HP Latex 300 Printer Series

Service Manual

Safety

The procedures described in this manual are to be performed by HP-qualified service personnel only.

Electrical shock hazard

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

• Disconnect the printer (both power cords) from the power source performing any maintenance or servicing operation. The rear switch is not the disconnecting device, unplug all power cords before servicing the printer.

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

Electrostatic discharge

See the beginning of Chapter 4 of this manual for precautions you should take to prevent damage to the printer circuits from electrostatic discharge.

Safety symbols

Serious hazards leading to death, injury, or damage may result if you do not take the following precautions:

• The Warning symbol calls attention to a procedure, practice, or the like, which, if not correctly performed or adhered to, could result in personal injury. Do not proceed beyond a Warning symbol until the indicated conditions are fully understood and met.

• The Caution symbol calls attention to an operating procedure, practice, or the like, which, if not correctly performed or adhered to, could result in damage to or destruction of part or all of the printer. Do not proceed beyond a Caution symbol until the indicated conditions are fully understood and met.

Using this manual

Purpose

This service manual contains information necessary to test, calibrate, and service the HP Latex 300 printer series.

For information about using the printer, see the user's guide.

Chapters

1 Printer systems

Use this chapter as a reference for technical information about the subsystems, components, and how they work together.

Of particular importance are the diagrams included for each subsystem of the printer. They can be useful for both troubleshooting and disassembly.

2 Troubleshooting

Whenever a printer is not functioning correctly due to a fault, use this chapter for step-by-step diagnosis until you arrive at the solution, which may include replacing a part.

Troubleshooting always begins with a problem; so, when you enter the chapter, navigate to the proper section and find the troubleshooting steps for your problem.

This chapter does not cover the procedures for the diagnostic tests you must perform while troubleshooting, nor the replacement procedures you must complete to fix the problem.

3 System error codes

This chapter contains the system error codes which are displayed on the front panel and by the Embedded Web Server. Each system error code shown in the chapter has a brief description and the steps required to solve the error.

Most of the troubleshooting steps involve performing a test or a calibration, which can be found in the following chapter. Before replacing any part that you suspect of causing the system error code, always perform the test or calibration.

4 Tests, utilities, and calibrations

Use this chapter whenever you need to perform a diagnostic test, service utility, or service calibration. This chapter is meant to provide procedures and relevant information, not troubleshooting information. For troubleshooting information, see the Troubleshooting chapter.

These procedures are described in full, so that you know any relevant values for the test, as well as information about what the printer is actually doing during the test.

The goal of diagnostic tests is to locate the root cause of the problem and the corresponding system error code or message that will provide you with logical steps to resolution.

Some diagnostic tests or calibrations must be performed after removing a component.

5 Print quality

This chapter describes the print-quality diagnostic procedures. Further troubleshooting advice can be found in the user's guide.

6 Ink supplies

This chapter describes and discusses the components of the ink supply system.

7 Parts and diagrams

The purpose of this chapter is to detail all of the available service parts of the printer. This information is presented in tables, organized by subsystem, and includes the following:

- Official service part names

- Part numbers

- Illustrations of the service parts

Use this chapter whenever you need to order a service part.

8 Removal and installation

The purpose of this chapter is to provide procedures for removing and installing service parts. Each service part has a removal procedure detailed in this chapter, and installation procedures and notes are included as needed.

Useful information such as access notes and screw types (head sizes) are provided to help you work efficiently.

9 Preventive maintenance

Maintenance alerts are displayed by the front panel and Embedded Web Server whenever maintenance is required. While most of these alerts can be resolved by the customer, some require a service engineer.

Use the preventive maintenance chapter whenever you need to perform a preventive maintenance procedure due to an alert the customer receives from the front panel or Embedded Web Server, or to get reference information on life counters and maintenance that must be performed by the customer.

10 Move, store, or repack the printer

This chapter gives advice on moving, storing, and repacking the printer.

11 Safety precautions

This is an industrial printer that uses high voltages: service operations can be hazardous. The safety chapter covers all the guidelines and checks you need to perform in order to service the printer.

You are expected to have appropriate technical training and experience necessary to be aware of hazards to which you may be exposed in performing a task, and take appropriate measures to minimize the risks to yourself and to other people.

Readership

The primary readers of this service manual are HP service engineers, although secondary readership may include resellers. All procedures must be performed by HP service engineers or authorized service-delivery partners, except for those procedures clearly marked otherwise.

Table of contents

1   Printer systems

Electrical system

Description

The electrical system controls all the printing systems and the heating systems inside the printer. Most parts of the control electronics are placed inside the 'E-box'.

Components

The electronics can be divided into different functional subsystems and will be described accordingly.

- **Front Panel**: The Front Panel includes a display, touchscreen, magic frame buttons, a power button, and a speaker. It is connected to the Formatter PCA.

    - **HP Latex 110/115/310/315/330/335**: The front panel has a 4.3" LCD display.

    - **HP Latex 360/365/370/375**: The front panel has a 8" LCD display.

- **Substrate Path**: Controls the substrate movement; Drive Roller and Rewinder motors, Take-Up Reel, two Vacuum Fans (controlled by a Vacuum Fan PCA), Pinch Lever Sensor, Media Sensor.

    - In the HP Latex 315/335/360/365/370/375 it also controls the OMAS sensor and Ink Collector/Platen Sensors.

- **Scan Axis**: Printhead firing control and sensors for color and substrate detection (Carriage PCA, encoder, Line sensor and SOL (in HP Latex 360/365/370/375) sensors, and Carriage movement control using the scan motor).

- **Service Station**: Printhead maintenance. It controls the monocassette, web wipe, and spit on roll motors, a drop detector, the primer system, an aerosol fan and some sensors.

- **Ink Supply**: Control of ink through two ISS PCAs.

- **Curing Impinging System**: Control of the impinging fans, pressure sensor, ambient temperature sensor (110/115/310/315/330/335 only), and heater control that supplies the power to the impinging resistors.

- **Air Curtain and print-zone heaters**: Provides the power and control for the air curtain resistors and fans, and print zone resistors and fans. Also supplies the Air Curtain and Printzone Heaters Control box cooling fan and ambient temperature sensor (HP Latex 360/365/370/375 only).

- **Inner Lights**: Composed of three equal boards that illuminate the print zone.

Block diagrams

HP Latex 375

HP Latex 375 block diagram

HP Latex 370 block diagram

HP Latex 365 block diagram

HP Latex 360 block diagram

HP Latex 335 block diagram

HP Latex 330 block diagram

HP Latex 315/115 block diagram

HP Latex 310/110 block diagram

Media Pressure sensor B4H70-67080

Air Curtain Fan w/ sensors B4H70-67061

Printzone Heater Assy B4H70-67126

Inner Lights PCA B4H70-67113

ISS PCAs B4H70-67041

Scan Axis Motor B4H70-67001

Media Motor Q6652-60108

APS Assy B4H70-67030

Fan-Heater Assy B4H70-67082

Curing Power Interconnect PCA B4H70-67112

Printmech PCA B4H70-67046

Curing Control PCA B4H70-67111

AC converter 4.3kW S6

Main PSU B4H70-67037

Formatter PCA B4H70-67060

LAN PCA B4H70-67115

Engine PCA B4H70-67038

Carriage PCA CZ109-67064

Interconnect PCA CQ871-67001

Take-Up Reel

Top Cover Fan and Diffusor B4H70-67060

Vacuum Fan Assy B4H70-67001

Primer Assy B4H70-67027

Service Station B4H70-67023

Aerosol Fan B4H70-67033

Rewinder Motor w/ Gears 64 B4H70-67066

E-Box Components

Description

The E-box contains most of the electronics of the printer.

Components
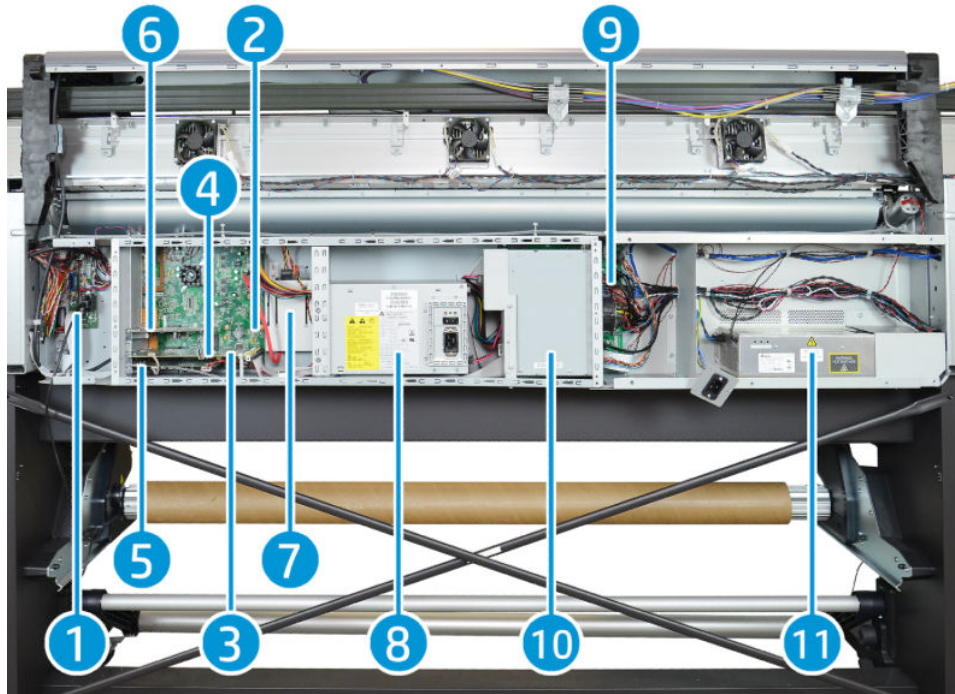
1. Interconnect PCA

2. Formatter PCA

3. Engine PCA

4. Printer ID PCA

5. OMAS PCA

6. LAN PCA

7. Solid State Disk Drive (SSD)

8. Power Supply Unit (Main PSU)

9. Printmech PCA

10. Air Curtain and Printzone Heaters control PCA

11. Heater Control

Functionality

Interconnect PCA

The Interconnect PCA is an interconnect board with connectors that helps distribute power, and control signals from the Printmech board, to all the elements connected to the right side of the machine, including the following:

- Take-Up Reel

- Vacuum Fans (passes through; the actual control is inside Eola)

- Valves and Motors for Primer, Rack Engage, SVS, and Aerosol Fan

- Top Cover Fans

- Rewinder Motor

- Pinch Lever, Media and Window Sensors

Formatter PCA

The motherboard of the printer. It is the same type of board as found in a standard computer.

Engine PCA

The main controller of the printer. It is responsible for all the processes performed in real-time, and is the ultimate controller of all electromechanical systems. The Engine PCA controls all substrate path components (Drive Roller, Spindle Motors, OMAS, etc.), and all non-substrate path components (Carriage, Scan Axis Motor, Print Head Cleaning Assembly, Service Station, etc). Attached to this board, is the Printer ID PCA.

Printer ID PCA

Contains printer identification. When replacing the Engine PCA, take care not to lose it.

OMAS PCA (315/335/360/365/370/375 only)

Controls the Optical Media Advance Sensor, used to measure substrate advance.

LAN Communication Card

Provides LAN communication.

Solid State Disk Drive (SSD)

Contains:

- The printer firmware

- The operating system

- All calibration values, product number, serial number, and so on. In order to avoid loss in the case of SSD failure, a backup is made in the ISS top board.

📝 IMPORTANT: In order to prevent any loss of calibration values, do not replace the following at the same time:

- The Hard Disk Drive and the ISS Top Board.

Power Supply Unit (Main PSU)

This PSU delivers power to all the parts of the printer except heater elements. The internal rails are: 5V_sb; 3V3, 5V, 12V, 24V, and 42V.

PrintMech PCA

The PrintMech PCA is mainly used to control the mechatronics of the printer. For routing reasons, only the parts connected to the left side of the printer are connected to this board:

- Scan-Axis Motor

- Substrate-Axis Motor

- Ink Pressurizing Pumps and Valve

- Ink Collector Sensors

- Ink Supply PCAs Connection

- Inner Light PCAs Connection

- Spit-on-Roll Motor (routed to the right side of the printer)

The remaining functionality implemented in the PrintMech PCA is sent to the right side of the printer through the Mini Interconnect PCA and its three cables (power + data).

Heater Control

Converts the input voltage from the mains to a voltage in the output that is controlled by the Curing Control PCA, and depends on the quantity of power required for impinging.

The converter has three cables: one power cable for the input, one for output, and finally the control cable. The control part of the converter that interfaces with the Curing Control PCA is powered at 24 V.

There are three LEDs: Status (off or fault), PWM (if power is being delivered to the output), and ACOK (if Vin is in range).

Air Curtain and Printzone Heaters control PCA

Controls the Air curtain and Printzone Heaters. For further details refer to: .

Carriage Electronics

Description

The carriage contains electronics for controlling and firing printheads. It also contains electronics for controlling the external sensors (SOL and Line sensor) and the scan-axis encoder.

The electronics of the carriage receive power and data from the trailing cables, which include both power (+42V) and data (LVDS) cables. The power cable connects the carriage with the Mini interconnect board, and the data cable connects the carriage with the engine PCA.

Components

Carriage PCA

The carriage PCA contains electronics that control how and when the ink is dropped from each printhead. It receives information from the sensors.
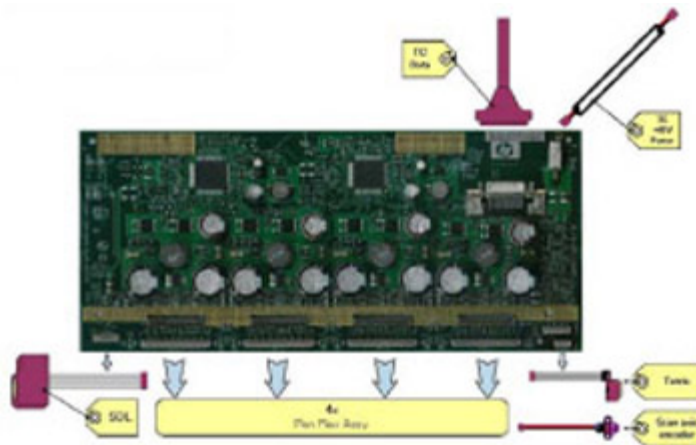
SOL Spectrophotometer (HP Latex 360/365/370/375)

The SOL is a color sensor located on the left side of the carriage. The main function of the SOL is to measure color samples printed on the loaded substrate, and then placed in the print platen zone.

Before taking any color measurement, the SOL must be initialized. The SOL initialization process takes approximately 7 minutes. This process consists of three steps:

- Sensor switch on

- Sensor warm up

- Sensor calibration

When the initialization process has finished, the shutter opens automatically and the carriage is moved along the scan axis to place the SOL on top of each sample and take a color measurement. After the measurements, the shutter is closed, and the sensor is switched off.

Line Sensor

The Line sensor is used to align the printheads, and to locate the edges of the substrate and measure its size. The alignment procedure consists of a series of patterns first printed, then scanned using the Line sensor, and finally an internal process is used to correct the timing of when and where the nozzles of the printheads fire, and detect any possible nozzle-out issues.

Scan-axis encoder

The line encoder is located on the carriage; it measures and counts the movements of the scan axis. An optical, infrared wavelength encoder is used: the same type of encoder used in most of the HP large-format printers. The encoder signal is converted to LVDS logic levels, and directly routed through the data TC.

Printhead flex

To connect the carriage to the printheads, a delicate flexible circuit with small golden dimples is used. Printheads are inserted into unique slots and a spring-loaded mechanism pushes the electrical contacts of the printheads into the printhead flex, which subsequently connects the printhead to the carriage electronics. Printhead flexes are the most delicate and sensitive part of the carriage. If the printheads are inserted with too much force, or they are misaligned, they can easily be damaged.

Ink Supply Station (ISS) Electronics

Description

There are two ISS PCAs (as in the DJ L25500/L26500 printers).

Components

Top and bottom ISS PCAs

The ISS electronics are powered from a +12 V line coming from the PrintMech, and a linear regulator on the ISS PCAs generates the +5 V used to power all the devices on the board.

The ISS PCAs are two electronic PCAs located at the rear of the Ink Supply Station. The ISS PCAs provide the following:

- Ink-Supply presence detection

- Ink-Cartridge broken-bag detection

- Ink-Supply smart-chip interface

- Air-Pressure measurement and air-pump shutdown

- Humidity and temperature measurements

- System back-up EEPROM

Below is a picture showing the connections and components located at the rear of the ISS.
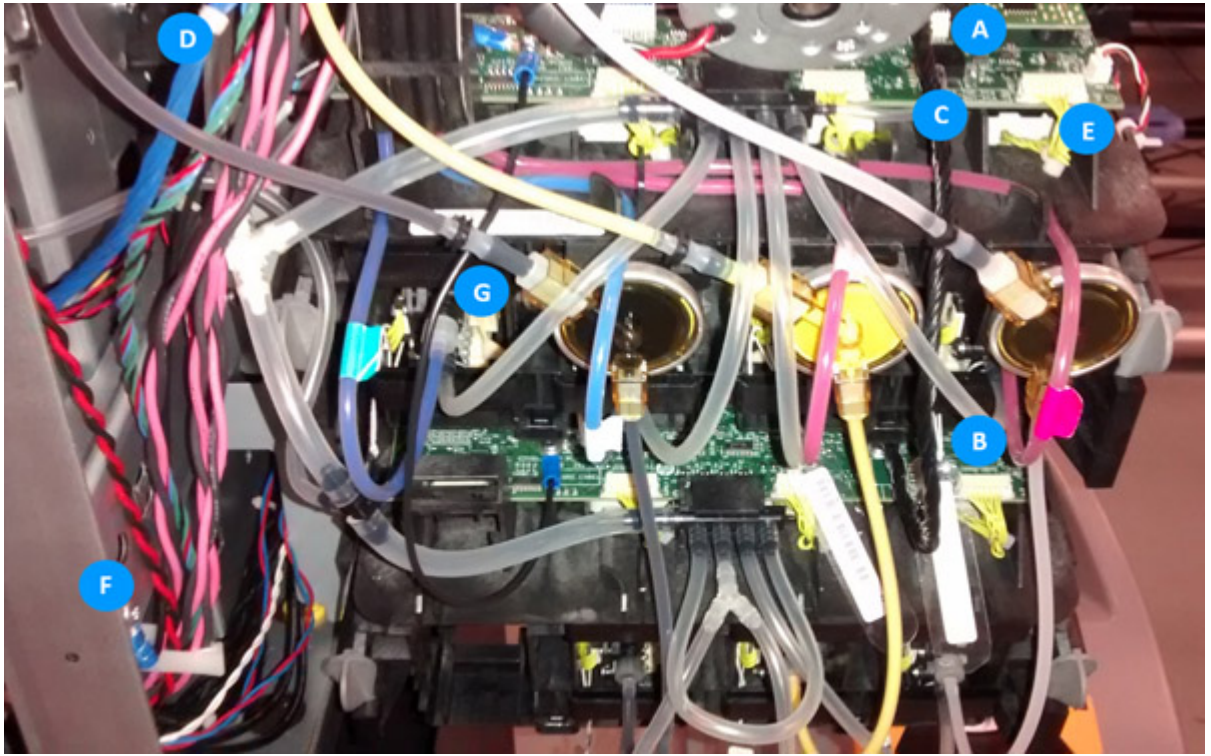
Marking	Description
A	ISS Top PCA
B	ISS Lower PCA
C	Cable: ISS Top PCA to ISS Lower PCA
D	Cable: ISS Top PCA to PrintMech PCA (blue)
E	Cables (6): ISS PCAs (Top and Lower) to Ink Cartridge and PIP
F	ISS grounding cable
G	PIP sensor (6)

Both top and bottom ISS PCAs share the same PCB; the only difference between them is that the bottom PCA is a simplification of the top PCA. The top PCA contains these additional parts:

- EEPROM

- Connection from the PrintMech PCA

- Air pressure sensor

- Temperature and humidity sensors

Both PCAs are connected through an 8-pin connector. The second ISS connector is connected to the PrintMech PCA in a daisy-chained connection, the first ISS board by means of this 8-pin connector.

Vacuum-Fan Electronics

Description

There is one Vacuum Fan PCA to control two different brushless blowers generating the required vacuum to hold the substrate. This PCA is connected to the Mini interconnect PCA (right side).

Heating-System Electronics

Description

In the Latex 360/365/370/375, power is delivered to 3 subsystems:

- Impinging (Drying and curing): Controlled through Curing Control PCA

- Air curtain: Controlled through Air Curtain and Printzone Heaters Control PCA

- Print zone heating: Controlled through Air Curtain and Printzone Heaters Control PCA

⚠ **WARNING!**   The PRI (POWER) area is not isolated, and there is an electrical shock hazard. The PCA is connected directly to the AC mains input. The power cords should be disconnected before manipulating the power elements.

The following diagrams show configuration, the Primary area, and its connection:

Latex 360/365/370/375
Power Cabling Diagram
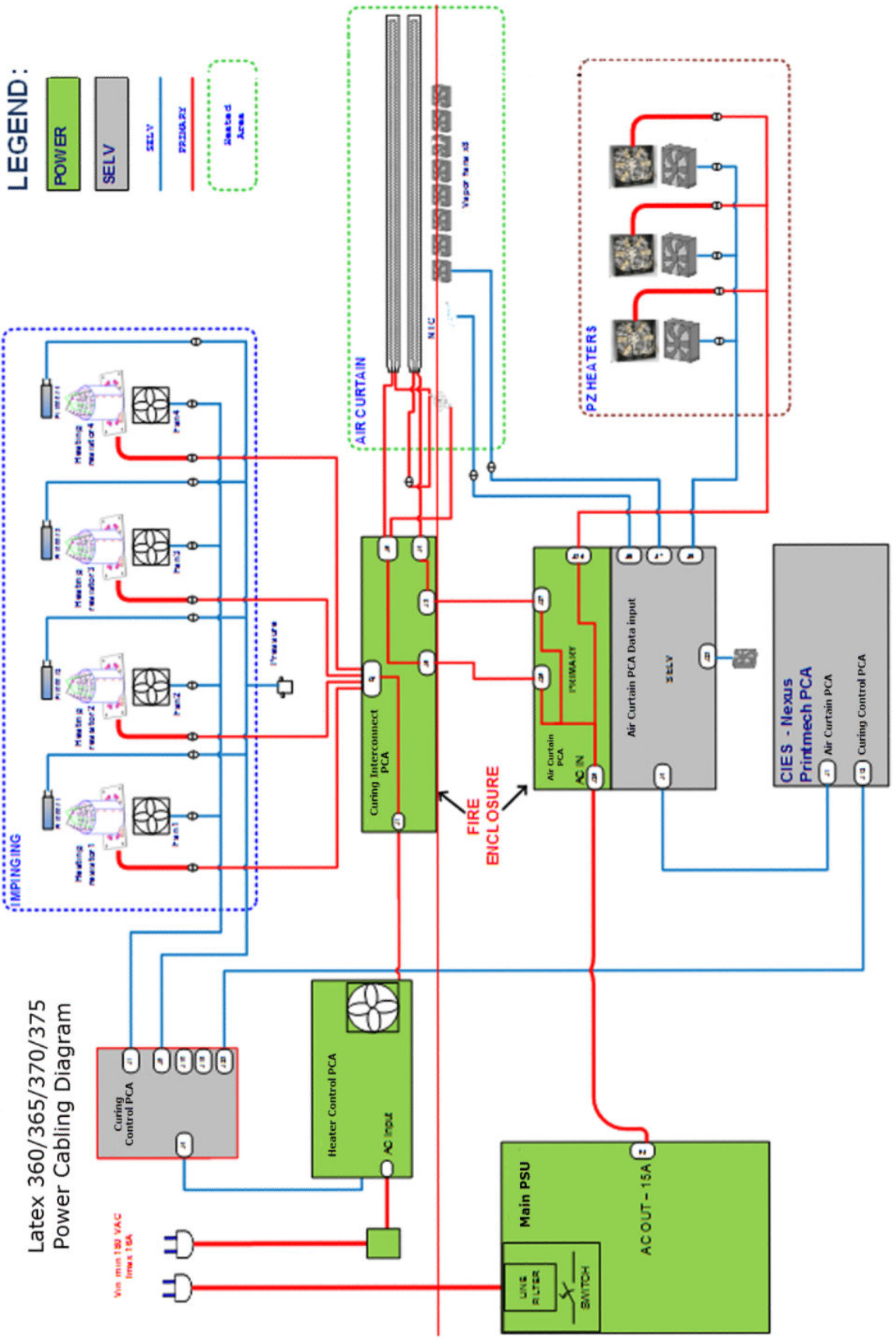
Components

Air Curtain and Printzone Heaters Control PCA:

The Air Curtain and Printzone Heaters Control PCA is only present in the Latex 360/365/370/375 printers, and is placed inside the E-box. The Air Curtain and Printzone Heaters Control is the PCA that controls the power delivered to the air curtain resistors and the printzone heaters. The AC power input comes from the Main PSU, but there is a pass through from the input power plug to the PCA AC input. The PCA has a primary non-isolated area, and a SELV isolated area. The power available is balanced between both subsystems based on burst control, the control is provided from the same PCA. The Air Curtain and Printzone Heaters Control also controls both subsystems' fans; the ambient temperature sensor, and the box fan installed for cooling the PCA.

Curing Control PCA:

The Curing Control PCA is placed at the impinging bracket on its left side and executes the servo that applies the power to the impinging module. The Curing Control PCA is present in all three SKUs; In the Latex 360/365/370/375 printer it controls the impinging sensors (temperature and pressure) and the Heater Control, and in the Latex 110/115/310/315/330/335 printers, it controls the air curtain fans, and reads the ambient temperature sensor. The Curing Control PCA has no power (PRI) lines.

Curing Power Interconnect:

The Curing Power Interconnect PCA is placed just above the Curing Control PCA. Both PCAs are housed in the same fire proof box. The Curing Power Interconnect PCA is connected to power lines and provides the interconnection interface for the curing module, and for the air curtain resistors (Latex 360/365/370/375 only). The Curing Power Interconnect PCA is present in all three SKUs.
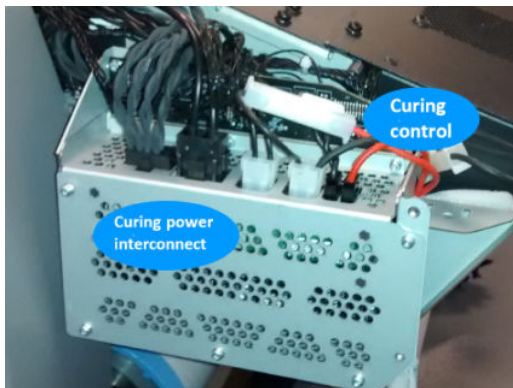
Table 1-1 Connection differences between SKUs in the Heating System:

	HP Latex 360/365/370/375	HP Latex 110/115/310/315/330/335
Ambient temp. sensor	Air Curtain and Printzone Heaters Control	Curing Control
Printzone fans	Air Curtain and Printzone Heaters Control	Printmech
Air curtain fans	Air Curtain and Printzone Heaters Control	Curing Control
Air curtain resistors	Air Curtain and Printzone Heaters Control/ Curing Power Interconnect	x
Printzone resistors	Air Curtain and Printzone Heaters Control	x

Electrical configuration

> 📝 **NOTE:** An electrician is required for the setup and configuration of the electrical system used to power the printer. Make sure that your electrician is appropriately certified according to local regulations, and supplied with all the information regarding the electrical configuration.

Your printer requires the following electrical components to be supplied and installed by the customer, according to the Electrical Code requirements of the local jurisdiction of the country where the equipment is installed.

Single-phase power

Table 1-2 Single-phase line specifications:

	HP Latex 360/365/370/375		HP Latex 330/335		HP Latex 110/115/310/315	
	Printer	Curing	Printer	Curing	Printer	Curing
Number of power cords	2		2		2	
Input voltage*	~200-240 V (two wires and protective earth)					
Input voltage tolerance**	+/10%					
Input frequency	50 / 60 Hz					
Maximum load current (per power cord)	16 A	16 A	3 A	16 A	3 A	13 A
Power consumption per power cord in printing mode	2.5 kW	2.1 kW	200 W	2.4 kW	200 W	2.0 kW
Power consumption in ready mode	85 W		72 W		70 W	

*   Site voltage must be within the "Input voltage" range.

**   Input voltage tolerance: HP Printers are tested to withstand +/-10% input voltage changes.

HP Printers have been tested to be able to withstand disturbances such as Surge transients, Voltage sag, Voltage dropout, etc.

Contact HP if you need more information about these disturbances.

Circuit breakers

> 📝 **NOTE:** The circuit breakers must meet the requirements of the printer and be in accordance with the Electrical Code requirements of the local jurisdiction of the country where the equipment is installed.

The printer requires two power cords that meet the following requirements.

Table 1-3 Dedicated lines per SKU:

	HP Latex 360/365/370/375		HP Latex 330/335		HP Latex 110/115/310/315	
	Printer	Curing	Printer	Curing	Printer	Curing

	HP Latex 360/365/370/375		HP Latex 330/335		HP Latex 110/115/310/315	
Dedicated line	Yes	Yes	Not required. Do not overload lines. See Table 2-3	Yes	Not required. Do not overload lines. See Table 2-3	Not required. Do not overload lines. See Table 2-3
Branch circuit breaker	2 poles, 16 A/20 A according to local laws and printer maximum load current					
Residual current circuit breaker (1)	Required		Recommended		Recommended	
	2 poles, 30 mA residual, at least 20 A capacity					

(1) Also known as Ground Fault Circuit Interrupter (GFCI)

Figure 1-1 Electrical configuration diagram (for reference only)
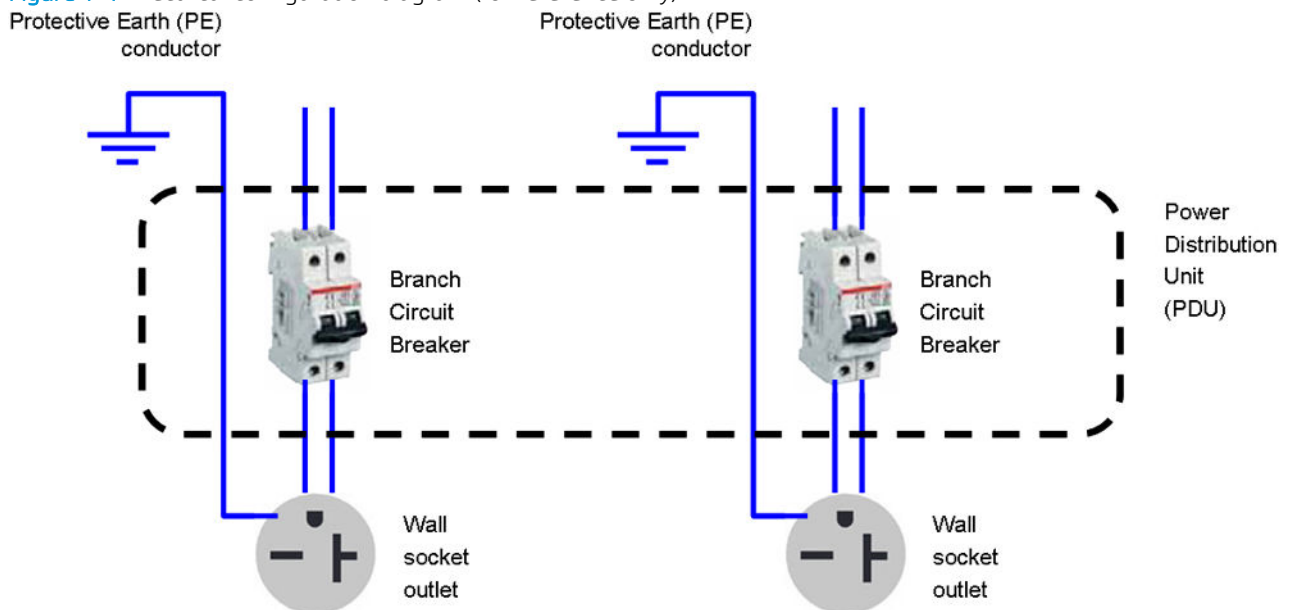
🖉 NOTE: The Power Distribution Unit (PDU) must be rated to meet the power requirements of the printer, and be in accordance with the Electrical Code requirements of the local jurisdiction of the country where the equipment is installed.

⚠ WARNING! Do not use a power strip (relocatable power tap) to connect both power cords.

Wall receptacles and power cords

Two power cords are provided with your printer, according to the printer's electrical specifications. If those cords do not reach your PDU and/or UPS, a certified electrician must install suitable extension cables on the day of installation.

To make sure you have the right wall socket outlets (wall receptacles) ready for installation, check the following:

1. The wall socket outlets must be suitable for **printer input ratings**. See .

2. The wall socket outlets must be suitable for the **power cord plug type** used in the country of installation. The list shows examples of the power cords and the plugs provided with the printer according to the country. To make sure you have the right wall receptacle, find your country in the appropriate table and check the **plug type**.

WARNING! Only use the power cord supplied by HP with the printer. Do not use a power strip (relocatable power tap) to connect both power cords. Do not damage, cut, or repair the power cord. With a damaged power cord, there is risk of fire and electric shock. Always replace a damaged power cord with an HP-approved power cord.

Table 1-4 HP Latex 330/335/360/365/370/375 Printers— Printer power cord specifications:

NOTE: For HP Latex 330/335/360/365/370/375 Printers— Use two power cords from below				
Country	**HP Part Number ***	**Length**	**Plug type**	**Plug**
USA, Canada, Mexico, Japan, Philippines, Thailand	8120-6893	4.5 m	NEMA 6-20P, 240 V, 20 A, non-locking	
International	8120-6897	4.5 m	IEC 60309, 240 V, 16 A, 2L +PE	

Table 1-5 HP Latex 310/315/115/110 Printer — Power cord specifications per region:

NOTE: For HP Latex 310/315/115/110 Printers — Use two power cords from below				
Country	**HP Part Number ***	**Length**	**Plug type**	**Plug**
America Region				
Argentina	8120-6897	4.5 m	IEC 60309, 240V, 16A, 2L +PE	
Brazil	8121-110	2.5 m	NBR 14136	
Chile, Uruguay	8121-0923	2.5 m	CEI 23-50	
USA, Canada, Mexico	8120-6360	2.5 m	NEMA 6-20P, 240 V, 20 A, non-locking	
Asia Pacific and Japan Region				
Australia/New Zealand	8120-6351	2.5 m	AS/NZS 3112-3 (15A)	

NOTE: For HP Latex 310/315/115/110 Printers — Use two power cords from below				
Country	**HP Part Number ***	**Length**	**Plug type**	**Plug**
China	8121-0924	2.5 m	GB 1002 (16A)	
Korea, Indonesia	8120-6352	2.5 m	CEE 7-VII	
India	8121-1074	2.5 m	IS 1293	
Taiwan	8121-1033	4.5 m	CNS 690	
Hong Kong, Singapore	8120-6898	4.5 m	BS 1363/A (13A fused)	
Japan, Philippines, Thailand	8120-6360	2.5 m	NEMA 6-20P, 240 V, 20 A, non-locking	
Europe, Middle East and Africa Region				
Europe Russia	8120-6352	2.5 m	CEE 7-VII	
Denmark	8121-1077	2.5 m	DK 2-5A	
Israel	8121-1010	2.5 m	SI 32	

NOTE: For HP Latex 310/315/115/110 Printers — Use two power cords from below				
Country	HP Part Number *	Length	Plug type	Plug
South Africa	8121-0915	2.5 m	SABS 164	
Switzerland, Liechtenstein	8120-6897	4.5 m	IEC 60309, 240 V, 16 A, 2L+PE	
U.K.	8120-6898	4.5 m	BS 1363/A (13A fused)	
Middle East	8120-6360	2.5 m	NEMA 6-20P, 240 V, 20 A, non-locking	

Table 1-6 Appliance coupler (printer connection):

Country	Appliance coupler (power cable)	Appliance coupler inlet (printer)
All	Detachable terminal as per IEC60320-1 C19 (squared type)	Detachable inlet as per IEC60320-1 C20 (squared type)

NOTE: Place the wall receptacle close enough to the printer so the plug can be plugged and unplugged easily.
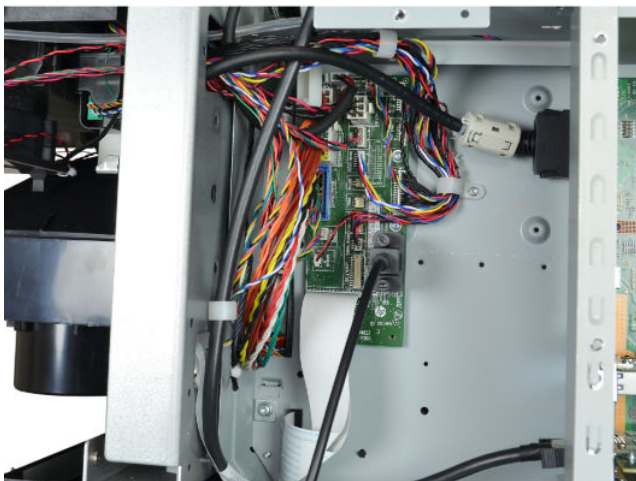
Electronic Cables Routing

This section can be used as a reference section, to check the original routing of the cables
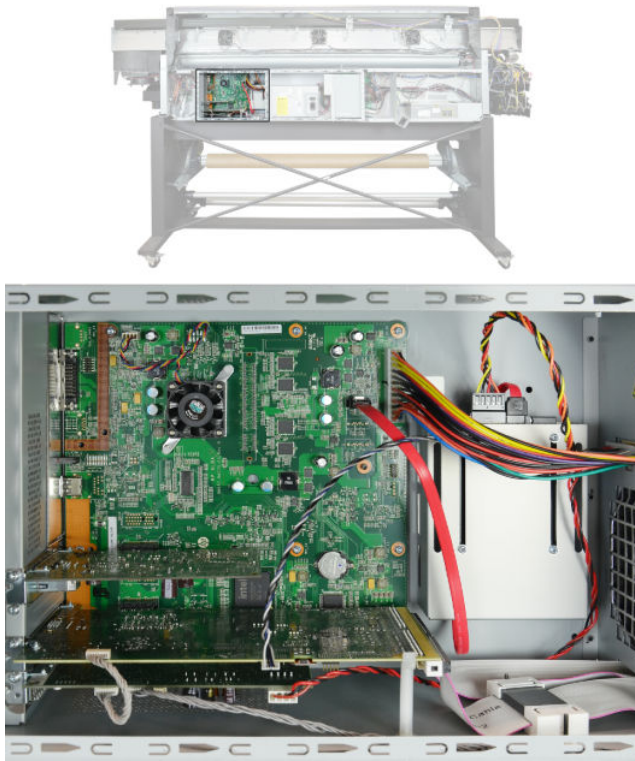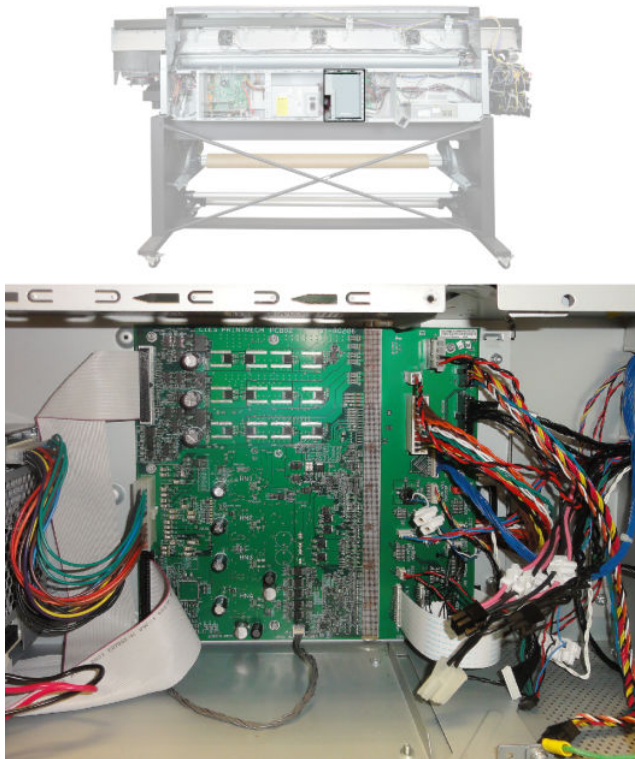
Rear Service Station Cables Routing
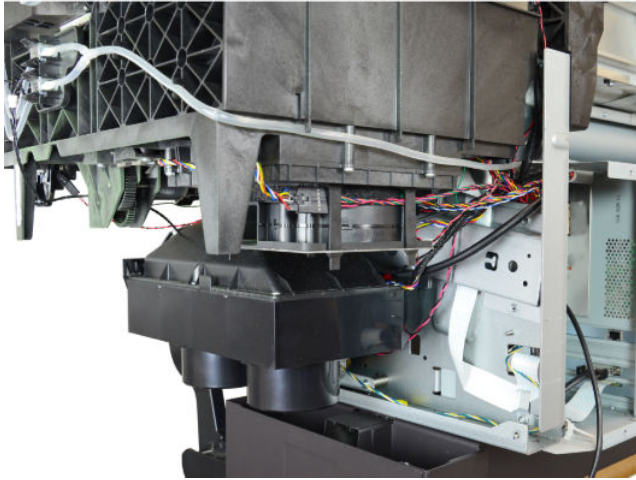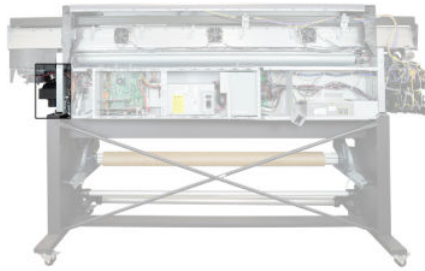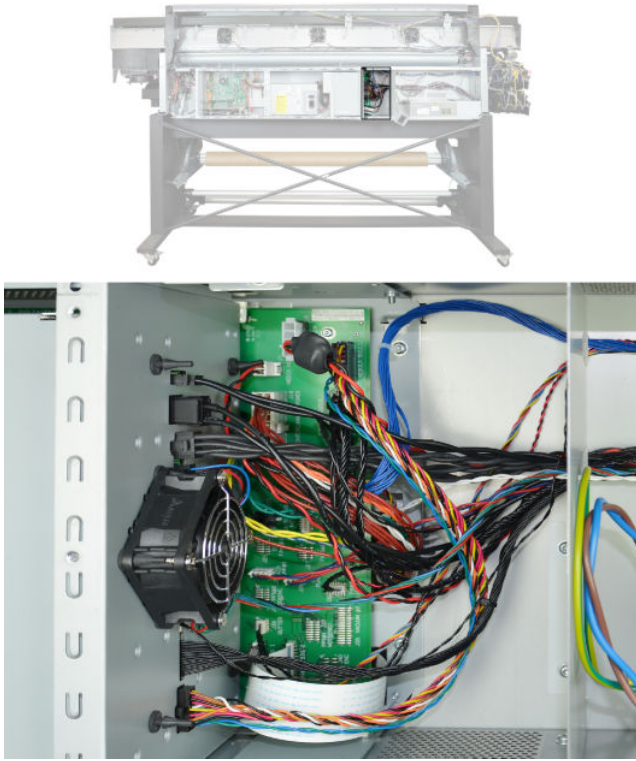

Interconnect PCA Cables Routing

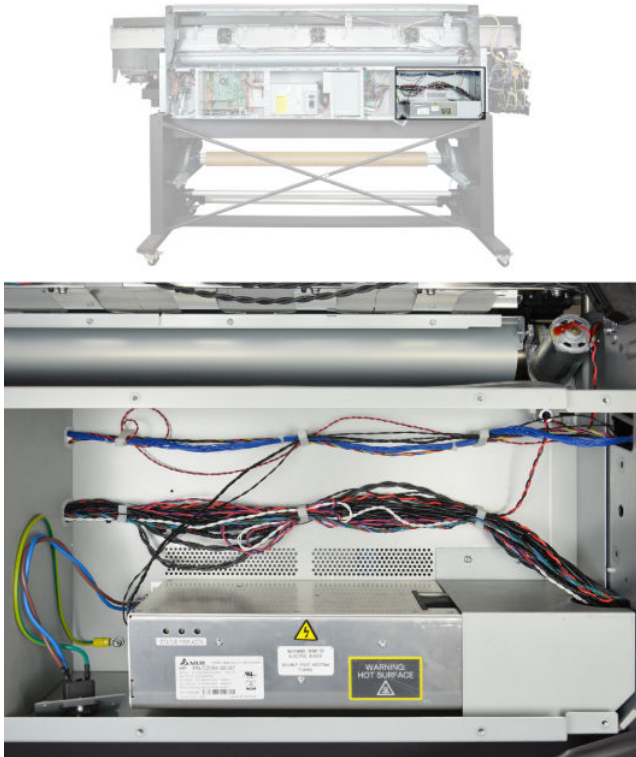# Electronics Main PCA Cavity Cables Routing

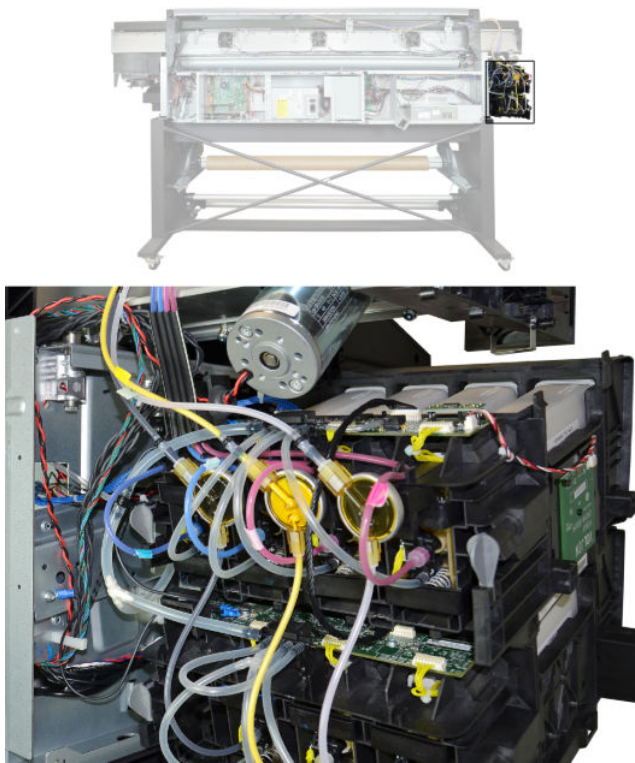# Printmech PCA Cables Routing (behind Heaters Control Assembly)

Left Interconnect Cables Routing

Left End Rear Chassis Cables Routing

Rear ISS Cables Routing

Substrate path

Description

The substrate path moves the substrate from the input spindle to the take-up reel, through the print path, while the carriage prints on the substrate. The objectives of the substrate path while advancing the substrate are:

- Maintain an accurate advance

- Maintain a constant advance

- Keep the substrate flat

- Advance the substrate straight along the substrate axis

Substrate path workflow overview

The following steps describe the substrate path workflow.
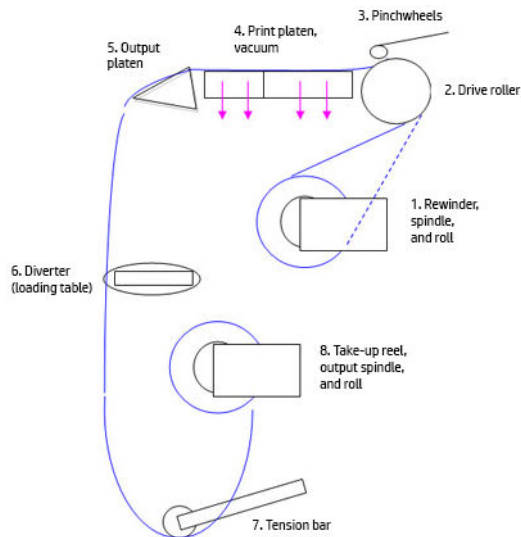
1. The substrate is loaded onto the **input spindle** (1), which is driven by the rewinder mechanism to provide back tension to the substrate. The substrate is fed through the input platen where an optical sensor detects substrate presence, around the **drive roller** (2), under the **pinchwheels** (3), over the **print zone** (4) and the **overdrive platen** (5), and finally it is either left free or looped through the **diverter** (6) through the **tension bar** (7) to be collected on the **take-up reel** (8).

2. The rewinder has a motor that primarily acts as a brake to maintain tension on the substrate. The rewinder may turn in either direction, depending on which is the printable side of the input substrate roll and its winding direction.

3. The drive roller also has a motor, and is the primary component that advances the substrate. The substrate is pressed to the drive roller by the pinchwheels, ensuring a smooth substrate advance. The motor receives feedback from an encoder located at the left side of the roller, inside a protected enclosure on the left of the left sideplate.

4. The surface of the substrate path where the substrate is printed is called the print platen. The print platen is designed to give minimal resistance to the substrate advance, and includes suction holes that apply vacuum to the substrate.

5. The printer detects and controls the substrate advance. The OMAS sensor, located on a special cut-out section of the print platen, is a sensor that is able to detect very small errors in the advance of the substrate. These errors are communicated to the motors on the drive roller, and small correctional adjustments are applied to the movement of the substrate.

   📝 NOTE: The OMAS sensor cannot see the fibers on some substrates, such as transparent substrate or very dark or very reflective substrates. In these cases, the OMAS sensor can be disabled. To disable the OMAS sensor, see 1.3.3 Enable/Disable OMAS on page 261.

6. The vacuum pressure is adjusted depending on the substrate type and print options used. It draws the substrate to the print platen, making sure that the substrate is flat.

7. After the platen, the substrate goes through the curing zone and finally leaves the printer, either to be collected on the take-up reel or to be cut.

8. When the take-up reel is in use, the substrate must be threaded, first passing in front of the loading table used as a diverter, then under the tension bar and rerouted to the output roll loaded in the take-up reel. This system creates tension on the outgoing substrate for proper winding. The take-up reel can operate in both directions with the rewinder, winding with the printed face outside or inside.

Startup, substrate load, substrate selection

During startup, the printer checks that the substrate path components are functioning correctly. When shutting down, if a substrate is loaded, the printer remembers the substrate definition. This may be modified through the front panel with the option 'Change loaded substrate' from the substrate menu list.

During substrate loading the printer may ask the user two interactions:

1. To rewind manually the substrate: The printer automatically checks the direction of the loaded substrate (printed face outwards or printed face inwards). If the 'curve' of substrate is too large the printer cannot detect it and the printer asks the user to rewind manually. Once the substrate is rewound the printer can detect automatically

2. To align the substrate in order to avoid skew: the printer measures skew. If the skew is too large the printer will ask the user to lift the pinchwheels (big blue lever on right hand side), and align the substrate. The substrate must be aligned against itself (substrate edge must be aligned with input roll edge).

Components

Spindle
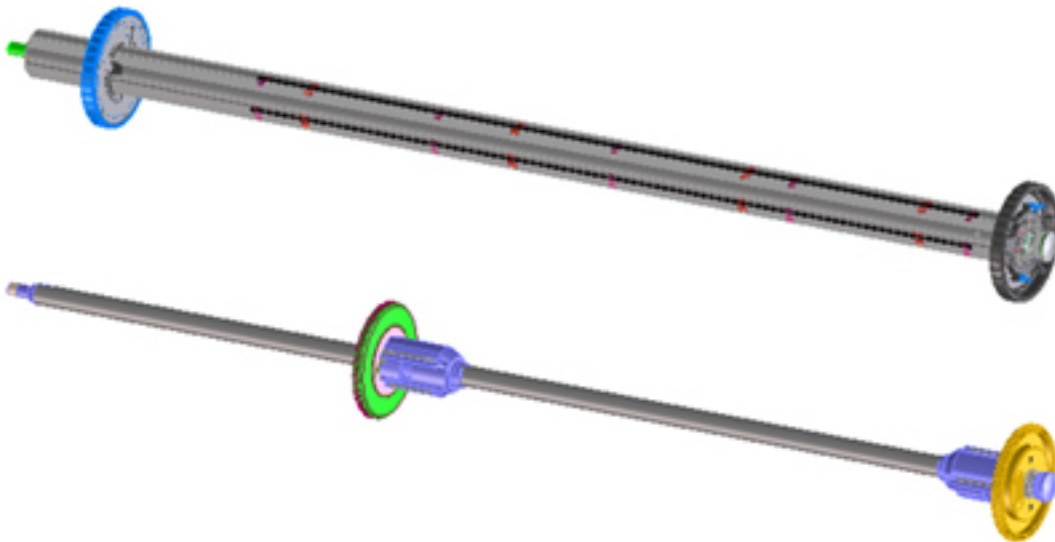
The aluminum spindle of the 360, 365, 370 and 375 printers can load 3-inch core rolls. The 2-inch spindle of the 110, 115, 310, 315, 330 and 335 printers has an adaptor for 3-inch cores.

The spindle holds the core of the roll when its rubber bands are nipped between the core of the roll and the aluminum extrusion.

On the 3-inch spindle, the hub on the left side has two possible fixed positions: the end position allows loading maximum width rolls, but there is a second position at 2.6 inches (65 mm) from the end that can be selected.

The right hub can be set along any length of the spindle so any length of roll can be loaded.

The right end of the spindle contains a gear which is used to transmit the movement from the rewinder to the roll.

Spindle latch
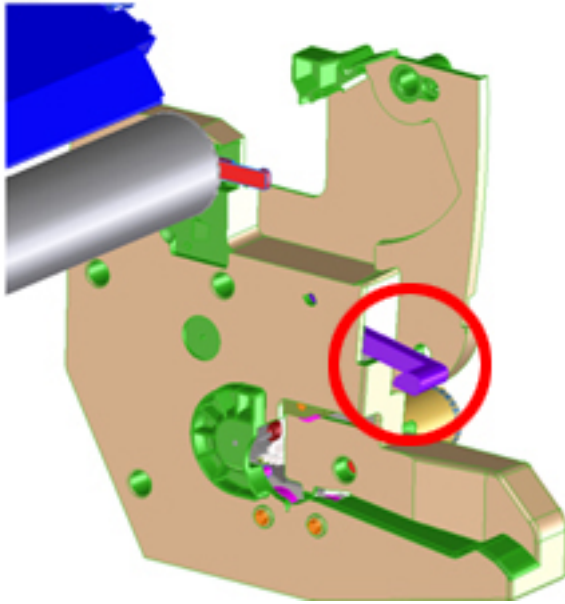
The spindle latch prevents the substrate roll from slipping from its position when printing. It is not necessary to close it when inserting the spindle, it closes automatically. But the user must lift the small blue lever in order to release the spindle and extract the roll of substrate.

Rewinder
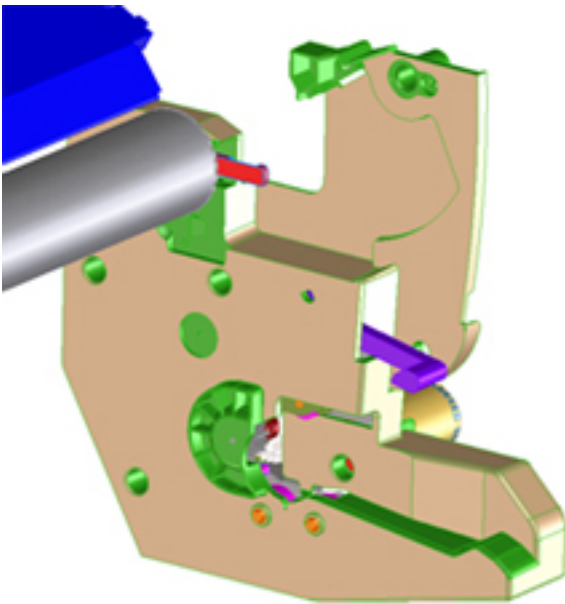
The rewinder motor keeps constant tension on the input substrate to prevent skew problems. There is a motor and a transmission that gives torque to the spindle in order to provide the necessary back tension.

Substrate sensor

The Input Platen has an optical sensor that detects substrate presence. When the substrate is inserted into the entry area, the sensor is activated and the drive roller starts turning to help the loading process. The substrate load process has been triggered and the printer will provide instructions through the front panel. When the substrate roll is exhausted and the bottom edge clears the substrate sensor, printing is interrupted.

OMAS sensor (substrate advance sensor)
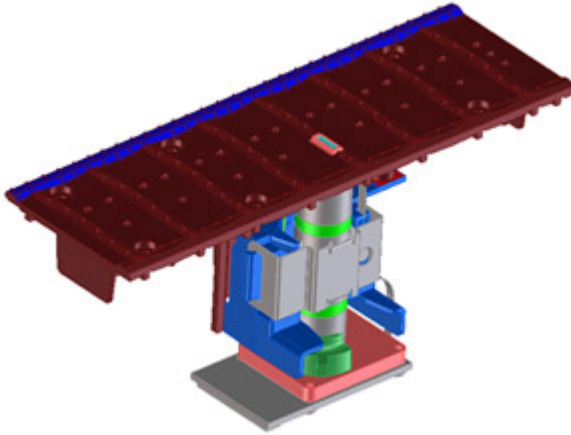
OMAS is located under the third front platen slab from the right only the top window can be seen:

OMAS is composed of two parts: the sensor and its optics located under the platen and a PCI control board on the main electronics box. Both are connected through a ribbon cable that runs through the vacuum beam, by the right sideplate, and into the electronics box.

The optical sensor detects the surface of the back of the substrate as it moves across the platen. The sensor is able to evaluate the exact movement of the substrate, and communicate any small adjustments required by the system to move the substrate accurately.

The window of the OMAS sensor must be cleaned of dust and ink to work correctly. The cleaning procedure is described in the user's guide, in the section 'Clean the substrate-advance sensor window'.

During the substrate load, the printer detects that the substrate has reached the print platen when the OMAS captures its image.

📝 NOTE: The OMAS sensor cannot detect the surface of some substrates, such as plastic or very dark ones. In these cases, the OMAS sensor must be disabled, and instead the printer uses feedback from the Driver Roller encoder to calculate the substrate advance. To disable the OMAS sensor, locate the OMAS Sensor selector from the print options menu of the RIP and set it to OFF. This can also be done from the Service menu <u>1.3.3 Enable/Disable OMAS on page 261</u>.

Drive roller and motor
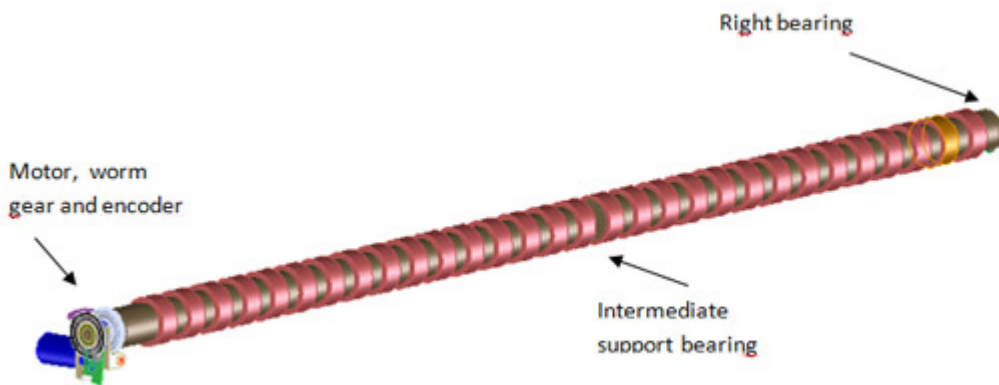
The drive roller and motor advance the substrate through the substrate path. The motor requires 42 V, and is controlled by the Printmech PCA.

The drive roller receives the torque from the motor through a worm as in the Z6100 and other Designjets.

Drive roller encoder disc and encoder PCA

The Drive Roller Encoder Disc and Encoder PCA provide the feedback system for the Drive Roller.

- The Encoder disc is a round disc mounted to the left end of the Drive Roller.

- The Encoder PCA is mounted with a sensor that reads the encoder movements of the disc (the disc turns with the drive roller).

Pinchwheels

The pinchwheels press the substrate against the Drive Roller to make sure that the Drive Roller can advance the substrate correctly.

- The pinchwheels are activated with the blue lever at the right side of the substrate roll and usually do not have to be lifted unless to correct skew during substrate load or to clear jams.

- The pinchwheel system has a sensor that detects if the system is up or down.

Vacuum pump, vacuum tube assembly, vacuum beam

The print zone is the area of the substrate path where the transmission of ink to the substrate occurs. The main function of the system can be defined as providing the surface where the substrate is printed, keeping it controlled during the process, playing a main roll on the final IQ of the plots and on the operational reliability of the printer. The subsystem is composed of the print platen assembly, which is the physical interface with the substrate, and the vacuum system which is the mechanical system where the vacuum pressure used to control the substrate is generated and conduced.

The platen gives a convenient shape to the wet substrate, avoiding uncontrolled expansion of the substrate.

The main components are:

- Platen assembly

  – Front platens, rear platens, OMAS platen

  – Linear blade 64-inch + springs (same as DJ Z6100 or L26500)

  – Foams, foam fillings, and foam wall

- Right vacuum fan assembly with EOLA control board (as with the HP Designjet Z6200 or T7100)

Related tests, utilities, and calibrations

- Rewinder test 2.1 Rewinder system on page 236

- Drive Roller test 2.2 Drive roller on page 236

- Substrate Path sensor test 2.3 Substrate path sensor on page 236

- Vacuum Test

- OMAS Test 2.4 OMAS module on page 237

- Rewinder Motor polarity test

- Substrate path menu

- Substrate advance adjustment

Service parts

- Drive Roller

- Substrate Path Assemblies

- Center guide Pinchwheels Assemblies

- Substrate Entry Assemblies

- Take-up reel Assemblies

Removal and installation

- Rewinder

- Vacuum Fan

- OMAS

- Output Platen

- Print Platen

- Input Roller

- Output Roller

- Substrate Sensor

- Pinchwheel Assembly

- Center Guide

- Driver Roller

- Rollfeed Modules

- Take-up reel

Ink Delivery System (IDS)

Ink Delivery System

The ink deliver system (IDS) is located in the left enclosure of the printer (inside the left covers) and delivers a continuous supply of ink to the printheads. It can detect an ink leakage anywhere in the system, including inside an Ink Cartridge. It also tracks and determines when an Ink cartridge needs replacing.
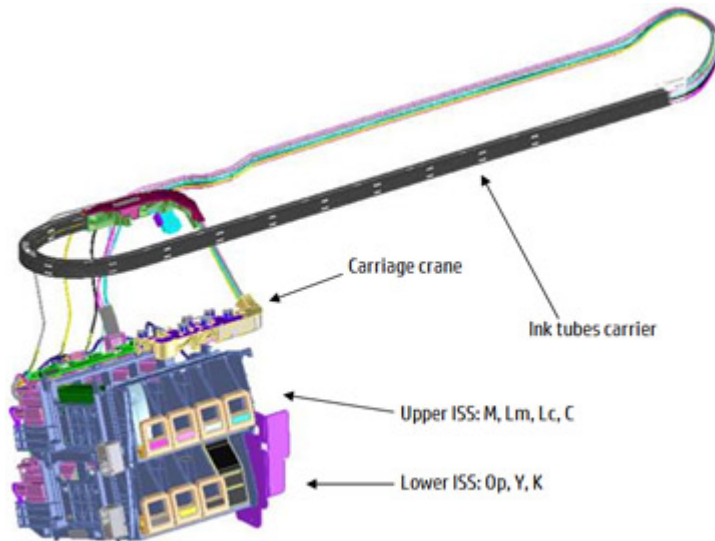
Rear of the Ink Supply Station
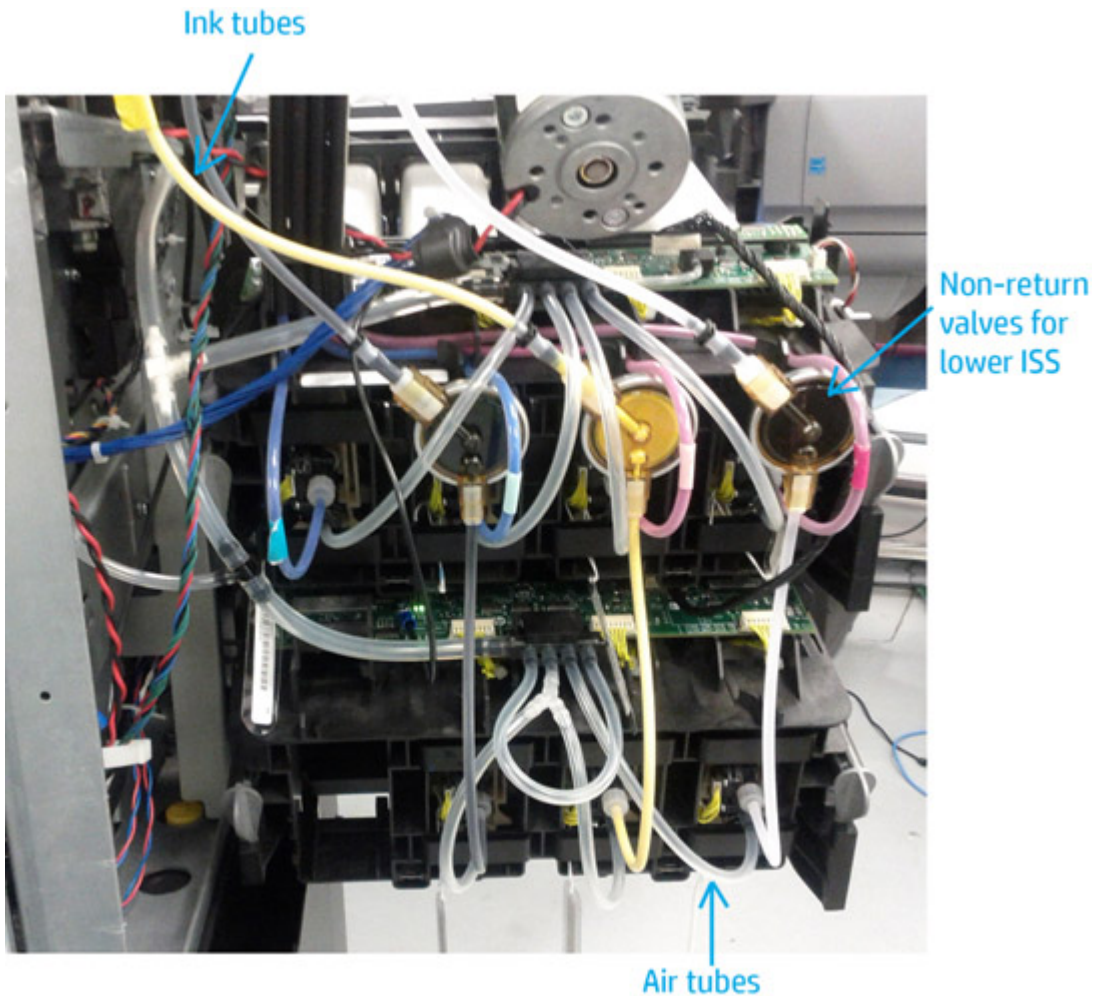
Ink tubes

There are 6 ink tubes that deliver the inks to the printheads in the carriage and two additional tubes which are used as a support structure. They are bundled together in a carrier and held on a shelf on the inside of the top cover with clips.

Insulation sleeve

The ink tubes are protected from the high temperatures of the Dryer Assembly by a heat resistant insulation sleeve, which protects the main body of the tubes that are static.

Upper and lower Ink Supply Station (ISS)

The Ink Supply Station (ISS) is divided into the upper and lower sections. They have six slots for holding the ink cartridges. Each slot has a unique shape (or lock out) which matches with an equal shape at the end of the applicable ink cartridge. this arrangement avoids the incorrect insertion of an ink cartridge, which would cause major damage to the ink system.

There are two places for additional slots but these are covered over.

The upper and lower ISS both contain PCAs, although the top PCA contains more functionality, such as the pressure sensor, see Ink Supply Station (ISS) Electronics on page 16.

Non-return valves

The two non-return valves are only for the inks on the lower IDS. This is to ensure that when the pump stops and the cartridges are nearly empty, that the ink does not flow back to the cartridge.
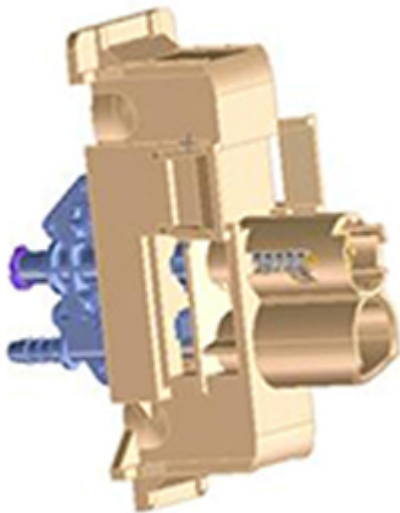
If a cartridge is nearly empty, with no pressure from the pump, the cartridge bag might increase, and air might enter the printhead.
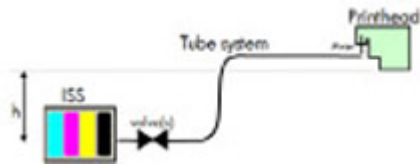
With a valve, the ink can go only from the cartridge to the printhead, and not the reverse.

Ink seals

Ink seals interface each ink cartridge with the air and ink tubes. They also contain leakage and end-of-ink sensors.

Air Pressure System (APS)

The APS contains two air pumps which are used to force the ink through the tubes to the carriage assembly. In the event of a broken bag in one of the Ink Cartridges, these tubes must be checked in case any of the leaked ink has been forced into the air tubes.

Related tests, utilities, and calibrations

- Ink delivery system tests: s

Service parts

- Left-hand assembly

Removal and installation

- Ink supply tubes and trailing cable
- ISS to cartridge cables
- Ink supply station
- Ink supply station PCAs
- APS assembly

Scan axis and carriage

Scan axis

The scan-axis system is the part of the scan-axis subsystem designed to move the carriage backwards and forwards for printing and servicing. This subsystem moves the carriage with a motor, belt, and pulley system. Furthermore, the scan axis has features to open and close the spectrophotometer shutter (SOL) and to enable/disable the cutter.

Scan-axis components

Scan beam:

It is an extruded aluminum part. Its main function is to guide the carriage along the scan axis via two rods, and it sets its limits of movement. Apart from this it positions and holds the service station, the scan-axis motor, the two brackets, and the pinchwheels assembly. It also works as an air container to be blown to the print zone coming from the rear and leaving through several pipes located over the substrate and holds the rear fans.

PPS system

The PPS consists of some screws and pockets, it locates the scan beam in reference to the side plates in order to have a correct distance between the printheads and the substrate. This distance is supposed to be constant during the life of the machine and it is set to be as small as possible without taking the risk of having the printheads touching the substrate.

Left bracket

The left bracket is an injected plastic part, and its main function is to set an end for the carriage movement. It also closes the scan beam to avoid the air blown to the print zone leaking. It has several features to enable/disable the cutter and the SOL shutter. The left bracket also houses the substrate jam sensor, which works with the reflector panel on the carriage assembly to detect substrate crashes. It also has some parts to ensure that the encoder strip is held with tension.

Encoder strip

The encoder strip contains positional data that the encoder sensor (located in the carriage) can read and detect the position of the carriage. Since it is made of thin metal it is sharp and extreme caution is needed when handling it.

Right bracket

This part is the same in the left bracket, this metallic part closes the right hole of the scan beam extrusion. It also holds the pulley assembly and the encoder strip.

Motor, pulley assembly, and belt

Their function is to transmit the position/speed to the carriage assembly.

Flat right bump

This plastic part defines the right end of the carriage movement. It is positioned and held by the scan beam.

Carriage

The carriage is the subsystem of the printer that performs the printing on the substrate. It is moved across the print path by the scan axis impelling system and with it the 6 printheads and several sensors, the Spectrophotometer (SOL), the line sensor (Tetris), the scan axis sensor. The carriage houses an on-board electronics system to send information to the 6 printheads though each of the interconnects, and it receives information from the sensors. Some parts aid the ink to arrive at the printheads. It also holds in position the cutter, used to cut some types of substrate.

Carriage components

SOL Spectrophotometer (360/365/370/375 only)

SOL is a color sensor and it is placed in the left side of the carriage, covered by a metal sheet that protects it from the heater's high temperatures. The main function of SOL is to measure color samples that have been printed on the loaded substrate and are placed on the print platen zone.

Before taking any color measurement, SOL must be initialized. The SOL initialization process lasts for about 7min. This process consists on 3 steps: sensor switch on, sensor warm up, and sensor calibration. When the initialization has been completed, the shutter is opened automatically and the carriage is moved along the scan axis to place SOL on top of each sample to take a color measurement. After the measurements, the shutter is closed again and the sensor is switched off.

SOL is used to make the linearization from the RIP.

Carriage base

The main function of this plastic part is to located the printheads. Its position is enforced by the two rods and the belt. It serves as a base where other parts are attached and it has some features to located other components (capping station and all the next parts).

Oiler

The Oiler is a small system at the right-hand side of the carriage base that provides continuous lubrication to the Slider Rod.
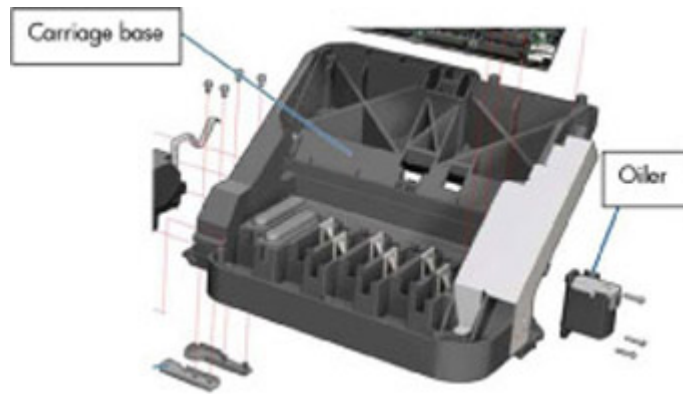
Latch assembly

This assembly holds down the printheads and helps to ensure that they do not move during operation. Once the handle is opened it can rotate to allow the user to remove the printheads. It has some features (holes) to allow the primer to pass through it and make contact with the printheads. Some parts help to transmit force to the printheads holding them in position and transmitting information of when the ink should be dropped.

Under-carriage protector

This part covers the bottom area of the carriage in order to keep it clean. It also protects the printheads from encounters with the substrate.

Sensors

The SOL, the Line sensor, and the encoder sensor send information to the PCA board and is passed to the printmech though the trailing cable. The SOL performs a color calibration, the line sensor calibrates the printhead alignment and detects other features (e.g. the substrate), and the encoder sensor detects the movement of the carriage in relation to the Encoder strip.

Carriage PCA

This part contains the electronics to control how and when ink is dropped into each printhead, and receives information from the sensors.

PCA Cover

This part covers the PCA to avoid aerosol contamination and acts as an electronic enclosure.

X-bias springs

The X-bias springs are sheet metal parts that hold the printhead in position in the X axis.

Covering sheet and metal parts

Bushings are bronze parts that are attached to the carriage base and slide over the rod.

Felts help to lubricate the rod and they also stop dirt going in between the carriage. They block four degrees of freedom (Z and Y translation and rotation over the primary rod)

SOL protectors help to avoid the SOL shutter breaking after a substrate jam.

Plastic rear bushing blocks one degree of freedom (the X rotation over the primary rod). The dam protector, are Mylar and stainless steel, and they stop the aerosol.

The plastic non-functioning printhead, is a plastic part which helps keep the carriage's integrity when the latch is applied over them. Also from a usability point of view, they avoid possible mistakes when inserting the printheads, and have a cosmetic function too.

The airflow deflector partially stops the air entering into the print zone, it is used to avoid vapor concentration over the substrate that also causes "dpe" (drop placement error).

Related tests, utilities, and calibrations

- Scan Axis Menu service tests:

- Carriage service tests

- Open/close SOL

- Carriage Calibrations

Service parts

- Right hand Assemblies

- Left hand Assemblies

- Carriage Assembly

- Scan Axis Assemblies

Removal and installation

- Cutter Assembly

- Encoder Strip and Encoder sensor

- Carriage Assembly.

- Belt Assembly

- Scan Axis Motor

- Line Sensor

- Color Sensor Assembly (SOL)

- Color Sensor Actuator

Service station and waste management

The main function of the service station is to maintain the printheads in the carriage assembly and to manage the waste ink. The service station and waste management can be split into two subsystems:

- PHC servicing, comprising cap, wiping, spitting, and priming functions

- Waste management, which contains ink spit/aerosol ink collection and the aerosol filter

Components

SVS mechanics

The SVS mechanics provide the movement for the maintenance cartridge, which integrates the capping, spitting, and wiping functions, and the cleaning roll assembly, which provides the means with which to advance the cleaning roll accurately.

PHC transmission

Spit Roller Mechanism

Aerosol Fan Extractor

Web Advance Mechanism
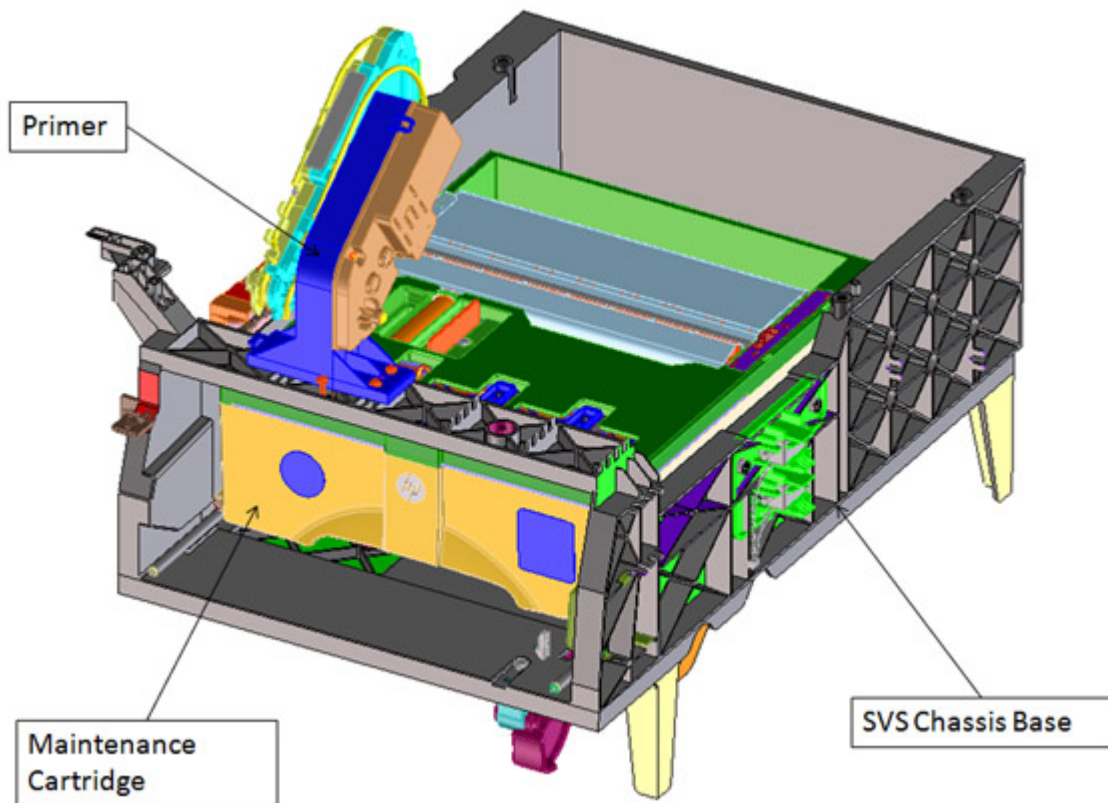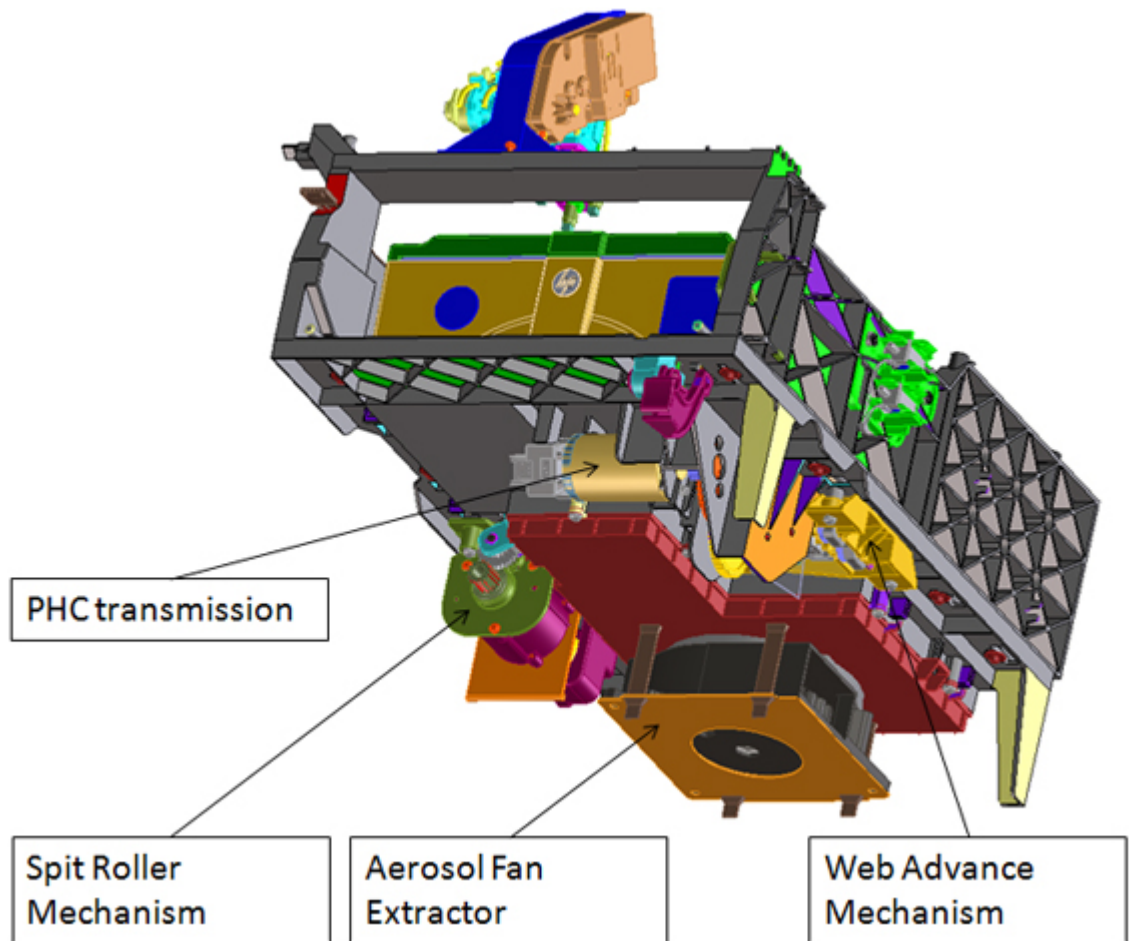
Primer

The primer executes the blow-primer functionality for the printheads. Air pressure to perform the prime operation is drawn from the ink supplies, and the prime pulse is controlled by solenoid valves.

Maintenance cartridge

The maintenance cartridge is a customer consumable that holds the main components for wiping and capping, and collecting ink from servicing operations.

Drop detector

The drop detector is a sensor that analyzes the nozzle health of all the printheads. The drop detector has a window where it is placed; there, nozzles are fired to check their status. Nozzles that are out are detected and compensated for by using other nozzles in order to maintain high print quality.

The drop detector has an infrared LED and a photodiode aligned in a beam light. This beam light can be blocked if it is not placed correctly.
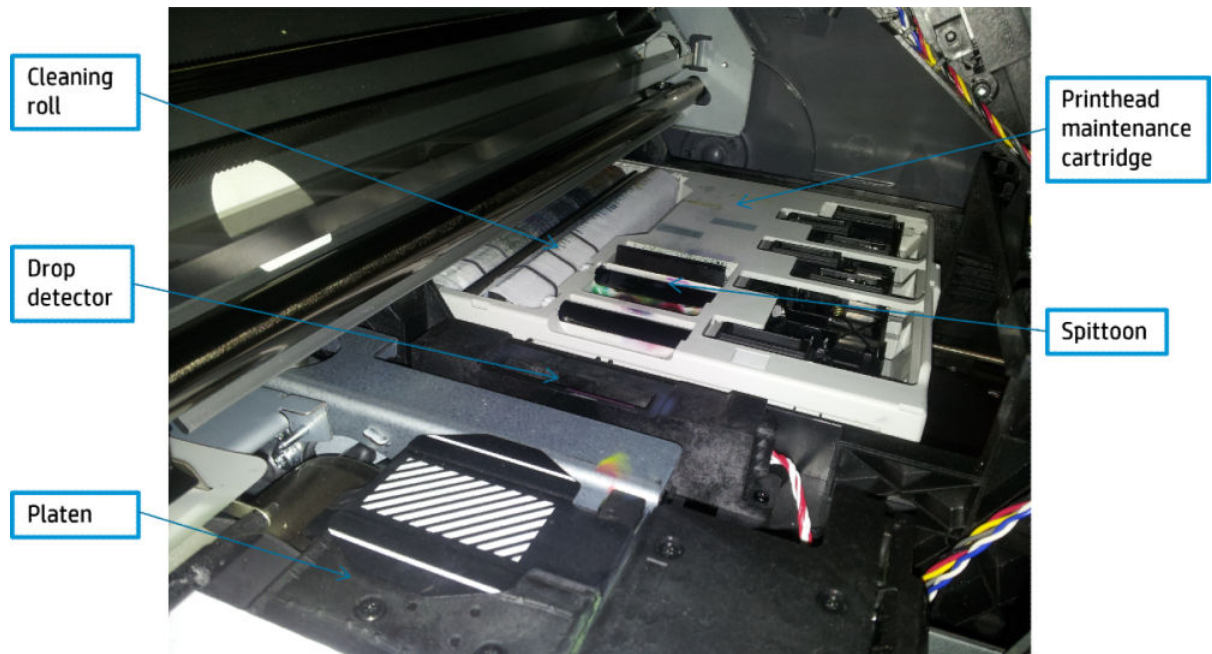
Cleaning roll advance

The cleaning roll advance mechanism engages/disengages the advance gear of the maintenance cartridge. The actual advance is achieved by moving the maintenance cartridge once the gear has been engaged by this mechanism.

Spit roller turn

The spit roller turn mechanism engages, disengages, and turns the spit roller gear of the maintenance cartridge.

Related tests, utilities, and calibrations

- Service station service tests: see 6. Service Station on page 250.

- Force drop detector: see 1.5.1 Force drop detection on page 263

- Drop detection calibration: see 4.2 Scan axis menu on page 277

- Service station calibration: see 1.7 Service Station Menu on page 265

Service parts

- Right-hand assemblies

Removal and installation

- Primer assembly

- Primer valves

- Service station

- Spit roller motor assembly

- Cleaning roll motor assembly

- Drop detector

- Primer assembly

Heating system

The type of ink used in this printer (latex) requires heating for the ink to be cured. The heating system applies heat through the Curing Assembly. The full SKU has additional heaters in the print zone and outlet. Temperatures are kept at a target level depending on the type of substrate and amount of ink fired via temperature sensors, which feed back information to the Heater Control assembly located at the rear of the printer, and to the left of Curing Assembly.

Components

Heater control

For details, see .

The following cross section shows the heating subsystems:

Top Cover Fan

PZ Heater & Fan

Air-Curtain

Curing
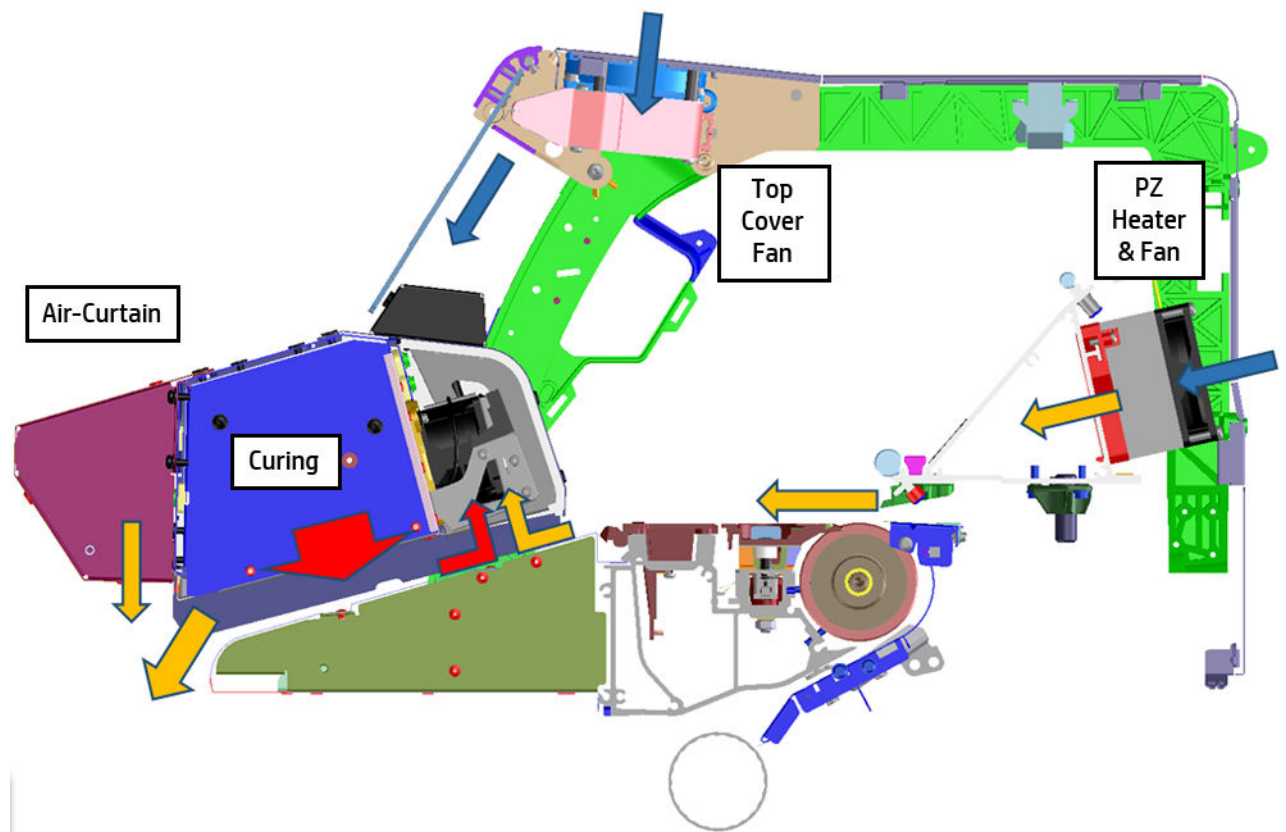
Print Zone heating

The Print Zone heaters are installed in the scan beam in HP Latex 360/365/370/375. They heat up the print zone to 25-35°C while printing. The main objective is to evaporate some of the ink, and raise the temperature for satisfactory print quality.

The three resistors in the scan beam provide up to 1050W during warm-up.

Print Zone Fans

The Print Zone fans provide an airflow parallel to the substrate to reach a higher evaporation rate and push the vapor out under the Curing Module to prevent condensation forming inside the printer.

Print Zone Air Pipes Diffusors Clip Assembly (V8N83-67006)

These pieces are made of plastic and are "clipped" on the air diffusors with the aim of creating a more uniform airflow. The number of Air Pipes Diffusors is different depending on the printer:

- **HP Latex 315**: 12 units (they can be installed on the HP Latex 310).

- **HP Latex 335/365/375**: 15 units (they can be installed on the HP Latex 330/360/370).

NOTE: These parts are included in the box on the HP Latex 315, 335, 365 and 375. They can be ordered as a service part for the old Latex 310, 330, 360 and 370 with the following Serial Number V8N83-67006 (this Service Part is for quantity: 15).

Air Pipes Diffusors are hand-assembled following the pictures below:
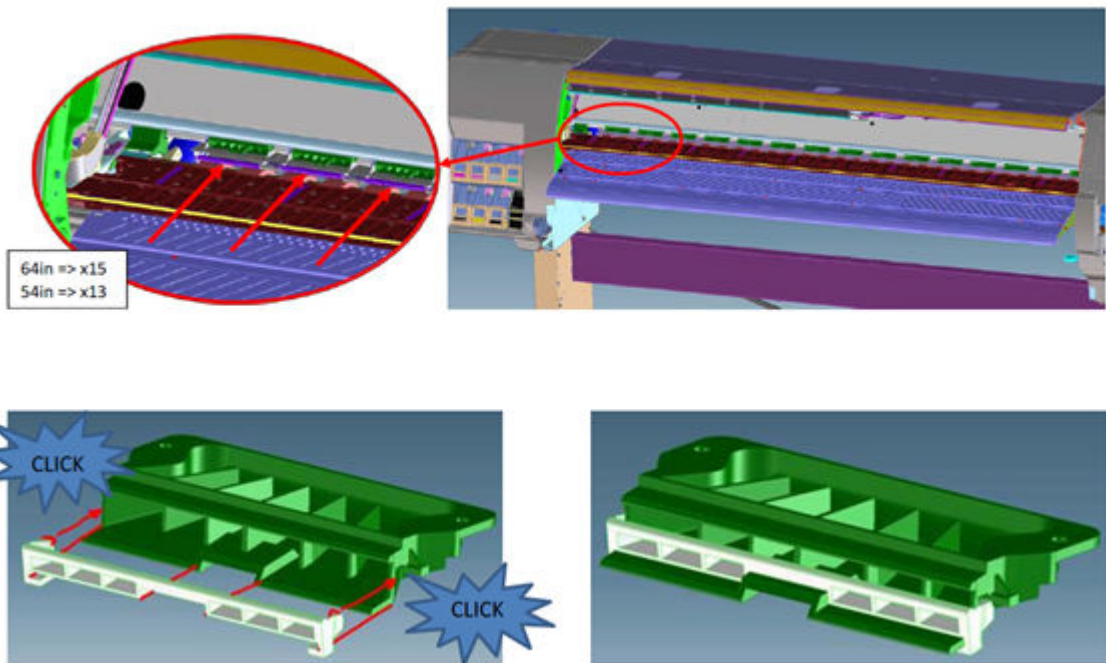
NOTE: A screwdriver is required in order to disassembly the part.

Top Cover Fans

The Top Cover fans blow air from outside the printer along the inside of the window to avoid condensation forming.

Curing Module

The Curing Module fixes the latex ink (cures) at around 80–116°C for satisfactory durability depending on the substrate.

The four heaters (three in the 54" model) provide a total of 3090 W (2540 W). Each heater has a fan to build up a chamber of hot air inside the Curing Module. This hot air, quite homogenous, is expelled onto the media through an array of small holes.

For thermal efficiency, some air is redirected to the inlet of the heaters and passed through the pressure chamber, before being expelled below the Air-curtain.
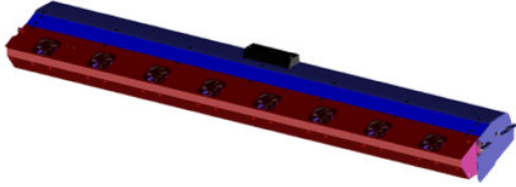
Air-Curtain

At the front of the Curing module is a row of fans that mixes the used air, full of vapor, with fresh ambient air. This prevents the moisture in the air from forming droplets, which can cause condensation under certain circumstances. It also lowers the air temperature that the operator is exposed to when standing in front of the printer.

For the HP Latex 360/365/370/375, with the higher throughput, heaters are included to heat up the ambient air before mixing it with the air from the printer. These two resistors provide up to 2480 W during warm-up, reaching a working temperature of 60°C while printing.

Pressure and thermal sensors

Each curing heater and fan has a thermal sensor. A pressure sensor, common for the entire curing module and placed in a dedicated housing to assure adequate working temperature, is used to measure the pressure inside the Curing Module. The sensor sends feedback to a servo in the Heater Control Assembly, and the heater power and fan speed supplied to each module is adjusted according to target levels.

Thermal Switches

Each heater has a thermal switch. In the event of too high temperature, these will physically disconnect the current from the heaters. These switches are integral parts of Print Zone and Curing heaters, while separate in the air-curtain.

Impinging Deflector

At the inlet of each Curing Module heater, is a metal deflector. It prevents media jams, and also controls how air is drawn in to assure media is exposed to uniform temperature.

Media Output Platen

The Media Output Platen is the part of the substrate path that is directly underneath the Curing Module. This is a large sheet metal assembly that guides the media at optimal distance to assure complete curing. The angle of the platen relative the Curing Module is important, as it affects how much air is leaving the printer, and how much is being recirculated.

Related tests, utilities, and calibrations

- Heating and Curing service tests: Troubleshooting the printer heaters on page 67

- Heating and Curing Temperature: Troubleshooting the printer heaters on page 67

Service parts

- Front Covers

- Dyer and Curing Modules

Removal and installation

- Heating Control Assembly

- Dryer (IR) Heater Sensor

- Dryer Heater Assembly

- Curing Temperature Sensor

- Curing Fans

- Curing Heaters

- Curing Module

Front panel
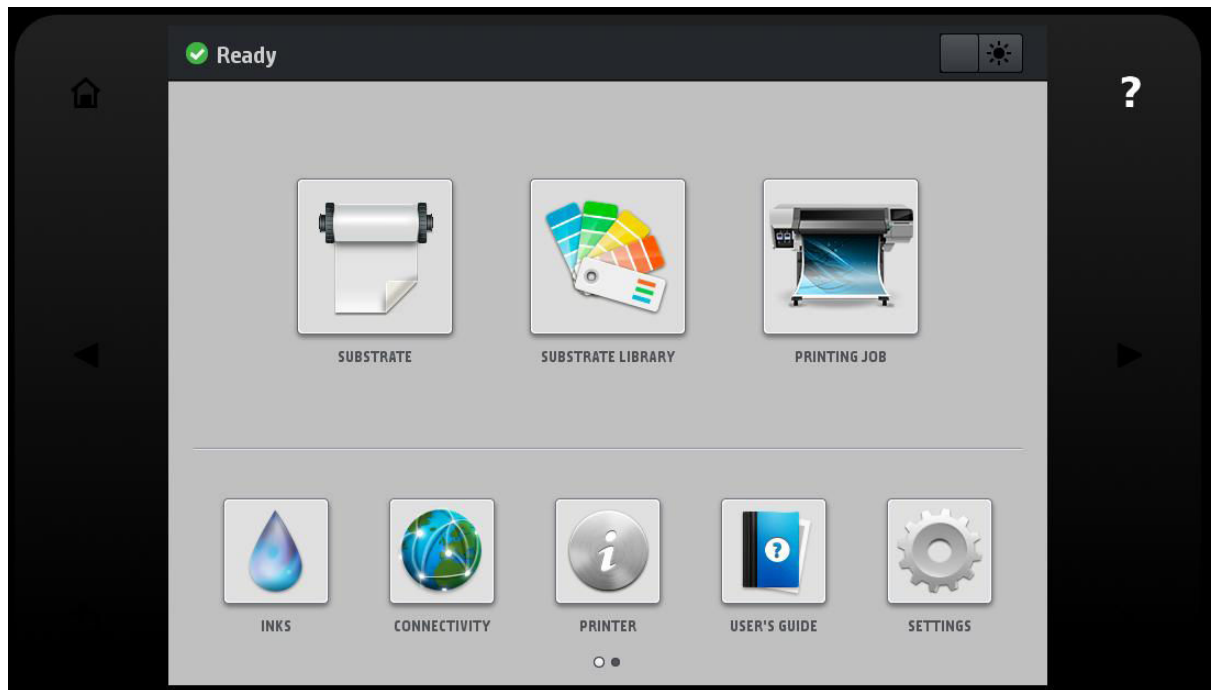
See the user's guide for a description of the front panel and how to use it.

# 3-liter Ink Upgrade accessory

Functional Description

Description

The 3-liter supplies module:

- Is an accessory for the Latex 360/365 printer. It can be installed (or uninstalled) through the Diagnostic Menu, available from firmware 4.10.3. It is necessary to install a license in the printer prior to going through with setup of the accessory.

- On Latex 370/375 printers, can be installed (or uninstalled) through the Diagnostic Menu. It is not necessary to install a license on the printer because it comes by default with the printer.

Physically the module consists of a rack that sits on the back of the printer, almost at floor level:
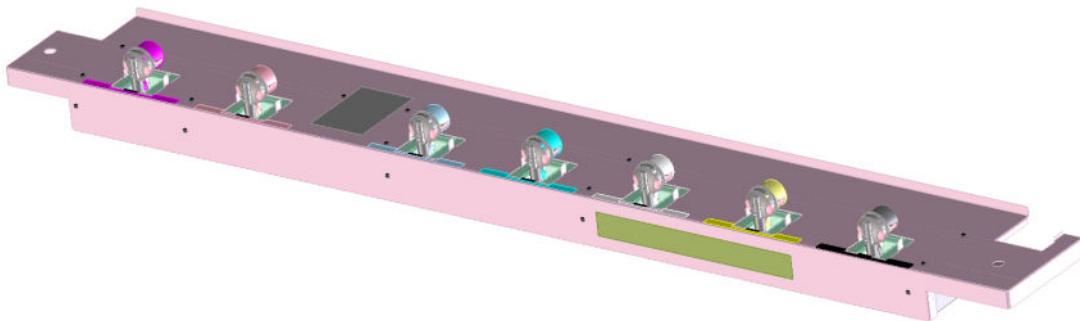
It allows connecting 7 HP 871 cartridges of 3-liters capacity each to the ink lines of the Latex 360/365/370/375 Printer.
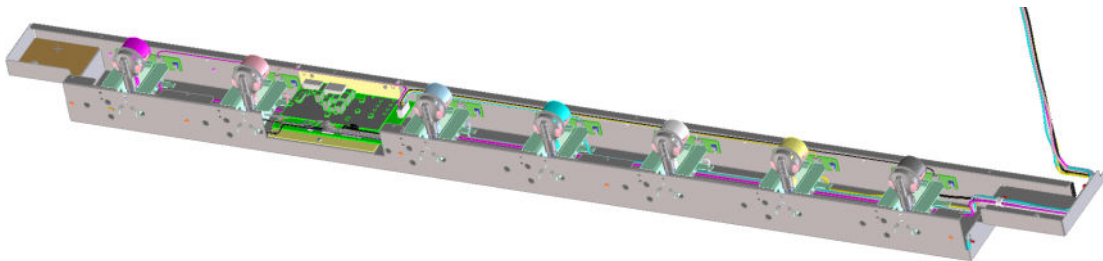
Internally the module includes a 3–liter PCA and 7 independent ink pumps. The PCA has its own processor, and is connected to the printer via accessory port, using CAN protocol. Most relevant functionality included:

- Connect up to 7 3-liter cartridges.

- 3-liter supply replacement without print job interruption (hot swap).

- Ink level monitoring and reporting of large supplies.

- Ink leak detection in accessory sunk.

Accessory interface overview

Mechanical interface

The accessory sits on the bottom of the printer structure on the back side of the printer.

Fluidic interface

Accessory is connected to printer by a tee connector in each ink tube connected to PIP sensor in printer IDS.

Electrical interface

Accessory is connected to accessory port of the back side of the printer. Communication between printer and accessory uses CAN protocol. Electrical power is supplied from accessory port and shared with TUR (take up reel) installed in daisy chain. The accessory is connected to each 3–liter ink cartridges using I2C single-ended bus to communicate with supply Acumen (v3.0b). A supply presence switch is also placed for each Gobi supply and connected to the accessory control PCA.

Functionality

When the module is in place, each ink line has 2 ink tanks per color.

- The main supply is referred to as the big cartridge in the control panel and user documents:

The big cartridge is the actual disposable supply, with 3 liters capacity per ink.

The intermediate tanks:

The intermediate tanks are thought to be permanent in the setup. They consist of regular Latex 831 Ink Cartridges of the corresponding colors. They are installed during the setup process, and do not need to be replaced over the life of the printer (except in case of damage). Once installed with this setup, the intermediate tanks can no longer be used in another Latex 3XX printer.

Operating principle

When the accessory is in place, the printer firmware tracks the ink level in the intermediate tank (IT) as the printer is being used. This is performed by drop counting.

When the estimated level reaches a low level (600 cc), the printer starts to refill the intermediate tank by acting on the ink pump of the corresponding line that moves ink from the big cartridge to the intermediate tank. This is performed without interruption of the print job

The refill operation ends when the printer ink pressure sensor of the corresponding ink line detects a slight over-pressure.

As the ink pump is in use, the noise in the pressure signal read by the pressure sensor of the corresponding ink line is monitored. A big cartridge running out of ink is detected by checking the attenuation of pressure pulses in the ink line.

The user can decide to stop refilling an intermediate tank of a given color from the printer control panel. In this case, the ink is pulled from the intermediate tank until it is completely emptied. It is then necessary to replace it by a genuine HP 831 cartridge of the corresponding color, unaltered.

Continuous refill

When the accessory is in place, the printer firmware tracks the ink level in the intermediate tank (IT) as the printer is being used. This is performed by drop counting.

When the estimated level reaches the low level (600 cc), the printer starts to refill the intermediate tank by acting on the ink pump of the corresponding line that moves ink from the big supply to the intermediate tank. This is performed without interruption of the print job. The ink pressure in printer SRK is maintained by the air pumps, regardless of the operation of the ink pump.

The process that controls the ink pump for one ink line also monitors the pressure present in the air circuit. It will reduce ink pump speed in the event of an excessive raise in air pressure.

We permanently monitor ink pressure and interrupt any pumping operations in case of detecting overpressure (PIP sensor saturation).

Each link line is treated individually. We perform repeated pumping cycles of pump ON for 10 seconds (at 12 V DC), and pump OFF during approximately 1 second. We monitor ink line pressure both during ON and OFF phases using the printer PIP sensor of the corresponding ink line.

The refill operation ends when the printer ink pressure sensor of the corresponding ink line detects a slight over-pressure (End Of Refill – EOR).

A 3-liter supply that is out of ink is detected when the noise induced by the pump in ink pressure signal is dampened below a specific threshold.

Overall layout (from the back of the printer):
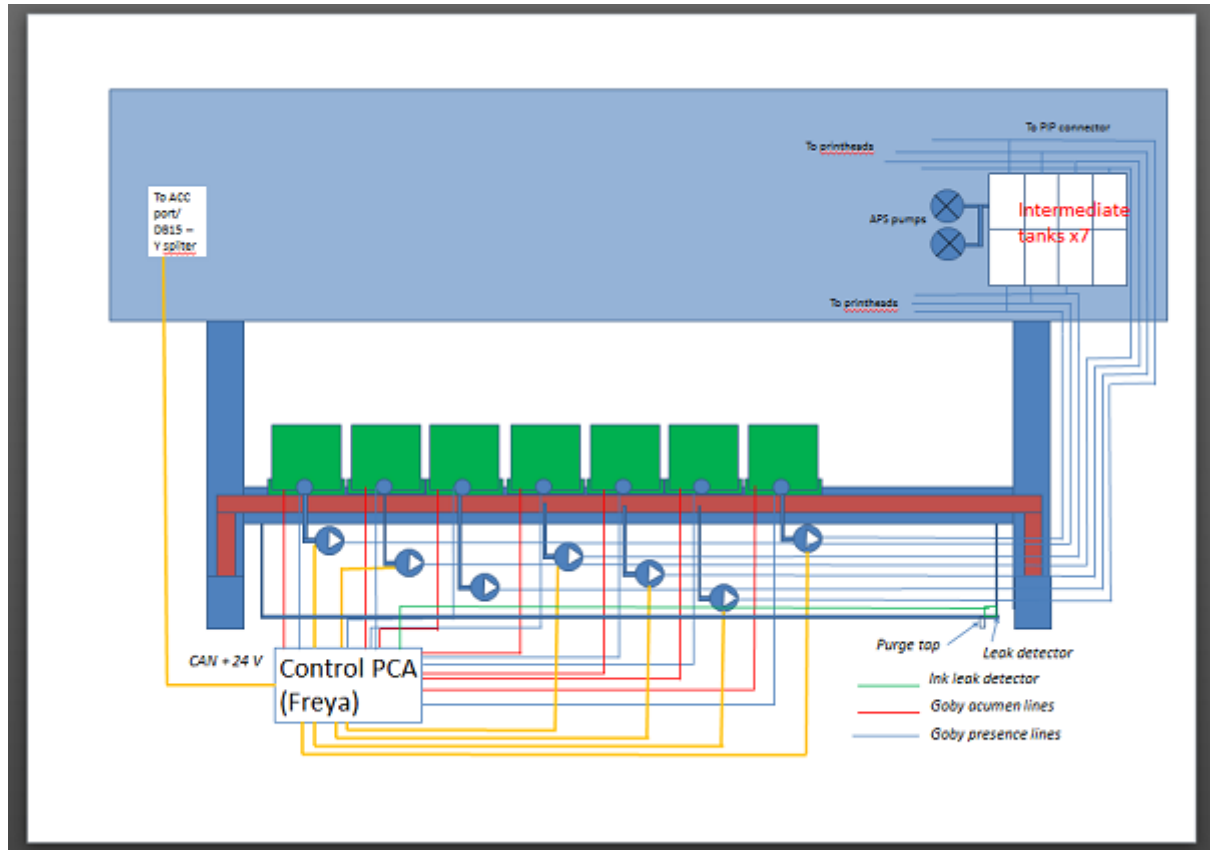
2 Troubleshooting

Troubleshooting the printer

Printer education and training

Before any attempt is made to troubleshoot the printer, it is critical that you have the relevant training on the HP Latex 300 Printer series. If you are not trained on this printer, contact HP Education or HP Training to enquire about becoming 'HP Service Qualified' for this printer.

Firmware update

The first step to take when trying to clear an error with the printer is to check that the firmware installed in the printer is the latest available. Firmware updates often include fixes for common problems, and simply updating the firmware can often resolve the problem. New firmware can be downloaded here:

http://www.hp.com/go/latex300/support/.

USB firmware update

If it is not possible to perform a firmware update using the Embedded Web Server (for instance, if the printer has a System Error and the Embedded Web Server is inaccessible), it is still possible to do it using a USB flash drive.

1. Turn off the printer.

2. Ensure that your USB flash drive contains a valid FMW firmware file and no other files.

3. Connect the USB flash drive to the USB host port on the Formatter.

4. Turn on the printer and follow the instructions on the front panel.

Troubleshooting system error codes

The System Error Codes chapter contains a list of system error codes, their respective descriptions, and recommended corrective actions: System error codes on page 89. Try one recommended action at a time and check whether the error code has disappeared.

If you have an error code which is not documented in this Service Manual or you have an error which you cannot resolve, then report the error to the HP Response Center or the nearest HP Support Office. When reporting the error, have the following information ready:

- Model and Serial Number of the printer.

- Which firmware revision the printer is using (see note below).

- The complete error number

NOTE: When reporting the System Error Code, make sure that you supply the full Error Code and the firmware version. Without this information, HP Support Personnel cannot help you.

- The Printer Information Pages. Select the "all pages" tab. See videos at:

  http://www.hp.com/supportvideos

  and

  http://www.youtube.com/HPSupportAdvanced

- Which RIP the customer is using (name, version, driver version, etc.).

Performing a service test on a failed assembly

If possible, always perform a Service Test on the component/assembly that you are about to replace, just to make sure that is the component/assembly that has failed.

📝 **NOTE:** If the test on that component/assembly passes, you should NOT replace it

For information on the Service Tests and how to use them see Service Tests, Utilities, and Calibrations on page 229.

Performing the necessary service calibrations

Is the printer calibrated correctly after replacing a component? For information on the Service Calibrations and how to use them refer to Service Tests, Utilities, and Calibrations on page 229

📝 **NOTE:** Remember that certain Calibrations are required even if an Assembly has been disassembled to gain access to another Assembly or Component.

The printer does not power on

To resolve printer power-up problems, try the following:

1. Check that the Power Switch on the BACK of the printer is in the ON position.

2. Check to see if any of the LEDs on the Power Switch are On. If any of the LEDs are On, then see "How to read the power switch LEDs on page 61" for more information. If none of the LEDs are on, check that the plug is well connected.

3. Check if the Circuit Breaker (Ground fault Interrupter) of the customer electrical installation has not blown.

4. Check the status of the Formatter PCA's troubleshooting LEDs. See "How to read the Formatter LEDs" (How to read the Formatter LEDs on page 61) for more information.

5. Check that the Front-Panel Cable is correctly connected to the Electronics Module. Also make sure that the Front-Panel cable is not damaged.

6. Replace the Power Supply Unit page 457.

How to read the power switch LEDs

The LEDs located above the power switch (at the rear of the printer) indicate the status of power supply to the printer.

1. When only the **Amber LED** is On:

   ● The printer has been switched off using the Power button beside the front panel.

   ● The Power Supply Unit delivers only 5 V standby power, which is needed to restart the printer after the Power button is pressed (the Formatter starts the printer).

2. When the **Blue LED** is On: The Power Supply Unit delivers standard "ATX" power for the Electronics Module PCAs (+12 V, +5 V, –5 V, –12 V, and so on). All the functions of the Electronics Module, such as the Embedded Web Server, are fully operational.

3. When the **Green LED** is On: The Power Supply Unit delivers "analog" 24 V and 42 V power to enable printing.

If you turn on the printer at the front panel, and the Blue LED does not come on, there is a problem. Turn off the printer using the switch at the rear, then turn it on again using the same switch. If the Blue LED still does not come on, replace the Power Supply Unit.

If Blue LED is ON but Green is OFF, you will probably see an error reported on the front panel as the printer starts up. If no error is reported, but you continue to have problems when turning on the printer from the front panel, see 'How to read the Formatter LEDs' below.

How to read the Formatter LEDs

The LEDs located on the Formatter can help to troubleshoot the printer. The LEDs can either be on or off; different combinations can indicate different problems.

The following image shows the three Formatter LEDs, which are numbered from the outer part: number I at the most external part, number II in the middle, number III at the most internal part.

Use the following table to interpret the LEDs and find the source of the problem. Remember that you should read these LEDs when you press the Power button.

Some combinations may require you to replace two or more components. In this case, always replace one component at a time. Test the printer to see if the problem has disappeared (check the LEDs again). If the same LED sequence continues, replace the next component indicated in the table.

Power amber LED	Power blue LED	Power green LED	Most external Formatte r 0 I LED	Formatte r II LED	Most internal Formatte r III LED	Front panel status	Problem and recommendations
Off	Off	Off	Off	Off	Off	Off	The printer is not receiving electrical power. See "The printer does not power on" on <u>The printer does not power on on page 60</u>
On	Off	Off	Off	Off	Off	Off	The Power key fails to turn on the printer. 1. Turn off the printer using the power switch at the back of the printer. Wait for 5 seconds and turn the printer back on using the same switch. 2. If the problem persists, replace the front panel.
Off	On	Off	Off	Off	Off	Off	There is a power failure in the Formatter. 1. Reseat the power connector in the Formatter. 2. Turn the printer on again. 3. If the problem persists, replace the PSU. 4. If the problem persists, or if the boot process starts, replace the Formatter.
Off	On	Off	On	Off	Off	Off	The Formatter BIOS is unable to start. Replace the formatter.
Off	On	Off	Flashing	Off	Off	Off	The Formatter BIOS cannot detect the Hard Disk Drive. 1. Reseat the Hard Disk Drive connectors. 2. Replace the Hard Disk Drive.
Off	On	Off	On	Flashing	Off	Off	The operating system has experienced a fatal error. Replace the Hard Disk Drive.

Off	On	Off	On	On	Off	Off	There is a communication failure in the Formatter.
							1. Reseat the Formatter connections to all other components.
							2. Replace the Formatter.
Off	On	Off	On	On	Flashing	Off	There is an initialization failure in the Formatter. Replace the Formatter.
Off	On	Off	On	On	On	Off	There is an initialization failure in the front panel.
							1. Reseat the front panel cable.
							2. Replace the front panel.

How to read other LEDs

The printer electronics allow for many self-checks that will result in a definite system error when something goes wrong. Therefore, it is not so important to know what the LEDs in other parts of the electronics mean. However, they are explained here for reference.

PrintMech PCA

The LEDs in the PrintMech PCA are the following.
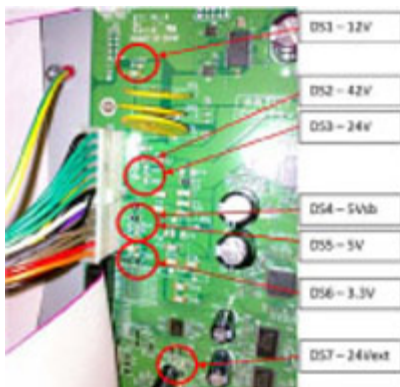
In normal operation all LEDs will be on.

If any of them are off, power from the corresponding voltage line is not reaching the PrintMech PCA. There could be a problem with the cable connections from the other electronic boards to the PrintMech PCA, in the Power Supply Unit, or in the PrintMech PCA itself. If none of these resolves the problem, you can also replace the cables.

Heater control modules (sine-wave converters)

State explanation

0 = OFF state

- Status = Off

- PWM LED = Off

- AC OK LED = Off

1 = ON state: input voltage within range

- Status = Off

- PWM LED = On

- AC OK LED = On

2 = Input voltage > 60 V AC and < 135 V AC (approximately)

- Status = Off

- PWM LED = On

- AC OK LED = Off

3 = Input voltage < 60 V AC (approximately)

- Status = Off

- PWM LED = Off

- AC OK LED = Off

4 = Over Temperature Protection (OTP) state

- Status = Off

- PWM LED = Off

- AC OK LED = On

5 = Latched protection state

- Status = Off

- PWM LED = Off

- AC OK LED = Off

Voltage check at installation

This chapter describes how to check that the voltages are appropriate to operate the printer.

Always refer to the site preparation guide and power voltage configuration information.

⚠ WARNING! Risk of electrical hazard! The procedures described below must be performed only by a certified electrician and always according to local regulations.

Correct voltage

Nominal input voltage range: 200–240 V plus/minus 10% tolerance (as described in the site preparation guide). Voltage measurement must be carried out while the printer is printing at full power.

Incorrect voltages

High voltages

Voltages higher than 264 V will severely damage the printer components.

Lower voltages

Voltages lower than 180 V may produce system errors in the printer. The printer will not be able to work.

Voltage range (real)	System error
60 - 140 V	14.74:01
< 60 V	14.73:01

Troubleshooting substrate jams or printhead crashes

The failure modes "substrate jam" and "head crash" are grouped together because in many cases a substrate jam causes the substrate to lift up into the Carriage path and cause a Printhead crash, thus causing many substrate jam failures to be detected as head crashes.

See the user's guide for instructions on how to respond to a substrate jam. Here are some additional tips.

- Let the printer cool down before touching the internal enclosures of the printer's curing modules.

- Always clear substrate jams from the front of the printer.

- Before loading, check the leading edge of the substrate for damage or excessive curling, and that the edge holders are in the parking possition.

- If the substrate is self-adhesive, check that the backing (the liner) has not become detached. This is quite common in Cast Self-Adhesive Vinyl printing materials.

- Check that the substrate preset selected during the loading process is the correct one for the substrate in use.

- Try loading the substrate manually.

- Try using the edge holders provided with the printer.

- Before printing, confirm that the front panel option "settings> Substrate handling options > Bypass job start safely" is OFF.

- Check that the material is loaded with the printing surface facing up.

Take-up reel usage tips

Correct usage of the Take-up Reel is very important to avoid substrate jams. In some cases, setting it up wrongly can produce it to wind in the opposite direction than expected or even cause substrate jams at the end of a job, while curing the final part of the printed image.

To avoid these issues, it is always recommended to follow all steps described in the user's guide chapter "Handle the substrate" (under the heading "The take-up reel") with the addition of the tips described in this chapter.

Before selecting the winding direction (user's guide, step19)

Maintain the winding-direction switch in the off position

Make sure to maintain the winding-direction switch in the off position until the substrate has been attached to the take-up reel core and the tension bar has been inserted.

Selecting the winding direction (user's guide, step 19)

To ensure correct winding, the correct winding direction must be selected according to how the substrate has been attached to the take-up reel core. See the illustrations below.
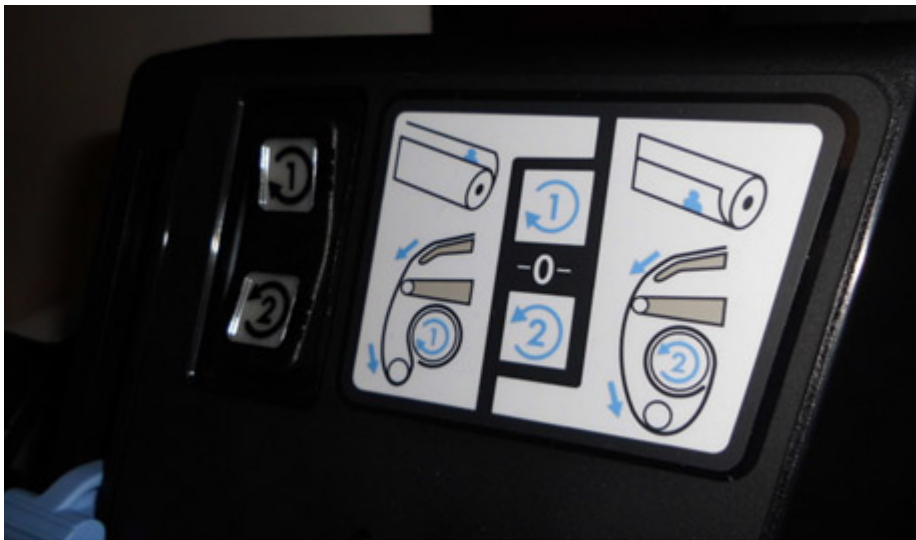
The printer continuously rejects printheads

To resolve printhead rejection problems, do the following:

1. Clean the flex contacts on the Printhead and in the Carriage Assembly using the Carriage Interconnect Wiper (see the user's guide) and try again.

2. If the conflictive Printhead is a Cyan/Black or a Yellow/Magenta, then swap the failed Printhead with a Printhead that is known to be working, and check if the error follows the printhead:

   ● If the error follows the Printhead try to recover the Printhead by cleaning the contact again, if that failed, replace the Printhead.

   ● If the error does not follow the Printhead, clean again the Carriage Interconnect and check for damage, check the Carriage Interconnect if appropriate.

3. If all the Printheads are rejected (the status message on the front panel does not show "OK" for all the Printheads), perform the 1. Electrical System Menu on page 231.

The cutter does not function (Latex 315/335/360/365/370/375 only)

Under certain circumstances the cutter will not cut the substrate. This is mainly when the take-up reel is enabled, but there are other circumstances when the cutter will not cut.

● If the settings for the RIP have disabled the Cutter, but the customer has set the front panel settings to cut, the customer could expect it to cut at the end of the job.

● If the customer presses the 'Scissors' icon, but the Cutter is disabled on the front panel.

● If the substrate being printed on cannot be physically cut because it is too thick.

The customer can enable and disable the cutter from the front panel (but remember this will be overridden by the RIP). To enable the cutter from the front panel; select the settings icon, then substrate, then substrate handling options > Enable/Disable.

Troubleshooting the printer heaters

Use this procedure if the resistors have failed. For this procedure you need a voltage-current tester like the one shown in the pictures to measure resistances. If the printer has been printing, allow enough time (about an hour) to cool down so that the resistance values will be correct when they are measured.

Important safety notice: Heating coils operate at hazardous voltages capable of causing death or serious personal injury. Disconnect both power cords before servicing the printer.

Measuring Print Zone Heaters (Latex 360/365/370/375 only)

The resistive value of a print zone heater must be between 107.8 and 114.4 Ohms. If the value is not in this range the heater must be changed.

The resistive value of the 3 printzone heaters can be measured from one of the cables connected to the Air Curtain and Print Zone Heaters PCA (it is necessary to remove the E-Box extension cover to access the cable):
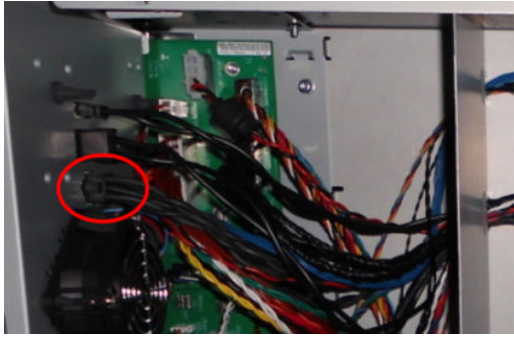
When the cable connector is in the position shown in the below picture:

- The 2 pins on the left allow you to measure the value of the heater closest to the service station.

- The 2 pins in the center allow you to measure the value of the heater in the center.

- The 2 pins on the right allow you to measure the value of the heater closest to the ink delivery station.
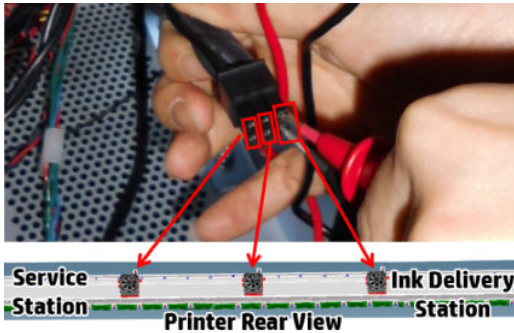
If any of the resistive values is out of range, check that the problem is not caused by the cable measuring the value directly at the heater connector (it's necessary to remove the right cover, left cover, and rear cover to access to the connectors):

Measuring Curing Modules Heaters

The resistive value of a curing module heater must be between 34.33 and 36.45 Ohms. If the value is not in this range the heater must be changed.

All the curing modules heaters can be measured from the connector of one of the cables connected to the Curing Power interconnect PCA (to have access to the connector, the left curing module cover must be disassembled):

When the connector of cable below is in the position shown, the pins of the connector match with the position of the heaters in the curing module:

If any of the resistive values is out of range, check that the problem is not caused by the cable. Measure the value directly at the heater connector (it's necessary to remove the curing left and right covers, and the curing recirculation cover to access the connectors):

Measuring Air Curtain Heaters (Latex 360/365/370/375 only)

The resistive value of a curing module heater must be between 36,41 and 40,25 Ohms. If the value is not in this range the heater must be changed.

Both air curtain heaters can be measured from the connectors of two cables connected to the Curing Power interconnect PCA highlighted connectors (to have access to the connector, the left curing module cover must be disassembled):

One of the connectors has 2 pins, one is the "ground" pin, and is shared between both resistors. The other connector has only one connected pin. The following picture shows how to measure the value of the two resistors:
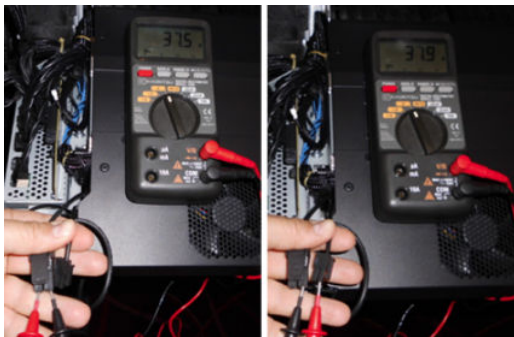
If any of the resistive values is out of range, check that the problem is not caused by the thermal switch, or the "connections" to the thermal switch (in order to do so, you must disassemble the air curtain module).

How to interpret the service information pages

The service information pages contain the following information:

- Current information
- Usage information
- Event logs
- Calibration status
- Connectivity configuration
- All pages

It is possible to print the service information pages through the Embedded Web Server:

- Support tab > Service Support > Printer Information.
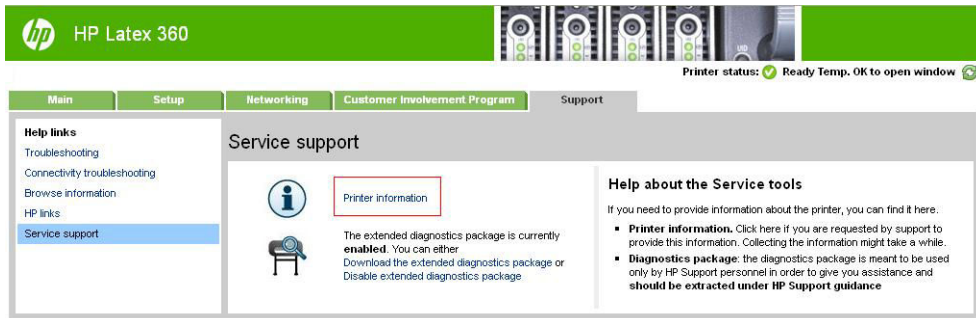
Main characteristics

- Available in English only (except the current information page).

- Each page can be printed from the Web browser.

- Each page can be sent by email from the Web browser.

Current information (1 of 2)

The first section is generic information and is available in every tab. It displays information such as the current level of firmware installed, the serial number of the printer, and so on.

This page is in two parts: The first part displays information on the following:

- Current printer configuration

- Substrate loaded information

- Current printhead kit information

Current information (2 of 2)

The second part displays information on the following:

- Current ink cartridge information

- Maintenance cartridge

Current Substrate, Printhead and Ink Information (2 of 2)

Date:	Jan 29, 2014 12:25:41 PM	Product:	HP Latex 360 Printer	Serial Number:	MY32R19014
Firmware:	s14-	Product number:	B4H70A	Service ID:	23078
Supported Ink Cartridges:				HP 831 / HP 831A / HP 831B / HP 831C	
Printer status:				Ready - Temp. OK to open window	

Current Ink Cartridge Info (I)

	Status	Status Code	Product Name	Product Number	Serial Number	Install Date	Warranty Status
Magenta	OK	0x00000001	HP 831	CZ702A	2886676-5-7	20130418	In warranty
Light magenta	OK	0x00000001	HP 831	CZ705A	1292768-5-7	20130418	In warranty
Light cyan	OK	0x00000001	HP 831	CZ704A	124296-5-7	20130418	In warranty
Cyan	OK	0x40000001	HP 831	CZ701A	2853492-5-7	20130418	In warranty
Latex Optimizer	OK	0x00000001	HP 831	CZ706A	246308-5-7	20130418	In warranty
Yellow	OK	0x00000001	HP 831	CZ703A	3308176-5-7	20130418	In warranty
Black	OK	0x00000001	HP 831	CZ700A	3326284-22-7	20280503	In warranty

Current Ink Cartridge Info (II)

	Purge	Expiration Date	Manufacturer	Capacity	Level	Used non-HP Ink
Magenta	Valid to purge	20150811	HP	620 ml	32 %	false
Light magenta	Valid to purge	20150808	HP	620 ml	77 %	false
Light cyan	Valid to purge	20150806	HP	620 ml	79 %	false
Cyan	Valid to purge	20150811	HP	620 ml	13 %	false
Latex Optimizer	Valid to purge	20150806	HP	620 ml	57 %	false
Yellow	Valid to purge	20150812	HP	620 ml	21 %	false
Black	Valid to purge	20151211	HP	620 ml	44 %	false

Printhead Cleaning Kit

| Status: | OK | Level: | 65 % | Product Number: | CZ681A |

Printer usage information (1 of 4)

This page contains the following information:

- Printer usage

- Usage per printhead slot

- Usage per cartridge slot

- Substrate usage per substrate type

Printer Usage Information (1 of 4)

Date:	Jan 29, 2014 12:34:00 PM	Product:	HP Latex 360 Printer	Serial Number:	MY32R19014
Firmware:	s14-	Product number:	B4H70A	Service ID:	23078
Supported Ink Cartridges:					HP 831 / HP 831A / HP 831B / HP 831C
Printer status:					Ready - Temp. OK to open window

Printer Usage

Total printed substrate:		11.41 m² / 122.76 ft²	Total number of prints:	7

Usage per Printhead Slot (I)

	Color	Product Number	Printheads Used	Total Insertions
Slot 1	Latex Optimizer-Latex Optimizer	CZ680A	2	13
Slot 2	Light cyan-Light magenta	CZ679A	0	4
Slot 3	Black-Cyan	CZ677A	1	2
Slot 4	Black-Cyan	CZ677A	1	5
Slot 5	Magenta-Yellow	CZ678A	1	7
Slot 6	Magenta-Yellow	CZ678A	3	5

Usage per Printhead Slot (II)

	Nozzles Out
Slot 1	P 454 520 1005 1009 1011 1019 1021 1035 1039 1048 P 425 545
Slot 2	c 452 548 837 888 890 1041 1045 1053 1055 m 306 330 380 442 533 591 593 703 726 784 843 847 864 899 973 1031 1054
Slot 3	K 646 650 832 942 C 20 181 336 338 340 918 927 976
Slot 4	K 411 413 415 417 419 421 423 425 434 438 450 564 604 672 812 868 1050 1051 1052 1053 1055 C 6 7 8 9 10 12 14 16 31 35 45 51 ...
Slot 5	M 186 194 427 897 1020 Y 372 394 457 748 1054
Slot 6	M 363 460 464 518 704 860 951 955 956 958 1037 1055 Y 488 721 862

Usage per Cartridge Slot

	Product Number	Usage
1 - Magenta	CZ702A	3 Cartridges / 50 cc
1 - Magenta	CZ684A	0 Cartridges / 0 cc
1 - Magenta	CZ690A	0 Cartridges / 0 cc

📝 **NOTE:** The sum of the substrate used for each substrate type may be lower than the total amount of substrate used by the printer. This is because the latter figure is saved in the backup EEROM in the ISS PCA. If the Solid State Disk is replaced, the substrate used per substrate type is reset to zero, but the total substrate used is recovered from the EEROM.

Printer usage information (2 of 4)

- Component usage
- Maintenance Usage
- Job accounting I
- Job accounting II

Date:	Jan 29, 2014 12:34:00 PM	Product:	HP Latex 360 Printer	Serial Number:		MY32R19014
Firmware:	s14-	Product number:	B4H70A	Service ID:		23078
Supported Ink Cartridges:					HP 831 / HP 831A / HP 831B / HP 831C	
Printer status:					Ready - Temp. OK to open window	

Component Usage

Carriage (#cycles):	3200	TrailingCable:	3200	Ink tubes (#cycles):	3200
Belt (#cycles):	3200	Scan motor (#cycles):	3200	Substrate cuts (#events):	1
Carr Axis Distance (m):	232	Subst motor(m of subst length):	531	Vacuum Fans (hrs):	0
OMAS (m. media length):	0	OMAS nav. success (count):	80	OMAS nav. failures (count):	0
Subst length total (m):	0	PH Cleaning Ctg (cc):	10000005	PH Cleaning Ctg (mm):	731
SVS motor (#cycles):	1100	Rack motor(#cycles):	300	Primer (#primes):	68
Drop Detector (hrs):	0	Aerosol Fan (hrs):	0	Aerosol filters (cc):	0
Line sensor (hrs):	0	SOL (hrs):	0	SOL shutter (#cycles):	1
APS pump (hrs):	75	APS pump (#cycles):	500	Heater resistor(hrs):	0
Heater fans(hrs):	0	Curing resistors(hrs):	3	Curing fans(hrs):	0
Top cooling fans(hrs):	3	Heating IR sensor(cc):	175932	Curing IR sensor(cc):	175932
Printing time (hrs):	1	Power-on time (hrs):	674	Soft On/Off (#cycles):	17
Hard On/Off (#cycles):	72	Prints (count):	2	Ink consumed total (cc):	156002
TOTAL # Scan axis (cycles):	3200	Last OMAS status:	0		

Maintenance Usage

Name	Current	History

Job Accounting(I)

Date	Print mode	Job name	Efficiency Mode
2014-01-29 11:29:24	300dpi-8P-Bidi-40ips-Ink-L	Calibration status	false
2014-01-29 11:14:37	300dpi-8P-Bidi-40ips-Ink-L	Calibration status	false
2014-01-29 11:04:34	300dpi-8P-Bidi-40ips-Ink-L	Usage information	false
2014-01-29 10:56:59	300dpi-8P-Bidi-40ips-Ink-L	Connectivity configuration	false
2014-01-27 10:59:41	300dpi-8P-Bidi-60ips-Ink-L	kaley-cuoco-hot-640x400~1	false
2014-01-27 10:52:33	300dpi-8P-Bidi-60ips-Ink-L	kaley-cuoco-hot-640x400~1	false

Printer usage information (3 of 4)

- Job accounting III
- Job accounting IV
- Job accounting V
- Job accounting VI

Date:	Jan 29, 2014 12:34:00 PM	Product:	HP Latex 360 Printer	Serial Number:		MY32R19014
Firmware:	s14-	Product number:	B4H70A	Service ID:		23078
Supported Ink Cartridges:					HP 831 / HP 831A / HP 831B / HP 831C	
Printer status:					Ready - Temp. OK to open window	

Job Accounting(III)

Date	Result	Print time	Curing Temp.	Advance Factor	Input Tension	Vacuum printing
2014-01-29 11:29:24	PRINTED	5832	116 C	0.0 mm/m	15 N/m	35 mmH2O
2014-01-29 11:14:37	PRINTED	3033	64 C	0.0 mm/m	15 N/m	35 mmH2O
2014-01-29 11:04:34	PRINTED	2964	64 C	0.0 mm/m	15 N/m	35 mmH2O
2014-01-29 10:56:59	PRINTED	3012	64 C	0.0 mm/m	15 N/m	35 mmH2O
2014-01-27 10:59:41	PRINTED	3247	69 C	0.0 mm/m	15 N/m	35 mmH2O
2014-01-27 10:52:33	PRINTED	2362	69 C	0.0 mm/m	15 N/m	35 mmH2O
2014-01-27 10:38:31	PRINTED	2242	69 C	0.0 mm/m	15 N/m	35 mmH2O
2014-01-27 10:08:27	PRINTED	2233	69 C	0.0 mm/m	15 N/m	35 mmH2O
2014-01-27 09:05:38	PRINTED	4438	69 C	0.0 mm/m	15 N/m	35 mmH2O
2014-01-23 09:11:34	PRINTED	4708	64 C	0.0 mm/m	15 N/m	35 mmH2O

Job Accounting(IV)

Date	Subst. ID	Substrate Name	OMAS Navigation	Double-Sided	Mute Speed/Svg	Cutter Used
2014-01-29 11:29:24	B5AA0DC4CD7B15B...	3M CONTROLTAC IJ180C v5	Yes	Off	No / No	Yes
2014-01-29 11:14:37	200100	Generic Paper	Yes	Off	No / No	Yes
2014-01-29 11:04:34	200100	Generic Paper	Yes	Off	No / No	Yes
2014-01-29 10:56:59	200100	Generic Paper	Yes	Off	No / No	Yes
2014-01-27 10:59:41	200100	Generic Paper	Yes	Off	No / No	No
2014-01-27 10:52:33	200100	Generic Paper	Yes	Off	No / No	No
2014-01-27 10:38:31	200100	Generic Paper	Yes	Off	No / No	No
2014-01-27 10:08:27	200100	Generic Paper	Yes	Off	No / No	No
2014-01-27 09:05:38	200100	Generic Paper	Yes	Off	No / No	No
2014-01-23 09:11:34	200100	Generic Paper	Yes	Off	No / No	Yes

Job Accounting(V)

Date	Vert. Correction	Straightness optimization	Inter-pass delay effect

Printer usage information (4 of 4)

- Machine historical performance

Printer Usage Information (4 of 4)

Date:			Jan 29, 2014 12:34:00 PM	Product:	HP Latex 360 Printer	Serial Number:		MY32R19014
Firmware:			s14-	Product number:	B4H70A	Service ID:		23078
Supported Ink Cartridges:						HP 831 / HP 831A / HP 831B / HP 831C		
Printer status:						Ready - Temp. OK to open window		

MACHINE HISTORICAL PERFORMANCE TABLE

MEASURE NUMBER	DATE	TOTAL CYCLES	ISS/ ENVIRONMENT TEMP.	MOTOR K R	FRICTION AVG.60ips	CURRENT AVG.60ips	FRICTION LIMIT	LUBRICATION STATUS	FRICTION TEST RESULT
1	2014-01-09	1349	27/26 C	0.104004/1.76291	23.9762 N	1.773 A	50 N	0	4 N
2	2014-01-10	1711	26/26 C	0.104645/1.74355	23.6885 N	1.741 A	50 N	0	4 N
3	2014-01-10	1910	27/27 C	0.103775/1.76424	23.5456 N	1.745 A	50 N	0	4 N
4	2014-01-10	1986	29/29 C	0.103455/1.78821	22.3036 N	1.658 A	50 N	0	4 N
5	2014-01-10	2017	28/27 C	0.103485/1.76404	22.754 N	1.691 A	50 N	0	4 N
6	2014-01-13	2044	25/24 C	0.104019/1.74405	26.2381 N	1.94 A	50 N	0	4 N
7	2014-01-13	2050	26/24 C	0.103821/1.7421	25.5139 N	1.89 A	50 N	0	4 N
8	2014-01-13	2055	26/24 C	0.103958/1.73788	25.7242 N	1.903 A	50 N	0	4 N
9	2014-01-17	2625	25/24 C	0.104095/1.7821	26.0139 N	1.922 A	50 N	0	4 N
10	2014-01-20	2684	27/26 C	0.103897/1.79868	23.3432 N	1.728 A	50 N	0	4 N
11	2014-01-20	2690	28/27 C	0.103592/1.7798	22.3452 N	1.659 A	50 N	0	4 N
12	2014-01-21	2618	26/25 C	0.104111/1.76476	25.0972 N	1.854 A	50 N	0	4 N
13	2014-01-21	2627	26/24 C	0.104553/1.76064	25.2182 N	1.855 A	50 N	0	4 N
14	2014-01-22	2623	28/27 C	0.103882/1.76337	23.1647 N	1.715 A	50 N	0	4 N
15	2014-01-22	2631	28/26 C	0.103577/1.75557	23.0972 N	1.715 A	50 N	0	4 N
16	2014-01-27	2749	25/25 C	0.104645/1.76566	25.9067 N	1.904 A	50 N	0	4 N
17	2014-01-27	2934	28/26 C	0.103622/1.76903	24.0635 N	1.786 A	50 N	0	4 N

Event logs

This page contains the following information:

- Last 20 System Error Codes (which prevented the printer from booting)

- Last 20 System Warnings (which did not prevent the printer from booting, but which required the user to acknowledge the problem)

- Printhead Error log

- Cartridge Error log

- GPIO Sensor Status

- Current alerts

In this section the printer reports the current status of the printer: Is the window open? Are all the printheads installed? And so on.

This also helps you to understand whether the sensors are working. For example, you could receive information with loaded substrate, check the status of the "Substrate Presence Sensor", remove the substrate from the substrate path, or retrieve the service plot information again to check if the status has changed.

This may help in several circumstances for advanced troubleshooting. For example, to see the pressure sensor millivolts when receiving the service plot (without measuring it directly). This can help R&D engineers understand the real status of the pressurization system (same for the sensors inside the ink cartridges).

Date:	Jan 29, 2014 12:45:23 PM	Product:	HP Latex 360 Printer	Serial Number:	MY32R19014
Firmware:	s14-	Product number:	B4H70A	Service ID:	23078
Supported Ink Cartridges:				HP 831 / HP 831 A / HP 831 B / HP 831C	
Printer status:				Ready - Temp. OK to open window	

System Errors

Event#	Severity	Error Code	Internal Code	F/W Version	Media Usage	Line	Date
1	severe	79:04	1074794497	TSTNX_91_00_00.1		RpcSpaceProcess.cpp:624	20140127
2	severe	79:04	-1161889074	TSTNX_91_00_00.1		NvmCommon.cpp:800	20140123
3	severe	79:04	-1161889074	TSTNX_91_00_00.1		NvmCommon.cpp:800	20140123
4	severe	79:04	-1161889074	TSTNX_91_00_00.1		NvmCommon.cpp:800	20140123
5	severe	79:04	-1161889074	TSTNX_91_00_00.1		AssertFail.cpp:39	20140116
6	severe	79:04	-1161889074	TSTNX_91_00_00.1		AssertFail.cpp:39	20140116
7	severe	79:04	-1161889074	TSTNX_91_00_00.1		AssertFail.cpp:39	20140116
8	severe	79:04	-1161889074	TSTNX_91_00_00.1		AssertFail.cpp:39	20140116
9	severe	79:04	-1161889074	TSTNX_91_00_00.1		AssertFail.cpp:39	20140116
10	severe	79:04	-1161889074	TSTNX_91_00_00.1		AssertFail.cpp:39	20140116
11	severe	79:04	-1161889074	TSTNX_91_00_00.1		AssertFail.cpp:39	20140116
12	severe	79:04	-1161889074	TSTNX_91_00_00.1		AssertFail.cpp:39	20140116
13	severe	79:04	-1161889074	TSTNX_91_00_00.1		AssertFail.cpp:39	20140116
14	severe	79:04	-1161889074	TSTNX_91_00_00.1		UrlManager.cpp:421	20140113
15	severe	79:04	-1161889074	TSTNX_91_00_00.1		AssertFail.cpp:39	20140109
16	severe	79:04	-1161889074	TSTNX_91_00_00.1		AssertFail.cpp:39	20140109
17	severe	79:04	-1161889074	TSTNX_91_00_00.1		AssertFail.cpp:39	20140109
18	severe	79:04	-1161889074	TSTNX_91_00_00.1		AssertFail.cpp:39	20140109
19	severe	79:04	-1161889074	TSTNX_91_00_00.1		AssertFail.cpp:39	20140109
20	severe	79:04	-1161889074	TSTNX_91_00_00.1		BoardElektra.cpp:235	20140109

System Warnings

Event#	Severity	Error Code	Internal Code	F/W Version	Media Usage	Line	Date
1	advisory	25.2:10	273711114	TSTNX_91_00_00.1		InkSupplyNarwhal.cpp:6103	20160115
2	advisory	25.3:10	273711115	TSTNX_91_00_00.1		InkSupplyNarwhal.cpp:6104	20160115

System warnings

- The **Line** and **Internal Code** do not provide much information, but are useful in the case of escalating a problem to the division (different internal error codes can point to the same error code (e.g. 01.10:10)).

- **Substrate Usage** (in square meters) and **Date** (from the printer's internal clock (RTC)) help you to understand if the printer has been used (substrate usage) and how much time has passed since the last error.

System Warnings

Event#	Severity	Error Code	Internal Code	F/W Version	Media Usage	Line	Date
1	advisory	25.2:10	273711114	TSTNX_91_00_00.1		InkSupplyNarwhal.cpp:6103	20160115
2	advisory	25.3:10	273711115	TSTNX_91_00_00.1		InkSupplyNarwhal.cpp:6104	20160115
3	advisory	25.2:10	273711114	TSTNX_91_00_00.1		InkSupplyNarwhal.cpp:6103	20160115
4	advisory	25.4:10	273711116	TSTNX_91_00_00.1		InkSupplyNarwhal.cpp:6105	20140129
5	advisory	25.4:10	273711116	TSTNX_91_00_00.1		InkSupplyNarwhal.cpp:6105	20140129
6	advisory	21:13	278925314	TSTNX_91_00_00.1		SystemManagerJni.cpp:441	20140128
7	advisory	08:04.1	-2146414591	TSTNX_91_00_00.1		packagemanageralert.cpp:145	20140127
8	advisory	08:04.1	-2146414591	TSTNX_91_00_00.1		packagemanageralert.cpp:145	20140127
9	advisory	08:04.1	-2146414591	TSTNX_91_00_00.1		packagemanageralert.cpp:145	20140127
10	advisory	08:04.1	-2146414591	TSTNX_91_00_00.1		packagemanageralert.cpp:145	20140127
11	advisory	08:04.1	-2146414591	TSTNX_91_00_00.1		packagemanageralert.cpp:145	20140127
12	advisory	08:04.1	-2146414591	TSTNX_91_00_00.1		packagemanageralert.cpp:145	20140127
13	advisory	08:04.1	-2146414591	TSTNX_91_00_00.1		packagemanageralert.cpp:145	20140127
14	advisory	08:04.1	-2146414591	TSTNX_91_00_00.1		packagemanageralert.cpp:145	20140127
15	advisory	08:04.1	-2146414591	TSTNX_91_00_00.1		packagemanageralert.cpp:145	20140127
16	advisory	25.4:10	273711116	TSTNX_91_00_00.1		InkSupplyNarwhal.cpp:6105	20140123
17	advisory	25.3:10	273711115	TSTNX_91_00_00.1		InkSupplyNarwhal.cpp:6104	20140123
18	advisory	25.1:10	273711113	TSTNX_91_00_00.1		InkSupplyNarwhal.cpp:6102	20140123
19	advisory	25.1:10	273711113	TSTNX_91_00_00.1		InkSupplyNarwhal.cpp:6102	20140123
20	advisory	25.1:10	273711113	TSTNX_91_00_00.1		InkSupplyNarwhal.cpp:6102	20140123

Printhead and cartridge error logs

- Printheads ago: History of the last printheads used ('0' represents the current printhead used).

- **Status:** '0' = Working, '1' = No printhead detected, '2' = Replace, '4' = Reseat, '8' = Remove.

- **%Ink Used**: Percentage of the warranty life (1000cc).

- **Error Code**: Specific error code generated by the printer when the printhead has been replaced.

- **Max Recovery:**

  - 0: No manual printhead recovery has been performed on the printhead.

  - 1 or higher: At least one printhead recovery has been performed.

Event Logs (2 of 3)

Date:	Jan 29, 2014 12:45:23 PM	Product:	HP Latex 360 Printer	Serial Number:	MY32R19014
Firmware:	s14-	Product number:	B4H70A	Service ID:	23078
Supported Ink Cartridges:				HP 831 / HP 831A / HP 831B / HP 831C	
Printer status:				Ready - Temp. OK to open window	

Printhead Error Log

Printheads name	Serial Number	Printhead service code	Status	Usage time	% Ink Used	Max Recovery Level	Error Code
1 - Latex Optimizer	4-1-2628178-25-2013	AzUspEbsPcIGDGSLEGI9iA==	0	0 h	0	1	0
	4-1-1991720-4-2013	LSsWH2IXXFPg4QtPAsiA+Q==	4	0 h	0	1	2
	4-1-1991714-4-2013	c9pGEXU1/6mezTiDEPl4aQ==	2	0 h	0	1	2002
2 - Light magenta-Light cyan	4-1-1991697-4-2013	x9ZA6xOiHaUtXh3KFtjGqw==	0	0 h	17	3	80000
3 - Cyan-Black	4-1-1991672-4-2013	I/zbvctqdTx0pSlJxpiPzQ==	0	0 h	64	3	80000
4 - Cyan-Black	4-1-1991659-4-2013	pWA+B9lfI/+DJGMPHG71tw==	0	0 h	64	3	80000
5 - Magenta-Yellow	4-1-1991634-4-2013	b4E3IGokrkSGl0NrxNDsxA==	0	0 h	36	3	80000
	4-1-1991617-4-2013	hkj2TAKePkv+2uHiYcbDDw==	4	0 h	33	3	82002
	4-1-2438360-19-2013	AbNkZjFP1HOmBp+M5BX/bg==	0	0 h	12	3	80000
6 - Magenta-Yellow	4-1-2438360-19-2013	/9UKruPBHg9HRKuP+oQ84g==	0	0 h	12	3	80000
	4-1-1991617-4-2013	hkj2TAKePkv+2uHiYcbDDw==	4	0 h	34	3	82002
	4-1-1991634-4-2013	TXG+YCu0gSHhWT8m5xoJ0w==	0	0 h	35	3	80000

Cartridge Error Log

Color	Serial Number	Exp. Date	In Warranty	% Ink Level	Non-HP Ink	Error Code
1 - Magenta	2886676-5-7	19700117	true	32	false	4000200
	3303816-17-7	19700117	false	100	false	4000200
	1292768-5-7	19700117	true	77	false	4000200
	124296-5-7	19700117	true	78	false	4000200
	1306064-5-7	19700117	false	0	false	4000200
	2853492-5-7	19700117	true	12	false	4000200
	246308-5-7	19700117	true	56	false	0
	3308176-5-7	19700117	true	20	false	4000200

GPIO log and current alerts

Event Logs (3 of 3)

Date:	Jan 29, 2014 12:45:23 PM	Product:	HP Latex 360 Printer	Serial Number:	MY32R19014
Firmware:	s14-	Product number:	B4H70A	Service ID:	23078
Supported Ink Cartridges:				HP 831 / HP 831A / HP 831B / HP 831C	
Printer status:				Ready - Temp. OK to open window	

GPIO Sensors

Name	Value	Units	Name	Value	Units

Current alerts

Id	Area Code	Description
0	System	Ready Temp. OK to open window
1	PDL Languages	Ready Temp. OK to open window
2	System	Cyan slot ink-level sensor is not working properly
3	System	Cyan slot ink-level sensor is not working properly
4	PDL Languages	deleted
5	Ink Delivery	Y-M printhead is low on ink
6	Ink Delivery	Y-M printhead is low on ink
7	Ink Delivery	C-K printhead is low on ink
8	Ink Delivery	C-K printhead is low on ink
9	Ink Delivery	LM-LC printhead is low on ink

Calibrations status

This page contains the following information:

- General calibrations (performed by service engineers)

- Diagnostic log

General calibrations

- **Printhead Alignment** relates to the printhead alignment, which changes to 'pending' when a printhead is replaced and the printhead alignment has not been performed.

  📝 **NOTE:** When a component is replaced, the corresponding calibration is NOT automatically set to 'NOT DONE'. This is because the printer does not know that there is a new part installed.

- **Drop Detector** relates to the drop-detector or service-station calibration

- **Line Sensor** relates to the line-sensor calibration

- **Line Sensor** calibration X axis

- **Line Sensor** calibration Y axis

Diagnostic log

This section displays the details of the calibrations that have been performed on the printer, it also contains useful information, such as whether the particular calibration was successful or not.

Connectivity configuration

This page contains full details of the current configuration of the printer.

| Current information | Usage information | Event logs | Calibration status | Connectivity configuration | All pages |

Connectivity Configuration

Date:	Jan 29, 2014 2:43:39 PM	Product:	HP Latex 360 Printer	Serial Number:	MY32R19014
Firmware:	s14-	Product number:	B4H70A	Service ID:	23078
Supported Ink Cartridges:				HP 831 / HP 831A / HP 831B / HP 831C	
Printer status:				Ready - Temp. OK to open window	

```
================================= IO DIAGNOSTIC PAGE =================================
Installed:                    Yes
IP enabled:                   Yes

---- Diagnostics and Troubleshooting ----      -------- Connectivity Settings --------
The connectivity troubleshooting wizard        Internet connection enabled:      Yes
has not been run recently                      Proxy:                  Direct access


                                               Download/Upload speed limit:    Disabled

                                               Firmware Update Check:          Automatic
                                               Firmware Update Download:       Automatic
```

Connectivity Configuration

Date:	Jan 29, 2014 2:43:39 PM	Product:	HP Latex 360 Printer	Serial Number:	MY32R19014
Firmware:	s14-	Product number:	B4H70A	Service ID:	23078
Supported Ink Cartridges:				HP 831 / HP 831A / HP 831B / HP 831C	
Printer status:				Ready - Temp. OK to open window	

```
==================================== JetDirect PAGE 1 ====================================
--------- General Information ----------      --------------- TCP/IP ----------------
Status:              I/O Card Ready           IPv4:                   Enabled
                                              IPv6:                   Enabled
Model Number:                J8022E           Host Name:             NPI84700F
Hardware Address:        009C0284700F         IPv4 Domain Name:   emea.hpqcorp.net
```

How obtain complete logs to investigate issues

The printer keeps an internal log of its own actions. When a system error occurs, the product log may help you 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 excessive hard disk space.

The printer log can be obtained through the diagnostic package. There are two types:

- Diagnostic package (reduced level)

- Extended diagnostic package (full level)

And there are two ways of retrieving the information:

- With a USB flash drive

- From the Embedded Web Server (EWS)

The **printer.log** file is **only available on the extended diagnostic packag**e; so it is always better to collect the extended diagnostic package.

The best way to collect the printer logs for investigation is:

1. Enable the extended diagnostic package (if not enabled previously).

2. Reproduce the system error or issue.

3. Collect the extended diagnostic package.

4. Disable the extended diagnostic package when no longer required.

When the information has been obtained, it should be attached to the case.

How to know if the extended diagnostic package is enabled?

It is possible to know if the extended diagnostic package is enabled via Embedded Web Server (EWS):

1. Access the EWS by typing the IP address of the product into a Web browser. In the **Support** tab, click **Service support**.

2. Check if this option is **enabled**.
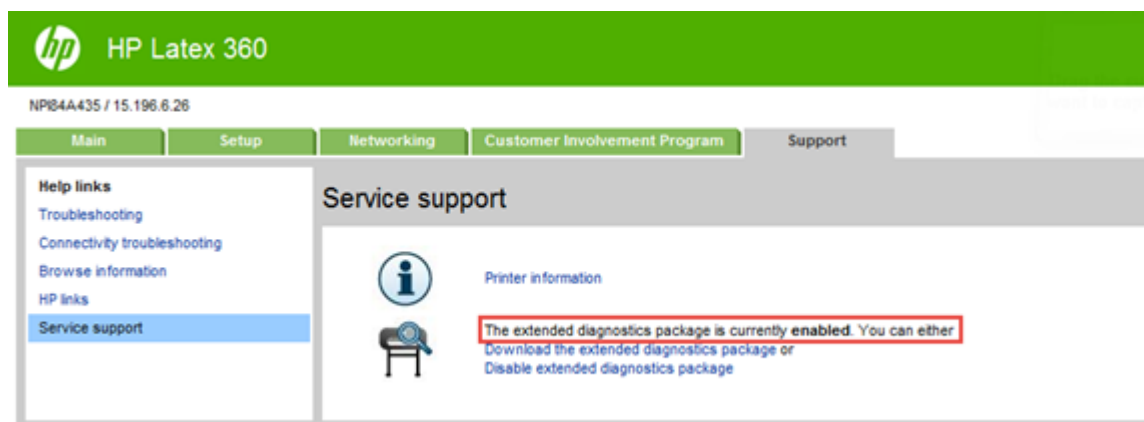
How to enable the extended diagnostic package?

There are three methods to enable the extended diagnostic package: USB, Embedded Web Server (EWS), and from the Front Panel.

1. USB method (recommended):

   a. Create a file in the USB Stick Memory (previously formatted in FAT 32) with the name: **pdipu_enable_elog_loggz.log**.

   > **NOTE:** Be sure that the name of the file created is: **pdipu_enable_elog_loggz.log** (and NOT **pdipu_enable_elog_loggz.log.txt**).
   >
   > Go to **Control Panel ▶ Appearance and Personalization ▶ Folder Options ▶ View (tab)** and uncheck the box **Hide extensions for known file types**.
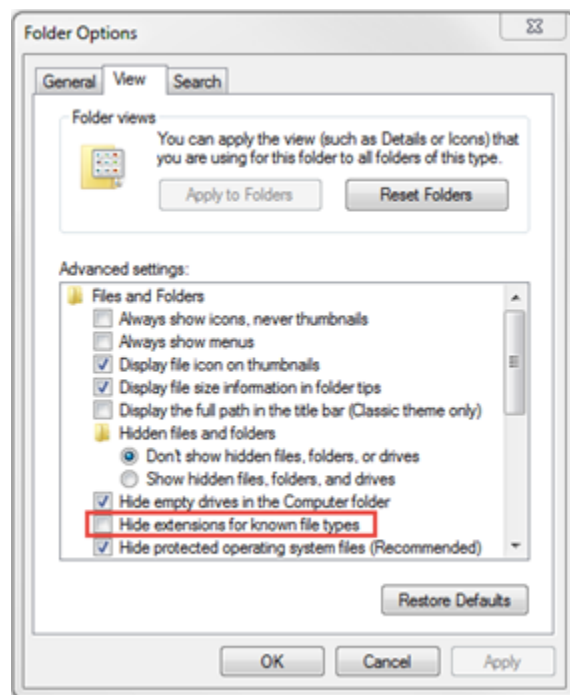
   b. With the printer in Ready mode, connect the USB Stick to the printer and it will guide you by voice, saying: "*Traces are now enabled. You must reboot the printer. You can now detach the USB pen drive*".

   > **NOTE:** If the printer is showing a System Error and it does not reach the Ready condition, it is still possible to activate the Extended Diagnostic Package by inserting the USB Stick just after the System Error appears on the Front Panel. Connect the USB Stick, and you will hear the same indications by voice.

   c. Detach the USB Stick from the printer.

   d. Restart the unit to finish with the log activation process.

2. EWS method:

a. Access the EWS by typing the IP address of the product into a Web browser. In the **Support** tab, click **Service support**.

b. Click **Enable the extended diagnostic package**.

c. The printer should be restarted after enabling or disabling the extended diagnostics package.

3. Front Panel method:

a. With the printer in Ready status, go to **Service Menu** ►**1 Service Utilities** ►**1.2 Electrical System Menu** ►**1.2.2 Enable/Disable Logs**

Also available on diagnostic menu in case that the unit cannot boot due to a System Error (**Diagnostic tests** ►**8. Diagnostic Utilities Menu** ►**8.3 Enable/Disable Logs**

b. Select the **Enable** option and press **OK**.

c. The printer asks you to select the component or subsystem you want to troubleshoot. Select the one you require or any of them if you just want to enable the extended diagnostic package.

d. You must restart the printer to apply the change you have requested.

How to obtain the printer log?

When the extended diagnostic package is enabled, there are two ways to retrieve the printer logs: USB or Embedded Web Server (EWS).

In case that the printer couldn't arrive at Ready status due to a System Error, the only method to obtain the logs is via USB.

1. USB method (recommended):

a. Create a file in the USB stick memory (previously formatted in FAT 32) with the name: **pdipu_enable_elog_loggz.log**. This is the same file used to activate the logs.

> 📝 **NOTE:** Be sure that the name of the file created is this one and NOT **pdipu_enable_elog_loggz.log.txt**.

b. Connect the USB stick to the printer and it will guide you by voice, saying: "*Generating diagnostic package. Please wait*". Now starts the process to download the logs. It may take up to 10 min.

c. When the package has been downloaded, the printer will tell you by voice: "*Diagnostic package successfully complete. You can now detach the USB pen drive*".

d. The diagnostic package will be saved in the USB stick. The package is a file that contains the date in the name. Check that the file is called **usb_elog_loggz_dj_diagnosticext_(P/N)_(S/N).trb** and that its size is not 0 KB.

2. EWS method:

a. Type the IP address of the product into a Web browser. In the **Support** tab, click **Service support**.

b. At any time after enabling the extended diagnostics package, you can download the package by clicking **Download the extended diagnostics package**. Check that the file is called **dj_diagnostic_ext_(P/N)_(S/N).trb** and that its size is not 0 KB.

How to disable the extended diagnostic package?

Remember that after obtaining the extended diagnostic package, it must be disabled; otherwise it could affect the product performance or even cause undesirable side-effects.

There are three methods to disable the extended diagnostic package: USB, Embedded Web Server (EWS) or the Front Panel.

1. USB method (recommended):

    a. Create a file in the USB Stick Memory (previously formatted in FAT 32) with the name: **pdipu_enable_dlog.log**.

        📝 **NOTE:** Be sure that the name of the file created is this one and NOT **pdipu_enable_dlog.log.txt**.

    b. Connect the USB Stick to the printer and the printer will guide you by voice, saying that it is generating the diagnostic package without the printer.log.

        In the normal process, the printer disables the extended diagnostic package and saves the diagnostic package (reduced level) onto the USB even if you don't need it.

    c. When the package has been downloaded, the printer will tell you by voice: "*Diagnostic package successfully complete. You can now remove the USB pen drive*".

    d. Restart the printer.

2. EWS method:

    a. Type the IP address of the product into a Web browser. In the **Support** tab, click **Service support**.

    b. To disable the extended diagnostic package click **Disable the extended diagnostic package**.

    c. Reboot the printer to finish with the process.

3. Front Panel method:

    a. With the printer in Ready status, go to **Service Menu ▶ 1 Service Utilities ▶ 1.2 Electrical System Menu ▶ 1.2.2 Enable/Disable Logs**

        Also available on diagnostic menu in case that the unit cannot boot due to a System Error (**Diagnostic tests ▶ 8. Diagnostic Utilities Menu ▶ 8.3 Enable/Disable Logs**

    b. Select the **Disable** option and press **OK**.

    c. You must restart the printer to apply the change.

3-liter Ink Upgrade accessory

Visual indicators (LED)

In order to provide quick feedback to service people for preliminary troubleshooting for the 3–liter PCA, some status indicators are installed in the most sensitive parts. Indicator placement is shown in the figure below.
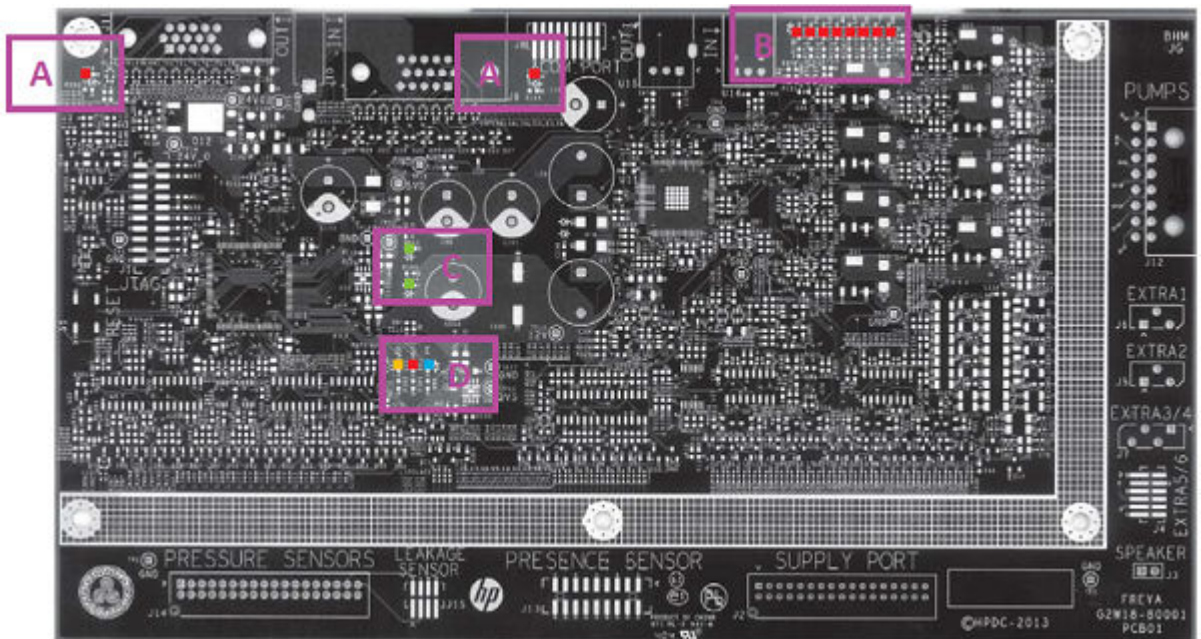
There are four different groups of LEDs according to their functionality:

- TUR and Power input indicators (A LEDs).

- Ink Supply Presence indicators (B LEDs).

- Internal Power Supply indicators (C LEDs).

- System Status indicators (D LEDs).

TUR and Power input indicators
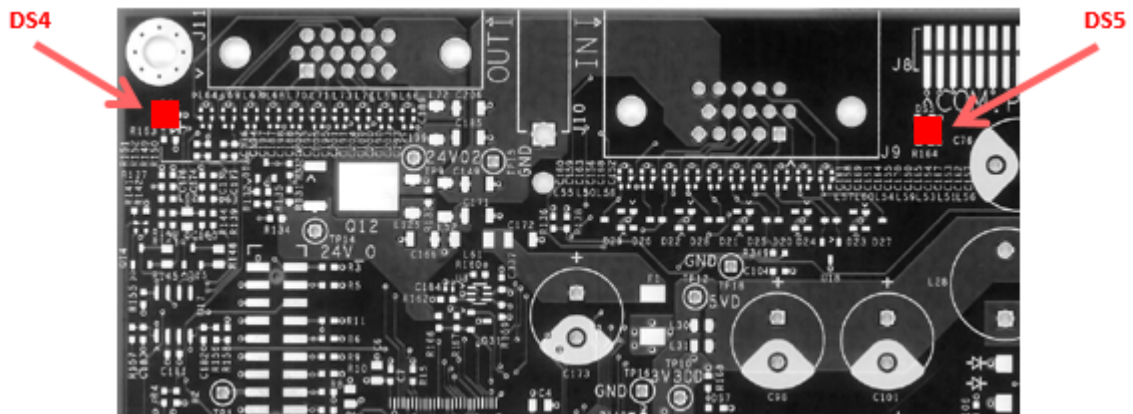
24V main power supply can be provided using one of 3 different available connectors: J8, J9 or J10. When some of those connectors are connected to power supply (system spec 24V +/- 3V), the DS5 LED represented in the image above is glowing. It provides feedback about if system is well powered or not.

The DS4 LED in the image above provides information about if output connector J11 provides power supply or not. The 3–liter PCA is powered on at startup depending on what is connected to J11. The firmware decides, on startup, if it is powered on or not, and if the output pending is short circuited or not. Basically on startup time the printer checks the 24V_O2_MON signal. If ADC value is 24V_O2_MON < 1V it means that output is short circuited and output is NOT powered. It is possible to turn power output on and off through TUR_ONOFF signal.

If nothing is connected to J11 (HD15 output), DS4 could be glowing without output powered.

If some short circuit happens after the printer performs check, the short circuit will be propagated to input connectors.

Ink Supply Presence indicators
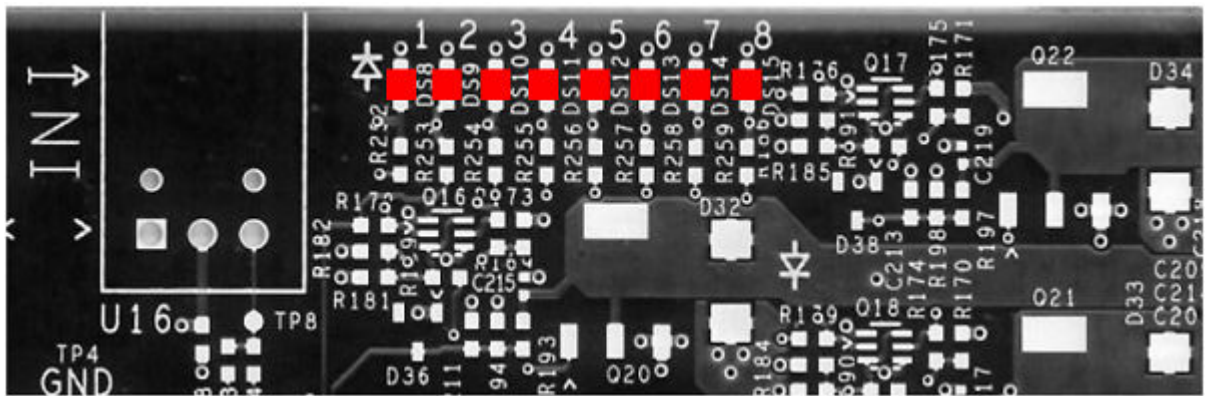
Ink supply presence indicators give feedback about whether ink cartridges are connected and present or not. When indicator is on this indicates that the system is well connected and the ink supply is not present. In that case you cannot pump.

When cartridge is connected, the LED indicator which corresponds to it is OFF.

NOTE: It could be OFF if cable and SIM connector are disconnected.

Internal Power Supply indicators
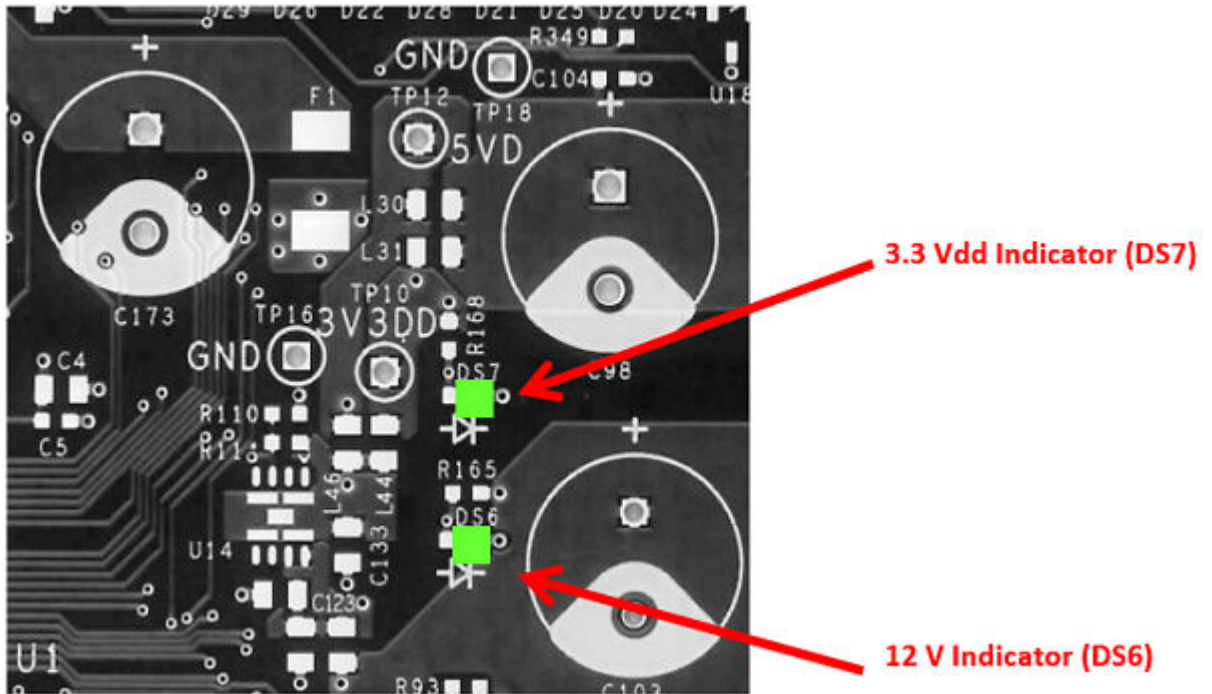
Both green indicators show whether main internal generated voltages are working or not. DS7 refers to Digital Power Supply 3V3 (shown in the upper part of the image above) and DS6 (shown in the lower part) refers to 12V. 12V Power Supply rail is used to provide power to pumps, to generate analog 3V3 voltage used in all sensors as power supply and as a reference for microcontroller Vref ADC.

DS7 must to be always ON, but depending on if something unexpected happens DS6 could be OFF in order to protect system. If 12V rail is OFF all ADCs and measurement systems are not powered. 12V rail could be switched off by firmware for instance to prevent a hard short circuit caused by pumps. When negative pump terminal is connected to chassis, pumps are powered without control. In order to avoid this, the pump power rail is disconnected.

System Status indicators
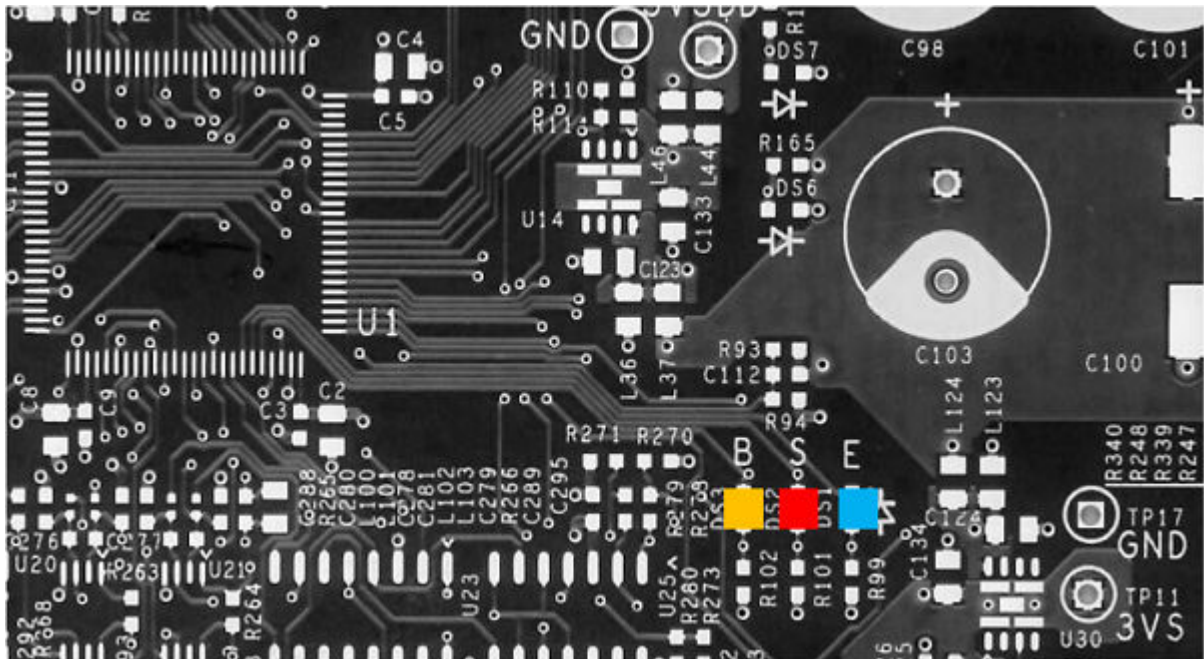
It is used the same way as in other boards which use microcontrollers connected to the main system using CAN protocol.

The red LED, named "S" above, when flashing, indicates Firmware System programmed is working properly. It is a good indicator to show if microcontroller is programmed or not and if it is working as expected. Flashing has a cadence of around 500 msec.

The orange LED, named "B" above, is related to the BUS—CAN connection. If the PCA is connected correctly to main system (printer) and it has a connection it will be flashing in the same way as the red indicator (not at the same time). System is configured by default to restart microcontroller in case of disconnections longer than 1 second.

The blue LED, named "E" above, is a general purpose indicator. This indicator is used to show some exceptions which could happen like pending operations with Accumen (the LED flashes very quickly). If some short circuit event occurs the blue LED will always appear ON.

📝 NOTE: While system is updating firmware from printer or standalone all system LEDs appear OFF. Program process takes a few seconds to be released.

3–liter ink tube kinked

Symptom of the problem

There is not enough ink flow to the affected printhead. The printhead may be suffering from starvation (not able to fire ink because not enough ink is arriving to the printhead) while printing.

Troubleshooting process

1. Remove left printer cover.

1. Remove left cover
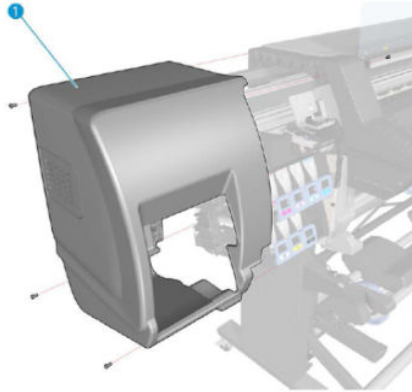
2. Remove ink tubes protector.
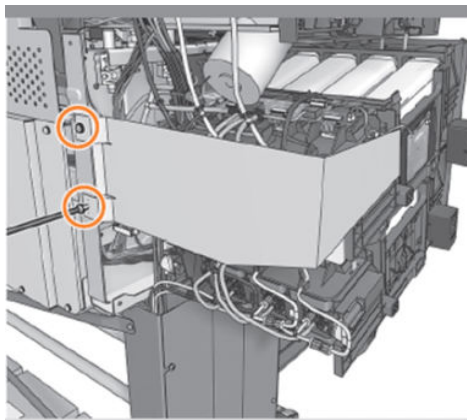
3. Check if there is an ink tube that is kinked.
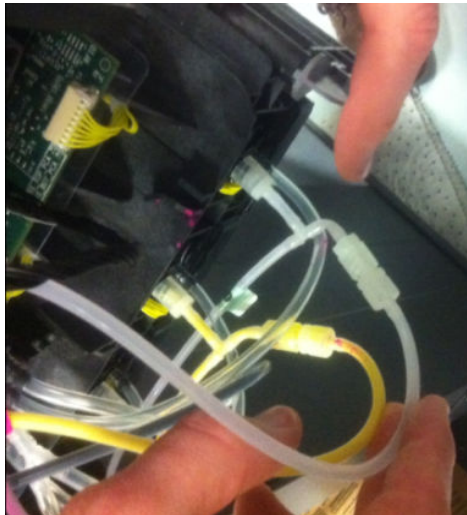
How to proceed

1. Remove and replace affected ink line by a new one.

2. Install a new printhead.

3. Install ink tube protector again.

4. Install left cover taking care not to bend the ink tubes.

Install the tubes protector.
Note: Be careful with not to damage the tubes and cables.

Install the left cover.
Note: Be careful not to damage the tubes and cables.
Pay special attention to the hook located on the inner back side of the left cover as it can damage the ink tube.

3 System error codes

- SE Code: 08:10 – Front Panel not connected or damaged. It appears when the there is a communication error with the device. It might be a hardware error or front panel unplugged

- SE Code: 11:10 – Trailing Cable does not seem to be connected

- SE Code: 12.1:10 – The 12V provided from Printmech to Curing module PCA are out of range (10.8V to 13.2V)

- SE Code: 12.2:10 – Printmech 24V_BULLI_1 to Curing module PCA out of range

- SE Code: 12.3:10 – Printmech 12V_BULLI_2 to Vapor Removal PCA out of range

- SE Code: 12.4:10 – Printmech 24V_BULLI_1 to Vapor Removal PCA out of range

- SE Code: 12.5:10 – Printmech: 12V to ISS, DD, 42Vdc motor drivers, Top cover fans and PZ fans failure

- SE Code: 12.6:10 – Printmech: 42V to Carriage PCA failure

- SE Code: 12.7:10 – Printmech: Hannibal1 24V failure. Check APS relief valve, SVS motor and Rack engage motor

- SE Code: 12.8:10 – Printmech: Hannibal2 24V failure. Check Spit-on roller motor and Primer motor

- SE Code: 12.9:10 – Printmech: Hannibal3 24V failure. Check Inner lights array 1

- SE Code: 12.10:10 – Printmech: Hannibal4 24V failure. Check Inner lights array 2

- SE Code: 12.11:10 – Printmech: 24V to Interconnect failure. Check TUR, Right aerosol fan and Primer valves

- SE Code: 12.12:10 – Printmech: 24V Misc failure. Check Air pumps and Primer valves switch

- SE Code: 12.13:10 – Printmech: 24V to Printzone fans failure

- SE Code: 12.14:10 – Printmech: 24V to Vacuum fans failure

- SE Code: 12.15:10 – Printmech: 42V to Paper motor failure

- SE Code: 12.16:10 – Printmech: 42V to Rewinder failure

- SE Code: 12.17:10 – Printmech: 42V to Scan motor failure

- SE Code: 12.18:10 – Printmech: 42V to SOL slit solenoid failure

- SE Code: 12.19:10 – Printmech: 5V line failure

- SE Code: 12.20:10 – Printmech: 12V to Curing module PCA open circuit

- SE Code: 12.21:10 – Printmech: 24V to Curing module PCA open circuit

- SE Code: 12.22:10 – Printmech: 12V to Vapor Removal PCA open circuit

- SE Code: 12.23:10 – Printmech: 24V to Vapor Removal PCA open circuit

- SE Code: 12.24:10 – Printmech: 12V to ISS, DD, 42Vdc motor drivers, Top cover fans and PZ fans open circuit

- SE Code: 12.25:10 – Printmech: 42V to Carriage PCA open circuit

- SE Code: 12.26:10 – Printmech: Hannibal1 24V open circuit

- SE Code: 12.27:10 – Printmech: Hannibal2 24V open circuit. Check Spit-on roller motor and Primer motor

- SE Code: 12.28:10 – Printmech: Hannibal3 24V open circuit. Check Inner lights array 1

- SE Code: 12.29:10 – Printmech: Hannibal4 24V open circuit. Check Inner lights array 2

- SE Code: 12.30:10 – Printmech: 24V to Interconnect open circuit. Check TUR, Right aerosol fan and Primer valves

- SE Code: 12.31:10 – Printmech: 24V Misc open circuit. Check Air pumps and Primer valves switch

- SE Code: 12.32:10 – Printmech: 24V to Printzone fans open circuit

- SE Code: 12.33:10 – Printmech: 24V to Vacuum fans open circuit

- SE Code: 12.34:10 – Printmech: 42V to Paper motor open circuit

- SE Code: 12.35:10 – Printmech: 42V to Rewinder open circuit

- SE Code: 12.36:10 – Printmech: 42V to Scan motor open circuit

- SE Code: 12.37:10 – Printmech: 42V to SOL slit solenoid open circuit

- SE Code: 12.38:10 – Printmech: 5V line open circuit

- SE Code: 14.73:01 – Curing power regulator V bigger than Vmax

- SE Code: 14.74:01 – Curing power regulator V lower than 140

- SE Code: 14.75:01 – Curing power regulator V lower than 60: V lower than 60

- SE Code: 14.76:11 – Curing power regulator V could not be read

- SE Code: 14.77:10 – Curing power regulator control signal failure

- SE Code: 14.80:10 – Curing power regulator current not null

- SE Code: 14.81:10 – Curing power regulator current too high

- SE Code: 14.82:10 – Curing power regulator short circuit

- SE Code: 14.83:11 – Curing power regulator open circuit

- SE Code: 14.87:10 – Curing power regulator OverTemp

- SE Code: 14.88:10 – Curing power regulator overvoltage or short circuit

- SE Code: 14.89:10 – Curing power regulator relay damaged

- SE Code: 15.20:10 – Cable or Resistor short circuit from any PZ or Air Curtain Resistors

- SE Code: 15.31:10 – PZ resistor 1: Cable or resistor short circuit

- SE Code: 15.32:10 – PZ resistor 2: Cable or resistor short circuit

- SE Code: 15.33:10 – PZ resistor 3: Cable or resistor short circuit

- SE Code: 15.41:11 – PZ resistor 1: Not connected

- SE Code: 15.42:11 – PZ resistor 2: Not connected

- SE Code: 16.44:10 – Curing system: module 4 failure

- SE Code: 16.50:03 – Curing system: pressure calibration error

- SE Code: 16.50:10 – Severe SE: Pressure calibration failure together with NVM values = 0 (failure at first startup)

- SE Code: 16.51:01 – Curing system: pressure not reachable. Printer is limiting working pressure

- SE Code: 16.61:10 – Air Curtain system: Fan array 1 failure

- SE Code: 16.70:10 – Air Curtain system: Box fan fault or disconnected

- SE Code: 16.71:10 – Air Curtain system: Box fan fault or cable damaged

- SE Code: 16.80:10 – Air Curtain steady resistor: Cable or resistor short circuit

- SE Code: 16.81:10 – Air Curtain burst resistor: Cable or resistor short circuit

- SE Code: 16.82:11 – Air Curtain steady resistor: Not connected

- SE Code: 16.83:11 – Air Curtain burst resistor: Not connected

- SE Code: 16.84:03 – Air Curtain steady resistor: Out of range

- SE Code: 16.85:03 – Air Curtain burst resistor: Out of range

- SE Code: 16.90:10 – Air Curtain: Temperature sensor failure or not connected

- SE Code: 17.0:11 – PrintMech to Interconnect Power cable does not seem to be connected

- SE Code: 17.0:12 – Main PCA to PrintMech Black 1 cable does not seem to be connected

- SE Code: 17.4:11 – Main PCA to PrintMech White 2 cable does not seem to be connected

- SE Code: 21:03 – Service Station electrical current limit

- SE Code: 21:13 – Problem with the Service Station. SVS jam

- SE Code: 21.2:10 – Web Wipe servo shutdown

- SE Code: 21.3:10 – Electrical fault in rack engage motor

- SE Code: 21.4:03 – Electrical warming in rack engage motor Electrical current limit in rackEngage motor

- SE Code: 21.5:03 – Service Station rack cannot be disengaged

- SE Code: 21.6:10 – Spit rollers servo shutdown

- SE Code: 21.7:10 – Electrical fault in Spit rollers engage motor

- SE Code: 21.8:10 – Electrical warming in Spit rollers engage motor or current limit in rack engage motor

- SE Code: 23:10 – The system has problems to pressurize or to depressurize

- SE Code: 24.1:11 – ISS Top to ISS Bottom cable does not seem to be connected

- SE Code: 24:03 – Ink Supply Tubes purge failure

- SE Code: 24:11 – PrintMech to ISS Top cable does not seem to be connected

- SE Code: 27.5:01 – Error due to a high number of nozzles out in printhead slot 5

- SE Code: 27.6:01 – Error due to a high number of nozzles out in printhead slot 6

- SE Code: 29:00 – Maintenance cartridge is almost full

- SE Code: 29:01 – Maintenance cartridge badly inserted

- SE Code: 29.1:01 – Possible maintenance cartridge malfunction (No detection of web advance)

- SE Code: 29.2:00 – Possible maintenance cartridge malfunction or doesn't advance properly (There's detection that web doesn't advance)

- SE Code: 32:01 – Take-up reel disconnected while printing

- SE Code: 32:01.1 – Take-up reel early substrate jam

- SE Code: 32:01.2 – Take-up reel substrate jam

- SE Code: 32:02 – Take-up reel disconnected while printer was powered off

- SE Code: 32.1:10 – Take-up reel internal short-circuit detected (Latex 370/375)

- SE Code: 41:03 – Electrical current limit: Electrical current limit in paper motor Electrical warm: Electrical warm in paper motor

- SE Code: 41:10 – Electrical fault: Electrical fault in paper motor

- SE Code: 42:03 – Scan-Axis motor electrical current limit

- SE Code: 42:10 – Scan axis motor fault detected

- SE Code: 42:11 – Scan axis motor disconnected

- SE Code: 43:11 – Vacuum fan not connected

- SE Code: 43.1:11 – Communication error: Problem in communication with vacuum board fan

- SE Code: 43.2:11 – A Vacuum Fan Stopped: Vacuum Fan Stopped

- SE Code: 43.3:10 – VacuumFan Over current: Vacuum Fan Overcurrent, SVS side

- SE Code: 43.4:10 – VacuumFan Low Performance: Vacuum Fan is not working at the desired performance, SVS side

- SE Code: 44:10 – Aerosol Fan Fault

- SE Code: 45:03 – Rewinder servo shutdown

- SE Code: 46:03 – Primer servo shutdown

- SE Code: 46:10 – Primer fault

- SE Code: 46:13 – Primer test distance failed

- SE Code: 47.0:01 – The 3-liter Ink Upgrade Kit is not detected: cable might be disconnected (Latex 370/375)

- SE Code: 47.1:10 – One of the red 3-liter ink pump cables has an internal short-circuit (Latex 370/375)

- SE Code: 47.2:10 – One of the black 3-liter ink pumps cable has a short circuit (Latex 370/375)

- SE Code: 50.4:11 – OMAS Controller to PrintMech PCA cable does not seem to be connected

- SE Code: 50.5:11 – OMAS board: SENSOR_NOT_CONNECTED

- SE Code: 50.6:11 – OMAS board: Media sensor board Power cable

- SE Code: 50:14 – Firmware version mismatch between the OMAS Controller Card and Hard Disk Drive

- SE Code: 50:17 – Advisory fw error in DSP or Engine code of the substrate advance sensor component

- SE Code: 52:10 – Drop Detector switch On/Off failure

- SE Code: 55:10 – Line Sensor communication failure

- SE Code: 55:11 – Line Sensor Performance: Line Sensor performs poorly needs recalibration, cleaning, or replacement

- SE Code: 56:01 – Incorrect readings from substrate encoder

- SE Code: 56:10 – Substrate Encoder calibration failed

- SE Code: 58.1:10 – Color sensor Shutter Actuator failure

- SE Code: 58.2:10 – Color sensor Shutter Deactivator failure

- SE Code: 58:01 – Color sensor shutter error

- SE Code: 58:04 – Firmware of the printer is incompatible with that of the Color Sensor

- SE Code: 58.10:10 – Color sensor Self test error

- SE Code: 58.11:10 – Color sensor Communication error

- SE Code: 58.12:10 – Color sensor Command error

- SE Code: 58.13:10 – Color sensor Calibration error

- SE Code: 59.1:09 – Default S/N found in main and backup NVM

- SE Code: 59.2:00 – Different S/N found in Main and Backup NVM

- SE Code: 59.3:10 Euler's SW error

- SE Code: 59.4:10 Euler's HW error

- SE Code: 59.5:19 Wrong Euler Type

- SE Code: 59.6:19 Printer/Printer ID PCA SN mismatch

- SE Code: 59.7:14 CryptoAsic Generic error. Possible Fw upgrade

- SE Code: 60.1:11 RFID tag was not found when trying to configure the printer

- SE Code: 60.2:17 RFID configuration is wrong

- SE Code: 61:01 – The Printer cannot process the job

- SE Code: 61:08 – The Printer cannot process the job

- SE Code: 61:08.2 – The Printer cannot process the job

- SE Code: 61:09 – Unexpected end of job (advisory)

- SE Code: 94:01 – CLC failed because paper white point is out of valid range

- SE Code: 94:02 – CLC failed, inconsistencies in measures detected

- SE Code: 94:08 – Color Calibration failed

- SE Code: 94:10 – CLC measures out of range

- SE Code: 98:03 – Potential Print Quality problem. Detected too many nozzles out

Introduction

Firmware upgrade

The first step to take when trying to clear an error with the printer is to check that the firmware installed in the printer is the latest available. Firmware updates often include fixes for some of the problems that are found in the following pages, simply updating the firmware can often resolve the problem. The latest firmware can be downloaded from the following url: http://www8.hp.com/us/en/drivers.html

If the error with the printer does not allow you to upgrade the firmware using the normal process, try upgrading the firmware using the emergency .plt file procedure.

What are system error codes?

System error codes are caused by internal system errors. The following pages contain a list of system error codes and their respective descriptions and recommended corrective actions. Only try one recommended action at a time and check if the issue causing the error code has been solved.

If you have an error code which is not documented in this Service Manual or you have an error which you cannot resolve, then report the error to the HP Response Center or the nearest HP Support Office. When reporting the error, have the following information ready:

- Model and serial number of the printer.

- Which firmware revision the printer is using (see note below). Check firmware in Setup Menu / Information Menu / Show Printer Information.

- The complete error number (see note below).

- The Service Configuration Print.

- The Current configuration sheet.

- Which software application the customer is using (name, version, etc).

📝 **NOTE:**   When reporting the System Error Code, make sure that you supply the full Internal Error Code and the firmware version. Without this information, HP Support Personnel cannot help you. To view the Internal Error Code, hold the DOWN key and press the CANCEL key at the same when the System Error Code is displayed on the front panel.
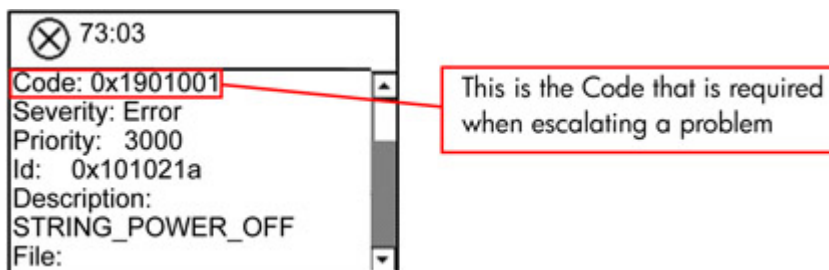
System error codes and warnings—explanation

System Error Codes explain which component/system is failing and what action should be taken to resolve the problem.

System Error Codes are displayed directly on the front panel (but can also be seen on the Information Page) and have been defined in the format **XX.YZ.** or **XX.n:YZ.m**.

- XX: Service Part (2 digits).

- n: Service Part Index (if more than one used in the product) – Optional.

  - e.g. Identify the Ink Supply (color and number).

- Y: Who should perform the action (1 digit) – (User or Service Engineer).

- Z: Action to perform (1 digit).

- m: additional actions/information to consider (1 digit) – Optional.

  - e.g. Non-authorized ink was detected, PM was triggered or printhead in/out of Warranty.

The following table explains the XX part of the System Error Code or Warning:

Code	Component/System
01.0	Engine PCA
01.1	PrintMech PCA
01.2	ISS Top PCA
01.3	ISS Bottom PCA
01.10	PrintMech PCA sine-wave management
01.11	PrintMech PCA sine-wave management
02.1	Carriage PCA
03	Power Supply Unit
03.10	Extra 24 V PSU
05	Formatter
05.1	Formatter Fan
05.3	Formatter Memory
06	Hard Disk Drive
08	Front Panel
09	Vacuum
11	Trailing Cable
14.3, 14.4	Heater Control Dryer Pinches
14,5, 14.6	Heater Control Dryer Overdrive
14.7, 14.8	Heater Control Curing
15	Drying System

16	Curing System
17	Other cables
21	Service Station
23	Pressure System (APS)
24	Ink Delivery Tubes
25.1n (where n is the ink cartridge number) (for example, n=1 for Magenta, n=7 for Black)	PIP overpressure
26.n	Ink cartridge (color n)
27.n	Printhead (color n)
29	Printhead Cleaning Cartridge
31	Cutter
32	Take-Up Reel
41	Substrate-Axis Motor
42	Scan-Axis Motor
43	Vacuum Fan
44	Aerosol Fan
45	Rewinder
46	Primer
47	3-liter Ink Upgrade Kit
47.1	3-liter Ink pump short circuit
47.2	3-liter Ink pump hard external short circuit
47.3n (where n is the ink cartridge number)	3-liter Ink pump disconnected
47.4	3-liter Acumen short circuit
47.5	3-liter Ink Leakage detected
47.6	3-liter Ink Leakage sensor cable disconnected
47.7	3-liter Acumen cable disconnected
47.8	3-liter Ink cartridges presence disconnected
47.9	3-liter Ink Upgrade Kit refill timeout
47.10	3-liter Ink Upgrade Kit incorrect accessory
50	OMAS
51	Window Sensor
51.1	PHC Access Door Sensor
52	Drop Detector
53	Substrate Sensor
54	Substrate Lever Sensor
55	Line Sensor

56	Drive Roller Encoder Sensor
58	Color Sensor
61	Language Interpreting
63	Input/Output through LAN Card
65	Input/Output (port unknown)
66	Print Job Configuration
71	Memory Management
74	Firmware Upgrade
77	Embedded Web Server
78	Substrate Settings
79	Assertion (Uncontrollable Firmware Error)
81	Substrate Advance
82	Substrate Jam Sensor
85	Substrate-Axis Encoder Reading
86	Carriage Movement
93	Ink Pumping
97	Automatic Substrate Advance Calibration

The following table explains the YZ part of the System Error Code or Warning:

Code	Recovery action	Response
00	Replace	Possible for customer to perform action
01	Reseat/Reconnect/Clean/Adjust (manually)	
02	Calibrate/Adjust (using automatic process)	
03	Power off and restart the printer	
04	Upgrade system firmware	
05	Upgrade driver or computer software	
06	Add accessory	
07	Escalate	
08	Send plot again	
09	Wrong part installed	
10	Replace	HP qualified personnel assistance required
11	Reseat/Reconnect/Clean/Adjust (manually)	
12	Calibrate/Adjust (using automatic process)	
13	Power off	

14	Upgrade system firmware
15	Upgrade driver or computer software
16	Add accessory
17	Escalate
18	Send plot again
19	Wrong part installed

Continuable and non-continuable error codes

Some of the error codes are continuable, which means you can press Enter on the front panel and continue working with the printer. Non-continuable error codes do not allow you to continue working with the printer, in this case power the printer off and on again and see whether the system error disappears. If the error code reappears, then the printer requires an on-site visit in order to resolve the problem.

IMPORTANT: If the solution calls for a replacement part, replace one component at a time and check if the error has been cleared before replacing another component. Using this procedure you will be able to determine exactly which component has failed.

SE Code: 01.0:10 – Engine PCA electronics error. The main Engine PCA component is not responding

Problem description:

Engine PCA damaged or wrongly connected. Connector on the formatter damaged (very low probability).

Corrective action:

Call agent:

▲ Power the unit off at the rear switch, and wait long enough for all 3 PSU LEDs to be off (to assure it: wait 2 minutes).

Service engineer:

1. Replace the engine PCA board (95% probabilities). See Engine PCA on page 510.

2. If the problem persist, replace the formatter PCA board (very low probability). See Formatter PCA on page 506.

Recommended parts:

Engine PCA B4H70-67038 (110, 115, 310, 330, 360, 370) - M0E29-67013 (315, 335, 365, 375); Formatter PCA B4H70-67050

Severity:

SEVERE

SE Code: 01.1:10 – Printmech electronics error

Problem description:

Printmech electronics error.

Corrective action:

Call agent:

▲ Restart the printer.

Service engineer:

1. Reseat/Replace Printmech to Formater PCA Cables.

2. Replace the Printmech PCA. See [PrintMech PCA on page 510](#).

3. Replace the Formatter PCA board (very low probability). See [Formatter PCA on page 506](#).

Recommended parts:

Ebox cables 64 SERV BB4H70-67045; Printmech PCA B4H70-67046; Formatter PCA B4H70-67050

Severity:

SEVERE

SE Code: 01.2:10 – ISS1 PCA problem

Problem description:

ISS1 PCA problem.

Corrective action:

Call agent:

1. Remove/Replace Ink Cartridges.

2. Restart the printer.

Service engineer:

1. Reseat/Replace Printmech to ISS1 PCA cable.

2. Reseat/Replace Main PSU to Printmech cable.

3. Replace ISS PCA. See [Ink supply station PCAs on page 404](#).

4. Replace PrintMech PCA.. See [PrintMech PCA on page 510](#).

Recommended parts:

Cables to ISS side 64 SERV B4H70-67122; E-box cables M0E29-67014; ISS PCAs B4H70-67041; Printmech PCA B4H70-67046

Severity:

SEVERE

SE Code: 01.3:10 – IISS2 PCA problem

Problem description:

IISS2 PCA problem.

Corrective action:

Call agent:

1. Remove/Replace Ink Cartridges.

2. Restart the printer.

Service engineer:

1. Reseat/Replace ISS1 to ISS2 PCA cable.

2. Replace ISS PCA. See [Ink supply station PCAs on page 404](#)

Recommended parts:

Ebox cables 64 SERV BB4H70-67045; ISS PCAs SERV B4H70-67041

Severity:

SEVERE

SE Code: 01.7:10 – Formatter-Printmech communication problem

Problem description:

Communication problem detected between Formatter and Printmech.

Corrective action:

Call agent:

1. Turn off the printer from the FP.

2. Once off, turn off the power switch on the back side for 3 minutes.

3. Switch on the unit again afterwards.

Service engineer:

1. Reseat/Replace the Formatter to Printmech and PSU to Engine cables (E-Box cables).

2. If the problem persists, replace the Formatter PCA.

3. If the problem persists, replace the Printmech PCA.

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

Recommended parts:

E-box cables M0E29-67014; Formatter PCA B4H70-67050; Printmech PCA B4H70-67046; Engine PCA B4H70-67038 (110, 115, 310, 330, 360, 370) - M0E29-67013 (315, 335, 365, 375)

Severity:

SEVERE

SE Code: 01.12:10 – Curing Control PCA failure

Problem description:

Curing Control PCA failure.

Corrective action:

Call agent:

▲ Restart the printer.

Service engineer:

1. Reseat/Replace Printmech PCA to Curing Control PCA Cable (Cables to ISS side).

2. Replace Curing Control PCA.

3. Replace Printmech PCA. See PrintMech PCA on page 510.

4. Remove the recirculation cover. If condensation is detected, clean all surfaces and connectors till dry as possible cause of the electrical SE.

Recommended parts:

Cables to ISS side 64 SERV B4H70-67122; Curing control PCA B4H70-67111; Printmech PCA B4H70-67046

Severity:

SEVERE

SE Code: 01.13:10 – Air Curtain and Printzone Heaters Control PCA failure

Problem description:

Air Curtain and Printzone Heaters Control PCA failure.

Corrective action:

Call agent:

▲ Restart the printer.

Service engineer:

1. Reseat/Replace Printmech to Air Curtain and Printzone Heaters Control PCA Cable.

2. Replace Air Curtain and Printzone Heaters Control PCA.

3. Replace Printmech PCA (very low probability). See PrintMech PCA on page 510.

Recommended parts:

Cables to ISS side 64 SERV B4H70-67122; Air curtain resistors Control PCA B4H70-67055; Printmech PCA B4H70-67046

Severity:

SEVERE

SE Code: 02.1:10 – Carriage PCA electronics error. The main components in the carriage PCA are not responding

Problem description:

Carriage PCA failure, no power reaching the carriage PCA or trailing cable damage.

Corrective action:

Call agent:

▲ Restart the printer.

Service engineer:

1. Change the Carriage PCA (80% probability). We recommend to change ONLY this part on the 1st visit, and if it doesn't work follow the troubleshooting below. See Carriage PCA on page 470.

2. If the issue is not fixed:

   2.1. Check that the trailing cable is well connected and not damaged.

   2.2. If the power LED (add picture) is ON, the power is reaching the carriage PCA --> the power trailing cable is OK.

   2.2.1. Change the Engine PCA. See Engine PCA on page 510.

   2.2.2. If the Engine PCA does not fix the issue, change the trailing cable.

   2.3. If the power LED is OFF, the power is not reaching the carriage:

   2.3.1. Check that the POWER trailing cable is not damaged and is well connected to the Carriage and the Interconnect PCA.

   2.3.2. Disconnect the trailing cable from the Interconnect PCA and check with a multimeter at the interconnect PCA that there is power in the connector.

   2.3.2.1. If there is power at the interconnect PCA connector, then, change the trailing cable.

   2.3.2.2. If there is no power at the interconnect PCA connector, then, change the interconnect PCA. See Interconnect PCA on page 505.

Recommended parts:

Carriage PCA CQ109-67034; Engine PCA B4H70-67038 (110, 115, 310, 330, 360, 370) - M0E29-67013 (315, 335, 365, 375); Cables to SVS side 64 SERV B4H70-67121; Interconnect PCA CQ871-67001

Severity:

EMERGENCY

SE Code: 03:10 – Power Supply error. A problem has been detected in the Power Supply

Problem description:

Power supply damaged. The 24/42V tensions are switched off. The "digital rails" fan has stopped. The "analog rails" fan has stopped. The voltage supplied to the carriage is out of specs. Problems with 5V line. Problems with 12V lin.e Problems with 42V line.

Corrective action:

Call agent:

1. Restart the printer.

2. Check the power supply LEDs status. If the blue LED is on (Digital rails OK but Analog rails not OK).

Service engineer:

1. If the Power Supply Unit's blue LED is on, replace the PrintMech PCA. See PrintMech PCA on page 510.

2. Otherwise, replace the Power Supply Unit. See Power Supply Unit (PSU) on page 510.

Recommended parts:

Printmech PCA B4H70-67046; Main PSU B4H70-67037

Severity:

SEVERE

SE Code: 03.20:01 – Air Curtain and Printzone Heaters Control PCA with no voltage detected

Problem description:

Air Curtain and Printzone Heaters Control PCA with no voltage detected.

Corrective action:

Call agent:

▲ Restart the printer.

Service engineer:

1. Reseat/Replace Main PSU to Air Curtain and Printzone Heaters Control PCA Cable.

2. Replace Air Curtain and Printzone Heaters Control PCA.

3. Replace Main PSU (very low probability).

Recommended parts:

Ebox cables 64 SERV BB4H70-67045; Air curtain resistors Control PCA B4H70-67055; Main PSU B4H70-67037

Severity:

SEVERE

SE Code: 03.21:01 – Air Curtain and Printzone Heaters Control PCA undervoltage detected

Problem description:

Air Curtain and Printzone Heaters Control PCA undervoltage.

Corrective action:

Call agent:

▲ Reseat both Power Cords and ensure that input voltage is within specifications (180-264 VAC).

Severity:

ADVISORY

SE Code: 03.22:01 – Air Curtain and Printzone Heaters Control PCA overvoltage detected

Problem description:

Air Curtain and Printzone Heaters Control PCA overvoltage.

Corrective action:

Call agent:

▲ Reseat both Power Cords and ensure that input voltage is within specifications (180-264 VAC).

Severity:

ADVISORY

SE Code: 05.1:10 – CPU fan stopped or burnt

Problem description:

CPU fan is stopped or burnt.

Corrective action:

Call agent:

▲ Switch the power off at the rear of the printer, wait briefly, then switch it back on again.

Service engineer:

▲ Replace Formatter. See Formatter PCA on page 506.

Recommended parts:

Formatter PCA: B4H70-67050

Severity:

SEVERE

SE Code: 05.5:10 – BIOS should be updated (advisory)

Problem description:

HDD replacement with FW requiring newer Formatter BIOS.

Corrective action:

Service engineer:

▲ Perform a Formatter BIOS update via the diagnostics menu.

Severity:

ADVISORY

SE Code: 06:03 – NVM file has bad CRC

Problem description:

NVM file has bad CRC.

Corrective action:

Call agent:

▲ Restart the printer.

Service engineer:

1. Switch the power off at the rear of the printer, wait briefly, then switch it back on again.

2. Use the Hard disk recovery in Diagnostic test.

3. Replace the Hard Disk Drive.

Recommended parts:

SSD B4H70-67155 (310, 330, 360, 370) – V8N83-67001 (315, 335, 365, 375) – M0E30- 67003 (110) – 1QE01- 67002 (115)

Severity:

SEVERE

SE Code: 06:10 – Main NVM failure: not detected, read/write failed or readback error

Problem description:

Main NVM not detected, read/write failed or readback error.

Corrective action:

Call agent:

▲ Restart the printer.

Service engineer:

1. Switch the power off at the rear of the printer, wait briefly, then switch it back on again.

2. Use the Hard disk recovery in Diagnostic test.

3. Replace the Hard Disk Drive.

Recommended parts:

SSD B4H70-67155 (310, 330, 360, 370) – V8N83-67001 (315, 335, 365, 375) – M0E30- 67003 (110) – 1QE01- 67002 (115)

Severity:

SEVERE

SE Code: 08.04:1 – ASERT in front panel code

Problem description:

It appears when there is a firmware error and front panel is not able to communicate with the rest of the printer.

Corrective action:

Call agent:

1. Press Enter and continue.

2. Update the firmware.

Severity:

ADVISORY

SE Code: 08.08 – Application crash in the front panel side

Problem description:

Application crash in the front panel side.

Corrective action:

Call agent:

1. Press Enter and continue. Try the last operation again.

2. Switch the power off at the rear of the printer, wait briefly, then switch it back on again.

3. Update the firmware.

Severity:

ADVISORY

SE Code: 08:10 – Front Panel not connected or damaged. It appears when the there is a communication error with the device. It might be a hardware error or front panel unplugged

Problem description:

Front Panel not connected or damaged.

Corrective action:

Call agent:

▲ Restart the printer.

Service engineer:

1. Ensure the front panel is properly connected.

2. Ensure the front panel cable is properly fitted in the Formatter.

3. Replace the Formatter. See Formatter PCA on page 506.

4. Replace the front panel. See Front panel on page 358.

Recommended parts:

Formater PCA: B4H70-67050; Front panel with cable B4H70-67051 (360, 370) - V8N83-67003 (365, 375) - B4H69-67024 (110, 310, 330) - V7L47-67001 (115, 315, 335)

Severity:

SEVERE

SE Code: 11:10 – Trailing Cable does not seem to be connected

Problem description:

Trailing cable not correctly connected or damaged.

Corrective action:

Call agent:

▲   Restart the printer.

Service engineer:

1.   Check that the Trailing Cable is not damaged.

2.   Check that the Trailing Cable is correctly connected to the Carriage PCA, Interconnect PCA, and Engine PCA.

3.   Replace the Trailing Cable.

Recommended parts:

Cables to SVS side 64 SERV B4H70-67121

Severity:

SEVERE

SE Code: 12.1:10 – The 12V provided from Printmech to Curing module PCA are out of range (10.8V to 13.2V)

Problem description:

One or more of the components powered by the 12V at the Curing Control PCA are causing a short circuit. The 12V cable from Printmech to the Curing Control PCA has a problem.

Corrective action:

Call agent:

▲   Restart the printer.

Service engineer:

1.   Check the Printmech cable to the Curing module PCA.

2.   Check the Printmech PCA.

Severity:

ADVISORY

SE Code: 12.2:10 – Printmech 24V_BULLI_1 to Curing module PCA out of range

Problem description:

The 24V cable from Printmech to Curing Control PCA has a problem. Printmech PCA is damaged.

Corrective action:

Call agent:

▲ Restart the printer.

Service engineer:

1. Check the Printmech cable to the Curing module PCA.

2. Check the Printmech PCA.

Severity:

ADVISORY

SE Code: 12.3:10 – Printmech 12V_BULLI_2 to Vapor Removal PCA out of range

Problem description:

The 12V cable from Printmech to Vapor Removal PCA has a problem Printmech PCA is damaged.

Corrective action:

Call agent:

▲ Restart the printer.

Service engineer:

1. Check cable Printmech to Vapor Removal PCA .

2. Check the Printmech PCA. .

Severity:

ADVISORY

SE Code: 12.4:10 – Printmech 24V_BULLI_1 to Vapor Removal PCA out of range

Problem description:

The 24V cable from Printmech to Vapor Removal PCA has a problem Printmech PCA is damaged.

Corrective action:

Call agent:

▲ Restart the printer.

Service engineer:

1. Check the Printmech cable to Vapor Removal PCA.

2. Check the Printmech PCA.

Severity:

ADVISORY

SE Code: 12.5:10 – Printmech: 12V to ISS, DD, 42Vdc motor drivers, Top cover fans and PZ fans failure

Problem description:

The 12V cable from Printmech to ISS, Interconnect and PZ fans has a problem Printmech PCA is damaged.

Corrective action:

Call agent:

▲   Restart the printer.

Service engineer:

1.   Check the Printmech cables to the ISS, Interconnect and PZ fans.

2.   Check the Printmech PCA.

Severity:

ADVISORY

SE Code: 12.6:10 – Printmech: 42V to Carriage PCA failure

Problem description:

The 42V cable from Printmech to Carriage PCA has a problem Printmech PCA is damaged

Corrective action:

Call agent:

▲   Restart the printer.

Service engineer:

1.   Check the Printmech cable to Interconnect.

2.   Check the trailing cables from Interconnect and Engine to Carriage PCA.

3.   Replace the Printmech PCA.

Severity:

ADVISORY

SE Code: 12.7:10 – Printmech: Hannibal1 24V failure. Check APS relief valve, SVS motor and Rack engage motor

Problem description:

The 24V cable from Printmech to Interconnect has a problem Printmech PCA is damaged.

Corrective action:

Call agent:

▲   Restart the printer.

Service engineer:

1. Check the APS relief valve, SVS motor and Rack engage motor.

2. Check the Printmech PCA.

Severity:

ADVISORY

SE Code: 12.8:10 – Printmech: Hannibal2 24V failure. Check Spit-on roller motor and Primer motor

Problem description:

The 24V cable from Printmech to Interconnect has a problem Printmech PCA is damaged.

Corrective action:

Call agent:

▲   Restart the printer.

Service engineer:

1. Check the Spit-on roller motor and Primer motor.

2. Check the Printmech PCA.

Severity:

ADVISORY

SE Code: 12.9:10 – Printmech: Hannibal3 24V failure. Check Inner lights array 1

Problem description:

The 24V cable from Printmech to Inner lights array 1 has a problem Printmech PCA is damaged.

Corrective action:

Call agent:

▲   Restart the printer.

Service engineer:

1. Check the Inner lights array 1.

2. Check the Printmech PCA.

Severity:

ADVISORY

SE Code: 12.10:10 – Printmech: Hannibal4 24V failure. Check Inner lights array 2

Problem description:

The 24V cable from Printmech to Inner lights array 2 has a problem Printmech PCA is damaged.

Corrective action:

Call agent:

▲   Restart the printer.

Service engineer:

1.   Check the Inner lights array 2.

2.   Check the Printmech PCA.

Severity:

ADVISORY

SE Code: 12.11:10 – Printmech: 24V to Interconnect failure. Check TUR, Right aerosol fan and Primer valves

Problem description:

The 24V cable from Printmech to Interconnect PCA has a problem Printmech PCA is damaged.

Corrective action:

Call agent:

▲   Restart the printer.

Service engineer:

1.   Check the Printmech to Interconnect cable.

2.   Check TUR, Right aerosol fan and Primer valves.

3.   Check the Printmech PCA.

Severity:

ADVISORY

SE Code: 12.12:10 – Printmech: 24V Misc failure. Check Air pumps and Primer valves switch

Problem description:

The 24V cable from Printmech to Air Pumps and Interconnect PCA has a problem Printmech PCA is damaged.

Corrective action:

Call agent:

▲   Restart the printer.

Service engineer:

1.   Check the Printmech to Air Pumps cable ,and to the primer valves switch.

2.   Check the Air Pumps.

3. Check Primer valves switch.

4. Check the Printmech PCA.

Severity:

ADVISORY

SE Code: 12.13:10 – Printmech: 24V to Printzone fans failure

Problem description:

The 24V cable from Printmech to Printzone fans has a problem Printmech PCA is damaged.

Corrective action:

Call agent:

▲ Restart the printer.

Service engineer:

1. Check the Printmech to Printzone fans cable.

2. Check the Printzone fans.

3. Check the Printmech PCA.

Severity:

ADVISORY

SE Code: 12.14:10 – Printmech: 24V to Vacuum fans failure

Problem description:

The 24V cable from Printmech to Vacuum fans has a problem Printmech PCA is damaged.

Corrective action:

Call agent:

▲ Restart the printer.

Service engineer:

1. Check the Printmech to Vacuum fans cable.

2. Check the Vacuum fans.

3. Check the Printmech PCA.

Severity:

ADVISORY

SE Code: 12.15:10 – Printmech: 42V to Paper motor failure

Problem description:

The 42V cable from Printmech to Paper motor has a problem Printmech PCA is damaged.

Corrective action:

Call agent:

▲   Restart the printer.

Service engineer:

1.   Check the Printmech to paper motor cable.

2.   Check the paper motor.

3.   Check the Printmech PCA.

Severity:

ADVISORY

SE Code: 12.16:10 – Printmech: 42V to Rewinder failure

Problem description:

The 42V cable from Printmech to Rewinder has a problem Printmech PCA is damaged.

Corrective action:

Call agent:

▲   Restart the printer.

Service engineer:

1.   Check the Printmech to Rewinder cable.

2.   Check the Rewinder.

3.   Check the Printmech PCA.

Severity:

ADVISORY

SE Code: 12.17:10 – Printmech: 42V to Scan motor failure

Problem description:

The 42V cable from Printmech to Scan motor has a problem Printmech PCA is damaged.

Corrective action:

Call agent:

▲   Restart the printer.

Service engineer:

1. Check the Printmech to Scan motor cable.

2. Check the Scan motor.

3. Check the Printmech PCA.

Severity:

ADVISORY

SE Code: 12.18:10 – Printmech: 42V to SOL slit solenoid failure

Problem description:

The 42V cable from Printmech to SOL slit solenoid has a problem Printmech PCA is damaged.

Corrective action:

Call agent:

▲ Restart the printer.

Service engineer:

1. Check the Printmech to SOL slit solenoid cable.

2. Check the slit solenoid.

3. Check the Printmech PCA.

Severity:

ADVISORY

SE Code: 12.19:10 – Printmech: 5V line failure

Problem description:

The 5V cable from Printmech to PSU has a problem Printmech PCA is damaged PSU is damaged.

Call agent:

▲ Restart the printer.

Severity:

ADVISORY

SE Code: 12.20:10 – Printmech: 12V to Curing module PCA open circuit

Problem description:

The 12V cable from Printmech to Curing Control PCA has a problem Printmech PCA is damaged.

Corrective action:

Call agent:

▲ Restart the printer.

Service engineer:

1. Check cable the Printmech to Curing module cable.

2. Check the Printmech PCA.

Severity:

ADVISORY

SE Code: 12.21:10 – Printmech: 24V to Curing module PCA open circuit

Problem description:

The 24V cable from Printmech to Curing Control PCA has a problem Printmech PCA is damaged.

Corrective action:

Call agent:

▲ Restart the printer.

Service engineer:

1. Check the Printmech to Curing module PCA cable.

2. Check the Printmech PCA.

Severity:

ADVISORY

SE Code: 12.22:10 – Printmech: 12V to Vapor Removal PCA open circuit

Problem description:

The 12V cable from Printmech to Vapor Removal PCA has a problem Printmech PCA is damaged.

Corrective action:

Call agent:

▲ Restart the printer.

Service engineer:

1. Check the Printmech to Vapor Removal PCA cable.

2. Check the Printmech PCA.

Severity:

ADVISORY

SE Code: 12.23:10 – Printmech: 24V to Vapor Removal PCA open circuit

Problem description:

The 24V cable from Printmech to Vapor Removal PCA has a problem Printmech PCA is damaged.

Corrective action:

Call agent:

▲   Restart the printer.

Service engineer:

1.   Check the Printmech to Vapor Removal PCA cable.

2.   Check the Printmech PCA.

Severity:

ADVISORY

SE Code: 12.24:10 – Printmech: 12V to ISS, DD, 42Vdc motor drivers, Top cover fans and PZ fans open circuit

Problem description:

The 12V cable from Printmech to ISS, Interconnect and PZ fans has a problem Printmech PCA is damaged.

Corrective action:

Call agent:

▲   Restart the printer.

Service engineer:

1.   Check the Printmech to ISS, Interconnect, and PZ fans cables.

2.   Check the Printmech PCA.

Severity:

ADVISORY

SE Code: 12.25:10 – Printmech: 42V to Carriage PCA open circuit

Problem description:

The 42V cable from Printmech to Carriage PCA has a problem Printmech PCA is damaged.

Corrective action:

Call agent:

▲   Restart the printer.

Service engineer:

1. Check the Printmech to Carriage PCA cable.

2. Check the Printmech PCA.

Severity:

ADVISORY

SE Code: 12.26:10 – Printmech: Hannibal1 24V open circuit

Problem description:

The 24V cable from Printmech to Interconnect has a problem Printmech PCA is damaged.

Corrective action:

Call agent:

▲   Restart the printer.

Service engineer:

1. Check the APS relief valve, SVS motor and Rack engage motor.

2. Check the Printmech PCA.

Severity:

ADVISORY

SE Code: 12.27:10 – Printmech: Hannibal2 24V open circuit. Check Spit-on roller motor and Primer motor

Problem description:

The 24V cable from Printmech to Interconnect has a problem Printmech PCA is damaged.

Corrective action:

Call agent:

▲   Restart the printer.

Service engineer:

1. Check the Spit-on roller motor and Primer motor.

2. Check the Printmech PCA.

Severity:

ADVISORY

SE Code: 12.28:10 – Printmech: Hannibal3 24V open circuit. Check Inner lights array 1

Problem description:

The 24V cable from Printmech to Inner lights array 1 has a problem Printmech PCA is damaged.

Corrective action:

Call agent:

▲   Restart the printer.

Service engineer:

1.   Check the Inner lights array 1.

2.   Check the Printmech PCA.

Severity:

ADVISORY

SE Code: 12.29:10 – Printmech: Hannibal4 24V open circuit. Check Inner lights array 2

Problem description:

The 24V cable from Printmech to Inner lights array 2 has a problem Printmech PCA is damaged.

Corrective action:

Call agent:

▲   Restart the printer.

Service engineer:

1.   Check the Inner lights array 2.

2.   Check the Printmech PCA.

Severity:

ADVISORY

SE Code: 12.30:10 – Printmech: 24V to Interconnect open circuit. Check TUR, Right aerosol fan and Primer valves

Problem description:

The 24V cable from Printmech to Interconnect PCA has a problem Printmech PCA is damaged.

Corrective action:

Call agent:

▲   Restart the printer.

Service engineer:

1.   Check the Printmech to Interconnect cable.

2.   Check the TUR, Right aerosol fan, and Primer valves.

3.   Check the Printmech PCA.

Severity:

ADVISORY

SE Code: 12.31:10 – Printmech: 24V Misc open circuit. Check Air pumps and Primer valves switch

Problem description:

The 24V cable from Printmech to Air Pumps and Interconnect PCA has a problem Printmech PCA is damaged.

Corrective action:

Call agent:

▲   Restart the printer.

Service engineer:

1.   Check the Printmech to Air Pumps and to primer valves switch cable.

2.   Check the Air Pumps.

3.   Check the Primer valves switch.

4.   Check the Printmech PCA.

Severity:

ADVISORY

SE Code: 12.32:10 – Printmech: 24V to Printzone fans open circuit

Problem description:

The 24V cable from Printmech to Printzone fans has a problem Printmech PCA is damaged.

Corrective action:

Call agent:

▲   Restart the printer.

Service engineer:

1.   Check the Printmech to Printzone fans cable.

2.   Check the Printzone fans.

3.   Check the Printmech PCA.

Severity:

ADVISORY

SE Code: 12.33:10 – Printmech: 24V to Vacuum fans open circuit

Problem description:

The 24V cable from Printmech to Vacuum fans has a problem Printmech PCA is damaged.

Corrective action:

Call agent:

▲ Restart the printer.

Service engineer:

1. Check the Printmech to Vacuum fans cable.

2. Check the Vacuum fans.

3. Check the Printmech PCA.

Severity:

ADVISORY

SE Code: 12.34:10 – Printmech: 42V to Paper motor open circuit

Problem description:

The 42V cable from Printmech to Paper motor has a problem Printmech PCA is damaged.

Corrective action:

Call agent:

▲ Restart the printer.

Service engineer:

1. Check the Printmech to Paper motor cable.

2. Check the paper motor.

3. Check the Printmech PCA.

Severity:

ADVISORY

SE Code: 12.35:10 – Printmech: 42V to Rewinder open circuit

Problem description:

The 42V cable from Printmech to Rewinder has a problem Printmech PCA is damaged.

Corrective action:

Call agent:

▲ Restart the printer.

Service engineer:

1. Check the Printmech to Rewinder cable.

2. Check the Rewinder.

3. Check the Printmech PCA.

Severity:

ADVISORY

SE Code: 12.36:10 – Printmech: 42V to Scan motor open circuit

Problem description:

The 42V cable from Printmech to Scan motor has a problem Printmech PCA is damaged.

Corrective action:

Call agent:

▲   Restart the printer.

Service engineer:

1. Check the Printmech to Scan motor cable.

2. Check the Scan motor.

3. Check the Printmech PCA.

Severity:

ADVISORY

SE Code: 12.37:10 – Printmech: 42V to SOL slit solenoid open circuit

Problem description:

The 42V cable from Printmech to SOL slit solenoid has a problem Printmech PCA is damaged.

Corrective action:

Call agent:

▲   Restart the printer.

Service engineer:

1. Check the Printmech to SOL slit solenoid cable.

2. Check the slit solenoid.

3. Check the Printmech PCA.

Severity:

ADVISORY

SE Code: 12.38:10 – Printmech: 5V line open circuit

Problem description:

The 5V cable from Printmech to PSU has a problem Printmech PCA is damaged PSU is damaged.

Corrective action:

Call agent:

▲ Restart the printer.

Service engineer:

1. Check that DS7 Printmech LED is turned on. If it is not the case, replace the Printmech PCA.

2. If the problem persist, replace the PSU.

Recommended parts:

Main PSU B4H70-67037

Severity:

ADVISORY

SE Code: 14.73:01 – Curing power regulator V bigger than Vmax

Problem description:

V bigger than Vmax

Corrective action:

Call agent:

1. Check that both Residual Circuit Breakers (RCCBs) are Powered and ON.

2. Check/Reseat both Power Cords.

Service engineer:

1. Check AC Voltage at customer's site (180–264 VAC).

2. Reseat/Replace cables to Heater Control's AC input.

3. Replace the Heater Control.

Recommended parts:

Ebox cables 64 SERV BB4H70-67045; Cables to ISS side 64 SERV B4H70-67122; Curing control PCA B4H70-67111; Heater Control B4H70-67040

Severity:

SEVERE

SE Code: 14.74:01 – Curing power regulator V lower than 140

Problem description:

V lower than 140

Corrective action:

Service engineer:

1. Check AC voltage at customer's site is within specs (180-264 VAC).

2. Run Service "Curing system monitor".

3. If AC voltage is OK but "Curing system monitor" not, then replace:

    ● Cables from Curing PCA to Heater Control (E-Box cables).

    ● Cables from Printmech to Curing PCA (Cables to ISS side).

4. If not fixed, replace the Curing Control.

5. If not fixed, replace the Heater Control.

Recommended parts:

Ebox cables 64 SERV BB4H70-67045; Cables to ISS side 64 SERV B4H70-67122; Curing control PCA B4H70-67111; Heater Control B4H70-67040

Severity:

ADVISORY

SE Code: 14.75:01 – Curing power regulator V lower than 60: V lower than 60

Problem description:

Curing power regulator V lower than 60: V lower than 60.

Corrective action:

Service engineer:

1. Check AC voltage at customer's site is within specs (180–264 VAC).

2. Run Service "Curing system monitor".

3. If AC voltage is ok but "Curing system monitor" not, then replace:

    ● Cables from Curing PCA to Heater Control (E-Box cables).

    ● Cables from Printmech to Curing PCA (Cables to ISS side).

4. If not fixed, replace the Curing Control.

5. If not fixed, replace the Heater Control.

Recommended parts:

Ebox cables 64 SERV BB4H70-67045; Heater Control B4H70-67040

Severity:

SEVERE

SE Code: 14.76:11 – Curing power regulator V could not be read

Problem description:

Curing power regulator V could not be read.

Corrective action:

Service engineer:

1. Run Service "Curing system monitor".

2. Reseat/Replace Curing Control PCA to Heater Control (E-Box Cables).

Recommended parts:

Ebox cables 64 SERV BB4H70-67045

Severity:

SEVERE

SE Code: 14.77:10 – Curing power regulator control signal failure

Problem description:

Curing power regulator control signal failure.

Corrective action:

Service engineer:

1. Run Service "Curing system monitor".

2. Reseat/Replace Curing Control PCA to Heater Control (E-Box Cables).

Recommended parts:

Ebox cables 64 SERV BB4H70-67045

Severity:

SEVERE

SE Code: 14.80:10 – Curing power regulator current not null

Problem description:

Curing power regulator current not null.

Corrective action:

Service engineer:

1. Run Service "Curing system monitor".

2. Replace the Heater Control.

Recommended parts:

Heater Control B4H70-67040

Severity:

SEVERE

SE Code: 14.81:10 – Curing power regulator current too high

Problem description:

Curing power regulator current too high.

Corrective action:

Service engineer:

1. Run Service "Curing system monitor".

2. Check heaters with a tester and replace heaters if necessary (short circuit).

3. Replace the Heater Control.

Recommended parts:

Fan-heater assembly B4H70-67063; Heater Control B4H70-67040

Severity:

SEVERE

SE Code: 14.82:10 – Curing power regulator short circuit

Problem description:

Curing power regulator short circuit.

Corrective action:

Service engineer:

1. Run Service "Curing system monitor".

2. Check heaters with a tester and replace heaters if necessary (short circuit).

3. Replace the Heater Control.

Recommended parts:

Fan-heater assembly B4H70-67063; Heater Control B4H70-67040

Severity:

SEVERE

SE Code: 14.83:11 – Curing power regulator open circuit

Problem description:

Curing power regulator open circuit.

Corrective action:

Service engineer:

1. Run Service "Curing system monitor".

2. Reseat/Replace cables from Heater Control to Curing Power Interconnect PCA (Cables to ISS side).

3. Reseat/Replace cables from Curing Power Interconnect PCA to Impinging Resistors (Impinging cables).

4. Reseat/Replace the Fan-Heaters.

Recommended parts:

Cables to ISS side 64 SERV B4H70-67122; Impinging Cables 64 SERV B4H70-67032; Fan-heater assembly B4H70-67063

Severity:

SEVERE

SE Code: 14.87:10 – Curing power regulator OverTemp

Problem description:

Curing power regulator OverTemp.

Corrective action:

Service engineer:

1. Run Service "Curing system monitor".

2. If the SE appears frequently, replace the Heater Control.

Recommended parts:

Heater control PCA B4H70-67040

Severity:

ADVISORY

SE Code: 14.88:10 – Curing power regulator overvoltage or short circuit

Problem description:

Curing power regulator overvoltage or short circuit.

Corrective action:

Service engineer:

1. Run Service "Curing system monitor".

2. Check resistor module values, If they are ok, check installation.

Severity:

SEVERE

SE Code: 14.89:10 – Curing power regulator relay damaged

Problem description:

Curing power regulator relay damaged.

Corrective action:

Service engineer:

1. Run Service "Curing system monitor".

2. Replace de Heater Control.

Recommended parts:

Heater control PCA B4H70-67040

Severity:

SEVERE

SE Code: 15.20:10 – Cable or Resistor short circuit from any PZ or Air Curtain Resistors

Problem description:

Cable or Resistor short circuit from any PZ or Air Curtain resistors.

Corrective action:

Service engineer:

1. Check AC Voltage at customer's site is within specs (180-264 VAC).

2. Measure PZ and Air Curtain resistors.

3. Reseat/Replace PZ resistors and cables.

4. Reseat/Replace Air Curtain Resistors and cables.

Recommended parts:

Printzone Heater Assy SERV B4H70-67126 ; Cables to ISS side 64 SERV B4H70-67122; Air curtain resistors + brackets + cover w/out fans B4H70-67156

Severity:

SEVERE

SE Code: 15.31:10 – PZ resistor 1: Cable or resistor short circuit

Problem description:

Cable or resistor short circuit.

Corrective action:

Service engineer:

▲ Check the PZ resistor 1 or cable short circuit.

Severity:

SEVERE

SE Code: 15.32:10 – PZ resistor 2: Cable or resistor short circuit

Problem description:

Cable or resistor short circuit.

Corrective action:

Service engineer:

▲ Check the PZ resistor 2 or cable short circuit.

Severity:

SEVERE

SE Code: 15.33:10 – PZ resistor 3: Cable or resistor short circuit

Problem description:

Cable or resistor short circuit.

Corrective action:

Service engineer:

▲ Check the PZ resistor 3 or cable short circuit.

Severity:

SEVERE

SE Code: 15.41:11 – PZ resistor 1: Not connected

Problem description:

PZ resistor 1 disconnected or damaged.

Corrective action:

Call agent:

▲ Restart the printer.

Service engineer:

1. Reseat/Replace cable from Air Curtain and Printzone Heaters Control PCA to PZ Heaters.

2. Reseat/Replace PZ Resistor 1.

Recommended parts:

Cables to ISS side 64 SERV B4H70-67122; Printzone Heater Assy SERV B4H70-67126

Severity:

SEVERE

SE Code: 15.42:11 – PZ resistor 2: Not connected

Problem description:

PZ resistor 2 disconnected or damaged.

Corrective action:

Call agent:

▲   Restart the printer.

Service engineer:

▲   Check that PZ 2 resistor is properly connected. If it is, then replace PZ 2 resistor.

Recommended parts:

Printzone Heater Assy SERV B4H70-67126

Severity:

SEVERE

SE Code: 15.43:11 – PZ resistor 3: Not connected

Problem description:

PZ resistor 3 disconnected or damaged.

Corrective action:

Call agent:

▲   Restart the printer.

Service engineer:

▲   Check that PZ 3 resistor is properly connected. If it is, then replace PZ 3 resistor.

Recommended parts:

Printzone Heater Assy SERV B4H70-67126

Severity:

SEVERE

SE Code: 15.51:03 – PZ resistor 1: Out of range

Problem description:

Resistor out of range.

Corrective action:

Service engineer:

▲   Measure the PZ 1 resistance. Replace in case of resistance out of range.

Recommended parts:

Printzone Heater Assy SERV B4H70-67126

Severity:

SEVERE

SE Code: 15.52:03 – PZ resistor 2: Out of range

Problem description:

Resistor out of range.

Corrective action:

Service engineer:

▲   Measure the PZ 2 resistance. Replace in case of resistance out of range.

Recommended parts:

Printzone Heater Assy SERV B4H70-67126

Severity:

SEVERE

SE Code: 15.53:03 – PZ resistor 3: Out of range

Problem description:

Resistor out of range.

Corrective action:

Service engineer:

▲   Measure the PZ 3 resistance. Replace in case of resistance out of range.

Recommended parts:

Printzone Heater Assy SERV B4H70-67126

Severity:

SEVERE

SE Code: 15.60:10 – PZ fan fault or not connected

Problem description:

Fan fault or not connected

Corrective action:

Service engineer:

▲   Check that the PZ fans are properly connected. If they are, then replace them.

Recommended parts:

Dryer fan V7L46-67002 (330, 335,315,310, 115, 110) ; Printzone heater assembly B4H70-67126 (360, 365, 370, 375)

Severity:

SEVERE

SE Code: 15.61:10 – PZ fan 1 fault or not connected

Problem description:

PZ fan 1 disconnected or damaged.

Corrective action:

Call agent:

▲   Restart the printer.

Service engineer:

▲   Check that PZ 1 fan is properly connected. If it is, then replace PZ 1 fan.

Recommended parts:

Dryer fan V7L46-67002 (330, 335,315,310, 115, 110) ; Printzone heater assembly B4H70-67126 (360, 365, 370, 375)

Severity:

SEVERE

SE Code: 15.62:10 – PZ fan 2 fault or not connected

Problem description:

PZ fan 2 disconnected or damaged.

Corrective action:

Call agent:

▲   Restart the printer.

Service engineer:

▲   Check that PZ 2 fan is properly connected. If it is, then replace PZ 2 fan.

Recommended parts:

Dryer fan V7L46-67002 (330, 335,315,310, 115, 110) ; Printzone heater assembly B4H70-67126 (360, 365, 370, 375)

Severity:

SEVERE

SE Code: 15.63:10 – PZ fan 3 fault or not connected

Problem description:

PZ fan 3 disconnected or damaged.

Corrective action:

Service engineer:

▲ Check that PZ 3 fan is properly connected. If it is, then replace PZ 3 fan.

Recommended parts:

Dryer fan V7L46-67002 (330, 335,315,310, 115, 110) ; Printzone heater assembly B4H70-67126 (360, 365, 370, 375)

Severity:

SEVERE

SE Code: 15.69:10 – More than 1 PZ fan fault or not connected

Problem description:

More than 1 PZ fan fault or not connected.

Corrective action:

Call agent:

▲ Restart the printer.

Service engineer:

1. Reseat/Replace cable from Air Curtain and Printzone Heaters Control PCA to PZ Heaters.

2. Reseat/Replace PZ Resistor Fan 1.

Recommended parts:

Cables to ISS side 64 SERV B4H70-67122; Dryer fan V7L46-67002 (330, 335,315,310, 115, 110) ; Printzone heater assembly B4H70-67126 (360, 365, 370, 375)

Severity:

SEVERE

SE Code: 15.71:10 – PZ fan 1: fan or cable damaged

Problem description:

Fan or cable damaged.

Corrective action:

Service engineer:

▲ Replace the PZ fan 1.

Recommended parts:

Dryer fan V7L46-67002 (330, 335,315,310, 115, 110) ; Printzone heater assembly B4H70-67126 (360, 365, 370, 375)

Severity:

SEVERE

SE Code: 15.72:10 – PZ fan 2: fan or cable damaged

Problem description:

Fan or cable damaged.

Corrective action:

Service engineer:

▲   Replace the PZ fan 2.

Recommended parts:

Dryer fan V7L46-67002 (330, 335,315,310, 115, 110) ; Printzone heater assembly B4H70-67126 (360, 365, 370, 375)

Severity:

SEVERE

SE Code: 15.73:10 – PZ fan 3: fan or cable damaged

Problem description:

Fan or cable damaged.

Corrective action:

Service engineer:

▲   Replace the PZ fan 3.

Recommended parts:

Dryer fan V7L46-67002 (330, 335,315,310, 115, 110) ; Printzone heater assembly B4H70-67126 (360, 365, 370, 375)

Severity:

SEVERE

SE Code: 15.79:10 – More than 1 PZ fan or cable damaged

Problem description:

More than 1 PZ fan or cable damaged.

Corrective action:

Service engineer:

▲   Replace the PZ fans.

Recommended parts:

Dryer fan V7L46-67002 (330, 335,315,310, 115, 110) ; Printzone heater assembly B4H70-67126 (360, 365, 370, 375)

Severity:

SEVERE

SE Code: 16.01:00 – Curing System unable to warm up in the pre-defined amount of time

Problem description:

Curing system unable to warm up in the pre-defined amount of time (Ambient temperature below 15°C).

Corrective action:

Service engineer:

1. Check if the environmental ambient temperature is low. Check the surrounding temperature is within the printer's operating specifications; it should be higher than 15°C for printer operation. If this is the case, increase the ambient temperature of the printer's location.

2. Check if the input voltage is outside the range of specifications for printing, see the Site Preparation Guide.

3. Run Service "Curing system monitor".

4. Check all Fans (Curing, Air Curtain, PZ), all spinning and no obstruction.

5. Reseat/Replace Curing Resistors.

6. Reseat/Replace Curing Temperature Sensors.

7. Reseat/Replace Curing Pressure Sensor.

Recommended parts:

Fan-heater assembly B4H70-67063; Fan-Heater assembly CR (*) B4H70-67142 *Parts ONLY for units with SN ≥ MY5BR69010.

Severity:

SEVERE

SE Code: 16.02:00 – Curing system: cool down timeout

Problem description:

Curing system: cool down timeout (Ambient temperature higher than 30°C).

Corrective action:

Service engineer:

1. The environmental ambient temperature is too hot or is outside the operational specification of the printer. Make sure there are no external sources of heat, such as strong lights, direct sunlight, heaters etc.

2. Check all Fans (Curing, Air Curtain, PZ), all spinning and no obstruction.

Severity:

SEVERE

SE Code: 16.03:00 – Curing system: high temperature error

Problem description:

Curing system: high temperature error.

Corrective action:

Service engineer:

1. The environmental ambient temperature is too hot or is outside the operational specification of the printer. Make sure there are no external sources of heat, such as strong lights, direct sunlight, heaters etc.

2. Run Service "Curing system monitor".

3. Check all Fans (Curing, Air Curtain, PZ), all spinning and no obstruction..

4. Reseat/Replace Curing Resistors.

5. Reseat/Replace Curing Temperature Sensors.

6. Reseat/Replace Curing Pressure Sensor.

Recommended parts:

Fan-heater assembly B4H70-67063; Fan-Heater assembly CR (*) B4H70-67142 *Parts ONLY for units with SN ≥ MY5BR69010.

Severity:

SEVERE

SE Code: 16.04:00 – Curing system: low temperature error

Problem description:

Curing system: low temperature error.

Corrective action:

Service engineer:

1. Check if the environmental ambient temperature is low. Check the surrounding temperature is within the printer's operating specifications; it should be higher than 15°C for printer operation. If this is the case, increase the ambient temperature of the printer's location.

2. Check AC Voltage at customer's site (180-264 VAC).

3. Run Service "Curing system monitor.

4. Check all Fans (Curing, Air Curtain, PZ), all spinning and no obstruction.

5. Reseat/Replace Curing Resistors.

6. Reseat/Replace Curing Temperature Sensors.

7. Reseat/Replace Curing Pressure Sensor.

Recommended parts:

Fan-heater assembly B4H70-67063; Fan-Heater assembly CR (*) B4H70-67142

Severity:

SEVERE

SE Code: 16.06:00 – Curing system: temperature sensor error

Problem description:

Curing system: temperature sensor error.

Corrective action:

Call agent:

▲   Restart the printer.

Service engineer:

1.   Run Service "Curing system monitor".

2.   Reseat/Replace Curing Temperature sensors cable array (Impinging Cables).

3.   Reseat/Replace Curing Temperature Sensors.

Recommended parts:

Impinging cables B4H70-67032 (375, 370, 365, 360, 335, 330) - Impinging cables B4H69-67016 (315, 310, 115, 110); Impinging cables CR (*) B4H70-67144 *Parts ONLY for units with SN ≥ MY5BR69010.

Severity:

SEVERE

SE Code: 16.07:03 – Curing system: warm up timeout (uniformity)

Problem description:

Curing system: warm up timeout (uniformity).

Corrective action:

Service engineer:

1.   Check if the environmental ambient temperature is low. Check the surrounding temperature is within the printer's operating specifications; it should be higher than 15ºC for printer operation. If this is the case, increase the ambient temperature of the printer's location.

2.   Check the input voltage is outside the range of specifications for printing, see the Site Preparation Guide.

3.   Run Service "Curing system monitor.

4.   Check all Fans (Curing, Air Curtain, PZ), all spinning and no obstruction.

5.   Reseat/Replace Curing Resistors.

6.   Reseat/Replace Curing Temperature Sensors.

7.   Reseat/Replace Curing Pressure Sensor.

Recommended parts:

Fan-heater assembly B4H70-67063; Fan-Heater assembly CR (*) B4H70-67142

Severity:

SEVERE

SE Code: 16.11:10 – Curing System: Temperature sensor 1 failure or not connected

Problem description:

Curing Temperature sensor array or Curing Temperature sensor 1 failure or not connected. Sensor 1 is the one located at FP's side.

Corrective action:

Call agent:

▲   Restart the printer.

Service engineer:

1.   Reseat/replace Curing Temperature sensors cable array (Impinging Cables).

2.   Reseat/replace Temp. sensor 1.

Recommended parts:

Fan-heater assembly B4H70-67063; Fan-Heater assembly CR (*) B4H70-67142

Severity:

SEVERE

SE Code: 16.12:10 – Curing System: Temperature sensor 2 failure or not connected

Problem description:

Temperature sensor 2 failure or not connected. Sensor 1 is the one located at FP's side.

Corrective action:

Call agent:

▲   Restart the printer.

Service engineer:

▲   Reseat/replace Temp. sensor 2.

Recommended parts:

Fan-heater assembly B4H70-67063; Fan-Heater assembly CR (*) B4H70-67142

Severity:

SEVERE

SE Code: 16.13:10 – Curing System: Temperature sensor 3 failure or not connected

Problem description:

Temperature sensor 3 failure or not connected. Sensor 1 is the one located at FP's side.

Corrective action:

Call agent:

▲   Restart the printer.

Service engineer:

▲   Reseat/replace Temp. sensor 3.

Recommended parts:

Fan-heater assembly B4H70-67063; Fan-Heater assembly CR (*) B4H70-67142

Severity:

SEVERE

SE Code: 16.14:10 – Curing System: Temperature sensor 4 failure or not connected

Problem description:

Temperature sensor 4 failure or not connected. Sensor 1 is the one located at FP's side.

Corrective action:

Call agent:

▲   Restart the printer.

Service engineer:

▲   Reseat/replace Temp. sensor 4.

Recommended parts:

Fan-heater assembly B4H70-67063; Fan-Heater assembly CR (*) B4H70-67142

Severity:

SEVERE

SE Code: 16.31:10 – Curing system: Fan 1 fault

Problem description:

Curing system: Fan 1 fault. Fan 1 is the one located at FP's side.

Corrective action:

Call agent:

▲   Restart the printer.

Service engineer:

▲   Replace module 1.

Recommended parts:

Fan-heater assembly B4H70-67063; Fan-Heater assembly CR (*) B4H70-67142

Severity:

SEVERE

SE Code: 16.32:10 – Curing system: Fan 2 fault

Problem description:

Curing system: Fan 2 fault. Fan 1 is the one located at FP's side.

Corrective action:

Call agent:

▲   Restart the printer.

Service engineer:

▲   Replace module 2.

Recommended parts:

Fan-heater assembly B4H70-67063; Fan-Heater assembly CR (*) B4H70-67142

Severity:

SEVERE

SE Code: 16.33:10 – Curing system: Fan 3 fault

Problem description:

Curing system: Fan 3 fault. Fan 1 is the one located at FP's side.

Corrective action:

Call agent:

▲   Restart the printer.

Service engineer:

▲   Replace module 3.

Recommended parts:

Fan-heater assembly B4H70-67063; Fan-Heater assembly CR (*) B4H70-67142

Severity:

SEVERE

SE Code: 16.34:10 – Curing system: Fan 4 fault

Problem description:

Curing system: Fan 4 fault. Fan 1 is the one located at FP's side.

Corrective action:

Call agent:

▲   Restart the printer.

Service engineer:

▲   Replace module 4.

Recommended parts:

Fan-heater assembly B4H70-67063; Fan-Heater assembly CR (*) B4H70-67142

Severity:

SEVERE

SE Code: 16.39:10 – Curing system: More than 1 fan failure

Problem description:

Curing system: More than 1 fan failure.

Corrective action:

Call agent:

▲   Restart the printer.

Service engineer:

1.   Reseat/replace the Curing fan cable.

2.   Replace the Main PSU.

Recommended parts:

Impinging cables B4H70-67032 (375, 370, 365, 360, 335, 330) - Impinging cables B4H69-67016 (315, 310, 115, 110); Impinging cables CR (*) B4H70-67144 *Parts ONLY for units with SN ≥ MY5BR69010.

Severity:

SEVERE

SE Code: 16.41:10 – Curing system: module 1 failure

Problem description:

Curing resistor 1 disconnected or damaged. Resistor 1 is the one located at FP's side.

Corrective action:

Call agent:

▲   Restart the printer.

Service engineer:

▲   Replace module 1.

Recommended parts:

Fan–heater assembly B4H70-67063; Fan-Heater assembly CR (*) B4H70-67142

Severity:

SEVERE

SE Code: 16.42:10 – Curing system: module 2 failure

Problem description:

Curing resistor 2 disconnected or damaged. Resistor 1 is the one located at FP's side.

Corrective action:

Call agent:

▲   Restart the printer.

Service engineer:

▲   Replace module 2.

Recommended parts:

Fan–heater assembly B4H70-67063; Fan-Heater assembly CR (*) B4H70-67142

Severity:

SEVERE

SE Code: 16.43:10 – Curing system: module 3 failure

Problem description:

Curing resistor 3 disconnected or damaged. Resistor 1 is the one located at FP's side.

Corrective action:

Service engineer:

▲   Replace module 3.

Recommended parts:

Fan–heater assembly B4H70-67063; Fan-Heater assembly CR (*) B4H70-67142

Severity:

SEVERE

SE Code: 16.44:10 – Curing system: module 4 failure

Problem description:

Curing resistor 4 disconnected or damaged. Resistor 1 is the one located at FP's side.

Corrective action:

Call agent:

▲   Restart the printer.

Service engineer:

▲   Replace module 4.

Recommended parts:

Fan-heater assembly B4H70-67063; Fan-Heater assembly CR (*) B4H70-67142

Severity:

SEVERE

SE Code: 16.50:03 – Curing system: pressure calibration error

Problem description:

Silent SE: If there's already a valid pressure calibration in NVM, and new calibration values are out of range, then FW will use the NVM values and show a silent SE in the printer log and service plot.

Severity:

SILENT

SE Code: 16.50:10 – Severe SE: Pressure calibration failure together with NVM values = 0 (failure at first startup)

Problem description:

Pressure calibration failure.

Corrective action:

Service engineer:

▲   Check the tube (not kinked), and sensor cable. If they are OK, replace the sensor

Recommended parts:

Pressure sensor and valve with cover B4H70-67140

Severity:

ADVISORY

SE Code: 16.51:01 – Curing system: pressure not reachable. Printer is limiting working pressure

Problem description:

Silent SE. Customer symptoms are: Slower throughtput, and/or Lack of curing Printer limiting working pressure.

It might be due to: Target pressure too high for printer attitude environment, and/or curing fan degradation.

Severity:

SILENT

SE Code: 16.61:10 – Air Curtain system: Fan array 1 failure

Problem description:

Air Curtain fan array failure.

Corrective action:

Call agent:

▲ Restart the printer.

Service engineer:

1. Reseat/Replace Air Curtain fans cable array (Cables to ISS side).

2. Check that all Air Curtain Fans rotate, and are unobstructed.

3. Reseat/Replace Air Curtain Fans.

Recommended parts:

Cables to ISS side 64 SERV B4H70-67122; Air curtain fan with NTC and Thermal switch B4H70-67061

Severity:

SEVERE

SE Code: 16.70:10 – Air Curtain system: Box fan fault or disconnected

Problem description:

Air Curtain system: Box fan fault or disconnected. Fault signal and PWM is not zero.

Corrective action:

Call agent:

▲ Restart the printer.

Service engineer:

1. Reseat/replace Air Curtain Box Fan.

2. Reseat/Replace Air Curtain Box Fan Cables (Cables to ISS side).

3. Replace Air Curtain and Printzone Heaters Control PCA.

Recommended parts:

Air curtain fan with NTC and Thermal switch B4H70-67061; Cables to ISS side 64 SERV B4H70-67122; Air curtain fan with NTC and Thermal switch B4H70-67061; Air curtain PZ Heating PCA SERV B4H70-67055

Severity:

SEVERE

SE Code: 16.71:10 – Air Curtain system: Box fan fault or cable damaged

Problem description:

Air Curtain system: Box fan fault or cable damaged. No fault signal and PWM is zero.

Corrective action:

Call agent:

▲ Restart the printer.

Service engineer:

1. Reseat/replace Air Curtain Box Fan.

2. Reseat/Replace Air Curtain Box Fan cables (Cables to ISS side).

3. Replace Air Curtain and Printzone Heaters Control PCA.

Recommended parts:

Air curtain fan with NTC and Thermal switch B4H70-67061; Cables to ISS side 64 SERV B4H70-67122; Air curtain fan with NTC and Thermal switch B4H70-67061; Air curtain PZ Heating PCA SERV B4H70-67055

Severity:

SEVERE

SE Code: 16.80:10 – Air Curtain steady resistor: Cable or resistor short circuit

Problem description:

Air Curtain steady resistor: Cable or resistor short circuit.

Corrective action:

Call agent:

▲ Restart the printer

Service engineer:

1. Reseat/Replace Air Curtain and Printzone Heaters Control to Curing Power Interconnect PCA cables.

2. Reseat/Replace Air Curtain Resistors.

Recommended parts:

Cables to ISS side 64 SERV B4H70-67122; Air curtain resistors + brackets + cover w/out fans B4H70-67156

Severity:

SEVERE

SE Code: 16.81:10 – Air Curtain burst resistor: Cable or resistor short circuit

Problem description:

Air Curtain burst resistor: Cable or resistor short circuit.

Corrective action:

Call agent:

▲   Restart the printer.

Service engineer:

1.   Reseat/Replace Air Curtain and Printzone Heaters Control to Curing Power Interconnect PCA cables.

2.   Reseat/Replace Air Curtain Resistors.

Recommended parts:

Cables to ISS side 64 SERV B4H70-67122; Air curtain resistors + brackets + cover w/out fans B4H70-67156

Severity:

SEVERE

SE Code: 16.82:11 – Air Curtain steady resistor: Not connected

Problem description:

Air Curtain steady resistor: Not connected.

Corrective action:

Call agent:

▲   Restart the printer.

Service engineer:

1.   Reseat/Replace Air Curtain and Printzone Heaters Control to Curing Power Interconnect PCA cables.

2.   Reseat/Replace Air Curtain Resistors.

Recommended parts:

Cables to ISS side 64 SERV B4H70-67122; Air curtain resistors + brackets + cover w/out fans B4H70-67156

Severity:

SEVERE

SE Code: 16.83:11 – Air Curtain burst resistor: Not connected

Problem description:

Air Curtain burst resistor: Not connected.

Corrective action:

Call agent:

▲   Restart the printer.

Service engineer:

1. Reseat/Replace Air Curtain and Printzone Heaters Control to Curing Power Interconnect PCA cables.

2. Reseat/Replace Air Curtain Resistors.

Recommended parts:

Cables to ISS side 64 SERV B4H70-67122; Air curtain resistors + brackets + cover w/out fans B4H70-67156

Severity:

SEVERE

SE Code: 16.84:03 – Air Curtain steady resistor: Out of range

Problem description:

Air Curtain steady resistor: Out of range.

Corrective action:

Call agent:

▲ Restart the printer.

Service engineer:

1. Measure the Air Curtain resistors (Troubleshooting chapter).

2. Reseat/Replace Air Curtain Resistors.

Recommended parts:

Air curtain resistors + brackets + cover w/out fans B4H70-67156

Severity:

SEVERE

SE Code: 16.85:03 – Air Curtain burst resistor: Out of range

Problem description:

Air Curtain burst resistor: Out of range.

Corrective action:

Call agent:

▲ Restart the printer.

Service engineer:

1. Measure the Air Curtain resistors (Troubleshooting chapter).

2. Reseat/Replace Air Curtain Resistors.

Recommended parts:

Air curtain resistors + brackets + cover w/out fans B4H70-67156

Severity:

SEVERE

SE Code: 16.90:10 – Air Curtain: Temperature sensor failure or not connected

Problem description:

Air Curtain: Temperature sensor failure or not connected.

Corrective action:

Call agent:

▲   Restart the printer.

Service engineer:

1.   Reseat/Replace Air Curtain and Printzone Heaters Control/Curing Control PCA to Air Curtain Temperature Sensor Cable.

2.   Replace Air Curtain Temperature Sensor.

Recommended parts:

Cables to ISS side 64 SERV B4H70-67122; Air curtain fan with NTC and Thermal switch B4H70-67061

Severity:

SEVERE

SE Code: 17.0:11 – PrintMech to Interconnect Power cable does not seem to be connected

Problem description:

The power cable from Printmech to Interconnect PCA has a problem.

Corrective action:

Call agent:

▲   Restart the printer.

Service engineer:

1.   Check that the PrintMech to Interconnect Power cable is not damaged.

2.   Check that the PrintMech to Interconnect Power cable is correctly connected to the PrintMech PCA and the Interconnect PCA.

3.   Replace the PrintMech to Interconnect Power cable (which is included in the Electronics Module Cable Kit).

Recommended parts:

Ebox cables 64 SERV BB4H70-67045

Severity:

SEVERE

SE Code: 17.0:12 – Main PCA to PrintMech Black 1 cable does not seem to be connected

Problem description:

Main PCA to PrintMech Black 1 cable is damaged Main PCA damaged.

Corrective action:

Call agent:

▲   Restart the printer.

Service engineer:

1.   Check that the Main PCA to PrintMech Black 1 cable is not damaged.

2.   Check that the Main PCA to PrintMech Black 1 cable is correctly connected to the Main PCA and the PrintMech PCA.

3.   Replace the Main PCA to PrintMech Black 1 cable.

Recommended parts:

Ebox cables 64 SERV BB4H70-67045; Formatter PCA B4H70-67050

Severity:

SEVERE

SE Code: 17.4:11 – Main PCA to PrintMech White 2 cable does not seem to be connected

Problem description:

Main PCA to PrintMech White 2 cable is damaged Main PCA damaged.

Corrective action:

Call agent:

▲   Restart the printer.

Service engineer:

1.   Check that the Main PCA to PrintMech White 2 cable is not damaged.

2.   Check that the Main PCA to PrintMech White 2 cable is correctly connected to the Main PCA and the PrintMech PCA.

3.   Replace the Main PCA to PrintMech White 2 cable.

Recommended parts:

Ebox cables 64 SERV BB4H70-67045

Severity:

SEVERE

SE Code: 21:03 – Service Station electrical current limit

Problem description:

Service Station electrical current limit.

Corrective action:

Call agent:

▲ Make sure that the Service Station path is clear. Remove any visible obstacles restricting the movement of the Service Station.

Service engineer:

▲ If the System Error continues, replace the Service Station. See Service station on page 428.

Recommended parts:

Service station B4H70-67023

Severity:

SEVERE

SE Code: 21:13 – Problem with the Service Station. SVS jam

Problem description:

Problem with the Service Station. SVS jam.

Corrective action:

Call agent:

1. Switch the Power OFF from the back of the Printer. Power the Printer back On.

2. Make sure that the Service Station path is clear. Remove any visible obstacles (e.g. screws, plastic parts, etc.) restricting the movement of the Service Station.

3. Switch the Power OFF from the back of the Printer, remove the Printhead Maintenance Cartridge, and check if there's any obstacle along the MC path.

4. Check that the MC is not finished, and the web advance is working properly.

5. Check the spit roller and rack engage mechanisms.

Service engineer:

1. If the error happens after printing for several hours and is cleared after power cycling, small damage in the encoder can cause the print carriage to lose its position little by little. The same effect could be produced by aerosol, ink or oil stain on the encoder. Clean (or replace) the encoder strip if it is dirty (or damaged).

2. If the System Error continues, replace the Service Station. See Service station on page 428.

Recommended parts:

Encoder strip sensor B4H70-67019 (375,370,365,360,335,330) - B4H69-67010 (315,310,115,110); Service station B4H70-67023

Severity:

SEVERE

SE Code: 21.2:10 – Web Wipe servo shutdown

Problem description:

Web Wipe servo shutdown.

Corrective action:

Call agent:

1. Switch the power off at the rear of the printer, manually pull the Printhead Maintenance Cartridge to the front position and switch the printer on again.

2. Switch the power off at the rear of the printer and remove the Printhead Maintenance Cartridge. Switch the printer on again. If the error is cleared, replace the Printhead Maintenance Cartridge.

Service engineer:

1. Revise that the Web Wipe cable is correctly connected to the Interconnect PCA.

2. Replace the Web Wipe Motor.

3. Replace the Interconnect PCA.

Recommended parts:

Web Wipe Motor B4H70-67035; Interconnect PCA CQ871-67001

Severity:

SEVERE

SE Code: 21.3:10 – Electrical fault in rack engage motor

Problem description:

Electrical fault in rack engage motor.

Call agent:

1. Switch the power off at the rear of the printer, manually pull the Printhead Maintenance Cartridge to the front position and switch the printer on again.

2. Switch the power off at the rear of the printer and remove the Printhead Maintenance Cartridge. Switch the printer on again. If the error is cleared, replace the Printhead Maintenance Cartridge.

Service engineer:

1. Revise that the Web Wipe cable is correctly connected to the Interconnect PCA.

2. Replace the Web Wipe Motor.

3. Replace the Interconnect PCA.

Recommended parts:

Web Wipe Motor B4H70-67035; Interconnect PCA CQ871-67001

Severity:

SEVERE

SE Code: 21.4:03 – Electrical warming in rack engage motor Electrical current limit in rackEngage motor

Problem description:

Electrical fault detected. Possible causes are cable, motor or driver.

Call agent:

1. Switch the power off at the rear of the printer, manually pull the Printhead Maintenance Cartridge to the front position and switch the printer on again.

2. Switch the power off at the rear of the printer and remove the Printhead Maintenance Cartridge. Switch the printer on again. If the error is cleared, replace the Printhead Maintenance Cartridge.

Service engineer:

1. Revise that the Web Wipe cable is correctly connected to the Interconnect PCA.

2. Replace the Web Wipe Motor.

3. Replace the Interconnect PCA.

Recommended parts:

Web Wipe Motor B4H70-67035; Interconnect PCA CQ871-67001

Severity:

SEVERE

SE Code: 21.5:03 – Service Station rack cannot be disengaged

Problem description:

Web Wipe motor is damaged or blocked

Corrective action:

Call agent:

1. Switch the power off at the rear of the printer, manually pull the Printhead Maintenance Cartridge to the front position and switch the printer on again.

2. Switch the power off at the rear of the printer and remove the Printhead Maintenance Cartridge. Switch the printer on again. If the error is cleared, replace the Printhead Maintenance Cartridge.

Service engineer:

1. Revise that the Web Wipe cable is correctly connected to the Interconnect PCA.

2. Replace the Web Wipe Motor.

3. Replace the Interconnect PCA.

Recommended parts:

Web Wipe Motor B4H70-67035; Interconnect PCA CQ871-67001

Severity:

SEVERE

SE Code: 21.6:10 – Spit rollers servo shutdown

Problem description:

Spit on roll motor is damaged PrintMech PCA is damaged.

Call agent:

1. Switch the power off at the rear of the printer, manually pull the Printhead Maintenance Cartridge to the front position and switch the printer on again.

2. Switch the power off at the rear of the printer and remove the Printhead Maintenance Cartridge. Switch the printer on again. If the error is cleared, replace the Printhead Maintenance Cartridge.

Service engineer:

1. Revise that Spit on roll motor cable is correctly connected to PrintMech PCA.

2. Replace the Spit on roll motor.

3. If the previous action did not work then, replace the PrintMech PCA.

Recommended parts:

Spit roller motor B4H70-67034; Printmech PCA B4H70-67046

Severity:

SEVERE

SE Code: 21.7:10 – Electrical fault in Spit rollers engage motor

Problem description:

Spit on roll motor has a problem.

Call agent:

1. Switch the power off at the rear of the printer, manually pull the Printhead Maintenance Cartridge to the front position and switch the printer on again.

2. Switch the power off at the rear of the printer and remove the Printhead Maintenance Cartridge. Switch the printer on again. If the error is cleared, replace the Printhead Maintenance Cartridge.

Service engineer:

1. Replace the Spit rollers engage motor.

2. Replace the PrintMech PCA. See PrintMech PCA on page 510.

Recommended parts:

Web wipe motor B4H70-67035; Printmech PCA B4H70-67046

Severity:

SEVERE

SE Code: 21.8:10 – Electrical warming in Spit rollers engage motor or current limit in rack engage motor

Problem description:

Spit on roll motor has a problem.

Call agent:

1. Switch the power off at the rear of the printer, manually pull the Printhead Maintenance Cartridge to the front position and switch the printer on again.

2. Switch the power off at the rear of the printer and remove the Printhead Maintenance Cartridge. Switch the printer on again. If the error is cleared, replace the Printhead Maintenance Cartridge.

Service engineer:

1. Replace the Spit rollers engage motor.

2. Replace the PrintMech PCA. See PrintMech PCA on page 510.

Recommended parts:

Web wipe motor B4H70-67035; Printmech PCA B4H70-67046

Severity:

SEVERE

SE Code: 23:10 – The system has problems to pressurize or to depressurize

Problem description:

The system has problems to pressurize or to depressurize.

Corrective action:

Call agent:

▲   Restart the printer.

Service engineer:

1. Check that the APS cable is not damaged and is correctly connected to the PrintMech PCA.

2. Check that the air tubes are properly connected and are not kinked or pinched.

3. Check that there is no supply with air leakage.

4. Replace the APS Assembly. See APS assembly on page 399.

Recommended parts:

APS assembly B4H70-67020 (375,370,365,360,335,330) - B4H69-67055 (315,310,115,110)

Severity:

SEVERE

SE Code: 24.1:11 – ISS Top to ISS Bottom cable does not seem to be connected

Problem description:

ISS1 to ISS2 cable not connected.

Corrective action:

Call agent:

▲   Restart the printer.

Service engineer:

1. Check that the PrintMech to ISS Top cable is correctly connected.

2. Check that the ISS Top to ISS Bottom cable is correctly connected.

3. Replace ISS Top to ISS Bottom cable.

4. Replace the ISS Bottom PCA.

Recommended parts:

Cables to ISS side 64 SERV B4H70-67122; ISS PCAs B4H70-67041

Severity:

SEVERE

SE Code: 24:03 – Ink Supply Tubes purge failure

Problem description:

Ink Supply Tubes purge failure.

Corrective action:

Service engineer:

1. Ensure that the dummy printheads are correctly installed and purge the Ink Supply Tubes again.

2. If the problem persists; replace the Setup Printhead Kit.

Recommended parts:

Setup Printhead kit Q6651-60335

Severity:

SEVERE

SE Code: 24:11 – PrintMech to ISS Top cable does not seem to be connected

Problem description:

PrintMech to ISS top cable not connected.

Corrective action:

Call agent:

▲   Restart the printer.

Service engineer:

1.   Check that the PrintMech to ISS Top cable is correctly connected.

2.   Replace the PrintMech to ISS Top cable.

3.   Replace the ISS Top PCA.

Recommended parts:

Cables to ISS side 64 SERV B4H70-67122; ISS PCAs B4H70-67041

Severity:

SEVERE

SE Code: 24.02:00 – The firmware has detected that there is no connection to the array of Top Covers Fans

Problem description:

The firmware has detected that there is no connection to the array of Top Covers Fans.

Corrective action:

Call agent:

▲   Restart the printer.

Service engineer:

1.   Reseat/Replace the top cover fans cable array connected to Interconnect PCA (Top Cover Fans Cable).

2.   If not fixed, replace the Interconnect PCA.

Recommended parts:

Drying fans cable B4H70-67043 (375,370,365,360,335,330) - B4H69-67019 (315,310,115,110); Interconnect PCA CQ871-67001

Severity:

ADVISORY

SE Code: 24.03:00 – The firmware has detected that one or more of the Top Covers Fans is not working

Problem description:

The firmware has detected that one or more of the Top Covers Fans are not working.

Corrective action:

Call agent:

▲ Restart the printer.

Service engineer:

1. Check if any of the fans is not running, that fan could be activating the failure signal and must be replaced.

2. Reseat/Replace the top cover fans cable array connected to Interconnect (Top Cover Fans cable).

3. If not fixed, replace the Interconnect PCA.

Recommended parts:

Drying fans cable B4H70-67043 (375,370,365,360,335,330) - B4H69-67019 (315,310,115,110); Interconnect PCA CQ871-67001

Severity:

ADVISORY

SE Code: 25.1:10 – Bad contact detected in ISS slot M floater

Problem description:

Malfunction or sensor failure: A PIP glitch or a presence error has been detected. Automatic diagnostic should discard if it's a recoverable failure or not.

Corrective action:

Call agent:

1. Remove the magenta ink cartridge and reinstall it into the printer.

2. Replace the magenta ink cartridge.

Service engineer:

1. Check that the ISS to magenta ink cartridge cable is not damaged and is correctly connected to the Ink Supply Tubes PCA.

2. Reseat PIP cable to ISS.

3. Replace the PIP.

Recommended parts:

PIP, floater floater floater and ISS connector B4H70-67137

Severity:

SEVERE

SE Code: 25.2:10 – Bad contact detected in ISS slot LM floater

Problem description:

Malfunction or sensor failure: A PIP glitch or a presence error has been detected. Automatic diagnostic should discard if it's a recoverable failure or not.

Corrective action:

Call agent:

1. Remove the light magenta ink cartridge and reinstall it into the printer.

2. Replace the light magenta ink cartridge.

Service engineer:

1. Check that the ISS to light magenta ink cartridge cable is not damaged and is correctly connected to the Ink Supply Tubes PCA.

2. Reseat PIP cable to ISS.

3. Replace the PIP.

Recommended parts:

PIP, floater floater floater and ISS connector B4H70-67137

Severity:

SEVERE

SE Code: 25.3:10 – Bad contact detected in ISS slot LC floater

Problem description:

Malfunction or sensor failure: A PIP glitch or a presence error has been detected. Automatic diagnostic should discard if it's a recoverable failure or not.

Corrective action:

Call agent:

1. Remove the light cyan ink cartridge and reinstall it into the printer.

2. Replace the light cyan ink cartridge.

Service engineer:

1. Check that the ISS to light cyan ink cartridge cable is not damaged and is correctly connected to the Ink Supply Tubes PCA.

2. Reseat PIP cable to ISS.

3. Replace the PIP.

Recommended parts:

PIP, floater floater floater and ISS connector B4H70-67137

Severity:

SEVERE

SE Code: 25.4:10 – Bad contact detected in ISS slot C floater

Problem description:

Malfunction or sensor failure: A PIP glitch or a presence error has been detected. Automatic diagnostic should discard if it's a recoverable failure or not.

Corrective action:

Call agent:

1. Remove the cyan ink cartridge and reinstall it into the printer.

2. Replace the cyan ink cartridge.

Service engineer:

1. Check that the ISS to cyan ink cartridge cable is not damaged and is correctly connected to the Ink Supply Tubes PCA.

2. Reseat PIP cable to ISS.

3. Replace the PIP.

Recommended parts:

PIP, floater floater floater and ISS connector B4H70-67137

Severity:

SEVERE

SE Code: 25.5:10 – Bad contact detected in ISS slot OP floater

Problem description:

Malfunction or sensor failure: A PIP glitch or a presence error has been detected. Automatic diagnostic should discard if it's a recoverable failure or not.

Corrective action:

Call agent:

1. Remove the optimizer ink cartridge and reinstall it into the printer.

2. Replace the optimizer ink cartridge.

Service engineer:

1. Check that the ISS to optimizer ink cartridge cable is not damaged and is correctly connected to the Ink Supply Tubes PCA.

2. Reseat PIP cable to ISS.

3. Replace the PIP.

Recommended parts:

PIP, floater floater floater and ISS connector B4H70-67137

Severity:

SEVERE

SE Code: 25.6:10 – Bad contact detected in ISS slot Y floater

Problem description:

Malfunction or sensor failure: A PIP glitch or a presence error has been detected. Automatic diagnostic should discard if it's a recoverable failure or not.

Corrective action:

Call agent:

1. Remove the yellow ink cartridge and reinstall it into the printer.

2. Replace the yellow ink cartridge.

Service engineer:

1. Check that the ISS to yellow ink cartridge cable is not damaged and is correctly connected to the Ink Supply Tubes PCA.

2. Reseat PIP cable to ISS.

3. Replace the PIP.

Recommended parts:

PIP, floater floater floater and ISS connector B4H70-67137

Severity:

SEVERE

SE Code: 25.7:10 – Bad contact detected in ISS slot K floater

Problem description:

Malfunction or sensor failure: A PIP glitch or a presence error has been detected. Automatic diagnostic should discard if it's a recoverable failure or not.

Corrective action:

Call agent:

1. Remove the black ink cartridge and reinstall it into the printer.

2. Replace the black ink cartridge.

Service engineer:

1. Check that the ISS to black ink cartridge cable is not damaged and is correctly connected to the Ink Supply Tubes PCA.

2. Reseat PIP cable to ISS.

3. Replace the PIP.

Recommended parts:

PIP, floater floater floater and ISS connector B4H70-67137

Severity:

SEVERE

SE Code: 25.8:10 – Malfunction or sensor failure

Problem description:

A PIP glitch or a presence error has been detected. Automatic diagnostic should discard if it's a recoverable failure or not

Corrective action:

Service engineer:

1. Reseat PIP cable to ISS.

2. Replace the PIP.

Recommended parts:

PIP, floater floater floater and ISS connector B4H70-67137

Severity:

SEVERE

SE Code: 25.11:10 – Magenta PIP overpressure or malfunction (*Latex 370/375*)

Problem description:

This SE is related to the following issues:

- The 3-liter Magenta Ink Tube might be blocked.

- The Magenta PIP sensor might be damaged.

- The 3-liter Magenta Ink pump is not working when it should.

Corrective action:

Service engineer:

1. Check that the 3-liter Magenta Ink Tube is not kinked or blocked.

2. Run the test and depending on the results, replace the following parts:

    - Magenta PIP sensor (for more information see the HP Latex 300 Printer Series Service Manual).

    - 3–liter M color Ink Line (see for instructions) and 3–liter PCA. See for instructions on replacing the 3–liter PCA.

Recommended parts:

PIP, floater floater floater and ISS connector B4H70-67137; 3–liter M color Ink Line G2W18-67006

Severity:

SEVERE

SE Code: 25.12:10 – Light magenta PIP overpressure or malfunction (*Latex 370/375*)

Problem description:

This SE is related to the following issues:

- The 3-liter Light Magenta Ink Tube might be blocked.

- The Light Magenta PIP sensor might be damaged.

- The 3-liter Light Magenta Ink Pump is not working when it should be.

Corrective action:

Service engineer:

1. Check that the 3-liter Light Magenta Ink Tube is not kinked or blocked.

2. Run the 3.5.1.2 Ink Setup *(Latex 370/375)* on page 246 test and depending on the results, replace the following parts:

   - Light magenta PIP sensor.

   - 3–liter LM color Ink Line (see 3–liter "x" color Ink Line on page 592 for instructions) and 3–liter PCA (see 3–liter PCA on page 591).

Recommended parts:

PIP, floater floater floater and ISS connector B4H70-67137; 3–liter LM color Ink Line G2W18-67005

Severity:

SEVERE

SE Code: 25.13:10 – Light cyan PIP overpressure or malfunction (*Latex 370/375*)

Problem description:

This service error is related to the following issues:

- The 3-liter Light Cyan Ink Tube might be blocked.

- The Light cyan PIP sensor might be damaged.

- The 3-liter Light Cyan Ink Pump is not working when it should be.

Corrective action:

Service engineer:

1. Check that the 3-liter Light Cyan Ink Tube is not kinked or blocked.

2. Run the 3.5.1.2 Ink Setup *(Latex 370/375)* on page 246 test and depending on the results, replace the following parts:

   - Light Cyan PIP sensor.

   - 3–liter LC color Ink Line (see 3–liter "x" color Ink Line on page 592 for instructions) and 3–liter PCA (see 3–liter PCA on page 591).

Recommended parts:

PIP, floater floater floater and ISS connector B4H70-67137; 3–liter LC color Ink Line G2W18-67004

Severity:

SEVERE

SE Code: 25.14:10 – Cyan PIP overpressure or malfunction (*Latex 370/375*)

Problem description:

This service error is related to the following issues:

- The 3–liter Cyan Ink Tube might be blocked.

- The Cyan PIP sensor might be damaged.

- The 3-liter Cyan Ink Pump is not working when it should be.

Corrective action:

Service engineer:

1. Check that the 3-liter Cyan Ink Tube is not kinked or blocked.

2. Run the 3.5.1.2 Ink Setup *(Latex 370/375)* on page 246 test and depending on the results, replace the following parts:

    - Cyan PIP sensor.

    - 3–liter C color Ink Line (see 3–liter "x" color Ink Line on page 592 for instructions) and 3–liter PCA (see 3–liter PCA on page 591).

Recommended parts:

PIP, floater floater floater and ISS connector B4H70-67137; 3–liter C color Ink Line G2W18-67002

Severity:

SEVERE

SE Code: 25.15:10 – Optimizer PIP overpressure or malfunction (*Latex 370/375*)

Problem description:

This service error is related to the following issues:

- The 3-liter Optimizer Ink Tube might be blocked.

- The Optimizer PIP sensor might be damaged.

- The 3-liter Optimizer Ink pump is not working when it should be.

Corrective action:

Service engineer:

1. Check that the 3-liter Optimizer Ink Tube is not kinked or blocked.

2. Run 3.5.1.2 Ink Setup *(Latex 370/375)* on page 246 and depending on the results, replace the following parts:

- Optimizer PIP sensor.

- 3-liter OP color Ink Line (see [3–liter "x" color Ink Line on page 592](#) for instructions on replacing a color ink line) and 3-liter PCA (see [3–liter PCA on page 591](#)).

Recommended parts:

PIP, floater floater floater and ISS connector B4H70-67137; 3–liter OPT color Ink Line G2W18-67007

Severity:

SEVERE

SE Code: 25.16:10 – Yellow PIP overpressure or malfunction (*Latex 370/375*)

Problem description:

This service error is related to the following issues:

- The 3-liter Yellow Ink Tube might be blocked.

- The Yellow PIP sensor might be damaged.

- The 3-liter Yellow Ink pump is not working when it should be.

Corrective action:

Service engineer:

1. Check that the 3-liter Yellow Ink Tube is not kinked or blocked.

2. Run the [3.5.1.2 Ink Setup *(Latex 370/375)* on page 246](#) test and depending on the results, replace the following parts:

    - Yellow PIP sensor.

    - 3–liter Y color Ink Line (see [3–liter "x" color Ink Line on page 592](#) for instructions on replacing a color ink line) and 3-liter PCA (see [3–liter PCA on page 591](#)).

Recommended parts:

PIP, floater floater floater and ISS connector B4H70-67137; 3–liter Y color Ink Line G2W18-67008

Severity:

SEVERE

SE Code: 25.17:10 – Black PIP overpressure or malfunction (*Latex 370/375*)

Problem description:

This service error is related to the following issues:

- The 3-liter Black Ink Tube might be blocked.

- The Black PIP sensor might be damaged.

- The 3-liter Black Ink pump is not working when it should be.

Corrective action:

Service engineer:

1. Check that the 3-liter Black Ink Tube is not kinked or blocked.

2. Run the 3.5.1.2 Ink Setup *(Latex 370/375)* on page 246 test and depending on the results, replace the following parts:

   - Black PIP sensor.

   - 3–liter K color Ink Line (see 3–liter "x" color Ink Line on page 592 for instructions on replacing a color ink line) and 3–liter PCA (see 3–liter PCA on page 591).

Recommended parts:

PIP, floater floater floater and ISS connector B4H70-67137; 3–liter K color Ink Line G2W18-67003

Severity:

SEVERE

SE Code: 26.01:10 – Broken Bag. M (PIP 1)

Problem description:

Magenta Ink Cartridge: A broken bag has been detected in the ink cartridge. This error must be solved and the printer checked and cleared of this error code before the printer can resume printing.

Corrective action:

Service engineer:

1. Remove the ink cartridge and check for any ink leaking from the cartridge. In some extreme cases:

   - Ink can leak from the damaged ink cartridge and contaminate the pressurized air system, or;

   - Air can get inside the Ink System causing bubbles in the Ink Tubes, which can damage the printheads.

2. For this issue perform the "3.3.2 Recover broken bag on page 241" Diagnostic procedure.

3. If the ISS Bottom PCA has been damaged by ink, and cannot be repaired; it must be replaced.

Recommended parts:

ISS PCAs B4H70-67041

Severity:

SEVERE

SE Code: 26.02:10 – Broken Bag. LM (PIP 2)

Problem description:

Light Magenta Ink Cartridge: A broken bag has been detected in the ink cartridge. This error must be solved and the printer checked and cleared of this error code before the printer can resume printing.

Corrective action:

Service engineer:

1. Remove the ink cartridge and check for any ink leaking from the cartridge. In some extreme cases:

   - Ink can leak from the damaged ink cartridge and contaminate the pressurized air system, or;

   - Air can get inside the Ink System causing bubbles in the Ink Tubes, which can damage the printheads.

2. For this issue perform the "3.3.2 Recover broken bag on page 241" Diagnostic procedure.

3. If the ISS Bottom PCA has been damaged by ink, and cannot be repaired; it must be replaced.

Recommended parts:

ISS PCAs B4H70-67041

Severity:

SEVERE

SE Code: 26.03:10 – Broken Bag. LC (PIP 3)

Problem description:

Light Cyan Ink Cartridge: A broken bag has been detected in the ink cartridge. This error must be solved and the printer checked and cleared of this error code before the printer can resume printing.

Corrective action:

Service engineer:

1. Remove the ink cartridge and check for any ink leaking from the cartridge. In some extreme cases:

   - Ink can leak from the damaged ink cartridge and contaminate the pressurized air system, or;

   - Air can get inside the Ink System causing bubbles in the Ink Tubes, which can damage the printheads.

2. For this issue perform the "3.3.2 Recover broken bag on page 241" Diagnostic procedure.

3. If the ISS Bottom PCA has been damaged by ink, and cannot be repaired; it must be replaced.

Recommended parts:

ISS PCAs B4H70-67041

Severity:

SEVERE

SE Code: 26.04:10 – Broken Bag. C (PIP 4)

Problem description:

Cyan Ink Cartridge: A broken bag has been detected in the ink cartridge. This error must be solved and the printer checked and cleared of this error code before the printer can resume printing.

Corrective action:

Service engineer:

1. Remove the ink cartridge and check for any ink leaking from the cartridge. In some extreme cases:

- Ink can leak from the damaged ink cartridge and contaminate the pressurized air system, or;

- Air can get inside the Ink System causing bubbles in the Ink Tubes, which can damage the printheads.

2. For this issue perform the "3.3.2 Recover broken bag on page 241" Diagnostic procedure.

3. If the ISS Bottom PCA has been damaged by ink, and cannot be repaired; it must be replaced.

Recommended parts:

ISS PCAs B4H70-67041

Severity:

SEVERE

SE Code: 26.05:10 – Broken Bag. OP (PIP 5)

Problem description:

Optimizer Ink Cartridge: A broken bag has been detected in the ink cartridge. This error must be solved and the printer checked and cleared of this error code before the printer can resume printing.

Corrective action:

Service engineer:

1. Remove the ink cartridge and check for any ink leaking from the cartridge. In some extreme cases:

- Ink can leak from the damaged ink cartridge and contaminate the pressurized air system, or;

- Air can get inside the Ink System causing bubbles in the Ink Tubes, which can damage the printheads.

2. For this issue perform the "3.3.2 Recover broken bag on page 241" Diagnostic procedure.

3. If the ISS Bottom PCA has been damaged by ink, and cannot be repaired; it must be replaced.

4. Ink might be leaking from one of the upper row PIPs, check and replace the PIP causing the leakage issue as well.

Recommended parts:

ISS PCAs B4H70-67041; PIP, floater floater floater and ISS connector B4H70-67137

Severity:

SEVERE

SE Code: 26.06:10 – Broken Bag. Y (PIP 6)

Problem description:

Yellow Ink Cartridge: A broken bag has been detected in the ink cartridge. This error must be solved and the printer checked and cleared of this error code before the printer can resume printing.

Corrective action:

Service engineer:

1. Remove the ink cartridge and check for any ink leaking from the cartridge. In some extreme cases:

- Ink can leak from the damaged ink cartridge and contaminate the pressurized air system, or;

- Air can get inside the Ink System causing bubbles in the Ink Tubes, which can damage the printheads.

2. For this issue perform the "3.3.2 Recover broken bag on page 241" Diagnostic procedure.

3. If the ISS Bottom PCA has been damaged by ink, and cannot be repaired; it must be replaced.

4. Ink might be leaking from one of the upper row PIPs, check and replace the PIP causing the leakage issue as well.

Recommended parts:

ISS PCAs B4H70-67041; PIP, floater floater floater and ISS connector B4H70-67137

Severity:

SEVERE

SE Code: 26.07:10 – Broken Bag. K (PIP 7)

Problem description:

Black Ink Cartridge: A broken bag has been detected in the ink cartridge. This error must be solved and the printer checked and cleared of this error code before the printer can resume printing.

Corrective action:

Service engineer:

1. Remove the ink cartridge and check for any ink leaking from the cartridge. In some extreme cases:

- Ink can leak from the damaged ink cartridge and contaminate the pressurized air system, or;

- Air can get inside the Ink System causing bubbles in the Ink Tubes, which can damage the printheads.

2. For this issue perform the "3.3.2 Recover broken bag on page 241" Diagnostic procedure.

3. If the ISS Bottom PCA has been damaged by ink, and cannot be repaired; it must be replaced.

4. Ink might be leaking from one of the upper row PIPs, check and replace the PIP causing the leakage issue as well.

Recommended parts:

ISS PCAs B4H70-67041; PIP, floater floater floater and ISS connector B4H70-67137

Severity:

SEVERE

SE Code: 27:14 – An incorrect Printhead has been detected

Problem description:

Printhead failure.

Corrective action:

Call agent:

1. Remove the Printheads and check that they are the correct ones for this Printer.

2. Check that the Printer has the latest Firmware version, if not, update the firmware to the latest version.

3. Replace the Printheads.

Recommended parts:

Replace the Printheads

Severity:

SEVERE

SE Code: 27.1:00 – Several nozzles out detected in Optimizer PH

Problem description:

Several nozzles out detected in Optimizer PH: If print quality is not acceptable replace the PH.

Corrective action:

Service engineer:

▲ Check the IQ. If required, recover or replace the PH.

Recommended parts:

Replace the Printhead

Severity:

ADVISORY

SE Code: 27.1:01 – Error due to a high number of nozzles out in printhead slot 1

Problem description:

High number of nozzles out in printhead slot 1.

Corrective action:

Service engineer:

1. Clean all the printheads and check their status.

2. Replace the printhead.

Recommended parts:

Replace the Printhead

Severity:

ADVISORY

SE Code: 27.2:01 – Error due to a high number of nozzles out in printhead slot 2

Problem description:

High number of nozzles out in printhead slot 2.

Corrective action:

Service engineer:

1. Clean all the printheads and check their status.

2. Replace the printhead.

Recommended parts:

Replace the Printhead

Severity:

ADVISORY

SE Code: 27.3:01 – Error due to a high number of nozzles out in printhead slot 3

Problem description:

High number of nozzles out in printhead slot 3.

Corrective action:

Service engineer:

1. Clean all the printheads and check their status.

2. Replace the printhead.

Recommended parts:

Replace the Printhead

Severity:

ADVISORY

SE Code: 27.4:01 – Error due to a high number of nozzles out in printhead slot 4

Problem description:

High number of nozzles out in printhead slot 4.

Corrective action:

Service engineer:

1. Clean all the printheads and check their status.

2. Replace the printhead.

Recommended parts:

Replace the Printhead

Severity:

ADVISORY

SE Code: 27.5:01 – Error due to a high number of nozzles out in printhead slot 5

Problem description:

High number of nozzles out in printhead slot 5.

Corrective action:

Service engineer:

1. Clean all the printheads and check their status.

2. Replace the printhead.

Recommended parts:

Replace the Printhead

Severity:

ADVISORY

SE Code: 27.6:01 – Error due to a high number of nozzles out in printhead slot 6

Problem description:

High number of nozzles out in printhead slot 6.

Corrective action:

Service engineer:

1. Clean all the printheads and check their status.

2. Replace the printhead.

Recommended parts:

Replace the Printhead

Severity:

ADVISORY

SE Code: 29:00 – Maintenance cartridge is almost full

Problem description:

Maintenance cartridge is almost full.

Corrective action:

Call agent:

▲   Replace the Maintenance Cartridge.

Recommended parts:

Replace Maintenance Cartridge

Severity:

ADVISORY

SE Code: 29:01 – Maintenance cartridge badly inserted

Problem description:

Maintenance cartridge badly inserted.

Corrective action:

Call agent:

1. Open the Print Head cleaning cartridge door on the right-hand side of the printer, reinsert the MC and close the door .

2. If the problem persists, replace the printhead cleaning cartridge.

Recommended parts:

Replace Maintenance Cartridge

Severity:

SEVERE

SE Code: 29.1:01 – Possible maintenance cartridge malfunction (No detection of web advance)

Problem description:

Possible maintenance cartridge malfunction. Unknown web wipe level pattern after 300 mm of web advance.

Corrective action:

Call agent:

▲   Open the Printhead cleaning cartridge door on the right-hand side of the printer, advance the web manually until clean web seen, and reinsert the MC. Close the door.

Service engineer:

1. Run the Diagnostic "cleaning roll advance" test. If the web does not advance, replace the web wipe motor.

2. Check line sensor. Run the Diagnostic test "line sensor check".

3. Replace the Line sensor if necessary.

Recommended parts:

line sensor B4H70-67025

Severity:

ADVISORY

SE Code: 29.2:00 – Possible maintenance cartridge malfunction or doesn't advance properly (There's detection that web doesn't advance)

Problem description:

Possible maintenance cartridge malfunction or doesn't advance properly.

Corrective action:

Call agent:

▲   Replace the printhead maintenance cartridge.

Recommended parts:

Replace Maintenance Cartridge

Severity:

SEVERE

SE Code: 32:01 – Take-up reel disconnected while printing

Problem description:

Take-up Reel disconnected from Interconnect PCA. Take-Up Reel damaged. Interconnect PCA damaged (very low probability).

Corrective action:

Call agent:

▲   The take-up reel is disconnected. If you want to use the take-up reel, turn off the printer and ensure that all take-up reel cables are connected (sensor cables, printer cable). If you do not want to use it, you may need to unload the substrate manually from the take-up reel. Remember to cut the substrate first, either manually or by using the Form feed and cut option in the front panel's Substrate menu.

Service engineer:

1.   Revise the Take-up Reel connections.

2.   Replace the Take-up Reel RH module. See Take-up reel motor on page 578.

Recommended parts:

Take-up reel motor module B4H70-67081

Severity:

ADVISORY

SE Code: 32:01.1 – Take-up reel early substrate jam

Problem description:

This system error happens when there is a small amount of substrate printed (less than 79 inches long), and the Take Up Reel sensor detects that the tension bar is (incorrectly) at the bottom of its path, even though the spindle motor has been rotating for more than 3 seconds.

The most likely cause of this error is that the user has forgotten to set the switch direction or tape the substrate to the spindle core.

Corrective action:

Call agent:

1. Check that the substrate is attached to the Take-Up Reel.

2. Check that the winding direction switch is in the correct position.

3. If needed, use the Take-Up Reel arrow keys to wind the substrate before resuming printing.

4. To resume printing, press OK.

Severity:

ADVISORY

SE Code: 32:01.2 – Take-up reel substrate jam

Problem description:

The tension bar has stayed in one of its sensor trigger positions for more than 8 seconds.

Corrective action:

Call agent:

1. Check that the substrate is attached to the Take-Up Reel.

2. Check that the winding direction switch is in the correct position.

3. Check that nothing is blocking the movement of the tension bar.

4. Ensure that the substrate is following the correct path along the tension bar and diverter bar.

Severity:

ADVISORY

SE Code: 32:02 – Take-up reel disconnected while printer was powered off

Problem description:

TUR disconnected while printer was powered off. This message is shown during initialization of the printer; it warns that the Take-Up Reel has been disconnected while the printer was off (previously the Take-Up Reel was enabled at the Front Panel).

Corrective action:

Service engineer:

▲   The take-up reel is disconnected. If you want to use the take-up reel, turn off the printer and ensure that all take-up reel cables are connected (sensor cables, printer cable). If you do not want to use it, you may need to unload the substrate manually from the take-up reel. Remember to cut the substrate first, either manually or by using the Form feed and cut option in the front panel's Substrate menu.

Service engineer:

1. Revise the Take-up Reel conections.

2. Replace the Take-up Reel RH module. See [Take-up reel motor on page 578](#)

Recommended parts:

Take-up reel motor module B4H70-67081

Severity:

ADVISORY

SE Code: 32.1:10 – Take-up reel internal short-circuit detected (*Latex 370/375*)

Problem description:

The Take-Up Reel has an internal short-circuit detected by the Take-Up Reel connector on the 3-liter PCA.

Corrective action:

Service engineer:

▲ Replace the Take-Up Reel motor module (for more information see the HP Latex 300 Printer Series Service Manual).

Severity:

SEVERE

SE Code: 41:03 – Electrical current limit: Electrical current limit in paper motor Electrical warm: Electrical warm in paper motor

Problem description:

The Media-axis motor has a failure.

Corrective action:

Call agent:

▲ Open the Window and check for any visible obstacles restricting the movement of the Drive Roller. If there is a wrinkled mass of paper inside the paper path, lift the Pinchwheels and clear the obstruction.

Service engineer:

▲ Replace the Media-Axis Motor.

Recommended parts:

Media motor SERV 60" Q6652-60108

Severity:

SEVERE

SE Code: 41:10 – Electrical fault: Electrical fault in paper motor

Problem description:

The Media-axis motor has a failure.

Corrective action:

Call agent:

▲   Open the Window and check for any visible obstacles restricting the movement of the Drive Roller. If there is a wrinkled mass of paper inside the paper path, lift the Pinchwheels and clear the obstruction.

Service engineer:

▲   Replace the Media-Axis Motor.

Recommended parts:

Media motor SERV 60" Q6652-60108

Severity:

SEVERE

SE Code: 42:03 – Scan-Axis motor electrical current limit

Problem description:

Media jam Scan Axis motor damaged.

Corrective action:

Call agent:

1.   Switch the power off from the rear of the printer and disconnect the power cord. Reconnect the power cord and power on the printer.

2.   Open the Window and check for any visible obstacles restricting the movement of the carriage. If there is a wrinkled mass of substrate inside the printer, clear the substrate jam using instructions provided in the User Guide.

Service engineer:

▲   Replace the Scan Axis Motor. See Scan-axis motor on page 421

Recommended parts:

Scan axis motor B4H70-67031

Severity:

SEVERE

SE Code: 42:10 – Scan axis motor fault detected

Problem description:

Scan axis failure.

Corrective action:

Service engineer:

▲ Replace the Scan-Axis Motor.

Recommended parts:

Scan axis motor B4H70-67031

Severity:

SEVERE

SE Code: 42:11 – Scan axis motor disconnected

Problem description:

The Scan axis motor has become disconnected.

Corrective action:

Service engineer:

▲ Reconnect the Scan Axis Motor. See Scan-axis motor on page 421

SE Code: 43:11 – Vacuum fan not connected

Problem description:

Vacuum fan not connected.

Corrective action:

Call agent:

▲ Restart the printer.

Service engineer:

1. Check the cable connections between the Mini Interconnect PCA and Eola SVS side.

2. Replace Eolas.

3. Replace the Mini Interconnect PCA.

Recommended parts:

Vacuum fan assembly B4H70-67001; Interconnect PCA CQ871-67001

Severity:

SEVERE

SE Code: 43.1:11 – Communication error: Problem in communication with vacuum board fan

Problem description:

Vacuum Fan PCA is not connected. Vacuum Fan PCA is damaged. Cable between Vacuum Fan PCA and Interconnect PCA is damaged.

Corrective action:

Call agent:

▲   Restart the printer.

Service engineer:

1.   Check the cable connections between Interconnect PCA and Vacuum Fan PCA.

2.   Replace the Vacuum Fan PCA.

3.   Replace the PrintMech PCA. See [PrintMech PCA on page 510](#).

4.   Replace the Interconnect PCA. See [Interconnect PCA on page 505](#).

Recommended parts:

Vacuum fan assembly B4H70-67001; Printmech PCA B4H70-67046; Interconnect PCA CQ871-67001

Severity:

SEVERE

SE Code: 43.2:11 – A Vacuum Fan Stopped: Vacuum Fan Stopped

Problem description:

A Vacuum Fan is not connected. The Vacuum Fan cable is damaged. Vacuum Fan PCA is damaged. PrintMech PCA is damaged (very low probability).

Corrective action:

Call agent:

▲   Restart the printer.

Service engineer:

1.   Check the cable connections between Vacumm fans and EOLA PCA.

2.   Replace the Vacuum Fan. See [Vacuum fan on page 442](#).

Recommended parts:

Vacuum fan assembly B4H70-67001

Severity:

SEVERE

SE Code: 43.3:10 – VacuumFan Over current: Vacuum Fan Overcurrent, SVS side

Problem description:

Vacuum fan failure.

Corrective action:

Call agent:

▲   Switch the power off at the rear of the printer, wait briefly, then switch it back on again.

Service engineer:

▲   Replace the Vacuum Fan SVS side.

Recommended parts:

Vacuum fan assembly B4H70-67001

Severity:

SEVERE

SE Code: 43.4:10 – VacuumFan Low Performance: Vacuum Fan is not working at the desired performance, SVS side

Problem description:

Vacuum fan failure.

Corrective action:

Call agent:

▲   Switch the power off at the rear of the printer, wait briefly, then switch it back on again.

Service engineer:

▲   Replace the Vacuum Fan SVS side.

Recommended parts:

Vacuum fan assembly B4H70-67001

Severity:

ADVISORY

SE Code: 44:10 – Aerosol Fan Fault

Problem description:

Aerosol Fan Fault.

Corrective action:

Call agent:

▲   Restart the printer.

Service engineer:

1.   Check that the Aerosol Fan cable is correctly connected to the Interconnect PCA.

2.   Check that the cables going from the Interconnect PCA to the PrintMech PCA are correctly connected.

3. Replace the Aerosol Fan. See [Aerosol fan assembly on page 409](#).

4. If the previous action did not work then, replace the PrintMech PCA. See [PrintMech PCA on page 510](#).

Recommended parts:

Aerosol fan B4H70-67033; Printmech PCA B4H70-67046

Severity:

SEVERE

SE Code: 45:03 – Rewinder servo shutdown

Problem description:

Rewinder servo shutdown.

Corrective action:

Call agent:

1. Switch the power off at the rear of the printer, wait briefly, then switch it back on again.

2. pen the Window and check for any visible obstacles restricting the movement of the Drive Roller. If there is a wrinkled mass of substrate inside the substrate path, lift the Pinch Wheels and clear the obstruction.

Service engineer:

1. Revise the Rewinder motor cable connections to Interconnect PCA.

2. Replace the Rewinder Motor. See [Rewinder on page 587](#).

3. If the previous action did not work then, replace the PrintMech PCA.

4. If the previous action did not work then, replace the Interconnect PCA.

Recommended parts:

Rewinder motor without gears B4H70-67066 (375,370,365,360,335,330) - B4H69-67029 (315,310,115,110); Printmech PCA B4H70-67046; Interconnect PCA CQ871-67001

Severity:

SEVERE

SE Code: 46:03 – Primer servo shutdown

Problem description:

Primer failure.

Corrective action:

Call agent:

1. Check that the Primer Arm is not damaged and there are no obstacles in its way.

2. Turn the power off at the rear of the printer and disconnect the power cord. Reconnect the power cord and turn on the printer.

Service engineer:

▲ Replace the Primer Assembly. See Primer assembly on page 412.

Recommended parts:

Primer assembly SERV M0E29-67099

Severity:

SEVERE

SE Code: 46:10 – Primer fault

Problem description:

Primer fault.

Corrective action:

Call agent:

1. Check that the Primer Arm is not damaged and there are no obstacles in its way.

2. Turn the power off at the rear of the printer and disconnect the power cord. Reconnect the power cord and turn on the printer.

Service engineer:

▲ Replace the Primer Assembly. See Primer assembly on page 412.

Recommended parts:

Primer assembly SERV M0E29-67099

Severity:

SEVERE

SE Code: 46:13 – Primer test distance failed

Problem description:

Primer test distance failed.

Corrective action:

Call agent:

▲ Restart the printer.

Service engineer:

1. Check that the Primer Arm is not damaged and there are no obstacles in its way.

2. Check that Primer cable is not damaged and correctly connected to the Interconnect PCA.

3. Replace the Primer Assembly. See Primer assembly on page 412.

4. Replace the PrintMech PCA. See PrintMech PCA on page 510.

5. Replace the Interconnect PCA. See Interconnect PCA on page 505.

Recommended parts:

Primer assembly SERV M0E29-67099; Printmech PCA B4H70-67046; Interconnect PCA CQ871-67001

Severity:

SEVERE

SE Code: 47.0:01 – The 3-liter Ink Upgrade Kit is not detected: cable might be disconnected (*Latex 370/375*)

Problem description:

The 3-liter Ink Upgrade Kit is not detected by the printer.

Corrective action:

Call agent:

1. Check if the Accessory port cable is well connected to the kit and to the printer.

2. If the SE persists, replace the Accessory port cable. See Accessory port cable on page 604 for instructions.

Recommended parts:

Accessory port cable G2W18-67016

Severity:

SEVERE

SE Code: 47.1:10 – One of the red 3-liter ink pump cables has an internal short-circuit (*Latex 370/375*)

Problem description:

One of the red cables providing power to the pumps has a short-circuit.

Corrective action:

Service Engineer:

1. Switch off the printer.

2. Run the 3.5.1.2 Ink Setup *(Latex 370/375)* on page 246 test to identify the defective 3-liter Ink pump.

3. Replace the defective Pump cable (included in the 3–liter Cables spare part). See 3–liter Cables on page 597 for instructions on replacing a 3–liter Cable.

Recommended parts:

3–liter Cables G2W18-67009

Severity:

SEVERE

SE Code: 47.2:10 – One of the black 3-liter ink pumps cable has a short circuit (*Latex 370/375*)

Problem description:

One of the black cables providing power to the pumps has a short-circuit.

Corrective action:

Service Engineer:

1. Switch off the printer.

2. Run the 3.5.1.2 Ink Setup *(Latex 370/375)* on page 246 test to identify the defective 3-liter Ink pump.

3. Replace the defective cable (included in the 3–liter Cables spare part). See 3–liter Cables on page 597 for instructions.

Recommended parts:

3–liter Cables G2W18-67009

Severity:

SEVERE

SE Code: 47.4:10 – 3-liter Ink cartridges Acumen cable has a short-circuit (*Latex 370/375*)

Problem description:

The 3-liter Acumen cable, which is connected in the J13 connector of the 3-liter PCA has a short-circuit.

Corrective action:

Call Agent:

1. Remove the 3-liter ink cartridges.

2. Clean the electrical pads of the 3-liter ink cartridges with a dry tissue.

3. Clean the electrical pads of the ink cartridge connectors with a dry tissue.

Service engineer:

1. If the SE persists then replace 3–liter Acumen cable, which is included in the 3–liter cables spare part. See 3–liter Cables on page 597 for instructions on changing a 3–liter Acumen cable.

2. If the SE persists, there is a low probability that the cable going out from the plastic ink connector is damaged. In this case you should replace the complete color line.

Recommended parts:

3–liter Cables G2W18-67009; 3–liter M color Ink Line G2W18-67006

Severity:

SEVERE

SE Code: 47.5:11 – Ink leakage detected in the 3-liter Ink Upgrade Kit tray (*Latex 370/375*)

Problem description:

The printer has detected an ink leakage in the 3-liter Ink Upgrade Kit tray.

Corrective action:

Service engineer:

1. Replace the "leaking part" (ink cartridge or ink line).

2. Clean the 3-liter Ink Upgrade Kit tray.

3. Clean the Ink leakage sensor and also the other affected parts.

4. In some cases cleaning the sensor is not enough to recover the machine. In that case, change the Ink Leakage Sensor that is included in the 3-liter Cables spare part (see 3–liter Cables on page 597). See Ink leak detector cable on page 603 for instructions on replacing the Ink Leakage Sensor.

Recommended parts:

3–liter Cables G2W18-67009

Severity:

SEVERE

SE Code: 47.6:11 – 3-liter Ink leakage sensor is not detected (*Latex 370/375*)

Problem description:

The 3-liter Ink leakage sensor is not connected to the J15 connector of the 3–liter PCA or is broken.

Corrective action:

Service engineer:

1. Clean the 3–liter Ink Upgrade Kit tray is there is an ink leakage.

2. Check if the Ink leakage sensor cable is well connected to the 3–liter PCA (see 3–liter PCA on page 591).

3. If the cable is well connected, then replace the defective 3-liter Ink leakage detector cable, which is included in the spare part: 3–liter Cables. See Ink leak detector cable on page 603 for instructions on replacing the cable.

Recommended parts:

3–liter Cables G2W18-67009

Severity:

SEVERE

SE Code: 47.7:11 – 3-liter ink cartridges Acumen cable is not detected (*Latex 370/375*)

Problem description:

The 3-liter Ink Cartridge Acumen cable is not connected to the J2 connector of the 3–liter PCA or is broken.

Corrective action:

Service engineer:

1. Check if the 3-liter Acumen cable is well connected to the 3–liter PCA (see 3–liter PCA on page 591).

2. If the cable is well connected, then replace the defective 3-liter Acumen cable, which is included in the spare part 3–liter Cables. See 3–liter Cables on page 597 for instructions on replacing the cable.

Recommended parts:

3–liter Cables G2W18-67009

Severity:

SEVERE

SE Code: 47.8:11 – 3-liter ink cartridges Presence cable is not detected (*Latex 370/375*)

Problem description:

The 3-liter Ink Cartridge Presence cable is not connected to the J13 connector of the 3-liter PCA or is broken.

Corrective action:

Service engineer:

1. Check if the 3-liter Presence cable is well connected to the 3—liter PCA (see 3—liter PCA on page 591).

2. If the cable is well connected, then replace the defective 3-liter Presence cable, which is included in the spare part: 3—liter Cables. See 3—liter Cables on page 597 for instructions on replacing the cable.

Recommended parts:

3—liter Cables G2W18-67009

Severity:

SEVERE

SE Code: 47.10:10 – 3-liter Ink Upgrade Kit incorrect accessory. The printer's region is mismatched (*Latex 370/375*)

Problem description:

Mismatch between the licenses stored in the printer and the ones stored in the 3-liter kit PCA.

Corrective action:

Call Agent:

▲   Switch the power off at the rear of the printer, wait two minutes, then switch it back on again.

Service engineer:

1. Run the diagnostic test 3.5.1.2 Ink setup (see 3.5.1.2 Ink Setup *(Latex 370/375)* on page 246) and confirm it finishes with an OK. Reboot the printer and check if the issue has been fixed.

2. Contact Level 3 providing Serial Number and Product Number.

3. The HP representative will send you a file (RFID file) with the extension .rs, you must format a USB flash driver with FAT32 format.

4. Copy the file in the USB flash.

5. Switch off the printer and then insert the USB flash driver with RFID file.

6. Switch on the printer, to ensure that the file is well copied in the printer looks if the USB flash drive is flashing.

7. Remove the USB flash driver, when the printer displays a message tells you to do it.

8. Switch off the printer and go to Diagnostic Menu.

9. Go to Diagnostic Menu > 3. Ink system menu > 3.5. 3-liter accessory menu > 3.5.1. Installation > 3.5.1.1. Install/uninstall, and then install the 3—liter Ink Kit.

10. Run the 3.5.1.2 Ink Setup *(Latex 370/375)* on page 246.

Severity:

SEVERE

SE Code: 47.31:01 – 3-liter Magenta Ink Pump is disconnected (PUMP 1) (*Latex 370/375*)

Problem description:

The 3-liter Magenta Ink Pump cable is disconnected or the connector is broken.

Corrective action:

Service Engineer:

1. Check if the 3-liter Magenta Ink Pump cable is well connected to the pump connector.

2. If the cable is well connected, then replace the defective 3–liter M color Ink Line (this spare part includes the 3-liter Magenta pump). See 3–liter "x" color Ink Line on page 592 for instructions on replacing a color ink line.

Recommended parts:

3–liter M color Ink Line G2W18-67006

Severity:

ADVISORY

SE Code: 47.32:11 – 3-liter Light magenta Ink Pump is disconnected (PUMP 2) (*Latex 370/375*)

Problem description:

The 3-liter Light Magenta Ink Pump cable is disconnected or the connector is broken.

Corrective action:

Service Engineer:

1. Check if the 3-liter Light Magenta Ink Pump cable is well connected to the pump connector.

2. If the cable is well connected, then replace the defective 3–liter LM color Ink Line (this spare part includes the 3-liter Light Magenta pump). See 3–liter "x" color Ink Line on page 592 for instructions on replacing a color ink line.

Recommended parts:

3–liter LM color Ink Line G2W18-67005

Severity:

SEVERE

SE Code: 47.33:11 – 3-liter Light Cyan Ink Pump is disconnected (PUMP 3) (*Latex 370/375*)

Problem description:

The 3-liter Light Cyan Ink Pump cable is disconnected or the connector is broken.

Corrective action:

Service Engineer:

1. Check if the 3-liter Light Cyan Ink Pump cable is well connected to the pump connector.

2. If the cable is well connected, then replace the defective 3–liter LC color Ink Line (this spare part includes the 3-liter Light Cyan pump). See 3–liter "x" color Ink Line on page 592 for instructions on replacing a color ink line.

Recommended parts:

3–liter LC color Ink Line G2W18-67004

Severity:

SEVERE

SE Code: 47.34:11 – 3-liter Cyan Ink Pump is disconnected (PUMP 4) (*Latex 370/375*)

Problem description:

The 3-liter Cyan Ink Pump cable is disconnected or the connector is broken.

Corrective action:

Service Engineer:

1. Check if the 3-liter Cyan Ink Pump cable is well connected to the pump connector.

2. If the cable is well connected, then replace the defective 3–liter C color Ink Line (this spare part includes the 3-liter Cyan pump). See 3–liter "x" color Ink Line on page 592 for instructions on replacing a color ink line.

Recommended parts:

3–liter C color Ink Line G2W18-67002

Severity:

SEVERE

SE Code: 47.35:11 – 3-liter Optimizer Ink Pump is disconnected (PUMP 5) (*Latex 370/375*)

Problem description:

The 3-liter Optimizer Ink Pump cable is disconnected of the connector or broken.

Corrective action:

Service Engineer:

1. Check if the 3-liter Optimizer Ink Pump cable is well connected to the pump connector.

2. If the cable is well connected, then replace the defective 3-liter OP color Ink Line (this spare part includes the 3-liter Optimizer pump). See 3–liter "x" color Ink Line on page 592 for instructions on replacing a color ink line.

Recommended parts:

3–liter OPT color Ink Line G2W18-67007

Severity:

SEVERE

SE Code: 47.36:11 – 3-liter Yellow Ink Pump is disconnected (PUMP 6) (*Latex 370/375*)

Problem description:

The 3-liter Yellow Ink Pump cable is disconnected or the connector is broken.

Corrective action:

Service engineer:

1. Check if the 3-liter Yellow Ink Pump cable is well connected to the pump connector.

2. If the cable is well connected, then replace the defective 3-liter Y color Ink Line (this spare part includes the 3-liter Yellow pump). See 3–liter "x" color Ink Line on page 592 for instructions on replacing a color ink line.

Recommended parts:

3–liter Y color Ink Line G2W18-67008

Severity:

SEVERE

SE Code: 47.37:11 – 3-liter Black Ink Pump is disconnected (PUMP 7) (*Latex 370/375*)

Problem description:

The 3-liter Black Ink Pump cable is disconnected or the connector is broken.

Corrective action:

Service engineer:

1. Check if the 3-liter Black Ink Pump cable is well connected to the pump connector.

2. If the cable is well connected, then replace the defective 3-liter B color Ink Line (this spare part includes the 3-liter Black pump). See 3–liter "x" color Ink Line on page 592 for instructions on replacing a color ink line.

Recommended parts:

3–liter K color Ink Line G2W18-67003

Severity:

SEVERE

SE Code: 47.91:10 – 3-liter Magenta Ink Cartridge has not been refilled in a maximum allowed time (*Latex 370/375*)

Problem description:

The printer has exceeded the allowed time to refill the Magenta Intermediate Ink cartridge. Three main reasons for having this SE are:

- Ink leakage on ink circuit

- 3-liter Magenta Pump is not working

- 3-liter Magenta ink tube might be blocked or kinked

Corrective action:

Service engineer:

1. Check if there is an obstruction in the Magenta ink line.

2. Replace the 3–liter M color Ink Line (3–liter "x" color Ink Line on page 592 for instructions) .

Recommended parts:

3–liter M color Ink Line G2W18-67006

Severity:

SEVERE

SE Code: 47.92:10 – 3-liter Light Magenta Ink Cartridge has not been refilled in a maximum allowed time (*Latex 370/375*)

Problem description:

The printer has exceeded the allowed time to refill the Light Magenta Intermediate Ink Cartridge. The three main reasons to have this SE are:

- Ink leakage on ink circuit.

- 3-liter Light Magenta Pump is not working.

- 3-liter Light Magenta ink tube might be blocked or kinked.

Corrective action:

Service engineer:

1. Check if there is an obstruction in the Light Magenta ink line.

2. Replace the 3–liter LM color Ink Line (3–liter "x" color Ink Line on page 592 for instructions) .

Recommended parts:

3–liter LM color Ink Line G2W18-67005

Severity:

SEVERE

SE Code: 47.93:10 – 3-liter Light Cyan Ink Cartridge has not been refilled in a maximum allowed time (*Latex 370/375*)

Problem description:

The printer has exceeded the allowed time to refill the Light Cyan Intermediate Ink Cartridge. The three main reasons to have this SE are:

- Ink leakage on ink circuit.

- 3-liter Light Cyan Pump is not working.

- 3-liter Light Cyan ink tube might be blocked or kinked.

Corrective action:

Service engineer:

1. Check if there is an obstruction in the Light Cyan ink line.

2. Replace the 3–liter LC color Ink Line (3–liter "x" color Ink Line on page 592 for instructions) .

Recommended parts:

3–liter LC color Ink Line G2W18-67004

Severity:

SEVERE

SE Code: 47.94:10 – 3-liter Cyan Ink Cartridge has not been refilled in a maximum allowed time (*Latex 370/375*)

Problem description:

The printer has exceeded the allowed time to refill the Cyan Intermediate Ink Cartridge. The three main reasons for having this SE are:

- Ink leakage on ink circuit.

- 3-liter Cyan Pump is not working.

- 3-liter Cyan Ink Tube might be blocked or kinked.

Corrective action:

Service engineer:

1. Check if there is a obstruction in the Cyan ink line.

2. Replace the 3–liter C color Ink Line (3–liter "x" color Ink Line on page 592 for instructions) .

Recommended parts:

3–liter C color Ink Line G2W18-67002

Severity:

SEVERE

SE Code: 47.95:10 – 3-liter Optimizer Ink Cartridge has not been refilled in a maximum allowed time (*Latex 370/375*)

Problem description:

The printer has exceeded the allowed time to refill the Optimizer Intermediate Ink Cartridge. The three main reasons to have this SE are:

- Ink leakage on ink circuit.

- 3-liter Optimizer Pump is not working.

- 3-liter Optimizer Ink Tube might be blocked or kinked.

Corrective action:

Service engineer:

1. Check if there is an obstruction in the Optimizer ink line.

2. Replace the 3–liter OP color Ink Line (3–liter "x" color Ink Line on page 592 for instructions) .

Recommended parts:

3–liter OPT color Ink Line G2W18-67007

Severity:

SEVERE

SE Code: 47.96:10 – 3-liter Yellow Ink Cartridge has not been refilled in a maximum allowed time (*Latex 370/375*)

Problem description:

The printer has exceeded the allowed time to refill the Yellow Intermediate Ink Cartridge. The three main reasons for having this SE are:

- Ink leakage on ink circuit.

- 3-liter Yellow Pump is not working.

- 3-liter Yellow Ink Tube might be blocked or kinked.

Corrective action:

Service engineer:

1. Check if there is an obstruction in the Yellow ink line.

2. Replace the 3–liter Y color Ink Line (3–liter "x" color Ink Line on page 592 for instructions) .

Recommended parts:

3–liter Y color Ink Line G2W18-67008

Severity:

SEVERE

SE Code: 47.97:10 – 3-liter Black Ink Cartridge has not been refilled in a maximum allowed time (*Latex 370/375*)

Problem description:

The printer has exceeded the allowed time to refill the Black Intermediate Ink Cartridge. The three main reasons to have this SE are:

- Ink leakage on ink circuit.

- 3-liter Black Pump is not working.

- 3-liter Black link Tube might be blocked or kinked.

Corrective action:

Service engineer:

1. Check if there is an obstruction in the Black ink line.

2. Replace the 3–liter K color Ink Line (3–liter "x" color Ink Line on page 592 for instructions) .

Recommended parts:

3–liter K color Ink Line G2W18-67003

Severity:

SEVERE

SE Code: 50:01 – OMAS Module communication failure

Problem description:

OMAS communication failure.

Corrective action:

Call agent:

▲ Check that the printer has the latest firmware version. If not, update the firmware to the latest version.

Service engineer:

1. Check that the OMAS Controller to OMAS Sensor cable is not damaged and is correctly connected to the OMAS Controller Card and the OMAS Module.

2. Replace the OMAS Module. See OMAS on page 494.

Recommended parts:

OMAS Module B4H70-67006

Severity:

ADVISORY

SE Code: 50:03 – OMAS Controller to PSU cable does not seem to be connected

Problem description:

The OMAS controller power cable does not seem to be connected.

Corrective action:

Call agent:

▲ Restart the printer.

Service engineer:

1. Check that the PSU to OMAS Controller cable is not damaged.

2. Check that the PSU to OMAS Controller cable is correctly connected to the PSU and the OMAS Controller Card.

Severity:

SEVERE

SE Code: 50:11 – OMAS: Navigation problems, may be due to a mispositionned sensor, DOF, or skew issue

Problem description:

OMAS sensor mispositionned.

Corrective action:

Call agent:

▲ Restart the printer.

Service engineer:

▲ Check that the OMAS sensor is well positioned.

Severity:

ADVISORY

SE Code: 50.1:10 – OMAS: error with the media advance sensor component or with the cable between sensor and controller

Problem description:

OMAS communication failure.

Corrective action:

Call agent:

▲ Restart the printer.

Service engineer:

1. Check that the OMAS Controller to OMAS Sensor cable is not damaged and is correctly connected to the OMAS Controller Card and the OMAS Module.

2. Replace the OMAS Module. See OMAS on page 494.

3. Replace the OMAS controller PCA. See OMAS controller PCA on page 508.

Recommended parts:

OMAS Module B4H70-67006; OMAS PCA B4H70-67114

Severity:

SEVERE

SE Code: 50.2:10 – OMAS board: Error with the media advance sensor controller board

Problem description:

OMAS disconneceted. OMAS Controller Card damaged.

Corrective action:

Call agent:

▲ Check that the printer has the latest firmware version. If not, update the firmware to the latest version.

Service engineer:

1. Check that OMAS sensor is connected to OMAS Controller Card.

2. Replace the OMAS Controller Card.

Recommended parts:

OMAS PCA B4H70-67114

Severity:

SEVERE

SE Code: 50.3:11 – Main PCA to OMAS Controller cable does not seem to be connected

Problem description:

The cable from Main PCA to OMAS controller has a problem.

Corrective action:

Service engineer:

▲ Restart the printer.

Service engineer:

1. Check that the Main PCA to OMAS Controller cable is not damaged.

2. Check that the Main PCA to OMAS Controller cable is correctly connected to the Main PCA and the OMAS Controller Card.

Severity:

SEVERE

SE Code: 50.4:11 – OMAS Controller to PrintMech PCA cable does not seem to be connected

Problem description:

OMAS Controller to PrintMech PCA cable does not seem to be connected.

Corrective action:

Call agent:

▲   Restart the printer.

Service engineer:

1.   Check that the OMAS Controller to PrintMech PCA cable is not damaged.

2.   Check that the OMAS Controller to PrintMech PCA cable is correctly connected to the PrintMech PCA and the OMAS Controller Card.

3.   Replace OMAS Controller PCA.

Recommended parts:

OMAS PCA B4H70-67114

Severity:

SEVERE

SE Code: 50.5:11 – OMAS board: SENSOR_NOT_CONNECTED

Problem description:

OMAS sensor not connected.

Corrective action:

Call agent:

▲   Restart the printer.

Service engineer:

1.   Check that OMAS sensor is well connected.

2.   Replace OMAS sensor. .

3.   Replace OMAS controller PCA. See OMAS controller PCA on page 508.

Recommended parts:

OMAS Module B4H70-67006; OMAS PCA B4H70-67114

Severity:

SEVERE

SE Code: 50.6:11 – OMAS board: Media sensor board Power cable

Problem description:

OMAS Controller to Engine PCA cable does not seem to be connected. Power not connected. Problems with 5V line.

Corrective action:

Call agent:

▲   Restart the printer.

Service engineer:

1.   Check that the OMAS Controller to Engine PCA cable is not damaged.

2.   Check that the OMAS Controller to Engine PCA cable is correctly connected to the Engine PCA and the OMAS Controller Card.

Severity:

SEVERE

SE Code: 50:14 – Firmware version mismatch between the OMAS Controller Card and Hard Disk Drive

Problem description:

FW mismatch.

Corrective action:

Call agent:

▲   Check that the printer has the latest firmware version. If not, update the firmware to the latest version.

Service engineer:

▲   Replace the OMAS Controller Card.

Recommended parts:

OMAS PCA B4H70-67114

Severity:

ADVISORY

SE Code: 50:17 – Advisory fw error in DSP or Engine code of the substrate advance sensor component

Problem description:

FW mismatch.

Corrective action:

Call agent:

▲   Check that the printer has the latest firmware version. If not, update the firmware to the latest version.

Service engineer:

▲   Replace the OMAS Controller Card.

Recommended parts:

OMAS PCA B4H70-67114

Severity:

ADVISORY

SE Code: 52:10 – Drop Detector switch On/Off failure

Problem description:

Drop detector damaged. SVS cable damaged Interconnect. PCA damaged (very low probability). PrintMech PCA damaged (very low probability).

Corrective action:

Call agent:

▲   Restart the printer.

Service engineer:

1.   Check that the Drop Detector cable is not damaged and is correctly connected to the Service Station cable.

2.   Check that the Service Station cable is not damaged and is correctly connected to the Interconnect PCA.

3.   Replace the Drop Detector. See Drop detector on page 432.

4.   If the System Error continues, replace the Interconnect PCA . See Interconnect PCA on page 505.

5.   Replace the PrintMech PCA. See PrintMech PCA on page 510.

Recommended parts:

Drop detector MR SERV Q1273-60236; Interconnect PCA CQ871-67001; Printmech PCA B4H70-67046

Severity:

SEVERE

SE Code: 55:10 – Line Sensor communication failure

Problem description:

Line sensor disconnected or damaged.

Corrective action:

Call agent:

▲   Restart the printer.

Service engineer:

1.   Check that Line sensor is properly connected to Carriage PCA.

2.   Replace the Line Sensor. See Line sensor assembly on page 457.

Recommended parts:

Line sensor SERV B4H70-67025

Severity:

SEVERE

SE Code: 55:11 – Line Sensor Performance: Line Sensor performs poorly needs recalibration, cleaning, or replacement

Problem description:

Line sensor needs recalibration.

Corrective action:

Call agent:

▲   Restart the printer.

Service engineer:

1.   Restart the printer.

2.   Clean the Line Sensor.

3.   Replace the Line sensor. See Line sensor assembly on page 457.

Recommended parts:

Line sensor SERV B4H70-67025

Severity:

ADVISORY

SE Code: 56:01 – Incorrect readings from substrate encoder

Problem description:

Incorrect readings from substrate encoder.

Corrective action:

Call agent:

▲   Restart the printer.

Service engineer:

1.   Perform Substrate Drive diagnostics.

2.   Replace the Encoder Disc and Sensor. See Encoder disc and sensor on page 435.

Recommended parts:

Drive roller Encoder SERV 60" Q6652-60123

Severity:

SEVERE

SE Code: 56:10 – Substrate Encoder calibration failed

Problem description:

Substrate Encoder calibration failed .

Corrective action:

Service engineer:

1. Perform Substrate Drive diagnostics.

2. Replace the Encoder Disc and Sensor. See [Encoder disc and sensor on page 435](#).

Recommended parts:

Drive roller Encoder SERV 60" Q6652-60123

Severity:

SEVERE

SE Code: 58.1:10 – Color sensor Shutter Actuator failure

Problem description:

Color sensor Shutter Actuator failure.

Corrective action:

Call agent:

▲ Restart the printer.

Service engineer:

1. Replace the Color sensor Shutter Actuator Assembly.

2. Perform the Color sensor Shutter Diagnostic Test to ensure that there is no other problem preventing shutter operation.

3. Perform a Color sensor basic test (CLC) to ensure that the replaced part is working correctly.

Recommended parts:

SOL actuator assembly B4H70-67029

Severity:

ADVISORY

SE Code: 58.2:10 – Color sensor Shutter Deactivator failure

Problem description:

The Color sensor Shutter Deactivator fail.

Corrective action:

Service engineer:

1. Check that the Shutter Deactivator is correctly screwed into place.

2. Perform the Color sensor Shutter Diagnostic Test to ensure that there is no other problem preventing shutter operation.

3. Perform a Color sensor basic test (CLC) to ensure that the replaced part is working correctly.

Severity:

ADVISORY

SE Code: 58:01 – Color sensor shutter error

Problem description:

Color sensor shutter error.

Corrective action:

Call agent:

▲   Restart the printer.

Service engineer:

▲   Execute the Color Sensor Diagnostic Test.

Severity:

ADVISORY

SE Code: 58:04 – Firmware of the printer is incompatible with that of the Color Sensor

Problem description:

Firmware of the printer is incompatible with that of the Color Sensor.

Corrective action:

Call agent:

▲   Restart the printer.

Service engineer:

▲   Replace the Color Sensor. See <u>Color sensor assembly on page 459</u>.

Recommended parts:

SOL assembly B4H70-67106

Severity:

ADVISORY

SE Code: 58.10:10 – Color sensor Self test error

Problem description:

Color sensor Self test error.

Corrective action:

Call agent:

▲   Restart the printer.

Service engineer:

1.   Check that the Color sensor is installed in the Carriage.

2.   Check that the Color sensor is correctly installed and screwed into place.

3.   Check that the Color sensor cable is not damaged.

4.   Check that the Color sensor cable is correctly connected to the Carriage PCA.

5.   If the system error persists, replace the Color sensor.

6.   Perform a Color sensor basic test (CLC), to ensure that the replaced part is working correctly.

Recommended parts:

SOL actuator assembly B4H70-67029

Severity:

ADVISORY

SE Code: 58.11:10 – Color sensor Communication error

Problem description:

Color sensor Communication error.

Corrective action:

Call agent:

▲   Restart the printer.

Service engineer:

1.   Check that the Color sensor is installed in the Carriage.

2.   Check that the Color sensor is correctly installed and screwed into place.

3.   Check that the Color sensor cable is not damaged.

4.   Check that the Color sensor cable is correctly connected to the Carriage PCA.

5.   If the system error persists, replace the Color sensor.

6.   Perform a Color sensor basic test (CLC), to ensure that the replaced part is working correctly.

Recommended parts:

SOL actuator assembly B4H70-67029

Severity:

ADVISORY

SE Code: 58.12:10 – Color sensor Command error

Problem description:

Default S/N found in main and backup NVM.

Corrective action:

Call agent:

▲   Restart the printer.

Service engineer:

1. Check that the Color sensor is installed in the Carriage.

2. Check that the Color sensor is correctly installed and screwed into place.

3. Check that the Color sensor cable is not damaged.

4. Check that the Color sensor cable is correctly connected to the Carriage PCA.

5. If the system error persists, replace the Color sensor.

6. Perform a Color sensor basic test (CLC), to ensure that the replaced part is working correctly.

Recommended parts:

SOL assembly B4H70-67106

Severity:

ADVISORY

SE Code: 58.13:10 – Color sensor Calibration error

Problem description:

Color sensor Calibration error.

Corrective action:

Service engineer:

1. Check that the Color sensor is installed in the Carriage.

2. Check that the Color sensor is correctly installed and screwed into place.

3. Check that the Color sensor cable is not damaged.

4. Check that the Color sensor cable is correctly connected to the Carriage PCA.

5. If the system error persists, replace the Color sensor.

6. Perform a Color sensor basic test (CLC), to ensure that the replaced part is working correctly.

Recommended parts:

SOL assembly B4H70-67106

Severity:

ADVISORY

SE Code: 59.1:09 – Default S/N found in main and backup NVM

Problem description:

Default S/N found in main and backup NVM.

Corrective action:

Service engineer:

▲ Replace one part at a time, and restart the printer before replacing another.

Severity

SEVERE

SE Code: 59.2:00 – Different S/N found in Main and Backup NVM

Problem description:

Different S/N found in Main and Backup NVM.

Corrective action:

Service engineer:

▲ Install only new parts recommended by HP for this printer.

Severity:

SEVERE

SE Code: 59.3:10 Euler's SW error

Problem description:

Wrong information stored on Euler's NVM (corrupted data)

Call agent:

▲ Switch the power off at the rear of the printer, wait two minutes, then switch it back on again.

Service engineer:

▲ Escalate the case to Level 3, requesting new CryptoAsic SIM licenses. Update the CryptoAsic SIM with the delivered licenses.

SE Code: 59.4:10 Euler's HW error

Problem description:

No communication with Euler.

Call agent:

▲   Switch the power off at the rear of the printer, wait two minutes, then switch it back on again.

Service engineer:

1.   Order an Engine Daughter PCA Service Kit. Escalate to Level 3 providing printer Serial Number, Product Number, and the serial number of the Engine Daughter PCA Service Kit. Replace the Engine Daughter PCA. Write in an empty USB the file provided by Level 3. Plug the USB in the printer and reboot. If booting fails, enable diagnostic package with the USB and provide logs to Level 3.

2.   Replace the engine PCA. See Engine PCA on page 510.

Recommended parts:

Printer ID PCA B4H70-67053 (110, 115, 310, 330, 360, 370) - M0E29-67017 (315, 335, 365, 375); Engine PCA B4H70-67038 (110, 115, 310, 330, 360, 370) - M0E29-67013 (315, 335, 365, 375)

Severity:

ADVISORY

SE Code: 59.5:19 Wrong Euler Type

Problem description:

When present Euler type doesn't correspond with the expected one (ie: a Mercury Euler present on a Nexus one).

Call agent:

▲   Switch the power off at the rear of the printer, wait two minutes, then switch it back on again.

Service engineer:

1.   Order an Engine Daughter PCA Service Kit. Escalate to Level 3 providing printer Serial Number, Product Number, and the serial number of the Engine Daughter PCA Service Kit. Replace the Engine Daughter PCA. Write in an empty USB the file provided by Level 3. Plug the USB in the printer and reboot. If booting fails, enable diagnostic package with the USB and provide logs to Level 3.

2.   Replace the engine PCA. See Engine PCA on page 510.

Recommended parts:

Printer ID PCA B4H70-67053 (110, 115, 310, 330, 360, 370) - M0E29-67017 (315, 335, 365, 375); Engine PCA B4H70-67038 (110, 115, 310, 330, 360, 370) - M0E29-67013 (315, 335, 365, 375)

Severity:

ADVISORY

SE Code: 59.6:19 Printer/Printer ID PCA SN mismatch

Problem description:

The product SN dosen't match the one on the Printer ID PCA.

Call agent:

▲   Switch the power off at the rear of the printer, wait two minutes, then switch it back on again.

Service engineer:

1. Order an Engine Daughter PCA Service Kit. Escalate to Level 3 providing printer Serial Number, Product Number, and the serial number of the Engine Daughter PCA Service Kit. Replace the Engine Daughter PCA. Write in an empty USB the file provided by Level 3. Plug the USB in the printer and reboot. If booting fails, enable diagnostic package with the USB and provide logs to Level 3.

2. Replace the engine PCA. See Engine PCA on page 510.

Recommended parts:

Printer ID PCA B4H70-67053 (110, 115, 310, 330, 360, 370) - M0E29-67017 (315, 335, 365, 375); Engine PCA B4H70-67038 (110, 115, 310, 330, 360, 370) - M0E29-67013 (315, 335, 365, 375)

Severity:

SEVERE

SE Code: 59.7:14 CryptoAsic Generic error. Possible Fw upgrade

Problem description:

CryptoAsic Generic error.

Call agent:

1. Switch the Power off at the rear of the printer, wait two minutes, then switch it back on again.

2. Recommend a FW upgrade.

Service engineer:

▲ Order a Printer ID PCA Service Kit. Escalate to Level 3 providing printer Serial Number, Product Number, and the serial number of the Printer ID PCA Service Kit. Replace the Printer ID PCA. Copy to an empty USB, the file provided by Level 3. Plug the USB in the printer and reboot. If booting fails, enable diagnostic package with the USB and provide the logs to Level 3.

Recommended parts:

Printer ID PCA B4H70-67053 (110, 115, 310, 330, 360, 370) - M0E29-67017 (315, 335, 365, 375)

Severity:

SEVERE

SE Code: 60.1:11 RFID tag was not found when trying to configure the printer

Problem description:

The tag was not found.

Call agent:

1. Switch the power off at the rear of the printer, wait two minutes, then switch it back on again.

2. Check the power cord; try connecting it to another power socket.

Service engineer:

1. Check that the RFID device is correctly connected.

2. If the error persists, get the printer log and contact Level 3 providing print Serial Number and Product Number.

Severity:

SEVERE

SE Code: 60.2:17 RFID configuration is wrong

Problem description:

RFID configuration is wrong.

Call agent:

▲ Switch the power off at the rear of the printer, wait two minutes, then switch it back on again.

Service engineer:

1. Check that the RFID device is correctly connected.

2. If the error persists, get the printer log and contact Level 3 providing print Serial Number and Product Number.

Severity:

SEVERE

SE Code: 61:01 – The Printer cannot process the job

Problem description:

The Printer cannot process the job.

Corrective action:

Call agent:

▲ Resend the file to the printer.

Severity:

ADVISORY

SE Code: 61:08 – The Printer cannot process the job

Problem description:

The Printer cannot process the job. Paper type has changed.

Corrective action:

Call agent:

▲ Resend the file to the printer.

SE Code: 61:08.2 – The Printer cannot process the job

Problem description:

The Printer cannot process the job. Job contains format errors or incorrect setting values.

Corrective action:

Call agent:

1. Resend the file to the printer.

2. Check that the Printer has the latest Firmware version. If not, update the Firmware to the latest version.

Severity:

ADVISORY

SE Code: 61:09 – Unexpected end of job (advisory)

Problem description:

Unexpected end of job.

Corrective action:

Call agent:

▲ Resend the job.

Severity:

ADVISORY

SE Code: 62:04 – I/O Reset

Problem description:

I/O Reset.

Corrective action:

Call agent:

▲ Reboot the unit. Restore factory settings. Perform a FW upgrade.

Severity:

ADVISORY

SE Code: 63:04 An input/output problem has occurred with the network card

Problem description:

An input/output problem has occurred with the network card.

Corrective action:

Service engineer:

1. Make sure that the network cable is correctly connected to the network card.

2. Check that your printer firmware is up to date. If the problem persists, replace the JDI PCA.

Severity:

SEVERE

SE Code: 63:05 – The job is reaching the printer too slowly

Problem description:

The printer cancels the job if there are long pauses of more than 20 seconds.

Corrective action:

Service engineer:

1. Make sure that a 1 Gigabit Ethernet card is correctly installed in the computer with the RIP.

2. Check the RIP for any error messages. Check that the computer with the RIP is working correctly and has the minimum specification required by the RIP. Check that the hard disk is neither full nor excessively fragmented.

3. Check whether the option RIP while printing is enabled. This option can cause slow printing if the computer is not sufficiently powerful.

4. Try reducing the resolution of the job or increasing the number of passes.

Severity:

ADVISORY

SE Code: 63:10 – JDI card not detected

Problem description:

JDI card not detected.

Corrective action:

Call agent:

▲ Switch the printer off, disconnect the power cords. Wait for 3 min. and switch the printer on again.

Service engineer:

▲ Reseat the JDI PCA. Replace the JDI.

Severity:

SEVERE

SE Code: 63:20 – Potential problem entering sleep mode (Advisory)

Problem description:

Potential problem entering sleep mode.

Corrective action:

Call agent:

1. Reboot the unit.

2. Check that the network configuration is correct; IP address, subnet mask, and default gateway should be properly set up.

3. Restore factory settings.

4. Perform a firmware upgrade.

Severity:

ADVISORY

SE Code: 65:04 – Internal I/O error

Problem description:

Internal I/O error.

Corrective action:

Call agent:

1. Check that the LAN cable is connected.

2. Reboot the unit.

3. Restore factory settings.

4. Check that the printer has the latest FW. If not, upgrade to the latest FW.

SE Code: 68:03 – Non-critical permament data was lost NVM tag was not found trying to store a CDS object

Problem description:

Permanent data was lost (i.e. configuration, accounting data). It might happen after a FW upgrade with a data structure not compatible with the previous one.

Call agent:

▲   Press OK to continue.

Severity:

ADVISORY

SE Code: 71:03 – Out of Memory failure

Problem description:

Out of memory.

Corrective action:

Call agent:

▲ Switch the Power OFF from the back of the Printer and disconnect the Power cord. Reconnect the power cord and power On the Printer.

Severity:

SEVERE

SE Code: 74:01 – Unable to upload FW file through the EWS

Problem description:

EWS: Unable to upload FW file through the EWS.

Corrective action:

Call agent:

1. Turn the power off at the rear of the printer and disconnect both power cords. Reconnect the power cords and turn on the printer.

2. Resend the firmware update file to the printer.

Severity:

ADVISORY

SE Code: 74.1:04 – Unable to upload substrate profile file thru the EWS

Problem description:

EWS: Unable to upload substrate profile file thru the EWS.

Corrective action:

Call agent:

1. Turn the power off at the rear of the printer and disconnect both power cords. Reconnect the power cords and turn on the printer.

2. Upload the substrate profile.

Severity:

ADVISORY

SE Code: 76:03 – Hard Disk Drive out of space

Problem description:

Hard Disk area is full.

Corrective action:

Call agent:

▲ Enter the Service test: HDD recovery utility.

Severity:

SEVERE

SE Code: 78:08 – Borderless printing is not possible

Problem description:

Borderless printing is not possible.

Corrective action:

Call agent:

1. In a 64" Full unit, install the Ink Collector provided.

2. Resend the plot.

Severity:

ADVISORY

SE Code: 78.1:04 – The printer has no substrate preset for this substrate

Problem description:

The printer has no substrate preset for this substrate.

Corrective action:

Call agent:

▲   Check that the printer has the latest firmware version. If not, update the firmware to the latest version.

Severity:

ADVISORY

SE Code: 78.2:01 – End of roll is detected in the IMD (Input substrate driver) (Rewinder)

Problem description:

The printer has reached an end-of-roll condition: substrate moving, but input spindle not rotating.

Corrective action:

Call agent:

1. If the roll is not finished, unload and reload the substrate.

2. Load a new roll.

3. Check that the substrate is not slipping on the spindle.

Severity:

ADVISORY

SE Code: 78.3:08 – Invalid Print Zone

Problem description:

Printing with ink collector is not available for this PM.

Call agent:

▲   Remove the ink collector.

Severity:

ADVISORY

SE Code: 79:03 – Generic FW error

Problem description:

Generic FW error.

Corrective action:

Call agent:

1.   Turn the power off at the rear of the printer and disconnect the power cord. Reconnect the power cord and turn on the printer.

2.   Check that the printer has the latest firmware version. If not, update the firmware to the latest version.

Service engineer:

▲   If the problem persists, perform a Hard Disk Recovery

Severity:

SEVERE

SE Code: 79:04 – Generic FW error

Problem description:

Generic FW error.

Corrective action:

Call agent:

1.   Turn the power off at the rear of the printer and disconnect both power cords. Reconnect the power cords and turn on the printer.

2.   Check that the printer has the latest firmware version. If not, update the firmware to the latest version.

3.   Try to reprint the image using different selections in the Rip.

Service engineer:

▲   If the problem persists, perform a Hard Disk Recovery

Severity:

SEVERE

SE Code: 79.2:04 – Operating-system signal error. Segmentation fault

Problem description:

Segmentation fault.

Corrective action:

Call agent:

1. Turn the power off at the rear of the printer and disconnect both power cords. Reconnect the power cords and turn on the printer.

2. Check that the printer has the latest firmware version. If not, update the firmware to the latest version.

3. If the problem persists, perform Hard Disk Recovery.

Severity:

SEVERE

SE Code: 81:01 – Paper servo shutdown; possible paper jam

Problem description:

Possible paper jam.

Corrective action:

Service engineer:

1. If the substrate is nearing the end of the roll, check the remaining substrate is not strongly glued to the substrate core.

2. Open the Window, observing all safety procedures check for any visible obstacles restricting the movement of the Drive Roller. If there is a wrinkled mass of substrate inside the paper path, lift the Pinchwheels (using the Substrate Lever) and clear the obstruction.

3. Check the performance of the rewinder system as it may also cause a servo shutdown.

4. Check the performance of the roll housing assemblies (right and left) as they may also cause a servo shutdown.

5. Check that the OMAS Controller Card to PrintMech PCA cable is not damaged.

6. Check that the OMAS Controller Card to PrintMech PCA cable is correctly connected to the OMAS Controller Card and the PrintMech PCA.

7. Perform the Drive Roller service test.

8. If the error continues, replace the Substrate Axis Motor.

9. Replace OMAS Controller PCA.

Recommended parts:

Media motor SERV 60" Q6652-60108; OMAS PCA B4H70-67114

Severity:

SEVERE

SE Code: 81.01:01 – Continuable substrate motor shutdown: Paper jam or motor hardware problem Servo shutdown: Substrate servo shutdown. Substrate jam

Problem description:

Paper jam or motor hardware problem.

Corrective action:

Call agent:

1. Switch off the printer.

2. Open the Window observing all safety procedures and check for any visible obstacles restricting the movement of the Drive Roller. If there is a wrinkled mass of media inside the paper path, lift the Pinchwheels (using the Media Lever) and clear the obstruction.

3. Switch on the printer.

4. Follow the instructions in the Front Panel.

Severity:

ADVISORY

SE Code: 81:03 – It was impossible to correctly stop the servo before setting the encoder position

Problem description:

It was impossible to correctly stop the servo before setting the encoder position.

Corrective action:

Call agent:

▲ Open the Window observing all safety procedures and check for any visible obstacles restricting the movement of the Drive Roller. If there is a wrinkled mass of substrate inside the paper path, lift the Pinchwheels (using the Substrate Lever) and clear the obstruction.

Service engineer:

1. Perform the Substrate Path service test.

2. Replace the Substrate-Axis Motor.

Recommended parts:

Media motor SERV 60" Q6652-60108

SE Code: 85:03 – Problem finding the Drive Roller zero

Problem description:

Problem finding the Drive Roller zero.

Corrective action:

Call agent:

▲ If the substrate is attached to TUR, cut the substrate and ensure that the substrate at the output side is not held by the TUR.

Service engineer:

▲ Perform the Substrate Drive Diagnostic.

Severity:

SEVERE

SE Code: 86:01 – SAX Shutdown. There is a problem with the carriage assembly

Problem description:

Scan Axis Shutdown. There is a problem with the carriage assembly.

Corrective action:

Call agent:

1. Turn off the printer.

2. Check the carriage's path for physical obstructions such as media jams.

3. Clean and lubricate the unit.

4. Clean the encoder strip.

Service engineer:

1. Clean and lubricate the unit.

2. Clean the encoder strip.

3. Run Diagnostics "Scan-Axis Test".

4. If issue is electrical, the following replacements might be required: Encoder Strip & Sensor, Scan Axis Motor.

5. If issue is mechanical, the following replacements might be required: Felts, Carriage Assy (includes bushings and felts), Oiler, Belt & Tensioner.

Recommended parts:

Drive roller Encoder SERV 60" Q6652-60123; Encoder strip sensor B4H70-67019 (375,370,365,360,335,330) – B4H69-67010 (315,310,115,110); Scan axis motor B4H70-67031; Carriage without PCA-SOL-LS B4H70-67022; Front Rod Oiler B4H70-67102; Belt and tensioner B4H70-67026 (375,370,365,360,335,330) – B4H69-67013 (315,310,115,110)

Severity:

SEVERE

SE Code: 86:11 – Autodiagnostic's Scan Axis Jam

Problem description:

Scan Axis Jam when running Autodiagnostics.

Corrective action:

Call agent:

▲   Reboot the unit.

Service engineer:

1.   Clean and lubricate the unit.

2.   Clean the encoder strip.

3.   Run Diagnostics "Scan-Axis Test".

4.   If issue is electrical, the following replacements might be required: Encoder Strip & Sensor, Scan Axis Motor.

5.   If issue is mechanical, the following replacements might be required: Felts, Carriage Assy (includes bushings and felts), Oiler, Belt & Tensioner.

Recommended parts:

Drive roller Encoder SERV 60" Q6652-60123; Encoder strip sensor B4H70-67019 (375,370,365,360,335,330) – B4H69-67010 (315,310,115,110); Scan axis motor B4H70-67031; Carriage without PCA-SOL-LS B4H70-67022; Front Rod Oiler B4H70-67102; Belt and tensioner B4H70-67026 (375,370,365,360,335,330) - B4H69-67013 (315,310,115,110)

SE Code: 87:01 – Encoder strip should be cleaned

Problem description:

The encoder strip is dirty.

Corrective action:

Call agent:

▲   Clean the encoder strip by following the respective process in the Front Panel menu.

Service engineer:

▲   Replace the encoder strip.

Recommended parts:

Encoder strip sensor B4H70-67019 (375,370,365,360,335,330) - B4H69-67010 (315,310,115,110)

Severity:

ADVISORY

SE Code: 87:02 – Excessive carriage friction detected: Clean and lubricate both carriage rails

Problem description:

Lack of lubrication on scan axis rails. Accumulation of dirt or aerosol on scan axis rails.

Corrective action:

Call agent:

▲   Clean and lubricate both carriage rails.

Service engineer:

▲   Clean and lubricate both carriage rails.

Severity:

ADVISORY

SE Code: 89:11 – Printzone LEDs both arrays disconnected

Problem description:

Printzone leds both arrays disconnected.

Corrective action:

Service engineer:

▲   Restart the printer.

Service engineer:

▲   One of the Inner lights PCAs might be disconnected, please ensure the connectors between PCAs are properly fitted or reconnect them.

Severity:

ADVISORY

SE Code: 89.1:10 – Inner light PCA array 1 disconnected

Problem description:

Printzone leds array 1 disconnected.

Corrective action:

Service engineer:

▲   Restart the printer.

Service engineer:

▲   Open circuit detected at array 1: At least one of the leds could be fused. Replace one of the inner lights PCAs and check if the problem is solved. If not, continue the troubleshooting by replacing sequentially another PCA. Use diagnostics utility to switch the array On & Off

Severity:

ADVISORY

SE Code: 89.2:10 – Inner light PCA array 2 disconnected

Problem description:

Printzone leds array 2 disconnected.

Corrective action:

Service engineer:

▲   Restart the printer.

Service engineer:

▲   Open circuit detected at array 2: At least one of the leds could be fused. Replace one of the inner lights PCAs and check if the problem is solved. If not, continue the troubleshooting by replacing sequentially another PCA. Use diagnostics utility to switch the array On & Off

Severity:

ADVISORY

SE Code: 89.3:10 – Printmech PCA short circuit

Problem description:

A short circuit in the Printmech PCA related to the printer's Inner Lights causes a warning during printer startup, and the printer cannot power on the inner lights.

Corrective action:

Call agent:

▲   Power the unit off at the rear switch and wait long enough for all 3 PSU LEDs to turn off (to be sure, wait 2-3 minutes).

Service engineer:

1.   If the problem persists, replace the Inner Lights PCA and cable (Service kit B4H70-67113).

2.   If the problem still persists, replace the Printmech PCA (Service kit B4H70-67046).

Severity:

ADVISORY

SE Code: 94:01 – CLC failed because paper white point is out of valid range

Problem description:

Paper white point is out of valid range.

Corrective action:

Call agent:

▲   Ensure the loaded substrate is white and there aren't spots on it.

Severity:

ADVISORY

SE Code: 94:02 – CLC failed, inconsistencies in measures detected

Problem description:

Inconsistencies in CLC measures detected.

Corrective action:

Call agent:

1. Check substrate type selection in front panel corresponds to actual substrate loaded.

2. Retry calibration.

Severity:

ADVISORY

SE Code: 94:08 – Color Calibration failed

Problem description:

Color Calibration failed.

Corrective action:

Call agent:

▲ Try again or check user manual color calibration troubleshooting.

Severity:

ADVISORY

SE Code: 94:10 – CLC measures out of range

Problem description:

Aerosol or other malfunction of Color Sensor prevents calibration.

Corrective action:

Service engineer:

1. Retry calibration.

2. Replace SOL.

Severity:

ADVISORY

SE Code: 98:03 – Potential Print Quality problem. Detected too many nozzles out

Problem description:

Check PH using the PH status plot.

Corrective action:

Service engineer:

▲ Use the printhead status plot to find out which printheads have a massive number of nozzles out, and replace them.

Severity:

ADVISORY

4   Service Tests, Utilities, and Calibrations

Introduction

This chapter explains how to use the Service Tests, and Diagnostic menus. Each part is shown step by step in order that it is displayed on the front panel. If the Test, Utility or Calibration should fail and display a system error, we explain where to go in the Service Manual to either troubleshoot the error or fix it directly.

📝 NOTE: If possible, always perform the related Service Test on a component that you are about to replace, to confirm it has failed.

Initialization Self Test

Whenever the printer is switched on, it automatically performs a series of internal self-tests and mechanical initialization sequences. If any part fails during these tests, a system error is displayed and you should consult System error codes and warnings—explanation on page 101.

Diagnostic Menu

The Diagnostic Menu is used whenever a diagnostic, maintenance, troubleshooting or calibration action has to be performed. In this machine operation mode, only the needed parts or subsystems of the printer will be used, in contrast to the Service Menu, where machine operation is similar to normal user operation, and all components of the printers are active.

Entering the Diagnostics Menu

1. Make sure the printer is switched off with the Power key beside 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 about 10 seconds until the icons on the front panel appear, then press the home button; the button will acknowledge by blinking.

   All LEDs will come on; press and release one after another: Cancel, HOME, Help.

   In order to be able to reset the counters a different combination is needed: Cancel, Back, Help.

   Do not press the icons all at the same time: press each one in the order shown above and release each icon before pressing the next one.

4. The icons on the front panel blink two times. Wait until the printer completes the initialization sequence and shows the Diagnostics menu.

5. In the Diagnostics menu, you can scroll up and down by sliding your finger vertically. Select an option by pressing it. In some cases a quick press may not be recognized by the printer; to select an option, press it deliberately for about one second.

   The Diagnostic Tests and Utilities work in a special mode that does not require 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. Also turn off the printer if it hangs up during a test.

Performing tests

All tests involve a similar User Interface, which guides you step by step along the test. Therefore, to perform any test, please follow the instructions displayed in the front panel. An example of the Test User Interface is shown below:
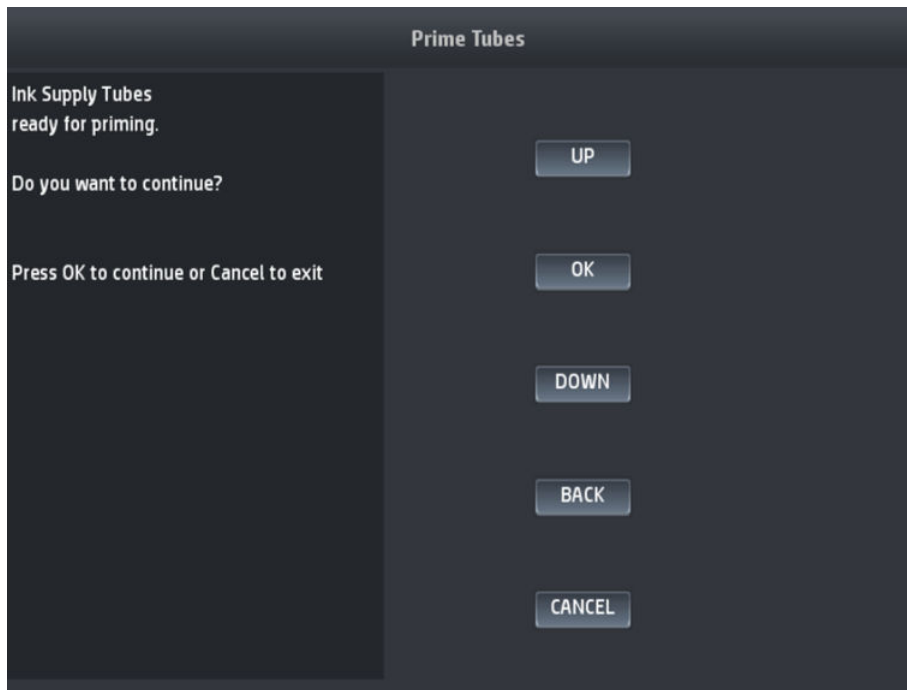
Here is a functional description of common buttons:

- **CANCEL**: Cancel the active test

- **BACK**: Move to the previous screen

- **UP/DOWN**: In some tests these buttons are used to change the value of a given parameter which might have to be modified during the test

- **OK**: Accept and move to the next screen

1. Electrical System Menu

1.1 Electronics Control

Description

The purpose of this test is to check the state of the Formatter PCA and HDD's memory partition state.

Procedure

1. Go to Diagnostic menu > 1. Electrical system menu > 1.1 Electronics control.

2. A front panel message asks whether you would like to check the Formatter. Press OK to confirm.

3. The front panel displays the real and total memory size. Press OK to continue.

4. The test displays device block information. Press OK to continue.

5. At the end of the test, device block usage is displayed in the front panel. Press OK to finish the test.

1.2 Hard disk drive

Description

The hard disk drive service test checks the following:

- Protection status test (protected/not protected)

- Partition configuration test

- System file contents (sanity check for critical files)

Procedure

1. Go to Diagnostic menu > 1. Electrical system > 1.2 Hard Disk Drive, and press **OK**.

2. The printer asks you if you want to perform the HD partition configuration test. Press OK to continue.

3. The printer checks the hard disk drive partitions for faults. The printer asks you if you want to perform this test. Press **OK** to continue.

4. The printer reads the current partition configuration of the hard disk drive and displays it on the front panel.

5. Press **OK** to continue.

6. The printer performs a sanity check to verify hard disk consistency. The printer asks you if you want to perform this test. Press OK to continue.

7. The printer reads and displays the current file system contents of the formatted partitions of the hard disk drive.

8. Press any key to shut down the system.

1.3 Hard disk recovery

Description

The purpose of this test is to recover HDD space. It cleans some folders on the hard disk, and restores the factory state, formatting partitions where the printer's logs, user data and temporary files are stored.

Perform this test when there is not free space on the HDD (the appropriate error message should be prompted) or usage data is desired to be erased.

After the test ends a reboot will take place; during the reboot the HDD is recovered.

To perform this test, go to Diagnostic test > 1. Electrical System > 1.3 Hard Disk Recovery.

Result

When reboot is finished, regular printer behavior indicates that the test was successful. In case something fails, replacement of the HDD is recommended.

1.4 Hard disk file system check

Description

The purpose of this test is to check and recover defective or corrupt files on the Hard Disk.

Procedure

1. Go to Diagnostic menu > 1. Electrical system > 1.4 Hard Disk File System Check.

2. The printer advises that this test restarts the printer and takes several minutes to complete. If you want to perform this test, press OK to confirm to continue. The printer will restart.

   During the restart, the recovery process takes place.

1.5 BIOS Update

Description

The purpose of this test is to update/restore the BIOS.

Procedure

1. Go to Diagnostic menu > 1. Electrical system > 1.5 BIOS Update.

   📝 NOTE: The printer advises you that the process could take two minutes and it should not be interrupted because it could damage the unit and require hardware replacement.

2. Press OK to continue with the test.

3. The front panel displays the final diagnostic result. Press **OK** to shut down the printer.

1.6 I/O information

Description

This test provides customer network printer information. Also, the informational test retrieves and displays information you may need when troubleshooting a network problem. The following information is displayed:

- IP address

- Gateway address

- Subnet mask

Procedure

1. Go to Diagnostic menu > 1. Electrical system > 1.6 I/O information.

2. The printer will initialize and the front panel will display the following messages:

   - The printer's public IP address

   - Gateway and subnet mask information

     If there is a failure at this point, the front panel will display an error.

     If no active interface is found, the front panel will display 0.0.0.0 in all the printer's network values. Press **OK** to finish the test.

3. Once the I/O information is obtained, it is displayed on the front panel. Press **OK** to finish the test.

1.7 Enable I/O interfaces

Description

The purpose of this test is to enable the printer's I/O interfaces (USB, Ethernet, Jetdirect) after they have been disabled from the Embedded Web Server.

Procedure

1. Go to Diagnostic menu > 1. Electrical system > 1.7. Enable I/O interfaces.

2. Use the UP and DOWN key to enable the I/O interfaces or to disable. Then, press to **OK** to confirm.

3. The front panel confirms the result of the operation. Press **OK** to restart the printer.

1.8 Unit information

Description

This option allows you to view the following printer information:

*   Firmware version.

*   Serial Number.

*   Part Number.

Procedure

1. Go to Diagnostic menu > 1. Electrical system > 1.8 Unit information.

2. The front panel will display the various electrical subsystems being initialized in order to perform the test, if there is a failure at this point the front panel will display a system error, troubleshoot the system error using System error codes on page 89.

    If the Serial Number does not have a correct 10 character format assigned or the Part number does not have a correct 6 character format assigned, a fail message will display on the front panel. In this case perform the diagnostic '71:19 Recovery' to set the correct Serial Number. Refer to 1.9 SE 59.2:00 recovery on page 234.

    If there is a failure at this point, the front panel will display an error.

3. Once the Unit information is obtained, it is displayed on the front panel. Press **OK** to continue.

1.9 SE 59.2:00 recovery

Description

Both Serial Number and Part Number of the printer are stored in both the HDD and the EEROM in the ISS PCA for backup purposes. SE 59.2:00 will be prompted when there is a mismatch between the information on the Hard Disk Drive and that in the Ink Supply Tubes.

Without its Serial Number and Part Number the printer cannot configure nor identify itself, therefore it cannot function.

This test is intended to be used when SE 59.2:00 is prompted. To set the Serial Number and Part Number of the printer look at the rear-sided label of the printer.

To perform this test, go to Diagnostic test > 1. Electrical System > 1.9 SE 59.2:00 recovery

Result

At the end of the test, both Serial Number and Part Number will be set. If something fails it can indicate that the entered numbers where not valid. It can also indicate that HDD or EEROM in the ISS PCA is failing and the system could not write on them.

1.10 Set SN and PN

Description

Both Serial Number and Part Number of the printer are stored in both the HDD and the EEROM in the ISS PCA for backup purposes. Without its Serial Number and Part Number the printer cannot configure nor identify itself, therefore it cannot function.

Use this test when Diagnostic Test 1.9 SE 59.2:00 recovery has been executed and the wrong SN/PN has been set by mistake. To set printer Serial Number and Part Number look at the rear-sided label of the printer.

Result

At the end of the test both Serial Number and Part Number will be set. If something fails it can indicate that the entered numbers where not valid. It can also indicate that the HDD or EEROM in the ISS PCA are failing and the system could not write on them.

1.11 EEROM reset

Description

The HDD and the EEROM in the ISS PCA share some important information. In the EEROM there is a subset of the most important information of the HDD for backup purposes. The purpose of this test is to force backup from the HDD to reset the EEROM to the default manufacturing settings.

Perform this test when there is a software conflict or the EEROM has been changed or replaced. It can also be performed after a Firmware downgrade.

After the test ends a reboot will take place; during the reboot the EEROM is reset.

To perform this test, go to Diagnostic test > 1. Electrical System Menu > 1.11 EEROM reset.

Result

When the test finishes the printer is rebooted and the EEROM will be reset to manufacturing settings. If something fails it can indicate that there is an internal communication problem or that it is the first time that a backup has taken place.

1.12 EEROM Restore

Description

This procedure can be used to restore the EEROM to the backup settings.

Procedure

1. Go to Diagnostic menu > 1. Electrical system Menu > 1.12 EEROM restore, and press OK.

2. The front panel asks for confirmation. Press OK to confirm.

3. Press **OK** to finish the procedure. The printer will restart.

2. Substrate Path Menu

2.1 Rewinder system

Description

The purpose of this test is to visually check the Rewinder Motor operation, any failures will be displayed as a system error, which can then be used to troubleshoot and solve the problem.

Procedure

1. Go to Diagnostic menu > 2. Substrate Path Menu > 2.1 Rewinder system, and press **OK** to start the test.

2. The test begins and asks to unload the paper and load an empty spindle. After, press Up or Down to turn the rewinder motor both ways. Check visually that it moves correctly in both directions.

3. When you want to finish the test, press OK to exit.

4. The front panel displays the final diagnostic result. Press OK to finish the test.

2.2 Drive roller

Description

The purpose of this test is to diagnose a Drive Roller components failure.

You must perform the Drive Roller test after:

*   System Error Code 81:YX

*   System Error Code 41:YX

📝 NOTE: If possible, always perform this test before replacing any Substrate Axis component.

Procedure

1. Go to Diagnostic menu > 2. Substrate Path Menu > 2.2 Drive roller.

2. The test initializes, and the front panel asks you to unload the paper, and then press OK to continue.

3. The test starts to calibrate the analog encoder and shows the diagnostic results in the front panel. Press OK to continue with the diagnostic test.

4. The test performs movements, and shows some value results as PWM average, speed error, PWM standard deviation, and PWM max. Press OK to continue.

5. The front panel asks to load media. After, press OK to continue.

6. The test moves the media, and finally shows the diagnostic result in front panel. Press OK to restart the printer.

    If the test displays a motor error; replace the media motor.

    If the test displays a high friction error; revise the drive roller system, look for obstacles, or if necessary, replace the media motor.

2.3 Substrate path sensor

Description

The purpose of this test is to verify the operation of the following Sensors:

- Pinchwheel lever sensor.

- Substrate Sensor.

Procedure

1. Go to Diagnostic menu > 2. Substrate Path Menu > 2.3 Substrate path sensor, and press **OK**.

2. Before starting, first make sure that:

   - The Window is closed.

   - The Substrate Lever is in the lowered position.

   - The SVS door is closed.

   - Paper is unloaded.

   Then press **OK** to continue.

3. Raise the Pinchwheel lever sensor and press OK.

   Previously, if the Paper Lever Sensor fails the test, the front panel will display an error message saying that it is not possible to detect this sensor.

4. Lower the Substrate Lever and press OK.

5. Now the paper sensor is tested. Press OK to continue.

   If this test is passed, press OK one more time.

   If the paper sensor fails the test, the front panel will display an error message saying that it is not possible to detect the paper loaded.

6. The front panel reports the overall result of the tests. Press OK to finish the test.

2.4 OMAS module

Description

The objective of this test is to check the communication of the OMAS system: OMAS controller PCA, OMAS flat cable, and OMAS sensor.

Procedure

1. Go to Diagnostic menu > 2. Substrate Path Menu > 2.4 OMAS Module.

2. The front panel displays the OMAS firmware version located in the OMAS Controller PCA.

   If the OMAS is unable to retrieve the firmware version, this would indicate an error with the OMAS system, and a system error would be displayed, troubleshoot the system error using System error codes on page 89.

3. Press **OK** to continue.

   The printer displays the OMAS sensor serial number.

4. Press **OK** to finish the test.

2.5 Solve Substrate Jam

Description

The purpose of this test is to solve a substrate jam by moving the substrate motor in both directions. It may help to "push" the substrate in the direction you want while you are pulling the substrate to remove it.

We recommend using this test in case you cannot remove the substrate from the substrate path after a substrate jam.

To perform this test go to Diagnostic test > 2. Substrate Path Menu > 2.5 Solve Substrate Jam.

Result

When this test ends successfully it means the substrate jam has been resolved. It most of the cases this test could fail for the following reasons:

- The Substrate jam is too big for the motor to move (this is very unlikely to happen in both directions)

- The Substrate motor does not work properly

- The PrintMech PCA does not work properly

- There is a connection problem between the Substrate Motor and the PrintMech PCA

3. Ink System Menu

3.1 Air Pressure System

Description

The purpose of this test is to verify the operation of the Air Pressure System (APS).

📝 NOTE: Perform this test before replacing the APS (if possible), if this test passes, do not replace the APS.

Procedure

1. Go to Diagnostic menu > 3. Ink system menu > 3.1 Air pressure system.

2. The front panel asks whether you want to perform the Air Pressure System diagnostic test. Use the UP and DOWN keys to select Yes and press **OK**.

3. The front panel asks you to insert all the Ink Cartridges. Insert all the Ink Cartridges (see p. 124 of the HP Latex 300 Printer Series User's Guide) and press any key to continue.

4. The front panel displays the various electrical subsystems being initialized in order to perform the procedure. If there is a failure at this point the front panel displays a system error; troubleshoot the system error using <u>System error codes on page 89</u>.

5. The printer pressurizes and then depressurizes the APS.

6. If there is a failure starting the Pump, the front panel displays a system error code. For more information on troubleshooting this error code, see <u>System error codes on page 89</u>.

7. Once the test is completed, OK is displayed on the front panel.

8. Press **OK**. The printer will restart.

3.2 Check Ink Supplies

Description

The purpose of this test is to verify which Ink Cartridges are valid for the purge process and their current available ink level. Some Ink Cartridges may not be able to be accessed (unable to read the Acumen) if previously there had been a failure (faulty, broken bag, and so on).

Procedure

1. Go to Diagnostic menu > 3. Ink system menu > 3.2 Check Ink Supplies.

2. The printer will start to initialize the test.

   If there is a failure at this point, the front panel will display system error code 01.0:10: see SE Code: 01.0:10 – Engine PCA electronics error. The main Engine PCA component is not responding on page 105.

   If there is a problem while reading the Acumen, the front panel will display one of the system error codes:

   - SE Code: 01.2:10 – ISS1 PCA problem on page 106

   - SE Code: 01.0:10 – Engine PCA electronics error. The main Engine PCA component is not responding on page 105

   If there is a failure at this point, the front panel will display the message "Replace failing ink supplies after running this utility".

3. Once the Ink Supplies information is obtained, it is displayed. Press any key to exit.

   If any part of the Acumen information is invalid, the front panel will display an error.

4. Once the process is completed, OK will be displayed on the front panel.

3.3 Broken bag recovery menu

Description

The purpose of the menus here is to recover the printer if a broken bag in an Ink Cartridge is detected. A broken bag will stop the printer from functioning and will need to be fixed and cleared of the error before the printer can continue printing normally. If ink leaks from the broken bag and leaves the confines of the ink cartridge, this error is potentially damaging to various parts of the printer.

Procedure

In order to remove the printer from this system error status and recover the printer to working order the test must be performed in the following order:

- 3.3.1 Clean air tubes

- 3.3.2 Recover broken bag

- 3.3.3 Refill Ink Tubes

The following procedures and menu selections enable the engineer to clear leaked ink from the pressurized air system in the ISS and to remove air bubbles (caused by the broken bag) from the Ink Tubes which can damage the Printheads.
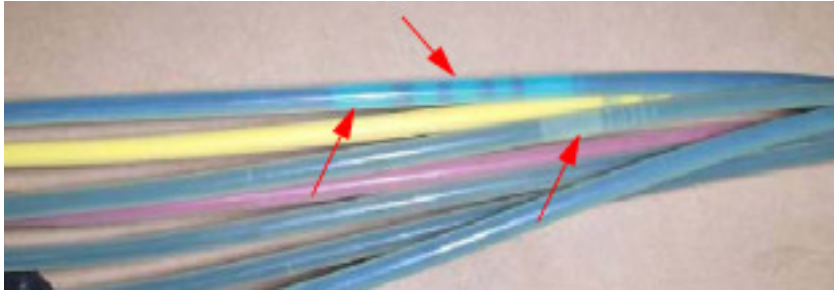
In order to perform the following procedures, the Broken bag fixing tools kit (B4H70-67131) is required.

3.3.1 Clean air tubes

Description

The procedures and menu selections must be performed if there is ink visible in the air tubes of the APS.

Procedure

1. Remove the Left Cover and check if the tubes from the APS to the ISS are clean. If the tubes are clean of ink this procedure does not need to be performed, go to and perform the Refill Ink Tubes to clear any air bubbles from the ink tubes.

    However if there are sections of tubing that have ink in them, like the examples indicated below with the red arrows.
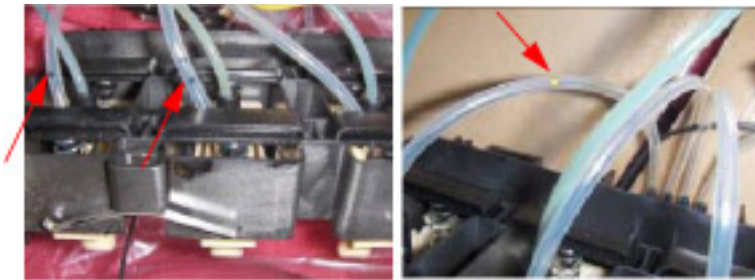
2. Remove all the Ink Cartridges and install the dummy Ink Cartridges from the Broken bag fixing tools kit.

3. One of the dummy Ink Cartridges has two holes at the top, this dummy Ink Cartridge must be inserted into the color slot with the Broken Bag error.
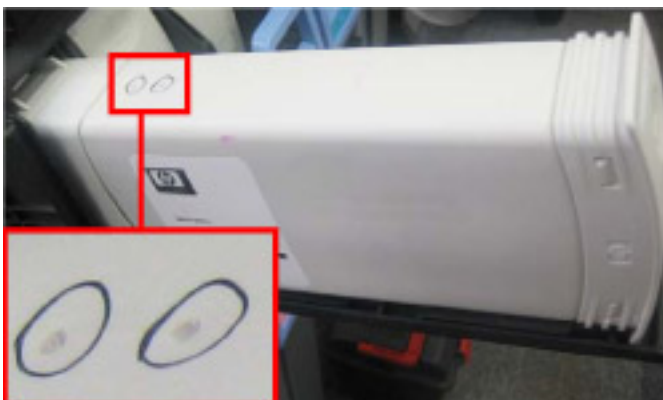
4. Go to Diagnostic menu > 3. Ink System Menu > 3.3 Broken Bag Recovery Menu > 3.3.1 Clean Air Tubes.

5. The front panel asks for confirmation. Use the UP and DOWN keys to select Yes and press **OK**.

6. The front panel asks whether the dummy cartridge is installed. Press OK to continue.

7. The front panel reports on the pumping of air through the tubes for two minutes. Once the test has passed, press **OK** to continue.

   Air is now pumping through the air tubes system, pushing any ink that may be there from the Air tubes into the Dummy Ink Cartridge with the two holes at the top. When this is finished, press any key to continue.

8. The front panel asks whether you want to repeat the test with another cartridge.

9. Remove the dummy ink cartridge with the two holes and insert it into the other slots that may also have ink in their air tubes, press OK to continue removing ink from the other air tubes.

   When you are sure there is no more ink from the broken bag blocking any of the air tubes, select Cancel.

3.3.2 Recover broken bag

Description

This option recovers the printer to a ready status after a broken bag has been detected in one of the Ink Cartridges.

📝 NOTE: This option should only be selected if the following has been performed:

● The Ink Cartridge with the broken bag has been replaced with a new Ink Cartridge.

● The Air Tubes have been cleaned of any ink.

Procedure

1. Go to Diagnostic menu > 3. Ink system menu > 3.3 Broken bag recovery menu > 3.3.2 Recover broken bag.

2. The printer will now scan for a broken bag in the Ink Cartridges, and the front panel will display the following messages:

   ● Starting Gamut

   ● Starting TestGPIO

   ● Detecting Bag Broken

   ● Starting Acumen Supplies

   ● Getting ISS data

   ● Starting SuppliesCon...

3. The front panel asks whether the tubes are clean. If the Air Tubes are clean of ink, use the UP and DOWN keys to select Yes and press **OK**.

4. The front panel asks whether you want to remove the broken-bag condition. Select Yes and press **OK**.

5. When prompted by the front panel, press **OK** the recovery procedure.

3.3.3 Refill Ink Tubes

Description

⚠ CAUTION: This procedure must only be performed after performing the Recover Broken Bag procedure or after replacing a Floater and PIP assembly.

The procedures and menu selections must always be performed if a broken bag has been detected by the printer. In this procedure the printer forces ink from the ink tube that had the broken bag, removing air bubbles, into a syringe.

Procedure

1. Remove all the dummy Ink Cartridges and install the normal Ink Cartridges.

   It is important that the Ink Cartridge with the broken bag, is discarded and replaced with a new Ink Cartridge. DO NOT reinstall the Ink Cartridge with the broken bag.

2. Go to Diagnostic menu > 3. Ink system menu > 3.3 Broken bag recovery menu > 3.3.3 Refill Ink Tubes.

3. The front panel will display the various electrical subsystems being initialized in order to perform the procedure. If there is a failure at this point the front panel will display a system error; troubleshoot the system error using .

4. The front panel asks you to select the color of the Ink Cartridge that had the broken bag. To select the color use the UP and DOWN keys and then press **OK** to confirm the color.

5. The front panel asks whether there is air in the ink tubes.

6. The front panel asks whether the new cartridges are installed.

7. When prompted by the front panel, open the Front Cover and Carriage Cover and press **OK** to continue.

8. When prompted by the front panel, remove the two Printheads of the color affected by the broken bag error, in the example shown below it is Magenta. Press **OK** to continue.

9. When prompted by the front panel, insert the needle connected to the syringe into the FI tower of the color affected. Use the FI of the color which is to the rear of the Carriage, as shown. Press OK to continue.

10. The front panel reports that the printer is pumping air.

    Ink is now pumping through the ink tube, pushing any air bubbles from the Ink Tubes into the syringe. The amount of ink pumped through the Ink Tube into the syringe is 33 cc + air.

11. After 2 minutes, the front panel asks whether the syringe has been filled. Press OK to continue.

12. The front panel displays several informational messages. Press **OK** to continue.

13. The front panel may ask whether you want to repeat the test with another cartridge. Press the OK key to repeat the test, or the Cancel key to finish.

NOTE: If you cannot clear the bubbles from the ink tubes, replace the complete SRK tubes assembly ⮕ page 381.

14. When prompted by the front panel, remove the needle from the FI tower, and press any key to continue.

TIP: Ink from the syringe can be emptied into the Printhead Cleaning Container.

15. When prompted by the front panel, reinstall the Printheads into the Carriage.

16. When prompted by the front panel, close the Carriage and close the Front Window.

3.4 Ink-Level sensors

Description

The purpose of the tests included in this menu is to check the status of the ink level sensors and calibrate a newly installed sensor. The ink level sensors are used by the printer for measuring the remaining ink level in each ink cartridge, and there is one ink level sensor for each supply. The available tests are as follows.

3.4.1 Ink level sensor check

Description

This test checks the presence and integrity of the ink level sensors present in the printer. It mainly performs four operations:

- Check for the presence of the ink-level sensors.

- Check for cumulative measurement errors in the sensors that could indicate malfunction.

- Check for broken bags.

- Display the calibration values of the sensors installed.

Procedure

1. Go to Diagnostic menu > 3. Ink system menu > 3.4. Ink level sensors check > 3.4.1. Ink level sensor check.

2. Press **OK** to continue.

3. The front panel displays whether or not all the color PIPS are presents. Press **OK** twice to continue.

4. The front panel displays any color that has a broken bag. Press **OK** to continue.

5. The front panel displays the calibration values of the sensors installed. Press **OK** to continue.

6. Press **OK** to finish the test.

3.4.2 Ink level sensor calibration

Description

This test sets the calibration values for a recently replaced ink level sensor. The test first runs the ink level sensor check (see previous section) internally, and then asks which ink level sensor(s) should be calibrated.

Procedure

1. Go to Diagnostic menu > 3. Ink system menu > 3.4. Ink level sensor check > 3.4.2. Ink level sensor calibration. Press **OK** to continue.

2. The printer checks if all the PIPs are present.

3. Select the color that corresponds to the PIP module replaced.

   ![] **IMPORTANT:** Make sure that you select the correct color.

4. Enter the value written on the label of the new PIP (10 digits).

5. Press OK if another PIP module needs to be calibrated.
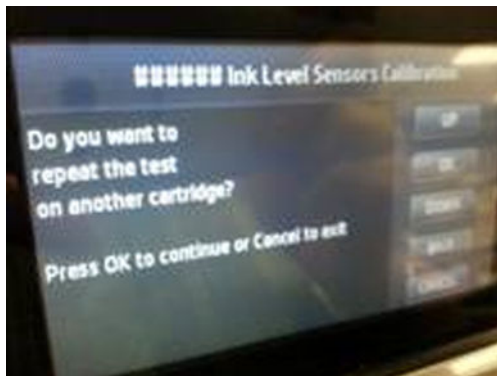
3.4.3. Refill ink tubes: 3.3.3 Refill Ink Tubes on page 241

Description

For information see:

3.5.1.1 Install/uninstall *(Latex 370/375)*

Description

The purpose of this test is to install or uninstall the Ink Upgrade Kit.

Perform this test:

- During the 3-liter Ink Kit installation.

Procedure

1. Go to Diagnostic Menu > 3. Ink system menu > 3.5. 3-liter accessory menu > 3.5.1. Installation > 3.5.1.1 Install/Uninstall.

2. The front panel invites you to continue the installation/uninstallation process; press OK to continue.

3. The front panel displays if the ink upgrade kit is installed or not. Then, the front panel asks you to install or uninstall it. Press OK to continue the installation/uninstallation process.

4. The front panel confirms you that the Ink Upgrade Kit is installed or uninstalled. Press OK to finish installing or uninstalling the 3-liter Ink Upgrade Kit.

3.5.1.2 Ink Setup *(Latex 370/375)*

Description

The purpose of this test is to check if all the 3-liter Ink Upgrade Kit components are working properly, like the Ink leakage sensor or the pumps. Leave all the pumps in a "controlled" status to prevent the ink from the intermediate ink tank from going to the large ink tank. Also, it takes the value of the region of the Printer ID PCA and then saves this information to the 3–liter PCA (see).

Perform this test:

- After installing the ink kit.

- After changing any ink kit part.

- Whenever you want to test all the components of the kit.

- When system error 47.10:10 is reported (see).

Procedure

1. Go to Diagnostic Menu > 3. Ink system menu > 3.5. 3-liter accessory menu > 3.5.1. Installation > 3.5.1.2. Ink setup.

2. The front panel explains to you how the test works. Press OK to continue.

3. The front panel invites you to select a specific color or all the colors. Select All colors to be sure you are checking the complete kit.
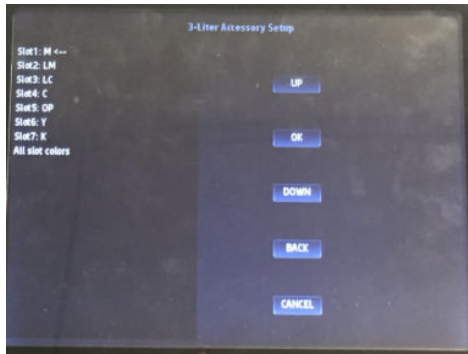
4. The pump starts to pump, and then the front panel displays some PIP values (PIP Initial values and PIP Pumping values).
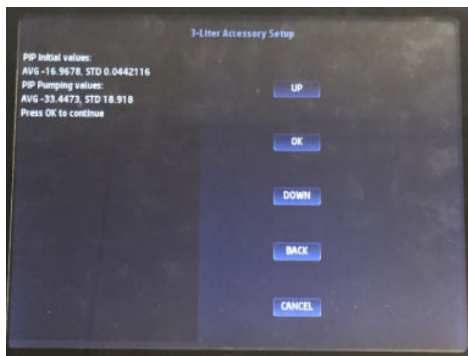
5. The printer evaluates if these values are within specifications, and the front panel displays if the pump is working correctly or not. Press OK to continue.

6. If you choose CANCEL, then the front panel confirms that the printer is checked and purged. To finish the test press CANCEL.

7. Press OK, and then the printer will restart.

3.5.2.1 Component check *(Latex 370/375)*

Description

The purpose of this test is to check if the 3-liter components are correctly connected (from the electrical point of view).

Procedure

1. Go to Diagnostics > 3.5.2.1. Components check.

2. Press OK to check all the 3-liter accessory components

3. The front panel confirms that the printer is checking the big ink tank components.

4. The front panel confirms whether any ink line has correct or incorrect components.

5. Press OK to finish the test.

4. Scan axis menu

4.1 Scan axis test

Description

The purpose of this test is to diagnose a failure in the operation of Scan Axis components.

Perform the Scan-Axis Test after:

- System Error Code 86:YX

- System Error Code 42:YX

- System Error Codes related to Scan-Axis shutdown or Carriage jam.

⚠ **WARNING!** All the cover sensors are disabled when in the diagnostic tests menu. If the carriage is moving it will not stop if the window is open, so be very careful not to place your hands inside.

Procedure

📝 **NOTE:** Perform this test with the Printheads and the Tubes System installed so that the values can be compared correctly.

1. Go to Diagnostic menu > 4. Scan axis menu > 4.1 Scan axis test.

2. The test starts to move the carriage along the scan axis, checking if there are any paper jams and the movements of the Carriage and other problems in the systems, as well.

3. Finally, the test will display thru the front panel the diagnostic result. Press OK to restart the printer. If the diagnostic test fails, along the test could appear a System Error. In this case, troubleshoot the system error using .

4.2 SAX Lubrication Health Check

Description

The purpose of this test is to check if the SAX lubrication is correct.

⚠ **WARNING!** All the cover sensors are disabled when in the diagnostic tests menu. If the carriage is moving it will not stop if the window is open, so be very careful not to place your hands inside.

Procedure

📝 **NOTE:** Perform this test with the Printheads and the Tubes System installed so that the values can be compared correctly.

1. Go to Diagnostic menu > 4. Scan axis menu > 4.2 SAX Lubrication Health Check.

2. The front panel asks if you want to continue with this test. Press OK to continue. If the Sax algorithm is disabled, the test asks if you want to enable it ONLY for this diagnostic test. Press OK for yes, and continue with the test.

   The test starts moving the carriage out of service station path and then moves the service station to detect the zero reverse. After, it begins to check the lubrication, moving the carriage along the printing path at 60ips first, and 10ips the second time. The front panel shows the values (in N) for 10ips and 60ips, showing also the limit for 60ips (50N).

3. Press OK to display in the front panel if the diagnostic result is correct. If the lubrication is not correct, the test asks for the SAX lubrication.

4. Press OK to finish. The printer will restart.

4.3 Enable/Disable SAX Algorithm

Description

The purpose of this test is to enable or disable the SAX algorithm.

Procedure

📝 **NOTE:**   Perform this test with the Printheads and the Tubes System installed so that the values can be compared correctly.

1. Go to Diagnostic menu > 4. Scan Axis Menu > 4.3 Enable/Disable SAX Algorithm, and press OK.

2. If the SAX algorithm is enabled, the front panel asks if you want to disable it. Otherwise, if the algorithm is disabled, it will ask to enable it. Press OK to confirm your selection.

3. Press OK to finish the test.

5. Carriage menu

5.1 Carriage PCA

Description

This test performs specific routines on the Carriage PCA to check for any problems. If a failure is detected, the printer will display a system error code which can be used to troubleshoot the problem.

Procedure

1. Go to Diagnostic menu > 5. Carriage menu > 5.1 Carriage PCA, and press OK.

2. The test starts to check the voltage of specific components of the Carriage PCA. After showing each value, it shows the valid voltage range. Press OK after each one.

3. The front panel asks to remove all printheads. Press OK when done.

4. The front panel shows the voltage from other Carriage PCA's parts and the valid range for each of them. Press OK after each one.

5. Then carriage moves to the middle of the printing path. The front panel asks to place a piece of blank paper under the carriage. Press OK when done.

6. Then test asks to remove the substrate. Press OK when done.

7. Insert all the printheads. Press **OK** to continue.

8. The front panel shows the diagnostic result. Press OK to finish the test and restart the printer.

5.2 Line sensor check

Description

The test checks the communication between the Line sensor and the Line sensor NVM.

Procedure

1. Go to Diagnostic menu > 5. Carriage menu > 5.2 Line sensor check.

2. The printer retrieves the Carriage Sensors PCA revision and displays it on the front panel. Press **OK** to continue.

3. The printer checks that the Line Sensor NVM reads and writes correctly. To do this, the printer temporarily writes a new serial number on the line sensor NVM then reads the new serial number to verify that the change was made. The printer retrieves the line sensor serial and part numbers and displays them on the front panel. During the whole process, to continue with the test, you must press OK to continue to the next check.

4. Press OK to finish the test. Then the printer will restart.

6. Service Station

6.1 Shuttle closed loop

Description

This test checks the connection and functionality of the shuttle and the Service station motor. The Service Station shuttle is the moving tray on which the Printhead Cleaning Cartridge is held.

Procedure

1. Go to Diagnostic menus > 6. Service station menu > 6.1 Shuttle closed loop.

2. When prompted by the front panel, manually move the Service Station to the front.

3. The front panel asks you to confirm that you have moved the Service Station, press OK.

4. Push the Service Station back a little to the rear, but not all the way, press OK.

5. Pull the Service Station a little to towards the front of the printer, but not all the way, and press OK.

6. Move the Carriage Assembly to the middle of the Scan axis, and press OK.

7. If the Service Station has moved automatically to the front of the printer press OK.

8. The front panel displays the results of the test in encoder units.

9. When prompted by the front panel, close the Window and press any key to finish the test.

6.2 Drop detector test

Description

The purpose of this test is to check the functionality of the drop detector.

Procedure

1. Go to Diagnostic menu > 6. Service station menu > 6.2 Drop detector test, and press OK.

2. The test starts to initialize, test, and analyze the drop detector.

3. The front panel displays the final diagnostic result. Press OK to shut down the printer. If the measures are within the specs, the diagnostic result will be successful.

   The final result could fail and the front panel shows that it is disconnected, or if 12Vs do not reach. Check the drop detector component connection.

   The final diagnostic result could also fail if the drop detector is dirty or blocked. In this case it also displays in the front panel. Replace the drop detector.

6.3 Printhead cleaning roll motor

Description

The purpose of this test is to check the functionality of the Web Wipe Motor and the connection with the PrintMech PCA. If a failure is found the appropriate system error is displayed, which can be used to troubleshoot the issue.

Procedure

1. Go to Diagnostic menu > 6. Service station menu > 6.3 PH cleaning roll motor.

2. The printer will now start to initialize the printhead cleaning roll test and will also check the Web Wipe Motor. The front panel displays the diagnostic result.

3. At the end of the test press OK to end the test and shut down the printer.

6.4 Primer

Description

The purpose of this test is to check the connection and functionality of the Primer assembly. The test involves selecting a Printhead to prime a specified Printhead.

Procedure

1. Go to Diagnostic menu > 6. Service station menu > 6.4 Primer.

2. The front panel will display the various electrical subsystems being initialized in order to perform the test.

   Test asks for:

   ● Close the windows door

   ● Lower the lever.

   ● Close the service station door

   ● Check that printheads are inserted.

   ● Check that ink cartridges are inserted

   If there is a failure at this point the front panel will display a system error, troubleshoot the system error using System error codes on page 89.

3. The test starts moving the carriage out of the service station path and then moves the service station to detect the zero reverse.

4. The front panel asks you to select the printhead number (1 to 6) by using the UP and DOWN keys and press OK to confirm your selection.

    1: Y-M

    2: Y-M

    3: C-K

    4: C-K

    5: Lm-Lc

    6: OP

5. The printer will move the Carriage and will then prime the selected printhead.

    If there is a failure at this point, the front panel will display the corresponding error message.

6. Once the test is completed, OK will be displayed on the front panel. Press OK to finish the test and restart the unit.

6.5 Maintenance cartridge

6.5.1 Cleaning roll advance

Description

The purpose of this test is to check visually if the web is advancing.

Procedure

1. Go to Diagnostic menu > 6. Service station menu > 6.5 Maintenance cartridge > 6.5.1 Cleaning roll advance.

2. The front panel will display the various electrical subsystems being initialized in order to perform the test. Front panel asks for:

    ●   Remove the right cover.

    ●   Lower the lever.

    Press OK to continue with the test.

3. The printer will move the cleaning roll of the maintenance cartridge and will ask you to visually check if it was advanced correctly. Press OK to repeat the test or Cancel to exit.

4. After exit from the test, the front panel asks if the printhead cleaning roll advanced or not. Press OK for yes or Cancel for no.

    If Cancel is pressed, because the printhead cleaning roll not advanced correctly, the test failed and needs to revise the system.

    If OK is pressed, because the printhead cleaning roll advanced correctly, the diagnostic result is successful. Press OK to finish the test and restart the unit.

6.5.2 Spit Rollers

Description

The purpose of this test is to visually check if the maintenance cartridge spit rollers are turning.

Procedure

1. Go to Diagnostic menu > 6. Service station menu > 6.5 Maintenance cartridge > 6.5.2 Spit Rollers.

2. The front panel will display the various electrical subsystems being initialized in order to perform the test. The front panel asks for:

   - Remove the right cover.

   - Lower the lever.

   Press OK to continue with the test.

3. The printer will move the cleaning roll of megacassette and will ask to check visually if it was advanced correctly. Press OK to repeat the test or Cancel to exit.

4. After exit from the test, the front panel asks if the spit rolls turned or not. Press OK for yes or Cancel for no.

   If Cancel is pressed, because both spit rolls did not turn correctly, the test failed and needs to revise the system.

   If OK is pressed, because both spit rolls turned correctly, the diagnostic result is successful. Press OK to finish the test and restart the unit.

6.6 Service station check distance

Description

The purpose of this test is to check the service station distance.

Procedure

1. Go to Diagnostic menu > 6. Service station menu > 6.5 Service station check distance.

2. The front panel will display the various electrical subsystems being initialized in order to perform the test. The front panel asks to:

   - Lower the lever.

   Press OK to continue with the test.

3. After, check the distance, the front panel displays the result of the test. Press OK to finish the test and restart the printer.

7. Covers menu

7.1 Cover/Switch sensor

Description

The printer checks the functionality of the window sensor.

Procedure

1. Go to Diagnostic menu > 7. Covers Menu > 7.1 Cover/Switch Sensor.

2. The test asks to close the window. Do so, and press OK.

3. The test asks for open the window. Do so, and press OK.

4.   The printer checks if the Window sensor works properly.

5.   Close the window, and press OK.

6.   The front panel display the diagnostic result. Press OK to finish the test.

8. Diagnostic utilities menu

8.1 Force Normal Start

Description

This selection must be made after you no longer want the printer to start up in diagnostic mode. After this selection is made the printer will start up as normal.

This feature is also included in the Service Menu.

Procedure

1.   Go to Diagnostic menu > 8. Diagnostic utilities menu > 8.1 Force Normal Start.

2.   Press OK to change your configuration or CANCEL to continue with your configuration.

3.   Press OK finish the test.

8.2 Force Diagnostic Start

Description

The Force Diagnostic Mode diagnostic utility allows you to tell the printer to start up every time in diagnostic mode. This is useful if you will be performing multiple tests running from diagnostic mode.

📝 **NOTE:**   Once you force the printer to start up in diagnostic mode, in order to change back again, you must perform the Force Normal Boot diagnostic utility, see previous utility.

This feature is also included in the Service Menu.

Procedure

1.   Go to Diagnostic menu > 8. Diagnostic utilities menu > 8.2 Force Diagnostic Start.

2.   Press OK to change your configuration or CANCEL to continue with your configuration.

3.   Press OK to finish the test.

8.3 Enable/disable logs

Description

Enabling logs is a useful tool when troubleshooting any error with the printer when the cause of the error is not obvious, the printer can log all printer activity up until the error occurred, this can give clues as to the cause and solution to the error. Logs can also be sent via email if the problem must be escalated for further analysis. This feature is also available in the Service Menu.

Procedure

1. Go to Diagnostic menu > 8. Diagnostic utilities menu > 8.3 Enable/disable logs.

2. The printer asks you if you want to enable or disable a component trace. Use the UP and DOWN keys to enable or disable, and then press OK to confirm.

3. Choose component trace to log, and press OK to confirm. The following options are available:

   a. OMAS

   b. Ink delivery system (IDS)

   c. Waste

   d. Media path

   e. Heating and curing

4. The front panel displays a message confirming your option. Press OK to continue.

5. When prompted by the front panel, press OK to finish the test.

8.4 Convert SKU

Description

The purpose of this test is to simulate in Full units the Basic SKU.

📝 NOTE: If you configure the unit to Basic unit simulation mode, to return to the Full version it is needed to run the same diagnostic test.

Procedure

1. Go to Diagnostic menu > 8. Diagnostic utilities menu > 8.4 Convert SKU.

2. The front panel shows the current state of this Basic unit simulation test ("Deactivated" as default). Press OK to switch the state on Cancel to exit.

3. Press OK to finish the test.

9. Print-zone LEDs

9.1 Check print-zone LEDs

Description

The purpose of this test is to check the connection and functionality of the inner lights.

Procedure

1. Go to Diagnostic menu > 9. Print-zone LEDs > 9.1 Check print-zone LEDs, and press OK to continue.

   The test starts to check if the array is connected and then checks the circuits one by one. If the array or circuits are disconnected, the front panel displays the system error, troubleshoot the system error using .

   Finally, if the test passes correctly, the diagnostic results display in front panel as OK.

2. Press OK to finish the test and restart the printer.

Service Menu

Service utilities help you to service, maintain, calibrate and clean the printer. This section guides you through the service utility procedures and provides information about each utility. In contrast to the Diagnostic Menu, where only the needed parts or subsystems of the printer are used, in the Service Menu machine operation is similar to normal user operation, where all components of the printers are active.

Entering the Service Menu

1. On the front panel's home screen, press the ⚙ icon.
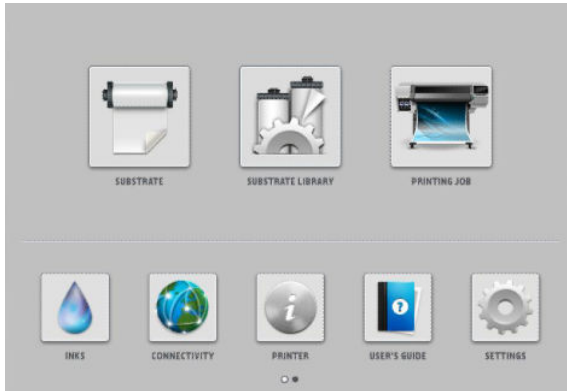
2. Scroll down to the bottom of the Main Menu and press **Service Menu**.
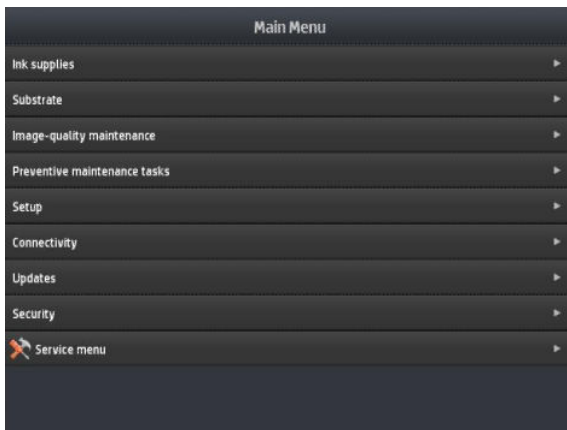
3. Enter the 4-digit access code "3174" and press **OK**.

Performing tests

All tests involve a similar User Interface, which guides you step by step along the test. Therefore, to perform any test, please follow the instructions displayed in the front panel. An example of the Test User Interface is shown below:
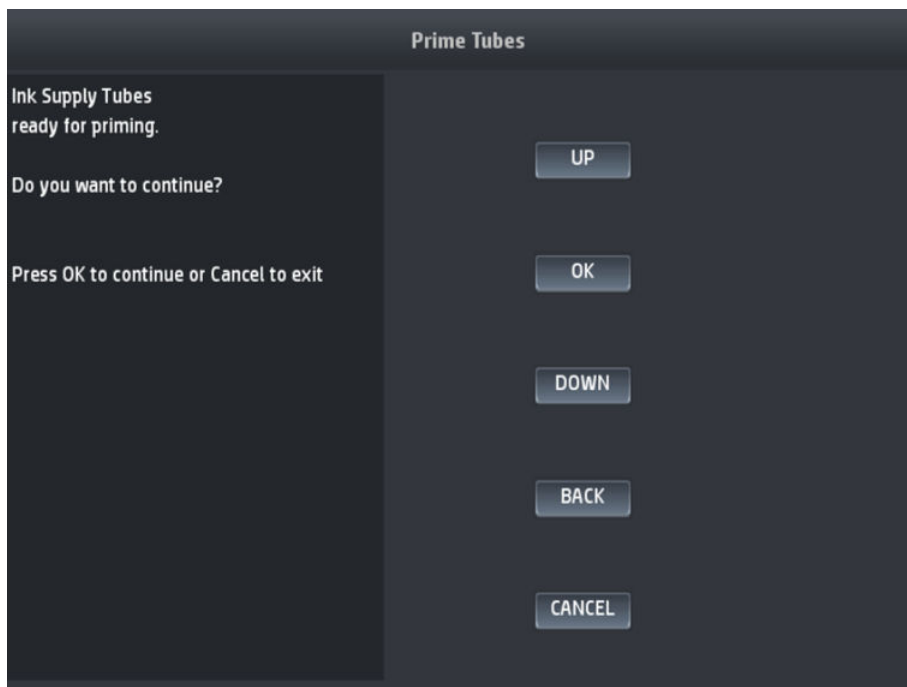
- **CANCEL**: Cancel the active test

- **BACK**: Move to the previous screen

- **UP/DOWN**: In some tests these buttons are used to change the value of a given parameter which might have to be modified during the test

- **OK**: Accept and move to the next screen

1. Service utilities

1.1 Boot mode menu

1.1.1 Force Diagnostic Start

Description

The Force Diagnostic Mode diagnostic utility allows you to tell the printer to start every time in diagnostic mode. This is useful if you will be performing multiple tests running from diagnostic mode. This feature is also included in the Diagnostic Menu.

📝 **NOTE:** Once you force the printer to start in diagnostic mode, in order to change back again, you must perform the Force Normal Boot diagnostic utility from the Diagnostic menu; or, if the printer is still in normal mode, from the Service menu.

Procedure

1. Go to Service menu > 1 Service utilities > 1.1 Boot mode menu.

2. Enter the 4-digit access code "5494" to access to the restricted folder and press OK.

3. Press to 1.1.1. Force Diagnostic Start.

4. The printer asks you to confirm that you want to the printer to start in diagnostic mode.

5. Press OK to confirm, or CANCEL to make no changes. Afterwards, press OK to exit.

1.1.2 Force Normal Start

Description

This selection must be made after you no longer want the printer to start in diagnostic mode. After this selection is made the printer will start as normal. This feature is also included in the Diagnostic Menu.

Procedure

1. Go to Service menu > 1 Service utilities > 1.1 Boot mode menu.

2. Enter the 4-digit access code "5494" to access to the restricted folder and press OK.

3. Press to 1.1.2. Force Normal Start.

4. The printer asks you to confirm that you want to the printer start in diagnostic mode.

5. Press OK to confirm, or CANCEL to make no changes. Afterwards, press OK to exit.

1.2 Electrical system menu

1.2.1 Set Date and Time

Description

The purpose of this Service Utility is to set the printer date and time and the Real Time Clock of the printer.

Procedure

1. Go to Service menu > 1 Service utilities > 1.2 Electrical system menu > 1.2.1 Set Date and Time.

2. The front panel displays the current time (HH:MM:SS) and date (MM:DD:20YY) and a space for you to enter the new time and date.

3. Use the UP and DOWN keys to go through the digits and press the OK key to go to the next digit. You can press the Cancel key at any time to exit the utility without making any changes.

   Once the new time has been entered, the front panel displays the time that you have entered.

4. Press the OK key to confirm the time, or the CANCEL key to exit the utility without making any changes, or the BACK key to modify again.

   📝 NOTE: If the current RTC Clock cannot be set, it could indicate a possible firmware error.

1.2.2 Enable/Disable logs

Description

Enabling logs is a useful tool when troubleshooting any error with the printer when the cause of the error is not obvious, the printer can log all printer activity up until the error occurred, this can give clues as to the cause and solution to the error. Logs can also be sent via email if the problem must be escalated for further analysis. This feature is also available in the Diagnostics Menu.

Procedure

1. Go to Service menu > 1 Service utilities > 1.2 Electrical system menu > 1.2.2 Enable/Disable logs.

2. The front panel asks whether you want to enable or disable logs. Select Enable logs or Disable logs and press OK to confirm.

3. If you are enabling logs, the printer asks you to select the component or subsystem you want to apply the changes to. The following options are available:

   a. OMAS

   b. Ink delivery system (IDS)

   c. Waste

   d. Media path

   e. Heating and curing

4. Select the component or subsystem by using the UP and DOWN keys, and then press OK to confirm..

5. If the utility exits correctly, OK is displayed on the front panel. You must restart the printer to apply the change you have requested.

1.2.3 Set Serial Number

Description

The purpose of this 1 Service Utility is to set the Serial Number and Part Number of the printer.

Procedure

1. Go to Service menu > 1 Service utilities > 1.2 Electrical system menu.

2. Enter the 4-digit access code "5494" to access to the restricted folder and press OK.

3. The front panel displays the current Serial Number and the new Serial Number of the printer. Use the **UP** and **DOWN** keys to go through the digits and press the **OK** key to go to the next digit. You can press the CANCEL key at any time to exit the utility without making any changes.

4. Once the new Serial Number has been entered, the front panel displays the Serial Number. Press the **OK** key to confirm the Serial Number, or the **CANCEL** key to exit the utility without making any changes, or the **BACK** key to modify again.

5. If the utility exits correctly, OK is displayed on the front panel.

1.3 Substrate path menu

1.3.1 Turn Drive Roller

Description

The purpose of this Service Utility is to rotate the Drive Roller in order to test it and perform maintenance cleaning.

Procedure

📝 **NOTE:** Remove substrate before performing this operation.

Open the Window and activate the Window Sensor (using a piece of substrate) before performing this service utility.

1. Go to Service menu > 1 Service utilities > 1.3 Substrate path menu > 1.3.1 Turn Drive Roller.

2. The printer checks whether substrate is loaded. If substrate is loaded, the front panel asks you to unload the substrate and start again.

3. The Drive Roller begins to turn slowly.

4. Refer to the Clean the printer on page 609.

5. Once you have finished cleaning the Drive Roller and the Overdrive, press the Cancel key to exit.

📝 **NOTE:** Remember to remove the piece of substrate from the Window Sensor before closing the Window, as this could damage the Window and the sensor.

1.3.2 Clean substrate preset

Description

The purpose of this Service Utility is to remove all the media presets created by customer. It can be useful when some of them are corrupted. The only presets that are not remove are the original ones (generic and HP presets).

Procedure

1. Go to Service menu > 1 Service utilities > 1.3 Substrate path menu > 1.3.2 Clean substrate preset.

2. The Front Panel asks if you want to continue with the test or cancel it. To go ahead press **OK**, otherwise press CANCEL/BACK.

3. If you pressed **OK**, the test runs successfully and you have to press **OK** to reboot the printer.

1.3.3 Enable/Disable OMAS

📝 **NOTE:** The OMAS sensor is only present on HP Latex 315, 335, 360, 365, 370 and 375 printers.

Description

The purpose of this Service Utility is to enable or disable the OMAS sensor to be able to measure and troubleshoot the influence of the OMAS sensor on print-quality problems. Use it if you have tried to calibrate the sensor without success.

Disabling the OMAS sensor is recommended under certain circumstances:

- When printing on highly reflective or transparent substrates

- When the OMAS sensor is dirty

When the OMAS is disabled, substrate advance is controlled by the Analog encoder on the Main drive roller.

To perform this test, go to Service Menu > 1 Service Utilities > 1.3 Substrate Path Menu > 1.3.3 Enable/Disable OMAS.

Result

When the OMAS sensor is disabled:

- If print quality does not improve it probably indicates that another root cause is responsible for the print-quality problems observed

- If print quality improves it probably means that the OMAS sensor is causing the problem

When the OMAS sensor is enabled:

- If print quality does not improve it probably means that the OMAS sensor is causing the problem.

- If print quality improves it probably indicates that another root cause is responsible for the print-quality problems observed

Recommendations in case the OMAS sensor is highly suspected to be causing a print-quality problem:

- Test another substrate

- There could be dirt on the OMAS sensor; clean it when possible. When cleaning is not possible (dirt inside the OMAS sensor) it should be replaced

- It could be that the OMAS sensor is broken; replace it.

When execution of this test fails it can indicate that there is a communication problem between the OMAS sensor and the Engine PCA

1.3.4 OMAS Sensor Check

📝 **NOTE:** The OMAS sensor is only present on HP Latex 315, 335, 360, 365, 370 and 375 printers.

Description

The purpose of this test is to determine the level of illumination and contrast for a given substrate. During this test the OMAS sensor captures some images of the loaded substrate and measures the standard deviation and average of the illumination level and contrast.

This calibration is performed whenever a substrate is loaded and should be performed when substrate navigation problems have been observed.

To perform this test go to Service Menu > 1 Service Utilities > 1.3 Substrate Path Menu > 1.3.4 OMAS Sensor Check.

Result

When this test passes it indicates that the OMAS sensor is able to navigate the loaded substrate.

When this test fails it could indicate:

- That there is dirt on the OMAS sensor; clean it when possible. When cleaning is not possible (dirt inside OMAS sensor) it should be replaced

- That the OMAS sensor is broken; replace it

- That there is a communication problem between the OMAS sensor and the Engine PCA

1.4 Ink System Menu

1.4.1 Purge Tubes

Description

The purpose of this is to prime the Ink Tubes when they are not new and they need to be re-primed or automatic priming was not completed correctly.

Procedure

1. Go to Service Menu > 1 Service utilities > 1.4 Ink system menu > 1.4.1 Purge Tubes.

2. The front panel warns you if the Ink Cartridges are not suitable for priming. Replace the installed Ink Cartridges with Ink Cartridges that are new or at least 88% full.

3. The front panel asks for confirmation; press **OK** to proceed. Then the System restarts.

4. Once the printer has restarted, the front panel asks you to open the Window and remove the desired printheads installed in the Carriage.

5. Once the desired printheads have been removed, the front panel asks you to install the Setup Printheads into the Carriage.

6. Once all the Setup Printheads are installed, the front panel prompts you to close the Carriage Cover and the Window.

7. The printer will begin to purge the tubes system.

8. Once the tubes system has been purged, the front panel asks you to open the Window.

9. The front panel asks you to check that the Setup Printheads are full of ink.

10. The front panel asks you to change the waste bottle. Disregard this instruction, do not change any parts. Continue with the purge procedure, pressing OK to advance through the procedure, but without changing anything.

11. At the end of the procedure the printer will perform the Printhead Alignment procedure.

1.5 Scan axis menu

1.5.1 Force drop detection

Description

The purpose of this is to reset the nozzle health database so that all nozzles are assumed to be correct.

Procedure

1. Go to Service Menu > 1 Service utilities > 1.5 Scan axis menu > 1.5.1 Force Drop Detection.

2. The printer asks you to check that the ink is ready and all the pinch lever is closed.

3. Check that the ink is ready, and the pinch lever is in the closed position. Press OK to continue with the test.

   The printer performs a drop detection and displays the drop detector values on the front panel.

   NOTE: The drop detector values for nozzles out should be below 150 nozzles per Printhead. If they are not, print the test plot and verify that this Printhead has so many nozzles out. If the Printhead has many nozzles out, and it is causing banding, change the Printhead. If the Printhead is OK, this would indicate an error with the drop detector. Perform the Drop Detector Calibration and the Force Drop Detection procedures.

4. Press **OK** to accept the values and pass the test or CANCEL to reject the values and fail the test.

1.6 Carriage menu

1.6.1 ESP Shutter Diagnostic

NOTE: The OMAS sensor is only present on HP Latex 315, 335, 360, 365, 370 and 375 printers.

Description

The purpose of this Service Utility is to check if the Embedded Spectrophotometer and its related actuators are working properly together.

Use it when a problem with the ESP (also named SOL) has been identified.

This test consists of 3 modules; each module validates one part:

● SOL Assembly bottom cover: verifies that there is a visible light below this part in the print zone when SOL is uncovered and there is no light when it is properly covered

● SOL Actuator Assembly: verifies that this part situated at the left side of the print zone is moving up and down accordingly in a way that can open the SOL assembly bottom cover

● SOL shutter bump: verifies that this part is located as defined and properly closes the SOL Assembly bottom cover

To perform this test, go to Service Menu > 1 Service utilities > 1.6 Carriage menu > 1.6.1 ESP Shutter Diagnostic.

Result

This test passes when the user visually verifies that:

- The SOL assembly bottom cover is properly covering and uncovering the SOL-emitted light

- The SOL actuator assembly completely closes the bottom SOL assembly cover

- The SOL shutter bump completely opens the bottom SOL Assembly cover

When any of the previous parts are not working as defined, it easy to visually guess which part should be replaced. In addition to a mechanical problem, any electrical communication problem between these parts and the PCA could be present.

1.6.2 ESP Measurement Test

Description

This Service Utility checks that the Embedded SpectroPhotometer (ESP) is functioning within predefined color specifications. The test involves measuring the lightness of the white of the substrate.

To perform this test correctly the printer must have the latest firmware available.

Procedure

1. Make sure that the substrate loaded is suitable for the test: there are certain substrate types that cannot be used for this type of test. The best results can be achieved by using HP Universal Instantdry Gloss Paper (part number Q1273-60232). There are some other substrate types that can be used:

    - HP Bright White Paper

    - HP Premium Instant Dry Gloss Paper

    - HP Premium Instant Dry Photo Satin Paper

    - HP Universal Coated Paper

    - HP Universal Heavyweight Coated Paper

2. Go to Service Menu > 1 Service utilities > 1.6 Carriage menu > 1.6.2 ESP Measurement Test.

3. The front panel displays information about the Spectrophotometer installed in the printer.

    The manufacturing date is shown in YYWW format, where YY is the year and WW is the week of manufacturing.

    Press OK to continue with the test.

4. The substrate is advanced 4 inches to cover the platen, and then the Spectrophotometer is used to measure paper white at five different positions along the scan axis. The measured Lab values are averaged and displayed.

5. Compare the values from the front panel with the expected results for the loaded substrate type.

    If, for example, the value seen for L is 93 when HP Bright White Paper is loaded, this would indicate that the Spectrophotometer is functioning correctly. The test itself does not detect whether the values are within the expected results.

1.6.3 Test cutter

Description

The purpose of this service utility is to check that the cutter works properly.

Procedure

1. Go to Service Menu > 1 Service Utilities > 1.6 Carriage Menu > 1.6.3 Test cutter.

2. Make sure that substrate is loaded, then press **OK** to proceed with the test.

3. The printer advances the substrate, prepares the cutter, and tries to cut the substrate.

4. When it has finished cutting, the printer disengages the cutter.

5. The front panel asks you to confirm that the cutter has cut the substrate.

1.7 Service Station Menu

1.7.1 Maintenance cartridge

1.7.1.1 Cleaning roll detection

Description

The purpose of this service utility is to check if level of usage of web wipe can be read.

Procedure

▲ Go to Service Menu > 1 Service utilities > 1.7 Service Station Menu > 1.7.1.1 Cleaning roll detection.

The printer displays the roll level percentage that maintenance cartridge is capable of. Press OK to finish the test.

1.8 Heating and curing menu

1.8.1 Curing system monitor

Description

The Curing System Monitor utility displays all the parameters of the curing system.

- Temperature at each curing module (Target 120°C)

- Fan revolutions for each curing module

- Curing chamber pressure (target 3.2)

- Power applied

- Input line voltage

Procedure

1. Make sure to unload any substrate.

2. Go to Service Menu > 1 Service utilities > 1.8 Heating and curing menu > 1.8.1 Curing system monitor.

3. Make sure that substrate is unloaded, and press OK.

4. The Front Panel shows current information related to the curing module. When the target is reached you can press OK to finish the test. The printer cools down before finishing the test.

1.8.2 Curing plate cleaning

Description

Guides the service engineer through the cleaning process, it must be performed after the SMK3 intervention.

1.8.3 Curing homogeneity calibration

Description

Every curing module can be calibrated by adding a temperature offset to the temperature read by each one of the curing sensors. Calibration has been already performed at manufactory and set as default.

Procedure

1. Go to Service Menu > 1 Service utilities > 1.8 Heating and curing menu > 1.8.3 Curing homogeneity calibration.

2. Select one of the following tests, using the UP and DOWN keys, and then press OK to confirm.

    a. Show calibration: shows current and factory calibration values for each curing module.

    b. Perform manual calibration: Prints calibration plot with current calibration values and allows new calibration values to be set. Print the first row of patches, if your visual inspection suggests that it is correctly cured, cancel print, save current values and exit wizard. If it is not well-cured then continue printing the second row or the following ones until the pattern is well-cured, then set up the values accordingly and exit set up.

    c. Restore factory calibration: sets all current values to factory calibration.

    d. Disable calibration: sets all current values to zero, no offset will be applied.

    📝 **NOTE:** You need to load a substrate with the maximum width allowed for the printer to print the calibration plot.

3. Press OK to finish the test.

1.8.4 Curing pressure calibration

Description

The pressure sensor can be calibrated running this service test. Calibration has been already performed at manufactory.

Procedure

1. Go to Service Menu > 1 Service utilities > 1.8 Heating and curing menu > 1.8.4 Curing pressure calibration.

2. Select one of the following tests, using the UP and DOWN keys, and then press OK to confirm.

    a. Show pressure calibration: shows the current value for the pressure sensor calibration.

    b. Perform pressure calibration: runs the pressure calibration and allows you to set a new value.

    c. Restore pressure calibration: restores value to factory calibration.

    📝 **NOTE:** You need to download the substrate before running this test.

3. Press OK to run the test selected.

1.9 Show test messages

Description

Explains how to enter the Test message TLC mode diagnostics.

Procedure

1. Go to Service menu > 1 Service utilities > 1.9 Show test messages.

2. Press **OK** to exit.

1.10 Force Mandatory Firmware Upgrade

Description

With this option selected the firmware of the printer must first be updated before it will initialize.

Procedure

1. Go to Service menu > 1 Service utilities > 1.10 Force Mandatory FW upgrade.

2. Enter the 4-digit access code "5494" to access to the restricted folder and press **OK**.

3. The front panel asks for confirmation. Press **OK** to accept the mandatory firmware upgrade mode.

> **NOTE:** If you have any issues during the firmware update, it is required to perform a HDD recovery, retrying the firmware upgrade.

1.11 Hard Disk Recovery

Description

The purpose of this test is to recover HDD space. It cleans up some folders on the hard disk, and restores the factory state, formatting partitions where the printer's logs, user data and temporary files are stored.

Perform this test when there is not enough free space on the HDD (the appropriate error message should be prompted) or usage data is desired to be erased.

After test ends a reboot will take place; during the reboot the HDD is recovered.

To perform this test go to Service menu > 1 Service utilities > 1.11 Hard Disk Recovery.

Result

When the reboot is finished, regular printer behavior indicates that the test was successful. In case something fails, replacement of the HDD is recommended.

1.12 Reset EWS password

Description

The purpose of this service utility is to reset the EWS password.

Procedure

1. Go to Service Menu > 1 Service Utilities > 1.12 Reset EWS password.

2. The Front Panel asks for confirmation; press **OK** to proceed.

2. Image quality prints

2.1 Print all plots

Description

The Print ALL Plots allows you to print at once all three basic diagnostic prints in order to diagnose an image quality defect. These are Printhead Alignment, Printhead Health, and Substrate Advance. Refer to chapter 5 for more details.

To run this test substrate must be loaded. If it is not loaded, the Front Panel asks for it.

Procedure

▲   Go to Service Menu > 2. Image quality prints > 2.1 Print all plots.

2.2 Printhead Alignment menu

2.2.1 Test plot

Description

The Printhead Alignment Test Plot allows you to check the accuracy of the current printhead alignment. Refer to the Printhead alignment status plot on page 287.

for more details.

▲   Go to Service menu > 2. Image quality prints > 2.2 Printhead Alignment > 2.2.1 Test plot.

2.2.2 Advanced test plot

Description

The purpose of the Advanced Test Plot is to help you to visually check for any alignment problem in the printer. Refer to the Advanced alignment diagnostic print on page 291 for more details.

Procedure

▲   Go to Service menu > 2. Image quality prints > 2.2 Printhead Alignment > 2.2.2 Advanced test plot.

2.2.3 Automatic Printhead Alignment

Description

This Service Utility triggers an Automatic Printhead Alignment.

Procedure

▲   Go to Service menu > 2. Image quality prints > 2.2 Printhead Alignment > 2.2.3 Auto Printhead Alignment.

2.2.4 Manual Printhead alignment menu

Description

Automatic printhead alignment may not produce optimal registration under certain conditions. Substrate texturing, elasticity, and the behavior of the substrate under different temperatures may lead to some imperfections with regard to printhead registration. In these circumstances, select the Manual Printhead Alignment instead.

2.2.4.1 Print Alignment Pattern

Description

The printer prints 17 rows labelled from A to Q. Inspect the print and write down the number of the straightest line in each row (for example, A:9).

Procedure

▲ Go to Service menu > 2. Image quality prints > 2.2 Printhead Alignment > 2.2.4 Manual PH alignment menu > 2.2.4.1 Print Alignment Pattern.

2.2.4.2 Manual alignment settings

Description

This is where the correction settings can be entered from the Manual Printhead Alignment.

Procedure

▲ Go to Service menu > 2. Image quality prints > 2.2 Printhead Alignment > 2.2.4 Manual PH alignment menu > 2.2.4.2 Manual alignment settings.

2.3 Substrate advance

2.3.1 Print adjustment plot

Description

The purpose of the Print Adjustment Plot is to help you in determining the advance offset in the printer with the current substrate loaded. This value can be found after printing the Advanced alignment diagnostic print on page 291, then it has to be introduced in the RIP.

Procedure

▲ Go to Service menu > 2. Image quality prints > 2.3 Substrate advance > 2.3.1 Print adjustment plot.

2.4 Printhead Health Menu

2.4.1 Print test plot

Description

The purpose of this Service plot is to show the overall health of the printhead nozzles by visual inspection. Refer to Chapter 5 for detailed information.

Procedure

▲ Go to Service menu > 2. Image quality prints > 2.4 PH Health > 2.4.1 Print test plot.

2.4.2 Advanced test plot

Description

The purpose of this Service plot is to help in identifying which of the printhead nozzles are failing. Refer to Chapter 5 for detailed information.

Procedure

▲ Go to Service menu > 2. Image quality prints > 2.4 PH Health > 2.4.2 Advanced test plot.

2.4.3 Only for escalations

Description

Service plot for escalations to HP Division upon request. Refer to .

Procedure

▲ Go to Service menu > 2. Image quality prints > 2.4 PH Health > 2.4.3 Only for escalations.

2.5 Geometry check

Description

The purpose of this Service plot is to provide a template for checking the printer's length accuracy and figure distortion. Refer to .

Procedure

▲ Go to Service menu > 2. Image quality prints > 2.5 Geometry check.

2.6 Scan-Axis Check

Description

The purpose of this Service plot is to help in diagnose any defect in the .

Procedure

▲ Go to Service menu > 2. Image quality prints > 2.6 Scan Axis Check.

2.7 Side-registration check

Description

This plot helps you to visually check any alignment problems of the printer caused by substrate expansion. You can use it to precisely measure the substrate expansion error with 2 dots row accuracy.

Procedure

1. Load the substrate.

2. Go to Service menu > 2. Image quality prints > 2.8 Side Registration check. Refer to .

3. Reset Life Counters Menu

📝 **IMPORTANT:** This must never to be attempted by the customer.

Description

After replacing a part of the printer, you should always reset the life counter of that part.

Procedure

To reset the printer's internal life counters, select Reset life counters from the Service menu.
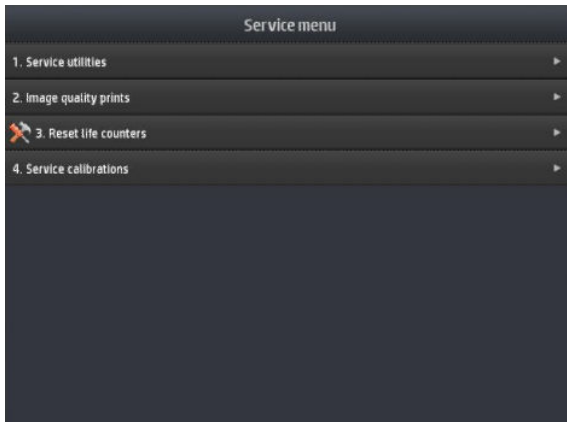
In order to continue, you must enter the 4-digit access code "5494" and press OK.

You can now choose to reset the counters related to one of the three Service Maintenance Kits, or to a specific printer part.

3.1 Reset Maintenance Kit usage

Description

The purpose of this Service Utility is to check the maintenance kit usage and/or reset the life counter of all the components included in the maintenance kit.

Procedure

1. Go to Service menu > 3. Reset Life Counters > 3.1 Reset Maint. Kit usage.

2. Select the Service Maintenance Kit for which you want to reset the life counters.

   ● 3.1.1 Reset SMK1: Resets the life cycles of the following: Carriage Assembly, Trailing cable, Ink Tubes, Belt, Scan Motor, Carriage lubrication, Line sensor (hours)

   ● 3.1.2 Reset SMK2: Resets the life cycles of the following: Service Station Motor, Carriage lubrication, Rack Motor, Printhead Cleaning Counters, Spit Plate spittoon (liters), Line sensor (hours)

   > **NOTE:** Reset SMK2 is only available in the HP Latex 3x0 series; the SMK2 is not required for the HP Latex 3x5 series.

   ● 3.1.3 Reset SMK3: Resets the life cycles of the following: Aerosol filters, Carriage lubrication, Line sensor (hours)

The printer displays the usage percentage and asks you if you want to reset the life counter.

3. Press OK if you want to reset the life counter or CANCEL if you do not want to reset the life counter. If you choose not to reset the life counter, the printer exits the utility.

Reset substrate path menu

Description

The purpose of this Service Utility is to check the service part usage and/or reset the life counter for the Substrate Path.

- 3.2.1 Drive roller motor: Resets the substrate motor.

- 3.2.2 Reset OMAS sensor: Resets OMAS (M of substrate length, navigable success, navigable failures).

- 3.2.3 Reset Vacuum Fan: Resets Vacuum Fans (hours).

3.3 Reset ISS menu

Description

The purpose of this Service Utility is to check the service part usage and/or reset the life counter for the ISS.

- 3.3.1 APS pumps: Resets the APS Pump in cycles and hours.

Reset scan axis menu

Description

The purpose of this Service Utility is to check the service part usage and/or reset the life counter for the Scan Axis:

- 3.4.1 Reset belt cycles: Resets the Belt cycles.

- 3.4.2 Tubes/Trailing cycles: Resets the cycles of the Trailing Cable and Ink Tubes.

- 3.4.3 SAX motor cycles: Resets the Scan Motor.

- 3.4.4 Encoder strip: Resets the Encoder Strip.

3.5 Reset carriage menu

Description

The purpose of this Service Utility is to check the service part usage and/or reset the life counter for the Carriage:

- 3.5.1 Carriage cycles: Reset the cycles of the Carriage.

- 3.5.2 New line sensor: Reset the Line Sensor (hours).

- 3.5.3 Cutter cycles: Reset the cutter cycles (number of times substrate has been cut).

- 3.5.4 Color sensor: Reset the SOL (hours).

- 3.5.5 Carriage rod lubrication.

3.6 Reset service station

Description

The purpose of this Service Utility is to check the service part usage and/or reset the life counter for the Service Station:

- 3.6.1 SS rack cycles: Resets rack motor.

- 3.6.2 Drop detector: Resets Drop Detector (hours).

- 3.6.3 Complete service station: Resets the Service Station motor (cycles), Aerosol Fan (hours), Rack Motor (Cycles), Split plate spittoon (liters), Aerosol Filters (liters), Spit plate DD (liters), Drop Detector (hours).

- 3.6.4 Maintenance cartridge.

- 3.6.5 Primer cycles: Resets the Primer.

- 3.6.6 Spit rollers.

4. Service calibrations

4.1 Substrate path menu

4.1.1 Substrate advance calibration

Description

The purpose of this Service Calibration is to calibrate the nominal advance of the substrate. This calibration is necessary to control the exact movement of the substrate in order to avoid print-quality problems such as banding. Perform the Service Accuracy Calibration whenever:

- Banding is detected in prints.

- Drive Roller is disassembled or replaced.

- Substrate-axis Assembly is disassembled or replaced.

Before starting the process, make sure that HP Universal Instant-dry Paper is loaded and ready to print. You will find two sheets included in the following service kits:

- B4H70-67006 OMAS Module 64

- B4H70-67002 Static Front Platens 64

- B4H70-67008 Drive Roller 64

- B4H70-67005 Drive Roller 54

You can also find two calibration sheets as an individual service kit: CQ871-67106 OMAS Calibration 54-in sheet.

The Substrate Advance Calibration performs a calibration in order to obtain a new set of calibration values. The printer makes a series of substrate advances, and the advance sensor registers the distance covered in each advance.

When all the substrate advances have been performed, the calibration values are calculated based on the data obtained.

Procedure

1. Go to Service Menu > 4. Service Calibrations > 4.1 Substrate Path Menu > 4.1.1 Substrate Advance Calibration.

2. If there is substrate ready, the printer performs the zero search for the Substrate Motor.

3. When the Substrate Motor has been initialized, the printer starts to perform the series of substrate advances. During this process, the front panel displays the current iteration number and the total number of iterations.

   You can cancel the calibration process at any time by pressing Cancel. In this case, the previous calibration values are restored and the cancelled process has no effect on the printer.

4. If the calibration process finishes without errors, the new calibration values are checked. If the values are considered valid, they are displayed and saved for use in future. Press OK to return to the main screen.

   📝 NOTE: Both the Automatic and the Manual Substrate Advance Calibration (which can be launched from the user menu), if they exist, are automatically set to zero for each type of substrate.

5. If the calibration values are not valid, the front panel displays the reason (for example, the percentage of good navigations is less than 90%). In this case the calibration process has no effect on the printer. Press OK to return to the main screen.

4.1.2.1 Print Calibration Pattern

Description

The purpose of this Service Calibration is to calibrate the OMAS Module. The calibration process consists of printing a special calibration plot and then scanning it with the printer. The scanned result values are compared with the actual printed values to obtain a PASS/FAIL result.

In the first step, the test prints a pattern navigating (measuring the movements) with the OMAS and creates in the hard disk a file with the navigation information from the OMAS system.

In the second step, the test scans the printed pattern with the line sensor measuring the distance between the lines of the pattern, and stores in the hard disk a file with the information from the line sensor.

Finally the test compares the information from the OMAS and the information from the line sensor scan, if the comparison is meaningful (there is no problem with the files stored in the hard disk) the firmware calculates what is the necessary compensation to be applied to the measurements of the OMAS to match the values measured by the line sensor.

Then, the firmware saves the OMAS compensation value in the NVM.

From this moment on, the measurements of the OMAS system will be compensated, providing better accuracy.

Perform the OMAS module calibration as follows:

Before starting the process, make sure that HP Universal Instant-dry Paper is loaded and ready to print. You will find two sheets included in the following service kits:

● B4H70-67006 OMAS Module 64

● B4H70-67002 Static Front Platens 64

● B4H70-67008 Drive Roller 64

● B4H69-67005 Drive Roller 54

You can also find two calibration sheets as an individual service kit: CQ871-67106 OMAS Calibration 54-in sheet.

Procedure

1. Go to Service Menu > 4. Service Calibrations > 4.1 Substrate Path Menu > 4.1.2 OMAS Calibration > 4.1.2.1 Print Calibration Pattern.

2. The front panel asks for confirmation; press OK.

3. If substrate is already loaded, it is unloaded. If it cannot be unloaded automatically, the front panel asks you to unload it manually.

4. The front panel prompts you to load substrate.

   NOTE: During this calibration process you have to load the substrate with the Carriage positioned in the print path.

   - Raise the Substrate Lever.

   - Load the substrate.

   - Lower the Substrate Lever.

5. Select the substrate type (HP Paper Aqueous).

6. The substrate calibration process starts and the front panel shows the following messages:

   - Calibrating paper advance.

   - Trimming roll edge. Please wait.

7. The front panel then prompts you to unroll 1 meter of substrate to avoid back tension. Unroll 1 meter of substrate and press OK.

8. The printer starts to print the OMAS Calibration Pattern. This could take several minutes.
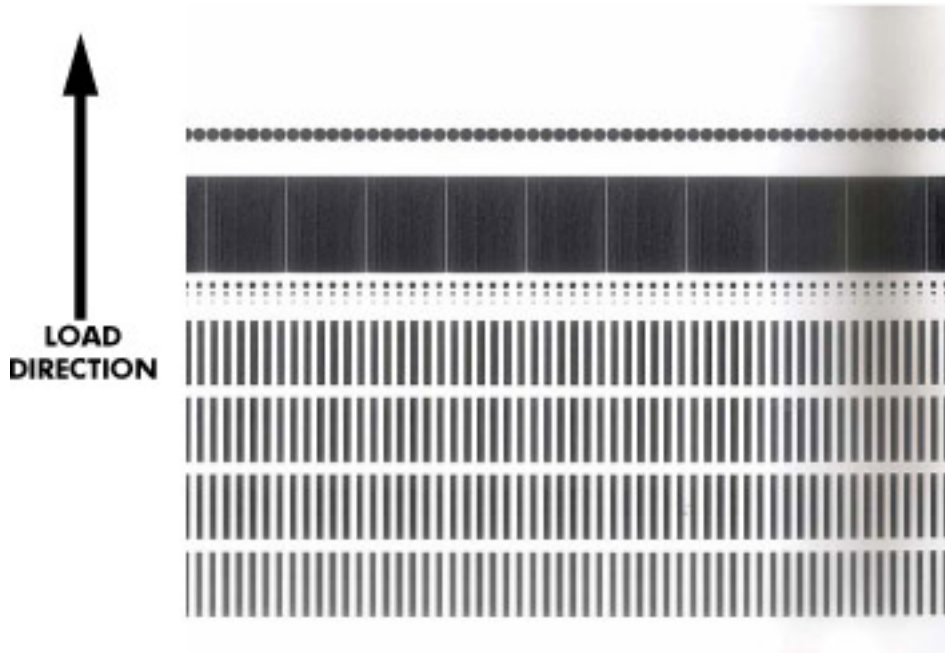
9. The front panel announces when the OMAS Calibration Pattern has been printed successfully. Press OK to continue.

   If the OMAS Calibration fails for any reason, a warning message will display on the front panel. In this case, try the following:

   ● Retry the Paper Advance Calibration.

   📝 NOTE: Remove the pattern from the printer and leave it to dry for a few minutes before continuing with the Calibration.

   📝 NOTE: Make sure substrate is not loaded into the printer before starting to scan the OMAS calibration pattern.

4.1.2.2 Scan Calibration Pattern

📝 NOTE: In order to perform this test, you first must perform 4.1.1.1 Print Calibration Pattern.

1. Go to Service Menu > 4. Service Calibrations > 4.1 Substrate Path Menu > 4.1.2 OMAS Calibration > 4.1.2.2 Scan Calibration Pattern.

2. The front panel asks for confirmation. Press the OK key to proceed, or press Back or Cancel to exit.

3. The front panel asks you to load the OMAS Calibration Pattern in to the printer. Make sure that you rotate the printed pattern 90° clockwise and reload it printed-side down. Press the OK key to continue.

4. Load the OMAS Calibration Pattern following the instructions on the front panel.

5. The front panel tells you when the OMAS Calibration Pattern is loaded correctly. Press OK to continue.

6. The printer scans the OMAS Calibration Pattern, which could take several minutes. The front panel tells you when it is complete. Press OK to continue.

   If the OMAS Calibration fails for any reason, a warning message will display on the front panel. In this case, try the following:

   ● Check that the OMAS Calibration Pattern was not incorrectly cut (trimming the actual pattern) during the substrate load process. If this is the case, perform the OMAS Calibration again from the beginning.

   ● Replace the OMAS Sensor.

   ● Replace the OMAS Controller Card.

   ● If the problem continues, replace the Substrate-Axis Motor.

4.1.3 Rewinder Calibration

Description

This test must be performed whenever the Rewinder Assembly has been replaced or one of the rewinder gears have been replaced. The test calculates the optimum power required to move the rewinder system.

Procedure

1. Go to Service menu > 4. Service calibrations > 4.1 Substrate path menu > 4.1.3 Rewinder Calibration.

2. The front panel asks you to load an empty roll of media onto the printer's spindle. Press OK to continue with the test.

4.2 Scan axis menu

4.2.1 Drop Detector calibration

Description

The purpose of this Service Calibration is to calibrate the Drop Detector in relation to the Carriage Assembly.

Perform the Drop Detector Calibration whenever:

● Drop Detector is removed or replaced.

Procedure

1. Go to Service menu > 4. Service calibration > 4.2 Scan axis menu > 4.2.1 Drop Detector calibration.

2. The front panel asks for confirmation. Press OK to continue, or press BACK or CANCEL to exit.

3. The printer starts to calibrate the Drop Detector. Once the Drop Detector has been calibrated, the results are displayed on the front panel. Press OK to continue the test or CANCEL to exit it.

4. Once the calibration is completed, OK is displayed on the front panel. Press OK to finish the test.

4.2.2 Reset Calibration Flag

Description

Resets the Drop Detector calibration flag. After the reset, the Drop Detector needs to be calibrated in order to be used it again.

Procedure

1. Go to Service menu > 4. Service calibrations > 4.2. Scan axis menu > 4.2.2 Reset Calibration Flag.

2. The printer asks you to clear the drop detector calibration flag. Press OK to clear it and continue with the test.

3. Once the test is complete ,OK is displayed on the front panel. Press OK to finish the test.

4.3 Carriage menu

4.3.1 Line Sensor calibration

Description

The purpose of the Line sensor calibration is to calibrate the intensity of the Carriage PCA line sensor. An incorrect calibration can result in edge detection failures during substrate loading and incorrect readings of alignment or calibration prints.

Perform the Line Sensor Calibration whenever:

- The edge-detect procedure fails during substrate loading.

- The Carriage is disassembled or replaced.

- The Line Sensor is disassembled or replaced.

- Banding is detected in prints.

- Misalignment between colors is detected.

📝 NOTE: Make sure you load one of the following substrates into the printer before performing this calibration. If none of them are available, use the service part Q1273-60296.

- HP Bond Paper

- HP Glossy Paper

- HP Coated Paper

- HP Productivity Photo Gloss

- HP Heavyweight Coated Paper

- HP Super Heavyweight Coated Paper

- HP Bright White Inkjet Paper

📝 NOTE: Make sure you load the substrate as "Generic paper," otherwise calibration will not work properly, but, do NOT use a clone of the preset.

Procedure

1. Go to Service menu > 4. Service calibrations > 4.3 Carriage menu > 4.3.1 Line Sensor calibration.

2. The front panel asks for confirmation. Press OK, or press BACK or CANCEL to exit.

3. Before continuing, the printer will check the following:

- The Substrate Lever is in the lowered position.

- The correct substrate type is loaded.

- The substrate is of the correct size (minimum substrate width 24 inches).

If these conditions are not met, a warning will be displayed on the front panel and you will need to restart the calibration from the beginning.

NOTE: Make sure you keep your hands away from the Print Platen as the Carriage will be moving at high speed and you could injure yourself or damage the Carriage Assembly.

4. The printer starts to calibrate the Line Sensor. Once the Line Sensor has been calibrated, the results are displayed on the front panel.

   If the values are not within the range specified, the front panel displays the error. In this case, try the following:

   - Try the Scan-Axis Calibration again.

   - Replace the Line Sensor.

5. The printer starts to calibrate the Line Sensor position to the Black Printhead.

6. Once the Line Sensor has been calibrated, the results are displayed on the front panel. Press OK to finish the calibration or press Back or Cancel to exit the calibration.

7. The printer will now perform the Printhead Alignment. When the front panel asks for confirmation, press OK.

8. The front panel tells you when the Printhead Alignment is complete. Press OK to continue.

   - If the Printhead Alignment fails for any reason, a warning message is displayed on the front panel. In this case, try the following.

   - Enter the front panel menu and retry the Printhead Alignment. If the Alignment completes successfully, then perform the Color Calibration.

   - If the Alignment fails again, check the Alignment pattern to see if any of the Printheads are printing incorrectly. If necessary, perform a Printhead Recovery through the front panel and retry the Printhead Alignment.

9. Once the complete Line Sensor calibration is completed successfully, OK is displayed on the front panel.

📝 **NOTE:** Remember that after changing the line sensor, for the Latex 330, 335, 310, 315, 115 and 110 models, the "color calibration" reference becomes obsolete. If the customer wants to keep the current color performance, it is advisable to follow the following process for each of the media he/she wants to "color calibrate:"

1. Load the media you want to "color calibrate" and select the corresponding media preset from the printer's front panel.

2. Delete the current calibration table as if that particular substrate had never been calibrated. Press ⚙, then Image quality maintenance > Color calibration > Reset to factory.

3. Run the Color calibration. Press ⚙, then Image quality maintenance > Color calibration > Calibrate.

4. Repeat the previous steps for all the media you want to "color calibrate."

4.3.2 Primer Calibration

Description

The purpose of this Service Calibration is to find the optimum position of the Primer Assembly with respect to the Carriage.

The calibration is a visual procedure so you will have to remove the Right Cover before starting.

Procedure

1. Go to Service menu > 4. Service calibrations > 4.3 Carriage menu > 4.3.2 Primer calibration.

2. Remove the Right Cover.

3. Block the Printhead Cleaning Cartridge door switch in the closed position.

4. The front panel asks for confirmation. Press OK to continue.

5. Follow the instructions on the front panel.

6. The calibration process starts and the front panel shows the following messages:

    ●   Homing Primer

    ●   Uncapping SVS

    ●   Homing Carriage

    ●   Computing the Left Scan-Axis Offset

7. Once the Left Scan-Axis Offset has been calculated the front panel prompts you to use the Up/ Down keys to move the carriage until the right edge of the Left Alignment Mark on the Carriage Cover is perfectly aligned with the Primer positioning indicator.
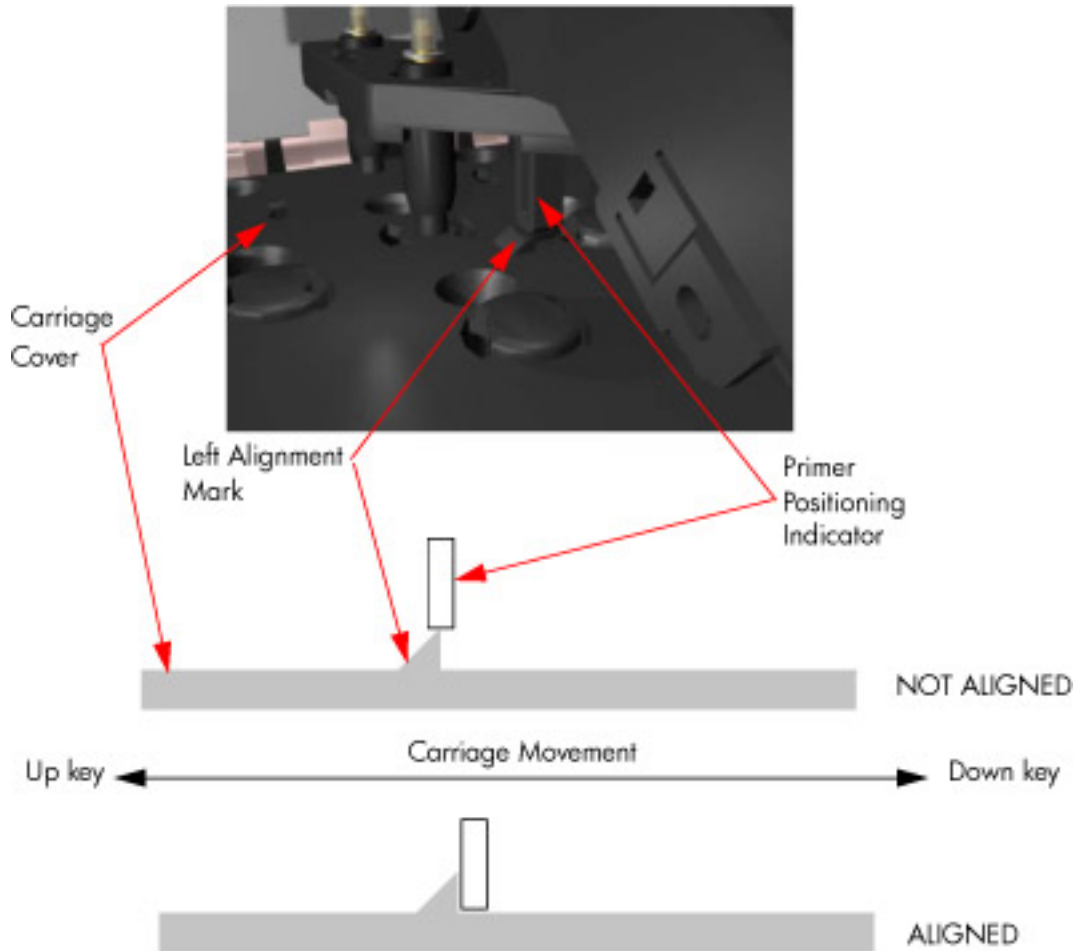
NOTE: To detect the exact position more easily while aligning the Carriage to the Primer it is a good idea to press down lightly on the Primer while you are moving the Carriage.

While the Carriage is moving, the front panel shows the actual position and the direction of movement and prompts you to press OK when done.

8. The front panel shows the actual Left Offset value and the system calculates the Right Scan-Axis Offset.

9. Once the Right Scan-Axis Offset has been calculated, the front panel prompts you to use the Up/ Down keys to move the carriage until the left edge of the Right Alignment Mark is correctly aligned with the Primer Positioning Indicator.

10. Use the Up and Down keys to move the Carriage until the left edge of the Right Alignment Mark is correctly aligned with the Primer Positioning Indicator.
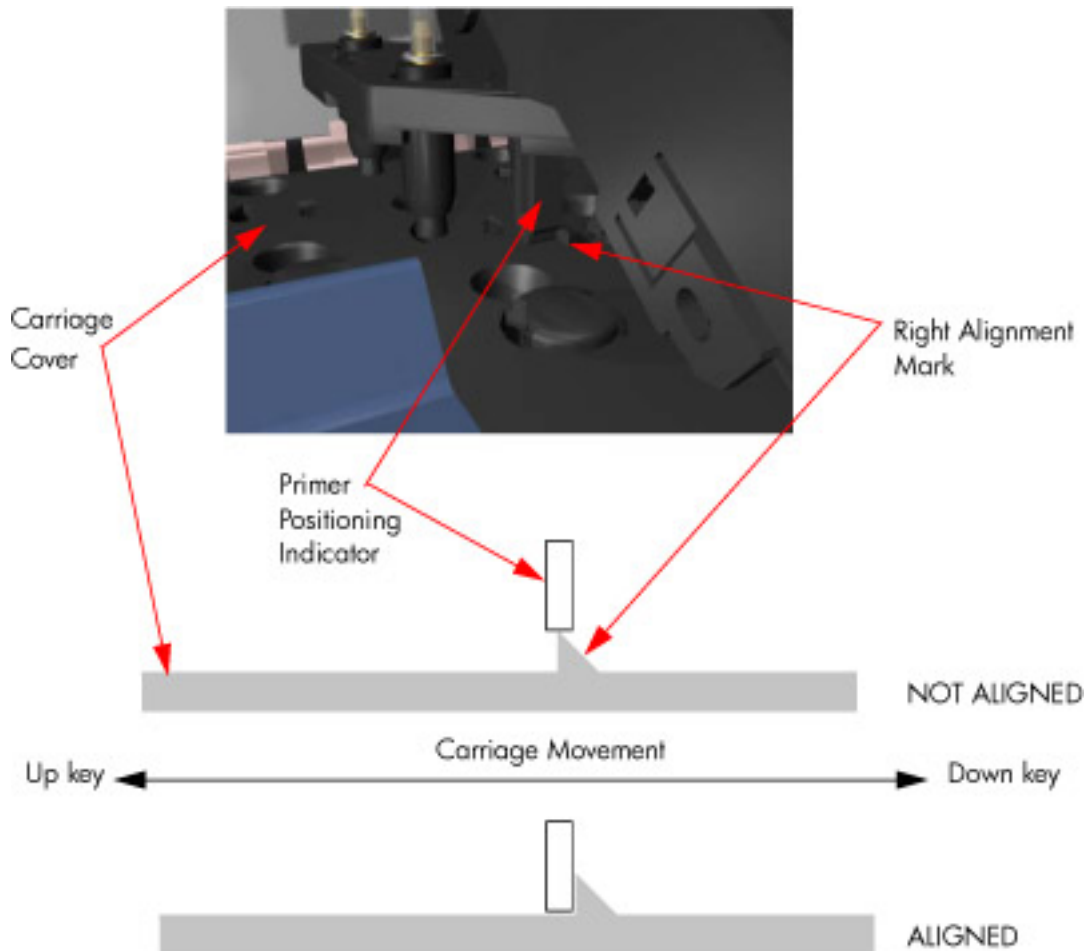
While the Carriage is moving, the front panel shows the actual position and the direction of movement and prompts you to press OK when done.

11. The front panel shows the actual Right Offset value.

12. The calibration process continues and the front panel shows the following messages as the new nominal offset value is read and saved to NVM:

   ● Reading Nominal Offset

   ● New Nominal Offset is [ActualValue]

   ● Saving to nvm

   ● Saved

13. Once the calibration is completed, OK is displayed on the front panel.

14. Replace the Right Cover.

4.3.3 Color Sensor Shutter Calibration

Description

This Service Calibration tries to open and close the Embedded SpectroPhotometer (ESP) shutter, and checks optically, using the ESP light, that it opens and closes. If it cannot open the shutter with the default values, it tries to fine-tune the location where the carriage stops so that the Shutter Actuator can hook the shutter lid and open it successfully. It will try over a range of ±1 cm around the nominal position, moving by 1 mm after each attempt, starting at the rightmost position (nominal +1 cm), until the actuator hooks the shutter. If, by nominal −1 cm, the shutter has not been successfully opened, the test fails. If a successful position is found, it is stored in the NVM as the new position to be used in future.

Procedure

1. Go to Service menu > 4. Service calibrations > 4.3 Carriage menu > 4.3.3 Color Sensor Shutter Calibration.

2. During calibration, the Carriage moves back and forth and the front panel displays a brief description of what is happening. When calibration is complete, the following message is displayed.

3. Press OK to finish the test.

   If the calibration fails, you can use the ESP Shutter Diagnostic in the Service Utilities submenu to identify which failed part is preventing the shutter from working correctly.

4.3.4 Color Sensor Calibration

Description

The purpose of this Service Calibration is to perform the internal calibration of the Embedded SpectroPhotometer (ESP). This requires the shutter lid to be closed. An open shutter lid will cause an error message. You can perform the ESP Shutter Test to check the shutter mechanism.

Procedure

1. Go to Service menu > 4. Service calibrations > 4.3 Carriage menu > 4.3.4 Color Sensor Calibration.

2. Press OK to start the test.

3. The printer starts to calibrate the Color sensor. When the test is complete, press OK to finish the test.

5 Print quality

Initial print-quality troubleshooting actions

For the vast majority of print-quality problems, a Call Agent should request that the customer performs the troubleshooting actions in the user's guide, in the chapter 'Troubleshoot print-quality issues'. Most problems can be resolved using these procedures without the need for an on-site visit.

RIP and front panel settings

It should be noted that this section describes the troubleshooting procedures for use with the printer's internal diagnostic plot. It does not describe the various settings in the printer's RIP or front panel that can cause changes in the print quality achieved by the printer. Before proceeding with the following troubleshooting sections, check that none of the settings in the front panel or RIP regarding vertical correction, XY correction, or bow correction have been set at extreme levels, which the troubleshooting here would not be able to correct.

How to use the print-quality plots

The printer contains a series of basic print-quality tests that help you to diagnose print-quality defects. There is an option to print all four diagnostic prints at once or print them individually

The four print-quality plots test the printer in different ways, but can be split into the following sections:

- **Printhead alignment**: The purpose of this test is to test the accuracy of the current printhead alignment.

- **Printheads health:** This test is designed to check that the printhead nozzles print correctly.

- **Optimizer check:** This test is designed to check whether a particular print-quality problem is related to the optimizer nozzle health or not. Because the latex optimizer is a transparent fluid, and the printhead health plot may show poor visibility on some substrates; as the case of the optimizer, a special plot is needed.

- **Substrate advance:** This test enables you to visually check whether there are any substrate-advance issues with the printer.

There are two different options available to print all the diagnostics at the same time: from the Settings menu > Image quality maintenance > Print all test plots option; or through the service menu List > Image Quality Plots > 2.1 print all plots. There are no differences between the two options

Considerations for printing the diagnostic print

Use the same type of substrate that the customer was using when the print-quality problem appeared.
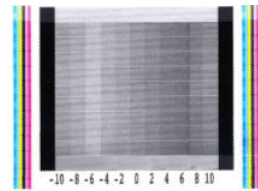
Substrate Advance Check Plot
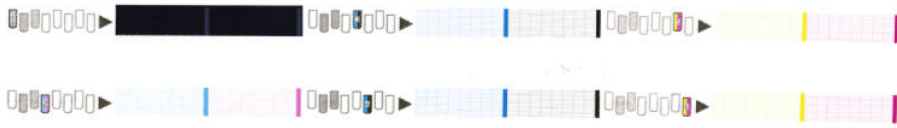
Printhead Health Test Plot

Printhead Alignment Test Plot
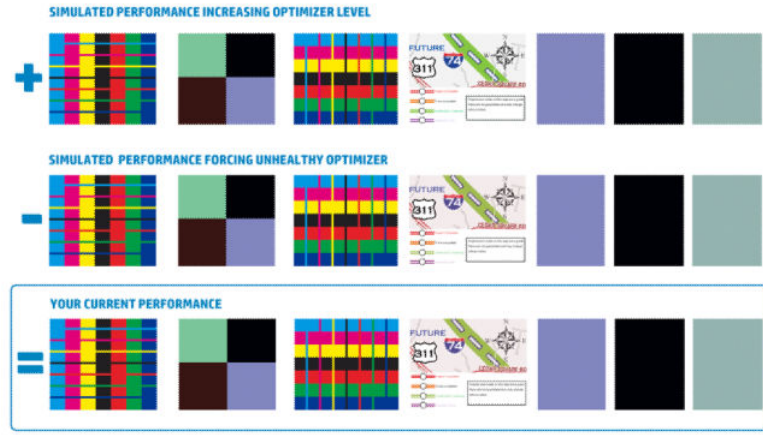
Optimizer Check Plot

Printhead alignment status plot

There are two different ways to print the printhead alignment status plot; both ways produce the same plot. It can be printed from the Settings menu > Image quality maintenance > Align Printheads > Print printhead status plot or from the Service menu List > Image Quality Plots > 2.2 Printhead Alignment > 2.2.1 Test plot.

See the user's guide for more information.

Printhead health test plot

There are two different ways to print the printhead health test plot; both ways produce the same plot. It can be printed from the Settings menu > Image quality maintenance > Clean printheads > Print test plot or from the Service menu List > Image Quality Plots > 2.4 PH health > 2.4.1 Print test plot.
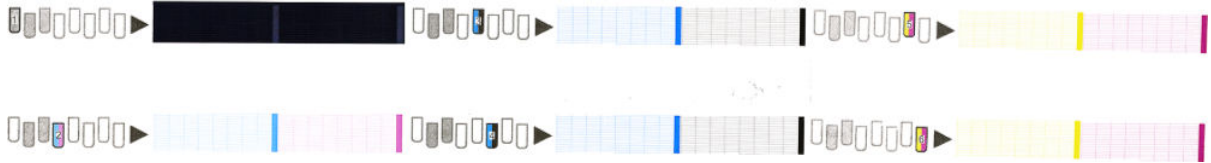
See the user's guide for more information.

Optimizer health test plot

The printhead health test plot can be printed from the Settings menu > Image quality maintenance > Print latex optimizer test plot.
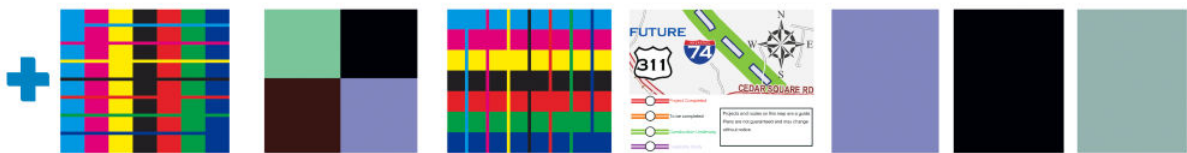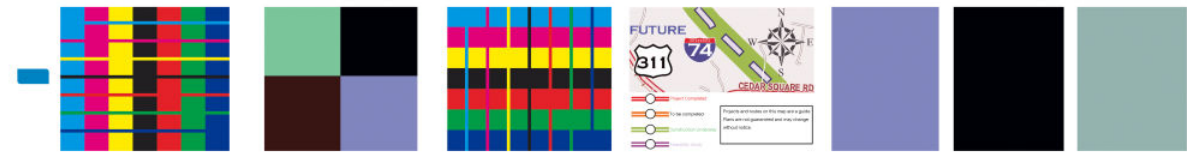
See the user's guide for more information.

Substrate-advance test plot

See the user's guide for more information.

There follows a more comprehensive explanation of how to print this plot in particular, interpret it, and apply the correction.

There are two different ways to print the substrate-advance test plot; both ways produce the same plot. It can be printed from the Settings menu > Image quality maintenance > Substrate advance calibration > Print adjustment plot or from the Service menu List > Image Quality Plots > 2.3 Substrate Advance > 2.3.1 Print adjustment plot.
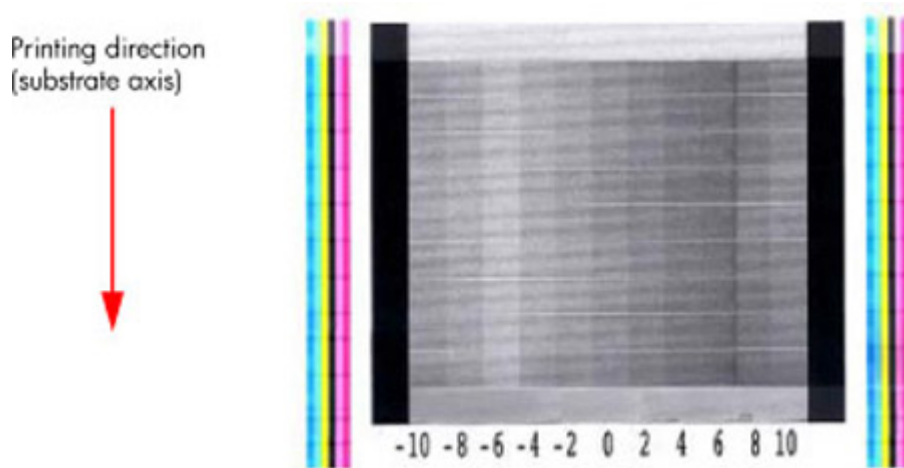
To print this test plot go to Menu List>2. Image Quality Plots>2.3 Substrate Advance>2.3.2 Print Adjustment Plot.

This plot enables you to visually determine the accuracy of the substrate advance, if there are any advancement issues they will appear in this diagnostic plot.

The plot can be used to precisely measure the substrate advance error with a one-dot row accuracy to verify the stability of the substrate advance.

The sample is composed of 11 vertical columns named -10 to 10. Each single column represents an advance deviation, so column -10 corresponds to a minus deviation and 10 corresponds to a plus deviation. The advance obtained along the scan axis direction corresponds with the position of the lighter portion of the pattern in each advance, as shown on the next page.

A perfectly calibrated printer will show a straight vertical lighter line in the 0 column, and values of +2 to -2 will also provide good advance results for most print modes. If the lighter line is printed in any of the other columns, this would indicated there is a constant advance offset along the entire plot. If the offset is bigger than ± 2.95 mm per meter (the lighter column is not the center one), this can be adjusted by using the button on the front panel to change the compensation of the substrate advance as the printer prints.

It is very important to verify that the substrate selected on the front panel, is the same as the actual substrate loaded on the printer. You can verify the substrate type selected through the front panel (Main Menu>Substrate Menu>View Loaded substrate). If an incorrect substrate is selected, this will produce an offset error in the Substrate Advance.

Corrective action

The figure shown here (left) shows a vertical lighter shaded line placed at column -6, which indicates an offset of 8.57mm per meter.
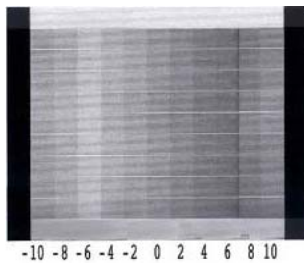
This can be adjusted by using the button on the front panel to change the parameters as the printer prints.

- If the lighter line is in the negative column, increase the compensation of the substrate advance.

- If the lighter line is in the positive column, decrease the compensation of the substrate advance.

Nonetheless, this is a temporary setting and the compensation will disappear when the current job is finished.

In order to introduce a permanent correction for the current media, proceed as follows:

Latex 115/315/335/360/365/370/375: A straight line in the diagnostic plot usually means that OMAS has been disconnected.

- If the media is suitable for OMAS (backside of the substrate is not glossy), make sure OMAS is enabled in the RIP print mode.

- Unload the media, and clean the OMAS on page 494.

- Reload the media and reprint the diagnostic plot. If the line is still not centered, add the value of the lightest column to the current advance compensation factor in the RIP print mode.

Latex 330/310/110: Add the value of the lightest column to the current advance compensation factor in the printmode at the RIP. This value may seldom have to be adjusted if TUR is used, relative humidity has a large variation, different lots of media and /or aging of the printer.

If the advance is not a straight line, this would indicate that the printer has a variable advance error.
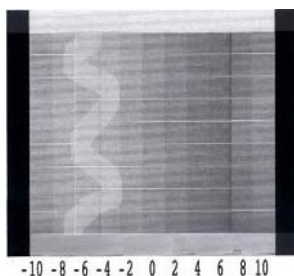
If this is the case verify the following:

- Clean the OMAS on page 494 and repeat the diagnostic plot (Latex 315, 335, 360, 365, 370 and 375 only).

- Check the pinchwheels for missing rollers or deformations.

- If the problem persists, calibrate the drive roller.

- Perform the Scan-axis check on page 295 (Scan Axis Calibration).

Advanced printhead health test plot

The advanced printhead health test plot is not part of the large diagnostic print, but it is similar to the printhead health test plot described previously. With this plot, however, you will be able to identify which of the printhead nozzles is actually failing. To print this test plot, go to Menu List > 2.4 Printheads Health > 2.4.2 Print Advanced Test Plot.
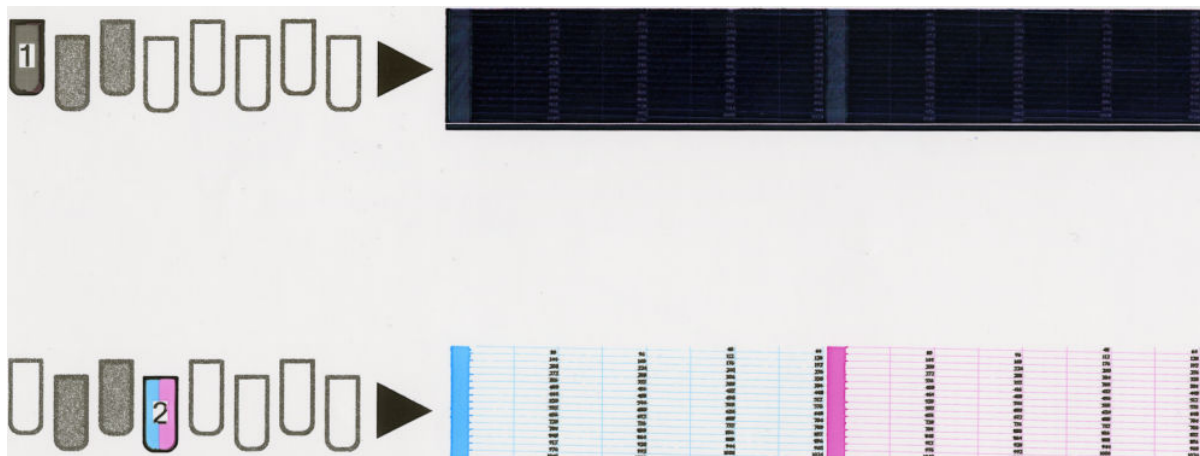
Corrective action

If the printer has nozzle defects, the level of print quality achieved can still be considered acceptable because the printer can automatically compensate for them. There may be no need to replace the printhead.

A single die for a single color can contain up to 70 nozzles out and still the print quality will not be significantly degraded.

1. Clean the printheads.

2. If there is still any die above the threshold level (70 nozzles out), clean the printheads again.

3. If there is still any die above the threshold level, replace the printhead.

Advanced alignment diagnostic print

This plot helps you to visually check any alignment problems of the printer, it is similar to the process already described on , but in more detail. You use it to measure the alignment error with greater accuracy. To print this test plot go to Menu List > 2. Image Quality Plots > 2.2 PH Alignment Menu > 2.2.2 Advanced Test Plot.
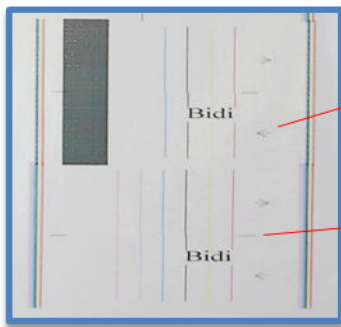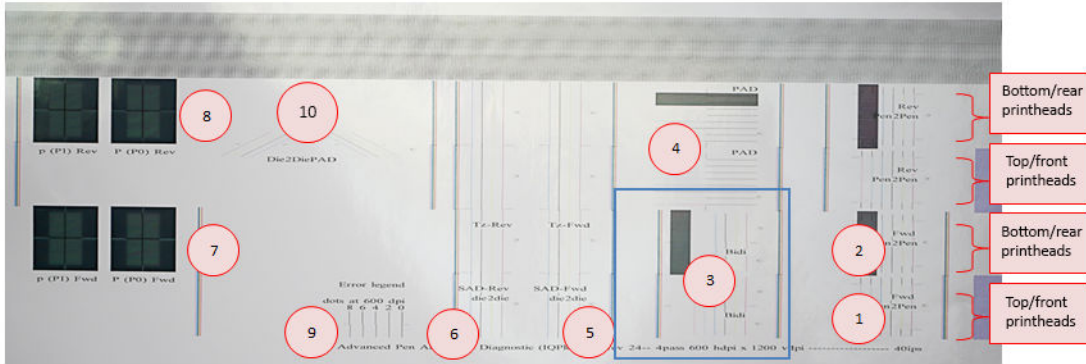
Arrows show carriage direction for printing. *NOTE: The text orientation changed in FW 42 so that it can be read as the image exits the printer. FWD direction is now to the left when the text can be read.*

Thin black lines denote location for measuring misalignment

Detail of bidi pattern to show general pattern features

For the regions labeled 1–4, there are two similar patterns on top of each other. These correspond to the two sets of printheads in the printer. The top patterns are printed with the top/front printheads, the bottom patterns are printed with the bottom/rear printheads. As there is only printhead for light cyan and light magenta, and only one printhead for the optimizer, the light colors appear only in the top patterns, and the optimizer appears only in the bottom patterns.

1. Printhead-to-printhead forward SAD: This is a measurement of how well each color is aligned with black in the SAD (Scan Axis Direction) when printing in the forward direction (as shown by the arrows).

2. Printhead-to-printhead reverse SAD: The same measurement in the reverse direction.

3. Bidirectional error: This pattern shows the amount of SAD error between the forward and reverse directions for each color. The pattern will be very misaligned (> 1 mm) if the alignment values have been cleared for some reason, which will cause significant grain and ghosting defects in normal prints.

4. Printhead-to-printhead PAD: This is a measurement of how well each color is aligned with black in the PAD (Paper Axis Direction) when printing in the forward direction. The alignment is the same in the forward and reverse directions, so it is measured in only one direction.

📝 NOTE: The top printheads are measured relative to the top black printhead and the bottom printheads are measured relative to the bottom black printhead.

5. Die-to-die SAD forward: The die-to-die measurements apply to CMYK only, as there is only one die for each of the other colors.

    📝 **NOTE:** The die is the part of the printhead that contains the nozzles. There is one die per printhead.

6. Die-to-die SAD reverse: The same as above, but in the reverse direction.

7. Supplemental optimizer to black alignment patterns, forward: These are extra patterns to help with optimizer to black alignment visibility. They can be used to evaluate alignment in both the SAD and PAD directions. The magnitude of misalignment should be the same as that observed in the other forward diagnostics, but the thicker lines may be easier to see. This group of patterns is printed in the forward direction.

8. Supplemental optimizer to black alignment patterns, reverse: The same as above, but in the reverse direction.

9. Error legend: This is a reference scale to help determine the magnitude of alignment errors.

10. Die overlap: Misalignment between the lines will be a combination of SAD and PAD errors. If the die-to-die SAD forward is well aligned then the error in this pattern can be attributed to PAD.

Corrective action

In order to solve any problem in the alignment, perform the following:

- Repeat the printhead alignment. Most recommended substrates are glossy papers where printhead alignment accuracy is best. There are some substrate types that are not suitable for printhead alignment (transparent, translucent)

- Try cleaning the printheads if the error continues.

- If the error persists, replace the affected printhead.

- If there is an issue in the ThetaZ and it cannot be fixed, check if the substrate is working with the OMAS sensor, and that the substrate is not loaded with excessive skew. There are some substrates that cannot be controlled by the OMAS sensor. If the substrate is a type that should work with the OMAS sensor, check the functionality of the sensor.

Plot for escalation only

To print this test plot, go to Menu List > 2. Image Quality Plots > 2.4 Health > 2.4.3 Only For Escalations. There are two identical plots to this test and each plot has three parts to it. The first plot refers to the rear printheads (number 1, 3, 5), while the second plot refers to the front printheads (2, 4, 6).
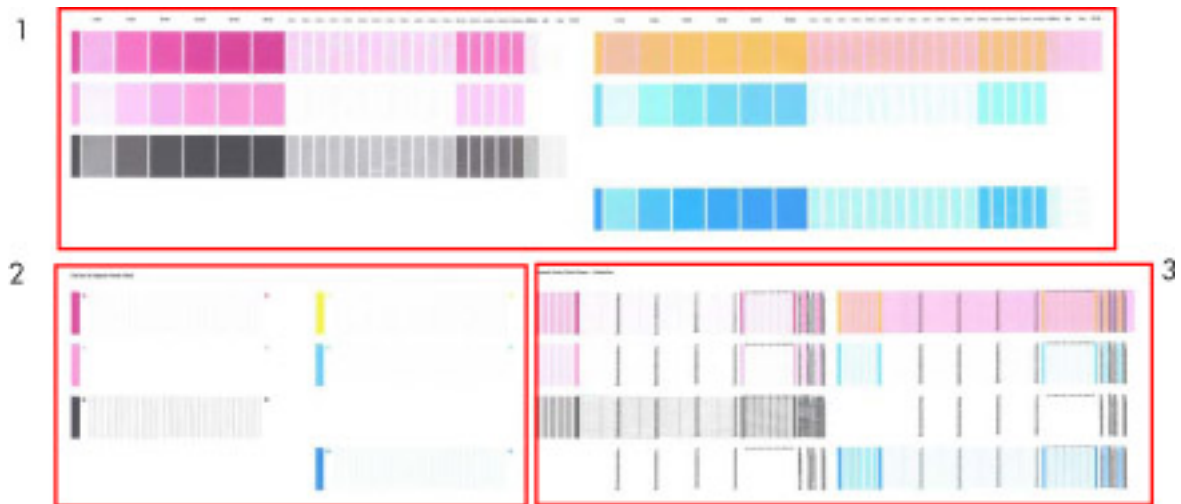
This plot is only printed at the request of the HP Division, or in case further help is required and there is need to escalate an image quality issue to HP Division.

Geometry check

The Geometry check print test is a simple template designed to check the printer's length accuracy and figure distortion performance. To print this test plot go to Menu List > 2. Image Quality Plots > 2.5 Geometry Check.

If a customer complains that there is an issue with a plot they are printing, this standard template can be printed and referred to by both the customer and HP as a single point of reference.

The plot consists of a 7x7 matrix of rectangular boxes. By default, each single rectangle corresponds to a DIN A4 sheet size (210mm x 297). Based on this, the total printed plot length should be about 2.07 meter (approx. 82") and 1.47 meters (approx. 58"). However the actual dimensions will highly depend on what settings have been defined for the Substrate Advance.

Each point in the matrix can be identified by means of a letter in the X axis and number in the Y axis. There is an arrow in the plot close to the point 'A1' to show the printing direction.
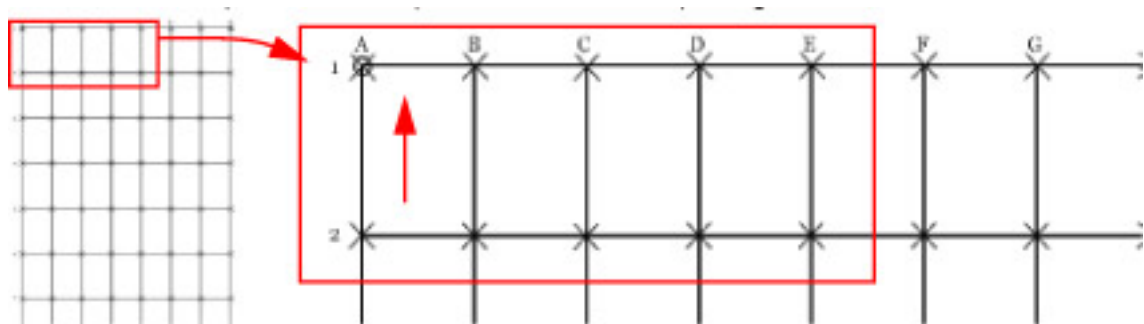
The method of evaluating the geometric performance is the following:

1. Select an area on the matrix to evaluate for accuracy and dimensional integrity. The template is designed so you can measure anything from an A4 sheet upwards to any probable dimension.

2. Place the printed plot on a flat surface. This will minimize any wrinkles before proceeding with the process.

3. Find the vector length accuracy by selecting parallel vectors and/or figure distortion by measuring the diagonals in the selected area.

4. Note the measurements to access the printer's performance. It will help to keep the measured vectors identified by using the name convention marked on the plot i.e. A1, A3. This makes it easier to identify exactly the areas of the plot where the measurements were taken.

📝 NOTE: To check whether a printer complies with the technical specifications, see the 'Line accuracy' section in the printer's data sheet.

After loading substrate, allow the substrate to stabilize before printing the plot. Some types of substrate require up to 3 meters before they are stabilized.

Corrective action

1. Reload the substrate following the exact steps from the user's guide.

2. In some cases, differences in the substrate advance along the scan axis could cause geometric defects. Try adjusting the settings in the RIP. Adjust Vacuum level and Backtension levels. Be careful when adjusting these settings, refer to the RIP supporting documentation for further details of this type of adjustment.

Scan-axis check

This plot shows any defect in the Encoder Strip along the Scan Axis. To print this test plot go to Menu List > 2. Image Quality Plot > 2.6 Scan Axis Check.

Any defects in the encoder strip can decrease the level of image quality of the printer, specifically in the area where the encoder is defective. The defect is revealed by means of an interference or Vernier pattern that spans the whole Scan Axis of the printer.
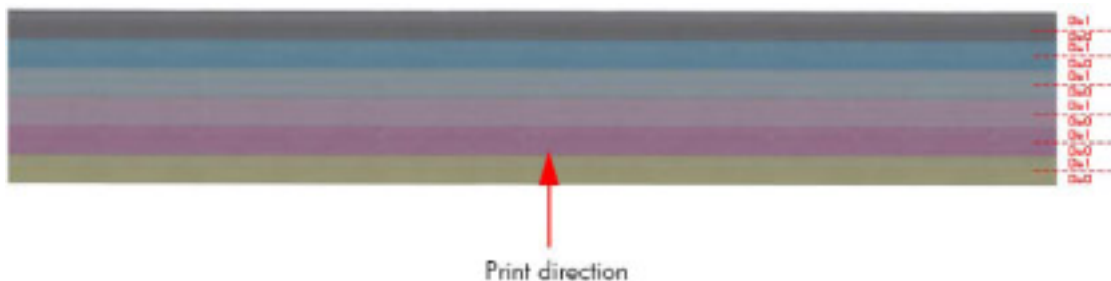
Print direction

The test plot consists of six horizontal color bands with a black pattern mask on top of them. Each band is split in to two horizontal areas corresponding to the die 0 and die 1 for the specific color. The plot is printed in unidirectional mode at 40ips.

Area of defect · Carriage · Encoder strip · Encoder strip defect · Die 1 · Die 2 · Printheads
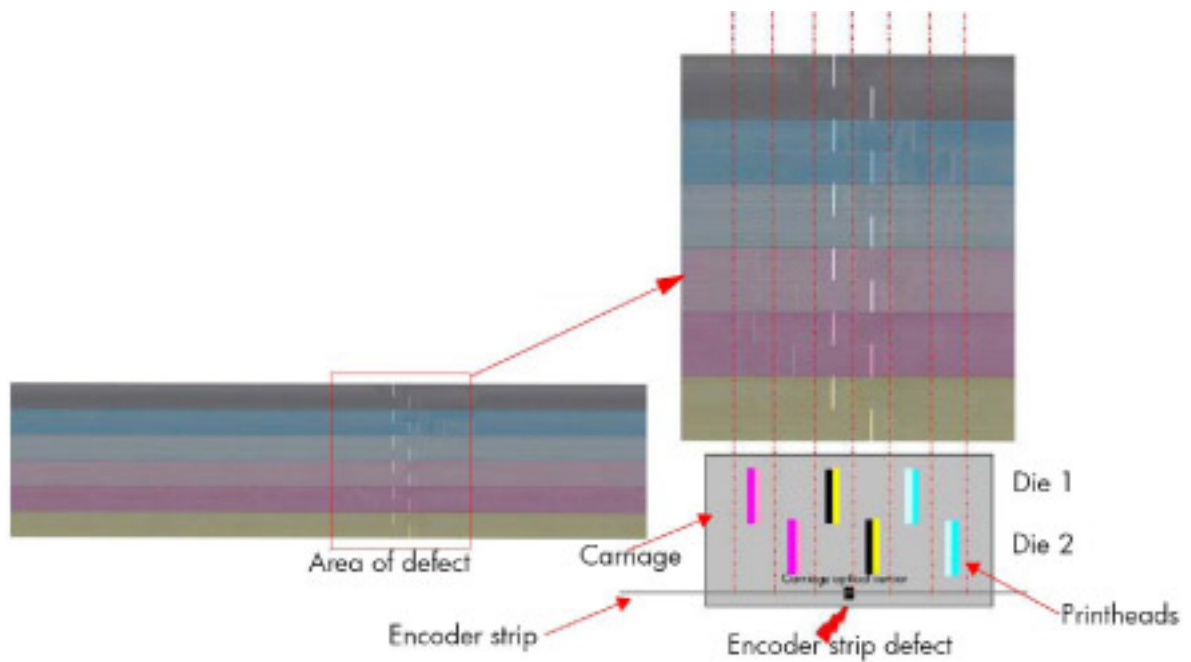
Corrective action

If an fault is found with the encoder strip, replace the Encoder Strip.

Misregistration check

This plot helps you to visually check any alignment problems of the printer caused by substrate expansion. You use it to precisely measure the substrate expansion error with 2 dots row accuracy. To print this test plot go to Menu List > 2. Image Quality Plots > 2.7 Misregistration Check. The plot is split into two main areas, the left (B) and the right (A) areas. Each area is made of a basic substrate expansion pattern, which allows the measurement of the misregistration produced by the substrate expansion.

The error is measured on the pattern where the vertical black line is aligned with the Cyan vertical line. At this point, the misregistration error can be measured by reading the corresponding number in the right vertical alignment.
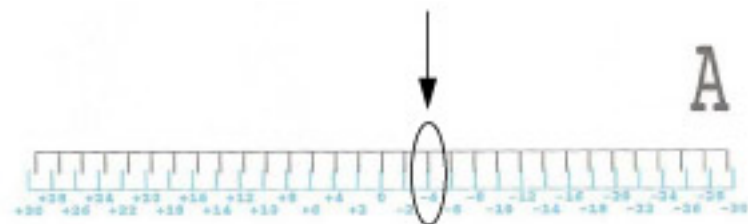
Each side of the plot gives a different error. Usually the error on each side is symmetric to zero (E.g.: A=- 4, B= +4). To evaluate the error, compute the difference between B-A.

- If B-A is less than 7, then no expected IQ defects.

- If B-A is more than 7, then there could be grain and less line quality at plot sides.

Where |A-B| is the absolute value (without sign) of A-B. An acceptable error should be comprised below (+/- 4 dots)

Force drop detection

If the Printhead health test plot on page 288 has persistent white point banding in only one color that cannot be fixed with a 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. After the nozzle health data base has been reset, the drop detection procedure is stated in 1.5.1 Force drop detection on page 263

The normal cause of this white point banding in a single color is the failure of the drop detector to correctly detect nozzles out on the printhead.

This tool is also helpful to diagnose a potential failure of the drop detector. The 'force drop detector tool' displays the number of nozzles out per printhead. If you print the diagnostic plot image, afterwards you will be able to compare this number detected by the drop detector with the real number of nozzles out that you see on the printout.

If there is a mismatch on all the colors, this would probably indicate that the drop detector is not working correctly or is mispositioned. Before replacing the drop detector, perform a 4.2.1 Drop Detector calibration on page 277 to correctly position it. If the failure (miss-match) is still there after the calibration, replace the drop detector.

Troubleshooting non–uniform curing

First of all, check if the unit with the non-uniform curing issue has a SN => MY5BR69010: In this case it is strongly recommended as a first check to revise that the altitude parameter is properly set. Remember that you can set this value via the Front panel (press [icon], then **Setup** > **Select altitude**) to tell the printer its operating altitude.

Typically most of the non-uniform drying/curing can be corrected by applying the correct profile setting. In those cases that the profile adjustment does not improve the uniformity of the curing perform the following troubleshooting procedure.

1. Set up the printer with the recommended profile for the type of substrate used, setting up the curing temperature at 95°C through the RIP.

2. Send the file **CuringTestDark_103x150.tif** to the printer, which is considered a worst case to analyze ink-curing uniformity (the TIFF file is attached to this PDF document).

3. Allow the printer to warm up, and start the printing process.

4. When approximately 60 cm of the job is done, increase Curing Temperature +5°C (100°C) through the front panel, mark the 100'°C step on the job. To do this, go to the Job Properties menu > Adjustments > Adjust curing temperature.

5. Wait for 40 cm more of the job to be done and then increase Curing Temperature +5°C (105°C), mark the 105°C on the job.

6. Wait for 40 cm more of the job to be done and then increase Curing Temperature +5°C (110°C), mark the 110°C on the job.

7. Wait for 40 cm more of the job to be done and then increase Curing Temperature +5°C (115°C), mark the 115°C on the job.
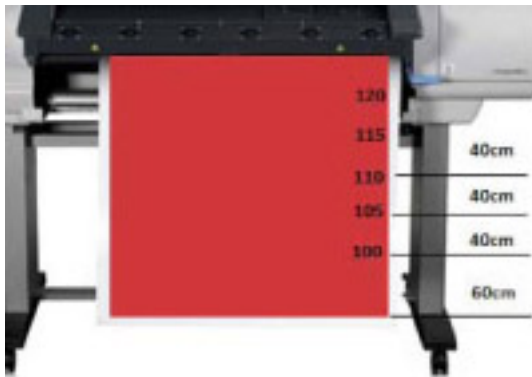
This troubleshooting test indicates:

On Printed area:

● Initial temperature 95°C is unlikely to cure (which will be the uniform behavior along the printer).

● Upon increasing the temperature the ink will have an improves curing performance (around 110°C)

On the Substrate back liner area:

- Initial temperatures 90°C back liner performs correctly.

- Upon increasing the temperature for some specific types of substrate, shiny spots could appear at a certain temperature (from110°C - 115°C)

There will be a temperature where curing is correct and the backliner of the substrate is damaged.

If this temperature is found, set up your job at this temperature on the RIP and recheck printing performance.

If at any temperature tested it is found:

- No curing and correct backliner, or

- Curing but damaged backliner

Then recommend to:

a. Reduce the amount of ink in order to gain more margin by reducing the temperature at which correct curing and no backliner damage occurs. Proper settings on inter pass delay offset (advance settings of a substrate profile) may help to gain extra margin on the curing side.

b. If it's not possible to cure at the highest temperature, even using inter pass delay offset, try to determine if the lack of curing coincides with at least one of the heating modules of the impinging module, it is recommend to replace it, and check again. Check also the pressure sensor within the impinging module is working correctly.

Substrate advance issues

The vast majority of issues concerning the substrate advance can be solved by asking the customer to clean the substrate-advance sensor window. This procedure is described in the user's guide.

If, after doing this, the customer is still experiencing image quality issues related to the substrate advance, use the following procedure.

1. Make sure the window of the OMAS sensor located in the Platen has been completely cleaned of all ink, the cleaning swabs provided to perform this procedure must be used.

2. Some types of substrate cannot be used with the OMAS sensor, because they are too smooth or there is too much light reflected from the substrate surface to be able to be read by the OMAS, examples of these types of substrate are: Clear Film, Backlit, types of Matte film, types of Polypropylene. Check the troubleshooting procedure on the next page to determine if the error is with the OMAS or the substrate being used. If the error is with the substrate, there are two options:

    - Change the type of substrate to a type that can be used with the OMAS, ideally it will be a substrate with a readable surface, such as a self-adhesive substrate, the type with a removal backing.

    - Disable the OMAS, and use the analog device to control the substrate advance.

- To disable OMAS, go to Service Test Menu >1.3 Substrate Path Menu>1.3.3 Enable/Disable OMAS. Refer 1.3.3 Enable/Disable OMAS on page 261

- Perform the Substrate Advance Calibration select the (ink) icon on the front panel, and then select 'Image quality maintenance > Substrate Advance calibration > Print adjustment plot (see the user's guide).

3. Perform the 'OMAS Sensor Check' to check the electrical functionality of the 1.3.4 OMAS Sensor Check on page 261.

   If the OMAS Sensor fails the check, replace the OMAS Sensor Page432.

Advance error with the substrate or with OMAS?

1. List of types of substrate which are NOT used (non navigable) by the OMAS:

   - HP or HP Approved Clear Film

   - HP or HP Approved Backlit

   - HP or HP Approved types of Matt film

   - HP or HP Approved types of Polypropylene

   - A non-HP or HP Approved Substrate

2. In order to perform this Calibration, you should order the Substrate Advance Calibration Kit (Part Number Q1273- 60296) which contains two cut sheets of HP Universal Instant-dry Gloss Photo Paper (36-inches wide by 42-inches long).

3. 'OMAS Blinking' means that the red LED in the OMAS lens blinks ON/OFF during substrate advance when OMAS is

6 Ink supplies

What are ink supplies?

Figure 6-1 Latex 370/375 (and 360/365 upgraded with the 3–liter Ink Upgrade accessory) only — Rear view

📝 NOTE: All of the HP Latex 310/315/330/335/360/365 ink cartridge part numbers are the same as the HP Latex 370/375 intermediate ink cartridge part numbers.

Printheads	Description
CZ677A	HP 831 Cyan / Black Latex Printhead universal
CZ678A	HP 831 Yellow / Magenta Latex Printhead universal
CZ679A	HP 831 Light Magenta / Light Cyan Latex Printhead universal

CZ680A	HP 831 Latex Optimizer Printhead universal
CZ681A	HP 831 Latex Maintenance Cartridge universal
CZ700A	HP 831 775-ml Black Latex Ink Cartridge universal
CZ701A	HP 831 775-ml Cyan Latex Ink Cartridge universal
CZ702A	HP 831 775-ml Magenta Latex Ink Cartridge universal
CZ703A	HP 831 775-ml Yellow Latex Ink Cartridge universal
CZ704A	HP 831 775-ml Light Cyan Latex Ink Cartridge universal
CZ705A	HP 831 775-ml Light Magenta Latex Ink Cartridge universal
CZ706A	HP 831 775-ml Latex Optimizer Ink Cartridge universal

Cartridges	HP Latex 370/375 & HP Latex 360/365 w/ 3–liter tanks	HP Latex 310/315/330/335/360/365	HP Latex 110/115
HP 821 400 ml Cyan Latex Ink Cartridge			G0Y86A
HP 821 400 ml Magenta Latex Ink Cartridge			G0Y87A
HP 821 400 ml Yellow Latex Ink Cartridge			G0Y88A
HP 821 400 ml Black Latex Ink Cartridge			G0Y89A
HP 821 400 ml Light Cyan Latex Ink Cartridge			G0Y90A
HP 821 400 ml Light Magenta Latex Ink Cartridge			G0Y91A
HP 821 400 ml Optimizer Latex Ink Cartridge			G0Y92A
HP 831 775–ml Optimizer Latex Ink Cartridge Universal	CZ706A	CZ706A	
HP 831A 775-ml Black Latex Ink Cartridge AMS	CZ682A	CZ682A	
HP 831A 775-ml Cyan Latex Ink Cartridge AMS	CZ683A	CZ683A	
HP 831A 775-ml Magenta Latex Ink Cartridge AMS	CZ684A	CZ684A	
HP 831A 775-ml Yellow Latex Ink Cartridge AMS	CZ685A	CZ685A	
HP 831A 775-ml Light Cyan Latex Ink Cartridge AMS	CZ686A	CZ686A	
HP 831A 775-ml Light Magenta Latex Ink Cartridge AMS	CZ687A	CZ687A	
HP 831B 775-ml Black Latex Ink Cartridge APJ	CZ688A	CZ688A	

Cartridges	HP Latex 370/375 & HP Latex 360/365 w/ 3–liter tanks	HP Latex 310/315/330/335/360/365	HP Latex 110/115
HP 831B 775-ml Cyan Latex Ink Cartridge APJ	CZ689A	CZ689A	
HP 831B 775-ml Magenta Latex Ink Cartridge APJ	CZ690A	CZ690A	
HP 831B 775-ml Yellow Latex Ink Cartridge APJ	CZ691A	CZ691A	
HP 831B 775-ml Light Cyan Latex Ink Cartridge APJ	CZ692A	CZ692A	
HP 831B 775-ml Light Magenta Latex Ink Cartridge APJ	CZ693A	CZ693A	
HP 831C 775-ml Black Latex Ink Cartridge EMEA	CZ694A	CZ694A	
HP 831C 775-ml Cyan Latex Ink Cartridge EMEA	CZ695A	CZ695A	
HP 831C 775-ml Magenta Latex Ink Cartridge EMEA	CZ696A	CZ696A	
HP 831C 775-ml Yellow Latex Ink Cartridge EMEA	CZ697A	CZ697A	
HP 831C 775-ml Light Cyan Latex Ink Cartridge EMEA	CZ698A	CZ698A	
HP 831C 775-ml Light Magenta Latex Ink Cartridge EMEA	CZ699A	CZ699A	
HP 871A 3000-ml Magenta Latex Ink Cartridge AMS	G0Y80D		
HP 871A 3000–ml Yellow Latex Ink Cartridge AMS	G0Y81D		
HP 871A 3000–ml Black Latex Ink Cartridge AMS	G0Y82D		
HP 871A 3000–ml Cyan Latex Ink Cartridge AMS	G0Y79D		
HP 871A 3000-ml Light Magenta Latex Ink Cartridge AMS	G0Y84D		
HP 831A 3000–ml Light Cyan Latex Ink Cartridge AMS	G0Y83D		
HP 871A 3000–ml Optimizer Universal Ink Cartridge AMS	G0Y85A		
HP 871B 3000-ml Magenta Latex Ink Cartridge APJ	G0Y80B		
HP 871B 3000–ml Yellow Latex Ink Cartridge APJ	G0Y81B		
HP 871B 3000–ml Black Latex Ink Cartridge APJ	G0Y82B		

Cartridges	HP Latex 370/375 & HP Latex 360/365 w/ 3–liter tanks	HP Latex 310/315/330/335/360/365	HP Latex 110/115
HP 871B 3000–ml Cyan Latex Ink Cartridge APJ	G0Y79B		
HP 871B 3000–ml Light Magenta Latex Ink Cartridge APJ	G0Y84B		
HP 871B 3000–ml Light Cyan Latex Ink Cartridge APJ	G0Y83B		
HP 871C 3000-ml Magenta Latex Ink Cartridge EMEA	G0Y80C		
HP 871C 3000–ml Yellow Latex Ink Cartridge EMEA	G0Y81C		
HP 871C 3000–ml Black Latex Ink Cartridge EMEA	G0Y82C		
HP 871C 3000–ml Cyan Latex Ink Cartridge EMEA	G0Y79C		
HP 871C 3000–ml Light Magenta Latex Ink Cartridge EMEA	G0Y84C		
HP 871C 3000–ml Light Cyan Latex Ink Cartridge EMEA	G0Y83C		

Maintenance materials	
CZ681A	HP 831 Latex Maintenance Cartridge

Ink cartridges (only for HP Latex 110/115/310/315/330/335/360/365 printers)

The printer's seven ink cartridges provide yellow, magenta, light magenta, light cyan, cyan, black ink, and optimizer to the printheads. No introductory ink cartridges are supplied with the printer. The 'host' ink cartridges which are purchased hold approximately 400 ml for the HP Latex 110 and 115, and 775 ml for the Latex 310, 315, 330, 335, 360 and 365.
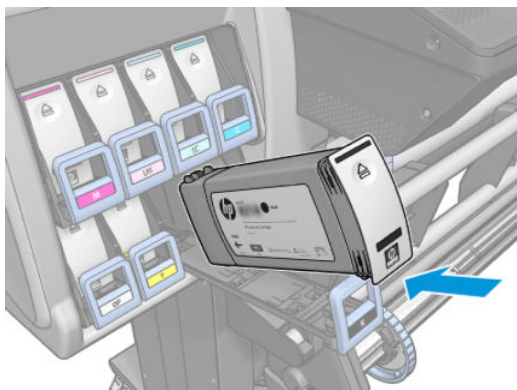
The ink cartridges require no maintenance or cleaning. As long as each ink cartridge is inserted correctly into its slot, the ink will flow to the printheads. Because the printheads control the amount of ink transferred to the page, you will continue to see high-quality printing results even when the ink levels are getting low.

The front panel displays the status of the ink cartridge. Using the front panel, detailed information can be checked on the Ink Cartridges menu.

Intermediate cartridges (only for HP Latex 370/375 printers and HP Latex 360/365 with 3–liter Ink upgrade accessory)

The printer's seven ink cartridges provide yellow, magenta, light magenta, light cyan, cyan, black ink, and optimizer to the printheads. No introductory ink cartridges are supplied with the printer. The 'host' ink cartridges which are purchased hold approximately 775 ml.
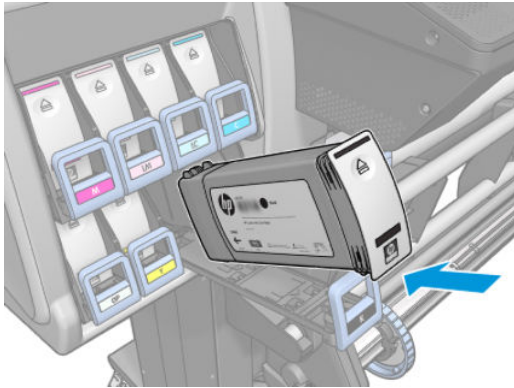
The ink cartridges require no maintenance or cleaning. As long as each ink cartridge is inserted correctly into its slot, the ink will flow to the printheads.

The front panel displays the status of the ink cartridge. Using the front panel, detailed information can be checked on the Ink Cartridges menu.

The 775ml ink cartridges remain as permanent intermediate tanks for your printer.

The printer now has seven intermediate tanks: magenta, light magenta, black, yellow, light cyan, cyan and optimizer.

⚠️ **CAUTION:**   Avoid touching pins, leads, and circuitry when handling ink cartridges because these elements are sensitive to electrostatic discharge, which can reduce the life expectancy of the cartridges. Such devices are called ESD-sensitive devices.

📝 **IMPORTANT:**   Once the Ink Upgrade accessory has been installed, the intermediate tanks cannot be transferred to be used as ink cartridges in another printer without the Ink Upgrade accessory.

📝 **NOTE:**   An intermediate tank must contain at least 500 ml of ink; otherwise it will be rejected.

Large cartridges (only for the HP Latex 370/375 and 360/365 upgraded with the 3–liter Ink Upgrade accessory)

The printer's seven large ink cartridges provide magenta, light magenta, black, yellow, light cyan, cyan, and optimizer ink to the intermediate ink tanks. Ink cartridges store the ink and are connected through the intermediate tanks to the printheads, which deposit the ink on the substrate.
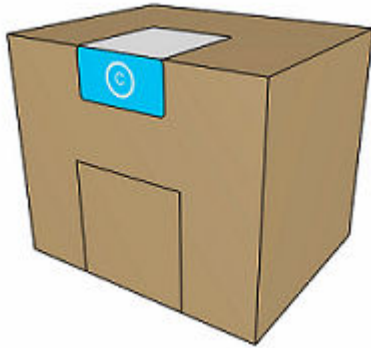
Each cartridge contains 3 liters of HP Latex ink, and consists of a bag within a recyclable cardboard box.

Check the regulatory and safety information label on the cartridge to ensure that no special ventilation is needed and no hazardous waste is created.

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

Excessive pressure on a cartridge can cause ink leaks. Avoid putting pressure on cartridges while they are connected to the printer. In particular:

- Always disconnect cartridges from the printer before handling them.

- Never place anything heavy—more than 1 kg (2.2 lb)—on top of a cartridge.

- Take care not to drop a cartridge.

- Do not try to force the last of the ink out of an almost-empty cartridge by pressing the ink bag inside the cartridge.

Ink cartridges require no maintenance or cleaning, but you must follow the instructions on the label before installation. High-quality printing results continue even when the ink levels are getting low.

⚠ **CAUTION:** Non-genuine or altered cartridges or intermediate tanks are not supported with the upgrade kit; if they are detected, printing is stopped. If you want to use such components, you must call an HP service representative to uninstall the upgrade kit.

📝 **NOTE:** Your existing printheads and maintenance cartridges continue working as before. See the HP Latex 300 Printer Series User's Guide.

Printheads

The printheads are connected to the ink cartridges. They use jet action to put ink on the substrate. Each printhead has two ink cartridge connection points and two jet nozzles, which means that each printhead accommodates two ink cartridges. For example, the following printhead image indicates a printhead that draws and jets ink from the magenta and yellow cartridges.
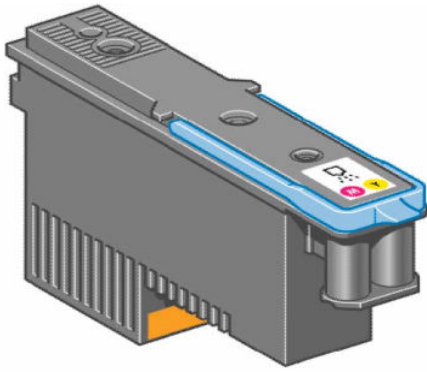
The printheads are extremely durable and do not need to be replaced every time an ink cartridge is replaced. They are independent of the ink cartridges and will continue giving excellent results even if the ink cartridges are low on ink.

⚠ **CAUTION:**   For Printhead CZ680A : HP 831 Optimizer latex printhead is shipped with a transparent cap and white color plug. DO NOT use the transparent cap and white color plug for other color printheads, failure to do so will cause nozzle problems.

Waste management system

Printhead cleaning kit

Maintenance cartridge

Use the maintenance cartridge to clean and maintain the printheads, ensuring the best possible print quality, and to seal the printheads when they are not in use, preventing them from drying out.
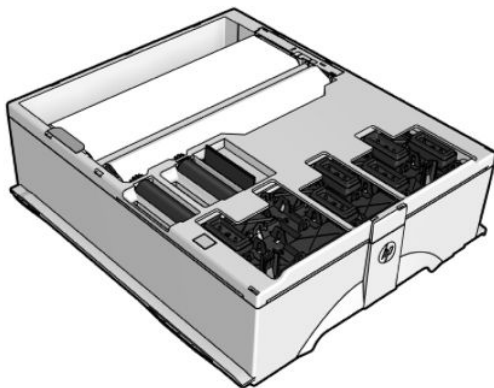
To maintain the status of the printhead nozzles, the printer expels a few drops of ink from each nozzle of each printhead into the spittoon. This is done at the start of each print job, during printing, whenever a printhead is replaced, and whenever you request a printhead check.

General information about the ink supplies

For optimum results from the printer and modular ink delivery system always follow these guidelines when handling the ink supplies:

- Install the ink cartridges, printheads, and printhead cleaning cartridge before the warranty ends date, which is printed on the packaging. The expiration for the ink cartridges is the warranty ends date marked on the cartridge plus 6 months. And for large cartridges, it is 18 months from their manufacturing date.

- Allow the printer and the printhead cleaning cartridge to clean the printheads automatically.

- Follow the instructions on the front panel of the printer during installation.

- Avoid unnecessary removal of the ink cartridges and printheads.

- When turning off the printer always use the power-off button on the front panel. The printheads are then stored correctly, which prevents them from drying out.

- The ink cartridges should never be removed while the printer is printing. They should be removed only when the printer is ready for you to replace them. The front panel will guide you through the removal and installation procedure.

General precautions when handling ink supplies

⚠ CAUTION: Do not touch, wipe, or attempt to clean the printhead nozzles manually. This can damage the printhead.

- You are recommended to wear gloves.

- Handle the ink supplies with care; in particular, the printhead, which is a high-precision device and must be handled carefully.

- Do not touch the printhead nozzles.

- Do not put the printhead down on the nozzles.

- Do not be rough when handling the printheads. Always set them down gently.

- Do not drop the printheads.

- Proper handling will assure optimum performance throughout the printhead's life.

- The printhead cleaning cartridge should always be handled and stored upright to avoid a potential spillage of ink.

- Do not touch the end of the ink cartridge which is inserted into the printer as there may be a small amount of ink on the connection.

- Avoid storing partially used ink cartridges on their ends.

Priming the ink system

When the customer first receives the printer, it is supplied with a set of six Setup Printheads pre-installed in the Carriage Assembly. These Setup Printheads are used for the priming of the tubes in the modular ink delivery system. Do not remove the Setup Printheads from the Carriage without following the procedures in the setup guide.

When the printer is powered on for the first time, the printer will automatically perform the priming process. Without the priming process, the customer will not be able to use the printer.

Why does the printer require priming:

- The Tubes System is empty when the customer receives the printer.

- The Tubes System has to be pressurized and filled with ink, ejecting any air bubbles.

⚠ CAUTION: If the Printing Printheads are installed in the carriage during the priming process, they will be rejected and the front panel will show a warning message.

When should you replace the ink supplies?

When to change the ink supplies is mostly determined by you with guidance from the front panel. In conjunction with the messages displayed in the front panel and the message explanations in this chapter, you will be able to choose for yourself when is the right time to change the ink supplies.

The printer will also display the ink level and will tell you when the ink supply is low on ink. This means you have constantly updated information about the ink supplies.

Printhead guarantied life is 1000 ml although the printheads usually last much longer. See the section about the 'Warranty Information for Ink Supplies'Warranty information for ink supplies on page 316.

Obtaining ink cartridge and printhead information

To obtain information about the ink supplies for the different printers, please use the following documents.

- To obtain information about the ink cartridges for HP Latex 110 and 115 printers see the Printer status section on page 13 and 14 of the HP Latex 110 and 115 Printer User Guide.

- To obtain information about the ink cartridges and printheads for the HP Latex 310/315/330/335/360 & 365 printers see the Printer status section on page 15 and 16 of the HP Latex 300 Printer Series User's Guide.

- To obtain information about the large cartridges for the HP Latex 370/375 printer see the Check the status of the large ink cartridges section on page 5 and 6 of the HP Latex 370/375 Printer User's Guide.

Troubleshoot ink cartridge and printhead issues

Most of the problems that you could encounter when working with the ink supplies are solved with guidance from the front panel. See Continuable and non-continuable error codes on page 105.

Cannot insert an ink cartridge or intermediate tank

1. Check that you have the correct type of cartridge or tank (model number).

2. Check that the colored label on the cartridge or tank is the same as the label on the slot.

3. Check that the cartridge or tank is correctly oriented; the arrow on its front should face upwards.

⚠ **CAUTION:** Never clean inside the intermediate tank slots.

Cannot insert a printhead

1. Use the correct procedure to change printheads, through the front panel. Refer to the user's guide for further details.

2. Check there is no obstruction in the printhead slot.

3. Check the printhead is correctly orientated.

4. Check that the printhead latch and printhead cover are closed and secured.

SIM connector pin is deformed

▲ With your finger, press on the 3–liter ink tank pin so that it returns to its original shape.
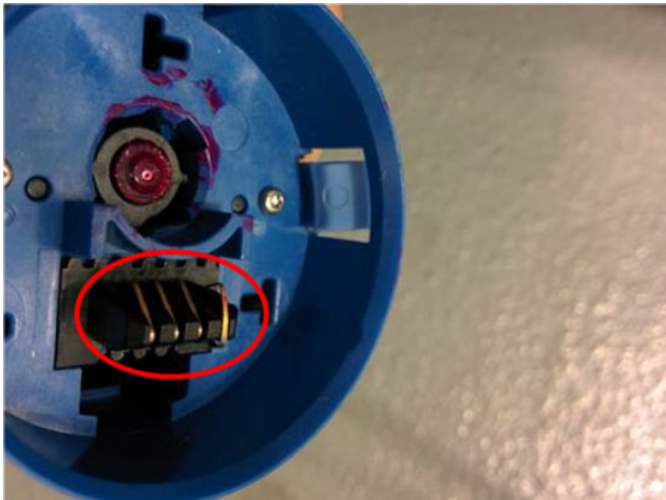
The front panel recommends replacing or reseating an ink cartridge

1. Disconnect the ink cartridge.

2. Reconnect the ink cartridge and check the front panel message.

3. If the problem persists, insert a new ink cartridge.

4. If the problem continues, escalate the issue to division level.

The front panel recommends replacing or reseating a printhead

If there is an error with one of the printheads, the printer will display an error message on the front panel. However, more information about the specific error can be found by looking at the error code in service

information. In the Embedded Web Server, go to Support Menu > Service support > Printer information > Events logs > Printhead Error Log > Error Code.

The error code is ALREADY CONVERTED TO HEXADECIMAL and you can go directly to the table below. In the example we can see several printheads rejected reporting error code (0x00010 TEMP EXTREMELY HIGH).

The following table explains the meaning of the different hexadecimal values:

- In the Error Code you may see some "combined" numbers, like for example (80010). In that case you have 2 combined in one number 80000 means Expired and 10 means Temp extremely high.

- When the value of the error code is displayed as 0, it means that the printhead is working correctly.

Error code	Meaning	Corrective action
0x0000	WORKING	
0x00001	FAILS LOGICAL V	Clean the electrical connections between the printhead and the carriage. Refer to the user's guide.
0x00002	FAILS CONTINUITY	
0x00004	SHUTDOWN	Refer to the 'Temperature too high procedure' below.
0x00008	FAILS VPP	Clean the electrical connections between the printhead and the carriage. Refer to the user's guide.
0x00010	TEMP EXTREMELY HIGH	Refer to the 'Temperature too high procedure' below.
0x00020	TEMP EXTREMELY LOW	Clean the electrical connections between the printhead and the carriage. Refer to the user's guide.
0x00040	TEMP TOO HIGH	Refer to the 'Temperature too high procedure' below.
0x00080	TEMP TOO LOW	Clean the electrical connections between the printhead and the carriage. Refer to the user's guide.
0x00100	BAD ACUMEN INFO	
0x00200	NO PRINTHEAD	
0x00400	BAD ACUMEN ACCESS	
0x00800	WRONG MODEL	Replace the printhead. The type of printhead inserted is not supported by the printer.
0x01000	MISMATCH	
0x02000	CSDATA NOT RESPONDING	Clean the electrical connections between the printhead and the carriage. Refer to the user's guide.
0x04000	CSDATA TRANSMIT ERROR	

0x08000	FAILS ENERGY CALIBRATION	
0x40000	END OF LIFE	Replace the 'out of warranty' printhead.
0x80000	EXPIRED	

A printhead has damaged the substrate

When a printhead touches the substrate, the most probable cause is excessive drying temperature. Reduce the heating and curing temperature.

Incorrect error messages displayed about the cleaning cartridge roller

The printer does not detect that a new cleaning cartridge has been installed. We have found several possible causes:

- Most probable cause the line sensor is dirty and cannot read the white label on the cleaning cartridge. In that case the solution is to change/clean the line sensor. Review that the aerosol extraction system is working, if it does not work the aerosol will go again on to the line sensor and the customer will have the same problem sooner or later.

- In some extreme cases even after changing the line sensor, the counter of the cleaning cartridge was not reseated. The issue was fixed by running the "EEROM reset" test.

The cleaning cartridge is finished before the level reported reaches the 100%:

- The most probable cause is that the "white label" on the cleaning cartridge (used to detect if it is new or used one) is detached from the cleaning cartridge. This will provoke a "reset" of the counter in the middle of the life of the cleaning cartridge.

Warranty information for ink supplies

Ink cartridges

The warranty for the ink cartridges will end when one of the following occurs (whichever occurs first):

- When the end-of-warranty date on the box and the cartridge label arrives (see illustrations).

- When the advertised volume of ink has been delivered.

- When the customer confirms having used non-HP ink in empty over-ride mode.

The end-of-warranty date is also recorded in the smart chip.

Box simple:
01 MAY 2016
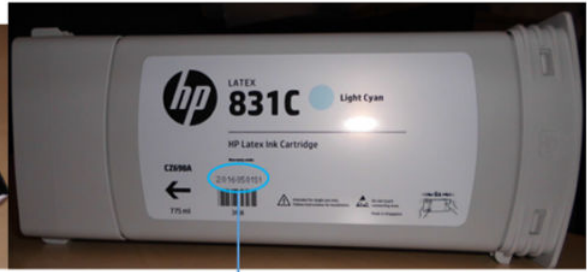
Cartridge simple:
2016 0501xx

Intermediate ink cartridges (only for HP Latex 370/375 printers)

The warranty for the intermediate ink cartridges will end when one of the following occurs (whichever occurs first):

- When the end-of-warranty date on the box and the cartridge label arrives (see illustrations).

- When it is empty.

- When the customer confirms having used non-HP ink in empty over-ride mode.

Box simple:
01 MAY 2016
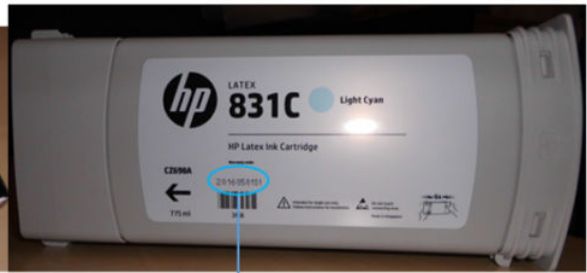
Cartridge simple:
2016 0501xx

Large ink cartridges

The warranty for the large ink cartridges will end when one of the following occurs (whichever occurs first):

- When the end-of-warranty date on the box and the cartridge label arrives (see illustrations).

- When the advertised volume of ink has been delivered: 3000 ml/101.4 fl oz.

- When the customer confirms having used non-HP ink in empty override mode.

The end-of-warranty date is also recorded in the smart chip.

Box sample:

24 APR 16

Cartridge sample:

24 APR 16

Printheads

The warranty for the printheads will end when one of the following occurs (whichever occurs first):

● When the end-of-warranty date on the box, the plastic pocket, and the printhead label arrives.

● When 1000 cc of ink has been consumed by the printhead (aggregated consumption of both colors).

● When the customer confirms having used non-HP ink in empty over-ride mode.

7 Parts and Diagrams

- Printer Support

- Left Cover

- Right Cover

- Front Covers

- Top and Rear Covers

- Left Side Assemblies

- Right Side Assemblies

- Scan Axis Assemblies

- Carriage Assemblies

- Electronics

- Drive Roller and Substrate Axis motor

- Substrate path

- Center Guide and Pinchwheels

- Substrate Input Assemblies

- Curing Assemblies

- Curing Fan Assemblies

- Printzone and Ink Collector

- Take-Up Reel

- Miscellaneous Parts

- 3–liter accessory

Printer Support
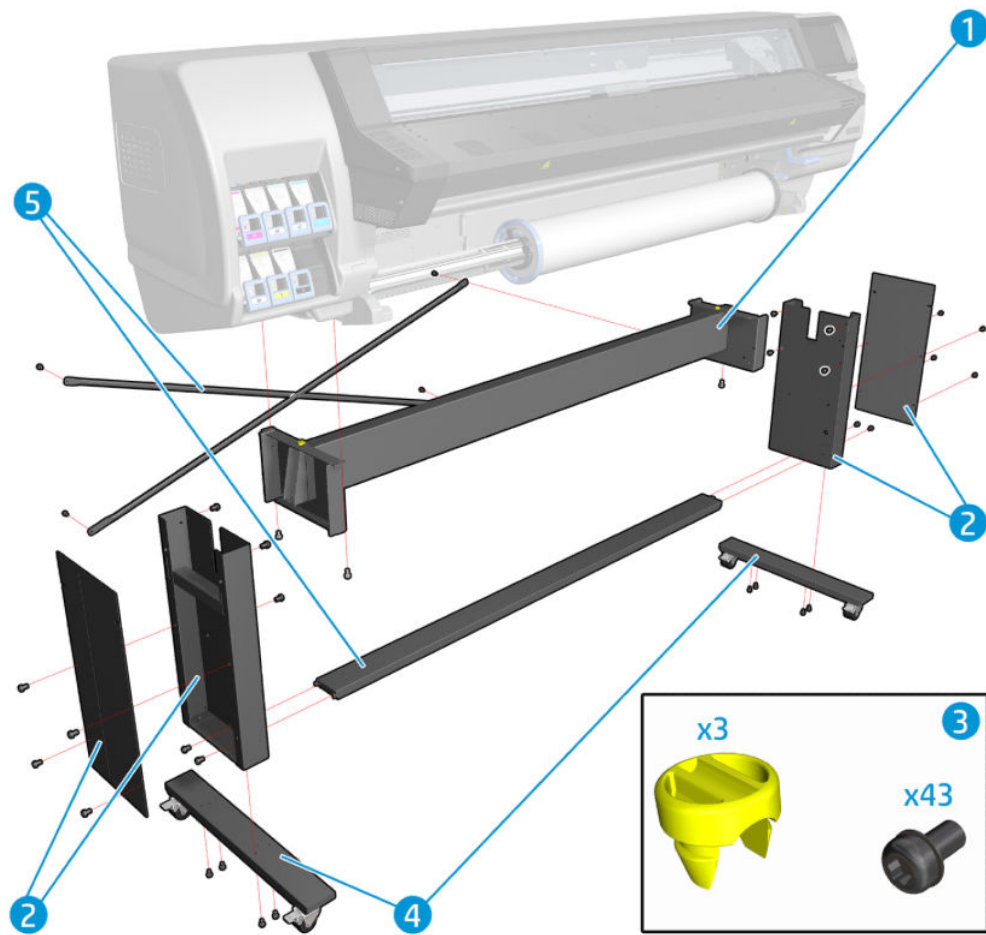
	Part number					Description
	HP Latex 370, 375	HP Latex 360, 365	HP Latex 330, 335	HP Latex 310, 315	HP Latex 110, 115	
1	B4H70-67087			B4H69-67038		Cross brace
2	B4H70-67088					Legs Assembly
3	B4H70-67089					Stand Hardware
4	B4H70-67077					Foot Assembly
5	B4H70-67090			B4H69-67053		Footbrace Assembly

Left Cover
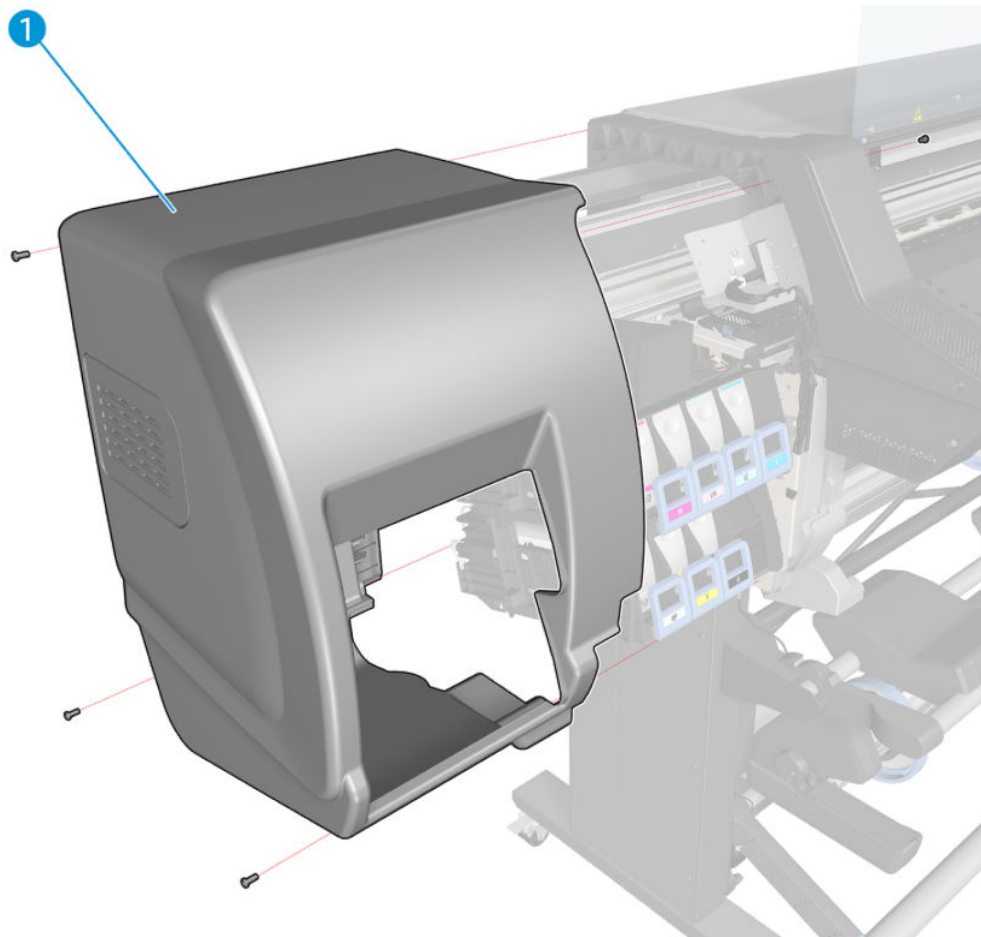
	Part number					Description
	HP Latex 370, 375	HP Latex 360, 365	HP Latex 330, 335	HP Latex 310, 315	HP Latex 110, 115	
1	B4H70-67072					Left cover

Right Cover

	Part number					Description
	HP Latex 370, 375	HP Latex 360, 365	HP Latex 330, 335	HP Latex 310, 315	HP Latex 110, 115	
1	B4H70-67073		E2X76-67004			Right cover without door
2	B4H70-67075		N/A			Front panel bezel 64
3	B4H70-67076					Right door
4	B4H70-67051 (360, 370)		B4H69-67024 (110, 310, 330)			Front panel with cable
	V8N83-67003 (365, 375)		V7L47-67001 (115, 315, 335)			

Front Covers
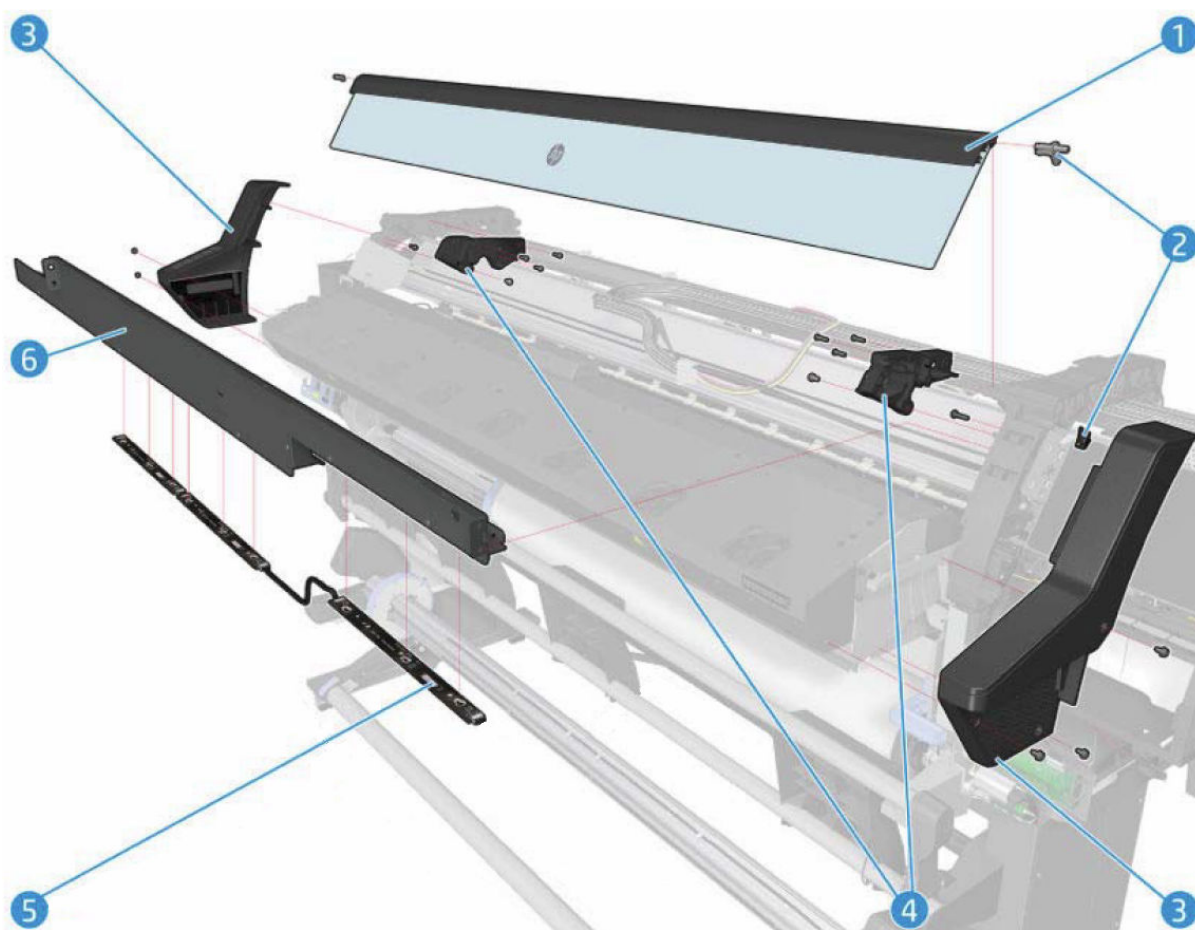
	Part number					Description
	HP Latex 370, 375	HP Latex 360, 365	HP Latex 330, 335	HP Latex 310, 315	HP Latex 110, 115	
1	B4H70-67084			B4H69-67035		Front window
2	B4H70-67059					Window sensor
3	B4H70-67078					Impinging covers
4	B4H70-67079					Impinging trims
5	B4H70-67113					Inner lights PCA
6	B4H70-67110			B4H69-67047		Front tube shelf

Top and Rear Covers
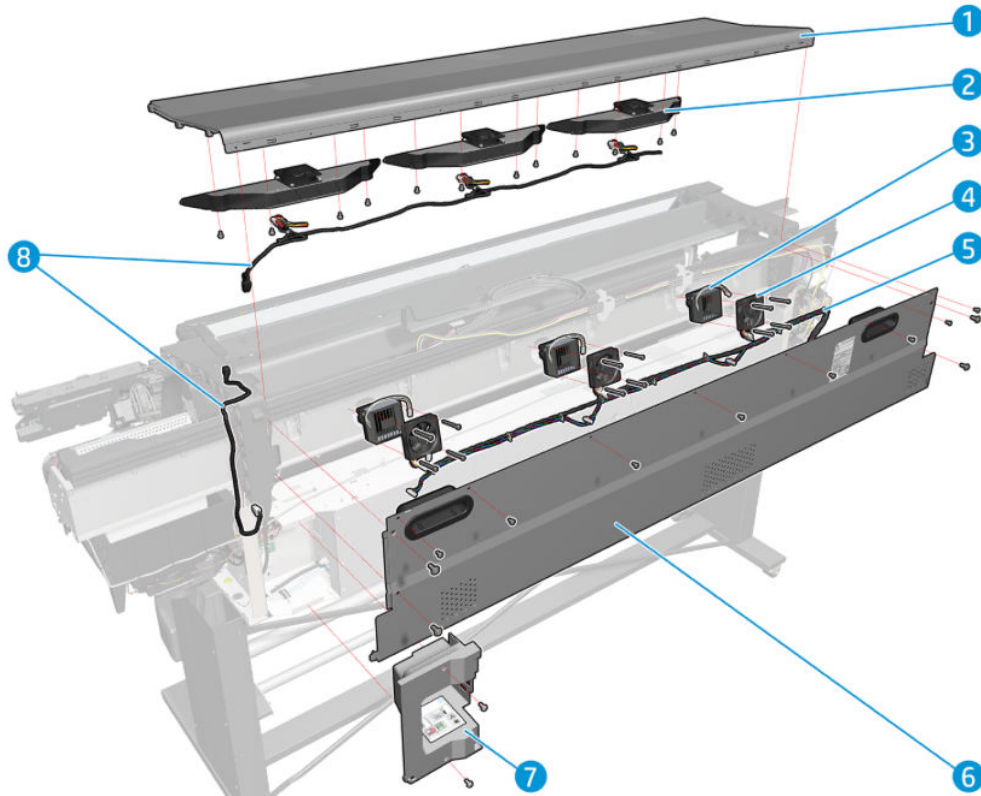
	Part number					Description
	HP Latex 370, 375	HP Latex 360, 365	HP Latex 330, 335	HP Latex 310, 315	HP Latex 110, 115	
1	B4H70-67083			B4H69-67034		Top cover
2	B4H70-67060					Top Cover fan and diffusor
3	B4H70-67126		N/A			Printzone heater assembly
4	N/A		V7L46-67002			Dryer fan
5	B4H70-67043			B4H69-67019		Drying fans cable
6	B4H70-67125			B4H69-67052		Rear cover
7	B4H70-67091					Connector cover right
8	B4H70-67042			B4H69-67018		Top cover fans cable

Left Side Assemblies
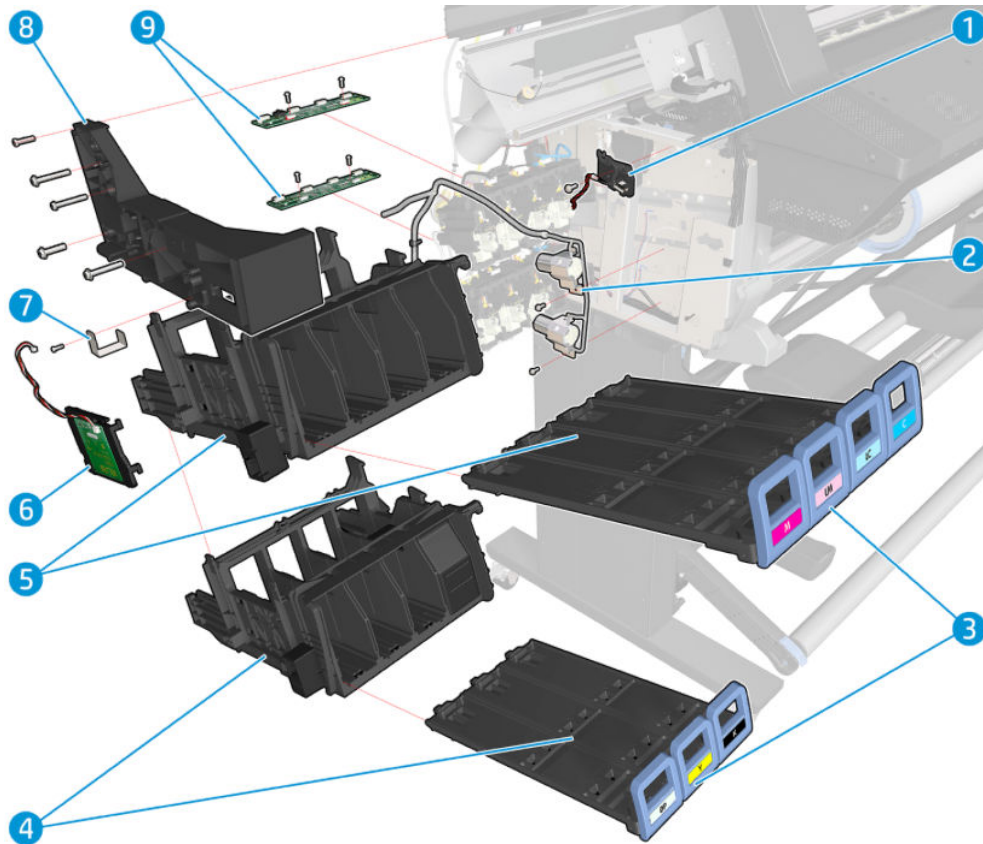
	Part number					Description
	HP Latex 370, 375	**HP Latex 360, 365**	**HP Latex 330, 335**	**HP Latex 310, 315**	**HP Latex110, 115**	
1	B4H70-67029	N/A				SOL actuator assembly
2	B4H70-67020			B4H69-67055		APS assembly
3	B4H70-67015					Cartridge trays
4	B4H70-67014					ISS down row
5	B4H70-67013					ISS up row
7	CH955-67084	N/A				SOL shutter bump
8	CQ869-67009					SPI left Bracket
9	B4H70-67041					ISS PCAs

Right Side Assemblies
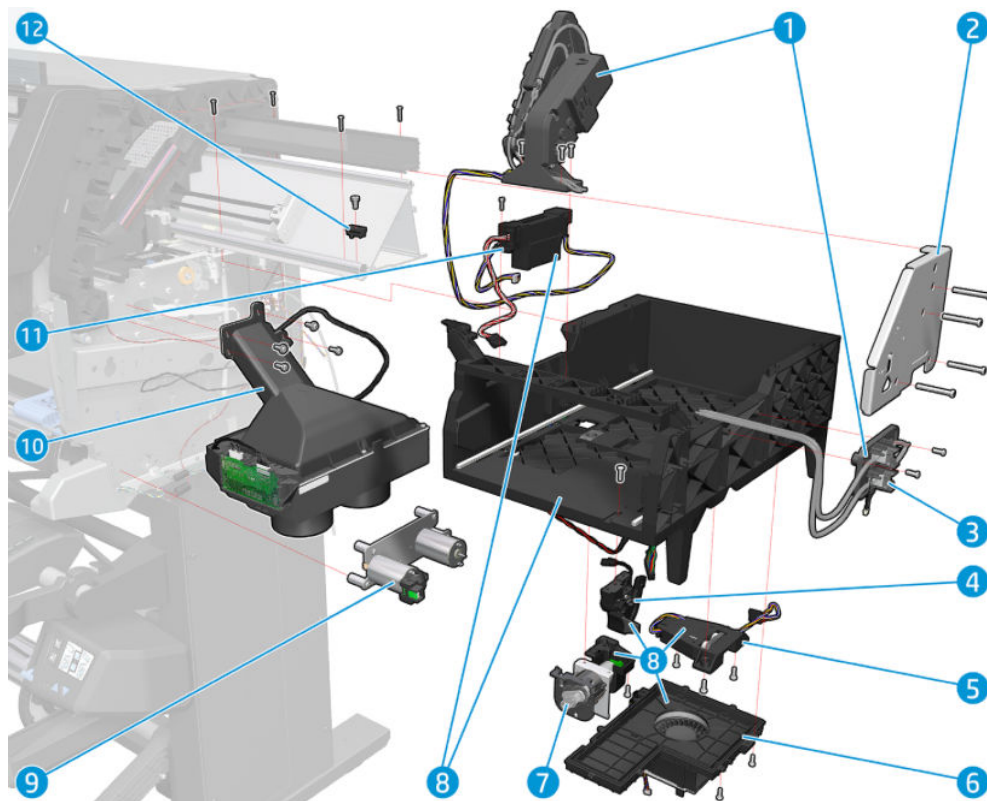
	Part number					Description
	HP Latex 370, 375	HP Latex 360, 365	HP Latex 330, 335	HP Latex 310, 315	HP Latex 110, 115	
1	B4H70-67027					Primer assembly
2	Q1273-60086					Bracket right
3	B4H70-67128					Primer valve and tubes assembly
4	B4H70-67054					SVS-window-pinch lever-gutter
5	B4H70-67035					Web wipe motor
6	B4H70-67033					Aerosol fan
7	B4H70-67034					Spit roller motor
8	B4H70-67023					Service station
9	B4H70-67066			B4H69-67029		Rewinder motor without gears
10	B4H70-67001					Vacuum fan assembly
11	Q1273-60236					Drop detector MR
12	Q6651-60341					Right carriage bump and others
	B4H70-67039					Front door switch sensor

Scan Axis Assemblies
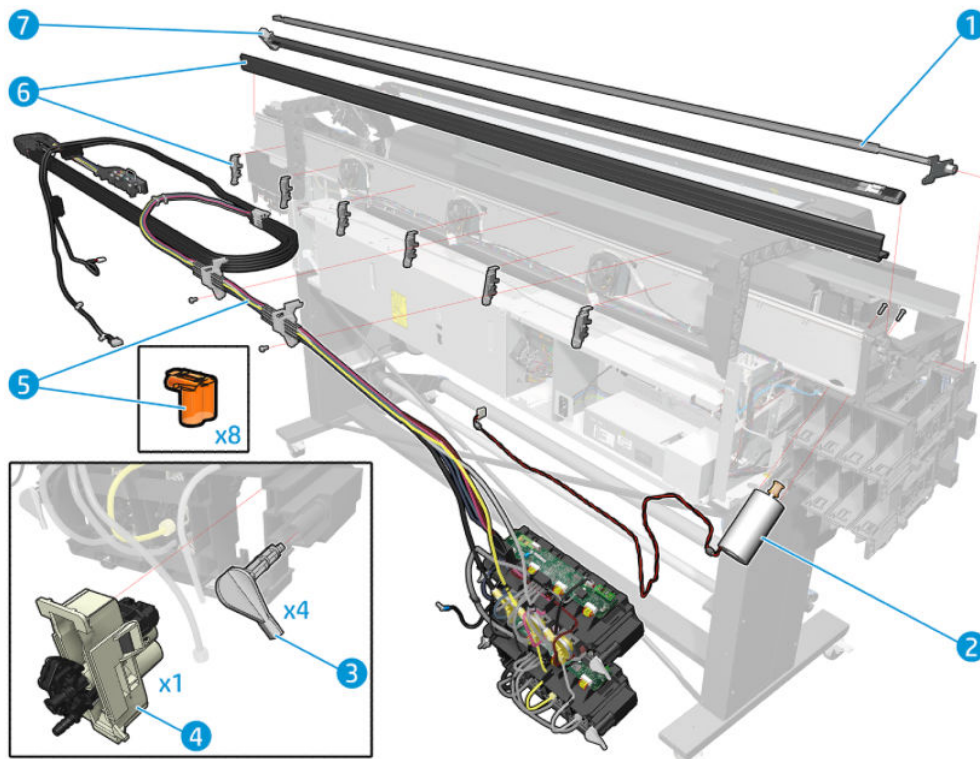
	Part number					Description
	HP Latex 370, 375	HP Latex 360, 365	HP Latex 330, 335	HP Latex 310, 315	HP Latex 110, 115	
1	B4H70-67019			B4H69-67010		Encoder strip sensor
2	B4H70-67031					Scan axis motor
3	CQ869-67082					Backplate latch
4	B4H70-67137					PIP, floater and ISS connector
5	B4H70-67138			B4H69-67058		SRK and TC
6	B4H70-67030			B4H69-67014		Rear tube shelf assembly
7	B4H70-67026			B4H69-67013		Belt and tensioner with metal
	B4H70-67131					Broken bag fixing tools
	B4H70-67136					x7 PIP, Floater and Cable
	M0E29-67109					FI Towers Assembly

Carriage Assemblies
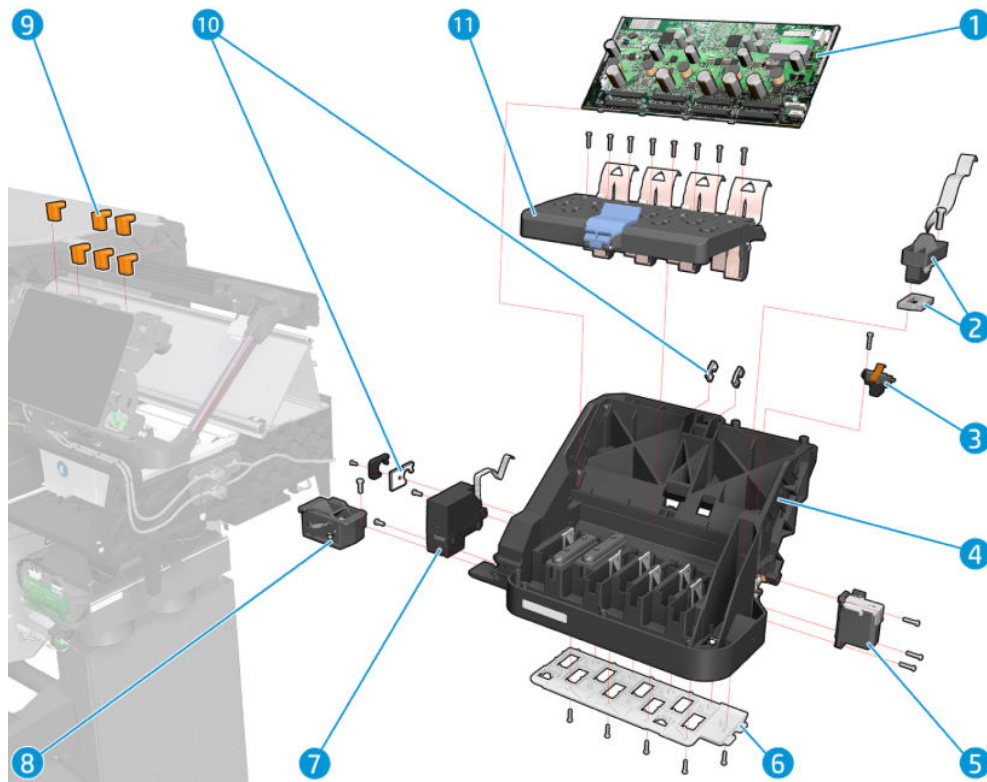
	Part number					Description
	HP Latex 370, 375	HP Latex 360, 365	HP Latex 330, 335	HP Latex 310, 315	HP Latex 110, 115	
1	CQ109-67034					Carriage PCA
2	B4H70-67025					Line sensor
3	B4H70-67019			B4H69-67010		Encoder strip sensor
4	B4H70-67022					Carriage without PCA-SOL-LS
5	B4H70-67102					Front Rod Oiler
6	B4H70-67130					Carriage protector assembly
7	B4H70-67106		N/A			SOL assembly
8	CH955-67007 (Not available for HP Latex 110)					Cutter assembly serv RoHS
9	Q6651-60335					Setup Printhead kit
10	Q6651-60081					Lubrication Felts Kit
11	B4H70-67018					Carriage Flex Cables
	CQ869-67077					100 ml. synthetic oil for carriage
	6040-0855					LUBRICANT-OIL SYN 5.8-CS ROHS
	CH956–67048					VAC Power cords

Electronics

	Part number						Description
	HP Latex 370, 375	HP Latex 360, 365	HP Latex 330, 335	HP Latex 310, 315	HP Latex 110	HP Latex 115	
1	B4H70-67070			B4H69-67031			E-Box extension base
2	B4H70-67040						Heater Control
3	B4H70-67046						Printmech PCA
4	B4H70-67055	N/A					Air Curtain Resistors Control PCA w/ sensors
5	B4H70-67037						Main PSU
6	B4H70-67045			B4H69-67021			E-Box cables
7	B4H70-67155 (310, 330, 360, 370) V8N83-67001 (315, 335, 365, 375)				M0E30-67003	1QE01-67002 (32 GB)	SSD 2.5 in 16 GB
8	B4H70-67114 (315, 335, 360, 365, 370, 375)		N/A (110, 115, 310, 330)				OMAS PCA
9	B4H70-67053 (110, 115, 310, 330, 360, 370) M0E29-67017 (315, 335, 365, 375)						Printer ID PCA
10	B4H70-67038 (110, 115, 310, 330, 360, 370) M0E29-67013 (315, 335, 365, 375)						Engine PCA
11	B4H70-67115						LAN PCA

	Part number						Description
	HP Latex 370, 375	HP Latex 360, 365	HP Latex 330, 335	HP Latex 310, 315	HP Latex 110	HP Latex 115	
12	B4H70-67050						Formatter PCA
13	CQ871-67001						Interconnect PCA
14	B4H70-67074						E-Box base
15	B4H70-67056						E-Box covers

Drive Roller and Substrate Axis motor
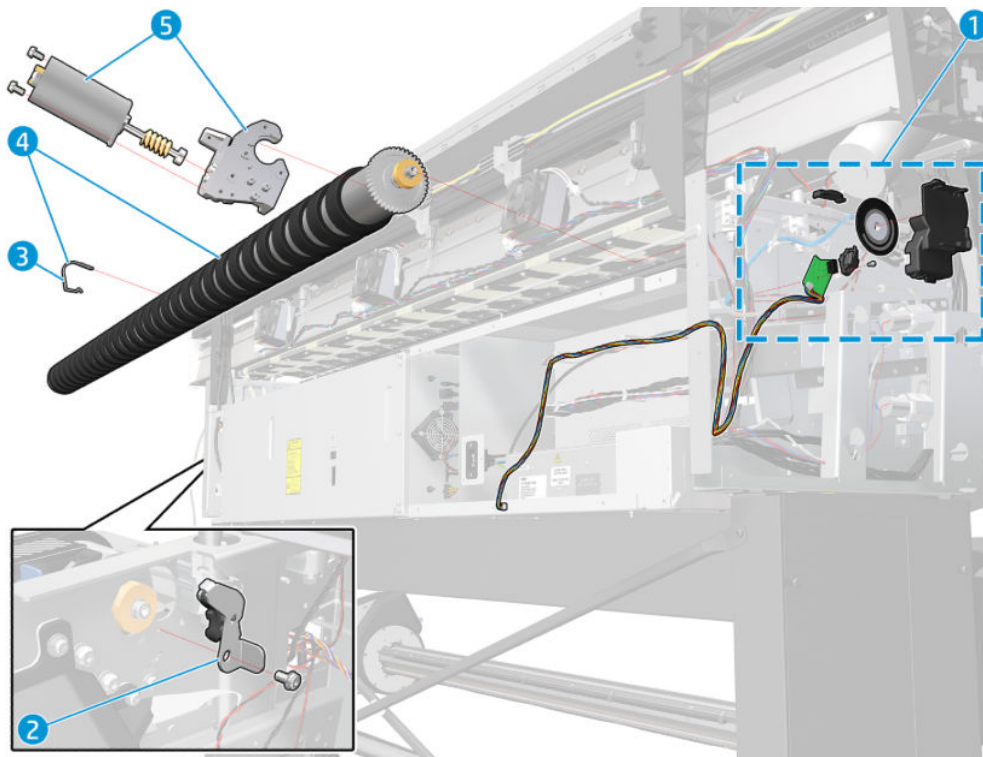
	Part number					Description
	HP Latex 370, 375	HP Latex 360, 365	HP Latex 330, 335	HP Latex 310, 315	HP Latex 110, 115	
1	Q6652-60123					Drive roller Encoder SERV 60"
2	B4H70-67007					Roller Brake RM
3	CQ869-67079					Mid Roller Support Cover Serv
4	B4H70-67008			B4H69-67005		Drive Roller
5	Q6652-60108					Media motor SERV 60"

Substrate path
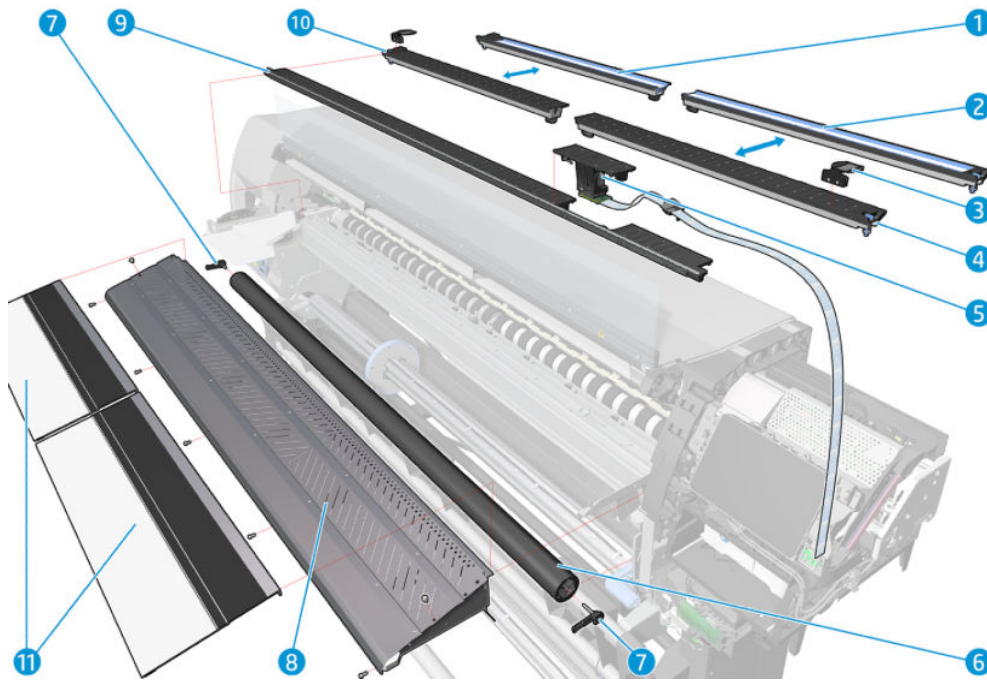
	Part number					Description
	HP Latex 370, 375	HP Latex 360, 365	HP Latex 330, 335	HP Latex 310, 315	HP Latex 110, 115	
1	B4H70-67118	n/a				Left removable gutter
2	B4H70-67004	n/a				Right Removable gutter
3	B4H70-67005					Edge holder
4	B4H70-67003	n/a				Right removable printzone
5	B4H70-67006 (370, 375, 360, 365, 335)			n/a		OMAS Module
6	B4H70-67092			B4H69-67040		Entry roller
7	Q1273-60103					Input roll support
8	B4H70-67069			B4H69-67030		Output platen
9	B4H70-67002 (370, 375, 360, 365, 335)			B4H69-67001		Static Front Platens
10	B4H70-67117	n/a				Left removable printzone
11	B4H70-67141		N/A			O P protector high productivity
	CQ871-67106					OMAS Calibration 54in Sheet
	N/A			V7L46-67001 (315 only)	N/A	Front Platens w/Blade 54

Center Guide and Pinchwheels
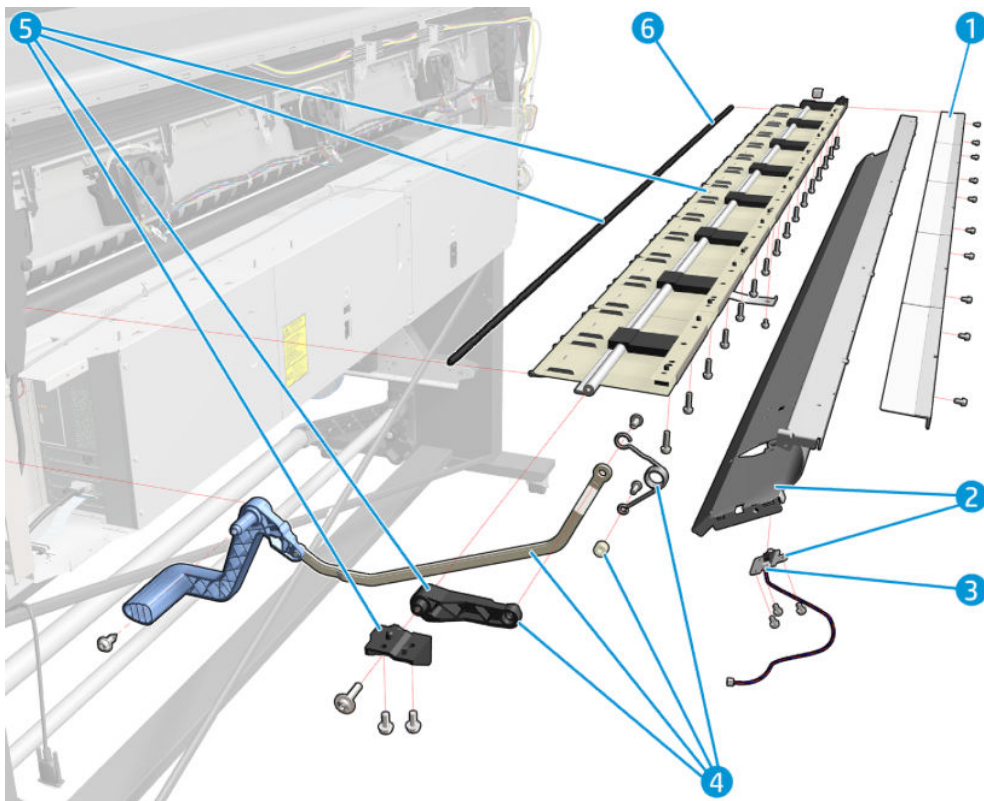
	Part number					Description
	HP Latex 370, 375	HP Latex 360, 365	HP Latex 330, 335	HP Latex 310, 315	HP Latex 110, 115	
1	B4H70-67127			B4H69-67054		Media input mylar
2	B4H70-67098			B4H69-67043		Media input assembly
3	B4H70-67080					Media presence sensor
4	B4H70-67100					Pinchwheel Lever assembly
5	B4H70-67101			B4H69-67045		Complete Pinchwheel assembly
6	B4H70-67099					Pinchwheels

Substrate Input Assemblies
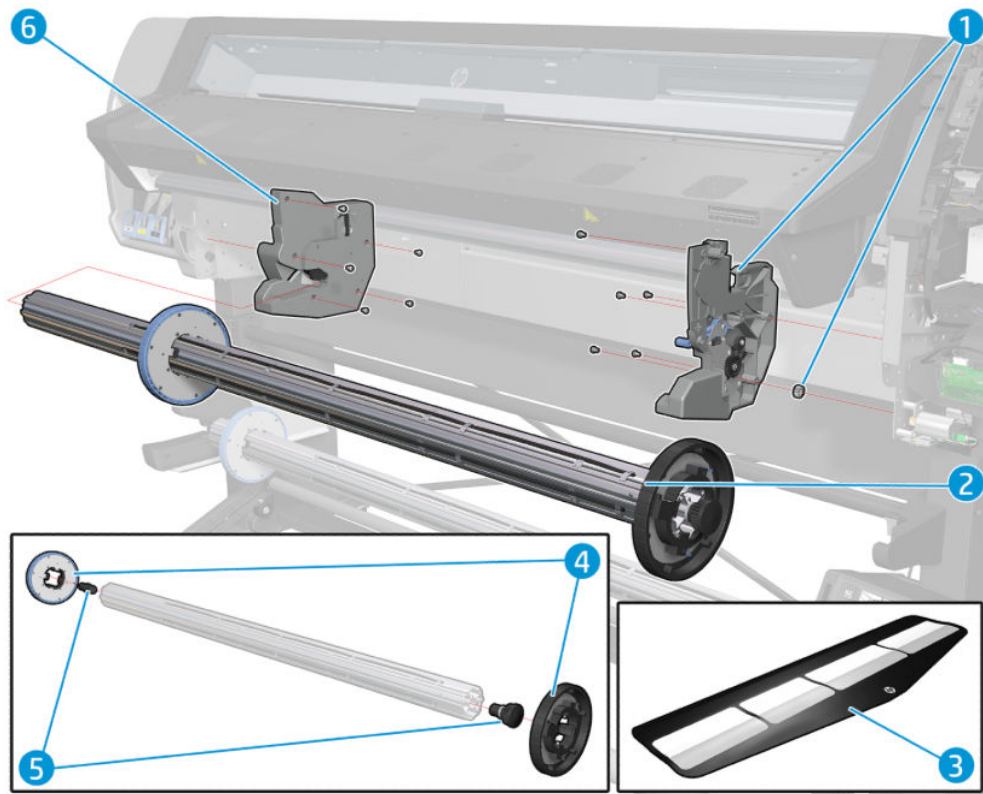
	Part number					Description
	HP Latex 370, 375	HP Latex 360, 365	HP Latex 330, 335	HP Latex 310, 315	HP Latex 110, 115	
1	B4H70-67058					Roll housing right
2	B4H70-67057			N/A		3-inch spindle with hubs
3	B4H70-67129					Media loading accessory
4	B4H70-67124					3-inch spindle hubs
5	B4H70-67068			N/A		3-in spindle gear and left end
6	B4H70-67071					Roll module left assembly

Curing Assemblies
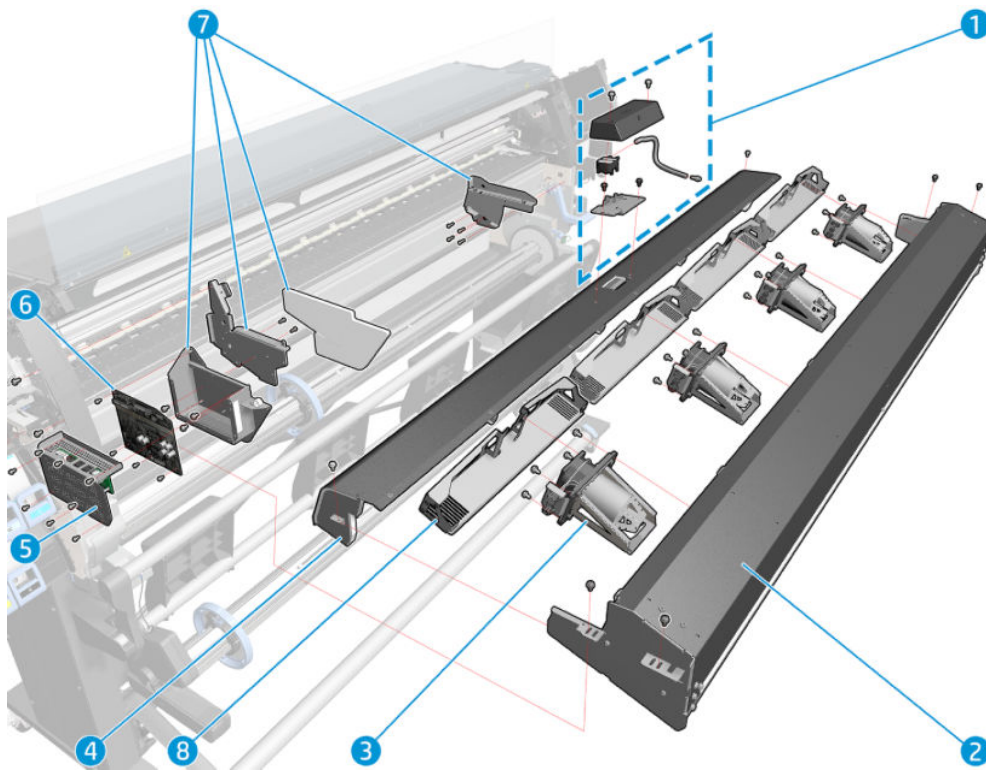
	Part number					Description
	HP Latex 370, 375	HP Latex 360, 365	HP Latex 330, 335	HP Latex 310, 315	HP Latex 110, 115	
1	B4H70-67140					Pressure sensor and valve with cover
2	E2X76-67006			B4H69-67059		Impinging module without Fans
3	B4H70-67063					Fan-heater assembly
3	B4H70-67142					Fan-Heater assembly CR (*)
4	B4H70-67139			B4H69-67060		Impinging recirculation cover
5	B4H70-67112		B4H69-67048			Impinging resistor PCA
6	B4H70-67111					Curing control PCA
6	B4H70-67143					Curing Control PCA CR (*)
7	B4H70-67067					Impinging bracket
8	B4H70-67133					Heater deflector
	B4H70-67032		B4H69-67016			Impinging cables
	B4H70-67144					Impinging cables CR (*)

*Parts ONLY for units with SN ≥ MY5BR69010.

Curing Fan Assemblies
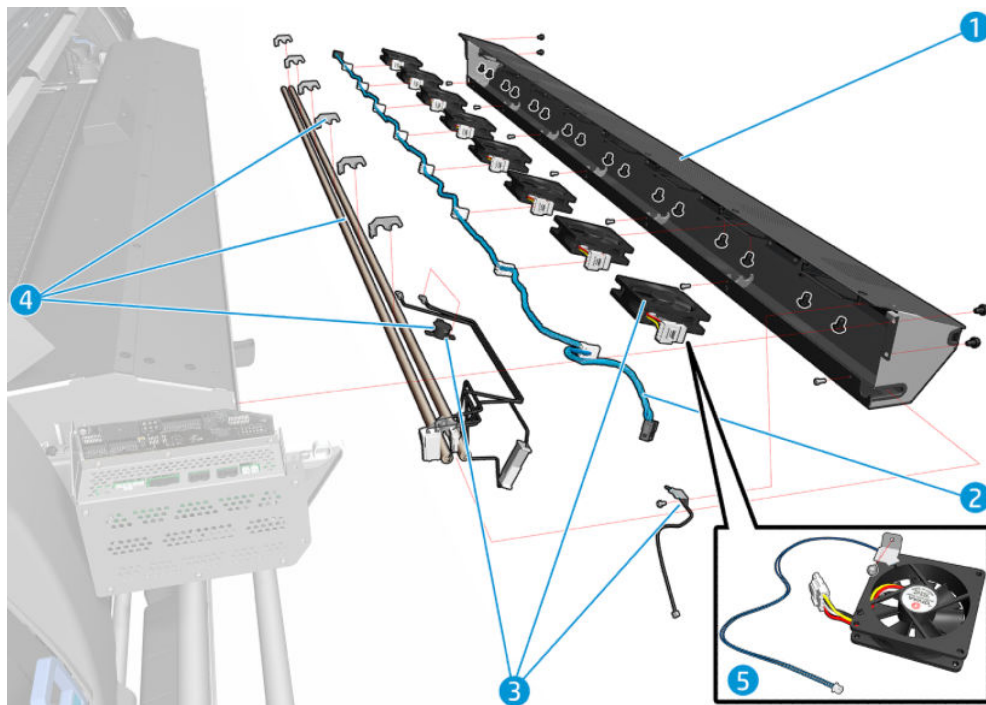
	Part number					Description
	HP Latex 370, 375	HP Latex 360, 365	HP Latex 330, 335	HP Latex 310, 315	HP Latex 110, 115	
1	N/A		B4H70-67086	B4H69-67037		Air curtain fans cover without fan
2	B4H70-67122			B4H69-67049		Air curtain fan cable
3	B4H70-67061		n/a			Air curtain fan with NTC and Thermal switch
4	B4H70-67156		n/a			Air curtain resistors + brackets + cover w/out fans
5	n/a		E2X76-67002			Air curtain fan with NTC

Printzone and Ink Collector
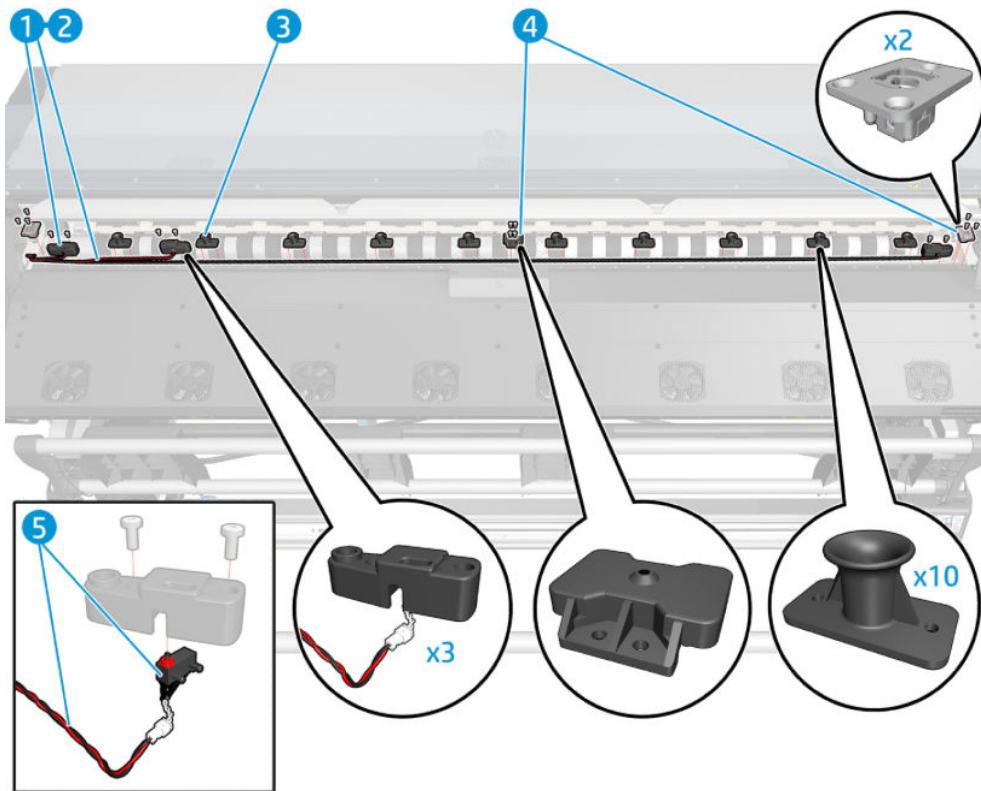
	Part number					Description
	HP Latex 370, 375	HP Latex 360, 365	HP Latex 330, 335	HP Latex 310, 315	HP Latex 110,115	
1	B4H70-67009		n/a			Ink Collector switch assembly
2	B4H70-67054					SVS-Window-Pinch Lever-Gutter
3	B4H70-67010		n/a			Vacuum rubber 64
4	B4H70-67011		n/a			Printzone lockers 64
5	B4H70-67049		n/a			Print Zone sensors 64

Take-Up Reel
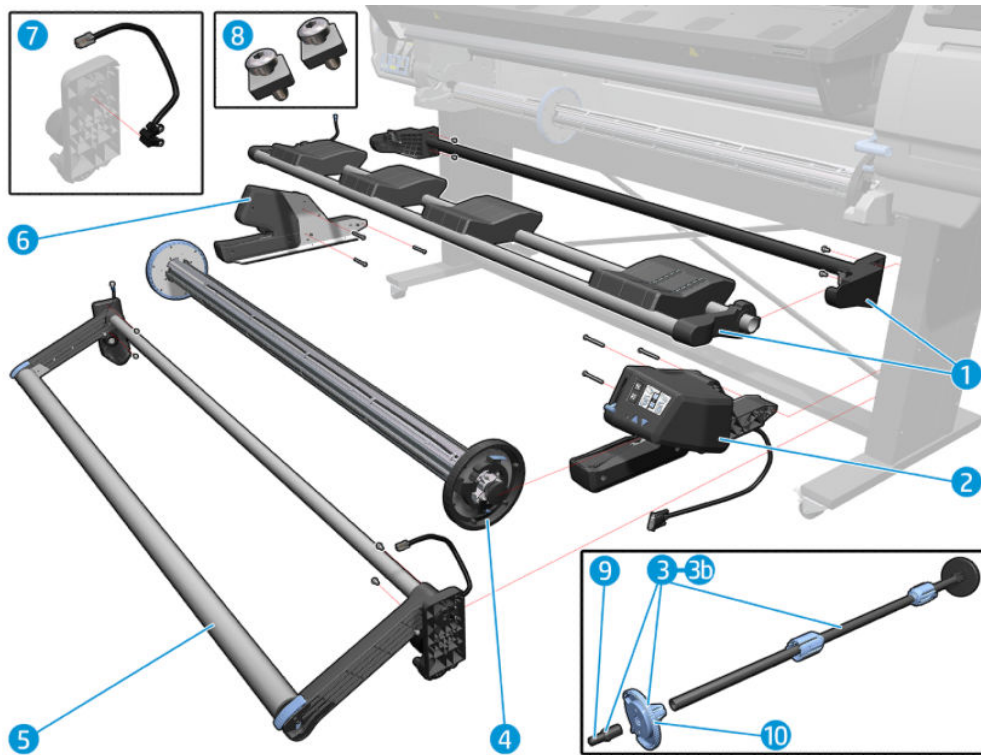
	Part number					Description
	HP Latex 370, 375	HP Latex 360, 365	HP Latex 330, 335	HP Latex 310, 315	HP Latex 110, 115	
1	B4H70-67095			B4H69-67042		Deflector assembly
2	B4H70-67081					Take-up reel motor module
3	N/A			B4H69-67026 / F0M55A		2–inch spindle with hubs 54
4	B4H70-67057			N/A		3–inch spindle with hubs 64
5	B4H70-67094			B4H69-67041		Tension bar (dancer)
6	B4H70-67093					Take-up reel left side module
7	B4H70-67047			n/a		Take-up reel sensor module
8	B4H70-67082					Take-up reel screws with hubs and Deflectors
9	N/A	E2X76-67003		N/A		Spindle 2-inch Left Endcap
9b	N/A	E2X76-67001		N/A		2-inch Spindle w/ Hubs 64
10	N/A	E2X76-67005		N/A		2-inch Spindle HUB w/ Adaptor 64"
	V8N83-67007				N/A	Variable Front Tension

NOTE: Variable front tension is recommended to improve the length consistency obtained when tiling, using the Take-Up Reel (TUR). In some cases length inconsistency was observed when comparing left and right side measurements when tiling: measurements on the left side being more inconsistent than on the right side. The root cause is the front tension applied by the Dancer Bar. Make sure that this kit is correctly installed and used properly according to the media used

Miscellaneous Parts
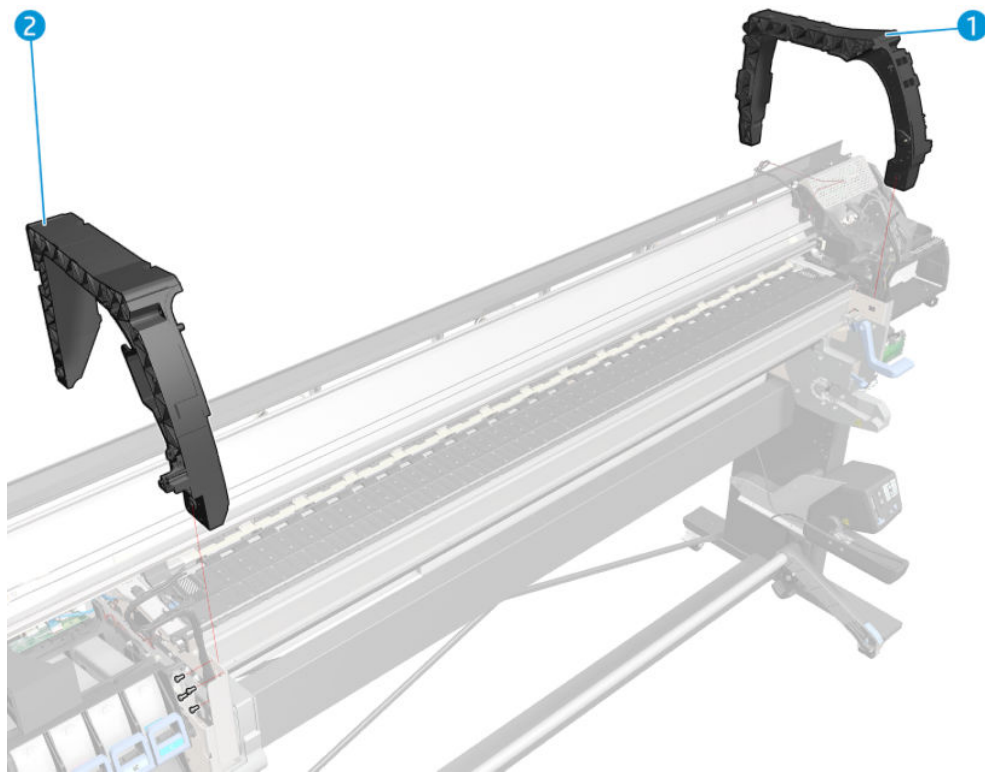
	Part number					Description
	HP Latex 370, 375	HP Latex 360, 365	HP Latex 330, 335	HP Latex 310, 315	HP Latex 110	
1	CH955-67114					CAL Right Arc
2	CH955-67115					CAL Left Arc
	B4H70-67103			B4H69-67046		SMK1
	B4H70-67104 (370, 360, 330, 310, 110 only)					SMK2
	B4H70-67105					SMK3
	B4H70-67016					HP Latex 300 Printer User's maintenance kit
	B4H70-67132 (370, 360, 330, 310, 110)					Reseller kit
	M0E29–67084					Low volume reseller kit
	CH955-67108					CAL HP Perm. Gloss Adhesive Vinyl
	B4H70-67021 (310, 330, 360, 370) V8N83-67004 (315, 335, 365, 375)				M0E30-67002	Label Bundle with serial number
	CH956-67048					L25500 60In power cord serv
	B4H70-67123					Grounding cables
	B4H70-67121			B4H69-67050		Cables to service station side
	B4H70-67122			B4H69-67049		Cables to ISS side

	Part number				Description
	HP Latex 370, 375	**HP Latex 360, 365**	**HP Latex 330, 335**	**HP Latex 310, 315**	**HP Latex 110**	
	N/A			CH955-67125		L25500 42In AMS Power Cord Ser
	N/A			CH955-67126		L25500 42In APJ Power Cord Ser
	N/A			CH955-67127		L25500 42In EMEA Power Cord Ser
	B4H70-67134		B4H69-67057			Curing Calibration Media
	B4H70-67135					Curing Air Curt. Cleaning
	V8N83-67006				N/A	PZ Air Clip Diffusors (this service part is for qty.15)

	SMK 1 CONTENT					Description
	HP Latex 370, 375	**HP Latex 360, 365**	**HP Latex 330, 335**	**HP Latex 310, 315**	**HP Latex 110**	
	B4H70-67103			B4H69-67046		SMK1
	B4H70-67019			B4H69-67010		Encoder strip sensor
	B4H70-67020			B4H69-67055		APS assy
	B4H70-67022			B4H69-67056		Carriage
	B4H70-67026			B4H69-67013		Belt and tensioner
	B4H70-67031					Scan axis motor 64
	B4H70-67105					HP Latex 300 series SMK3
	B4H70-67138			B4H69-67058		Ink tubes

	SMK 2 CONTENT					Description
	HP Latex 370, 375	**HP Latex 360, 365**	**HP Latex 330, 335**	**HP Latex 310, 315**	**HP Latex 110**	
	B4H70-67015					HP Latex 300 series SMK3
	B4H70-67023 (370, 360, 330, 310, 110 only)					Service station SERV

	SMK 3 CONTENT					Description
	HP Latex 370, 375	HP Latex 360, 365	HP Latex 330, 335	HP Latex 310, 315	HP Latex 110	
			B4H70-67105			SMK3
			B4H70-67130			Carriage protector assembly SE
			Q1271-40089			Plastic rear bushing
			Q1271-60346			Rear lubrication felt assy
			Q6651-60081			Lubrication felts kit SERV
			B4H70-67025			Line sensor SERV
			B4H70-67102			Front rod oiler SERV
			B4H70-67034			Spit roller motor SERV
			B4H70-67135			Curing Air Curt. Cleaning SERV1
			B4H70-67140			Pressure sensor and valve w/
			CH955-80014			Gloves for CAL service parts
			CZ151-60201			HP User maintenance kit

	Reseller kit SERV (B4H70–67132)	Content description
	B4H70-67018	Carriage flex cables SERV
	B4H70-67019	Encoder strip sensor
	B4H70-67023	Service station SERV
	B4H70-67025	Line sensor SERV
	B4H70-67026	Belt and tensioner w/ metal 64
	B4H70-67033	Aerosol fan SERV
	B4H70-67034	Spit roller motor SERV
	B4H70-67040	Heater control SERV
	B4H70-67041	ISS PCA SERV
	B4H70-67046	Printmech PCA SERV
	B4H70-67050	Formatter PCA SERV
	B4H70-67055	Air curtain PZ Heating PCA SERV
	B4H70-67058	Roll housing right SERV
	B4H70-67063	Fan heater assy SERV
	B4H70-67066	Rewinder motor w/ gears 64 SERV
	B4H70-67080	Media presence sensor SERV
	B4H70-67111	Curing control PCA SERV
	B4H70-67112	Curing power interconnect PCA

Reseller kit SERV (B4H70-67132)	Content description
B4H70-67115	LAN PCA SERV
B4H70-67126	Printzone heater assy SERV
B4H70-67131	Broken bag fixing toll SERV
B4H70-67137	PIP, Floater, ISS con. V2 SERV
B4H70-67140	Pressure sensor and valve w/ c
B4H70-67155	L300_CR SSD -5 in 16 GB SERV
C7769-00200	SVC B Box Label
B4H70-67034	Carriage PCA SERV
CQ869-67077	100 ml synthetic oil for carriage
E2X76-67005	2-inch spindle HUB w/ adaptor
M0E29-67099	Primer assembly SERV
Q1273-60236	Drop detector MR SERV

3–liter accessory

Mechanical systems (part 1)
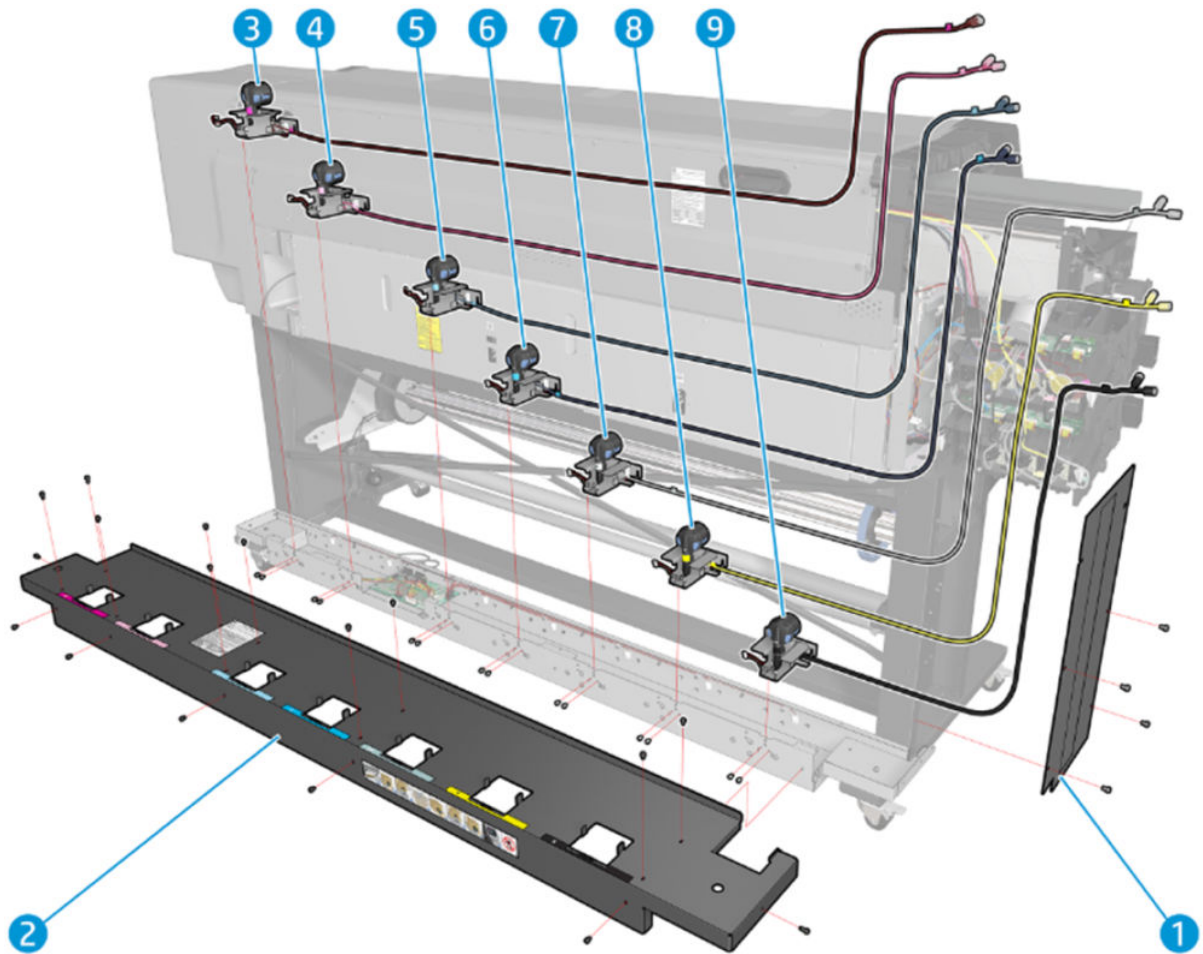
Item	Part Number	Description
1	G2W18-67011	3–liter Left Foot Cover
2	G2W18-67010	3–liter Top Cover
3	G2W18-67006	3–liter M color Ink Line
4	G2W18-67005	3–liter LM color Ink Line
5	G2W18-67004	3–liter LC color Ink Line
6	G2W18-67002	3–liter C color Ink Line
7	G2W18-67007	3–liter OP color Ink Line
8	G2W18-67008	3–liter Y color Ink Line
9	G2W18-67003	3–liter K color Ink Line

Electrical and mechanical systems (part 2)
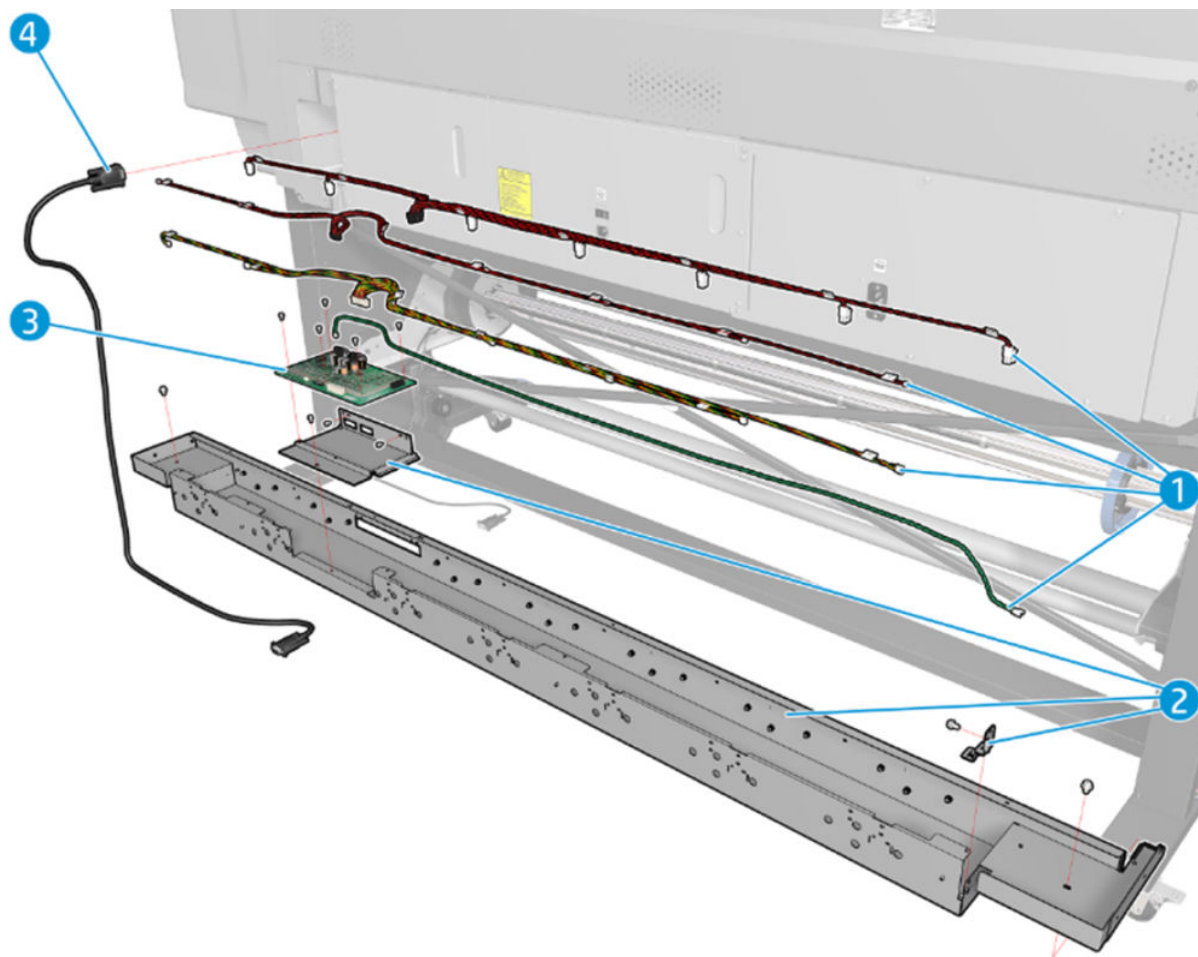
Item	Part Number	Description
1	G2W18-67009	3–liter Cables
2	G2W18-67012	3–liter Ink Sump
3	G2W18-67001	3–liter PCA
4	G2W18-67016	Accessory port cable

Miscellaneous parts

Item	Part Number	Description
1	G2W18-67014	3–liter Screws, Fasteners
2	G2W18-67015	3–liter Purging, Install

8 Removal and installation

-

- – Static front platens (330/335)

    - – Static front platens (310/315/115/110)

- • Take-Up Reel

    - – Take-up reel motor

    - – Take-up reel left module

    - – Take-up reel deflector supports

    - – Tension bar

    - – Take-up reel sensors

    - – Rewinder

- • 3-liter Ink Upgrade accessory

    - – 3–liter PCA

    - – 3–liter "x" color Ink Line

    - – 3–liter Cables

    - – 3–liter Top Cover

    - – 3–liter Ink Sump

    - – Ink leak detector cable

    - – Accessory port cable

Introduction

This chapter is a step-by-step guide to removal and installation of the key components of the product. It may be 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 the **Service Substrate Library**.

- Employees and contingent workers: http://thesml.hp.com

- Find a quick training guide on using and maintaining the printer, substrate preset generation and general RIP usage here: http://latex300quickguide.heleni.me/

- Find videos created to help with answering customer questions, troubleshooting problems, and some expert tips here:

  - www.hp.com/supportvideos

  - www.youtube.com/HPSupportAdvanced

- In the HP Customer Support Web site you will also find troubleshooting articles, manuals, drivers, and much more: http://support.hp.com.

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

Safety precautions

Review the instructions identified by WARNING and CAUTION symbols before servicing the product. Follow these warnings and cautions for protection and to avoid damaging the product.

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 the product off, and disconnect both power cords 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 product'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 product. 202 Chapter 6 Removal and Installation ENWW.

5. After removing a cover from the product, 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 product.

6. After removing any PCA from the product, 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 product are provided in the Toolkit. Some tools can be ordered separately from the toolkit.

The Toolkit contains the following tools:

Description/Comments	HP Part Number
Alcohol	Q6675-60091
Allen Key #2	Q6675-60041
Cleaning Cloth	9300-2531
Lubricant Oil	Q6675-60090
Oil Dispenser	Q6675-60062
Spring Insertion Tool	Q5669-20594
Protective Plastic Gloves	Q6675-60035
Screwdriver	8710-2456
Tweezers Q6675-60037	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) magnetic end	8/9/10 straight, 15/20 straight and angled
Philips Screwdriver	PH1
Pliers	N/A
Snips	N/A
Flat-bladed Screwdriver	N/A
Pipe Spanner	5.5 mm
Wrench	7.0 mm
Long Torx Screwdriver	1/4 inch drive

Service calibration guide to removal and installation

Using the service calibration guide

When you remove most product components, you will need to perform a particular set of Service Calibrations and Diagnostic tests to ensure proper product performance.

The Service Calibration Table explains which service calibrations and diagnostic tests need to be performed whenever you remove and install particular product 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	Calibrations	Service Utilities
Drive Roller	—	Paper Advance Calibration	—
Belt Assembly	TBD	—	After replacement, reset belt cycles
Line Sensor Assembly	—	Line Sensor Calibration	Reset the Line Sensor Cycle
Carriage Assembly	Carriage Assembly, Scan Axis /Scan Axis, Scan Axis / Cutter	Line Sensor Calibration	After replacement, reset "carriage" usage counters
Carriage PCA	Carriage Assembly	Line Sensor Calibration	—
Color Sensor	Substrate Path Sensor	Open Close SOL	Reset the Color sensor counter
Cutter	Scan Axis / Cutter	—	—
Scan–axis Motor	—	—	Reset the Scan Axis Motor life counter
Drop Detector	—	Before replacement, run Drop Detector Calibration / Reset Calibration Flag. After replacement, run Drop Detector Calibration / Calibrate Drop Detector	After replacement, reset "drop detector working time" usage counters
Encoder Strip	Scan Axis / Scan Axis	—	—
Formatter PCA, Hard Disk Drive, Engine PCA, LAN PCA, front panel, Power Supply Unit, PSU Fan	Electronics Module	—	—
Ink Tubes and Trailing Cable	Scan Axis / Scan Axis, Ink Delivery System	—	After replacement, reset "tubes and trailing cable" usage counters
Line Sensor	Carriage Assembly	Line Sensor Calibration	—
Motor Substrate Advance Transmission with Encoder	Paper Drive	Paper Advance Calibration	—
Overdrive	Paper Drive	—	—

Component	Diagnostic Tests	Calibrations	Service Utilities
Pinch Rollers	Paper Drive	—	—
Preventative Maintenance #1	Carriage Assembly, Scan Axis / Scan Axis, Scan Axis / Cutter	Line Sensor Calibration	After replacement, reset "Life PMK1" counters
Preventative Maintenance #2	Service Station, Carriage Assembly	Before replacement, run Drop Detector Calibration / Reset Calibration Flag. After replacement, run Drop Detector Calibration / Calibrate Drop Detector. Line Sensor Calibration	After replacement, reset "Life PMK2" counters
Primers	Service Station / Primer motor	—	—
Scan Axis motor	Scan Axis / Scan Axis	—	After replacement, reset "scan motor" usage counters
SVS W/ Drop Detector	Service Station	Before replacement, run Drop Detector Calibration / Reset Calibration Flag. After replacement, run Drop Detector Calibration / Calibrate Drop Detector	After replacement, reset ""SVS"" usage counters. After replacement, reset ""drop detector working time"" usage counters
Window Position Sensor (microswitch)	Sensors	—	—
3–liter PCA	Ink Setup	—	—
3–liter C color Ink Line	Ink Setup	—	—
3–liter K color Ink Line	Ink Setup	—	—
3–liter LC color Ink Line	Ink Setup	—	—
3–liter LM color Ink Line	Ink Setup	—	—
3–liter M color Ink Line	Ink Setup	—	—
3–liter OP color Ink Line	Ink Setup	—	—
3–liter Y color Ink Line	Ink Setup	—	—
3–liter Cables	Ink Setup	—	—
3–liter Top Cover	—	—	—
3–liter Left Foot Cover	—	—	—
3–liter Ink Sump	Ink Setup	—	—
Accessory port cable	Ink Setup	—	—

Left Cover

Left cover

Removal

⚠ **WARNING!** Turn off the printer and disconnect both power cords.

1. Open the window. See .
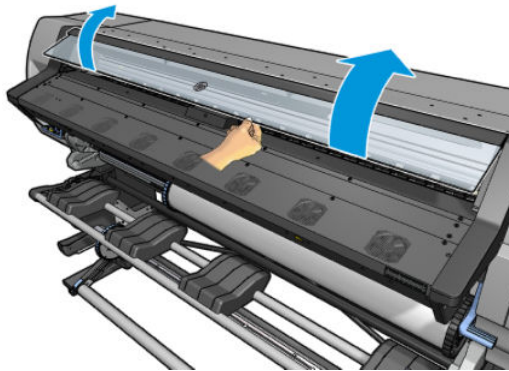
2. Remove one T-15 (**Type J**) screw that secures the Left Cover at the top.
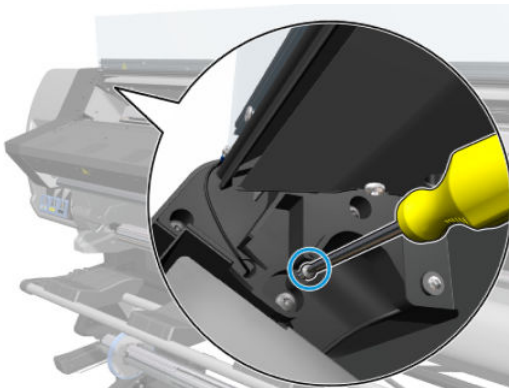
3. Remove one T-15 (**Type J**) screw that secures the Left Cover at the bottom.
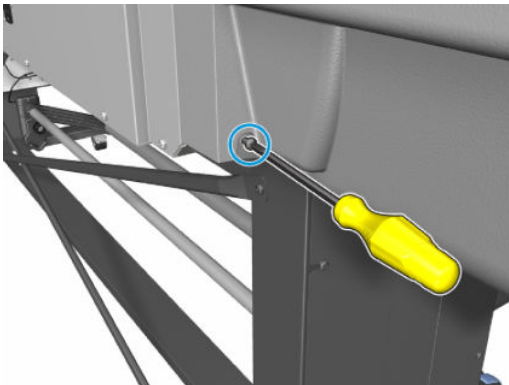
4.	Remove one T-20 screw (**Type J**) that secures the Left Cover.
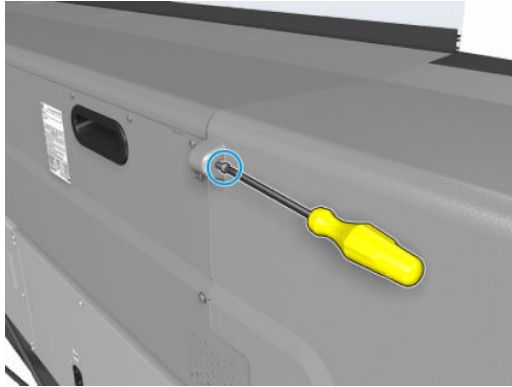
5.	Remove one T-15 screw (**Type J**) that secures the Left Cover.
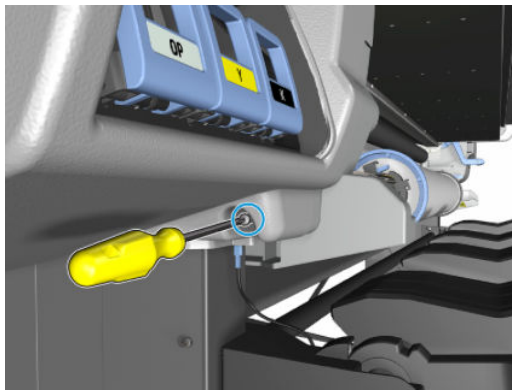
6.	Remove the Left Cover from the printer.
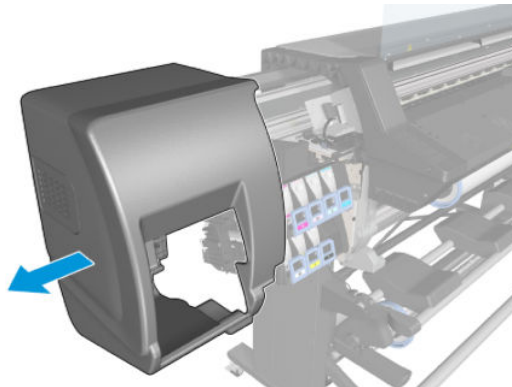
Right Cover

Front panel

Removal

> ⚠ **WARNING!** Turn off the printer and disconnect both power cords.

1. Remove the Right cover on page 360.

2. Remove the Right connector cover on page 384.

3. Disconnect the front-panel cable from the formatter PCA.
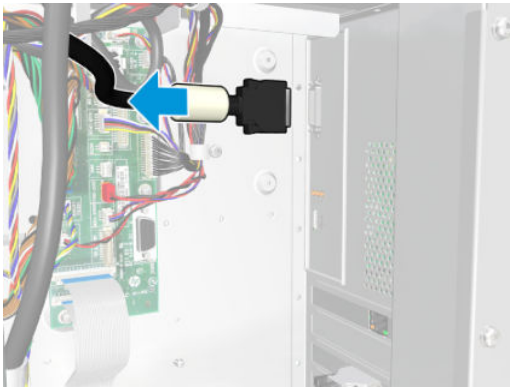
4. Move the front-panel cable (including the ferrite) out of the electronics module.
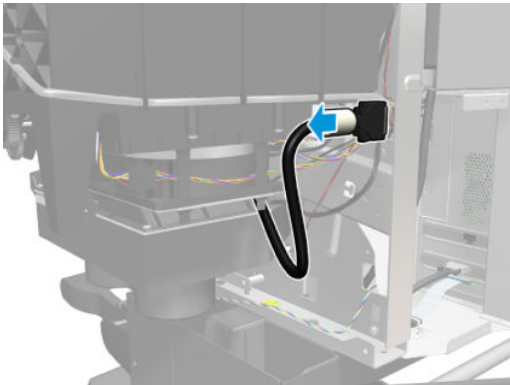
5. Release the cable tie used to guide the front-panel cable from the right arc.
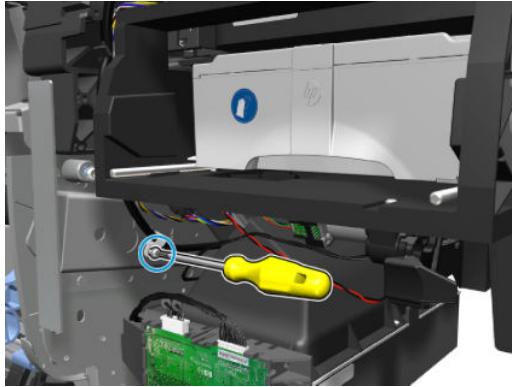
6. Remove the front-panel cable from the right arc.
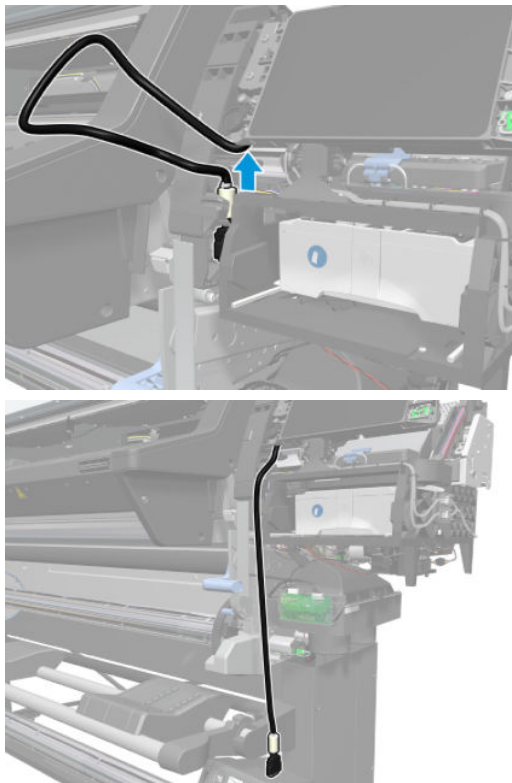
7. Remove the two T-15 screws (**Type G**) that secure the front panel to the printer.

8. Remove the front panel from the printer.
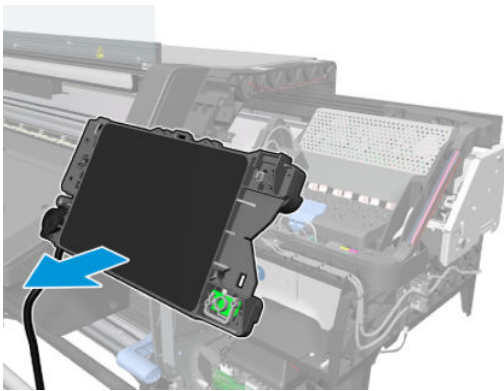
Right cover

Removal

⚠ WARNING!   Turn off the printer and disconnect both power cords.

1. Using a suitable small flat-blade screwdriver, unclip the front-panel bezel from the right cover.

2. Remove the front-panel bezel from the right cover.

3. Open the maintenance-cartridge door.
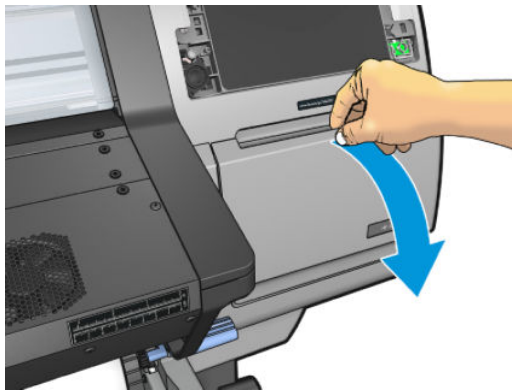
4. Remove one T-15 screw (**Type J**) that secures the right cover.

5. Open the window. See .
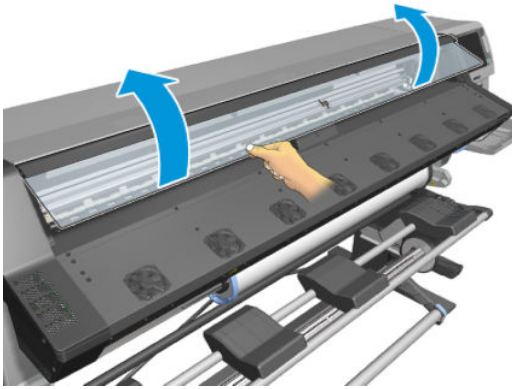
6. Remove one T-15 screw (**Type J**) that secures the right cover.
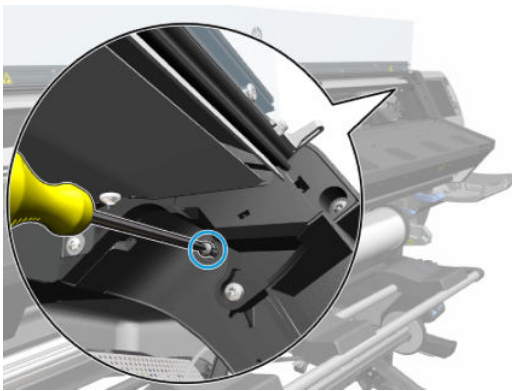
7. Remove one T-15 screw (**Type J**) that secures the right cover.
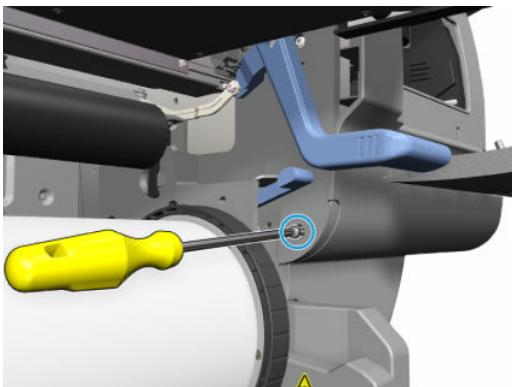
8. Remove one T-15 screw (**Type J**) and one T-20 screw (**Type A**) that secure the right cover from the rear of the printer.
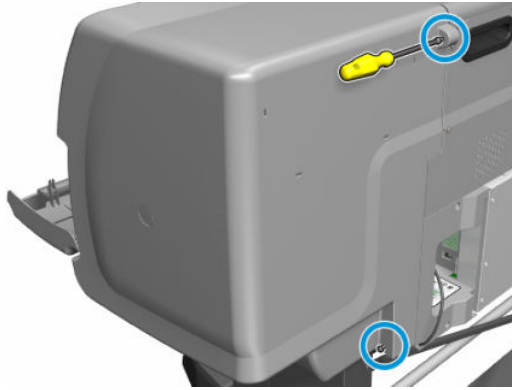
9. Remove the right cover from the printer.

⚠ CAUTION: When installing the right cover, make sure you leave the maintenance-cartridge door open, otherwise you could damage the door sensor.
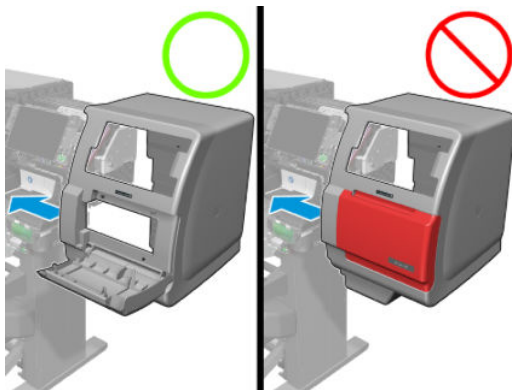
Maintenance-cartridge door

Removal

⚠ WARNING!   Turn off the printer and disconnect both power cords.

1. Open the maintenance-cartridge door.
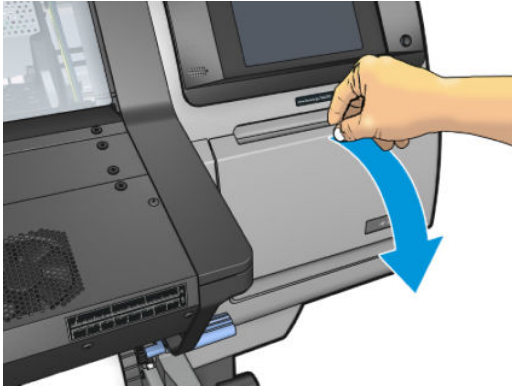
2. Unclip and remove the maintenance-cartridge door from the right cover.
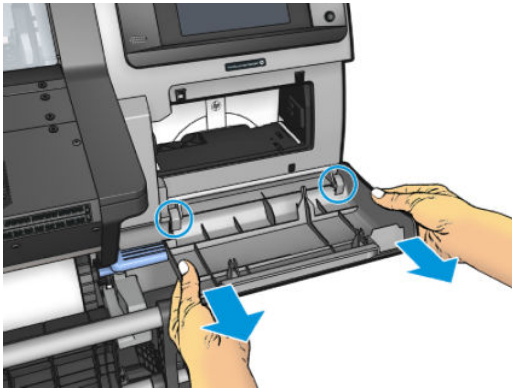
Front Covers

Opening the window

⚠ **WARNING!** Before opening the window, observe all safety precautions when working in the area of the print zone. Make sure that the temperature of the print zone has sufficiently cooled down.

1. Turn off the printer at the front panel.

2. Turn off the power switch at the rear of the printer.
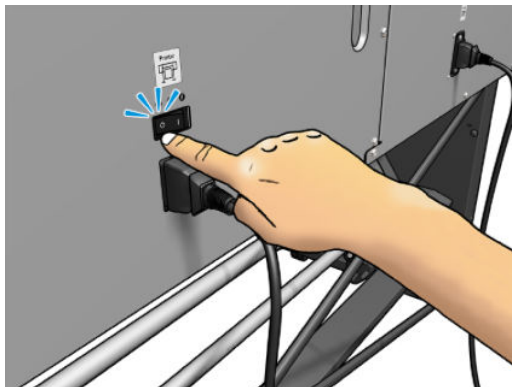
3. Unplug both power cables from the rear of the printer.
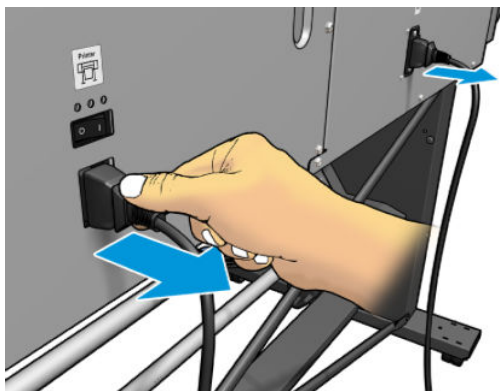
4. Open the window.
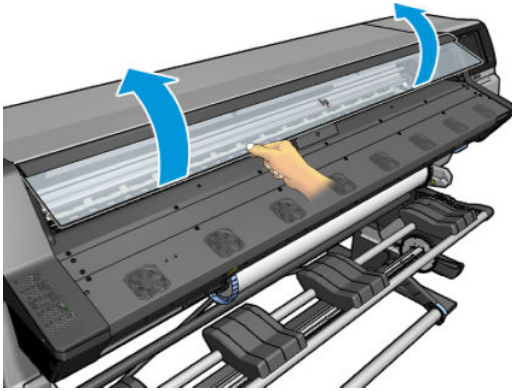
5. Wait five minutes for the printer to cool down.
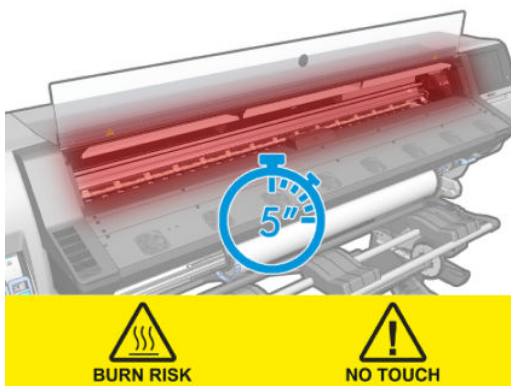
Left impinging module cover

WARNING!   Heating coils operate at hazardous voltages capable of causing death or serious personal injury. Disconnect both power cords before servicing the printer.

Removal

1. Open the window. See .

2. Remove one T-15 (**Type J**) screw that secures the left cover at the bottom.
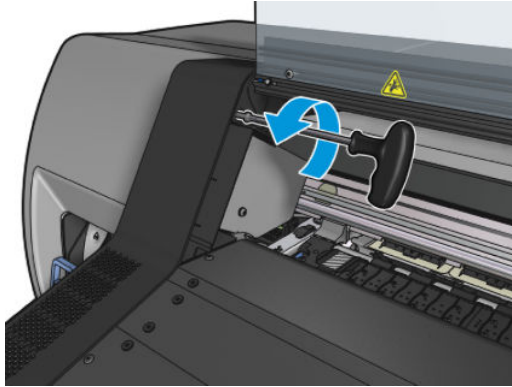
3. Remove two T-20 screws from the left impinging module cover.

4. Remove the left impinging module cover by sliding it off.
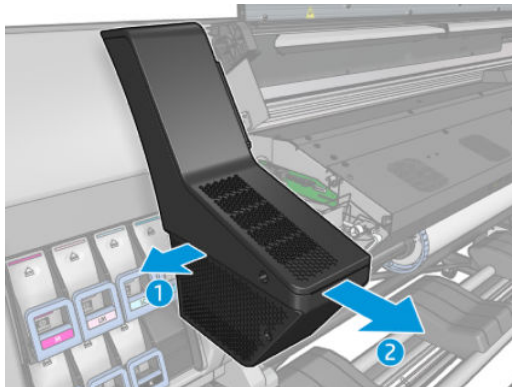
Right impinging module cover

WARNING! Heating coils operate at hazardous voltages capable of causing death or serious personal injury. Disconnect both power cords before servicing the printer.

Removal

1. Open the window. See .

2. Remove one T-15 (**Type J**) screw that secures the right cover.
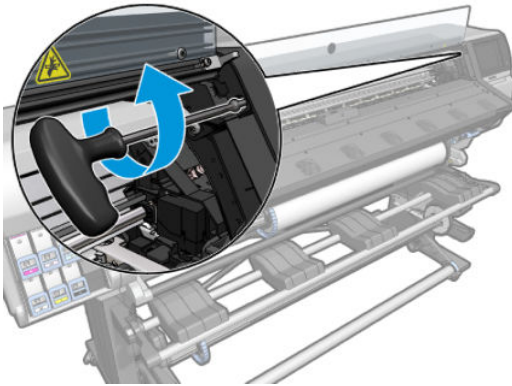
3. Remove three T-20 screws from the right impinging module cover.
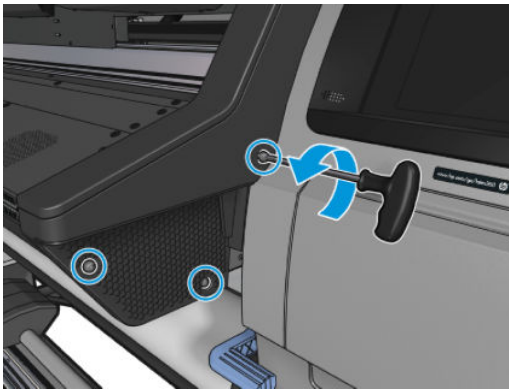
4. Remove the right impinging module cover.
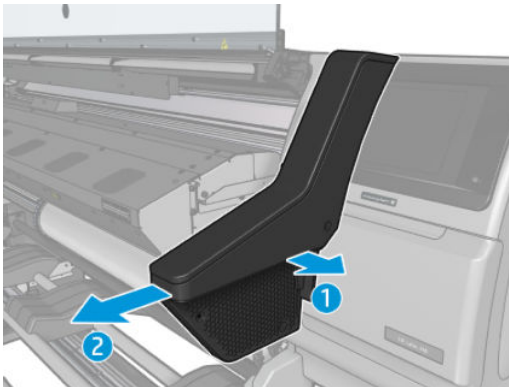
Window sensor

Removal

⚠ **WARNING!**   Turn off the printer and disconnect both power cords.

1. Remove the [Right impinging module cover on page 367](#).

2. Carefully remove some cable to gain access to the connector.

3. Unclip the window sensor from its mounting legs.
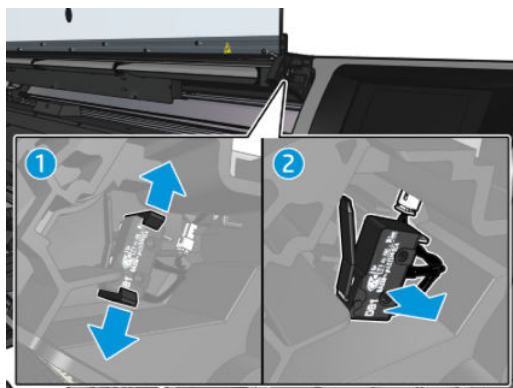
4. Disconnect the sensor cable.
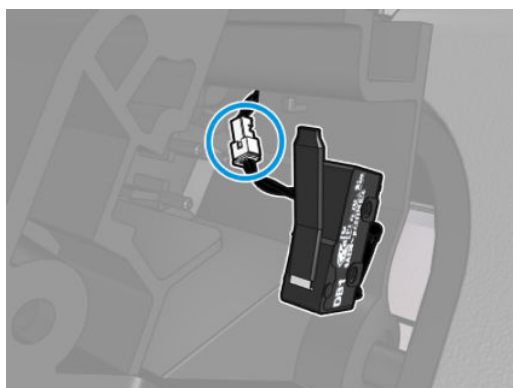
5. Remove the window sensor.
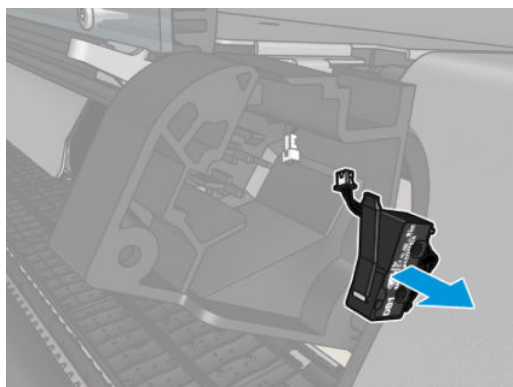
Window trims

Removal

5. To detach the left window trim from the arch, remove three T-15 screws and one T-25 screw.
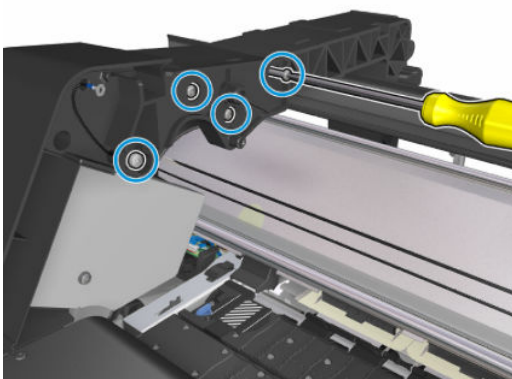
6. Remove the left window trim from the arch.
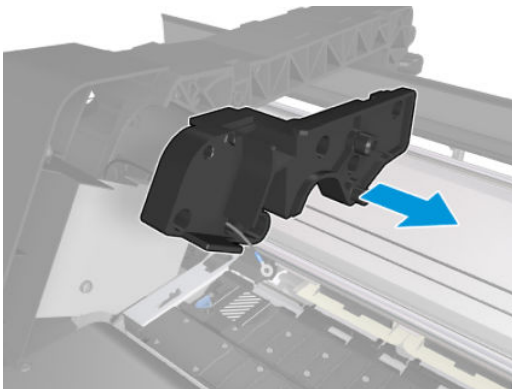
7. On the right trim unclip the window sensor cable.
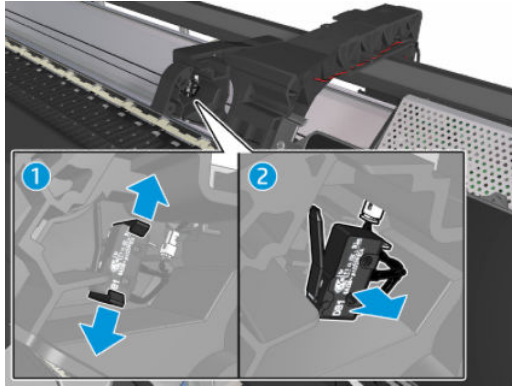
8. Disconnect the window sensor cable from its connector.
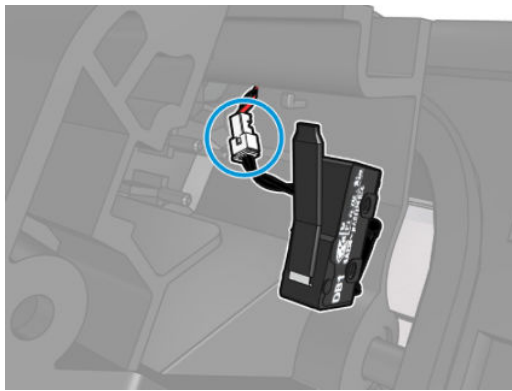
9. Unroute the window sensor cable.
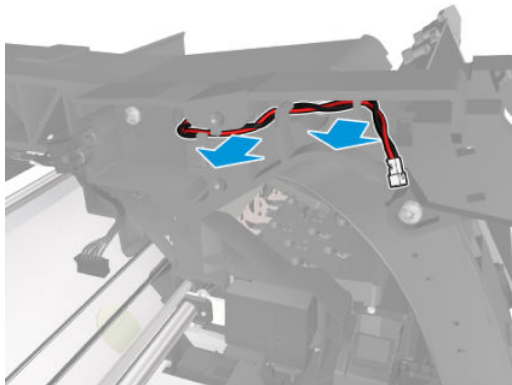
10. To detach the right window trim from the arch, remove three T-15 screws and one T-25 screw.
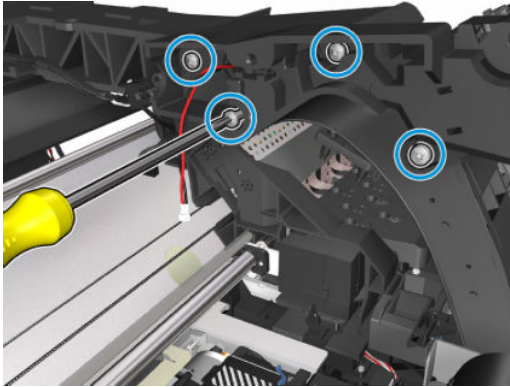
11. Remove the right window trim from the arch.
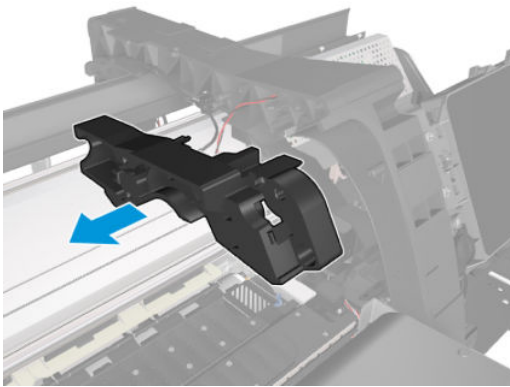
Window

Removal

⚠ **WARNING!** Turn off the printer and disconnect both power cords.

1. Open the window. See

2. Remove one screw on the left hinge to disconnect the grounding cable.
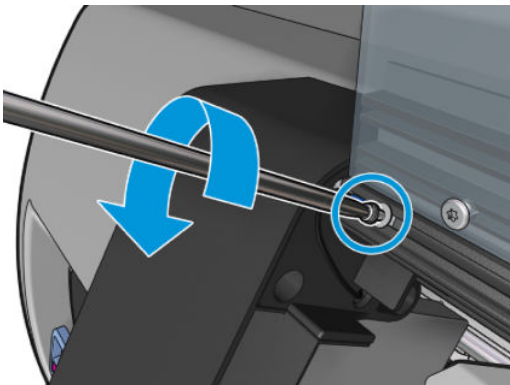
3.   Move the hinge rod by sliding it to the right by the window profile.
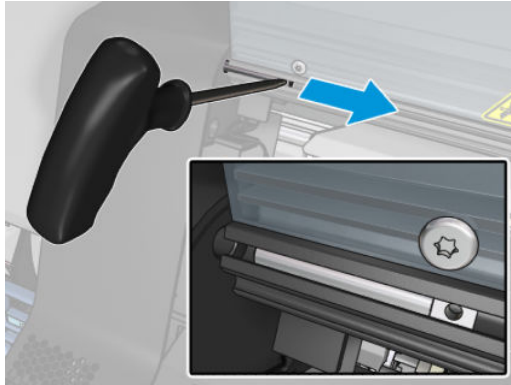
4.   Lift up the left side of the window and disengage the right window hinge.
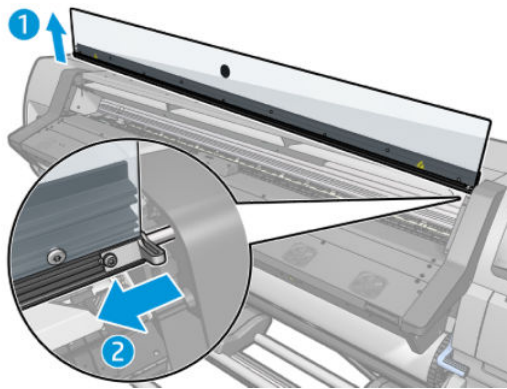
5.   Remove the window.

Front tube shelf

Removal

⚠ **WARNING!**   Turn off the printer and disconnect both power cords.

1.   Remove the .

2.   Remove the .

3. Remove the Top cover on page 380.

4. Remove the inner light PCAs (see Inner light PCA on page 377).

5. Remove the T-15 screw that connects a grounding cable to the front tube shelf.
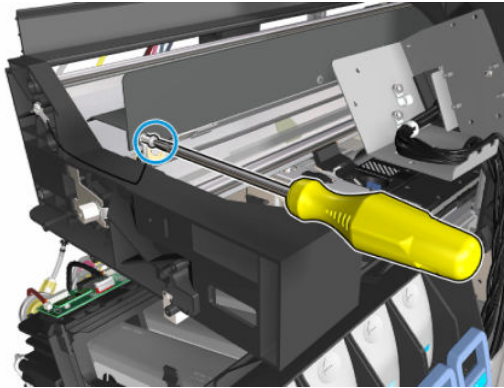
6. Remove the T-15 screw that holds the front tube shelf to the left arch.
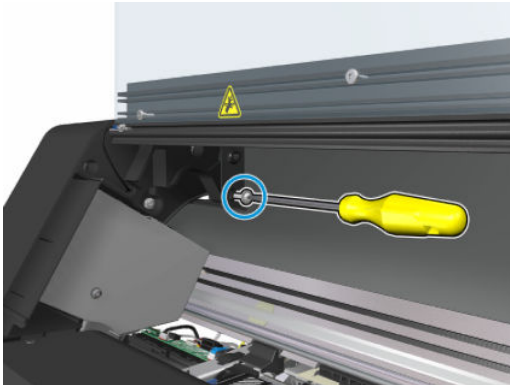
7. Unclip the ink supply tubes from the front tube shelf.

8. Remove the two T-15 screws that hold the front tube shelf to the right arch.
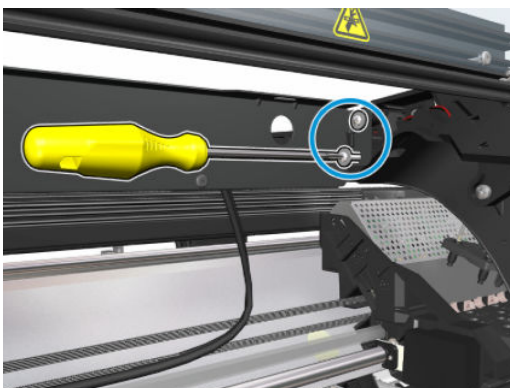
9. Unroute the trailing cable from the front tube shelf.

10. Slide out the front tube shelf on the right side (1), and unclip from the left (2).
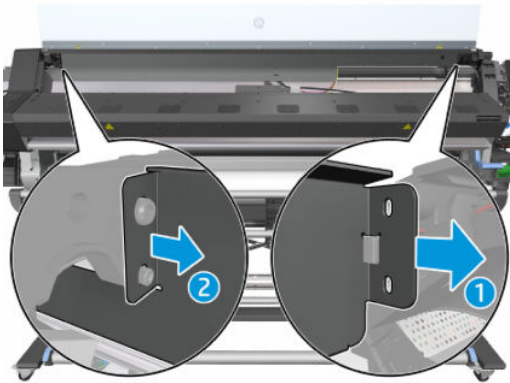
11. Remove the front tube shelf from the printer.
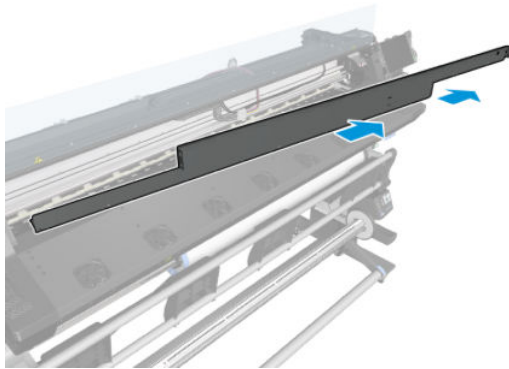
Rear tube shelf

Removal

⚠ **WARNING!** Turn off the printer and disconnect both power cords.

1. Remove the <u>Left cover on page 356</u>.

2. Remove the <u>Right cover on page 360</u>.

3. Remove the <u>Top cover on page 380</u>.

4. Remove the T-15 screw holding the rear tube shelf to the left side plate.

5. Remove the T-20 screw (**Type A**) that secures the belt tensioner to the chassis.

6. Remove the T-10 screw (**Type C**) that secures the encoder strip.

7. Remove four T-20 screws (**Type N**) that secure the right scan-axis bracket.
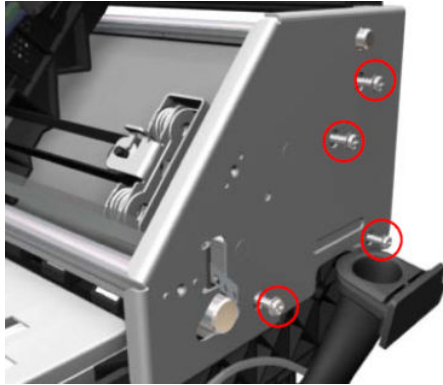
8. Remove the right scan-axis bracket from the printer.
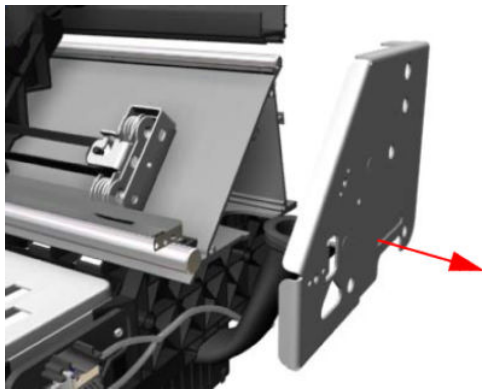
9. Slide the rear tube shelf out of the printer.

Inner light PCA

Removal

⚠ WARNING!   Turn off the printer and disconnect both power cords.

1. Open the window and locate the three inner light PCAs underneath the front tube shelf. They are connected together with small cables and there is one final cable loop at the left end of the leftmost one.
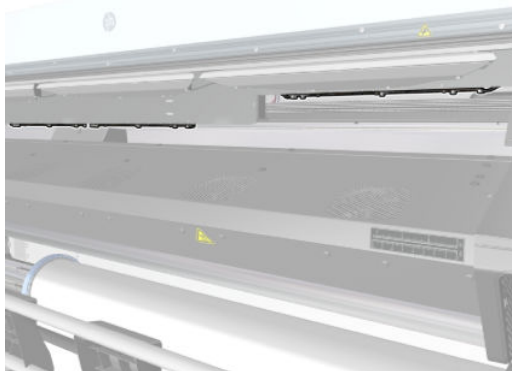
2. Unplug the cables from the defective PCA.
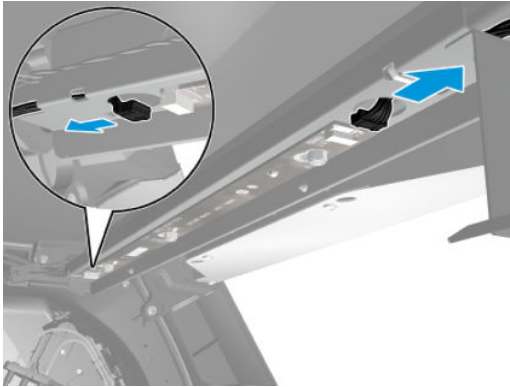
3. Untighten the two nuts until the inner light PCA moves freely. There is no need to remove the nuts completely.
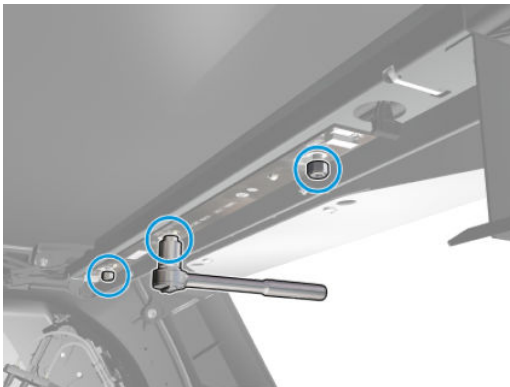
4. Move the inner light PCA slightly to the right in order to remove it.

5. Remove the inner light PCA.
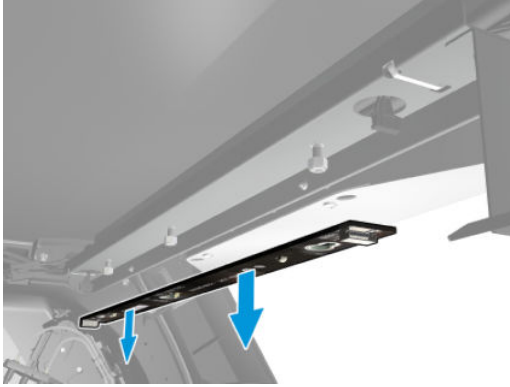
Top and Rear Covers

Top cover

Removal

⚠ **WARNING!**　Turn off the printer and disconnect both power cords.

1. Remove the .

2. Remove the .

3. Remove the .

4. Remove the .

5. Release the Ink Supply Tubes and Trailing Cable from the clip under the Top Cover.
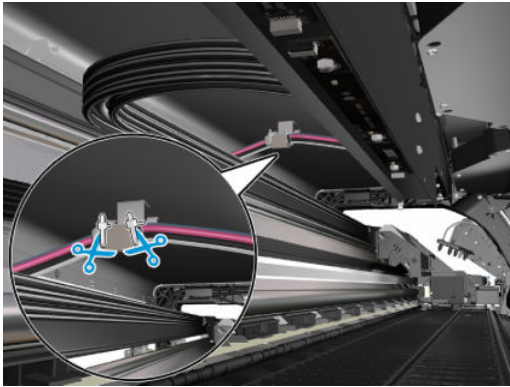
6. Release the Ink Supply Tubes from the Front Shelf.
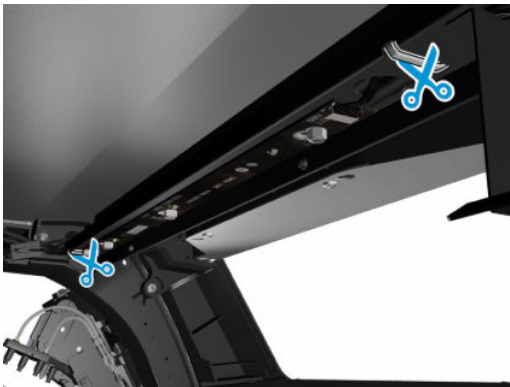
7. Unroute the Trailing Cable from the Top Cover.
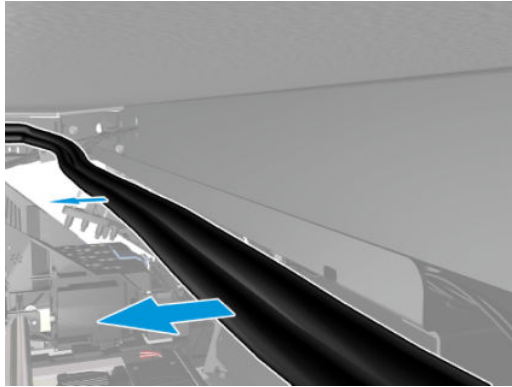
8. Position the Ink Supply Tubes so they are resting on the Platen.

📝 **NOTE:** Take care not to damage the plastic scan axis encoder.
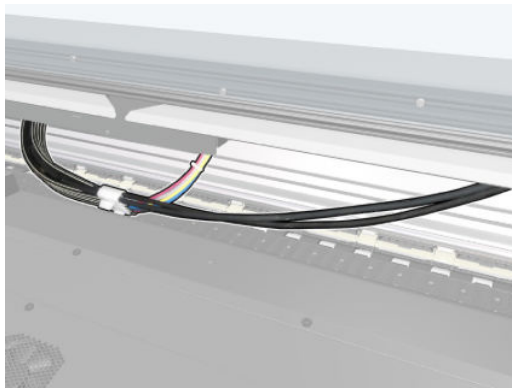
9. Remove 4 (3 in 54") T-20 screws that secure the Front Tube Shelf to the Top Cover.
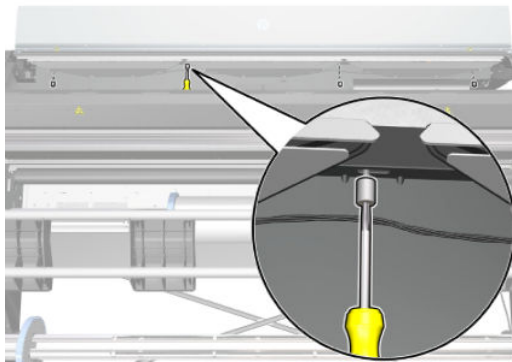
10. Disconnect the cable of the Top Cover fans and LEDs cable, at the right arch.
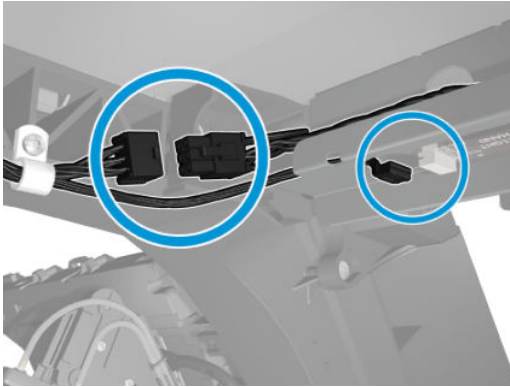
11. Unroute cables at the right arch.
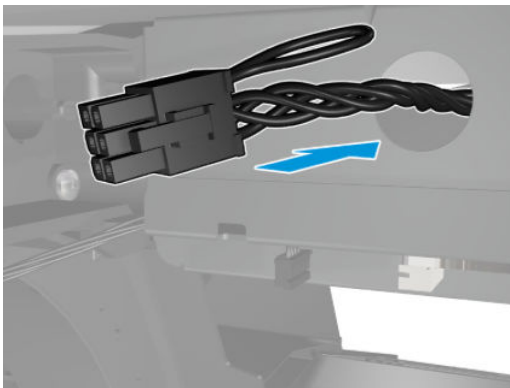
12. Remove the two locking plates.
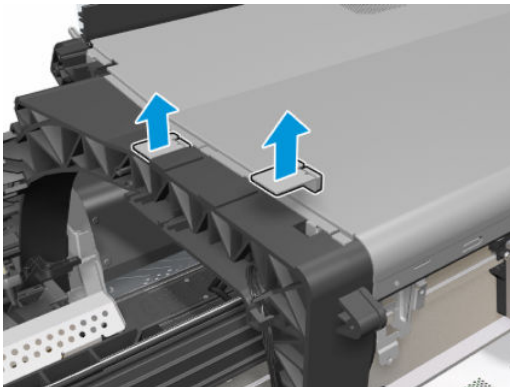
13. Slide the Top cover to the Left (1) and then raise the Top Cover (2).
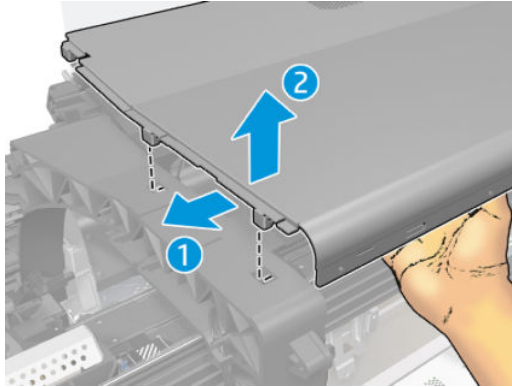
14. Close the Window.
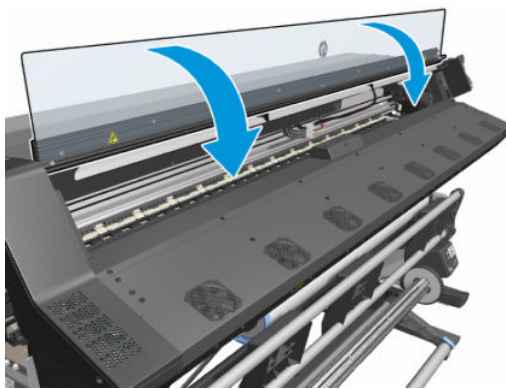
15. Raise the Top Cover in the direction of the arrows to release the two locking clips.
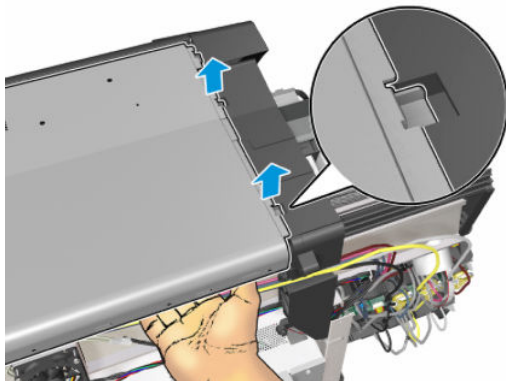
16. Remove the Top Cover that includes the fans and pipes.
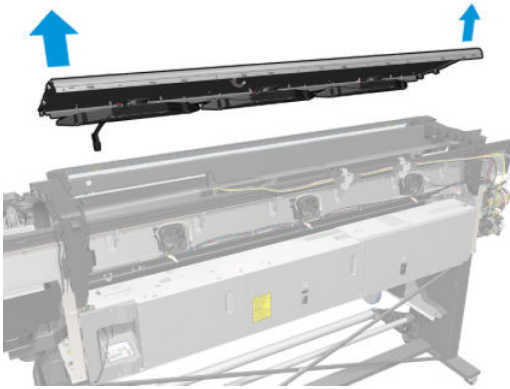
Right connector cover

Removal

⚠ WARNING!   Turn off the printer and disconnect both power cords.

1. Disconnect the TUR connector.
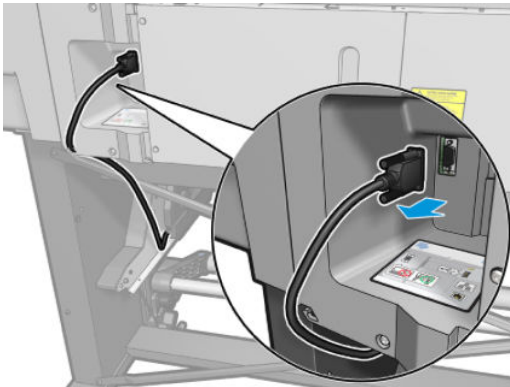
2. Unroute the TUR cable from the Right Connector Cover.

3. Remove two T-20 screws (**Type B**) from the Right Connector Cover.
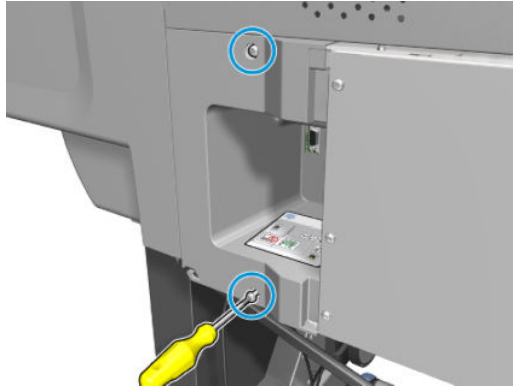
4. Rotate the Right Connector Cover a few degrees counter-clockwise so it can be removed completely.

5. Remove the Right Connector Cover from the printer.
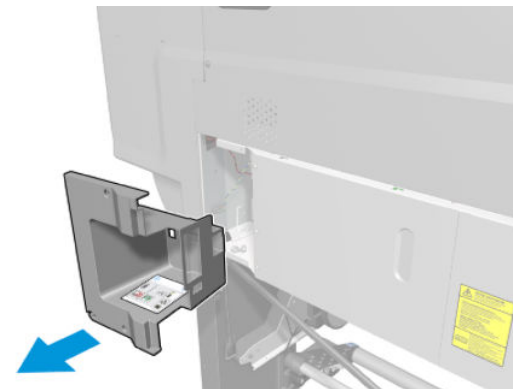
E-box extension

WARNING! Heating coils operate at hazardous voltages capable of causing death or serious personal injury. Disconnect both power cords before servicing the printer.

1. Remove three T-10 screws to release the power socket plate.
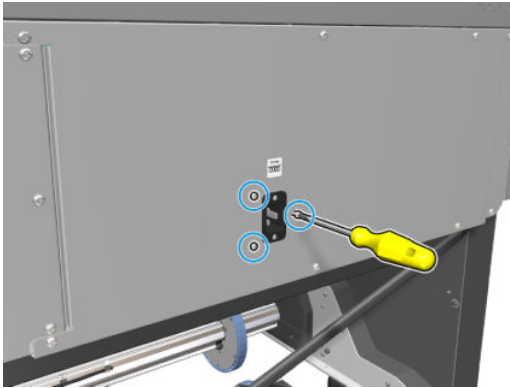
2. Remove eight T-20 screws (**Type B**) from the e-box extension cover (only 6 screws in the 315/310/115/110 printer).
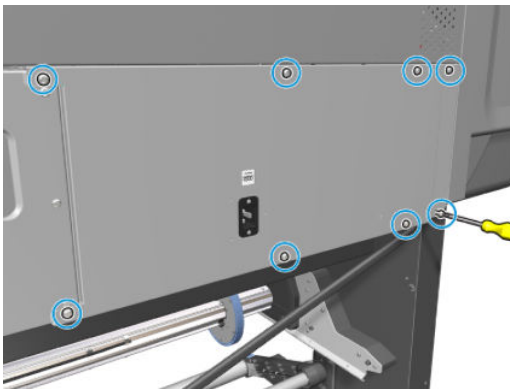
3. Remove the e-box extension cover from the printer.
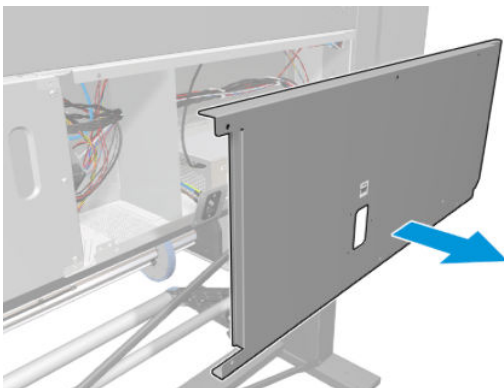
Installation

NOTE: Before installing the e-box extension cover, tighten the three T-10 screws that hold the power socket plate.

Top cover fans

Removal

⚠ **WARNING!** Turn off the printer and disconnect both power cords.

1. Open the window. See Opening the window on page 365
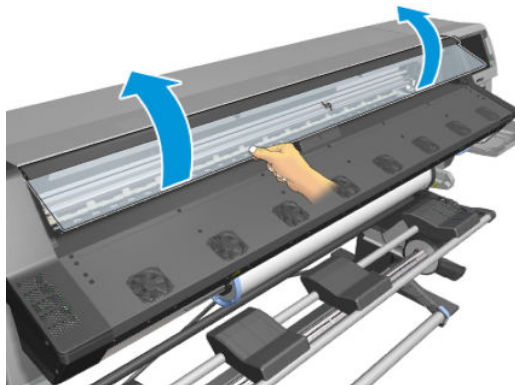
2. From inside the printer, remove four T-20 screws that secure the Top Cover Fan to the Top Cover.
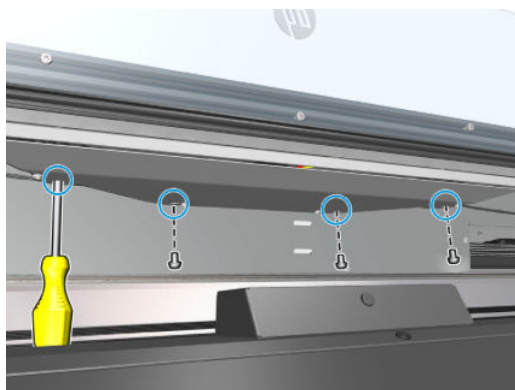
3. When the last T-20 screw is being removed, support the Fan Assembly with your hand so that it does not fall.
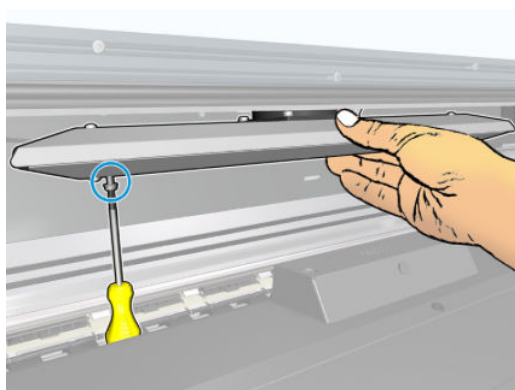
4. Disconnect the cable from Fan and Diffuser Assembly.
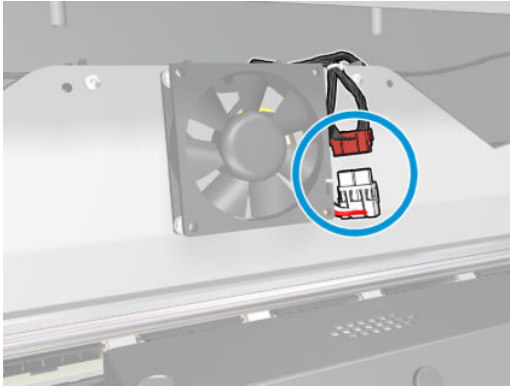
5. Remove the four T-15 screws that secure the Fan to the Diffuser Assembly.
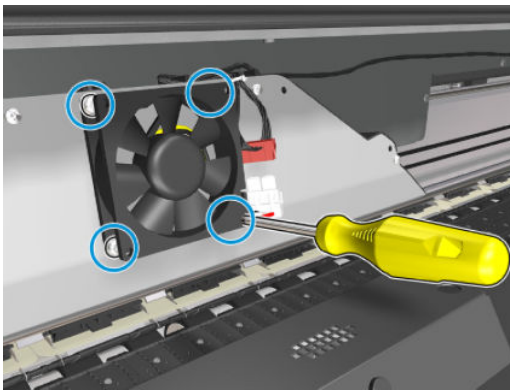
6. Remove the fan.
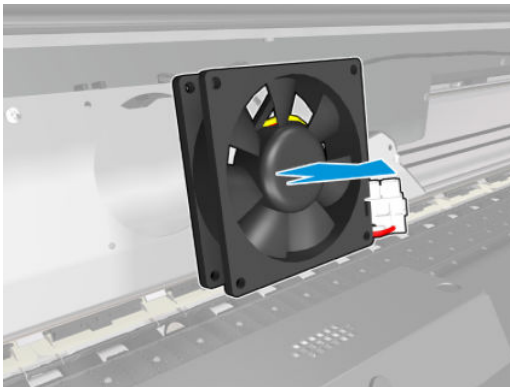
> **NOTE:** When installing the fan again, take care that the cable connector is positioned correctly

Dryer fan

Removal

> **WARNING!** Turn off the printer and disconnect both power cords.

1. Remove the

2. Disconnect the Rear Fan Cable.
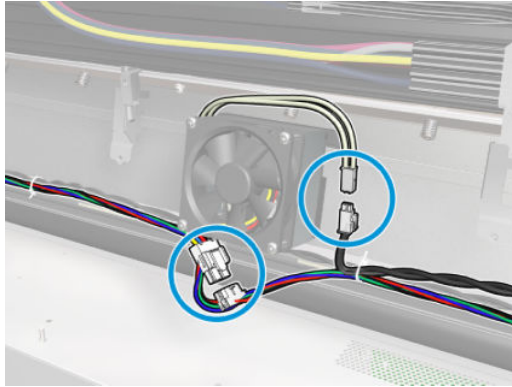
3. Remove four T-20 screws that secure the Rear Fan and Resistor **(the only fan in the basic SKU)**
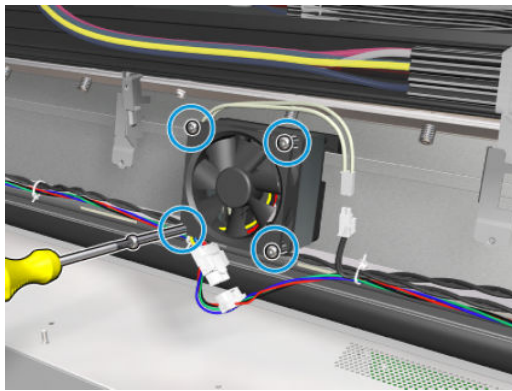
4. Remove the Rear Fan.
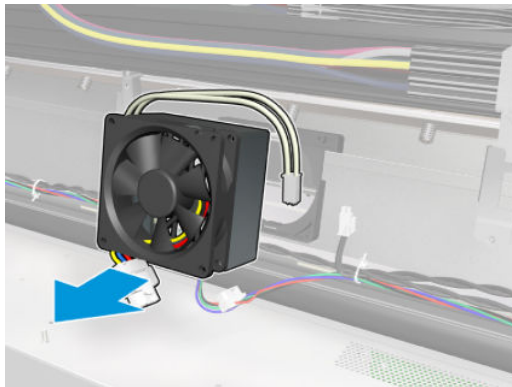
5. To remove the Rear Fan Array Cable, remove the two plastic clamps to release the cable from the array of Fans.

6. If you need to remove the plastic frame holding the fan to the scan beam, loosen the screw, turn the frame 10 degrees and pull it away.
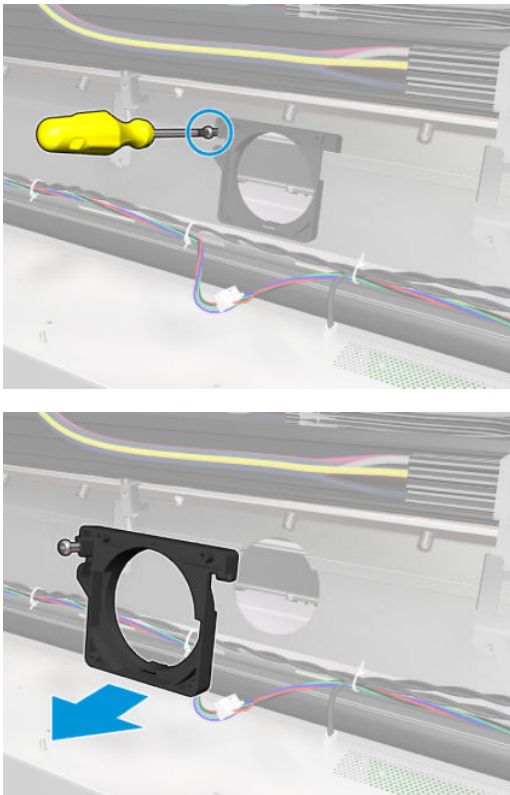
📝 **NOTE:** When installing a fan, make sure the fan is installed with its label face down.
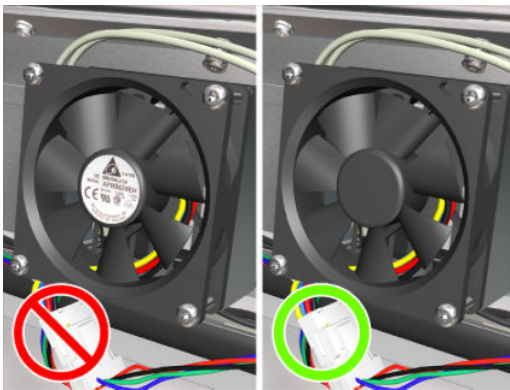
Rear cover

Removal

⚠ **WARNING!** Turn off the printer and disconnect both power cords.

1. Remove the Right cover on page 360.

2. Remove the Left cover on page 356.

3. From the Rear Cover:

- for 54–inch printers remove seven T-20 screws (**Type G**) and four T-15 screws (**Type X**)

- for 64–inch printers remove eight T-20 screws (**Type G**) and four T-15 screws (**Type X**).

📝 **NOTE:** Each Type X screw includes a washer (part number 3050-1267).
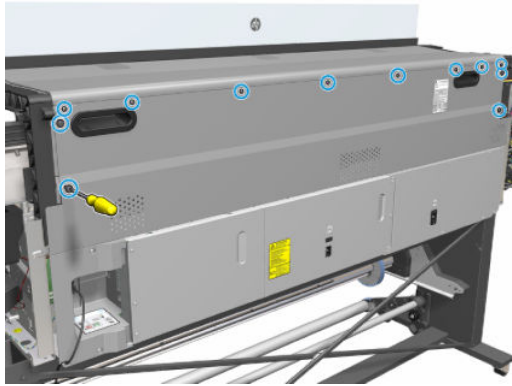
4. Open the Rear Cover slightly (as shown, approximately 30 degrees).
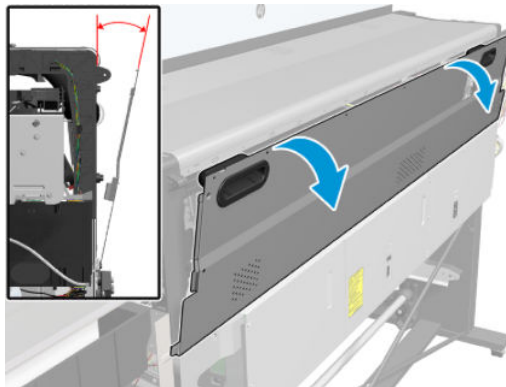
5. Lift the left side of the rear cover sufficiently to release it from the three location studs.
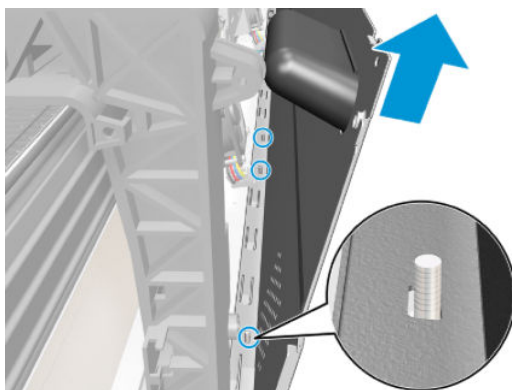
6. Remove the Rear Cover from the printer.
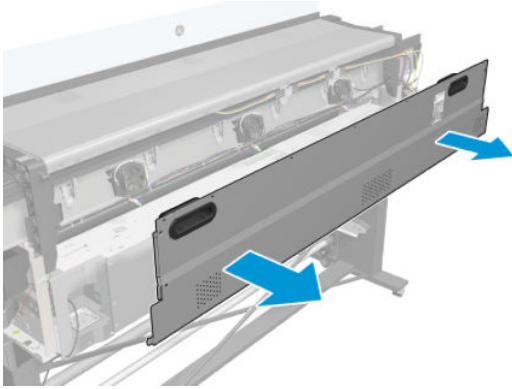
Left Side Assemblies

Color sensor actuator assembly

Removal

> ⚠ **WARNING!** Turn off the printer and disconnect both power cords.

1. Remove the Left cover on page 356.

2. Slide out the top row of Ink Cartridges from the Ink Supply Station.

3. Disconnect the Color Sensor Actuator Assembly.
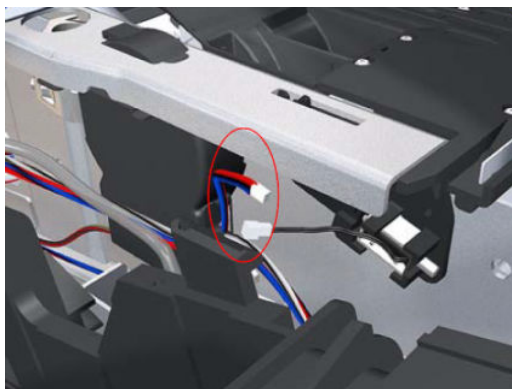
4. Remove one T-15 screw (**Type G**) that secures the Color Sensor Actuator Assembly to the printer.
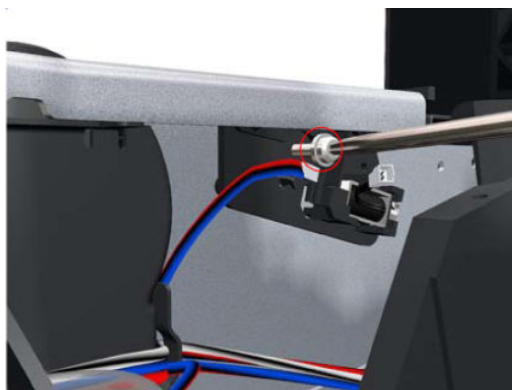
5.   Remove the Color Sensor Actuator Assembly from the printer.
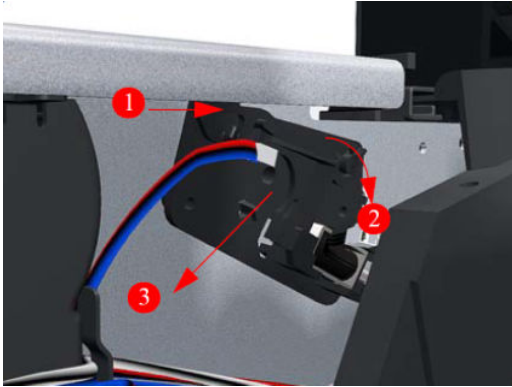
Cartridge tray

Removal

1.   Release the Tray Lever of the required color and pull out the Tray.
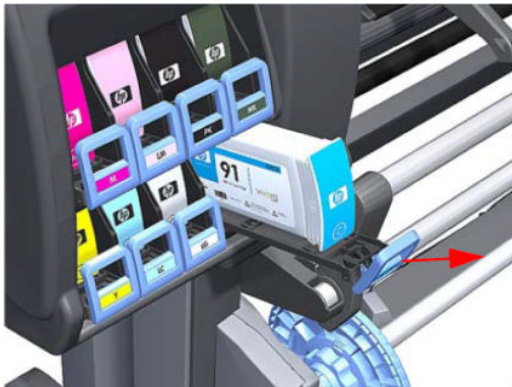
2.   Remove the Ink Cartridge if installed.

3. Press down on the Tray clip.

4. Pull the Tray completely out of the printer.

NOTE: Note that each Cartridge Tray is different even though they look very similar. When selecting the Cartridge Tray from the Support Part (it contains eight Cartridge Trays), choose the Tray that exactly matches the one that you have just removed.

Ink Supply Station (ISS)

Removal

WARNING! Turn off the printer and disconnect both power cords.

1. Remove the Left cover on page 356.

2. Remove the Scan-axis motor on page 421.

3. Pull out the top row of Cartridge Trays and remove the Ink Cartridges.
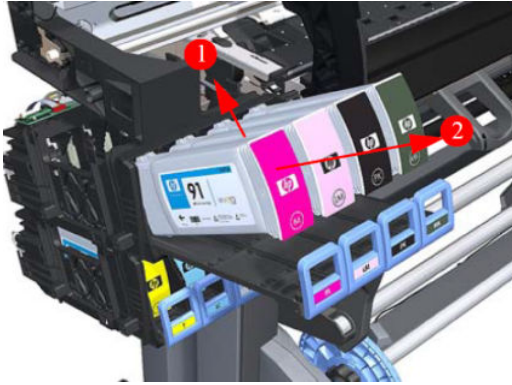
4. Close the top row of Cartridge Trays and pull out the bottom row.
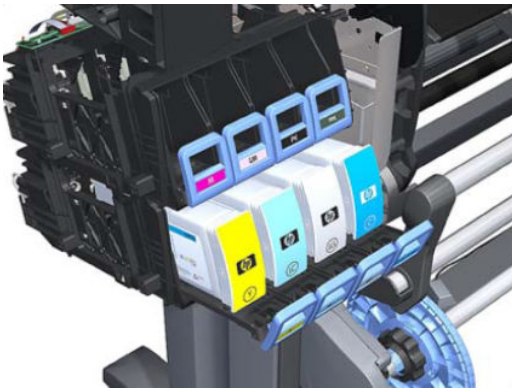
5. Pull out the bottom row of Cartridge Trays and remove the Ink Cartridges.
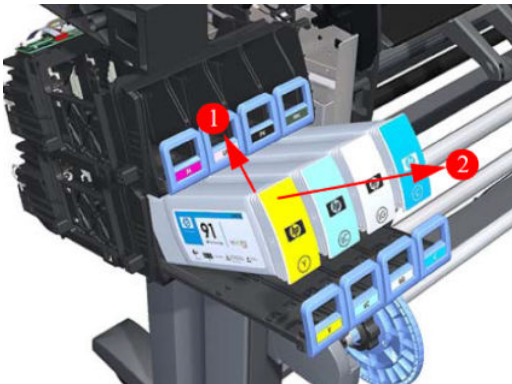
6. Disconnect the top and bottom Air Tubes from the Ink Supply Tubes.
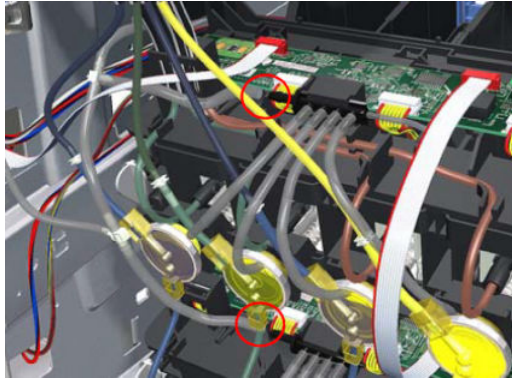
7. Disconnect the Electrical Cable from the rear of the Ink Cartridge Tube Connector.
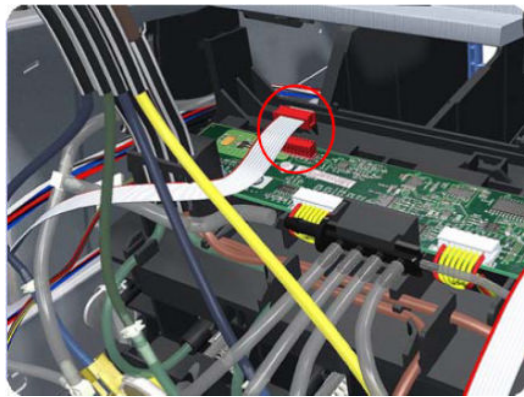
8. Unroute the Air Tubes and Electrical Connector.
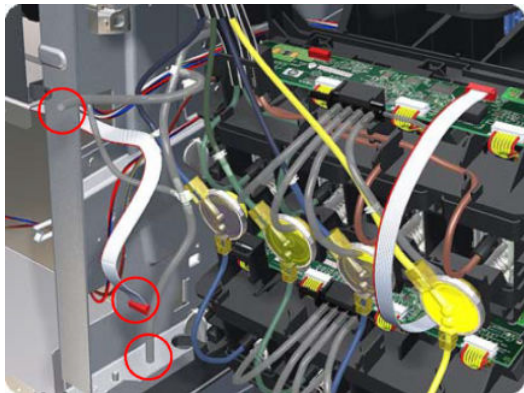
9. Remove one T-20 Screw from the Sideplate (grounding cable).
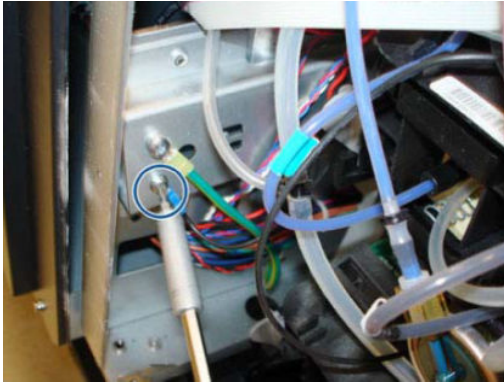
10. Twist the four latches at the rear of the Ink Cartridge Tube Connector and release the complete assembly.
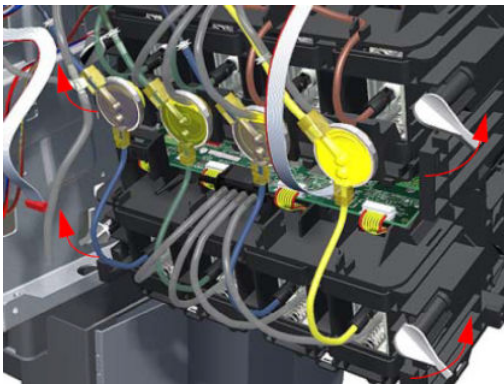
11. Lift the Cartridge Tube Connector off the Ink Supply Station.
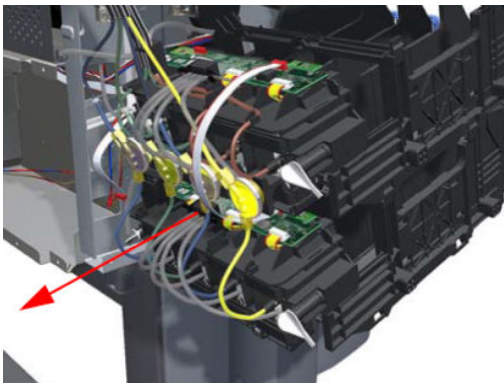
12. Remove the Cartridge Tube Connector from the Ink Supply Station.
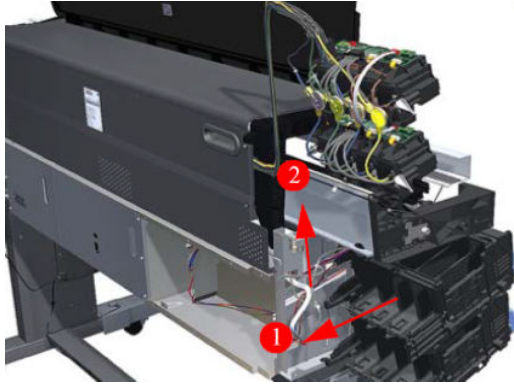
13. Unhook Ink Supply Station cables from the printer.
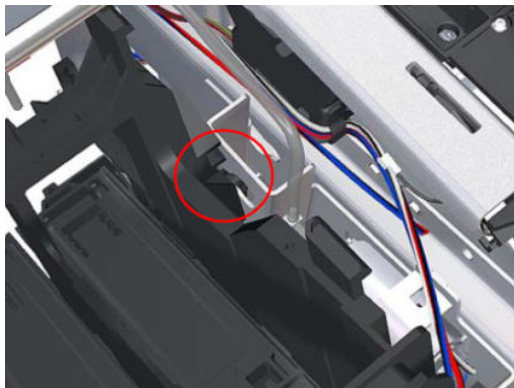
14. Remove the complete Ink Supply Station (upper and lower assemblies) from the printer.
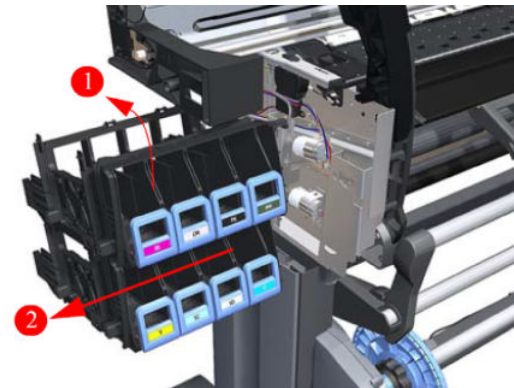
APS assembly

Removal

⚠ **WARNING!** Turn off the printer and disconnect both power cords.

1. Remove the .

2. Remove the .

3. Remove the Scan-axis motor on page 421.

4. Remove the Ink Supply Station (ISS) on page 395.

5. Disconnect the APS 1 (Top unit) valve electrical connectors from the PCA.
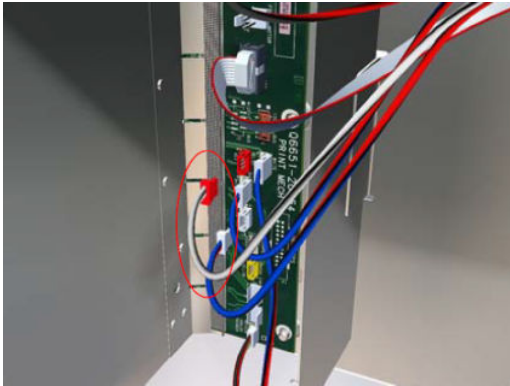
6. Unclip the APS 1 electrical cables from the cable clamps in the left connector panel.
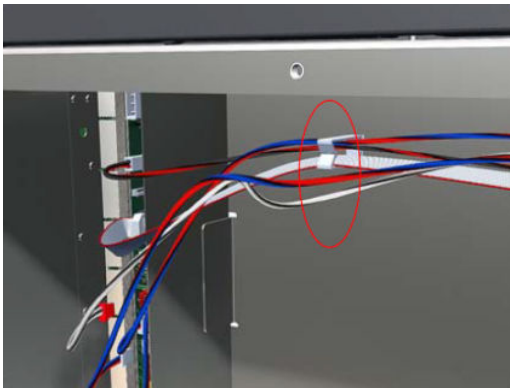
7. Unroute the APS 1 electrical connections from the left connector panel.
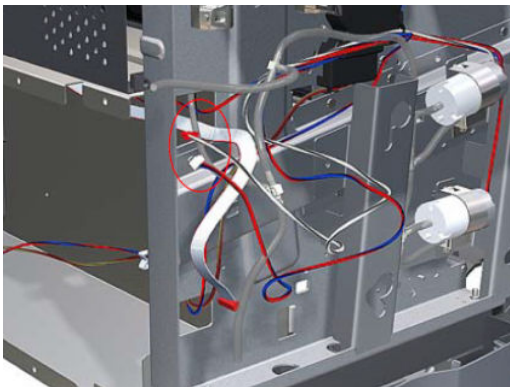
8. Unroute the electrical connections from the printer.
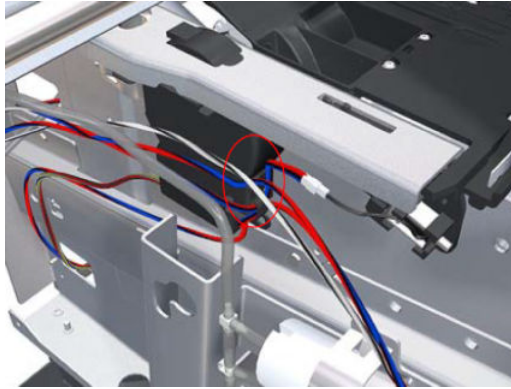
9. Disconnect both air tubes from APS 1.
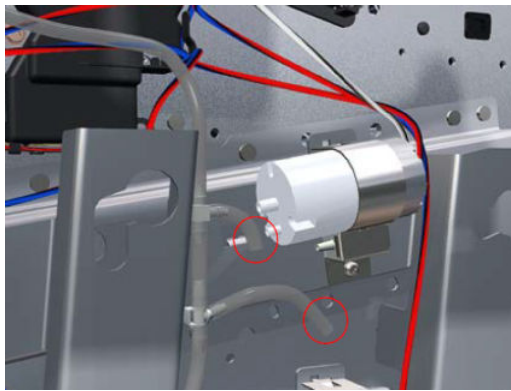
10. Remove one T-20 attachment screw from APS 1 (Top unit).
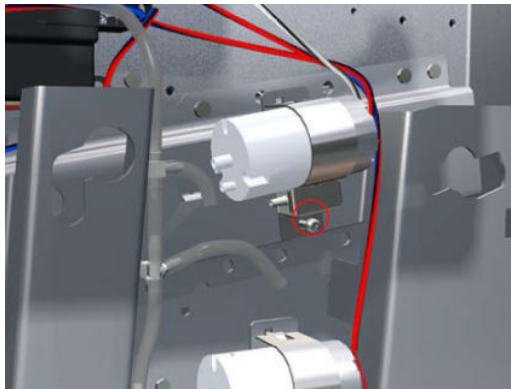
11. Remove APS 1 (Top unit) from the printer.
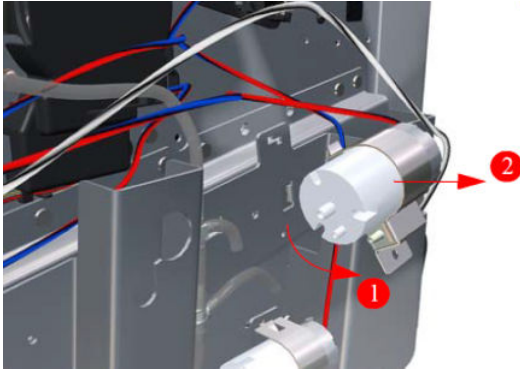
12. Disconnect the APS 2 (Bottom unit) valve electrical connectors from the PCA.
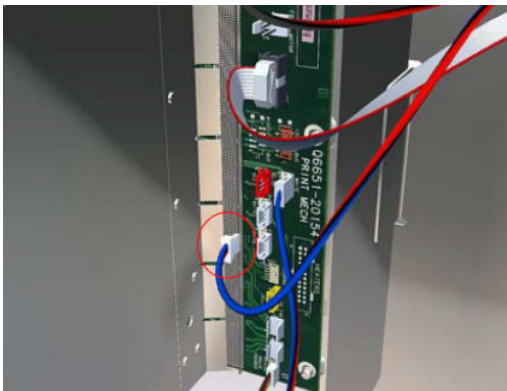
13. Unclip the APS 2 electrical cable from the cable clamps in the left connector panel.
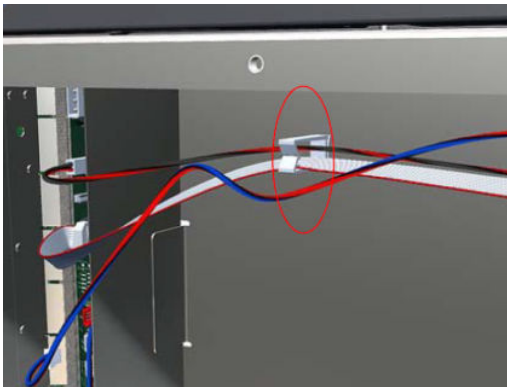
14. Unroute the APS 2 electrical connection from the Substrate Path Cover Encoder.
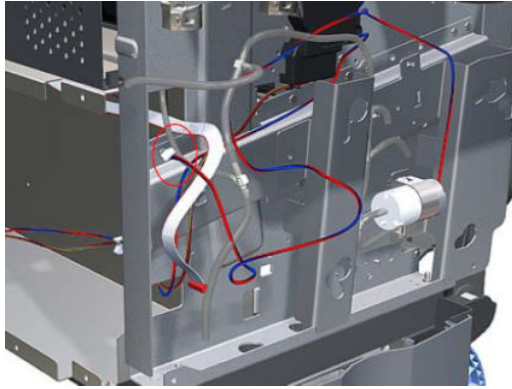
15. Unroute the APS 2 electrical connection from the printer.
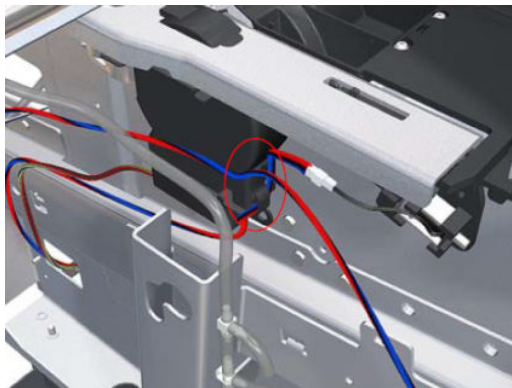
16. Disconnect both air tubes from APS 2.
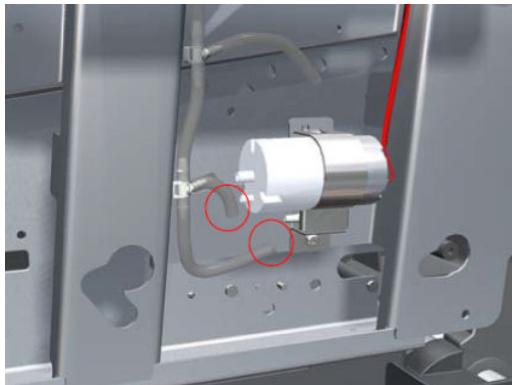
17. Remove one T-20 attachment screw from APS 1 (Top unit).
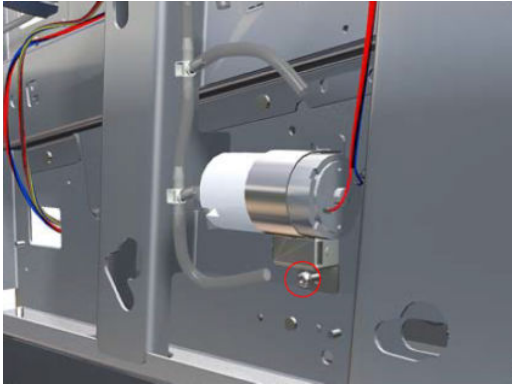
18. Remove APS 2 (Bottom unit) from the printer.

📝 NOTE: After installing the NEW APS pumps, reset the life counter "4.4.1 APS cycles".
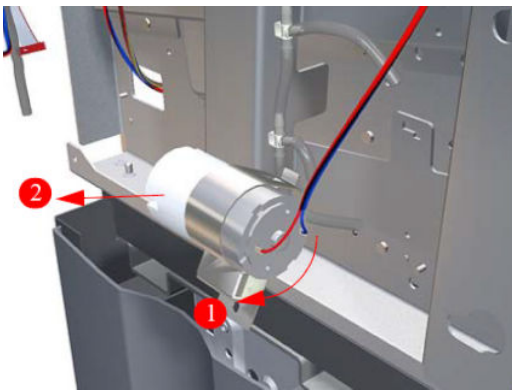
Ink supply station PCAs

Removal

⚠ WARNING! Turn off the printer and disconnect both power cords.

⚠ CAUTION: You must **never** replace both the SSD and the ISS PCAs (or the ink supply tubes and trailing cable) at the same time. If these parts need to be replaced, you must first replace one part and then turn on the printer until it completely initializes. Then turn off the printer and replace the other part.

1. Remove the .

2. Pull out the top row of cartridge trays and remove the ink cartridges.

3. Close the top row of cartridge trays and pull out the bottom row.

4. Pull out the bottom row of cartridge trays and remove the ink cartridges.

5. Twist the four latches at the rear of the lower ink cartridge tube connector and release the complete assembly.

6. Slide the upper and lower cartridge tube connectors out of the ISS assembly (but do not remove) to gain access to the upper ISS PCAs.

7. Disconnect the air tube from the upper ISS PCA.

8. Disconnect the electrical cable from the upper ISS PCA.

9. Remove two T-10 screws from the upper ISS PCA.

10. Disconnect four connectors from the upper ISS PCA.

11. To make the removal easier, you can remove the two ink valves located at the rear of the upper cartridge tube connector from their holders, by turning them in a clockwise direction.

12. Slide out the lower carriage tube connector to gain access to the lower ISS PCA (but do not remove). You may need to slide in the upper carriage tube connector.

13. Disconnect the electrical cable from the lower ISS PCA.
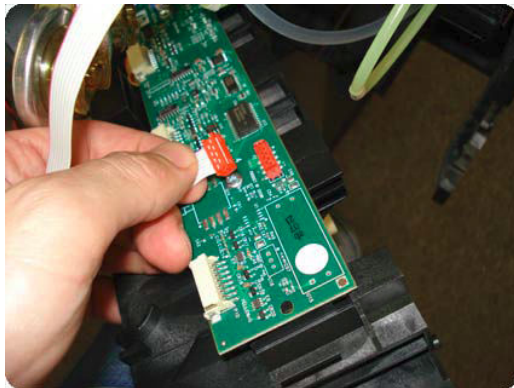
14. Remove two T-10 screws from the lower ISS PCA (one screw also secures a grounding cable).
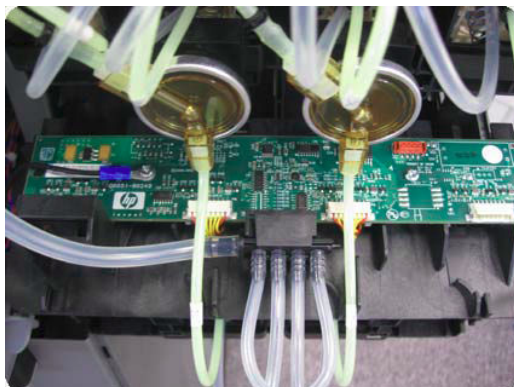
15. Disconnect the two electrical cables from the lower ISS PCA.

Right Side Assemblies

Front door swtich sensor

Removal

⚠ **WARNING!** Turn off the printer and disconnect both power cords.

1. Remove the <u>Right cover on page 360</u>

2. Disconnect the maintenance-cartridge door sensor cable.
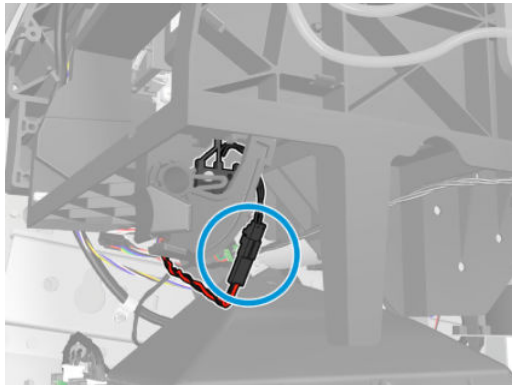
3. Release one T-10 screw the attaches the maintenance-cartridge door sensor assembly to the printer.
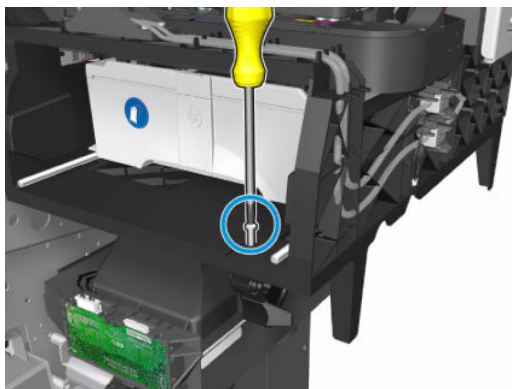
4. Remove the maintenance-cartridge door sensor assembly from the printer.
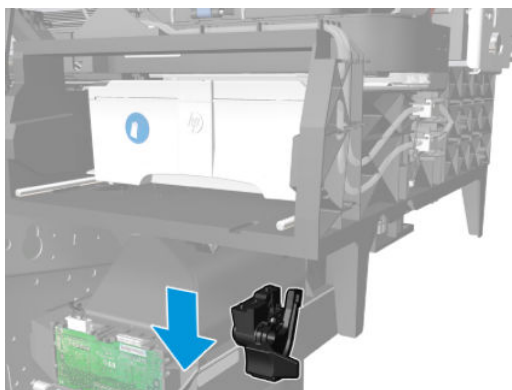
Right bracket

Removal

⚠️ **WARNING!**   Turn off the printer and disconnect both power cords.

1.   Remove the Right cover on page 360.

2.   Remove the Left cover on page 356.

3.   Remove the Encoder strip and encoder sensor on page 447.

4.   Remove the T-20 screw (type A) that secures the Belt tensioner to the Chassis.

5.   Remove four T-20 screws (type N) that secure the Right scan-axis bracket.

📝 **NOTE:**   Note that these are Chassis screws and in normal circumstances should never be removed, but in this case we need to remove them in order to remove the Right scan-axis bracket.

6. Remove the Right scan-axis bracket from the printer.
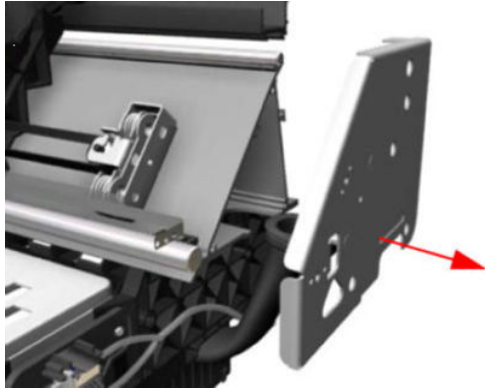
Aerosol fan assembly

WARNING! Hazardous moving parts: rotating fan blades. Keep hands clear

Removal

⚠ WARNING! Turn off the printer and disconnect both power cords.

1. Remove the .

2. Remove the .

3. Unroute the cleaning roll motor cable from the Aerosol Fan Assembly.
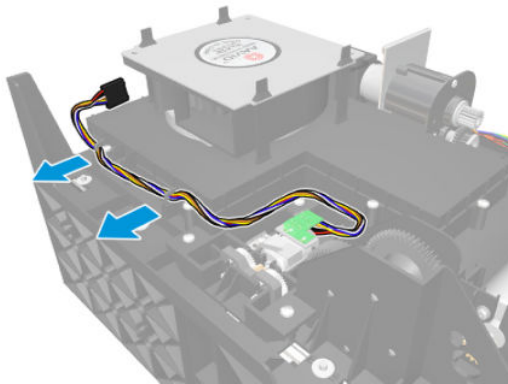
4. Remove eight T-15 screws.
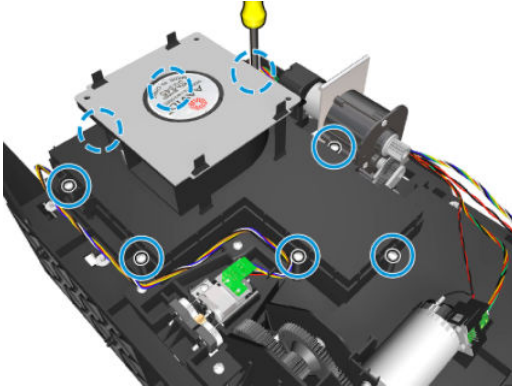
5. Remove the Aerosol Fan Assembly.
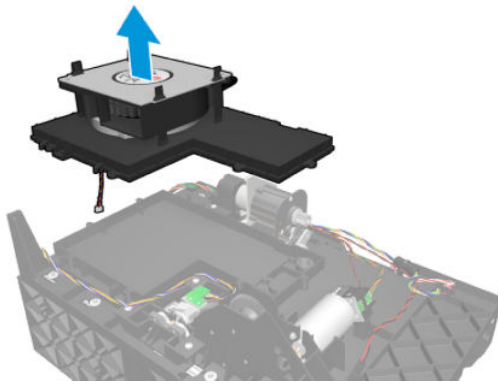
Spit roller motor

Removal

⚠ **WARNING!**   Turn off the printer and disconnect both power cords.

1. Remove the .

2. Remove the .

3. Remove two T-15 screws that secure the Spit Roller Motor plastic protector to the Service Station chassis.
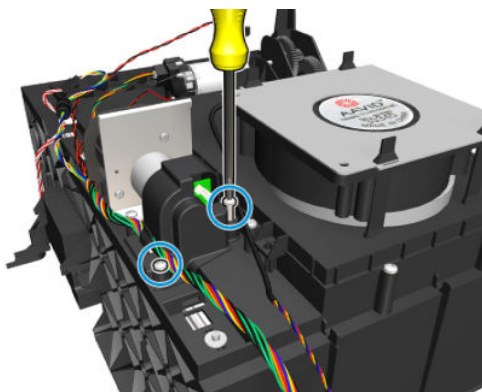
4. Remove three T-15 screws that secure the Spit Roller Motor to the Service Station chassis.
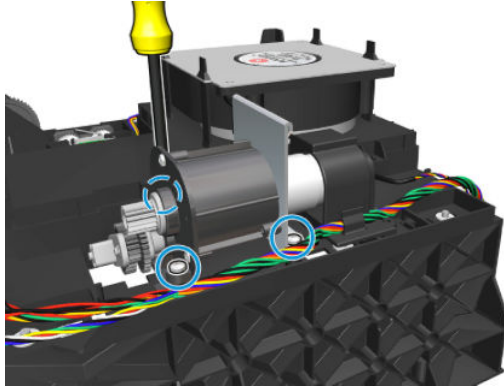
5. Remove the Spit Roller Motor.
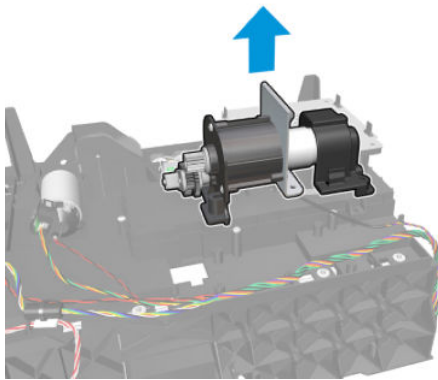
Cleaning roll motor assembly

Removal

⚠ **WARNING!** Turn off the printer and disconnect both power cords.

1. Remove the <u>Right cover on page 360</u>.

2. Disconnect the cleaning roll motor cable.
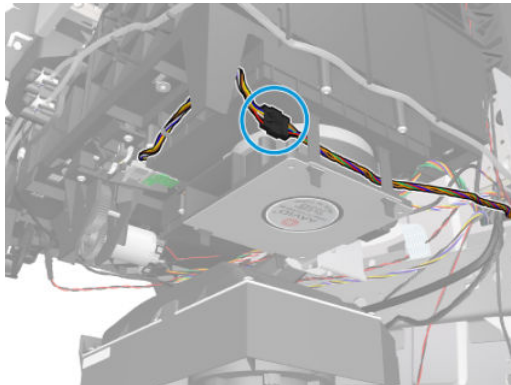
3. Remove three T-15 screws that secure the cleaning roll assembly to the Service Station chassis.
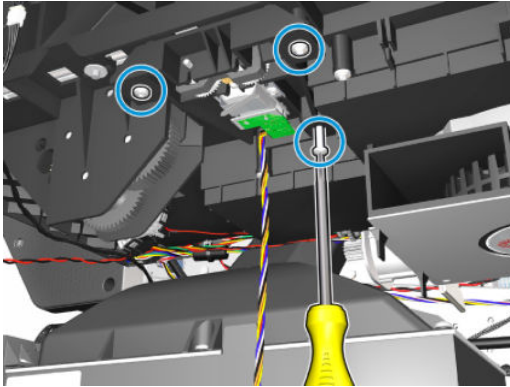
4. Remove the cleaning roll assembly.
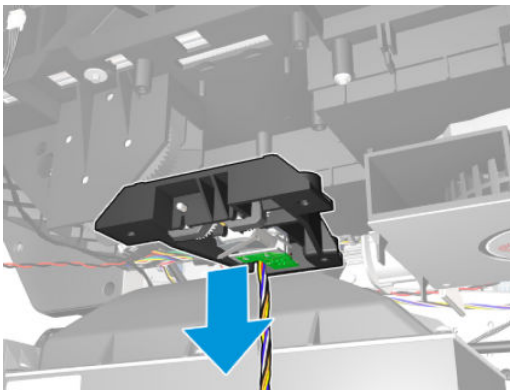
Primer assembly

Removal

⚠ **WARNING!** Turn off the printer and disconnect both power cords.

1. Remove the Right cover on page 360.

2. Remove the Right connector cover on page 384.

3. Remove the Front Panel.

4. Disconnect the Primer Assembly Cable from the Interconnect PCA.
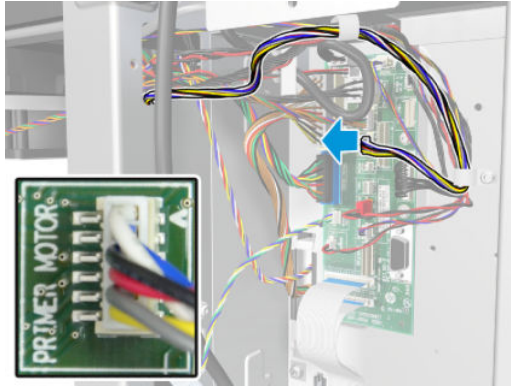
5. Remove two T-10 screws to unroute the Primer Assembly Cable from the cable clamp.
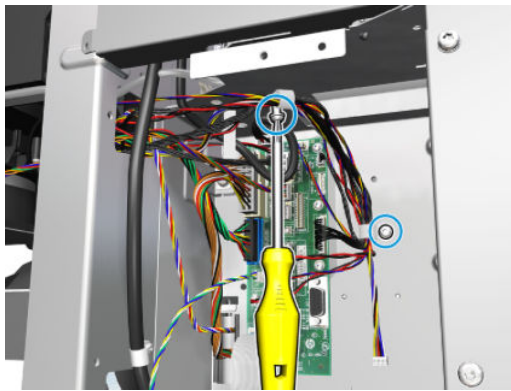
6. Disconnect the two Primer Assembly tubes.
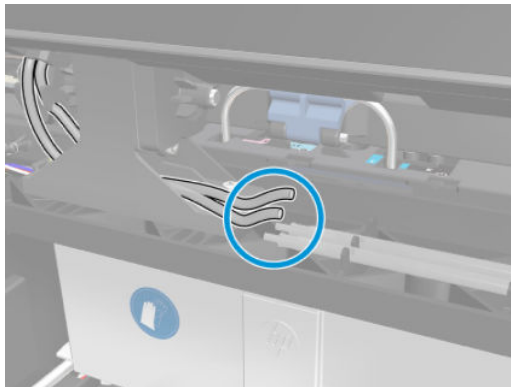
7. Remove four T-10 screws that secure the Primer Assembly to the Service Station.

📝 **NOTE:** Use a short screw driver, less than 10 cm in length.
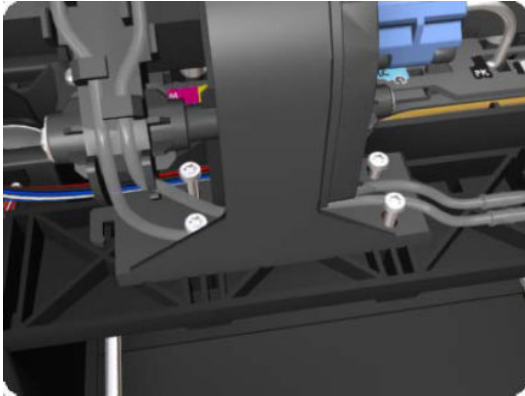
8. Remove the Primer Assembly from the Service Station.

📝 **NOTE:** When installing the Primer Assembly, use the identification marks on the Primer Assembly Tubes to ensure they are correctly connected.
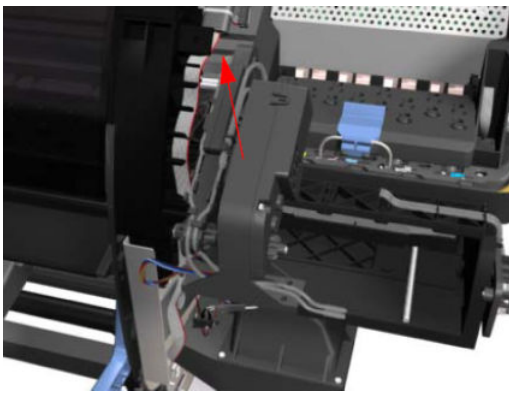
Installation

1. When installing the new Primer Assembly, it is important to note that the internal tube (red) is shorter than the external tube (green).
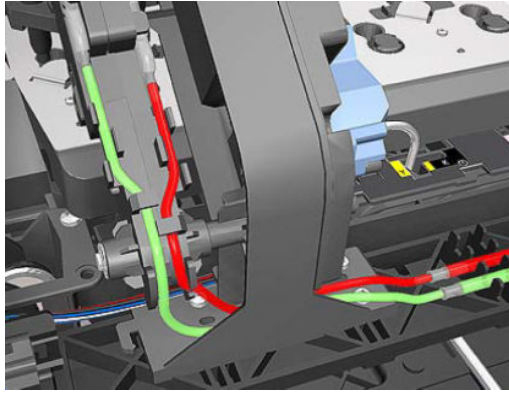
2. Reset "4.7.7. Primer Cycles".

3. Perform the Calibration "5.6.2 Primer Calibration".

Primer valves

Removal

1. Remove the .

2. Remove the .

3. Disconnect the primer valves cable from the interconnect PCA.
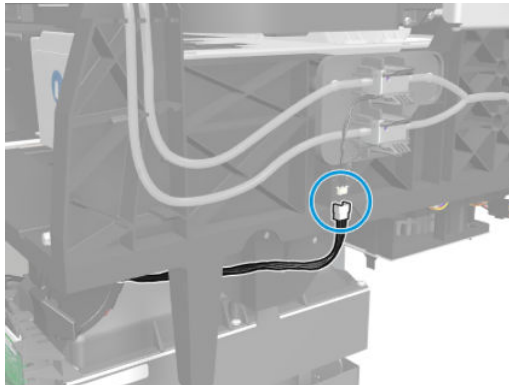
4. Disconnect the two primer assembly tubes.
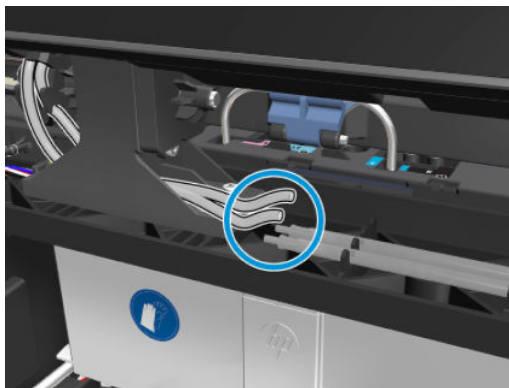
5. Completely unroute the primer valves cables from the service station.
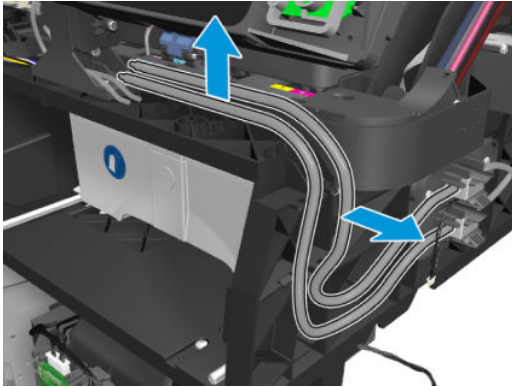
6. Disconnect the primer valve tube at the Y-piece.
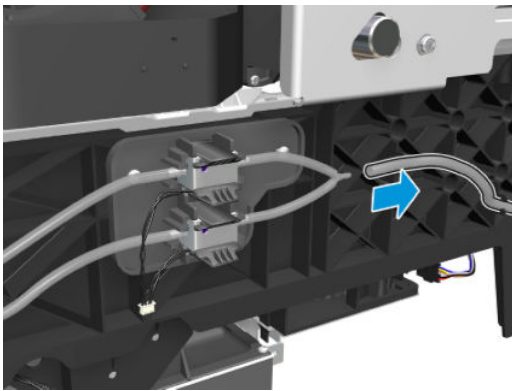
7. Remove two T-15 screws that secure the primer-valves mounting plate from the printer.
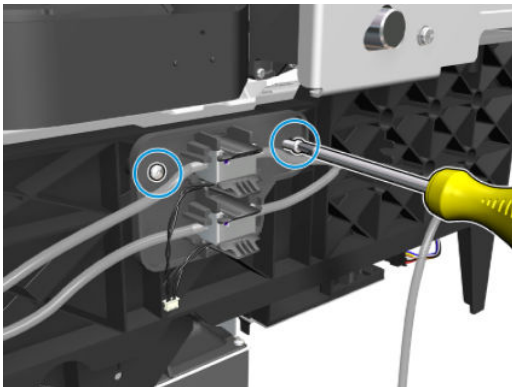
8. Remove the primer-valves and mounting plate from the printer.
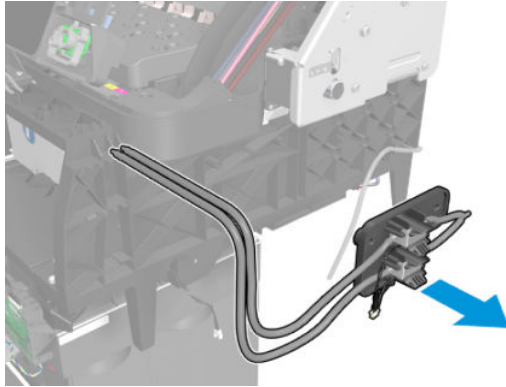
Installation notes

- The internal tube (red) is shorter than the external tube (green).
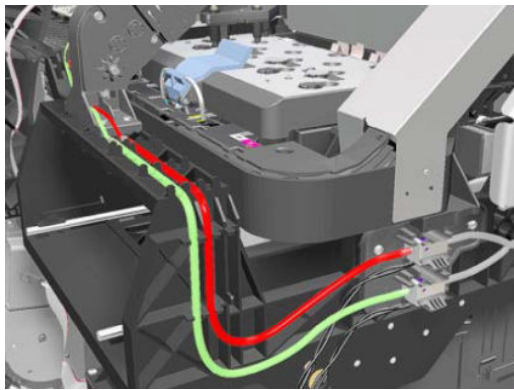
- The upper valve has a shorter cable than the lower valve.
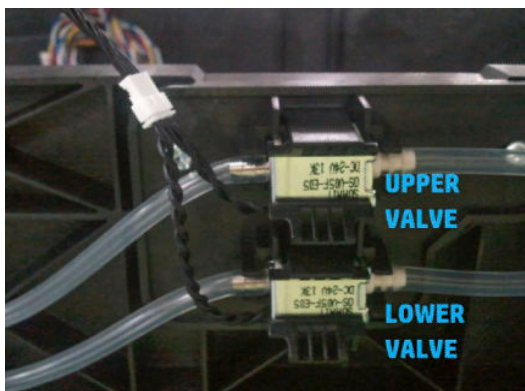
Primer valve cable

Removal

1. Remove the .

2. Remove the .

3. Disconnect the primer valve cable from the interconnect PCA.
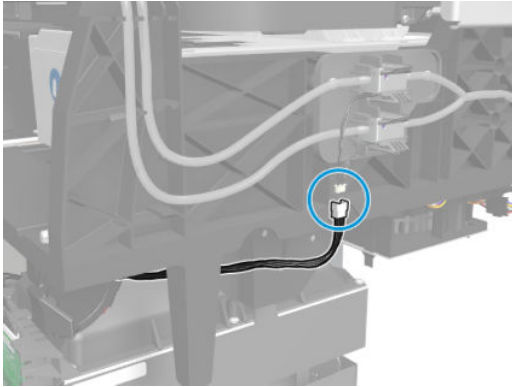
4. Disconnect the Primer Assembly Cable from the Interconnect PCA.
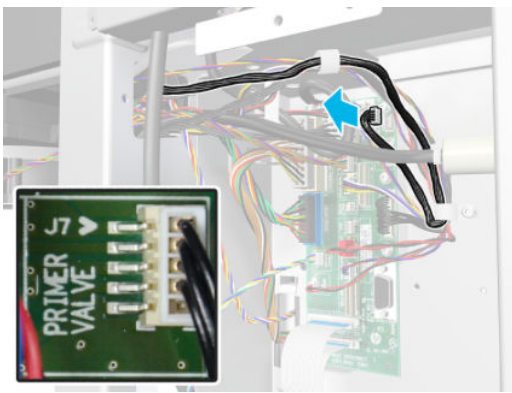
5. Remove two T-10 screws to unroute the Primer Assembly Cable from the cable clamp.
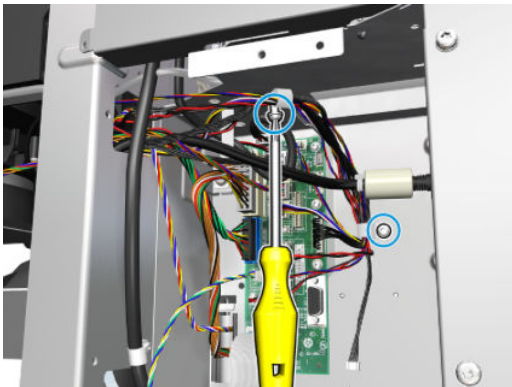
6. Completely the primer valve cable.

7. Remove the primer valve cable.
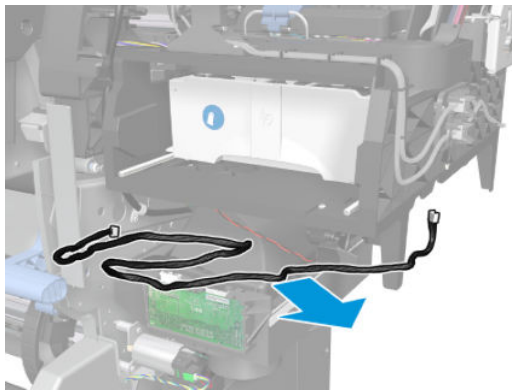
Installation notes

- The internal tube (red) is shorter than the external tube (green).
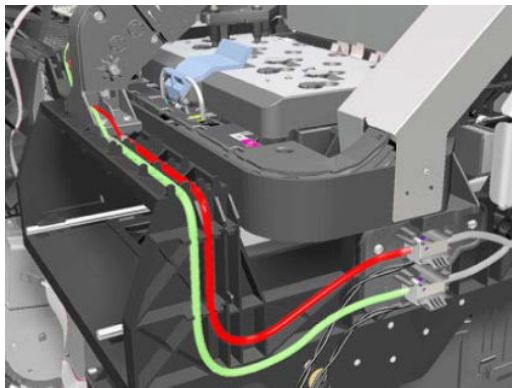
- The upper valve has a shorter cable than the lower valve.
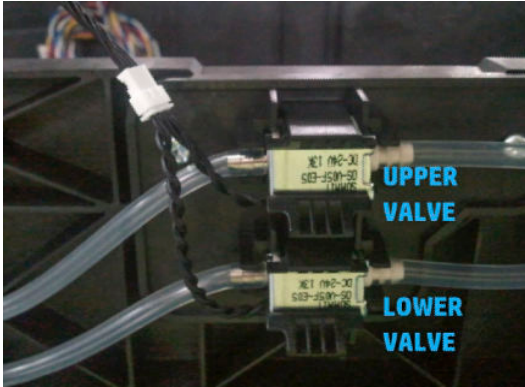
Scan Axis Assemblies

Scan-axis motor

Removal

⚠ **WARNING!** Turn off the printer and disconnect both power cords.

1. Remove the <u>Right cover on page 360</u>.

2. Remove the <u>Left cover on page 356</u>.

3. Remove the <u>E-box extension on page 385</u>.

4. Uncap the Carriage Assembly by manually pulling out the Printhead Maintenance Cartridge tray.
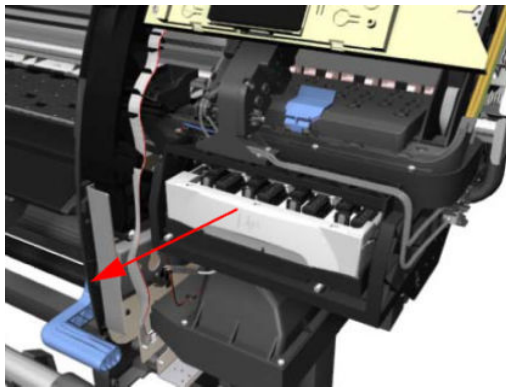
5. Lift the Primer and hold the Primer to its maximum position to avoid damaging it when you move the Carriage Assembly in the next step.
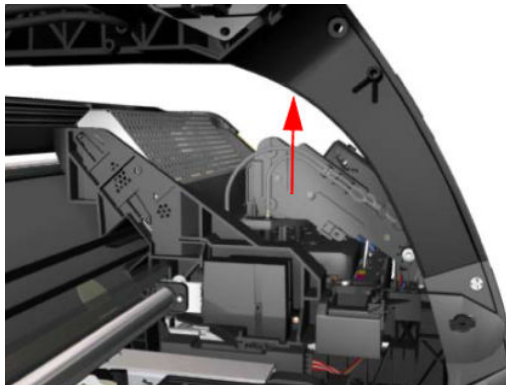
6. Move the Carriage Assembly slightly away from the right Scan-Axis Bracket.
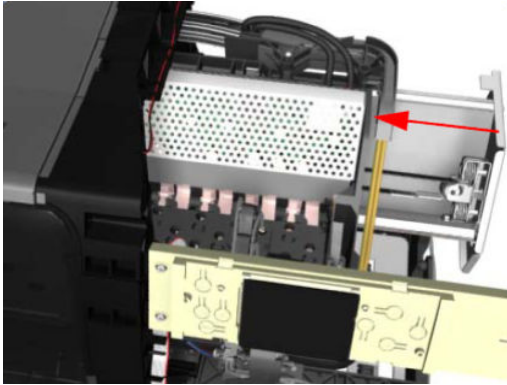
7. Remove one T-15 screw that secures the Belt Tensioner to the Chassis.

8. Release the Carriage Belt from the Scan-Axis Motor on the left hand side of the printer.
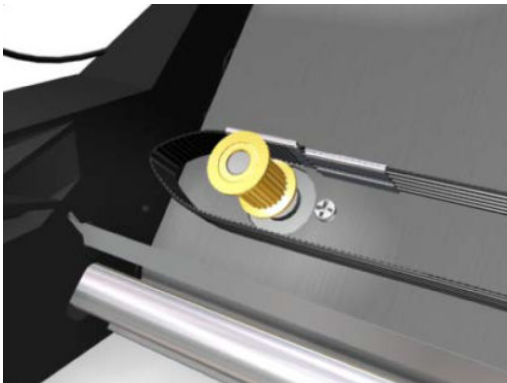
9. Disconnect the Scan-Axis Motor cable from the PrintMech PCA.

10. Unroute the Scan-Axis Motor cable from the chassis.
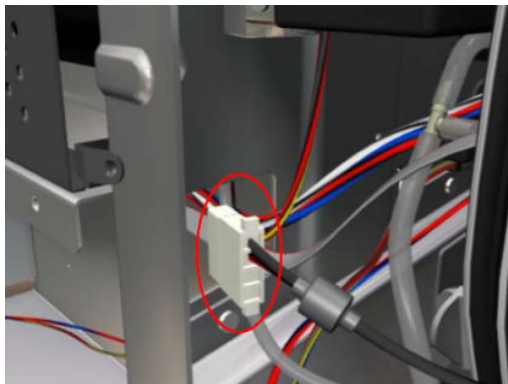
11. Remove two T-20 screws (Type A) that secure the Scan-Axis Motor.

   📝 NOTE: Make sure you hold the Scan-Axis Motor securely when removing the screws.
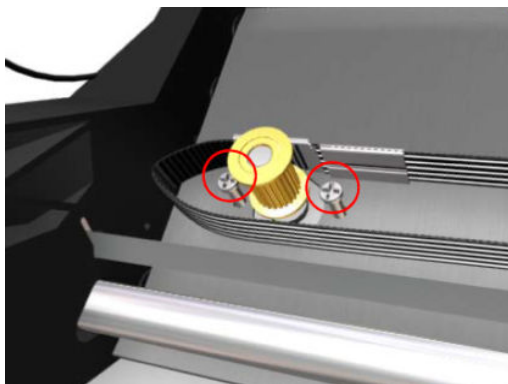
12. Remove the Scan-Axis Motor from the printer.

   📝 NOTE: After installing the NEW Scan-Axis Motor, make sure you perform the following Service Utility:

   ● Reset the life counter "4.5.3 Scan Axis motor".
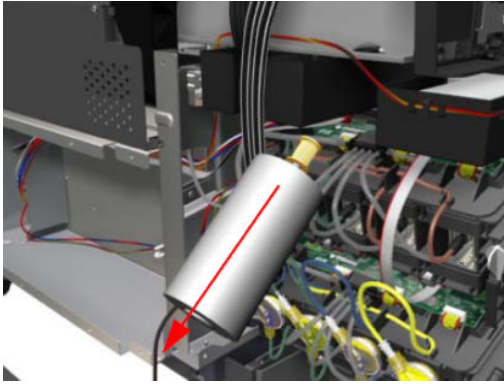
Installation

- Make sure to route the cable through the lower cable bundle.

Floater and PIP assembly

📝 NOTE: The following procedure involves handling of ink tubes. You are recommended to protect areas around the repair zone to avoid undesired ink stains, and to wear gloves and protective clothes.

Removal

⚠ WARNING! Turn off the printer and disconnect both power cords.

1. Remove the Left cover on page 356.

2. Remove the Ink Supply Station (ISS) on page 395.

3. Remove the lower ink supply station PCA (see Ink supply station PCAs on page 404).

4. Undo two clips that hold the Floater and PIP Assembly to the ISS.

📝 NOTE: You only need to disassemble the Floater and PIP Assembly you intend to replace it.
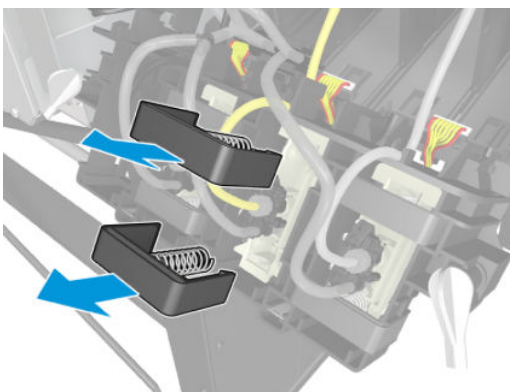
5. Disconnect the PIP cable from the ISS PCA.
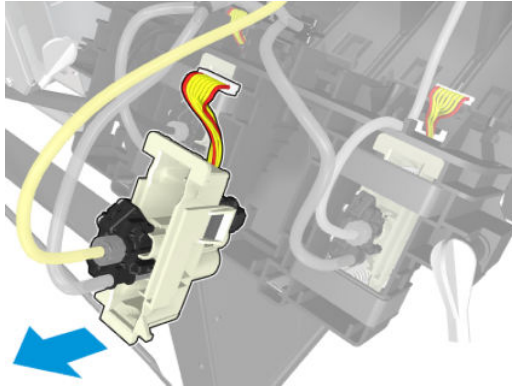
6. Remove the Floater and PIP assembly from the ISS.
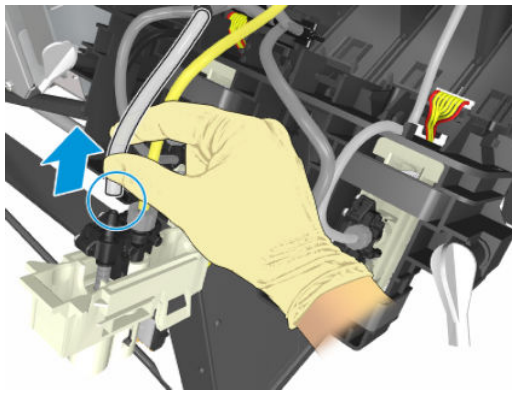
7. Pull the air tube from the PIP.

   📝 **NOTE:** Pull firmly taking care not to damage the tube.
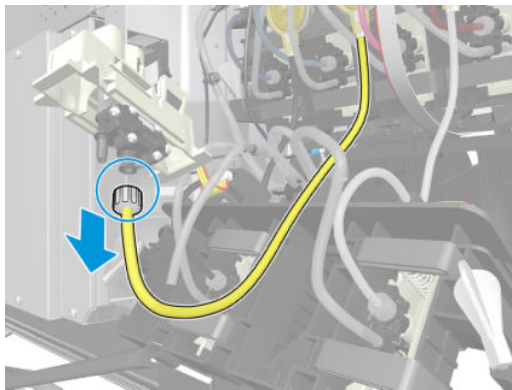
8. Disconnect the ink tube from the PIP. Put a plastic cap on the replaced PIP and on the ink tube you have just disconnected.

    NOTE: Ink may drip from the tube during this process. Hold the floater up to minimize ink drops, and protect the floor under the PIP.
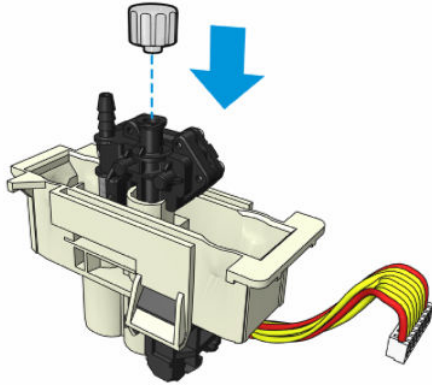
Installation

1. Connect the ink tube to the new PIP, and make sure the fitting is tightened. A loose fitting can cause ink leakages.
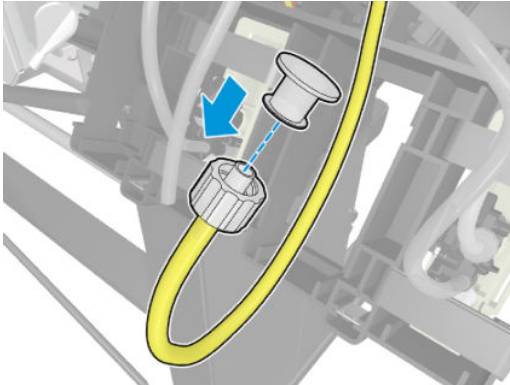
2. Connect the air tube to the new PIP.
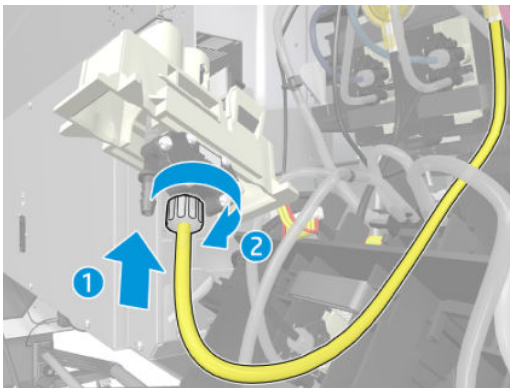
3. Attach the Floater and PIP assembly to the ISS.
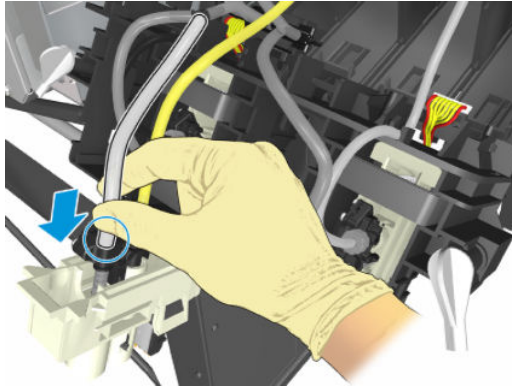
4. Connect the PIP cable to the ISS PCA.
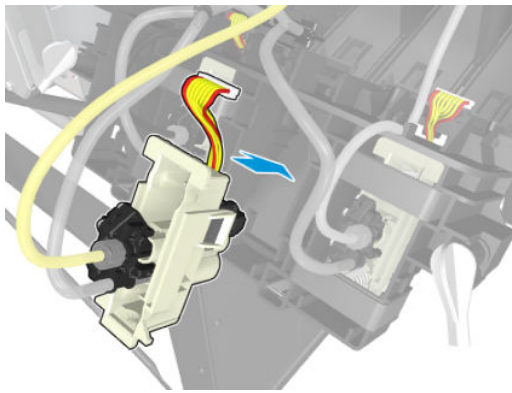
5. Replace the two clips that hold the Floater and PIP Assembly to the ISS.
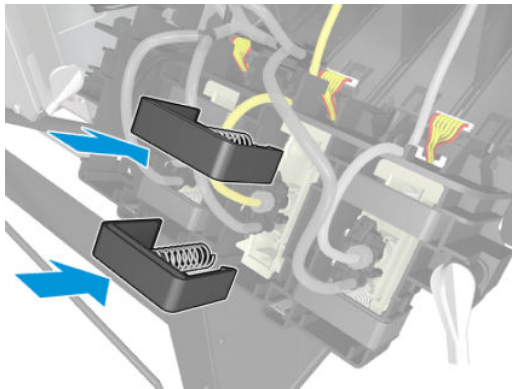
6. Tighten all 7 fittings connecting the ink tube to the PIP module.

7. Refill the ink tube from which the PIP module has been replaced. See 3.3.3 Refill Ink Tubes on page 241.

8. Perform the PIP calibration process. See 3.4.2 Ink level sensor calibration on page 244.

9. Before installing the left cover, print a sample plot and make sure there is no ink leaking from the PIP fittings.

Service station

Removal

⚠ WARNING!   Turn off the printer and disconnect both power cords.

1.   Remove the Right cover on page 360.

2.   Remove the Primer assembly on page 412.

3.   Remove the Primer valves on page 415.

4.   Remove the Right connector cover on page 384.

5.   Remove the Printhead Maintenance Cartridge — see the user's guide.

6.   Disconnect the cleaning roll motor cable.
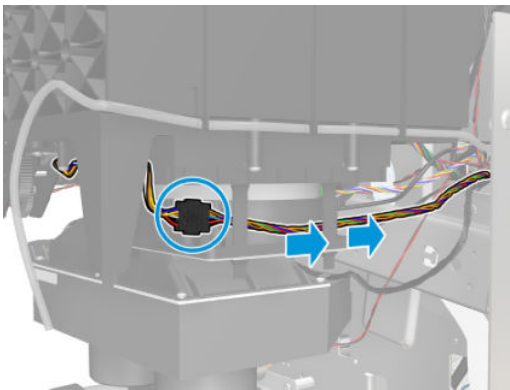
7.   Disconnect the Spit Rollers Motor cable.
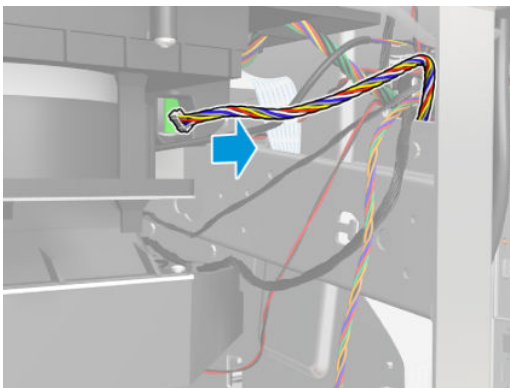
8. Disconnect the Service Station cable from the interconnect PCA.
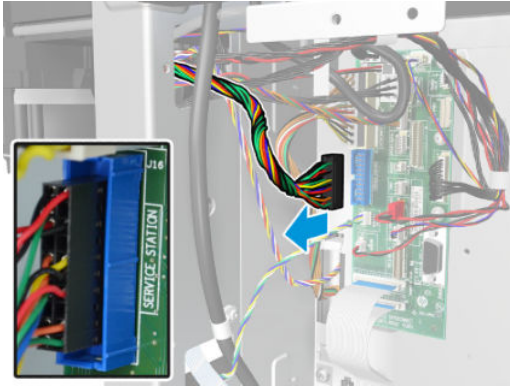
9. Unroute the Service Station cable.

10. Disconnect the Aerosol Fan cable from Interconnect PCA.
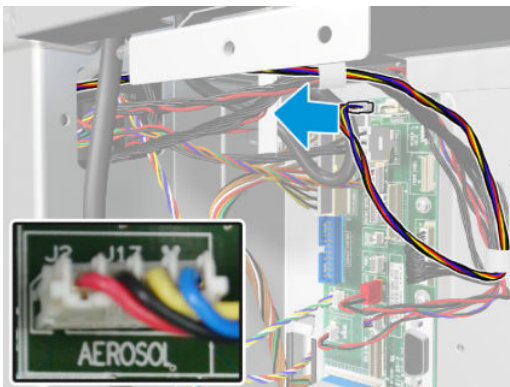
11. Remove two T-10 screws to unroute the Aerosol Fan cable from the cable clamp.
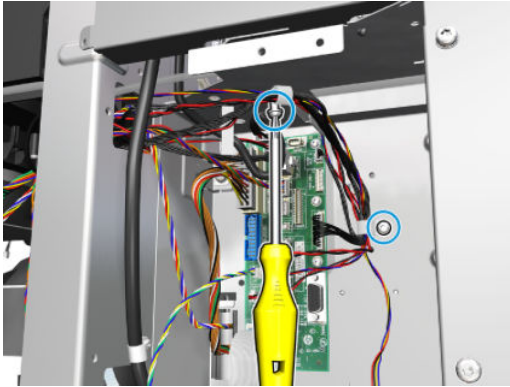
12. Unroute the Primer Assembly Valves tube from the Service Station.
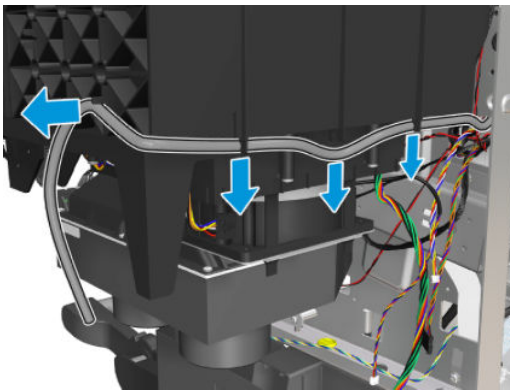
13. Slide the Carriage Assembly into the print path in order to access the screws.
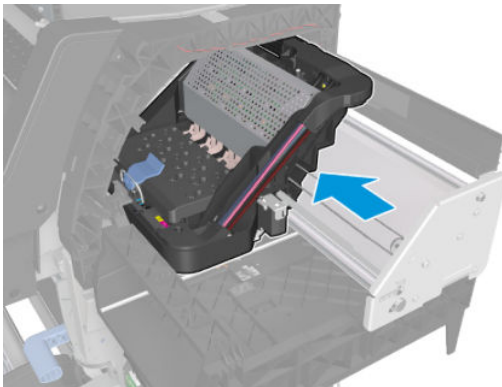
14. Remove four T-20 screws (**Type J**) that secure the rear of the Service Station to the Chassis. Follow the order in the picture.
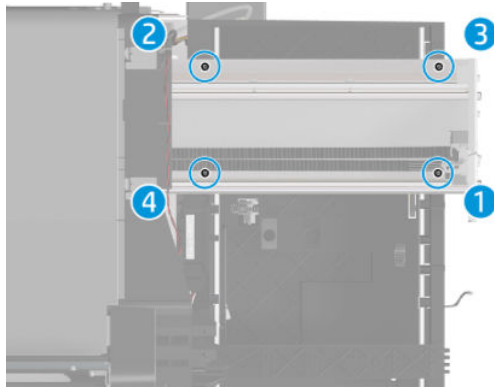
⚠ **CAUTION:** When removing the screws 1 and 4, be very careful NOT to damage the Encoder Strip.
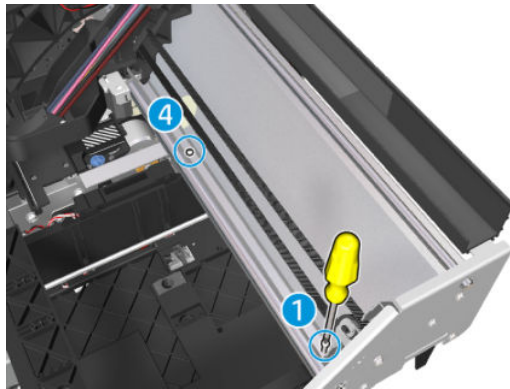
⚠ **CAUTION:** When removing the screws 2 and 3 that secure the Service Station to the X-Axis, hold the Service station as it could fall when the screws are removed.
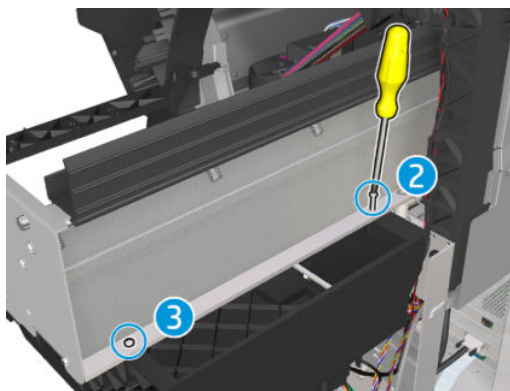
15. Remove the Service Station from the printer.
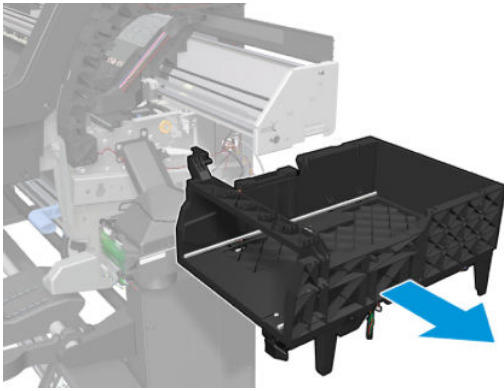
> **NOTE:** After installing the NEW Service Station, make sure you perform the following Service Utility:
>
> ● Reset "4.7.5 Service Station cycle counter".

Installation

▲ When installing the Service Station, insert four T-20 screws (**Type J**) in the order shown in the picture.
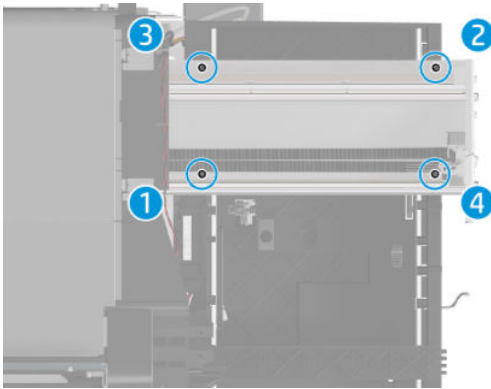
Drop detector

Removal

> ⚠ **WARNING!** Turn off the printer and disconnect both power cords.

1. Remove the Right cover on page 360.

2. Open the Window. See Opening the window on page 365.

3. Pull out the Printhead Cleaning Cartridge fully from the Service Station to release the Carriage Assembly.
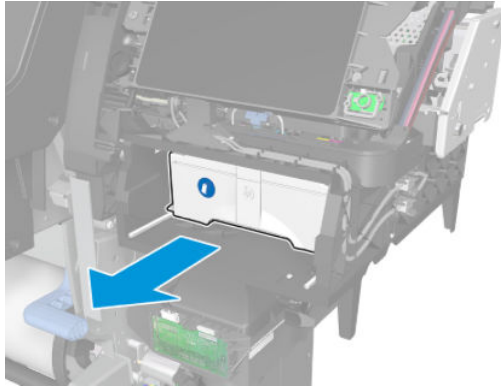
4. Disengage the assembly.
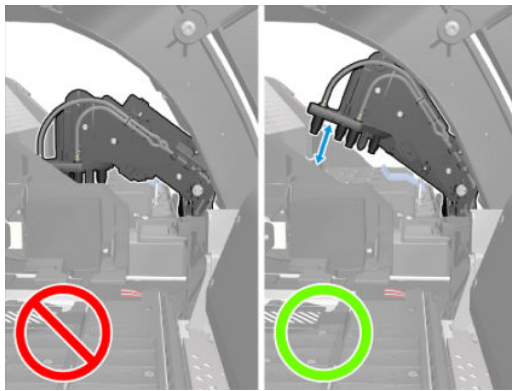
5. Slide the Carriage Assembly into the print path so you can access the Drop Detector.
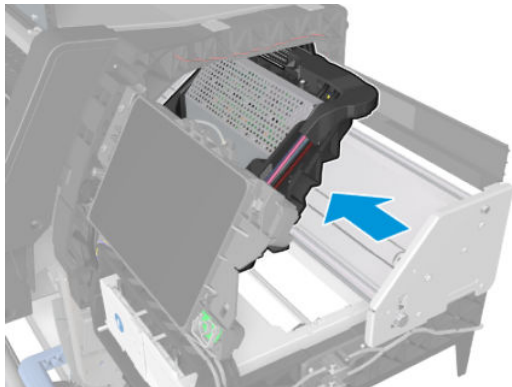
6. Disconnect the Drop Detector Cable from the Service Station Cable.
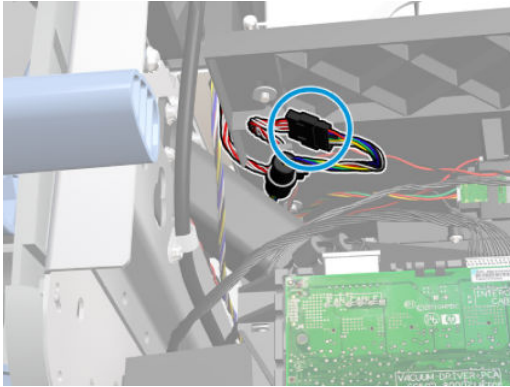
7. Remove one T-8 screw.
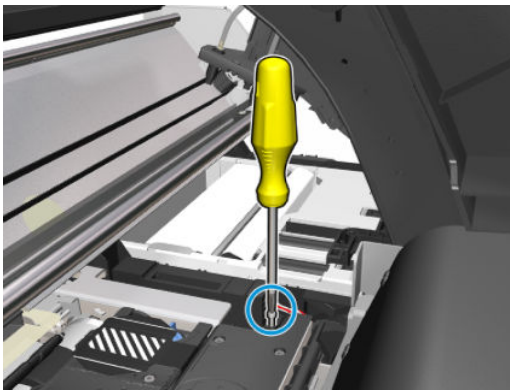
8. Remove the Drop Detector from the printer.

> 📝 NOTE: After installing the NEW Drop Detector, perform the following:
>
> ● Drop Detector Calibration.
>
> ● Reset Drop detector cycle.
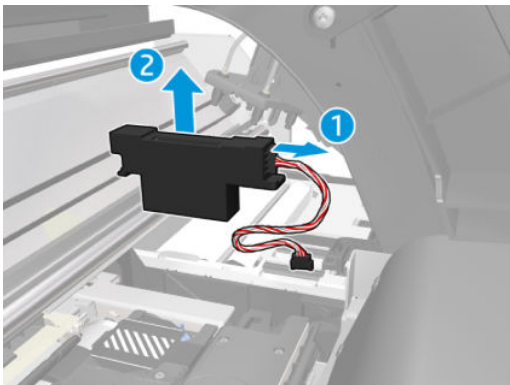
Encoder disc and sensor

Removal

> ⚠ **WARNING!**   Turn off the printer and disconnect both power cords.

> ⚠ **CAUTION:**   Handle the encoder disc very carefully: any finger prints, scratches, or stains could cause the printer to malfunction.

1. Remove the Left cover on page 356.

2. Remove the E-box extension on page 385.

3. Remove the Ink Supply Station (ISS) on page 395.

4. Disconnect the Encoder Sensor cable from the PrintMech PCA.
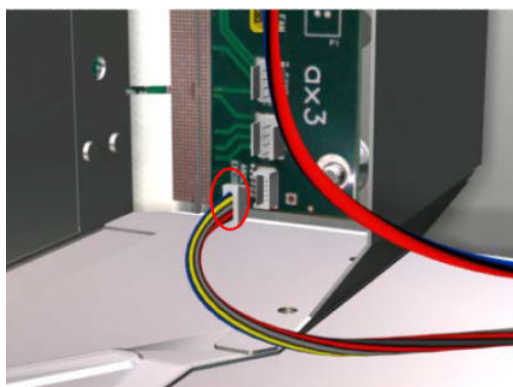
5. Release the Encoder Sensor cable from the clip located on the Electronics Module.
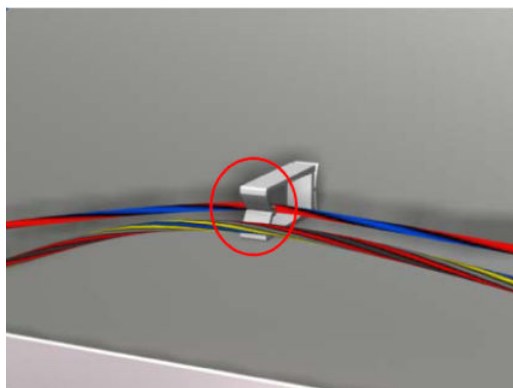
6. Release the Encoder Sensor cable from the clip located on the Encoder Disc Cover.
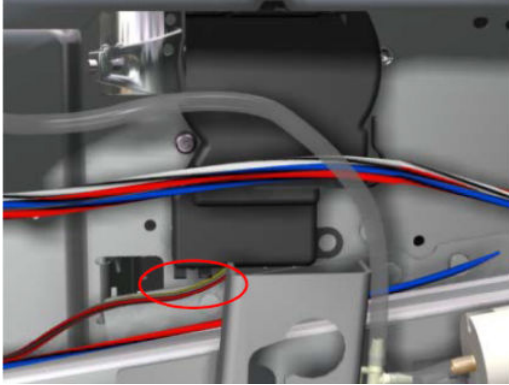
7. Unclip the Encoder Disc Cover and remove from the printer
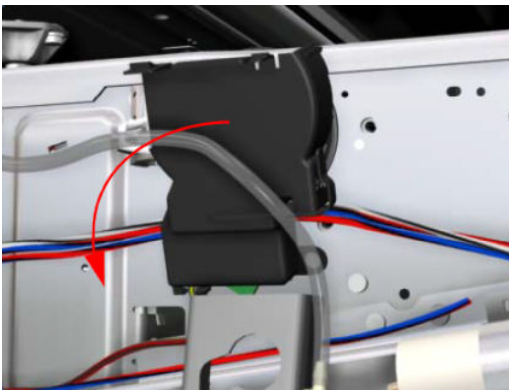
8. Remove one T-8 screw (**Type D**) that secures the Encoder Sensor to the Chassis.
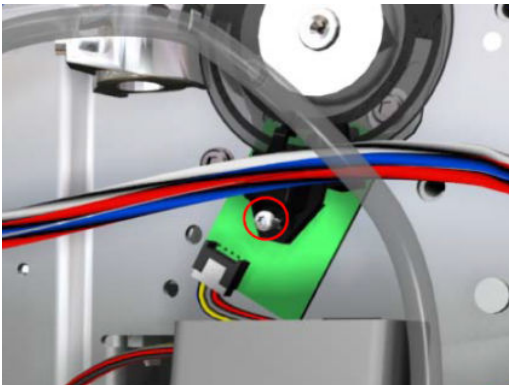
9. Remove the Encoder Sensor from the printer.
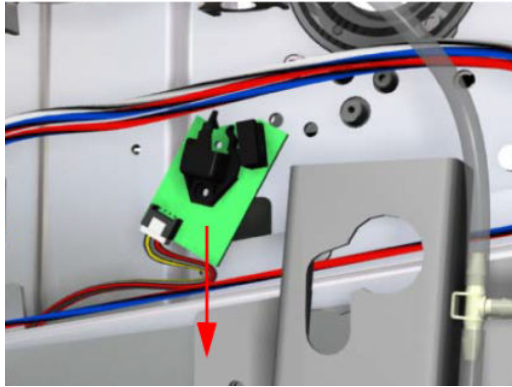
10. Carefully peel the Encoder Disc from the Drive Roller.
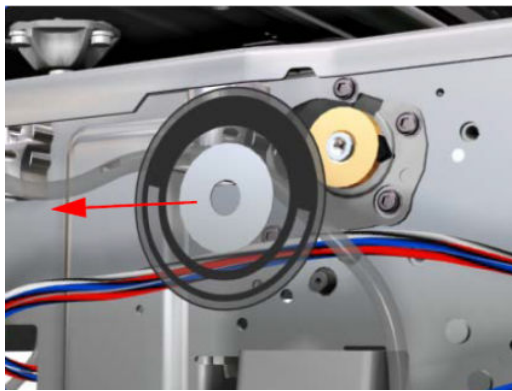
Substrate lever assembly

Removal

⚠️ **WARNING!** Turn off the printer and disconnect both power cords.

1. Remove the .

2. Remove the .

3. Raise the Substrate Lever.
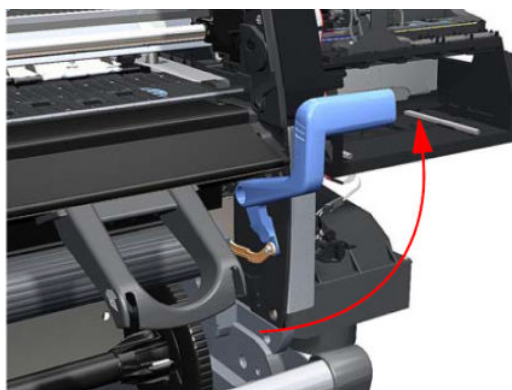
4. Remove one T-15 screw (**Type F**) that secures the Linkage to the Spring.
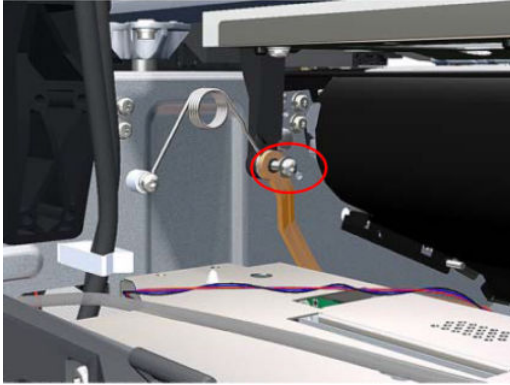
5. Remove the Linkage from the Spring.
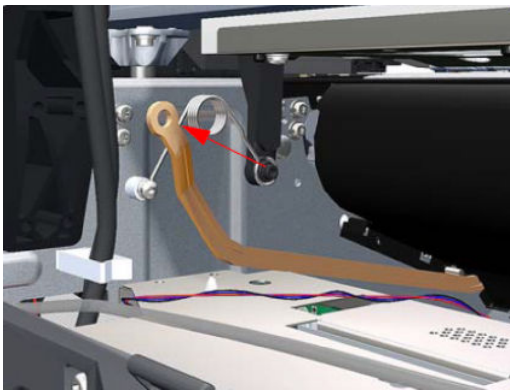
6. Remove one T-20 screw (**Type A**) that secures the Spring to the Spacer.
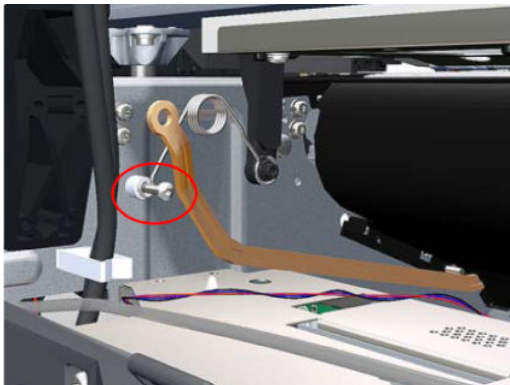
7. Remove the Spring and plastic washer.
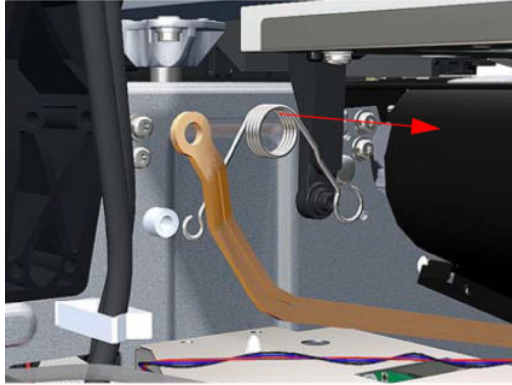
8. Raise the Substrate Lever to gain access to the linkage attachment screw.
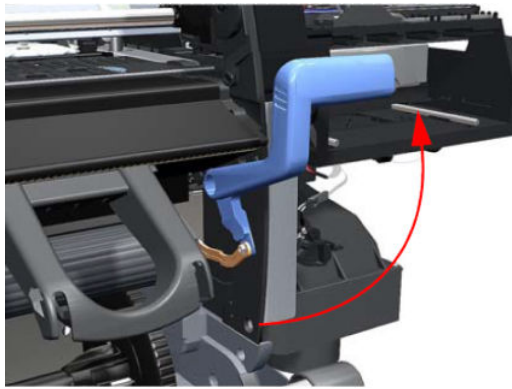
9. Remove one T-15 screw (**Type F**) that secures the Substrate Lever to the Linkage.
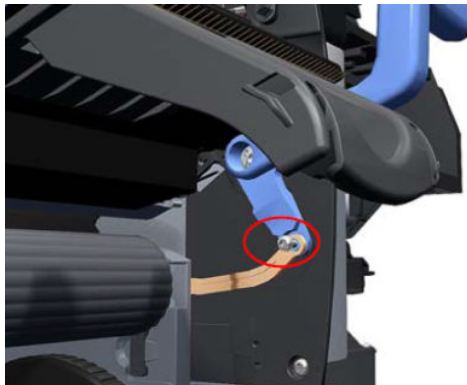
10. Remove the Substrate Lever Linkage from the printer.
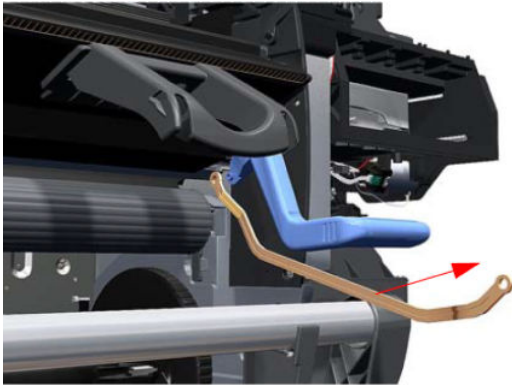
11. Remove one T-20 screw (**Type O**) that secures the Substrate Lever to the Right Trim.

12. Raise the Substrate Lever.
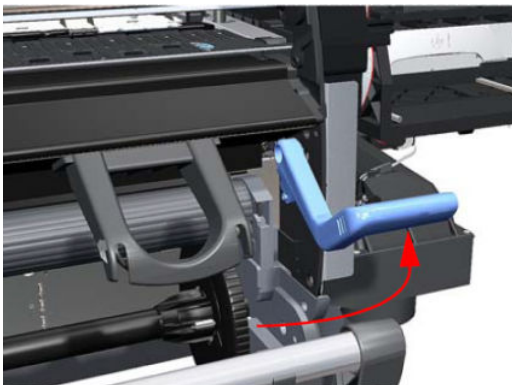
13. Remove the Substrate Lever from the printer.
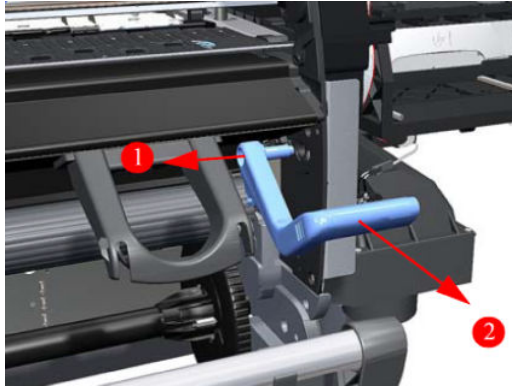
Substrate lever sensor

Removal

⚠ **WARNING!** Turn off the printer and disconnect both power cords.

1. Remove the Right cover on page 360.

2. Remove the Input roller on page 489.

3. Remove the Substrate lever assembly on page 437.

4. Unclip the Substrate Lever Sensor cable from the cable clamp to avoid putting strain on the Substrate Lever Sensor connections during removal of the Right Rollfeed.
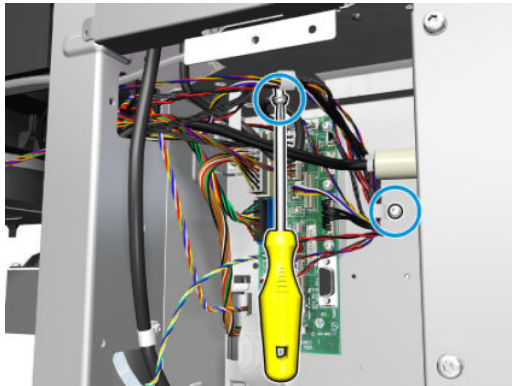
5. Remove five T-20 screws that secure the Right Rollfeed.
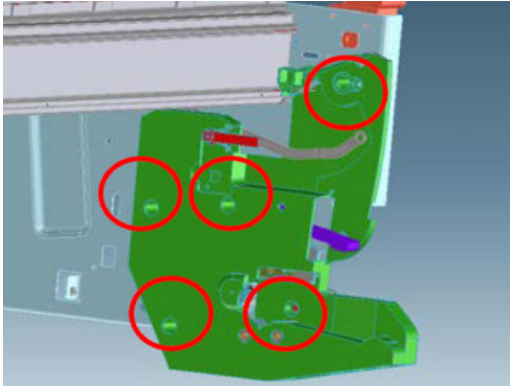
6. Carefully remove the Right Rollfeed sufficiently to gain access to the Substrate Lever Sensor.

7. Unclip the Substrate Lever Sensor from the mounting lugs on the Right Rollfeed.
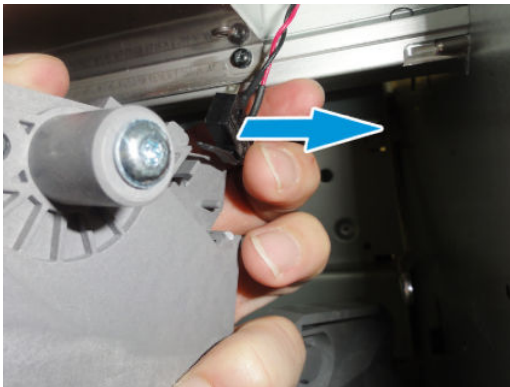
Vacuum fan

WARNING!   Hazardous moving parts: rotating fan blades. Keep hands clear.

Removal

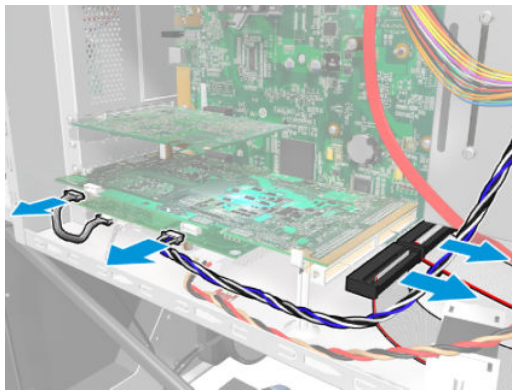> ⚠ **WARNING!**   Turn off the printer and disconnect both power cords.

1. Remove the Right cover on page 360.

2. Remove the Right connector cover on page 384.

3. Remove the Primer assembly on page 412.

4. Remove the Primer valves on page 415.

5. Remove the Printhead Maintenance Cartridge. See the user's guide.

6. Remove the Service station on page 428.

7. Disconnect the cable from the PCA.
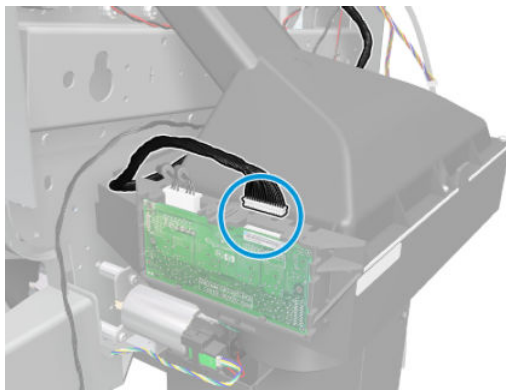
8. Unclip the cables from the cable clamp.
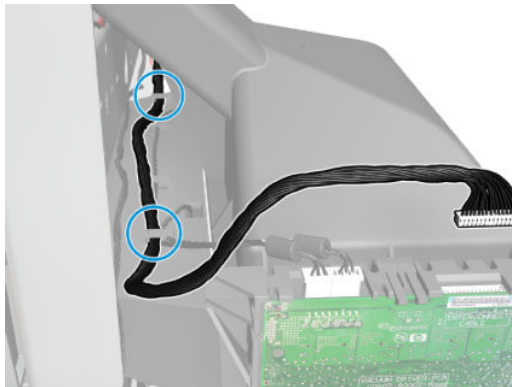
9. Remove four T-20 screws (**Type B**) that secure the Vacuum Fan to the printer.
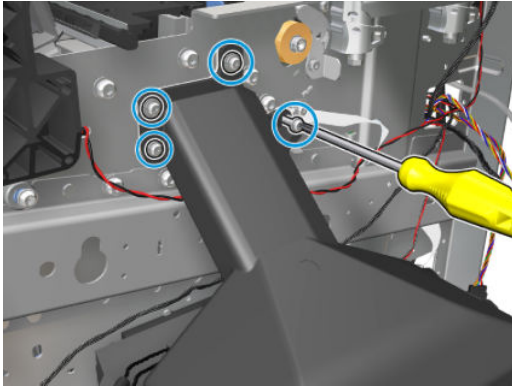
10. Lower then lift the Vacuum Fan out of its attachment.
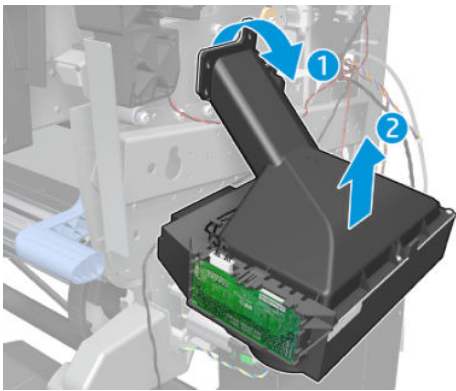
11. Remove the Vacuum Fan from the printer.
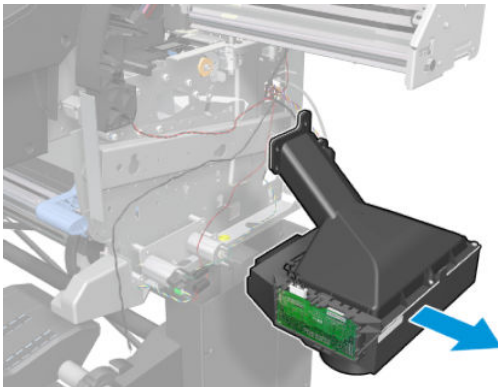
Installation

📝 **NOTE:** When connecting the Vacuum Fan cables to the Interconnect PCA, make sure you connect the cable with the label marked Vacuum Fan 1 to connector 1 and the cable with the label marked Vacuum Fan 2 to connector 2. You can verify if both cables are labelled correctly by the actual markings on the Vacuum Fan.

📝 **NOTE:** Make sure that the OMAS ribbon cable is free of slack when you install the cable.

📝 **NOTE:** After installing the NEW Vacuum Fan, perform the following Service Calibration:

▲   Reset Vacuum Fan Cycle

Vacuum fan cable

Removal

⚠ **WARNING!**   Turn off the printer and disconnect both power cords.

1.   Remove the [Right cover on page 360](#).

2.   Remove the [Right connector cover on page 384](#).

3.   Remove the [Primer assembly on page 412](#).

4.   Remove the [Primer valves on page 415](#).

5.   Remove the Printhead Maintenance Cartridge. See the user's guide.

6.   Remove the [Service station on page 428](#).

7.   Disconnect the cable from the PCA.
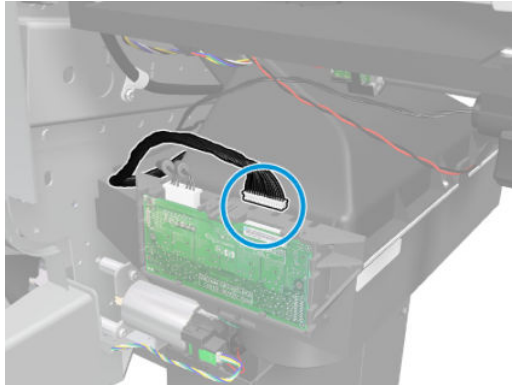
8.   Unclip the cables from the cable clamp.
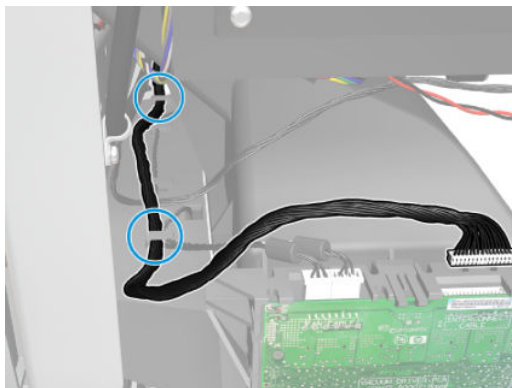
9. Disconnect the vacuum valve cable from the interconnect PCA.
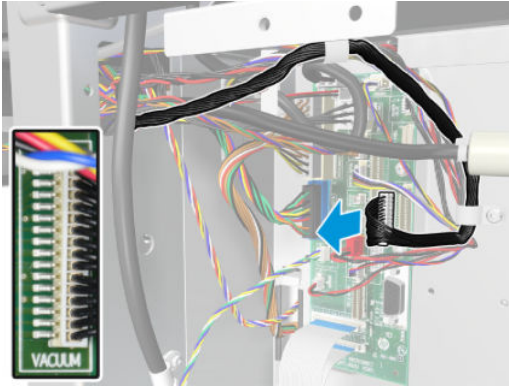
10. Remove two T-10 screws to unroute the vacuum valve cable from the cable clamp.
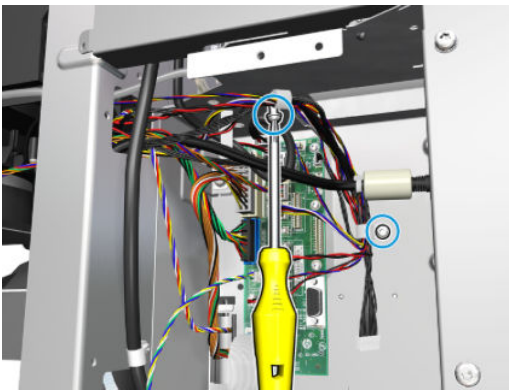
11. Remove the vacuum valve cable.
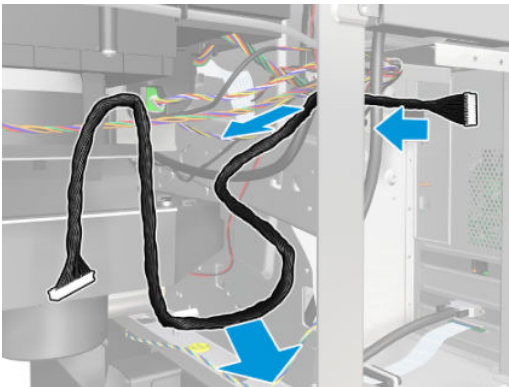
Installation

> **NOTE:** When connecting the Vacuum Fan cables to the Interconnect PCA, make sure you connect the cable with the label marked Vacuum Fan 1 to connector 1 and the cable with the label marked Vacuum Fan 2 to connector 2. You can verify if both cables are labelled correctly by the actual markings on the Vacuum Fan.

> **NOTE:** Make sure that the OMAS ribbon cable is free of slack when you install the cable.

> **NOTE:** After installing the NEW Vacuum Fan, perform the following Service Calibration:

1. Vacuum Calibration

2. Reset Vacuum Fan Cycle

Belt assembly

Removal

⚠ **WARNING!**   Turn off the printer and disconnect both power cords.

1. Remove the Right cover on page 360.

2. Remove the Left cover on page 356.

3. Remove the Encoder Strip. See Encoder strip and encoder sensor on page 447.

4. Remove the Carriage assembly on page 475.

5. Release the Belt from the bottom of the Carriage Assembly.

   📝 **NOTE:**   After installing the NEW Belt Assembly, make sure you perform the following Service Utility:

   ● Reset the life counter "4.5.1 Reset belt cycles".
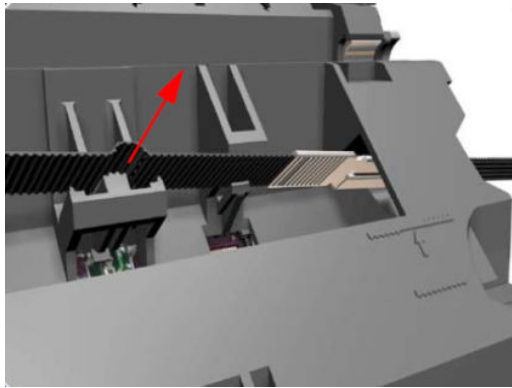
Encoder strip and encoder sensor

Removal

⚠ **WARNING!**   Turn off the printer and disconnect both power cords.

1. Remove the Right cover on page 360.

2. Remove the Left cover on page 356.

3. Uncap the Carriage Assembly by manually pulling out the Printhead Maintenance Cartridge tray.
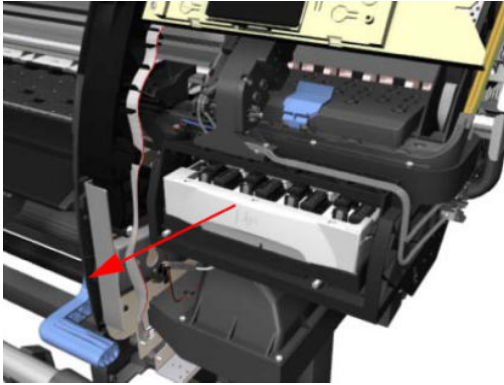
4. Lift the Primer and hold the Primer to its maximum position to avoid damaging it when you move the Carriage Assembly in the next step.
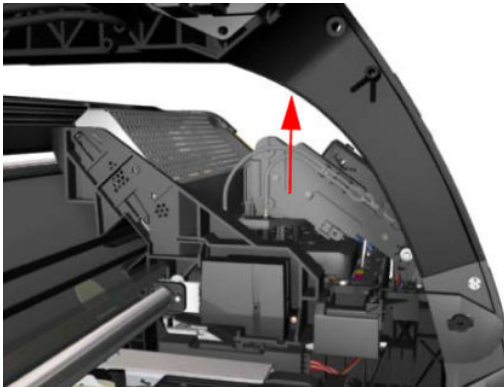
5. Move the Carriage Assembly slightly away from the right Scan-Axis Bracket.
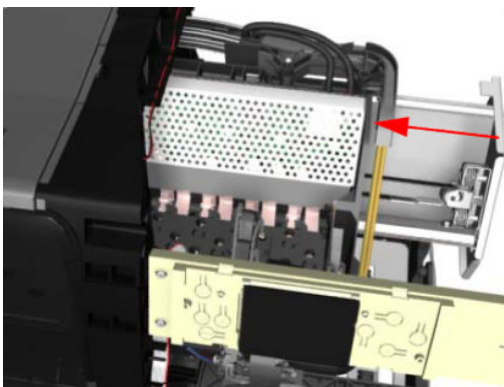
6. Remove the T-10 screw (**Type I**) that secures the encoder strip on the right-hand side of the printer.
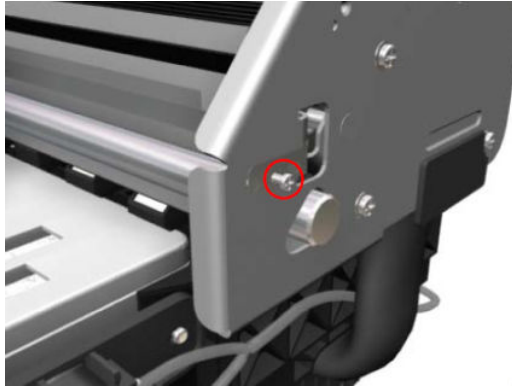
7. Release the Encoder Strip from the locating pins on the right hand side of the printer.

8. Release the Spring Clip from the Bracket on the left hand side of the printer.
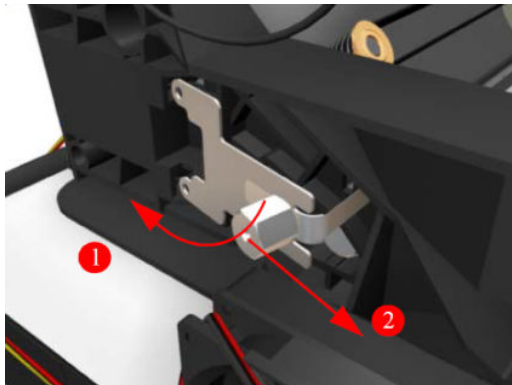
9. Carefully pull the Encoder Strip out of the left hand side of the printer.
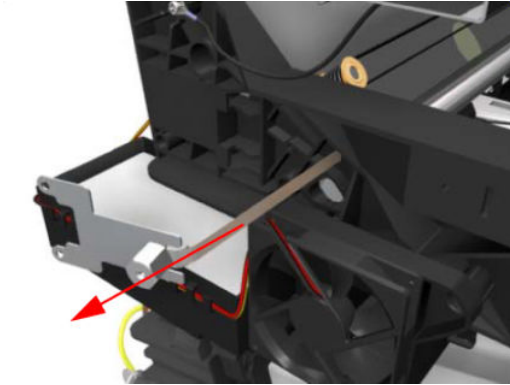
10. Remove the Carriage PCA on page 470.

11. Remove one T-8 (**Type L**) screw that secures the Encoder Sensor to the Carriage Assembly.

12. Slide the plastic cover to the left and remove it from the Encoder Sensor.
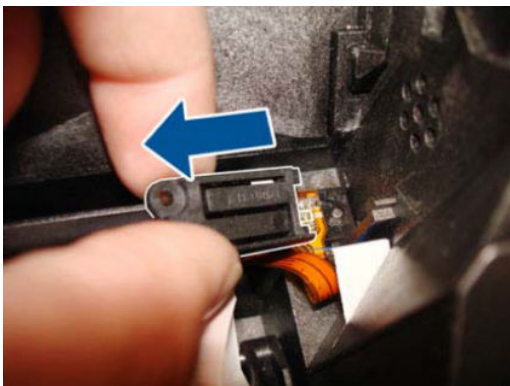
13. Remove the Encoder Sensor from the printer.

    📝 NOTE: After installing the NEW Encoder Strip and Encoder Sensor, perform the following Service Calibration:

    ● "5.5.1 Scan Axis Calibration".

    ● Reset the life counter "4.5.4 Encoder Strip cycles".

Ink supply tubes and trailing cable

Removal

⚠ **WARNING!**   Turn off the printer and disconnect both power cords.

⚠ **CAUTION:**   You MUST NEVER replace both the Hard Disk Drive and the ISS PCAs (or the Ink Supply Tubes and Trailing Cable) at the same time. If these parts need to be replaced, you MUST first replace one part and then power ON the printer until it completely initializes. Then power OFF the printer and replace the other part.

1. Remove the Right cover on page 360.

2. Remove the Left cover on page 356.

3. Remove the Top cover on page 380.

4. Remove the Rear cover on page 390.

5. Remove the Right connector cover on page 384.

6. Remove the ink supplies.

7. Disconnect the Trailing Cable from the Interconnect PCA and the Engine PCA.

8. Release the Trailing Cable from the cable clamp.
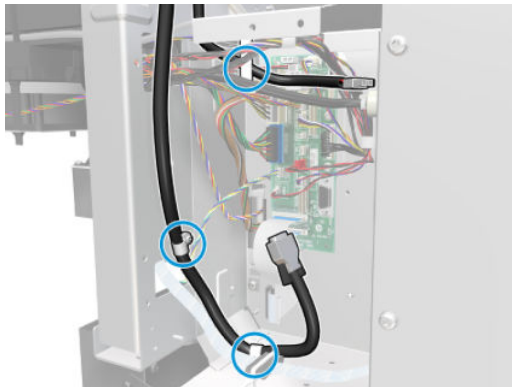
9. Release the two plastic clips securing the Trailing Cable to the Right Arch.
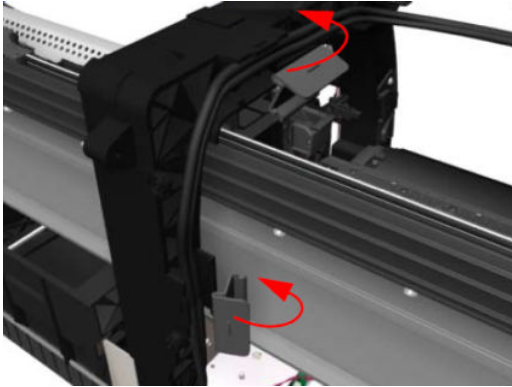
10. Press the two sides of the Carriage PCA Cover and unclip from the Carriage Assembly.
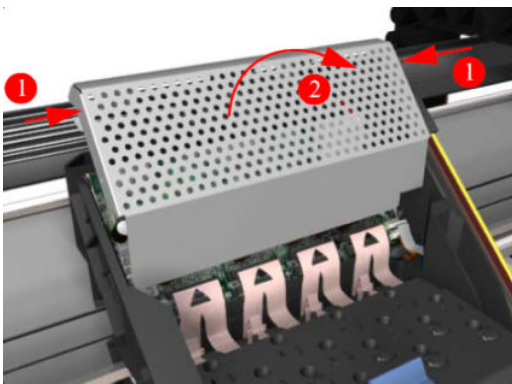
11. Disconnect the Trailing Cable from the Carriage PCA.
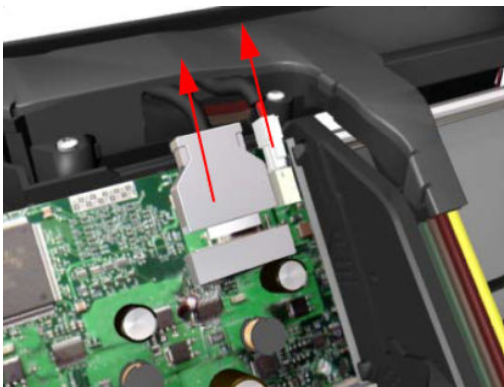
12. Open the Carriage Cover and remove ALL the Printheads from the Carriage Assembly.
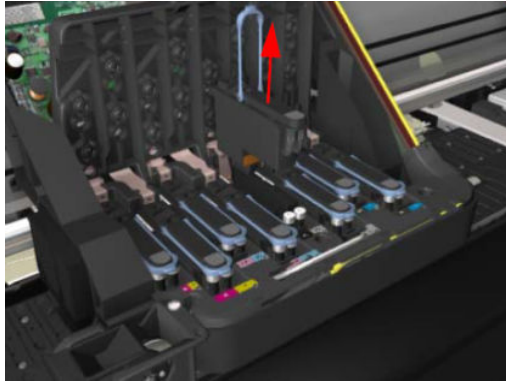
13. Remove five T-15 screws (**Type G**) that secure the Ink Supply Tubes to the Carriage Assembly.
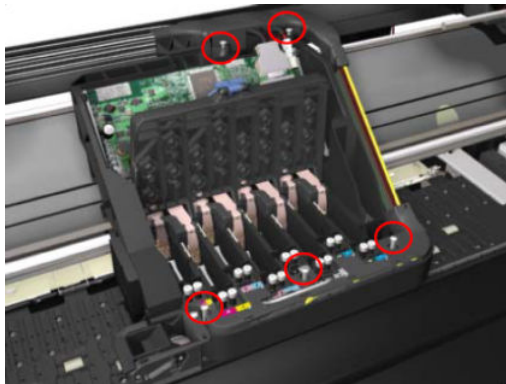
14. Remove the Ink Supply Tubes from the Carriage Assembly and safely place to one side of the printer.
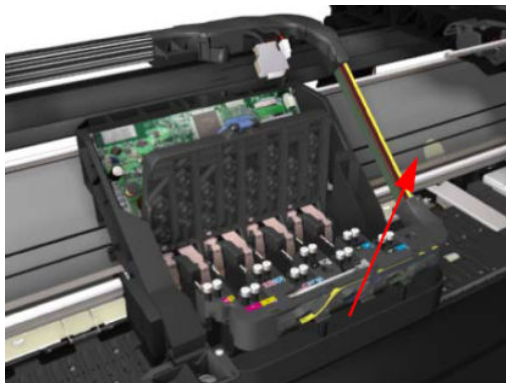
15. Remove one T-20 screws (**Type B**) from two plastic holders at the rear of the printer.
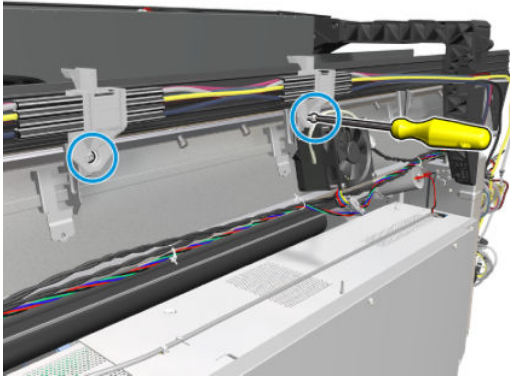
16. Disconnect the Air Tubes from the Ink Cartridge Tube Connector.
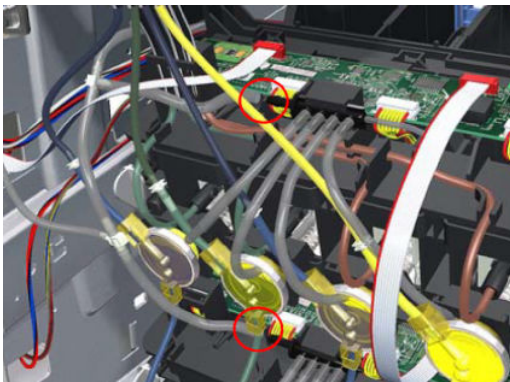
17. Disconnect the Electrical Cable from the rear of the Ink Cartridge Tube Connector.
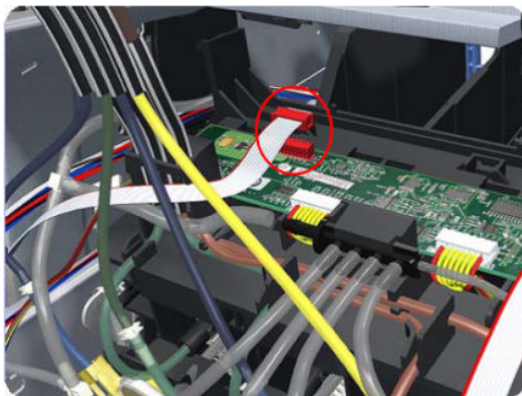
18. Unroute the Electrical Cable and Air Tubes from the rear of the Ink Cartridge Tube Connector.
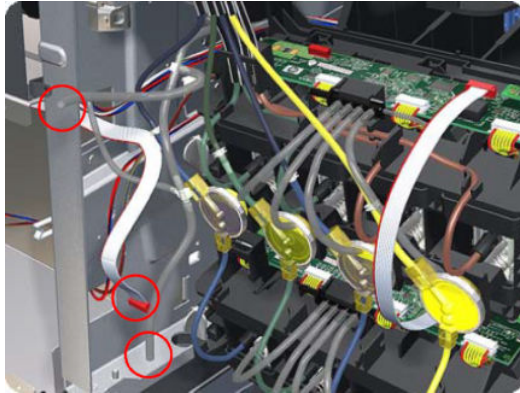
19. Twist the four latches at the rear of the Ink Cartridge Tube Connector and release the complete assembly.

📝 **NOTE:** Be careful not to damage the interconnecting cable.
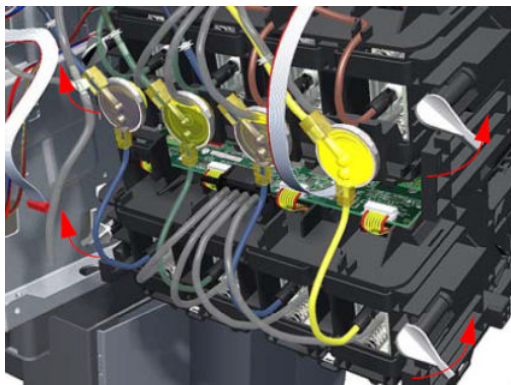
20. Remove one T-20 Screw from the Sideplate (grounding cable).
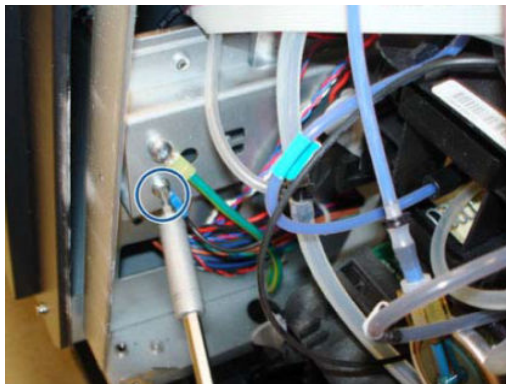
21. Carefully slide the Ink Cartridge Tube Connector off the Ink Supply Station.
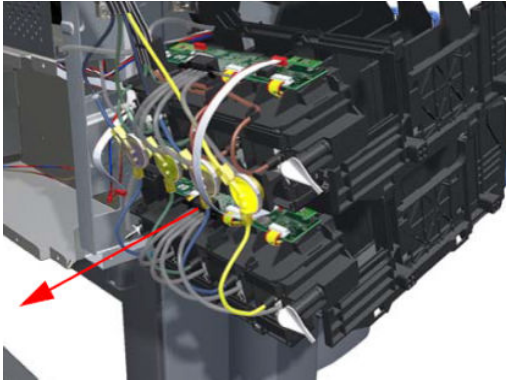
22. Remove the Ink Supply Tubes and Trailing Cable from the printer.
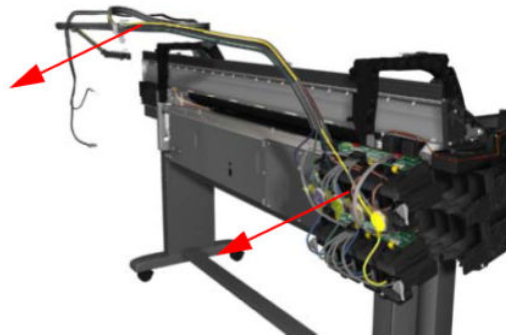
Carriage Assemblies

Line sensor assembly

Removal

> ⚠ **WARNING!** Turn off the printer and disconnect both power cords.

1. Remove the Right cover on page 360.

2. Press the two sides of the Carriage PCA Cover and unclip from the Carriage Assembly.
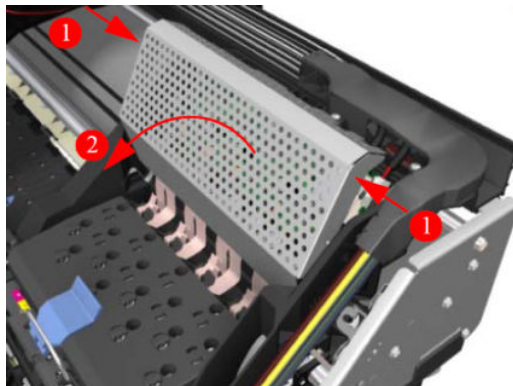
3. Release the clip and disconnect the Line Sensor cable from the Carriage PCA.
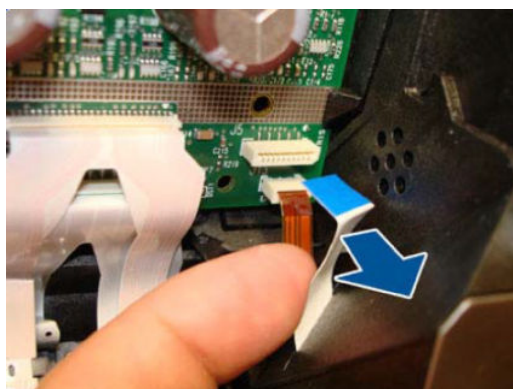
4. Uncap the Carriage by manually pulling out the Printhead Maintenance Cartridge
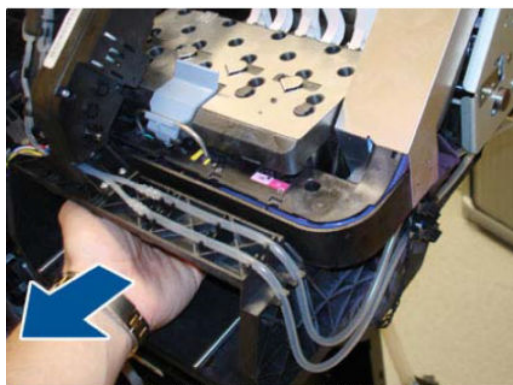
5. Lift the Primer and hold the Primer to its maximum position to avoid damaging it when you move the Carriage Assembly in the next step.
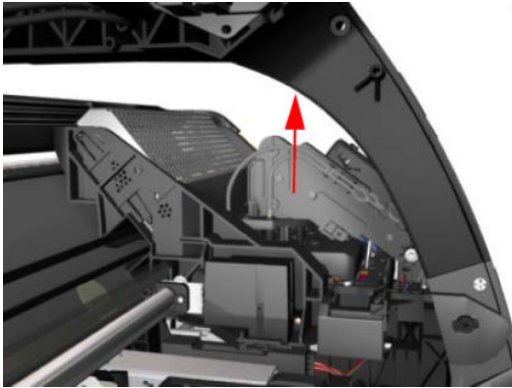
6. Pass the Line Sensor Cable through the hole.

7. Remove one T-15 screw (**Type G**) that secures the Line Sensor to the carriage Assembly.

8. Remove the Line Sensor from the Carriage Assembly.
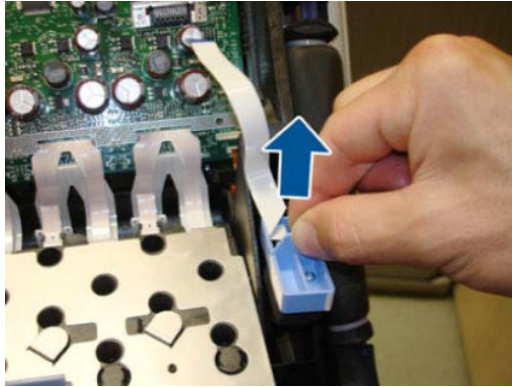
9. Remove the protective foam from around the sensor.

NOTE: After installing the NEW Line Sensor, perform the following Service Calibrations:

- "5.6.1 Line Sensor Calibration".

- Reset the life counter "4.6.2 Line Sensor cycle".
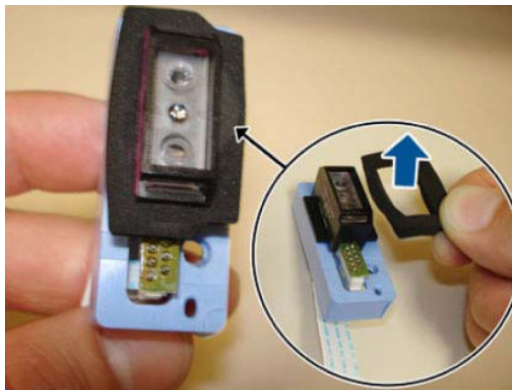
Color sensor assembly

Removal

WARNING! Turn off the printer and disconnect both power cords.

1. Open the Window.

2. Remove the .

3. Press the two sides of the Carriage PCA Cover and unclip from the Carriage Assembly.
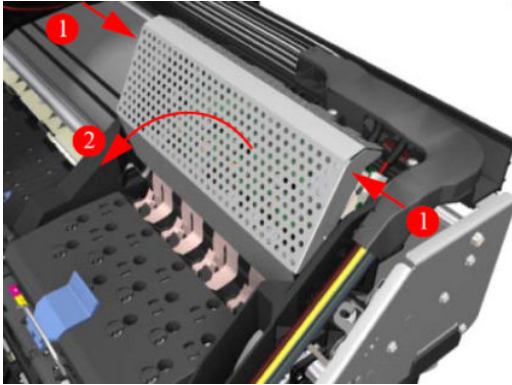
4. Release the clip and disconnect the Color Sensor cable from the Carriage PCA.
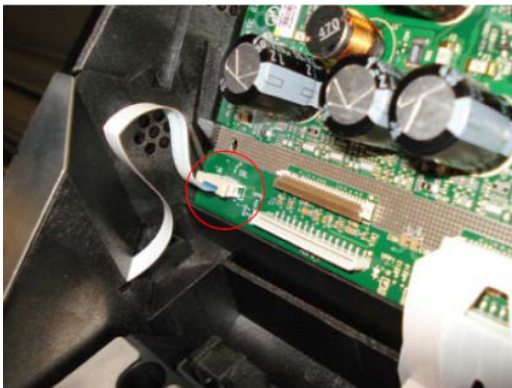
5. Uncap the Carriage by manually pulling out the Printhead Maintenance Cartridge
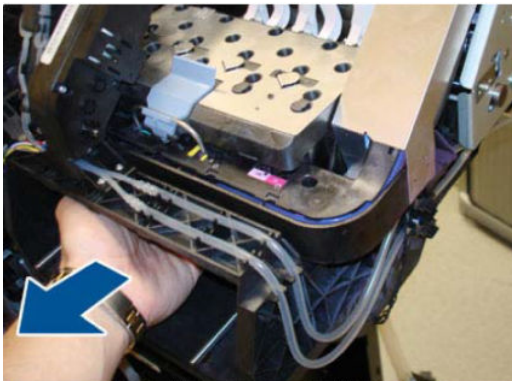
6. Lift the Primer and hold the Primer to its maximum position to avoid damaging it when you move the Carriage Assembly in the next step.
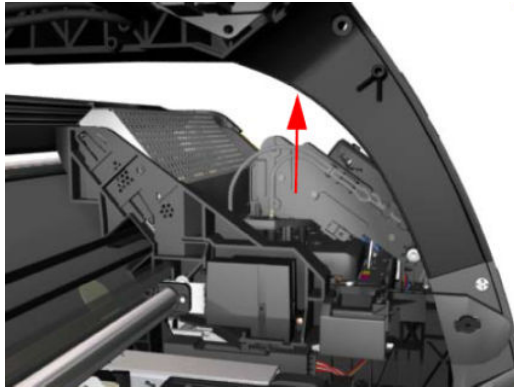
7. Move the Carriage away from the Service Station, into the center of the platen.
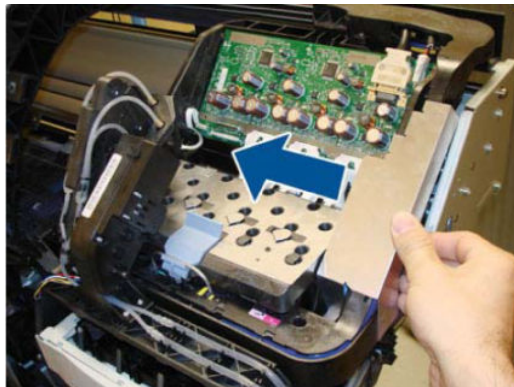
8. Remove one T-10 screw from the front of the Color Sensor.

9. Remove one T-10 screw from the Rear of the Color Sensor.

10. Tilt the Color Sensor so it can be removed.
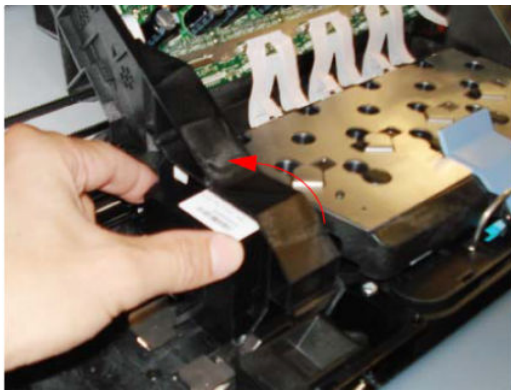
11. Remove the Color Sensor from the Carriage Assembly.

📝 NOTE: After installing the NEW Color Sensor, perform the following Service Calibrations:

● "5.6.3 Open Close SOL".

● Perform the safety test "3.3 Substrate Path Sensor".

● Reset the life counter "4.6.5 Color sensor".

Installation

1. When installing the T-10 screw to the front of the Color Sensor, make sure you do not over-tighten the screw.
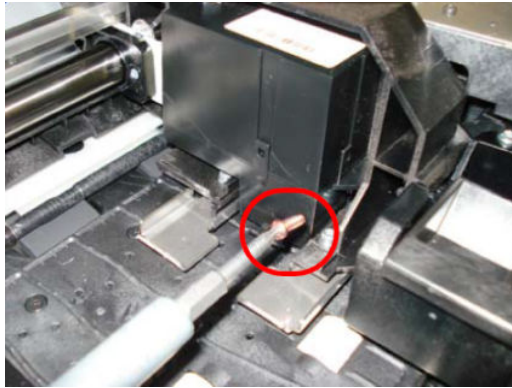
2. When installing the T-10 screw to the rear of the Color Sensor, make sure you do not over-tighten the screw.

Oiler assembly

Removal

⚠ WARNING!   Turn off the printer and disconnect both power cords.

1. Remove the Right cover on page 360.

2. Remove the Encoder Strip. See Encoder strip and encoder sensor on page 447.

3. Open the Window.

4. Pull out the Printhead Cleaning Cartridge fully from the Service Station to release the Carriage Assembly.
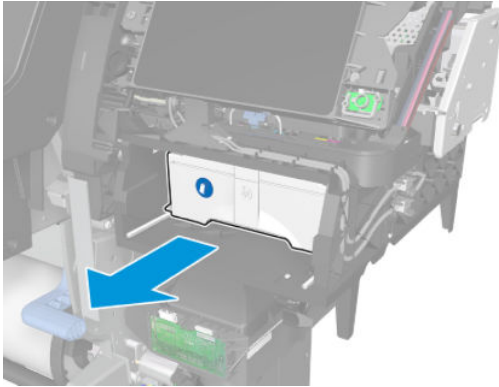
5. Lift the Primer and hold the Primer to its maximum position to avoid damaging it when you move the Carriage Assembly in the next step.
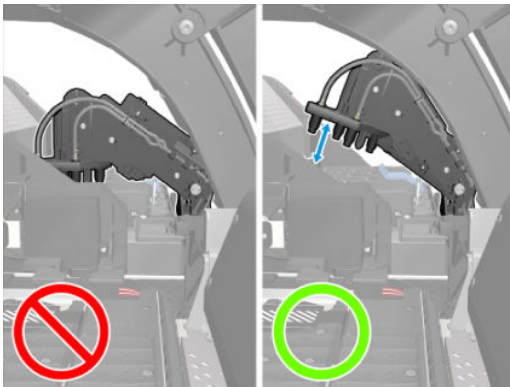
6. Move the Carriage Assembly out of the Service Station.
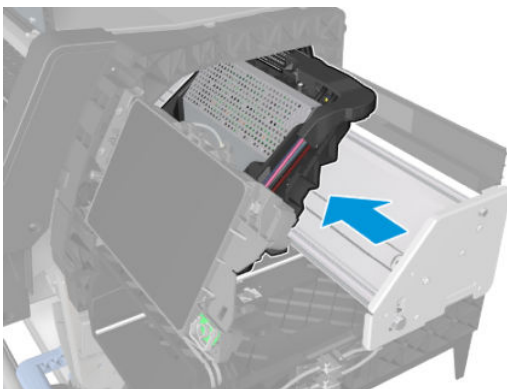
7. Remove three T-8 screws that secure the Oiler Assembly to the side of the Carriage Assembly.
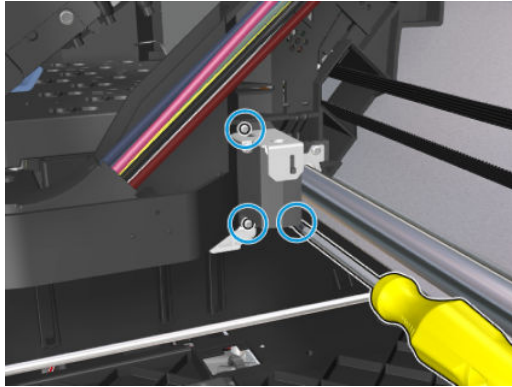
8. Remove the Oiler Assembly.
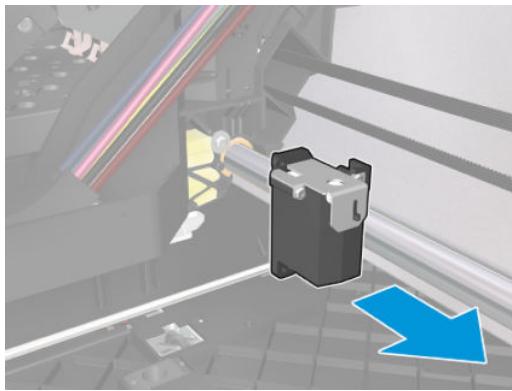
9. Remove the Absorber Foams from the cavities in the carriage.

📝 **NOTE:** It is recommended to wear gloves.
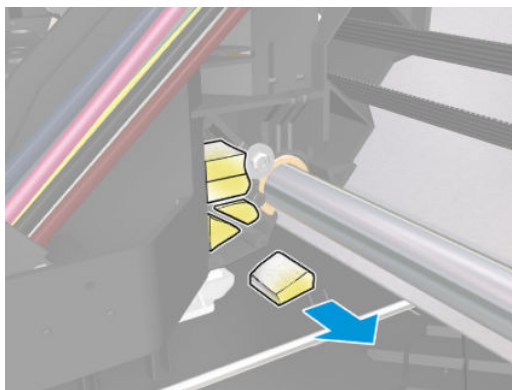
Installation

📝 **NOTE:** Before installing the Oiler Assembly, clean and lubricate the Carriage Rail following the standard procedure.

NOTE: Insert the Absorbent Foams following the recommendations in the graph. Top pads have to be in horizontal position and bottom pads popping out from the cavities.

If the Absorbent Foams are not inserted correctly, oil may reach the line sensor and prevent it from working. Oil may also reach the print or the Printhead Cleaning Cartridge, which could damage the printheads.
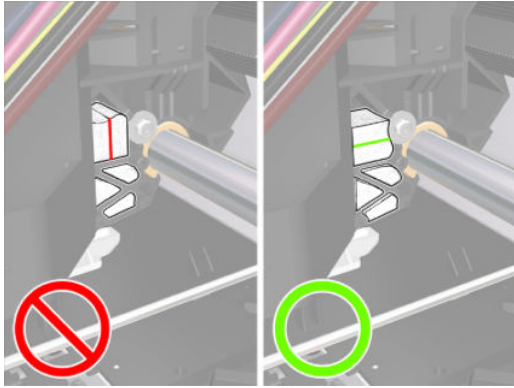
NOTE: It is recommended to check the state of the lubrication felts. They should be replaced in case they are very dirty or damaged.

Lubrication felts

Removal

WARNING! Turn off the printer and disconnect both power cords.

1. Open the window.

2. Pull out the maintenance cartridge fully from the service station to release the carriage assembly.

3. Pull the carriage assembly into the center of the platen.
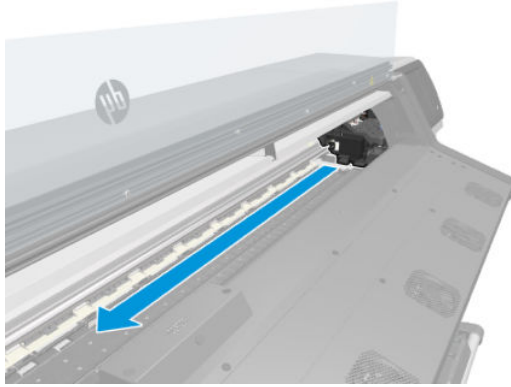
4. Remove the T-8 screw that secures the lubrication felts from the left side of the carriage assembly.
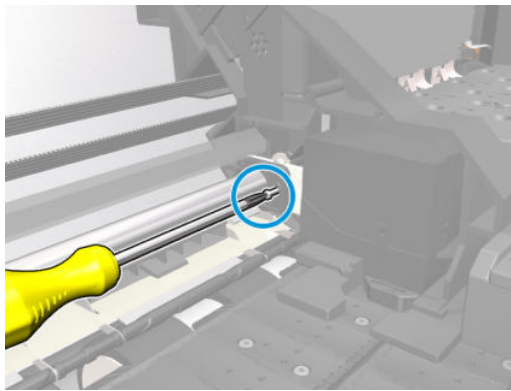
5. Remove the lubrication felts.
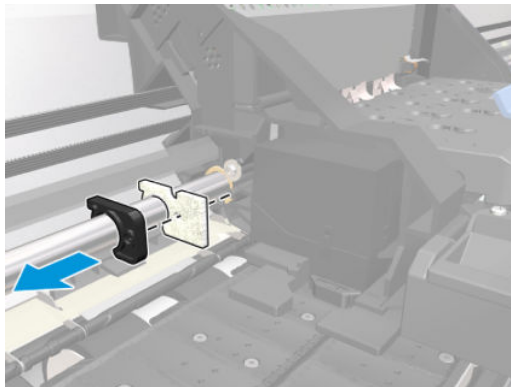
Under-carriage protector assembly

Removal

⚠ WARNING! Turn off the printer and disconnect both power cords.

1. Remove the Right cover on page 360.

2. Remove the Carriage assembly on page 475.

3. Remove the [Left cover on page 356](#).

4. Remove the [Encoder disc and sensor on page 435](#).

5. Turn the carriage assembly upside down to access the under-carriage protector assembly.
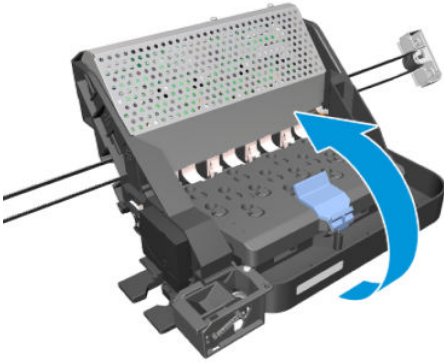
6. Remove nine T-8 screws that secure the under-carriage protector assembly to the carriage assembly.
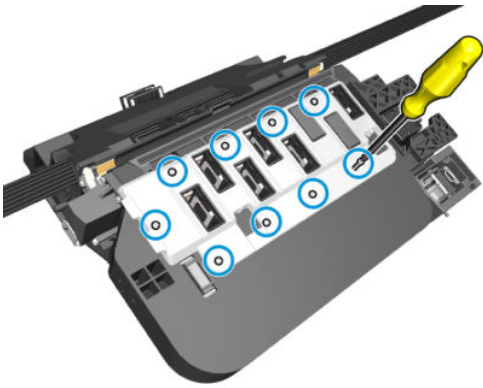
7. Remove the under-carriage protector assembly from the carriage assembly. You are recommended to wear protective gloves.
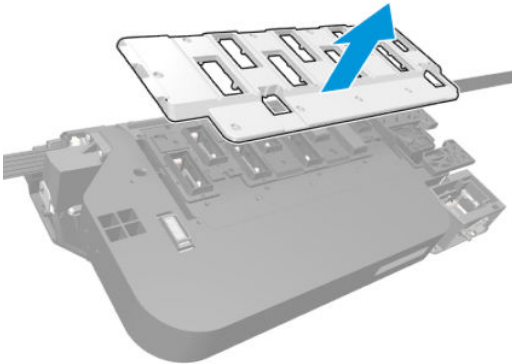
Cutter assembly

Removal

1. Select "Replace Cutter" from Service Menu and follow the instructions on the front panel.

2. Open the Window.
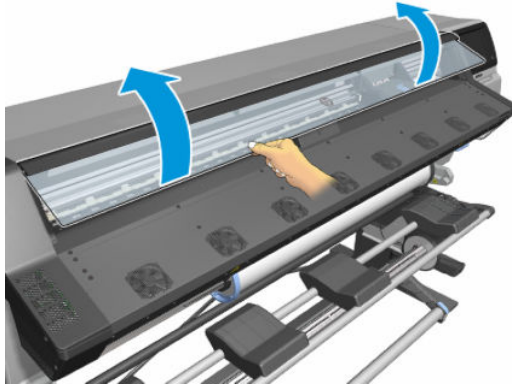
3. Open the Carriage Cover.
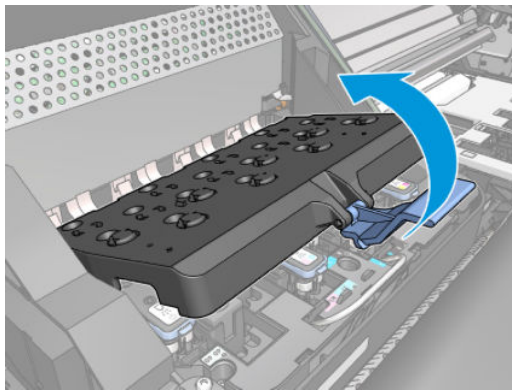
4. Remove one T-15 screw (**Type G**) that secures the Cutter Assembly to the Carriage Assembly.
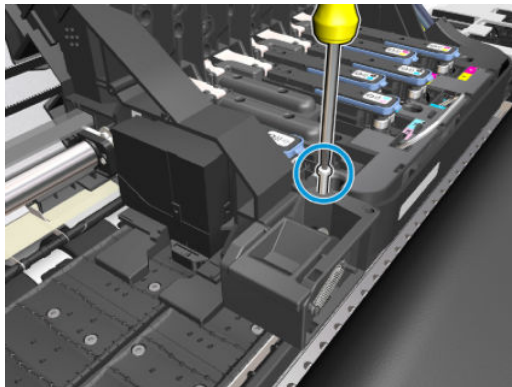
5. Slide the Cutter Assembly to the left and remove from the printer.
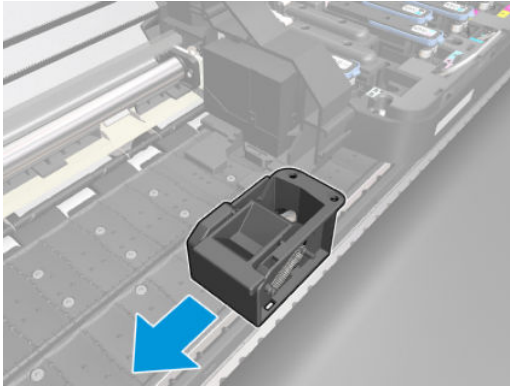
📝 NOTE: After installing the NEW cutter, reset the life counter "4.6.4 cutter cycles".

Carriage PCA

Removal

⚠ WARNING! Turn off the printer and disconnect both power cords.

1. Remove the Right cover on page 360.

2. Press the two sides of the Carriage PCA Cover and unclip from the Carriage Assembly.

3. Disconnect the Trailing Cable from the Carriage PCA.
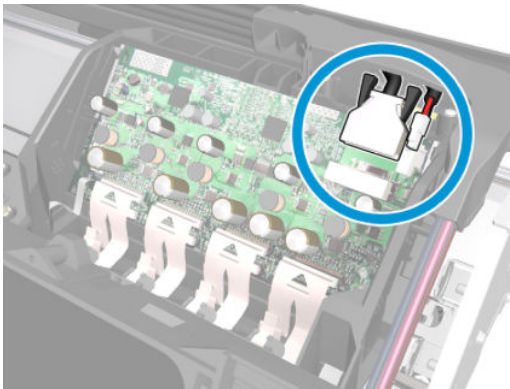
4. Use a flat bladed screwdriver to release ALL the clips, securing the Carriage Flex Cables to the Carriage Assembly, by pulling upwards.
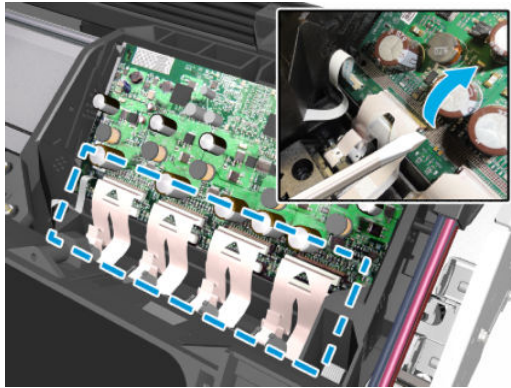
5. Disconnect the Flex Cables from the Carriage PCA.
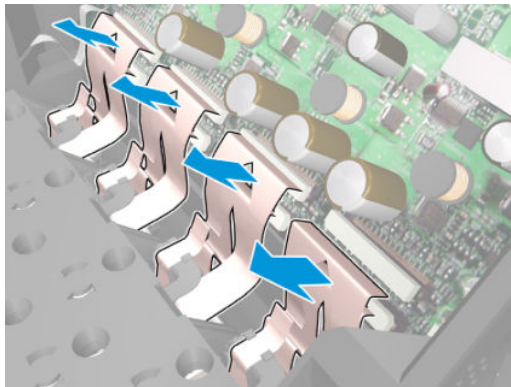
6. Disconnect the Line Sensor Cable and the Encoder Sensor Cable from the Carriage PCA.
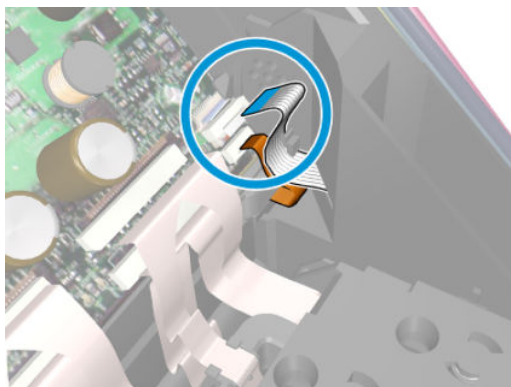
7. Unlock the connector and disconnect the Color Sensor Cable from the Carriage PCA.
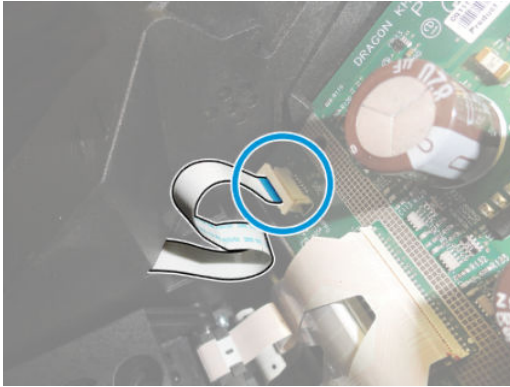
8. Push inwards the four clips that secure the Carriage PCA.
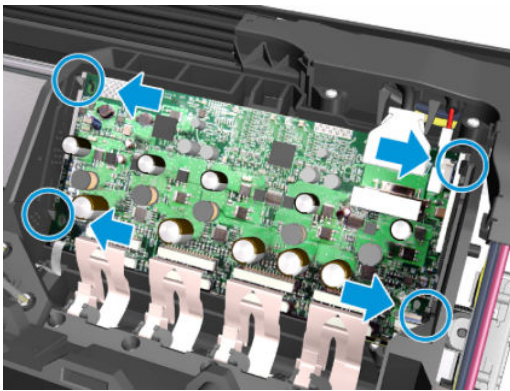
9. Remove the Carriage PCA from the printer.
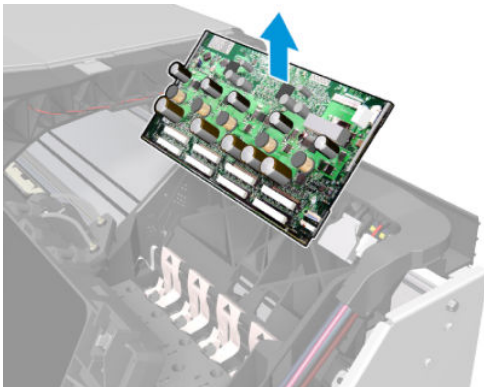
Carriage flex cables

Removal

⚠ WARNING!   Turn off the printer and disconnect both power cords.

1. Remove the .

2. Remove the .

3. Remove the Primer assembly on page 412.

4. Press the two sides of the Carriage PCA Cover and unclip from the Carriage Assembly.

5. Use a flat bladed screwdriver to release ALL the clips, securing the Carriage Flex Cables to the Carriage Assembly, by pulling upwards.
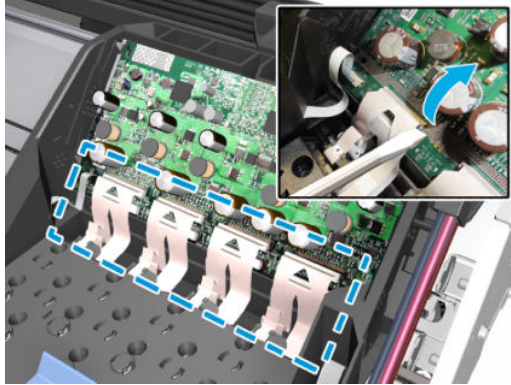
6. Disconnect the ALL the Flex Cables from the Carriage PCA.
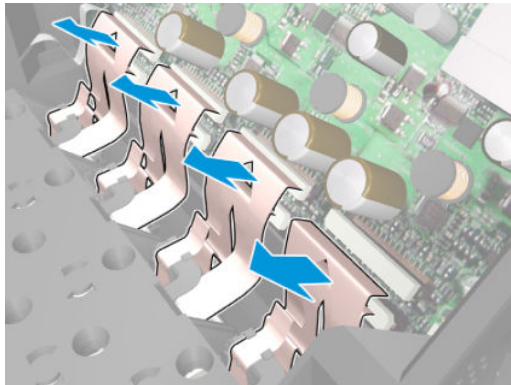
7. Remove eight T-8 screws (**Type L**) that secure the Carriage Flex Cables to the Carriage Assembly.
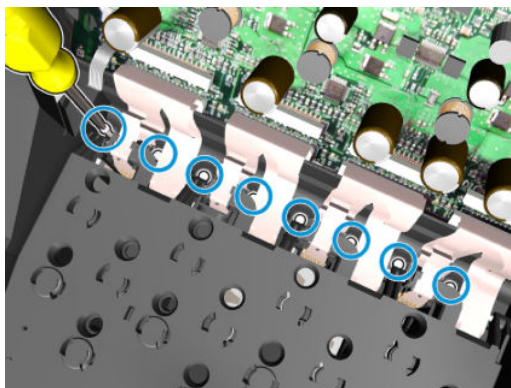
8. Open the Carriage Cover and remove ALL the Printheads from the Carriage Assembly.
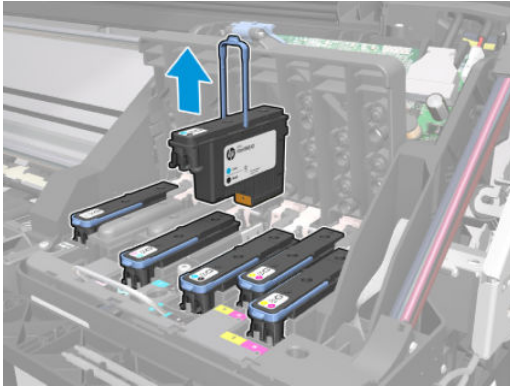
9. The two unused spaces of the Carriage Assembly have dummy printheads installed. To remove them, insert a thin bladed tool into a small hole on the left to release a latch located below.
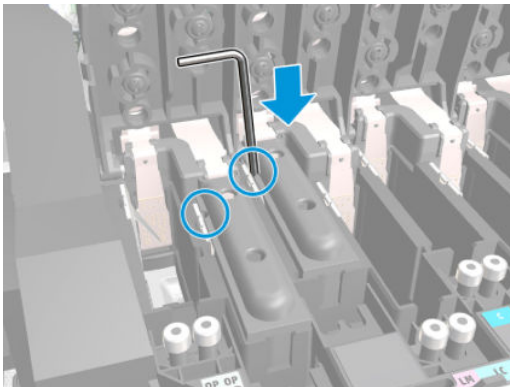
10. Remove the dummy Printheads.
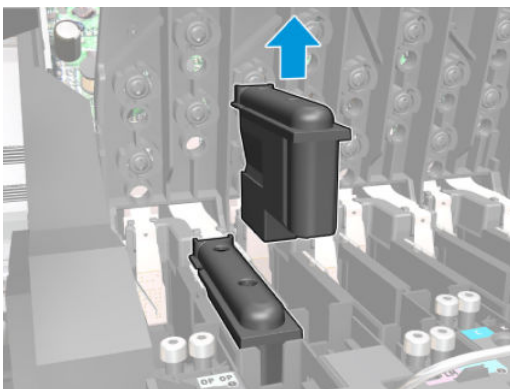
11. Remove the Carriage Flex Cable from the printer.
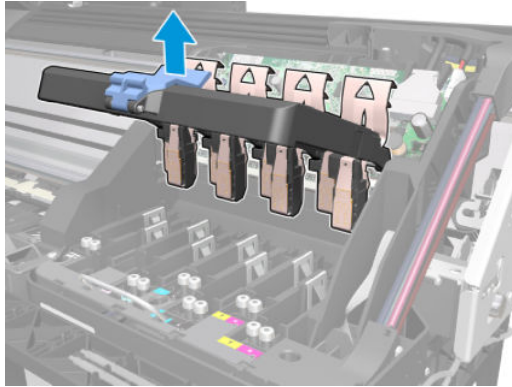
Carriage assembly

Removal

⚠ **WARNING!** Turn off the printer and disconnect both power cords.

1. Remove the Right cover on page 360.

2. Remove the Front panel on page 358.

3. Remove the Left cover on page 356.

4. Remove the Encoder Strip. See Encoder strip and encoder sensor on page 447.

5. Pull out the Printhead Maintenance Cartridge.
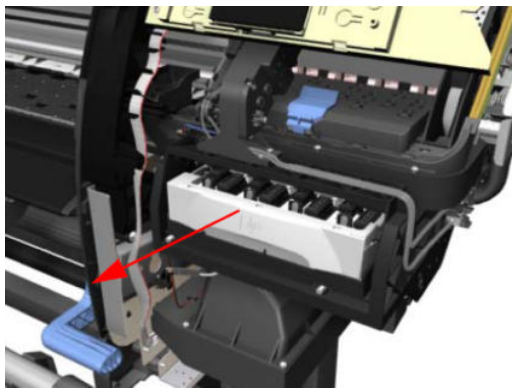
6. Lift the Primer and hold the Primer to its maximum position to avoid damaging it when you move the Carriage Assembly in the next step.
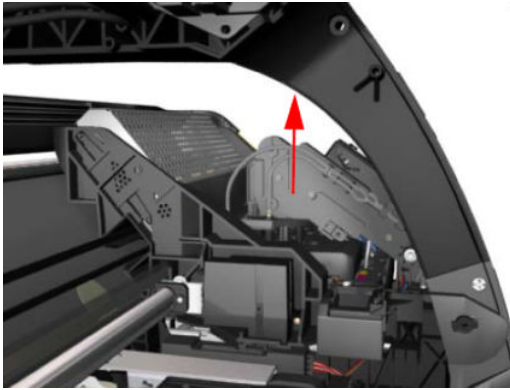
7. Move the Carriage Assembly to the extreme right of the printer.
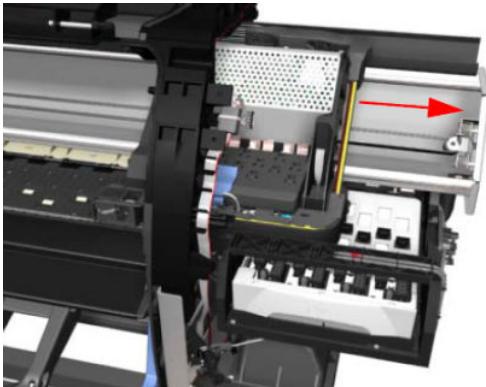
8. Press the two sides of the Carriage PCA Cover and unclip from the Carriage Assembly.
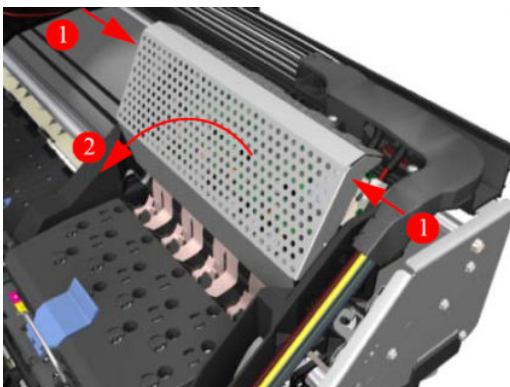
9. Use a flat bladed screwdriver to release ALL the clips, securing the Carriage Flex Cables to the Carriage Assembly, by pulling upwards.
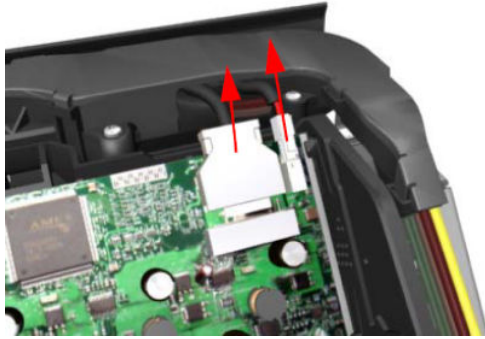
10. Open the Carriage Cover and remove ALL the Printheads from the Carriage Assembly.

11. Remove five T-15 screws (**Type G**) that secure the Ink Supply Tubes to the Carriage Assembly.
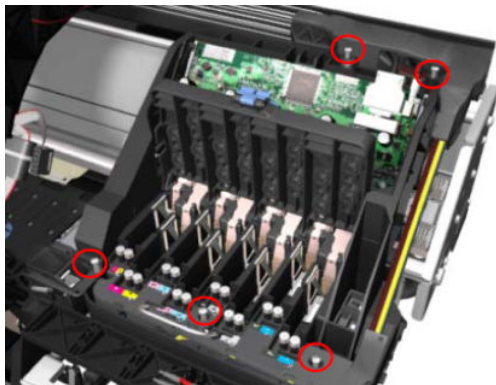
12. Remove the Ink Supply Tubes from the Carriage Assembly and safely place to one side of the printer.
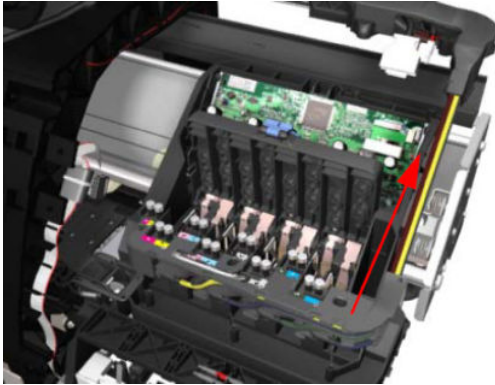
13. Remove the T-20 screw (**Type A**) that secures the belt tensioner to the chassis.

14. Lift the Primer and hold the Primer to its maximum position to avoid damaging it when you move the Carriage Assembly in the next step.
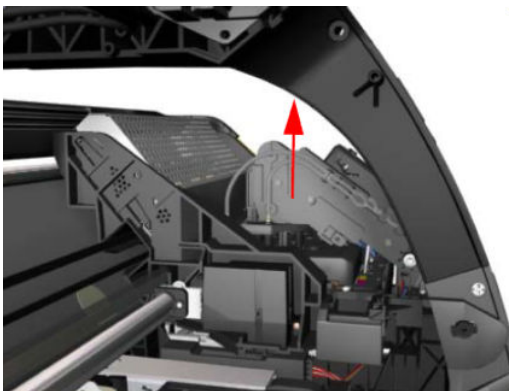
15. Move the Carriage Assembly slightly away from the right Scan-Axis Bracket.
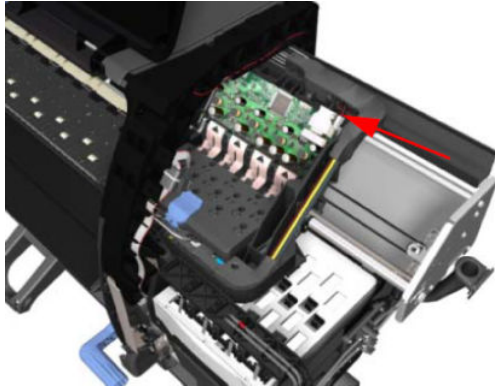
16. Release the carriage belt from the scan-axis motor on the left-hand side of the printer.
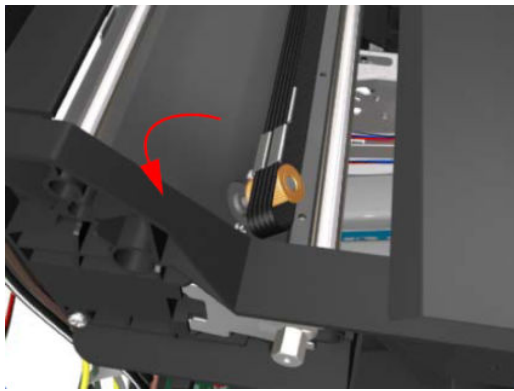
17. Remove four T-20 screws (**Type N**) that secure the right scan-axis bracket.

📝 NOTE: Note that these are chassis screws and in normal circumstances should **never** be removed, but in this case we need to remove them in order to remove the carriage assembly.

18. Remove the right scan-axis bracket from the printer.
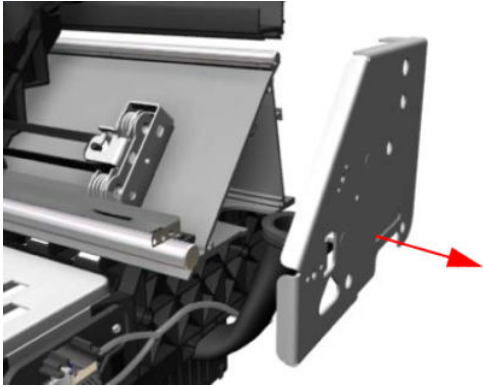
19. Remove the Carriage Stopper Screw (T-20) from the Chassis.
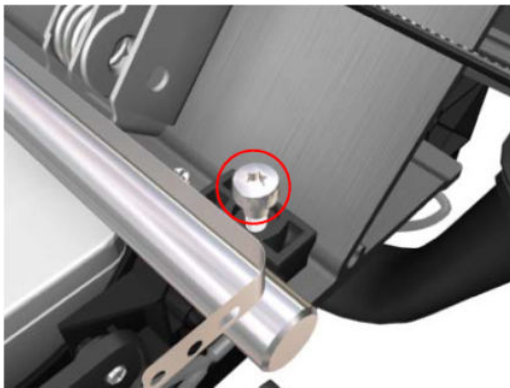
20. Remove the Carriage Stopper from the printer.
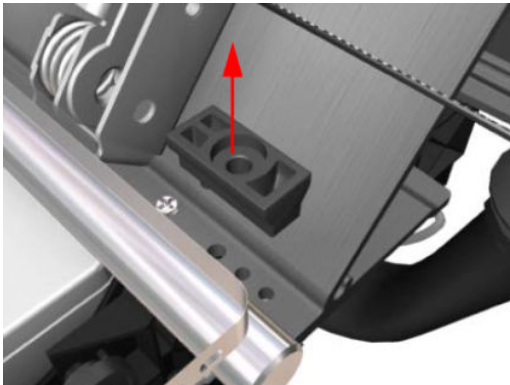
21. Slide the Carriage Assembly (including the belt) to the right and out of the printer.
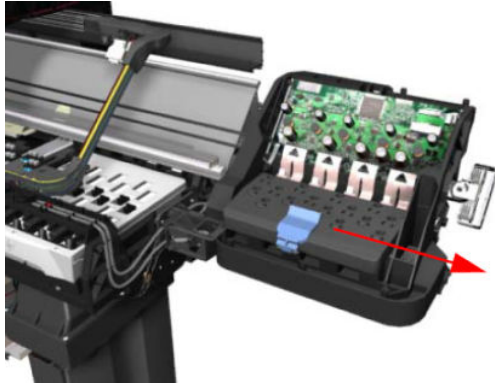
22. If the Carriage Assembly is to be replaced, make sure that you remove the Belt, the Carriage PCA, Color Sensor, Encoder and Line Sensors and the Cutter Assembly (in order to install them on the new Carriage Assembly).

NOTE: After installing the NEW Carriage Assembly, perform the following:

● "5.5.1 Scan-Axis Calibration".

● "5.6.1 Line Sensor Calibration".

Carriage bushings

Removal

1. Remove the Right cover on page 360.

2. Remove the Left cover on page 356.

3. Remove the encoder strip.

4. Remove the Carriage assembly on page 475.

5. Remove the Oiler assembly on page 463.

6. Remove the Lubrication felts on page 466.

7. Slide both carriage bushings away from the carriage assembly.
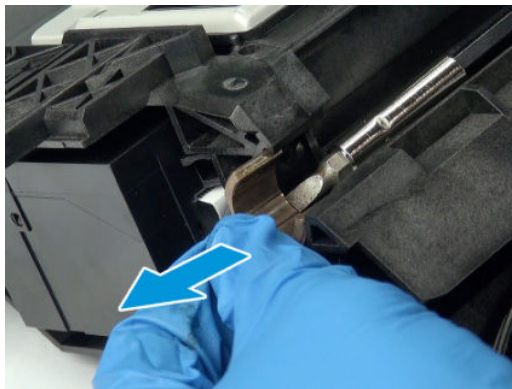
Drive Roller and Substrate Axis Motor

Drive roller

Removal

⚠️ **WARNING!** Turn off the printer and disconnect both power cords.

📝 **NOTE:** This service kit includes two Universal Instant-dry sheets for the corresponding service calibrations.

1. Remove the Right cover on page 360.

2. Remove the Left cover on page 356.

3. Remove the Right connector cover on page 384.

4. Remove the E-box extension on page 385.

5. Remove the Service station on page 428.

6. Remove the Ink Supply Station (ISS) on page 395.

7. Remove the Substrate-axis motor on page 486.

8. Remove the Encoder disc and sensor on page 435.

9. Remove the Substrate lever assembly on page 437.

10. Remove the Substrate Input Assemblies on page 564.

11. Remove the Static front platens (310/315/115/110) on page 576 — only for basic model.

12. Remove the Static front platens (360/365/370/375) on page 493 — only for full model.

13. Remove one T-20 screw (**Type B**) that secures the cover on the right-hand side of the printer.
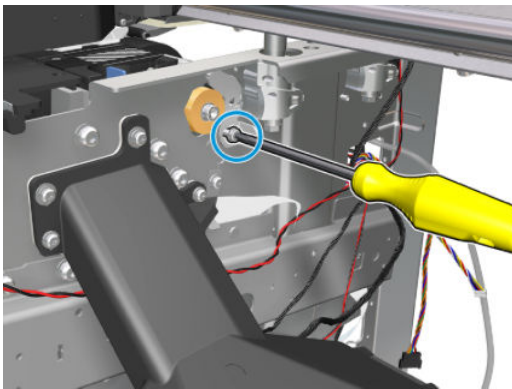
14. Remove the Cover.
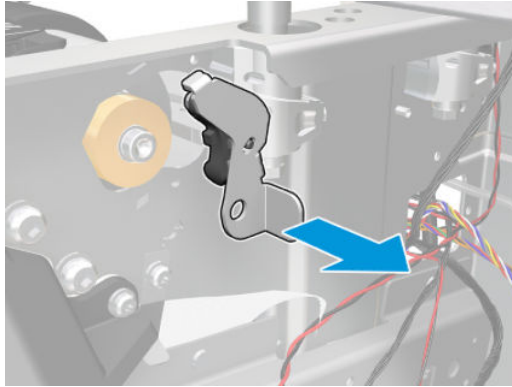
15. Remove three T-20 screws that secure the cover on the left hand side of the printer.
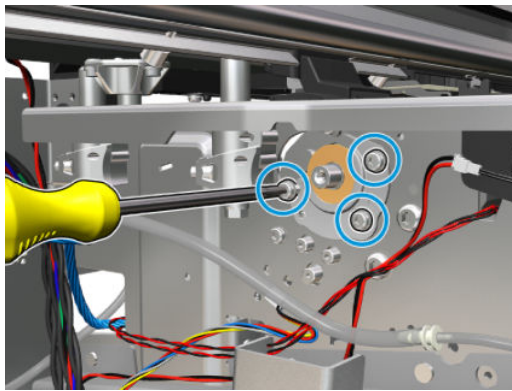
16. Remove the Cover.
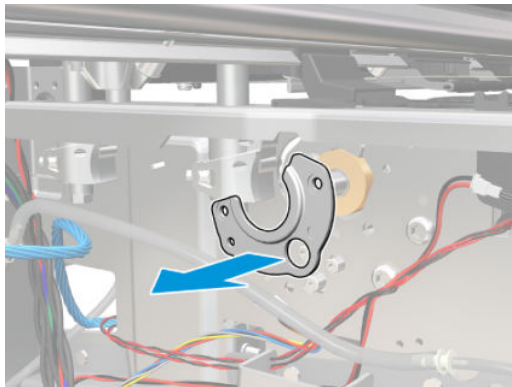
17. Remove T-20 screws that secure the Substrate-Axis Motor Bracket to the side-plate.
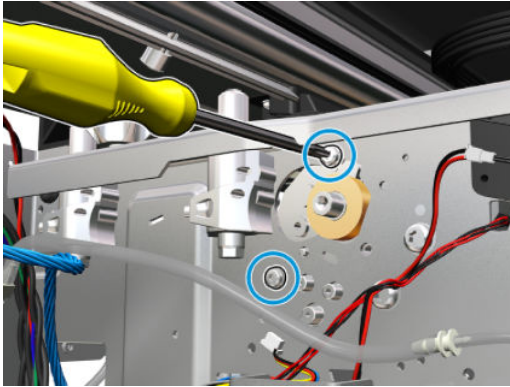
18. Remove two T-20 screws (**Type A**) that secure the Substrate-Axis Motor Bracket to the Chassis.
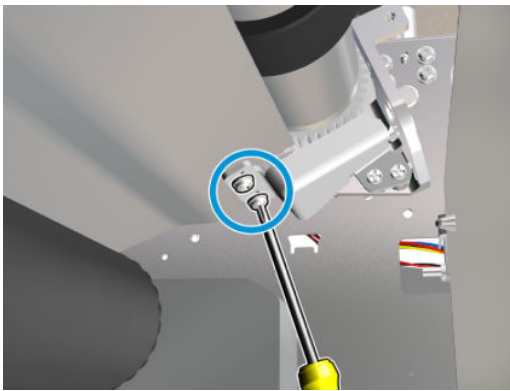
19. Remove the Substrate-Axis Motor Bracket from the printer.
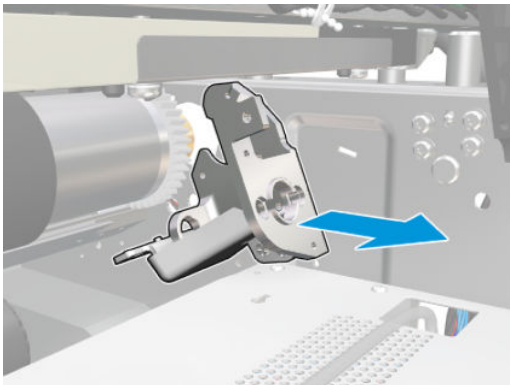
20. Use a flat bladed screwdriver to unclip the Roller Middle Support Cover.
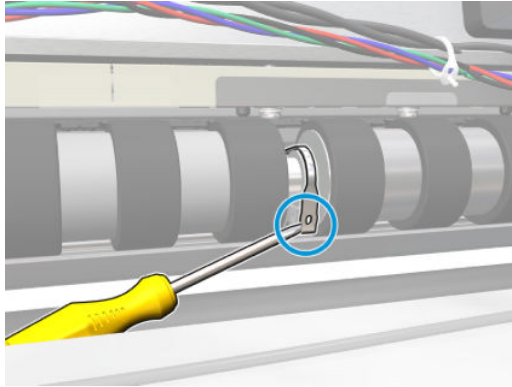
21. Rotate the Roller Middle Support Cover vertically.
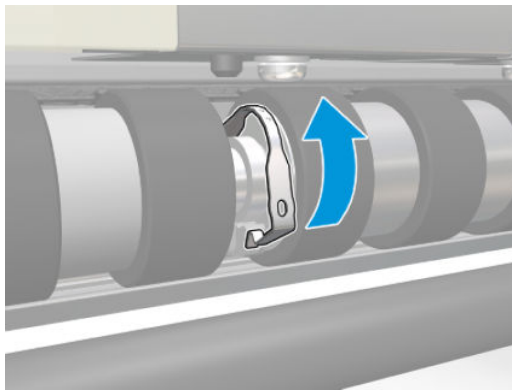
22. Release the Roller Middle Support Cover from its attachment point.
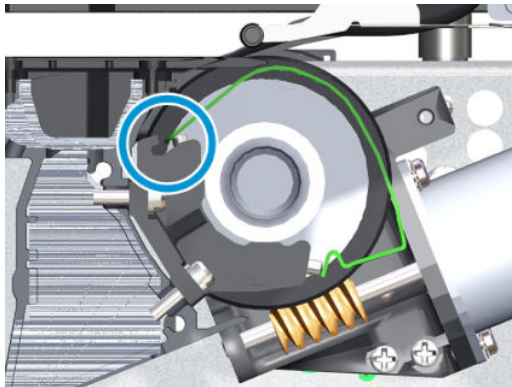
23. Remove the Roller Middle Support Cover.
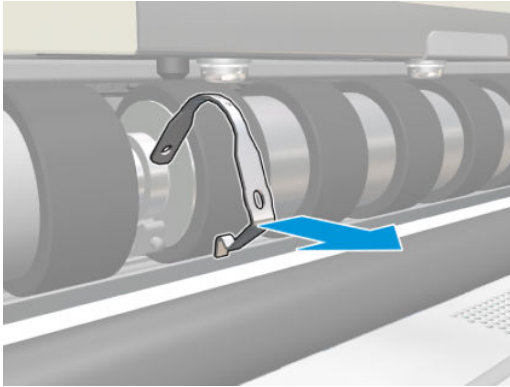
24. Remove the Drive Roller by sliding it to the right, then downwards and then out of the printer.

📝 NOTE: When reinstalling the parts, make sure you apply the grease (included with the support part) to the gears.

📝 NOTE: After installing the NEW Drive Roller, perform the following Service Calibration.

   ● Substrate Advance Calibration. See 4.1.1 Substrate advance calibration on page 273
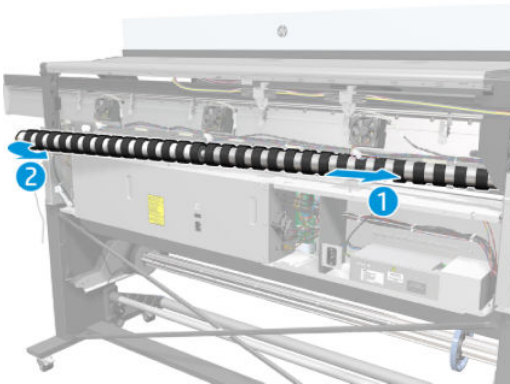
Installation

▲ Reverse the removal steps.

Substrate-axis motor

Removal

⚠ WARNING!   Turn off the printer and disconnect both power cords.

1. Remove the Left cover on page 356.

2. Remove the Rear cover on page 390.

3. Remove the E-box extension on page 385.

4. Disconnect the Substrate-Axis Motor cable from the PrintMech PCA.
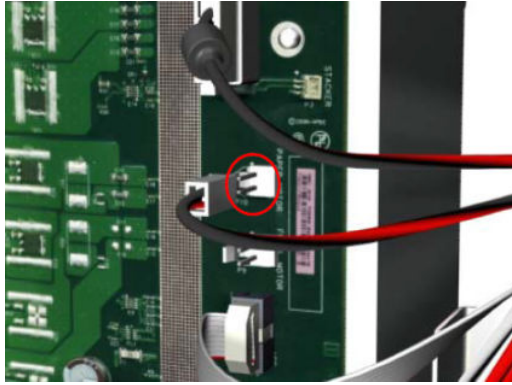
5. Detach the clamp of the ferrite core of the Substrate-Axis Motor cable from the printer chassis.
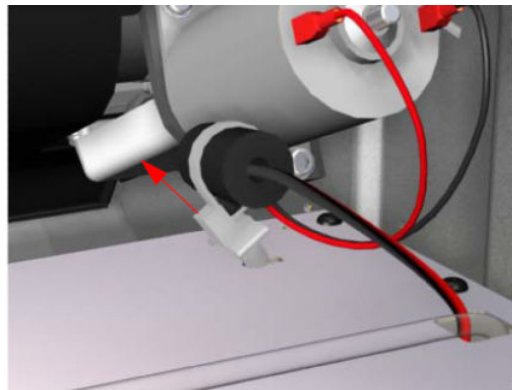
6. Remove the T-15 screws (**Type R**) identified (A) and loosen the T-15 screws (**Type R**) identified (B) that secure the Substrate-Axis Motor.
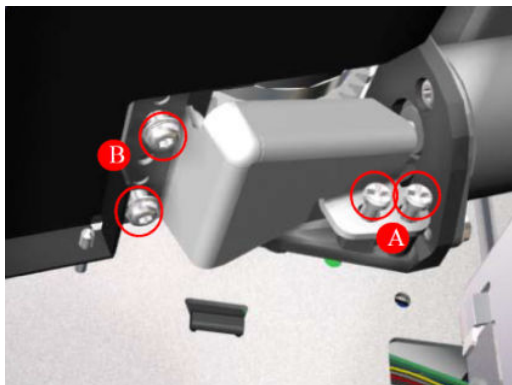
7. Remove the Substrate-Axis Motor Bracket.
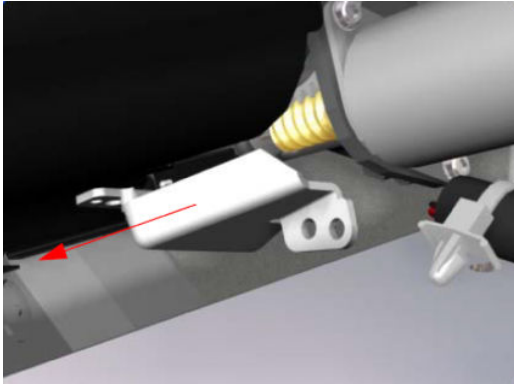
8. Remove two T-20 screws (Type B) that secure the Substrate-Axis Motor Bracket.
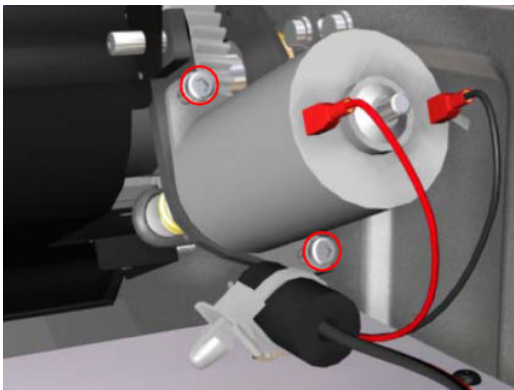
9. Remove the Substrate-Axis Motor from the printer.
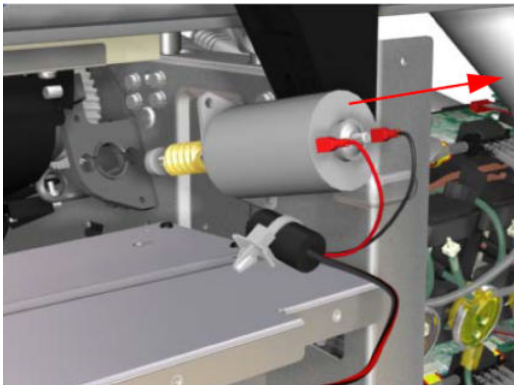
📝 NOTE: When reinstalling the parts, make sure you apply the grease (included with the support part) to the gears.

📝 NOTE: After installing the NEW Substrate-Axis Motor, perform the following Service Calibration:

- Substrate Advance Calibration — See 4.1.1 Substrate advance calibration on page 273

- Drive Roller Motor — See 2.2 Drive roller on page 236

Substrate path

Input roller

Removal

⚠️ **WARNING!**　Turn off the printer and disconnect both power cords.

1. Raise the right lever to release the right hand end of the Input Roller.
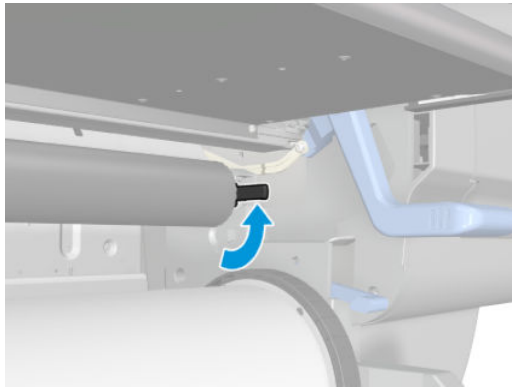
2. Pull out the right hand end of the Input Roller from the printer.

3. Move the Input Roller to the right to disengage it from the printer.
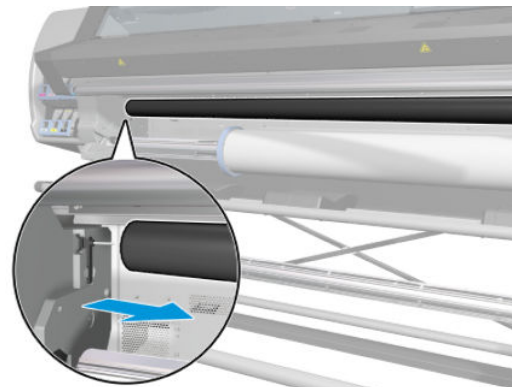
4. Remove the Input Roller from the printer.
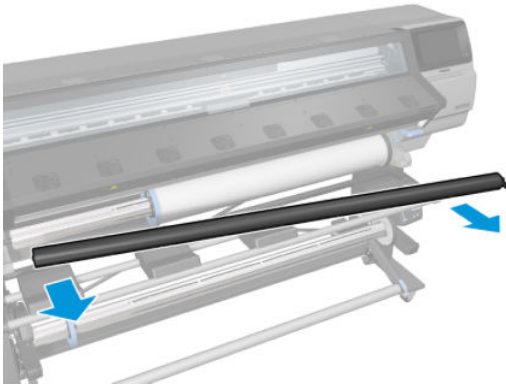
Output platen

Removal

WARNING! Turn off the printer and disconnect both power cords.

1. Remove the .

2. Remove the .

3. Remove the cable cover.

4. Disconnect all the cables that are fitted to the control PCA and curing power interconnect PCA, two aerial connectors in the full SKU, and the window grounding cable.
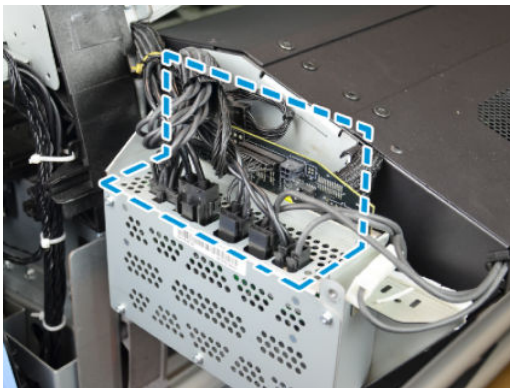
5. Remove two T-20 screws from the right side of the impinging module.
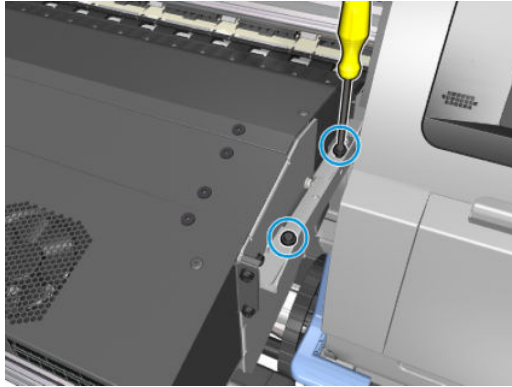
6. Remove two T-20 screws from the left side of the impinging module.
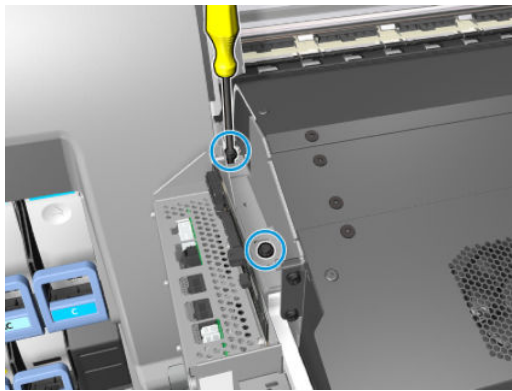
7. Remove the impinging module; lift upwards (1), and take out (2).

⚠ WARNING!   The module is heavy. Two people are recommended. The underside of the module is fragile, particularly the impinging deflectors. Handle with care.
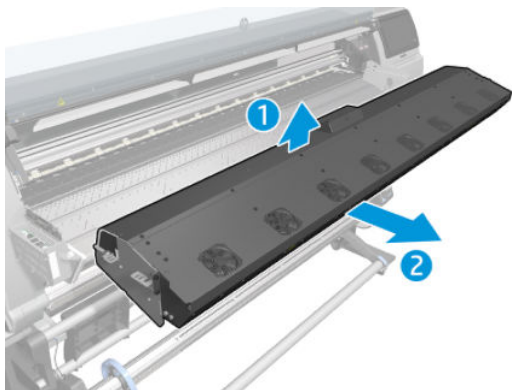
8. Remove one T-20 screw from the right side of the Output Platen.
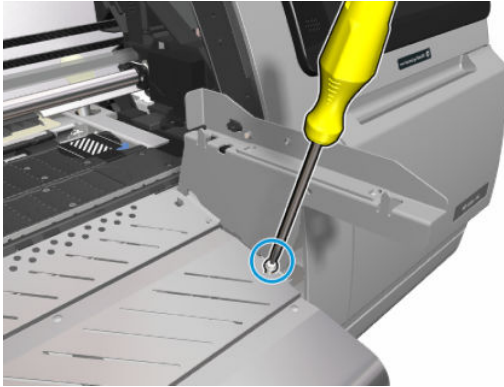
9. Remove the custom shoulder screw from the left side of the Output Platen.
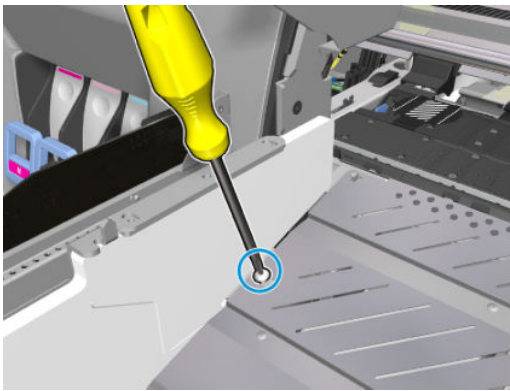
10. Remove five T-10 screws from below the Output Platen edge.
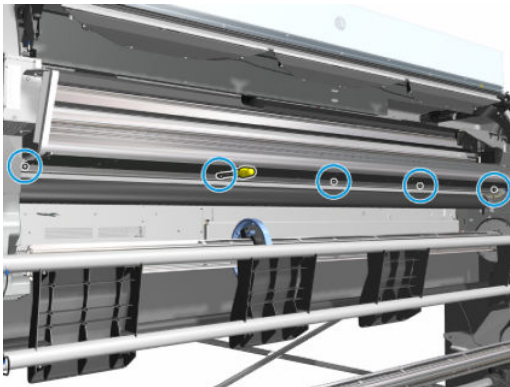
11. Lift the Output Platen off the locating pins and remove.
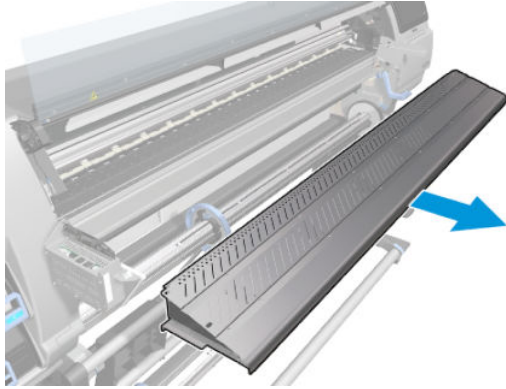
Installation

📝 **NOTE:** To ensure the Impinging Module is properly secured to its brackets insert and tighten the far right screw first.

Static front platens (360/365/370/375)

This service kit includes two Universal Instant-dry sheets for the corresponding service calibrations.

Removal

1. Remove the .

2. Remove the .

3. Remove the .

4. Move the Carriage Assembly fully to the right.

5. Remove fifty-eight T-10 screws (**Type C**) that secure the static front platen to the Vacuum Beam.
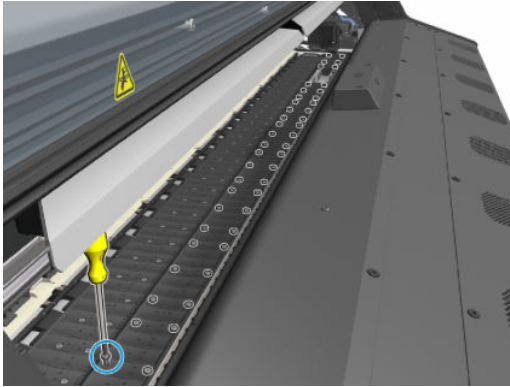
6. Remove the static front platen with the linear blade from the printer.
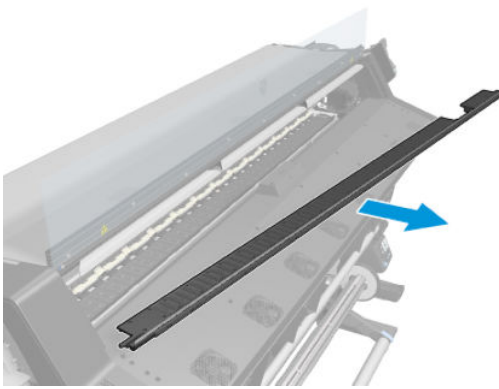
📝 NOTE: After installing the NEW Static Front Platen, perform the following Service Calibration:

- Substare Advance Calibration — See <u>4.1.1 Substrate advance calibration on page 273</u>

- OMAS Calibration — See <u>4.1.2.1 Print Calibration Pattern on page 274</u>

OMAS

This service kit includes two Universal Instant-dry sheets for the corresponding service calibrations.

Removal

⚠ WARNING! Turn off the printer and disconnect both power cords.

1. Remove substrate if installed.

2. Remove six T-10 screws (**Type C**) that secure the OMAS platen to the Vacuum Beam.
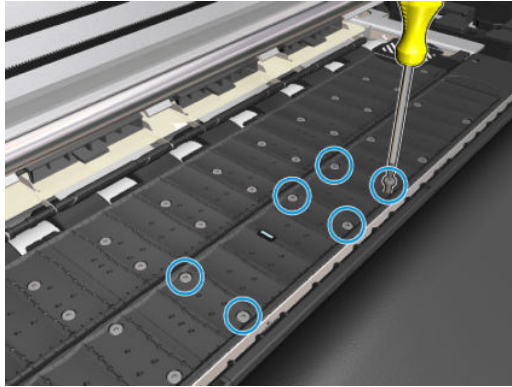
3. Slightly lift the OMAS platen assembly to unclip the OMAS cable from the OMAS PCA.
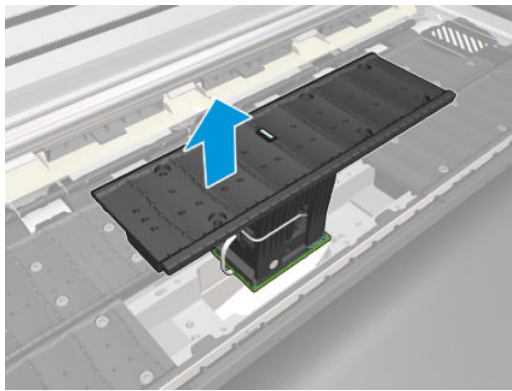
4. Disconnect the OMAS Cable from the OMAS Module.
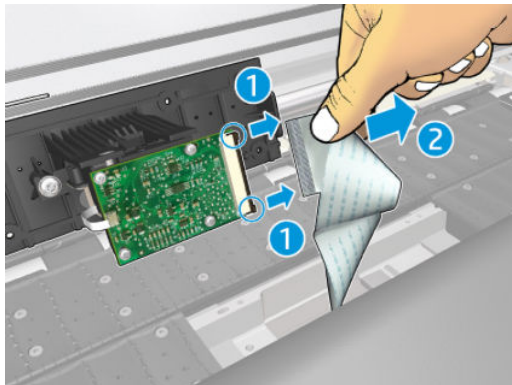
Installation

1. Connect the OMAS Cable that protrudes from the Vacuum Beam to the OMAS Module.
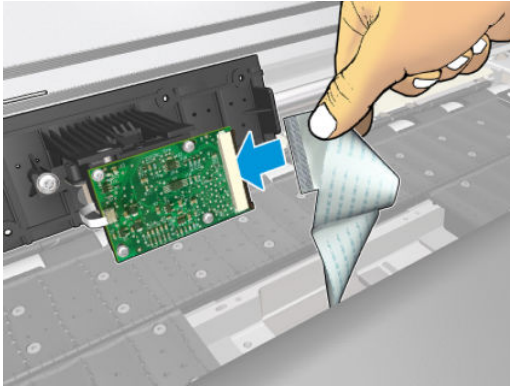
📝 **NOTE:** Activate the two locking clips of the OMAS connector to ensure the OMAS Cable is securely connected to the OMAS Connector.
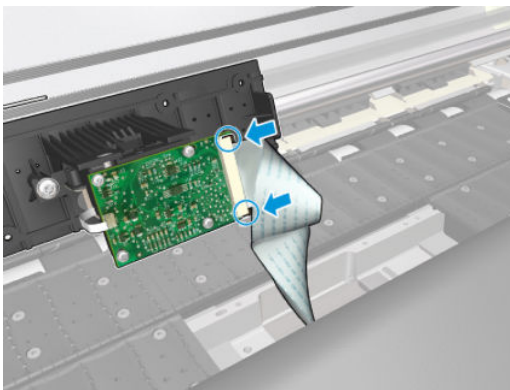
2. Carefully tighten the six T-10 screws (**Type C**) that secure the OMAS Module to the Vacuum Beam.
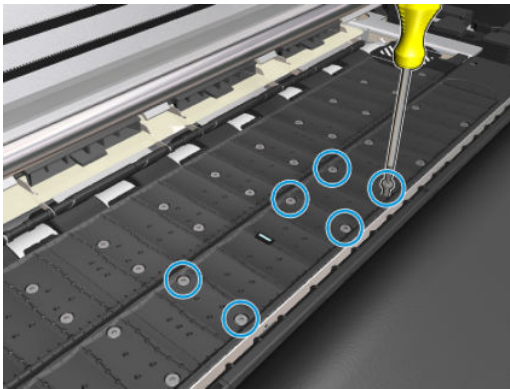
📝 **NOTE:** After installing the new OMAS Module, perform the following Service Calibration:

- Calibrate the OMAS — See page

- Reset the life counter.

OMAS cable

Removal

📝 **NOTE:** If any substrate is loaded, unload it.

WARNING! Turn off the printer and disconnect both power cords.

1. Remove the Right cover on page 360.

2. Remove the Service station on page 428.

3. Remove the Vacuum fan on page 442.

4. Remove the OMAS on page 494.

5. Carefully slide the ferrite core from the vacuum beam. Unroute the OMAS cable through the ferrite.
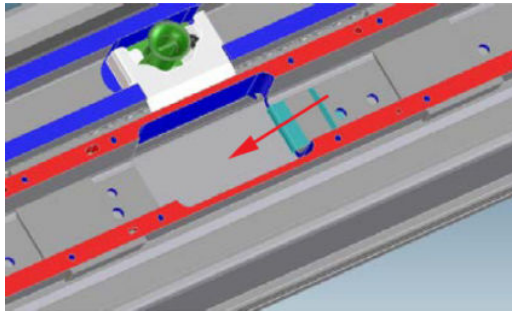
6. Slide the OMAS cable from the sideplate, pulling it carefully. Unroute the cable from both OMAS cable clamps on the sideplate.
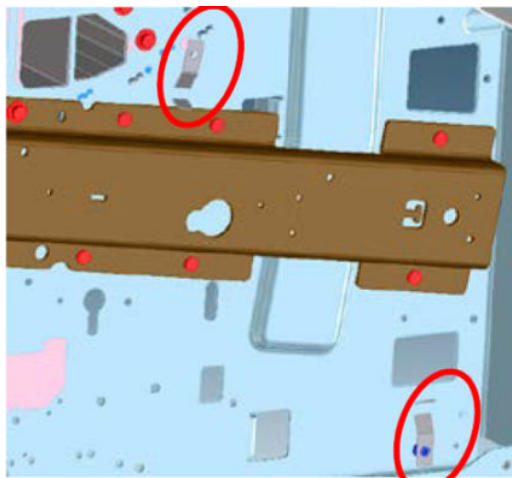
7. Unroute and remove the OMAS cable from the printer.

Installation

CAUTION: It is critical that the OMAS cable is correctly positioned in the vacuum beam so that it does not block the vacuum chamber.

The following illustration shows a cross-section of the vacuum beam with the OMAS cable correctly routed to avoid blocking the vacuum chamber.
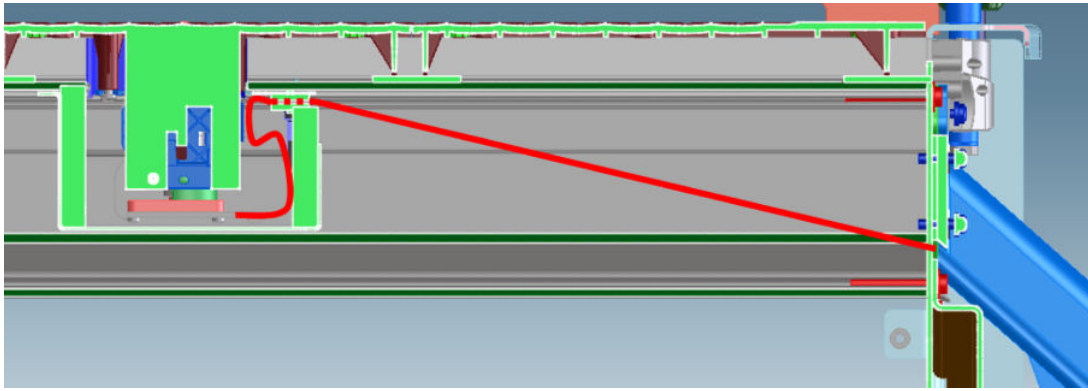
1. Before you can start to install the OMAS cable you must first identify which end connects to which component. The end of the cable that has a red line across its width connects to the OMAS (red line face upwards). The other end should be connected to the OMAS controller card.

2. Carefully route the OMAS cable from the OMAS slot, sliding it through the OMAS foam.
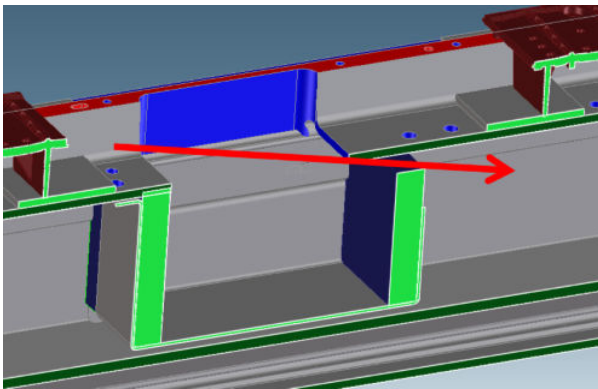
3. Carefully feed the OMAS cable through the vacuum beam sufficiently to have approximately 10 cm (4 in) hanging from the OMAS installation position.

4. Slide the ferrite core and its associated attachment plate onto the OMAS cable.

📝 IMPORTANT: Slide the OMAS cable through the ferrite core until the red line of the cable is aligned with the edge of the ferrite core.
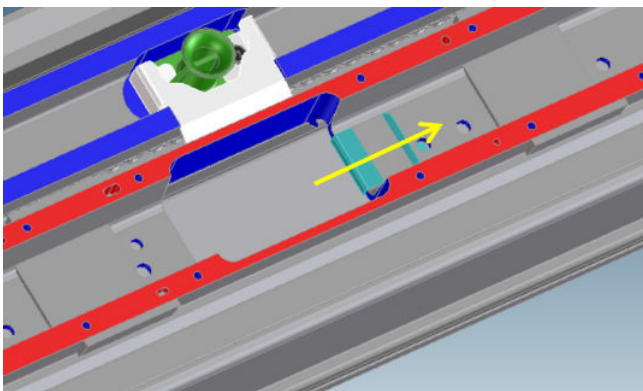
5. Carefully route the OMAS cable back into the sideplate connections, making sure that the straight fold immediately before the first diagonal fold (from the OMAS sensor end) is aligned with the slot. Fold the OMAS cable across the diagonal fold, and install the cable clamp to lock the OMAS cable in the correct position.
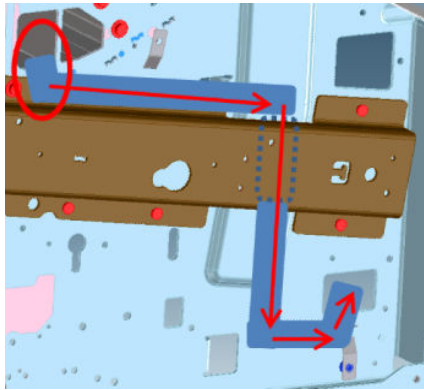
6. Route the OMAS cable to the ferrite core in the right interconnect panel.

7. Feed the OMAS cable through the ferrite core.

8. Connect the OMAS cable to the OMAS controller card with the connections on the top.

Electronics

E-box
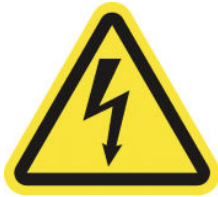
WARNING! Heating coils operate at hazardous voltages capable of causing death or serious personal injury. Disconnect both power cords before servicing the printer.

Removal

1. Remove the <u>Right connector cover on page 384</u>.

2. Remove the.e-box right cover.

3. Disconnect all the cables connected to the right interconnect PCA and the PrintMech PCA.
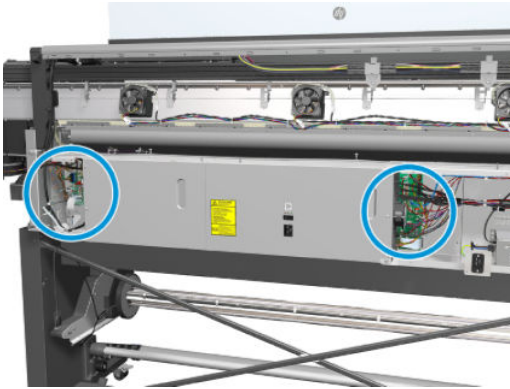
4. Unroute all the disconnected cables so they are clear of the e-box.

5. Remove two T-20 screws (**Type B**) that secure the right-hand side of the e-box.
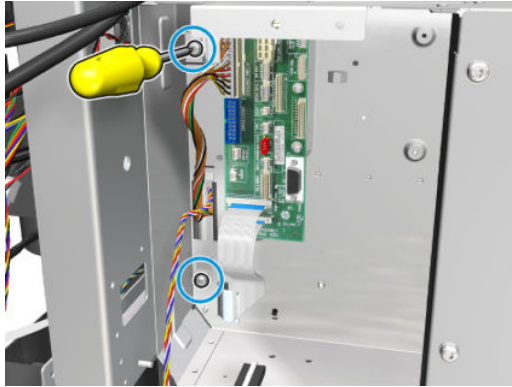
6. Remove two T-20 screws (**Type A**) that secure the left hand side of the e-box.
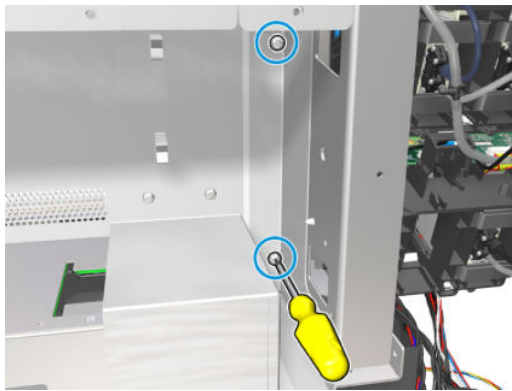
7. Lift the e-box sufficiently (approximately 2 cm) to release it from the attachments.

    ⚠ CAUTION: Be careful not to damage the cables on top of the e-box as you remove it.
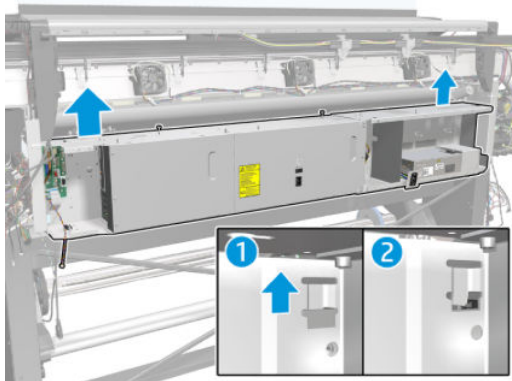
8. Remove the e-box from the printer.
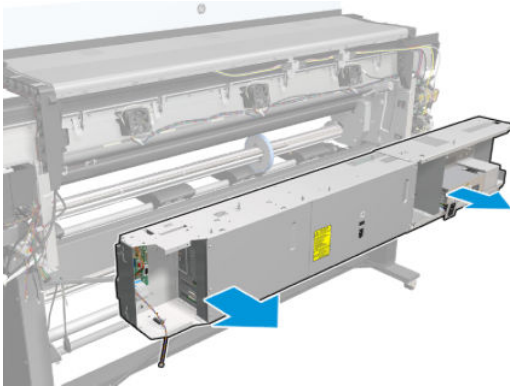
Formatter battery

Removal

⚠ **WARNING!** Turn off the printer and disconnect both power cords.

1. Remove the <u>Right connector cover on page 384</u>.

2. Remove three T-20 screws (**Type A**) that secure the formatter PCA cover.
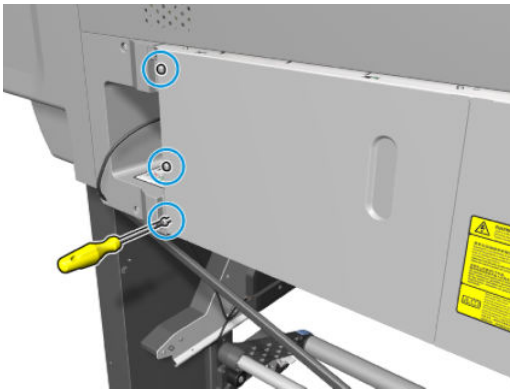
3. Slide the formatter PCA cover to the left and then remove it from the printer.
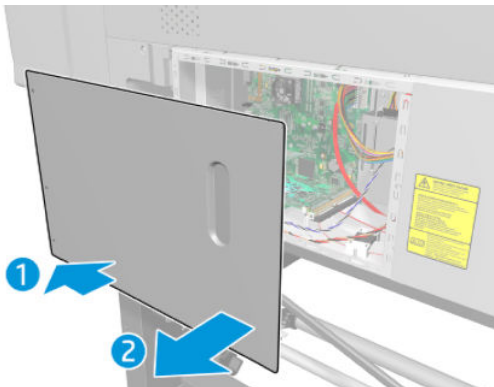
4. Push the clip down (1) and release the battery (2) from the formatter PCA.
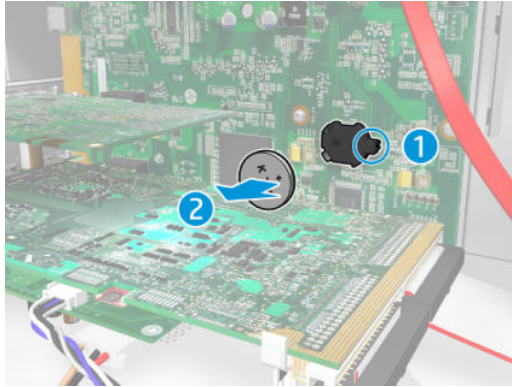
Solid State Drive (SSD)

Removal

Before removing the SSD, download the latest firmware version from the HP Web site. Copy it to a portable device such as a USB flash drive or a CD, and take it to the repair site.

⚠ **WARNING!** Turn off the printer and disconnect both power cords.

⚠ **CAUTION:** You must **never** replace both the SSD and the ISS PCAs (or the ink supply tubes and trailing cable) at the same time. If these parts need to be replaced, you must first replace one part and then turn on the printer until it completely initializes. Then turn off the printer and replace the other part.

1. Remove the .

2. Remove three T-20 screws (**Type A**) that secure the formatter PCA cover.

3. Slide the formatter PCA cover to the left and then remove it from the printer.
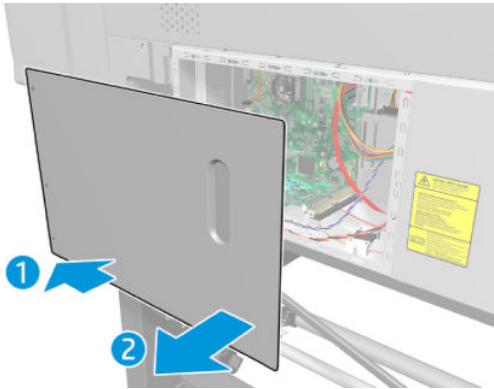
4. Disconnect the two cables from the SSD.
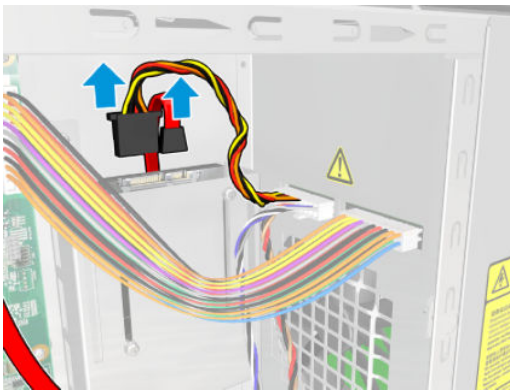
5. Remove four T-10 screws (**Type I**) from the SSD holder.
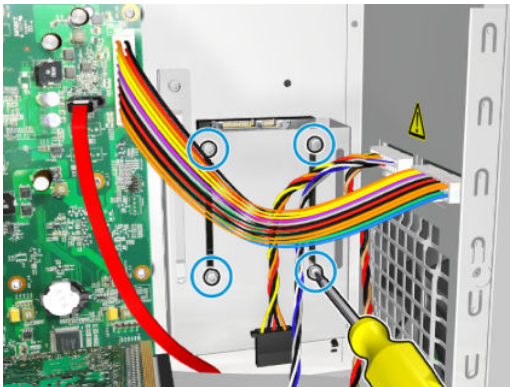
6. Slide the SSD upwards and remove it from the printer.
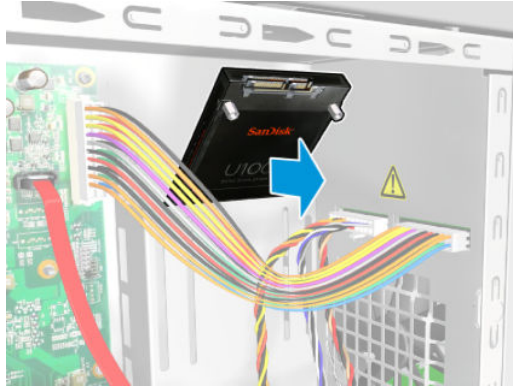
7. Turn on the printer and let it initialize normally. It will not request new firmware.

8. Connect the printer to the customer's network, and retrieve the IP address.

9. Install the new firmware using the Embedded Web Server. See the user's guide.

10. Perform printhead alignment, substrate-advance calibration, and color calibration.

Interconnect PCA

Removal

⚠ **WARNING!**   Turn off the printer and disconnect both power cords.

1. Remove the .

2. Disconnect all cables from the interconnect PCA.
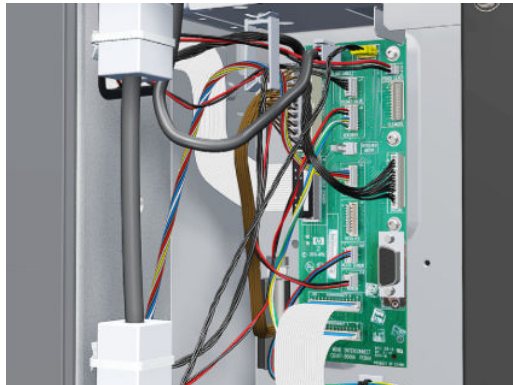
3. Remove five T-10 screws that secure the interconnect PCA.
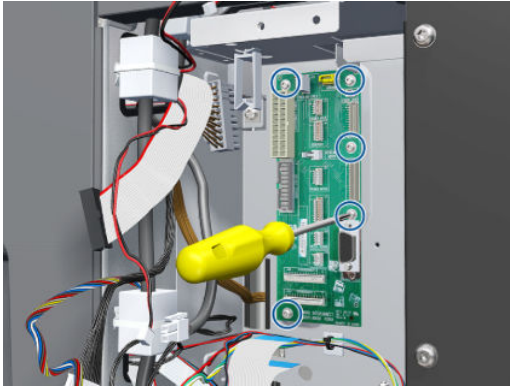
4. Remove the interconnect PCA.
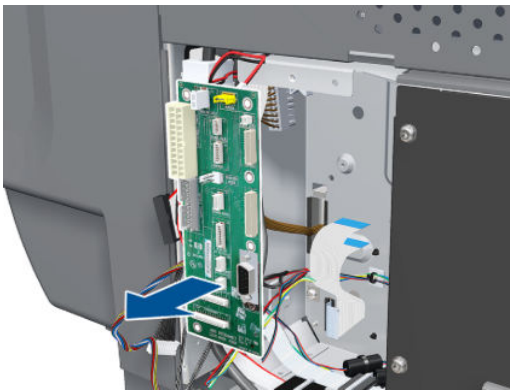
Formatter PCA

Removal

⚠ **WARNING!** Turn off the printer and disconnect both power cords.

⚠ **CAUTION:** Do not remove the fan or the processor (located under the fan) from the formatter PCA. The fan and the processor are part of the formatter PCA support part and should be replaced as one assembly.

1. Remove the Engine PCA on page 510.

2. Remove the OMAS controller PCA on page 508.

3. Disconnect all cables from the formatter PCA.
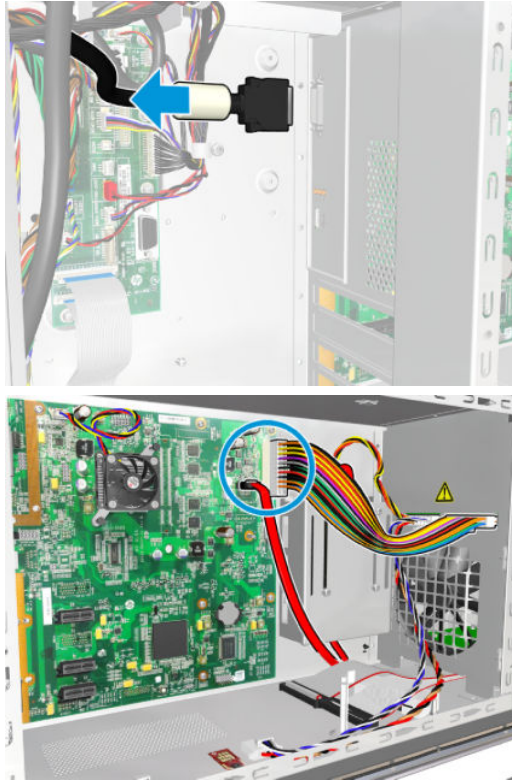
4. Remove eight T-10 screws that secure the formatter PCA.
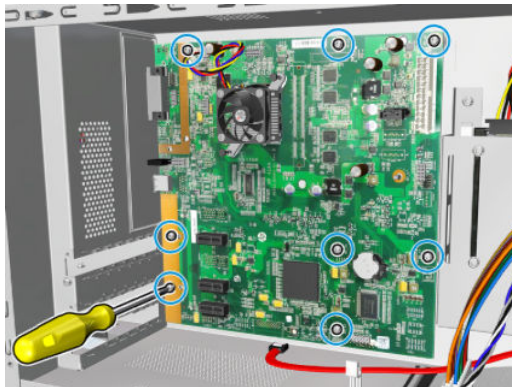
5. Release the plastic locating pin that secures the formatter PCA.
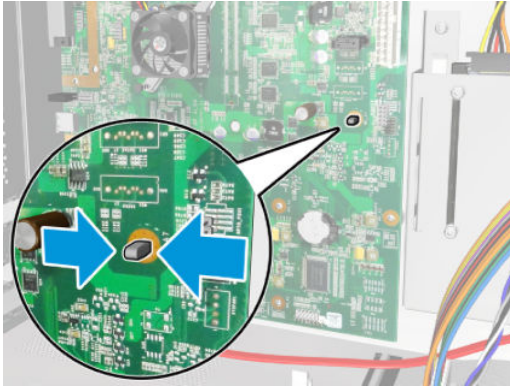
6. Remove the formatter PCA.
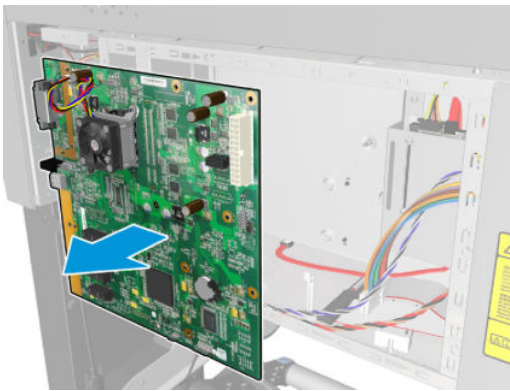
📝 NOTE: When installing the formatter PCA, make sure that you first locate it on the plastic locating pin and then install the screws.

OMAS controller PCA

Removal

⚠ WARNING! Turn off the printer and disconnect both power cords.

1. Remove the .

2. Remove three T-20 screws (**Type A**) that secure the formatter PCA cover.

3. Remove the formatter PCA cover from the printer.

4. Disconnect the OMAS controller PCA to OMAS ribbon cable.
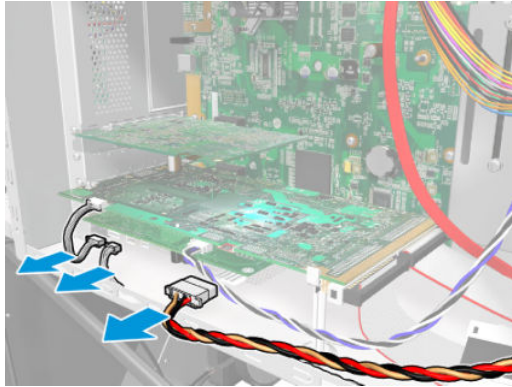
5. Disconnect the OMAS controller PCA to PrintMech and engine PCA connection cables (three connectors).

6. Remove the T-10 screw (**Type I**) that secures the OMAS controller PCA.
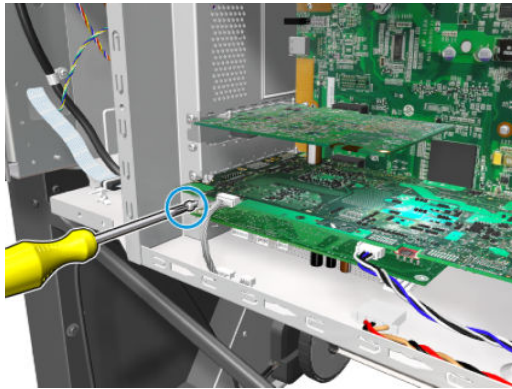
7. Disconnect the OMAS controller PCA from the formatter PCA and remove it from the printer.

⚠ CAUTION: To remove the OMAS controller PCA without damaging it on the e-module cover, you will need to disconnect it first and then rotate it slightly in the direction indicated.
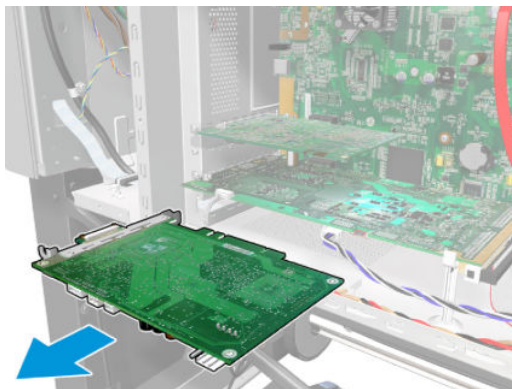
Power Supply Unit (PSU)

Removal

⚠ **WARNING!** Turn off the printer and disconnect both power cords.

1. Remove the Right connector cover on page 384.

2. Remove the E-box extension on page 385.

3. Remove three T-20 screws (**Type A**) that secure the formatter PCA cover.

4. Remove the formatter PCA cover from the printer.

5. Remove three T-20 screws (**Type A**) that secure the PSU cover.

6. Remove the PSU cover from the printer.

7. Disconnect cables as required.

8. Remove two T-10 screws (**Type I**) from the back of the PSU assembly.

9. Remove two T-10 screws (**Type I**) from the PSU assembly.

10. Pull out the PSU assembly slightly from the electronics module.

11. Remove the PSU assembly.

PrintMech PCA

Removal

⚠ **WARNING!** Turn off the printer and disconnect both power cords.

1. Remove the E-box extension on page 385.

2. Remove the Heater control assembly on page 561.

3. Disconnect all cables from the PrintMech PCA.

4. Remove eight T-10 screws (**Type I**) that secure the PrintMech PCA.

5. Remove the PrintMech PCA from the printer.

Engine PCA

Removal

⚠ **WARNING!** Turn off the printer and disconnect both power cords.

1. Remove the Right connector cover on page 384.

2. Remove three T-20 screws (**Type A**) that secure the formatter PCA cover.

3. Remove the formatter PCA cover from the printer.

4. Disconnect the trailing cable from the engine PCA.

5. Disconnect all other cables from the engine PCA.

6. Remove the T-10 screw (**Type I**) that secures the engine PCA.
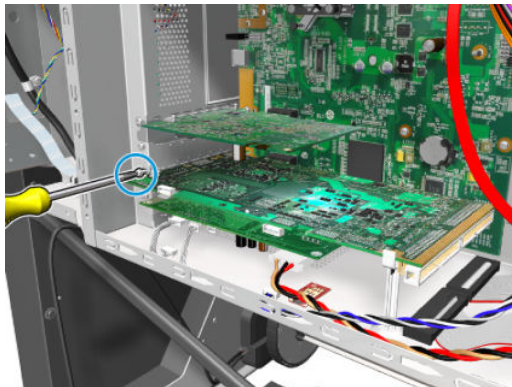
7. Unclip the engine PCA from the white plastic clip.

8. Remove the engine PCA from the formatter PCA.
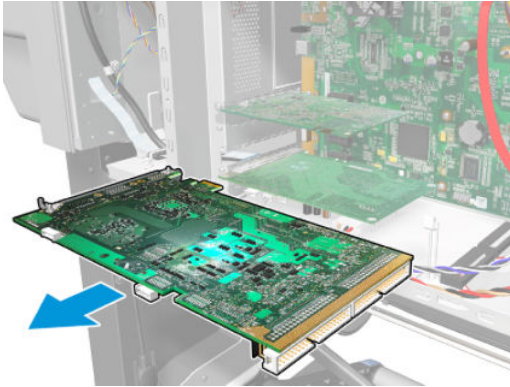
Printer ID PCA

Removal

⚠ WARNING! Turn off the printer and disconnect both power cords.

1. Remove three T-20 screws that secure the e-box left cover.

2. Remove the e-box left cover.

3. Remove the printer ID PCA, which is a small, SIM-like red board, from the engine PCA's SIM slot.

   To remove it, just pull it out firmly.
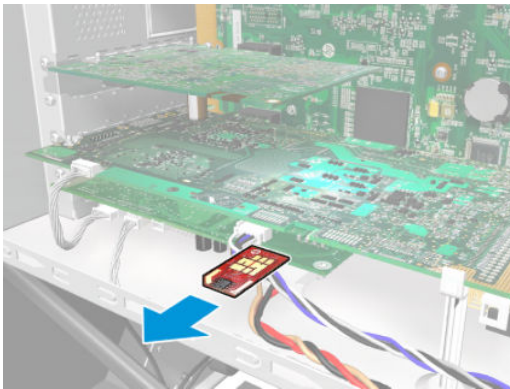
Installation

▲ Follow the removal steps in reverse. When inserting the new PCA, you are recommended to press it upwards a little so that it slides into the SIM card slot.

Air curtain and print-zone heater control PCA

> ⚠️ **WARNING!** Heating coils operate at hazardous voltages capable of causing death or serious personal injury. Disconnect both power cords before servicing the printer.

Removal

1. Remove three T-20 screws that secure the e-box right cover.

2. Remove the e-box right cover.

3. Remove the <u>Heater control assembly on page 561</u>.

4. Open the heater control assembly container by removing all the screws.

5. Remove the air curtain and print-zone heater control PCA.

LAN PCA

Removal

> ⚠️ **WARNING!** Turn off the printer and disconnect both power cords.

1. Unplug the LAN cable accessible to users, if present.

2. Remove three T-20 screws that secure the e-box right cover.

3. Remove the e-box right cover.

4. Remove one screw.
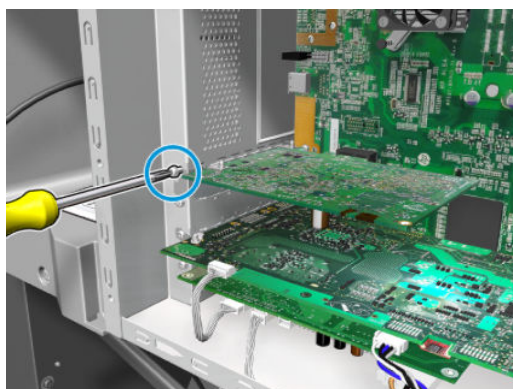
5. Remove the LAN PCA.
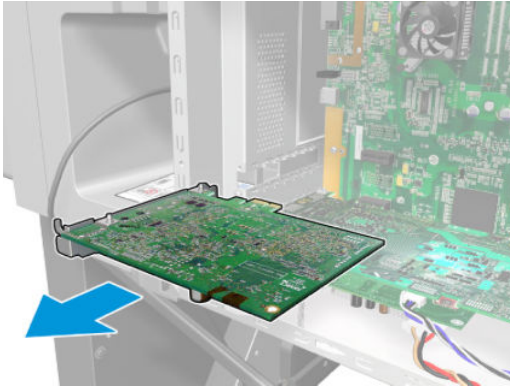
Heater Control

Removal

⚠ **WARNING!** Turn off the printer and disconnect both power cords.

1. Remove the <u>E-box extension on page 385</u>.

2. Remove three T20 screws.
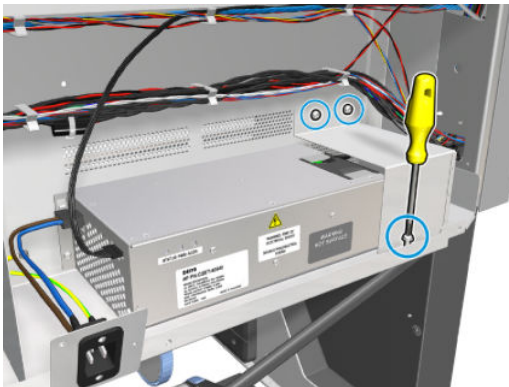
3. Remove the bracket.
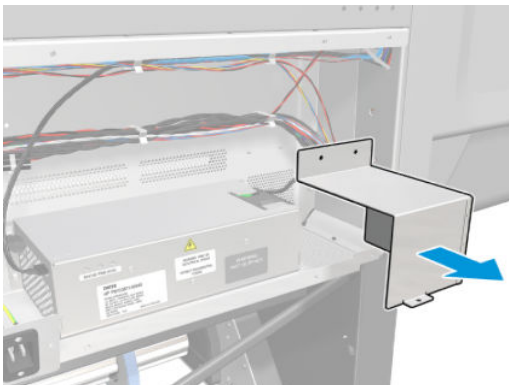
4. Remove the right connector.
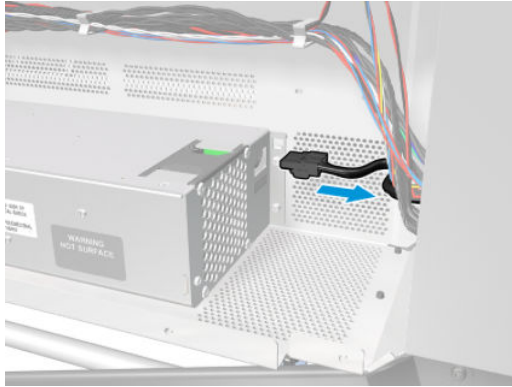
5. Remove the two left connectors.
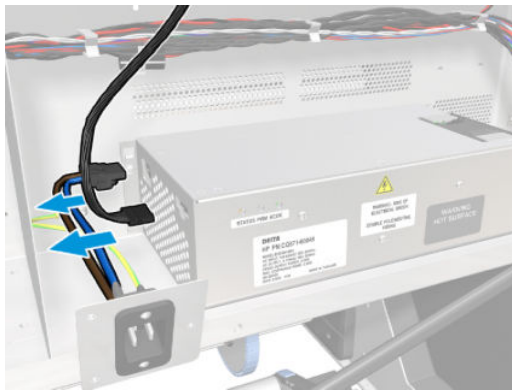
6. Remove three T20 screws.

7. Remove the Heater Control.

Center Guide and Pinchwheels

Substrate sensor

Removal

⚠ **WARNING!** Turn off the printer and disconnect both power cords.

1. Remove the Loading Table

2. Remove the input and output Spindles.

3. Remove the .

4. Remove the tension bar.

5. Beneath the printer, remove three screws to release the Substrate Sensor.
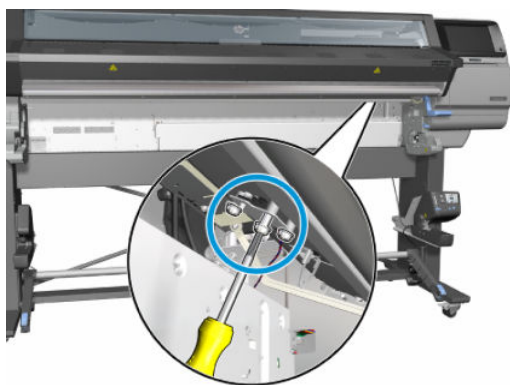
6. Disconnect the cable from the connector to remove the Substrate Sensor.
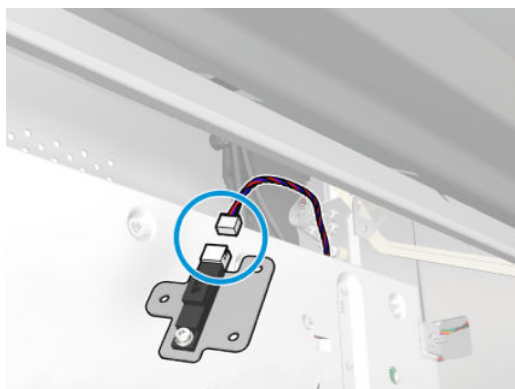
Entry Mylar

Removal

⚠ **WARNING!** Turn off the printer and disconnect both power cords.

1. Remove the .

2. Untighten the two T10 screws.
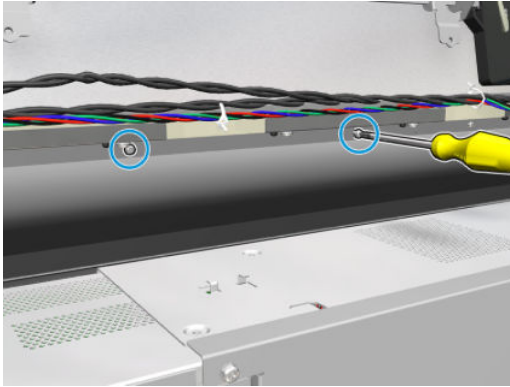
3. Remove the cover.
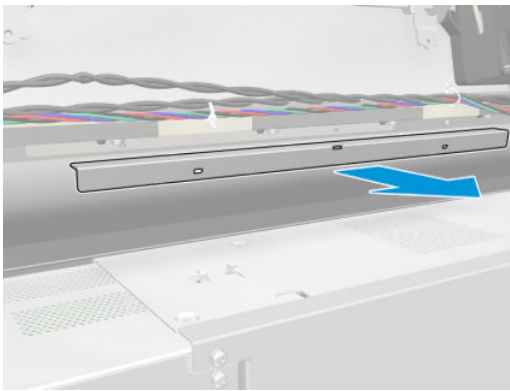
4. Remove the Entry Mylar.
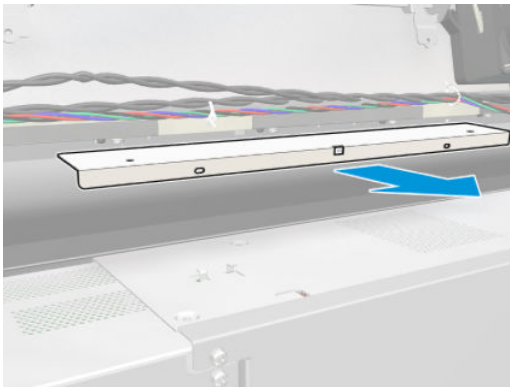
Pinchwheel assembly

Removal

⚠ **WARNING!** Turn off the printer and disconnect both power cords.

1. Remove the Right cover on page 360.

2. Remove the Rear cover on page 390.

3. Remove the Service station on page 428.

4. Raise the substrate lever.
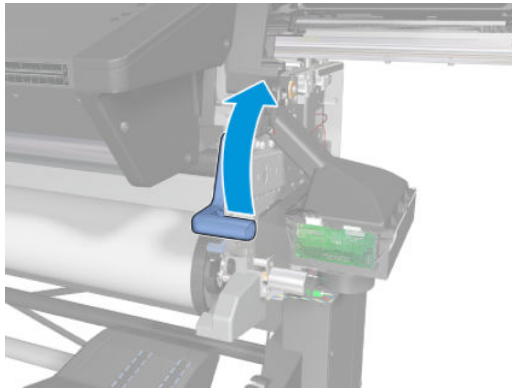
5. Remove all the interpinches.
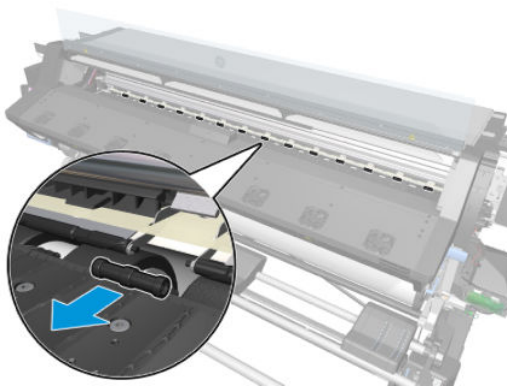
6. Remove one T-20 screw that secures the linkage to the spring.
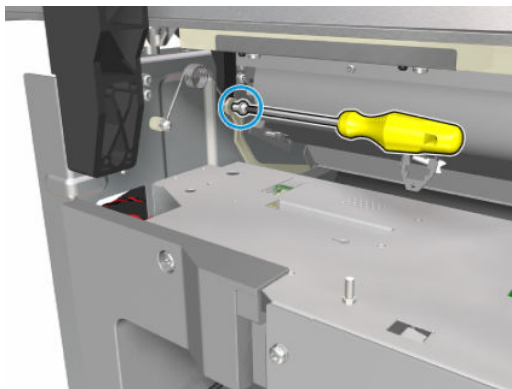
7. Disconnect the linkage from the pinchwheel cam-arm.
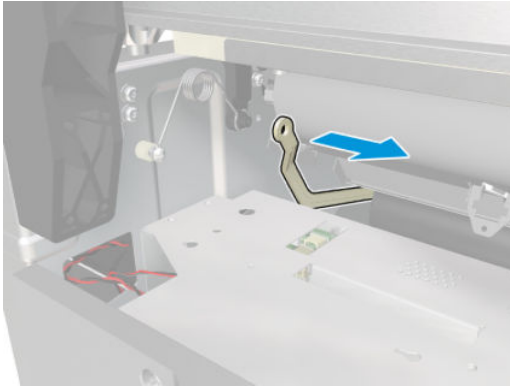
8. Disconnect the spring from the pinchwheel cam-arm.
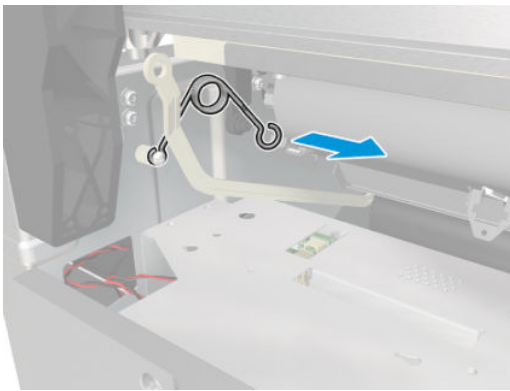
9. Remove one T-20 screw that secures the attachment plate to the central pinchwheel subassembly.
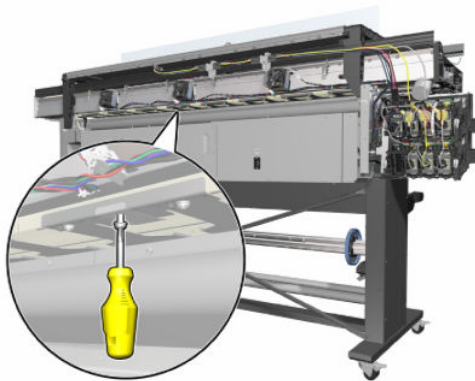
10. Remove the attachment plate from the central pinchwheel subassembly.
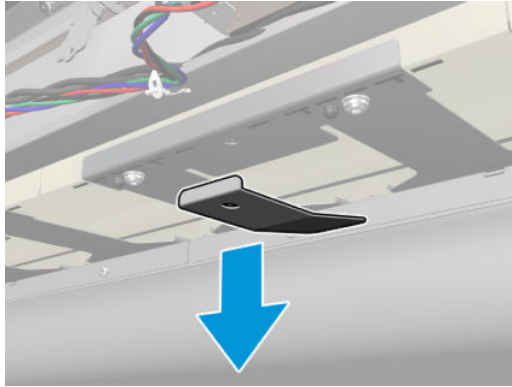
11. Remove two T-20 screws from each pinchwheel subassembly (a right-angled screwdriver is included with the replacement pinchwheel assembly).
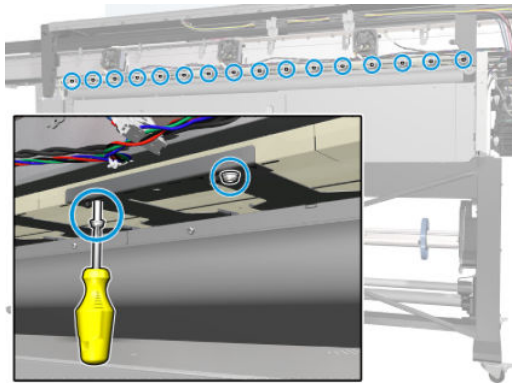
12. Unclip the individual pinchwheel from the scan axis by pressing down on the module.
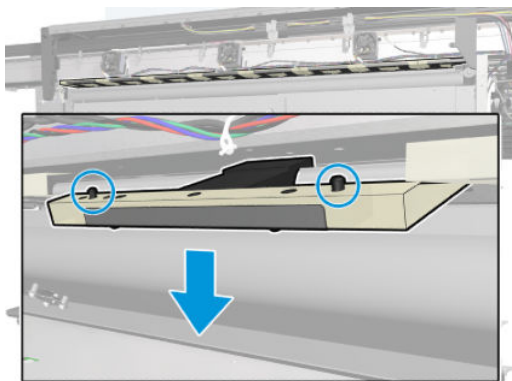
13. Bend the individual pinchwheel while pushing the module back.

📝 IMPORTANT: Bend the module so that the black plastic part avoids the cam.
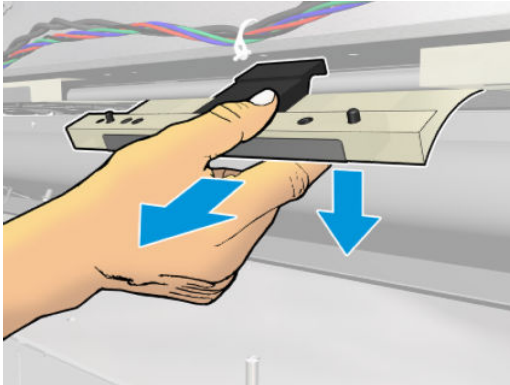
14. Remove the complete pinchwheel assembly (including the cam and cam lever) from the printer.
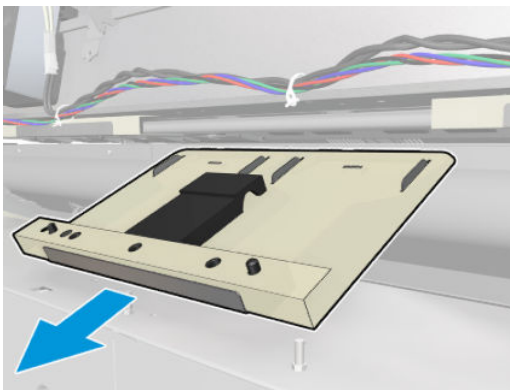
15. Remove the T-20 screw that secures the cam arm to the axial stop.
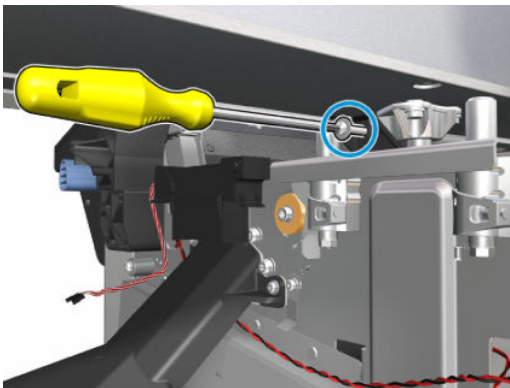
16. Remove the T-20 screw from the bottom of the printer, remove the left cam holder, and remove the entire cam from the printer.
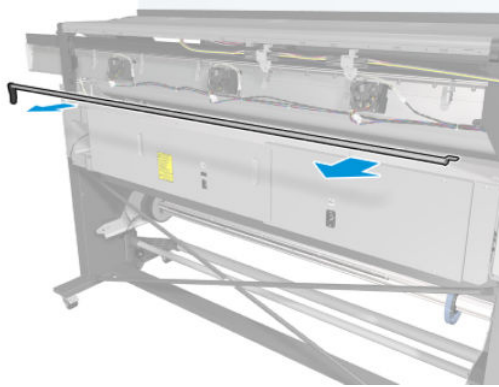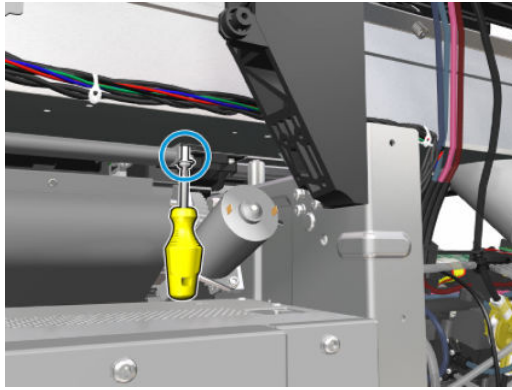
Installation

1. Place the cam into the printer and tighten the screw that secures the left cam holder to the printer.
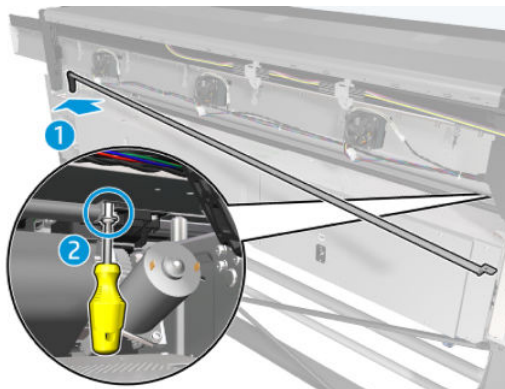
2. Retighten the T-20 screw that secures the cam arm to the axial stop.
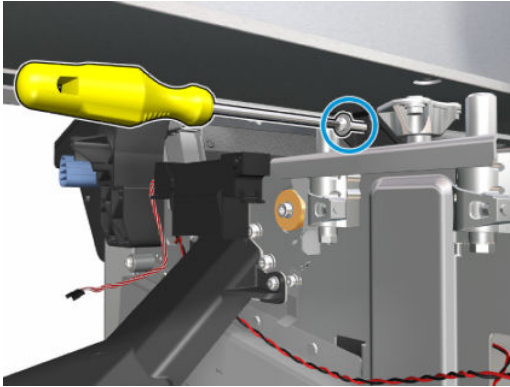
3. Take an individual pinchwheel module from the service kit.
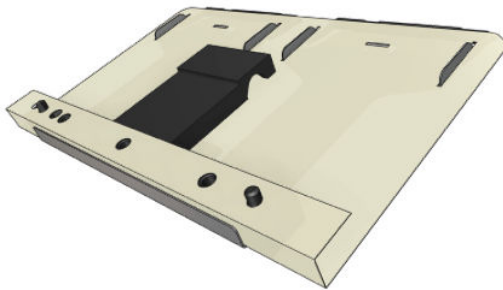
4. From the rear of the printer, introduce all the individual pinchwheel modules.
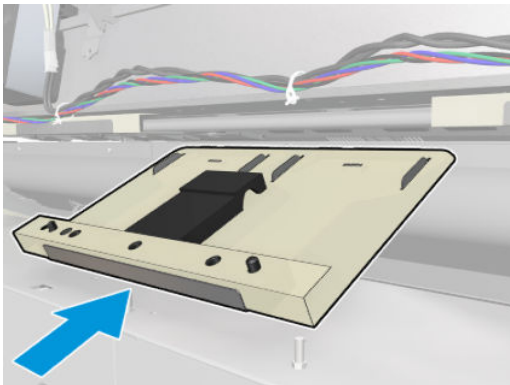
5. Introduce the all-pinchwheel module from the rear of the printer, making sure that the black plastic part is inserted between the cam and the scan axis.

📝 IMPORTANT: Bend the module slightly so that it will go in more easily.
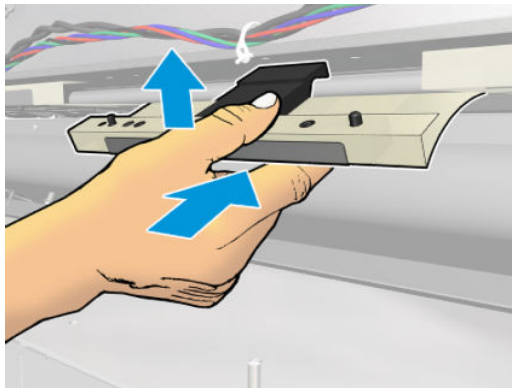
6. Insert the two pins from the black plastic part into the scan-axis pin location, then insert two T-20 screws that secure the individual pinchwheel module to the scan axis.
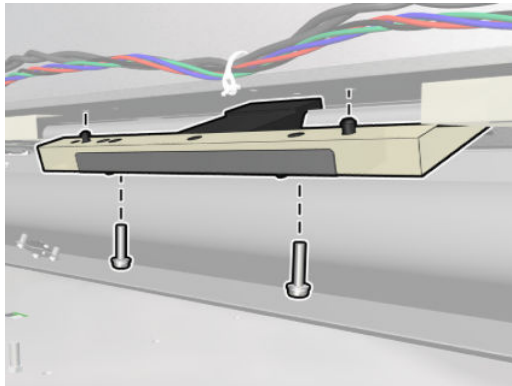
7. Insert the T-20 screw and secure the attachment plate to the central pinchwheel subassembly.
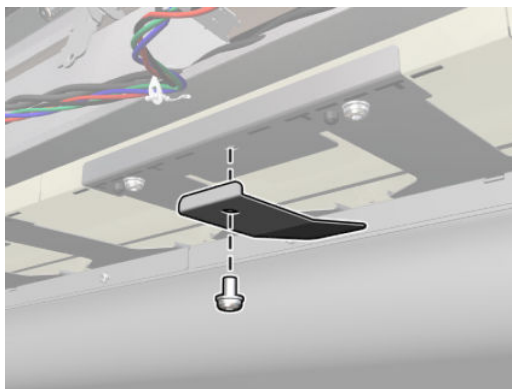
8. Reinsert the interpinches that you removed earlier.
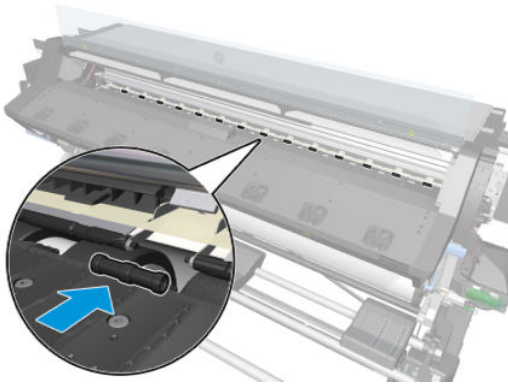
9. Connect the spring from the pinchwheels cam-arm.
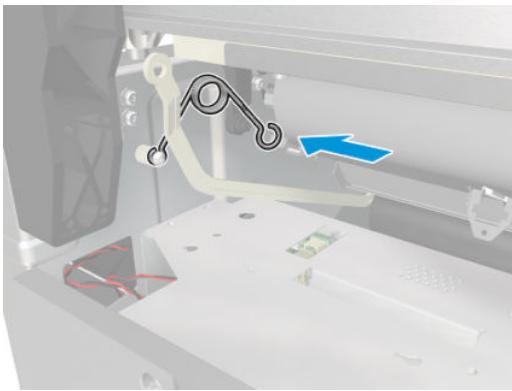
10. Connect the linkage from the pinchwheels cam-arm.
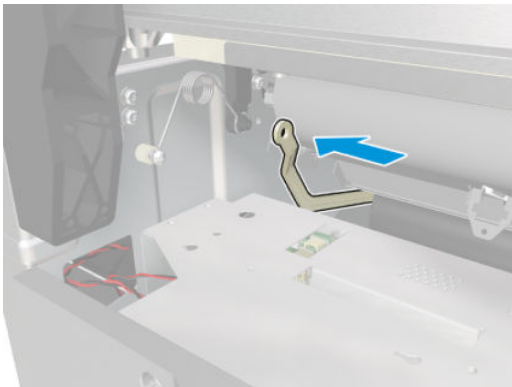
11. Tighten the T-20 screw that secures the linkage to the spring.
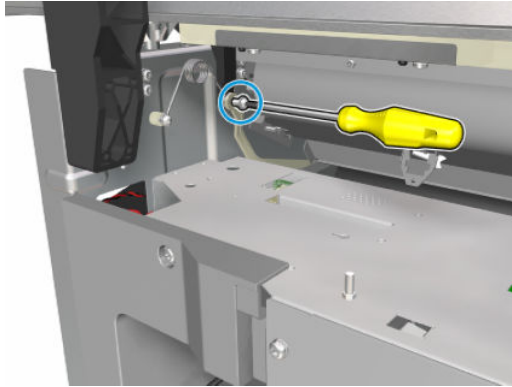
Individual pinchwheel rollers

📝 NOTE: If you need to replace the whole pinchwheel assembly, see Pinchwheel assembly on page 518.

Removal

⚠ WARNING! Turn off the printer and disconnect both power cords.

1. Remove the Rear cover on page 390.

2. Raise the substrate lever.
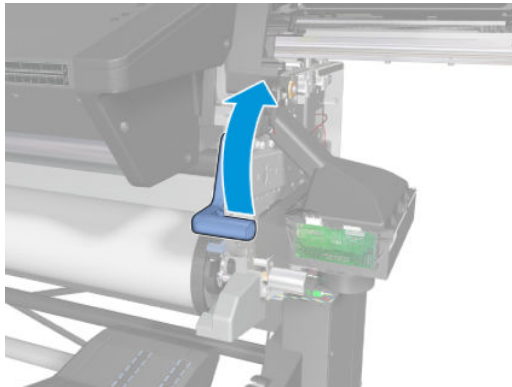
3. Remove the interpinches close to the individual pinchwheel affected.
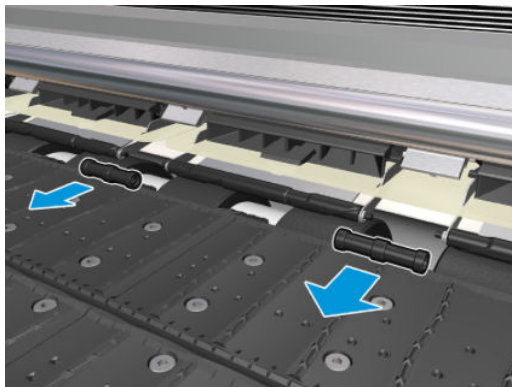
4. Remove the two T-20 screws that secure the individual pinchwheels to the scan axis.
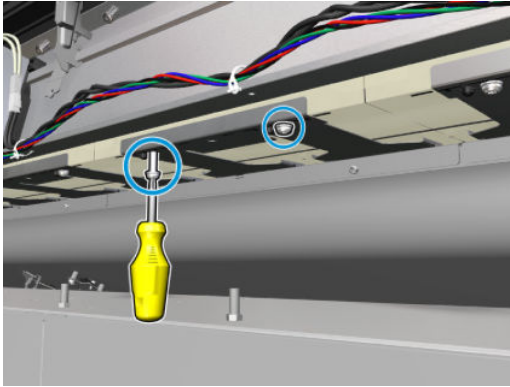
5. Unclip the individual pinchwheel from the scan axis by pressing down on the module.
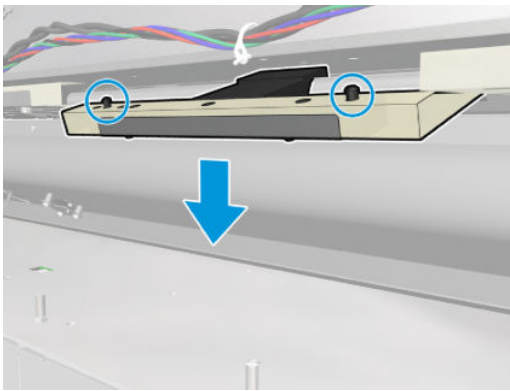
6. Bend the individual pinchwheel while pushing the module back.

    ☑ IMPORTANT: Bend the module so that the black plastic part avoids the cam.
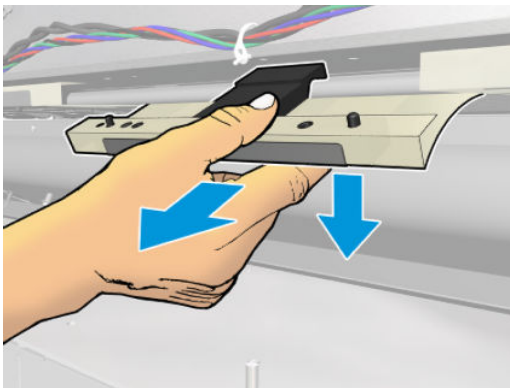
7. Remove the pinchwheel.
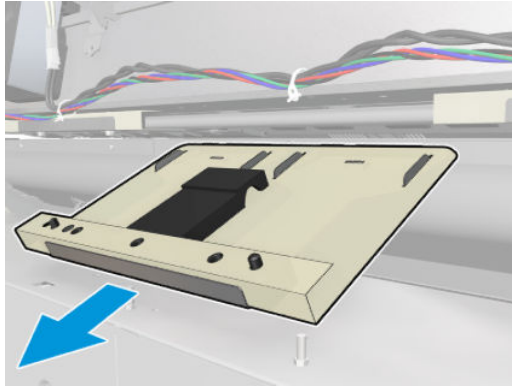
Installation

1. Take the individual pinchwheel module from the service kit.
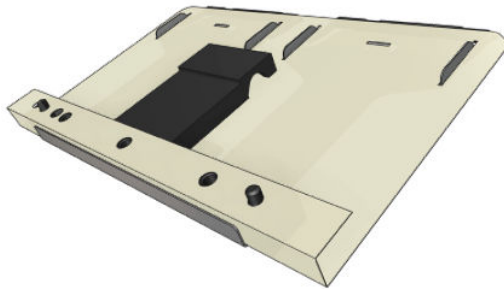
2. From the rear of the printer, introduce the individual pinchwheel module.
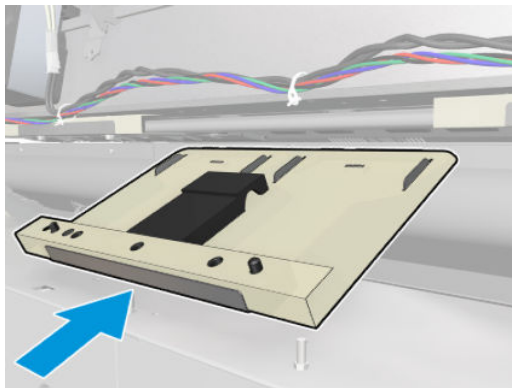
3. Introduce the individual pinchwheel module from the rear of the printer, making sure that the black plastic part is inserted between the cam and the scan axis.

    📝 IMPORTANT: Bend the module slightly so that it will go in more easily.
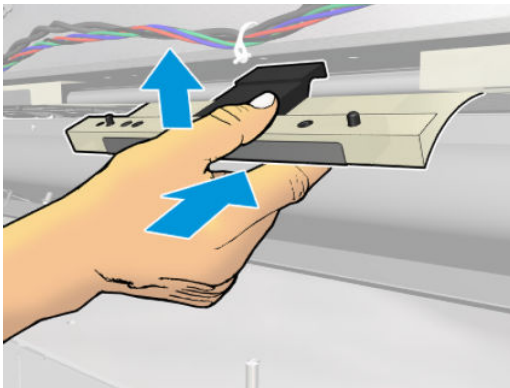
4. Insert the two pins from the black plastic part into the scan-axis pin location, then insert two T-20 screws that secure the individual pinchwheel module to the scan axis.
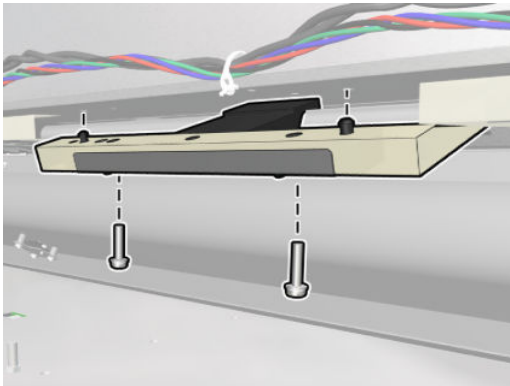
5. Reinsert the interpinches that you removed earlier.
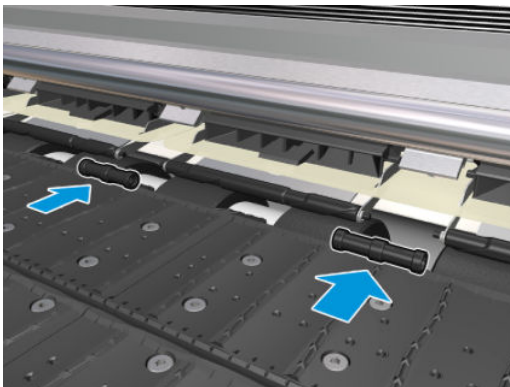
Curing Assemblies

Impinging pressure sensor

Removal

1.   Open the window. See Opening the window on page 365.

2.   Remove two T-20 screws to release the pressure sensor cover.
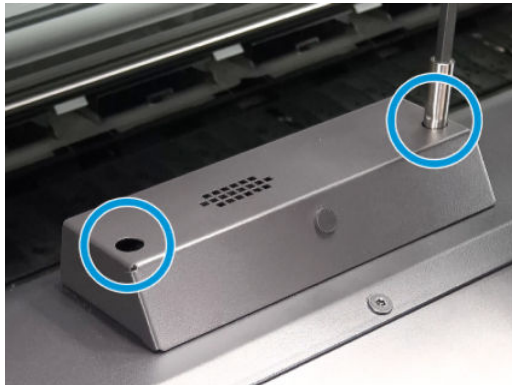
3.   Remove the pressure sensor cover.

4.   Remove two T-20 screws to release the pressure sensor support bracket.
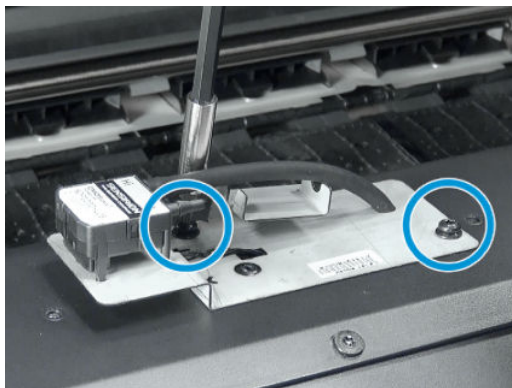
5.   Disconnect the sensor cable from the under the sensor.

6.   Pull the rubber tube to disconnect it from the sensor.
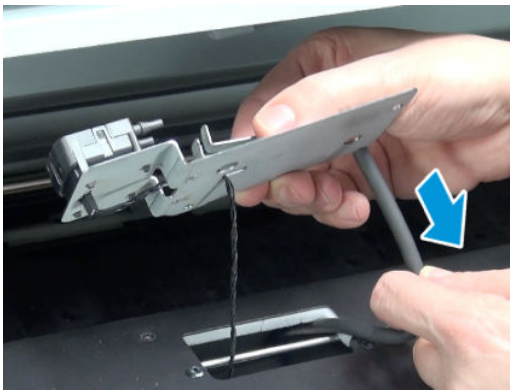
7.   Unclip the sensor from the support bracket.

Installation

📝 **NOTE:**   When installing the new sensor, make sure that the rubber pipe is connected to the 'High' position on the sensor.

📝 IMPORTANT: When installing the new sensor, handle the rubber pipe with care to avoid any damage. Damage to the rubber tube may cause inaccurate pressure readings.

Impinging recirculation cover

Removal

⚠ WARNING! Turn off the printer and disconnect both power cords.

1. Open the Window. See .

2. Remove the .

3. Remove the .

4. Remove the .

5. Remove one T-20 screw on the left side of the Impinging Recirculation Cover.

📝 **NOTE:** Hard to access with all cables. It is not required to remove the cable cover and disconnect the cables, but it reduces the risk of damaging them.
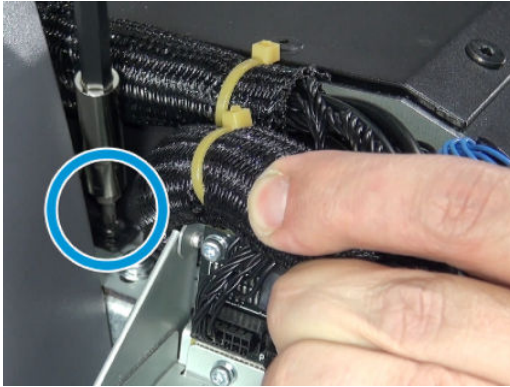
6. Remove one T-20 screw on the right side of the Impinging Recirculation Cover.

7. Remove seven T-20 screws from the top of the Impinging Recirculation Cover.
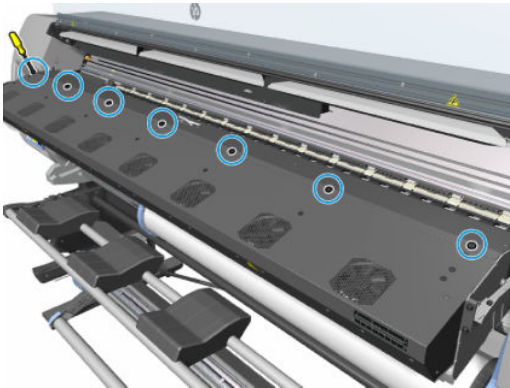
8. Remove the Impinging Recirculation Cover carefully in order to avoid damage to the scan-axis encoder. Be careful with all cables on the left side.
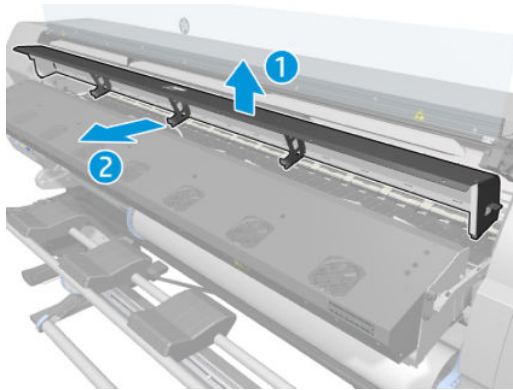
📝 **IMPORTANT:** Be careful with cables during reassembly. There are cables all along and they can be trapped by the ribs in the cover.

Impinging heater module

Removal

⚠ **WARNING!** Turn off the printer and disconnect both power cords.

1. Open the Window. See .
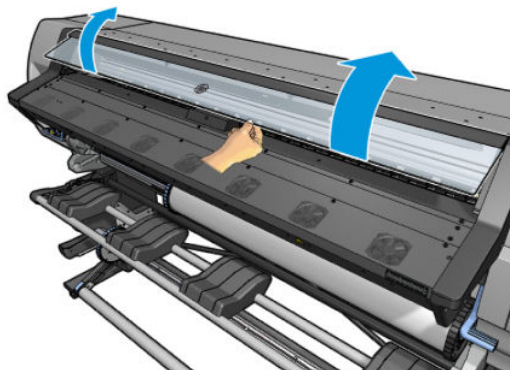
2. Remove the .

3. Remove the [Left impinging module cover on page 366](#).

4. Remove the [Impinging pressure sensor on page 531](#).

5. Remove the [Impinging recirculation cover on page 533](#).

6. Remove four T-20 screws to remove the impinging deflector.

⚠ CAUTION: The deflector can easily be deformed.
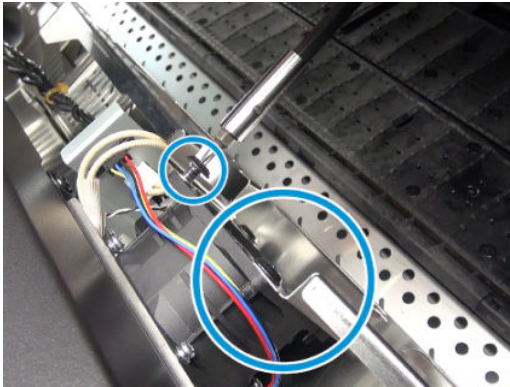
7. Remove the impinging deflector.
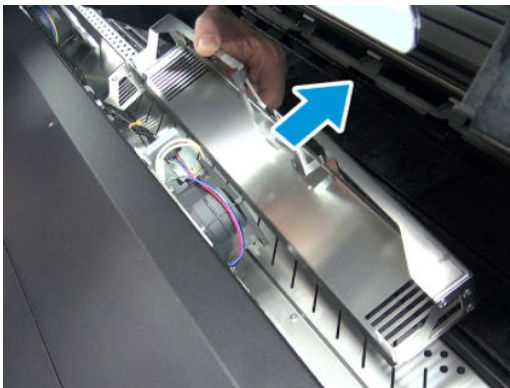
8. Disconnect the three cables that are in the holder bracket.

⚠ CAUTION: Make sure to disconnect the cables, for your own safety.
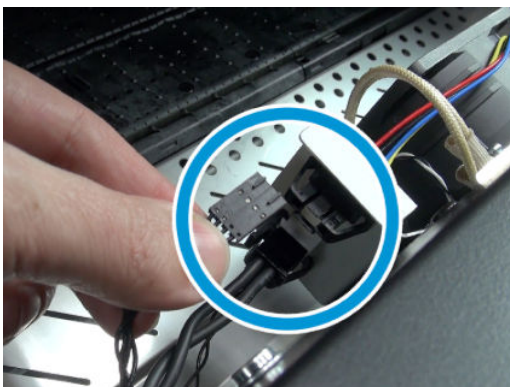
9. Remove four T-20 screws that attach the heater to the impinging pressure chamber
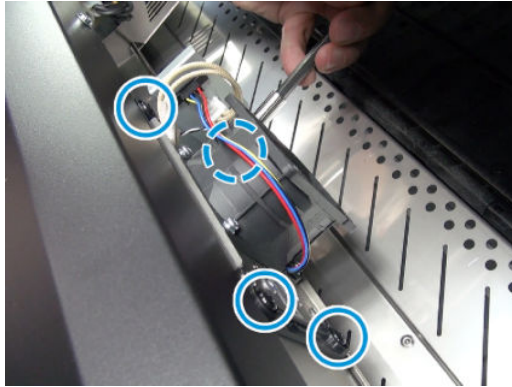
10. Slide out the heater module carefully, so as not to damage the heater coils.
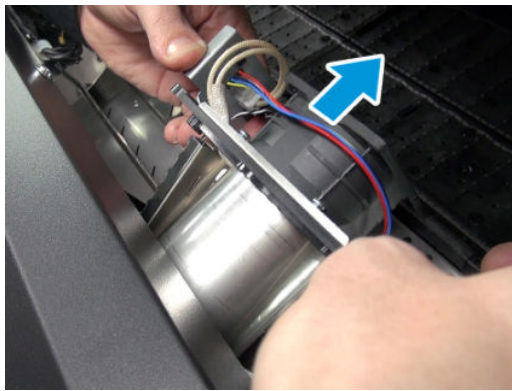
Installation

- During reassembly, be careful to orient the heater module correctly. There is an arrow to help, and also physical poka-yoke.

Impinging holding brackets

Removal

⚠ **WARNING!**   Turn off the printer and disconnect both power cords.

1. Remove the .

2. Remove the .

3. Remove the cable cover.
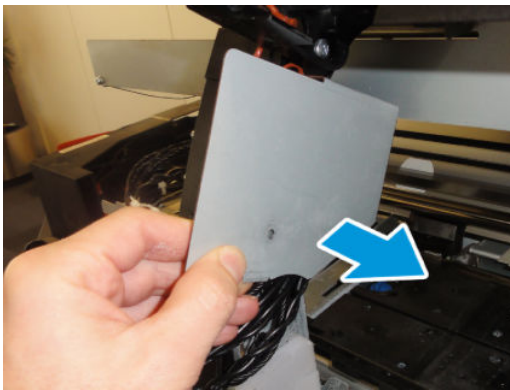
4. Disconnect all the cables that are fitted to the control PCA and curing power interconnect PCA, two aerial connectors in the full SKU, and the window grounding cable.
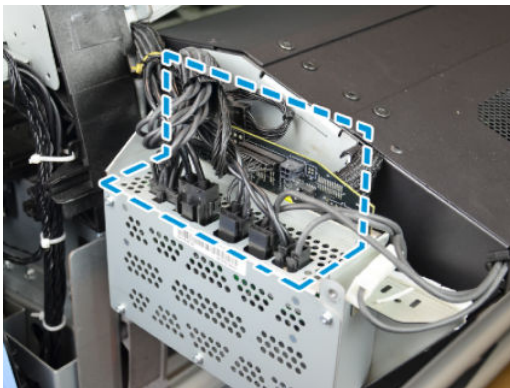
5.   Remove two T-20 screws from the left side of the impinging module and three T-20 screws from the right side.
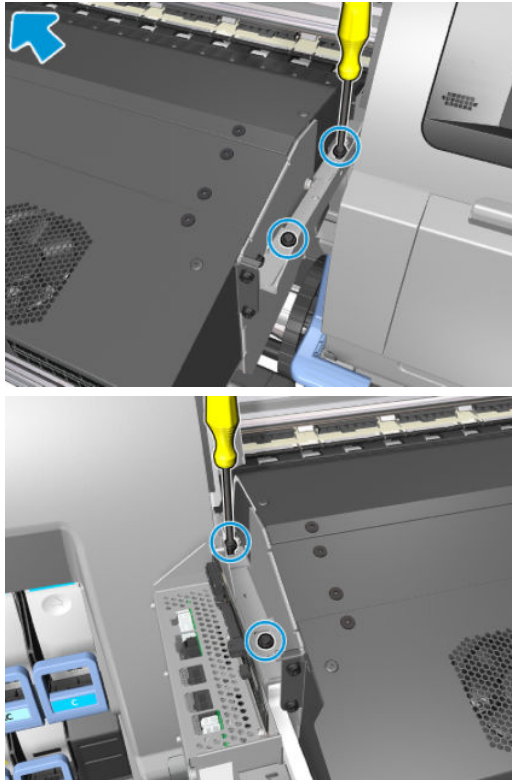
6.   Remove the impinging module.
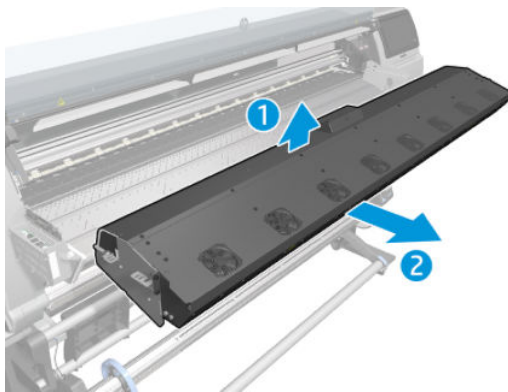
⚠ **WARNING!**   The module is heavy. Two people are recommended. The underside of the module is fragile, particularly the impinging deflectors. Handle with care.

7.   Remove the <u>Impinging heater-controller enclosure on page 541</u>.

8.   To remove the left bracket:

   ●   Remove two T-20 screws on the left side and one T-20 screw to disconnect the window grounding cable.
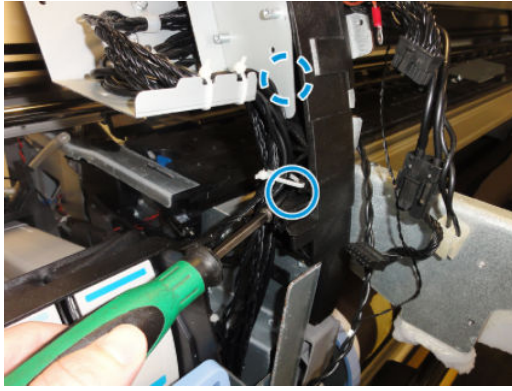
- Remove two T-15 screws on the right side.

Take note of which screws are which. They have the same heads, but different thread sizes.

9. To remove the right bracket:

- Remove four T-15 screws on the left side.
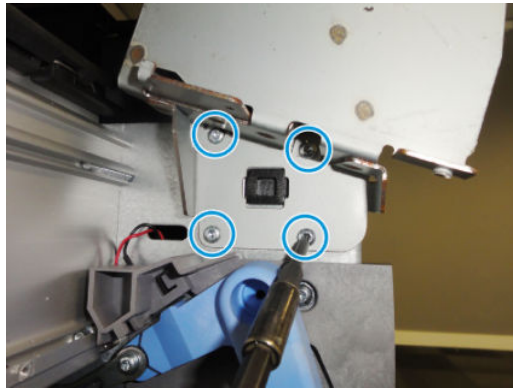
● Remove four T-15 screws and one T-25 screw on the right side.
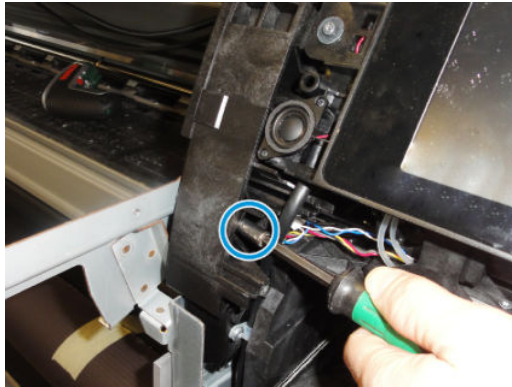
If you stop here, the left bracket still holds the heater-controller enclosure, PCA isolator holder, and PCA isolator. The PCA isolator is pre-pasted onto the left impinging bracket and the PCA isolator holder. The PCA isolator is designed so that it can easily be divided. Leave the section already attached to the PCA isolator holder (do not try to remove it, it is impossible). If the left impinging bracket is replaced, paste a new PCA isolator to it, dividing it as needed.

Each bracket holds a shim. It needs to be moved to a new bracket if replaced. (This shim might be removed in a couple of months.)

Impinging heater-controller enclosure

Removal

⚠ WARNING!   Turn off the printer and disconnect both power cords.

1.   Remove the .

2. Remove eight T-10 screws to remove the enclosure cover.
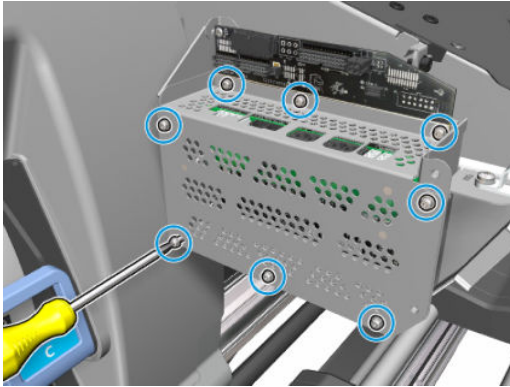
3. Remove the enclosure cover.
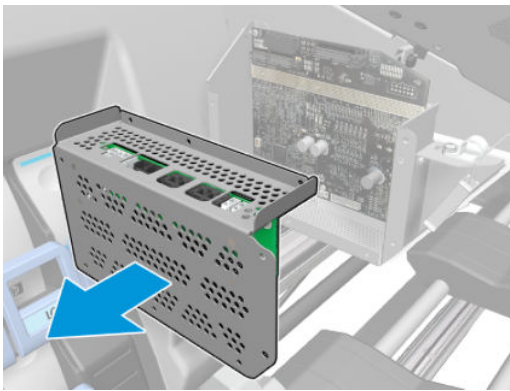
4. Remove four T-10 screws to remove the control PCA.
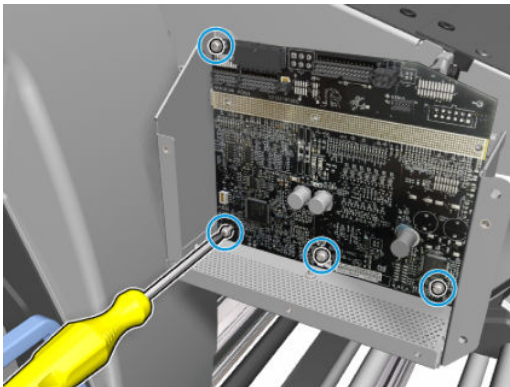
5. Remove the control PCA.
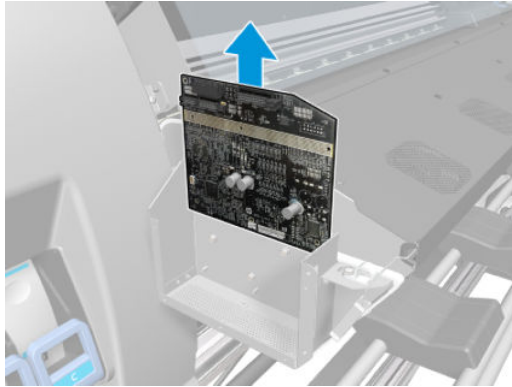
6. Remove three T-20 screws to remove the Heaters Controller Enclosure.
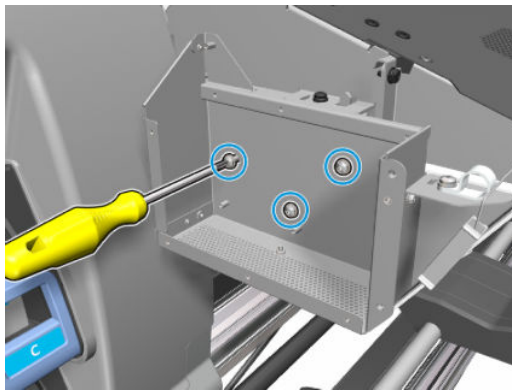
7. The PCA isolator holder is still attached. Remove three T-10 screws, then remove the enclosure from the PCA isolator holder. The PCA isolator is pre-pasted onto the left impinging bracket and the PCA isolator holder. It is probably possible to replace the heater-controller enclosure without breaking the PCA isolator.
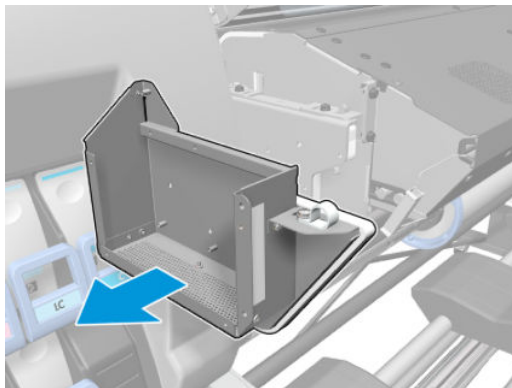
Impinging air curtain

Removal

⚠️ **WARNING!** Turn off the printer and disconnect both power cords.

1. Remove the Right impinging module cover on page 367.

2. Remove the Left impinging module cover on page 366.

3. Disconnect four connectors: two from the PCA (resistors) and two aerial connectors (fan and room-temperature sensor). For the Basic SKU, there are only the fan and room-temperature sensor, both connected to the PCA.
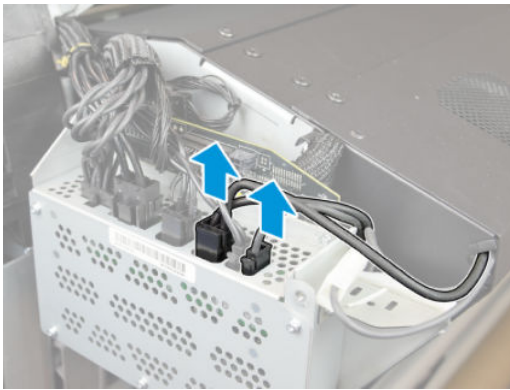
4. Remove two T-20 screws from the left side of the air curtain cover and two T-20 screws from the right side.
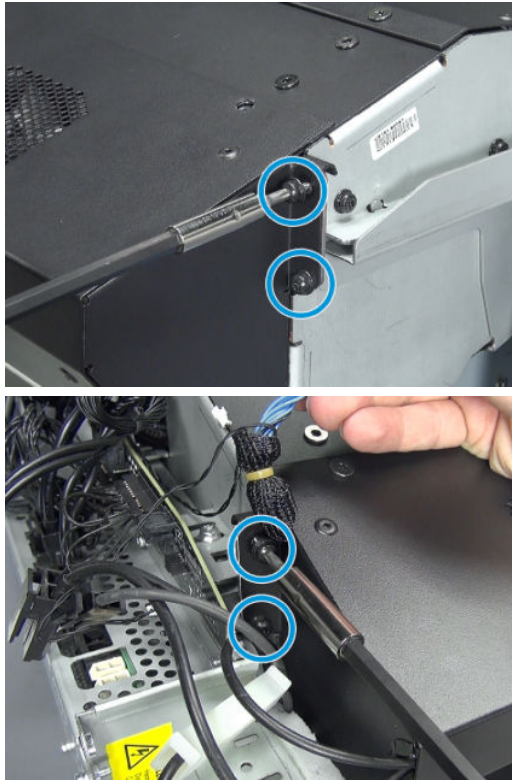
5. Remove seven T-20 screws from the air curtain cover.
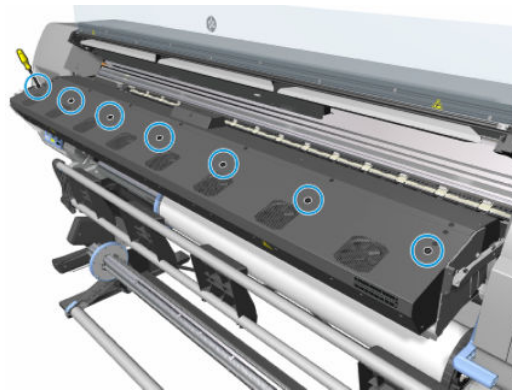
6. Remove the air curtain cover.
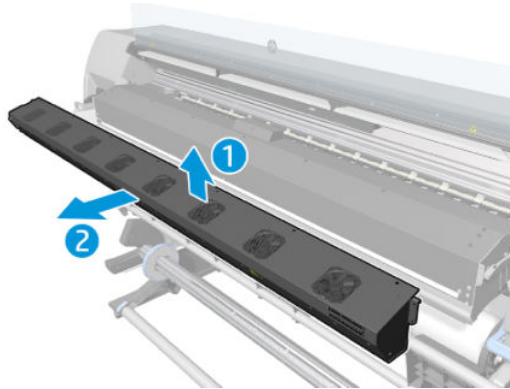
Curing Control PCA

Removal

⚠ **WARNING!** Turn off the printer and disconnect both power cords.

1. Unplug all the cables from the two PCAs.
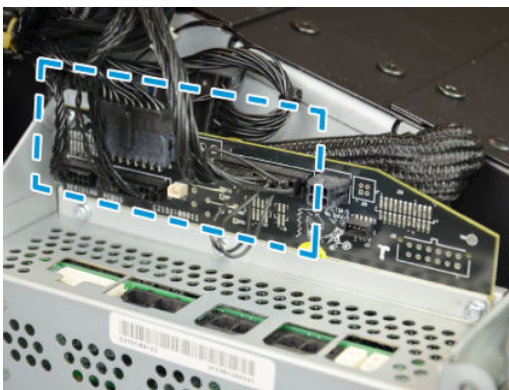
2. Remove eight screws.
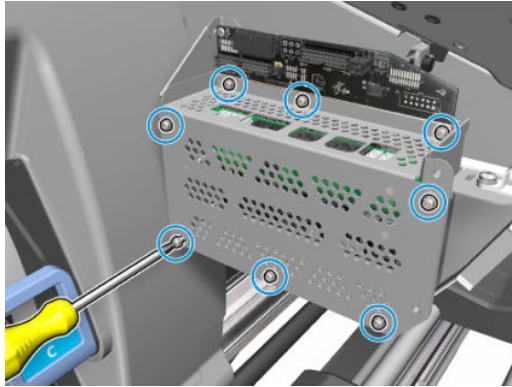
3. Remove the metal cover.
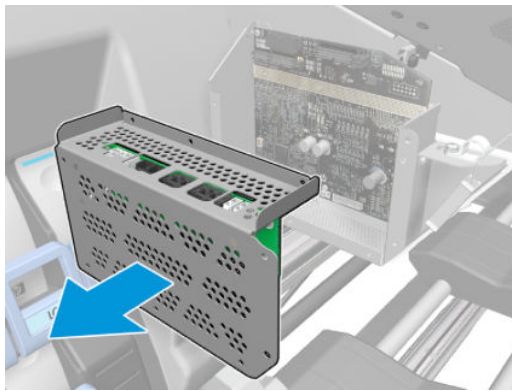
4. Remove four screws.
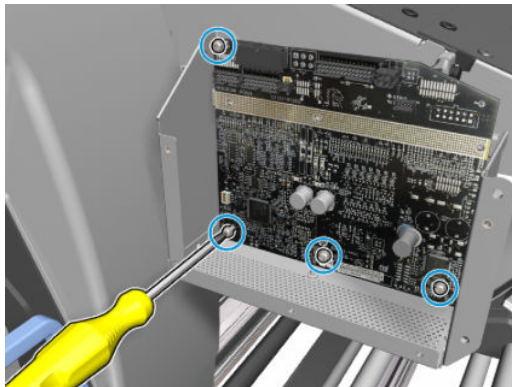
5. Remove the Curing Control PCA.
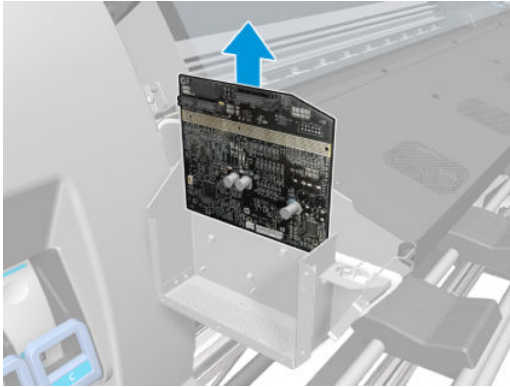
Curing power interconnect PCA
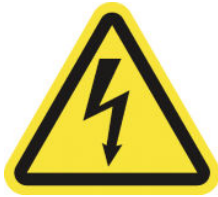
WARNING! Heating coils operate at hazardous voltages capable of causing death or serious personal injury. Disconnect both power cords before servicing the printer.

Removal

1. Unplug all the cables from the two PCAs.
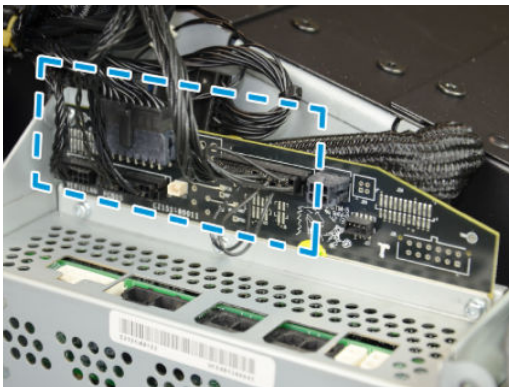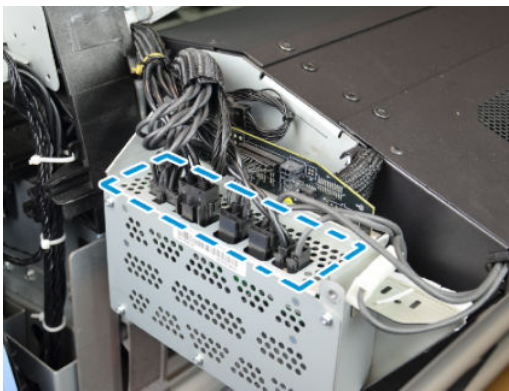
2. Remove eight screws.
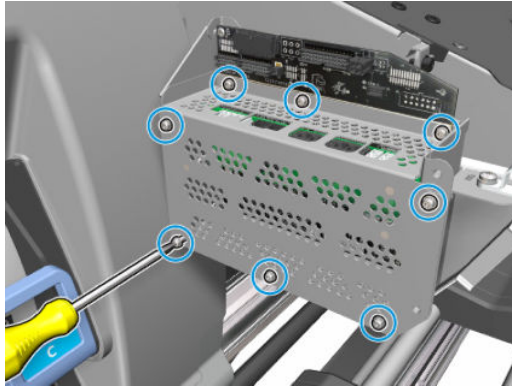
3. Remove the metal cover.
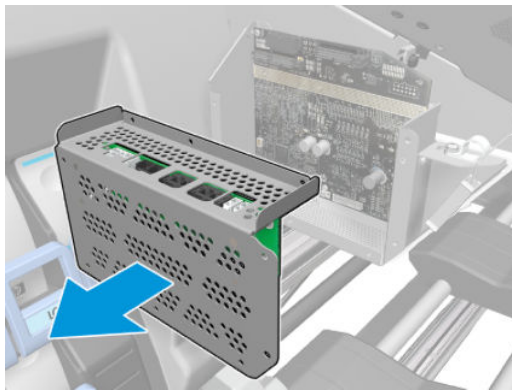
4. The curing power interconnect PCA (shown in green) is kept attached to the inside of the removed metal cover.
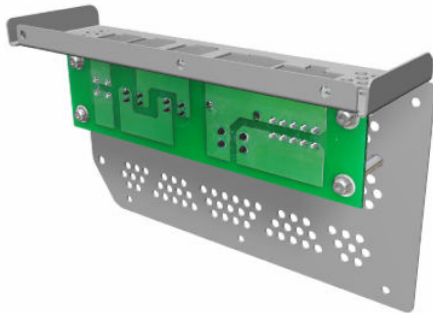
Curing Fan Assemblies

Impinging air curtain resistors

Removal

⚠ **WARNING!**   Turn off the printer and disconnect both power cords.

1.   Remove the Impinging air curtain on page 544.

2.   Remove two T-10 screws to disconnect the cables from the thermal switch.

3.   Remove the cables from the thermal switch.
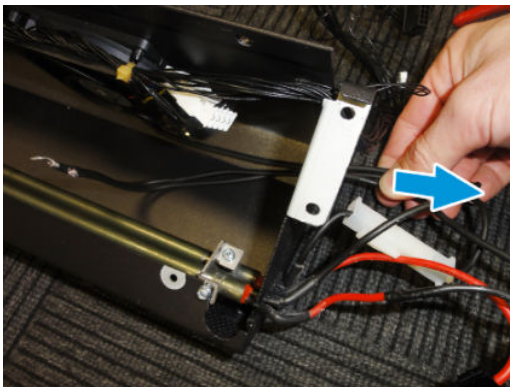
4.   Remove six T-10 screws to release the brackets that lock the resistors.
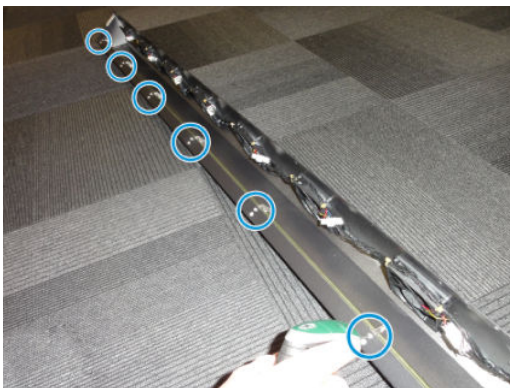
5. Remove two T-10 screws to release the resistors from the datum position on the far right in front of you.
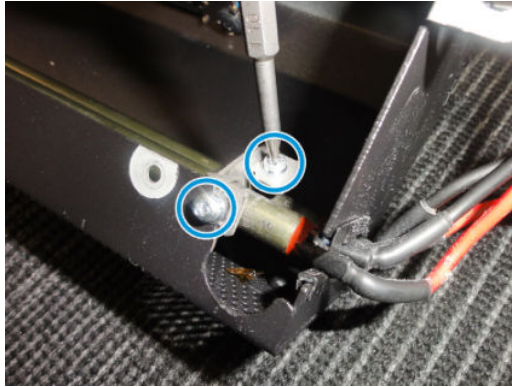
6. Remove the resistors.
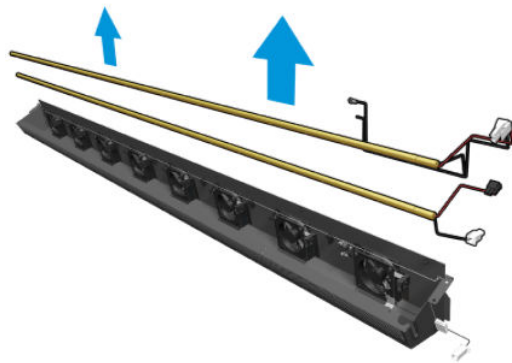
Installation

⚠ CAUTION: Make sure to reconnect the cables to the thermal switch properly: the double-wired O-ring cable end in one thermal-switch leg and the other single O-ring cable end in the other leg. Otherwise you will bypass the thermal-switch safeties and risk setting the printer on fire.
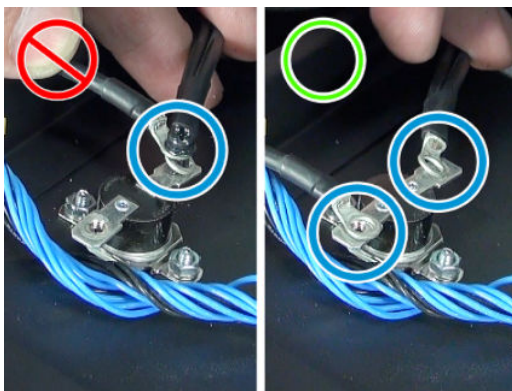
📝 NOTE: There are two different resistors, 'steady' and 'burst'. They have to be assembled together and their joint is poka-yoke to avoid errors in terms of position.

📝 NOTE: Make sure all cables are correctly routed.
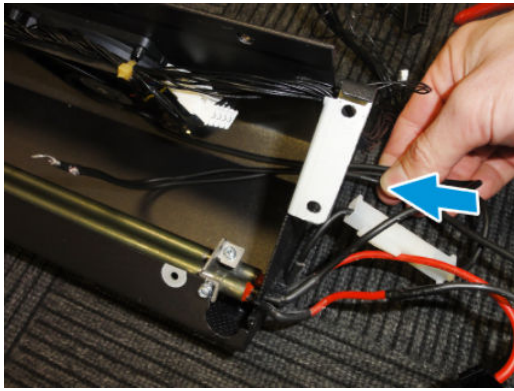
Impinging air curtain fans

Removal

⚠ **WARNING!** Turn off the printer and disconnect both power cords.

1. Remove the Impinging air curtain on page 544.

2. Disconnect the connector next to the fan.
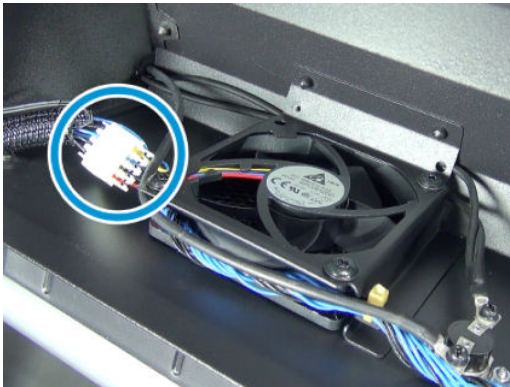
3. Remove two T–20 screws to release the fan in its slot.

4. Pull out the fan.

Installation

- When installing the fan, make sure it is correctly placed in its slot with the fan label facing inwards.

- Cables leaving the fan can get damaged if not inside the slot in the fan.

Impinging air curtain thermal switch

Removal

⚠ **WARNING!** Turn off the printer and disconnect both power cords.

1. Remove the Impinging air curtain on page 544.

2. Remove two T-10 screws in order to disconnect the cables from the thermal switch.
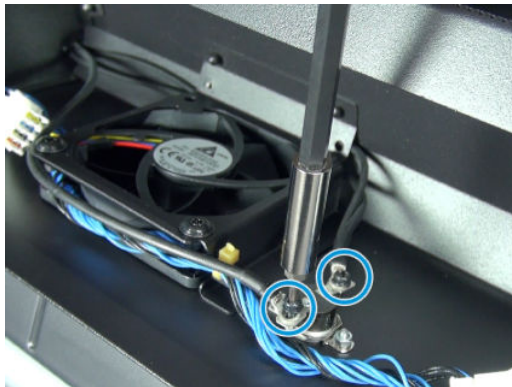
3. Remove two M3 nuts and washers in order to detach the thermal switch from the air curtain cover. Do not lose the nuts and washers: you will need them for reassembly.

Installation

- When installing the thermal switch, make sure that is tightly fitted to the air curtain cover and that cables are correctly routed.

⚠ **CAUTION:** Make sure to reconnect the cables to the thermal switch properly: the double-wired O-ring cable end in one thermal-switch leg and the other single O-ring cable end in the other leg. Otherwise you will bypass the thermal-switch safeties and risk setting the printer on fire.
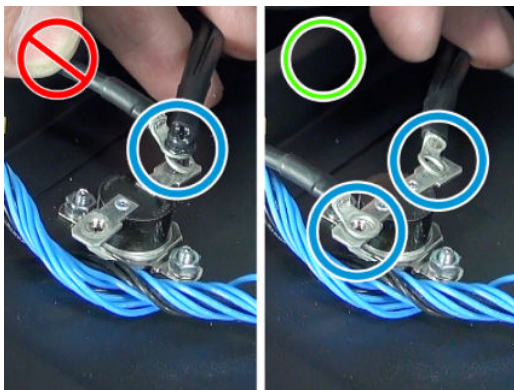
Room-temperature sensor

Removal

⚠ **WARNING!** Turn off the printer and disconnect both power cords.

1. Remove the <u>Right impinging module cover on page 367</u>.

2. Remove the <u>Left impinging module cover on page 366</u>.

3. Disconnect three cables from the PCB: one each for resistors and fans, and a single cable for the aerial connector (room-temperature sensor). For basic SKUs there are only two cables; one for the fans and one room-temperature sensor.
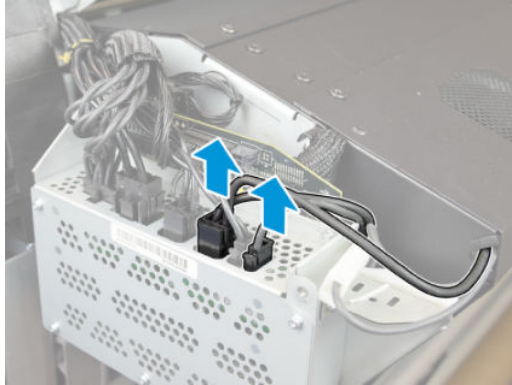
4. Remove two T-20 screws from the left side of the air curtain cover and two T-20 screws from the right side.
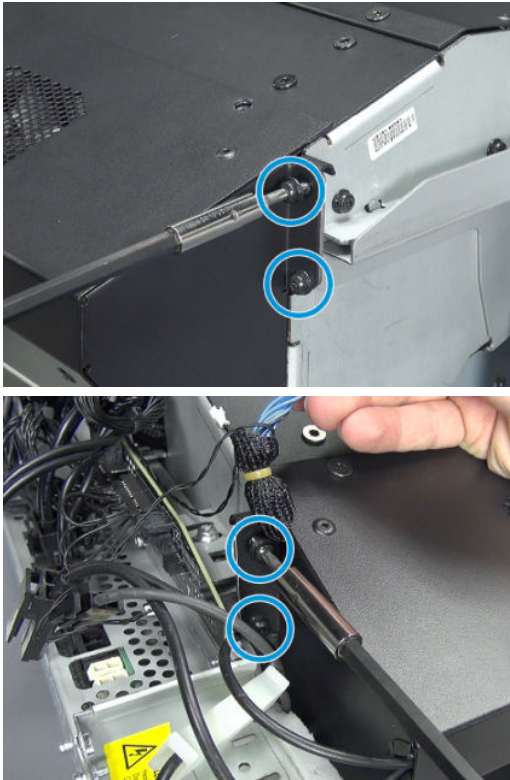
5. Remove seven T-20 screws from the air curtain cover.
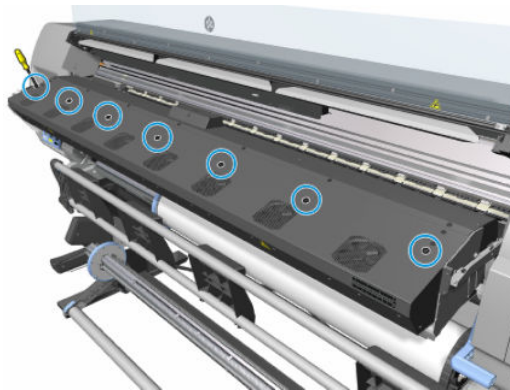
6. Remove one T-10 screw to release the sensor and bracket.
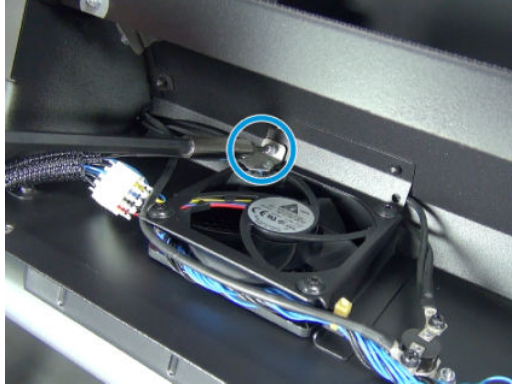
7. Remove the room-temperature sensor.
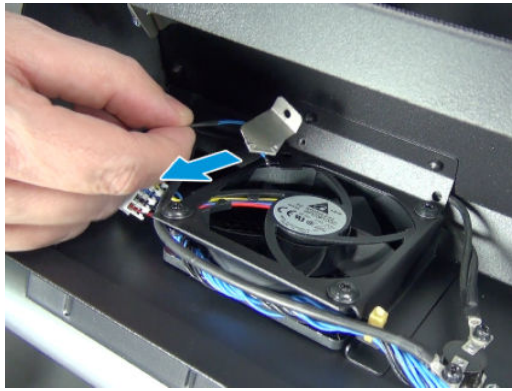
Installation

- The sensor and bracket are pre-assembled in the factory with a dedicated assembly fixture. This ensures correct positioning of the sensor. If the adhesive is compromised, the sensor will not read the correct temperature.

- Make sure all cables are correctly routed. The power and signal cables are separate.

⚠ CAUTION: A high-power cable is routed behind this fan. Make sure that the screw holding the sensor does not pinch the high-power cable.

CAUTION: Make sure to reconnect the cables to the thermal switch properly: the double-wired O-ring cable end in one thermal-switch leg and the other single O-ring cable end in the other leg. Otherwise you will bypass the thermal-switch safeties and risk setting the printer on fire.

Heater control assembly fan

WARNING!   Hazardous moving parts: rotating fan blades. Keep hands clear.

Removal

⚠ **WARNING!**   Turn off the printer and disconnect both power cords.

1.   Remove the left connector cover.

2.   Remove the heater control assembly fan by gently pulling it from three rubber stand-offs.
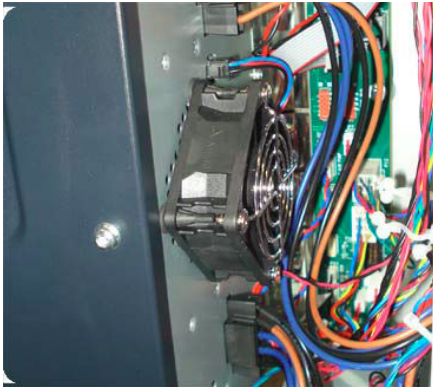
3. Disconnect the heater control assembly fan cable.
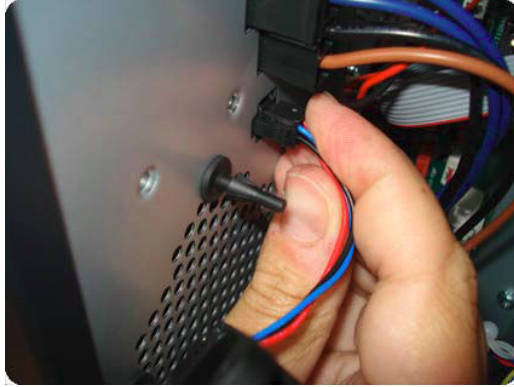
Installation

1. Remove the four screws from the old heater control assembly fan.

2. Install three rubber stand-offs into the side of the heater control assembly.

3. Use a screwdriver to push them through the holes.
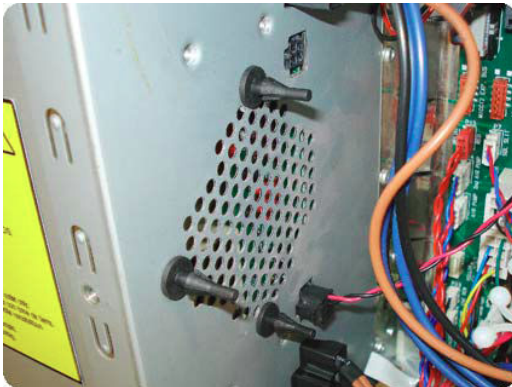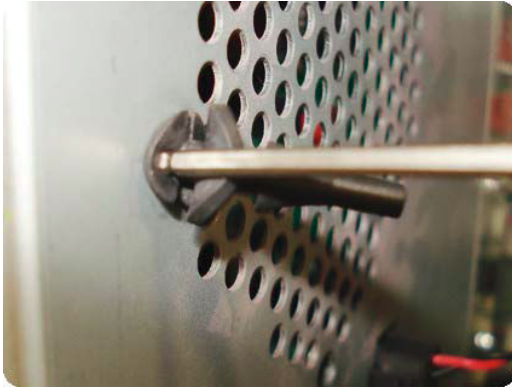
4. Install the fan onto the three rubber stand-offs. With the type of fan currently installed on the printer, make sure the label shown here is facing towards the printer when it is installed.
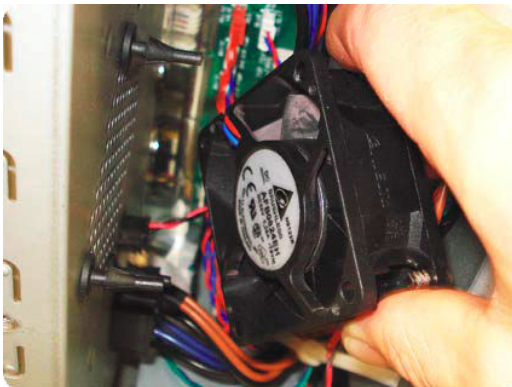
5. Connect the cable of the new fan.
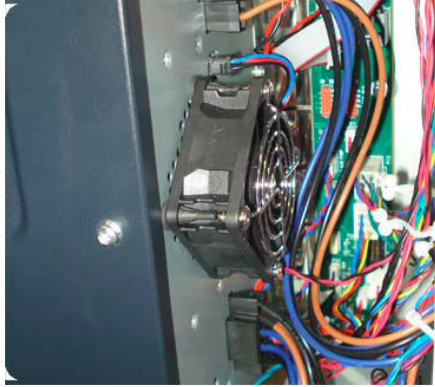
Heater control assembly
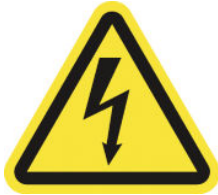
⚠️ **WARNING!** Heating coils operate at hazardous voltages capable of causing death or serious personal injury. Disconnect both power cords before servicing the printer.

Removal

1. Remove the E-box extension on page 385.

2. Remove four T-20 screws (**Type A**) that secure the PSU cover.

3. Remove the PSU cover from the printer.

4. Disconnect the curing heater power connector below the heater control assembly fan.

5. Disconnect the dryer heater power connector above the heater control assembly fan.

6. Disconnect and unroute the cable from the PSU to the PCA inside the heater control assembly.

7. Remove the T-20 screw from inside the chassis, above the heater control assembly fan.

8. Remove the T-20 screw from underneath the 60 extension.

9. Gently open up the top part and the bottom part of the extension.

10. Pull out slightly (but do not remove) the heater control assembly.

11. Remove the heater control assembly with the dryer AC input and dryer circuit breaker from the printer.

Installation

Use the following installation procedure to avoid damaging exposed parts on the PrintMech PCA.

1. There are two screws that attach the electronics enclosure extension to the electronics enclosure. It is important to loosen these two screws. If the screws are fully screwed in it is very difficult to insert the heater control assembly correctly.

2. The heater control assembly has a groove at the top and another at the bottom of the side plate. These grooves must be correctly inserted into the guides of the electronics enclosure.
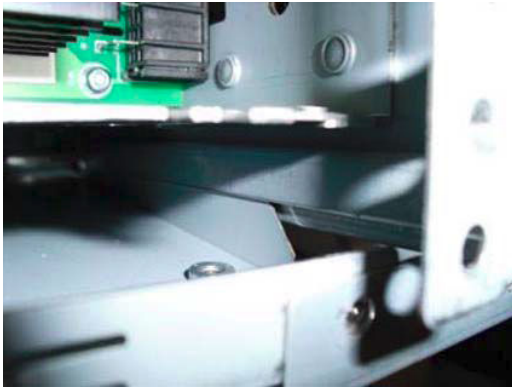
3. The picture and drawing show the bottom part of the heater control assembly. The same features can be found on the top, which are assembled in the same way.
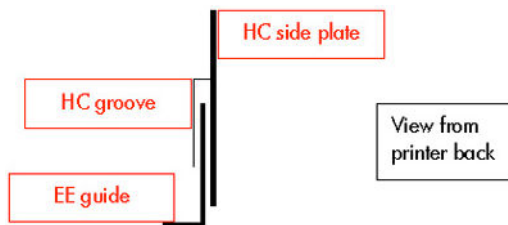
4. When inserted sliding along the grooves, the final assembly position is with the heater control assembly side plate in between the electronics enclosure and the electronics enclosure extension.
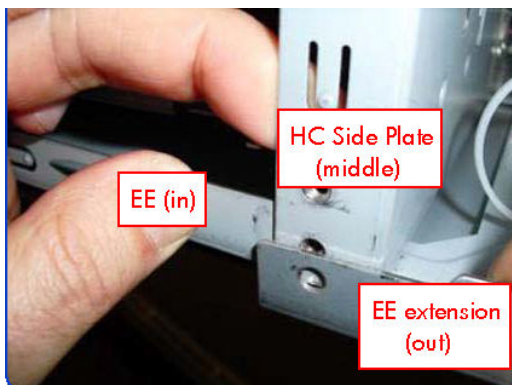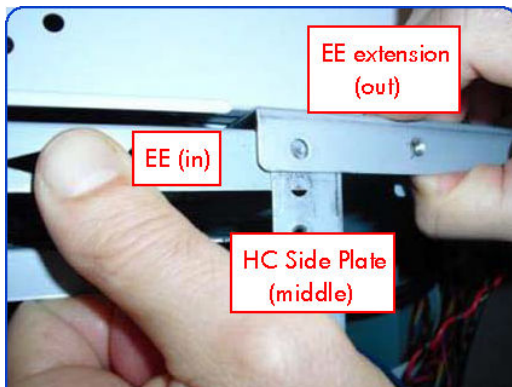
5. The diagram below shows the correct position.
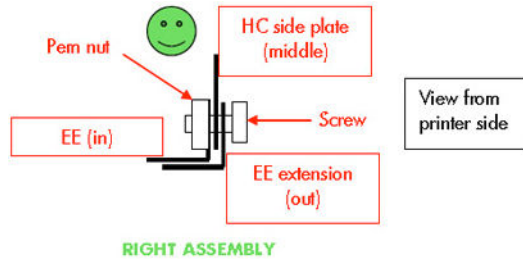
6. The diagram below shows an incorrect position.
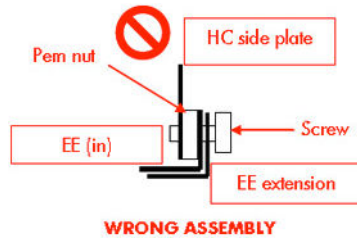
In an incorrect installation, it is clearly visible that the heater control assembly is 1 mm or more to the inner side of the electronics enclosure than it should be: the thickness of the electronics enclosure sheet metal and the nut. A misaligned screw could push it even further in.

7. When connecting the cable of the dryer AC input assembly to the heater control assembly, it is important to install the washers as shown here.
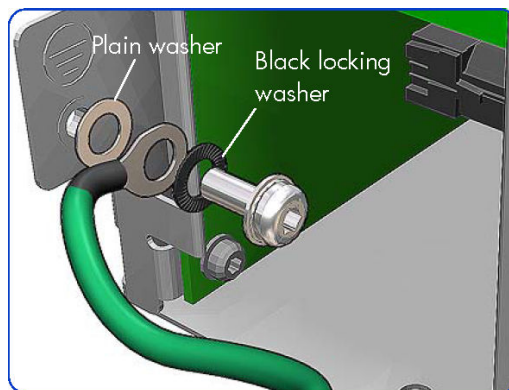
8. Once the heater control assembly has been installed successfully, tighten the screws of the electronics enclosure extension to the electronics enclosure.

Substrate Input Assemblies

Left rollfeed module assembly

Removal

⚠ **WARNING!** Turn off the printer and disconnect both power cords.

1. Remove the Input Spindle (if installed).

2. Remove the

3. Remove five T-20 screws that secure the Left Rollfeed Module.
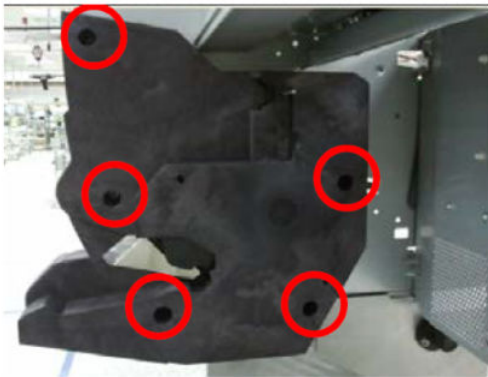
4. Remove one T-20 screw to release the ground cable.

5.   Remove the Left Rollfeed Module from the printer.

Right rollfeed module assembly

Removal

⚠ **WARNING!**   Turn off the printer and disconnect both power cords.

1.   Remove the

2.   Remove the Substrate Spindle (if installed).

3.   Remove the

4.   Remove five T-20 screws that secure the Right Rollfeed Module to the printer.
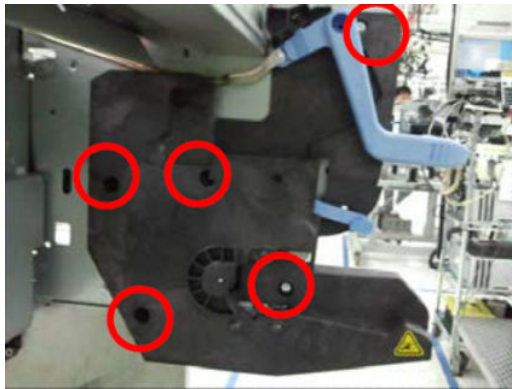
5. Remove one T-15 screw to release the pinch rod from the blue lever.
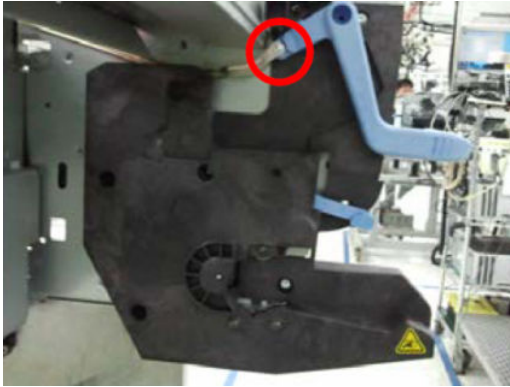
6. Remove the Right Rollfeed Module slightly to the left to detach the pinch lever sensor from its housing.
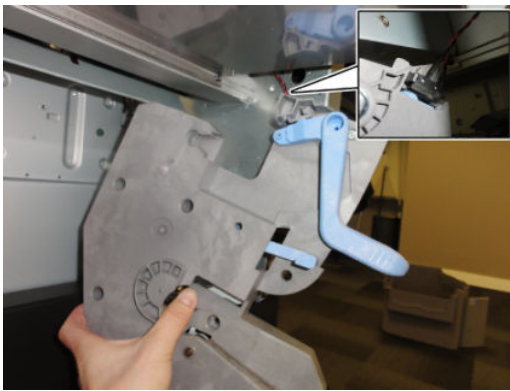
7. Remove the Right Rollfeed Module from the printer.

    The blue lever will remain attached to the Module.
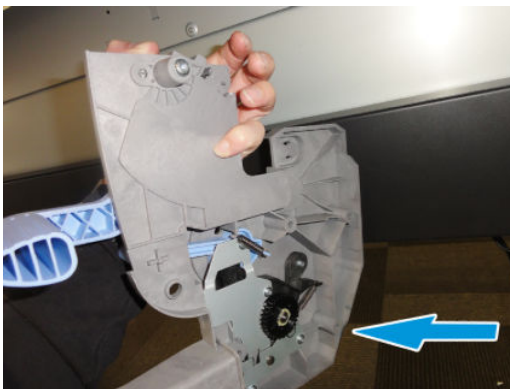
Printzone and Ink Collector

Ink Collector sensor

⚠ **WARNING!**   Turn off the printer and disconnect both power cords.

1. Remove the Right cover on page 360.

2. Remove the Left cover on page 356.

3. Remove the removable print zone (see the ink collector section in the user's guide).

4. Remove two T-10 screws (**Type C**) that secure the switch holder to the Vacuum Beam.
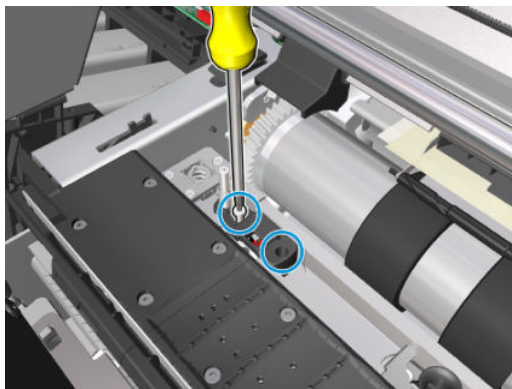
5. Pull out the connector.
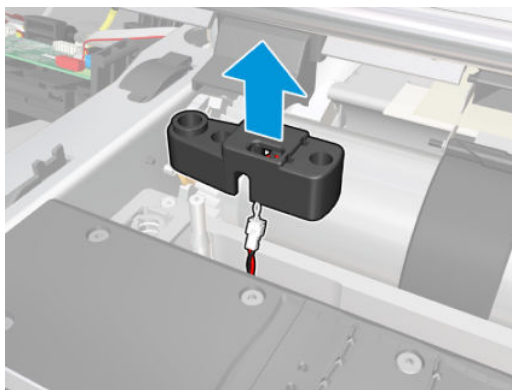
6. Unclip the cable from the connector.
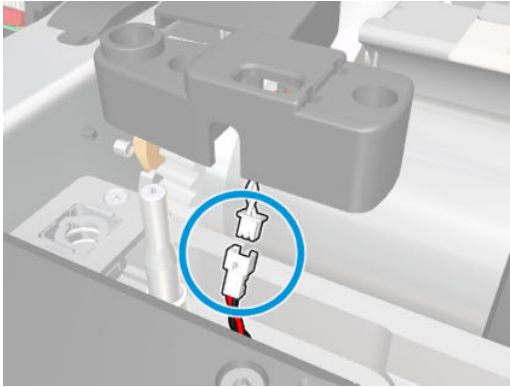
7. Repeat steps 4 to 6 for the two other Ink Collector Sensors.
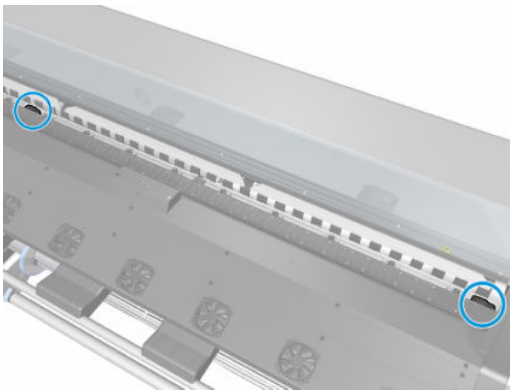
Ink Collector sensor cable

Removal

⚠ WARNING!   Turn off the printer and disconnect both power cords.

1. Remove the Right cover on page 360.
2. Remove the Left cover on page 356.
3. Remove the removable print zone (see the ink collector section in the user's guide).
4. Remove the Ink Collector sensor on page 567.

5. Remove the two T-10 screws (**Type C**), and the switch holder from the Vacuum Beam.
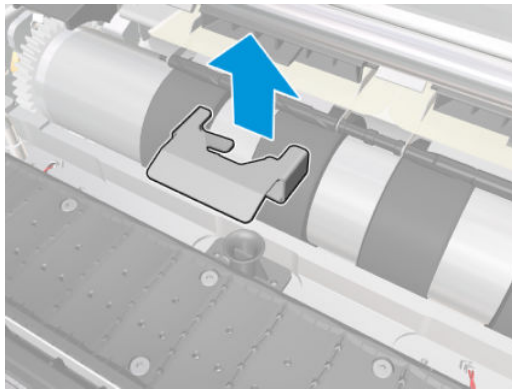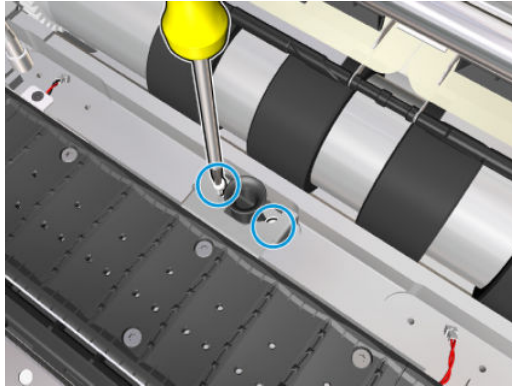
6. Repeat step 5 for the ten Vacuum Rubbers.
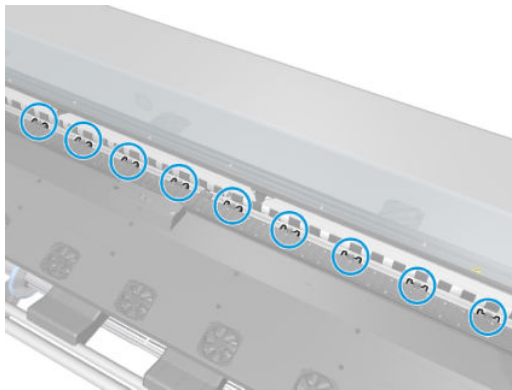
7. Remove one screw T-10 screw (**Type C**) that secures the PZ cable holder to the Vacuum Beam.
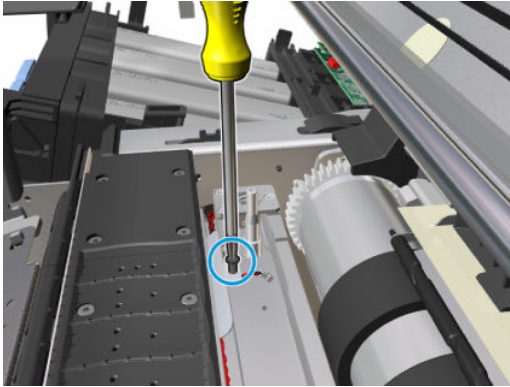
8. Repeat step 7 for the other PZ cable holder.

9. Unclip the Ink Collector Sensor Cable from each switch.
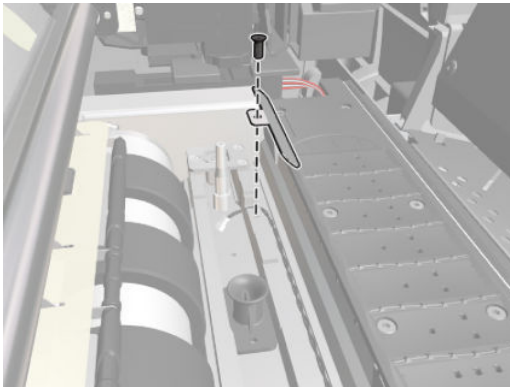
10. Unclip the Ink Collector Sensor Cable from the PCA.
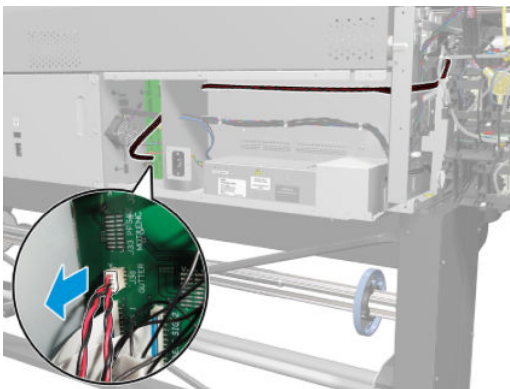
Vacuum rubbers

Removal

⚠ **WARNING!** Turn off the printer and disconnect both power cords.

1. Remove the Right cover on page 360.

2. Remove the Left cover on page 356.

3. Remove the removable print zone (see the ink collector section in the user's guide).

4. Remove the two T-10 screws (**Type C**), and the switch holder from the Vacuum Beam.
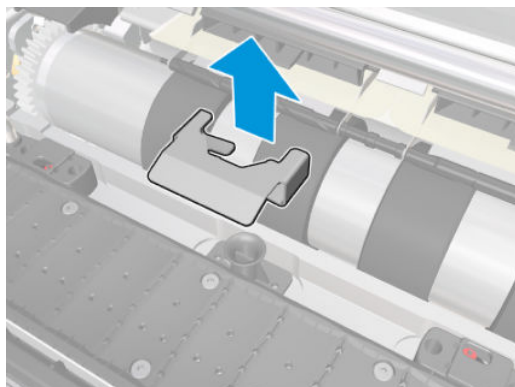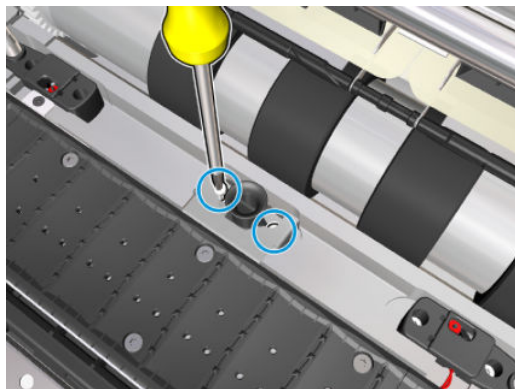
5. Remove the Vacuum Rubber from the Vacuum Beam.
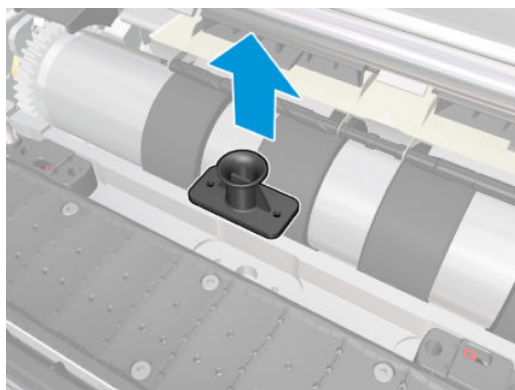
6. Repeat steps 4 and 5 for the ten Vacuum Rubbers.
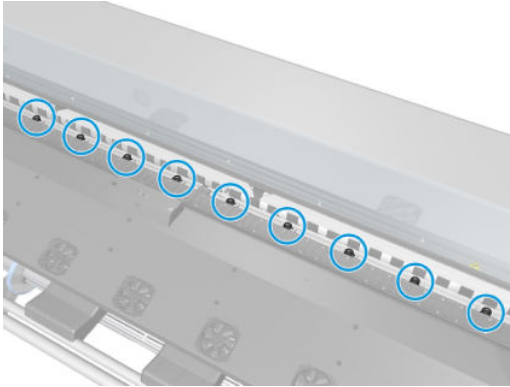
Roller gear protector

Removal

> ⚠ **WARNING!** Turn off the printer and disconnect both power cords.

1. Remove the [Right cover on page 360](#).

2. Remove the [Left cover on page 356](#).

3. Remove the [Right connector cover on page 384](#).

4. Remove the [E-box extension on page 385](#).

5. Remove the [Service station on page 428](#).

6. Remove the [Ink Supply Station (ISS) on page 395](#).

7. Remove the [Substrate-axis motor on page 486](#).

8. Remove the [Encoder disc and sensor on page 435](#).

9. Remove the [Drive roller on page 482](#).

10. Raise the substrate lever.
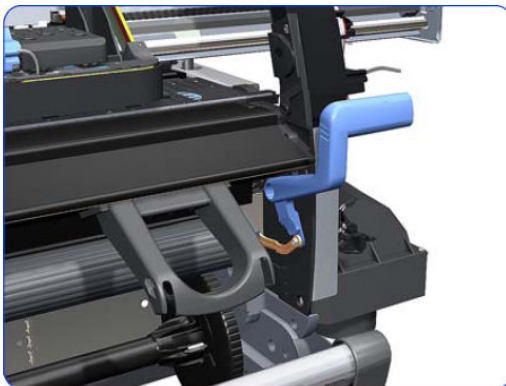
11. Remove the T-20 screw that secures the linkage to the spring.
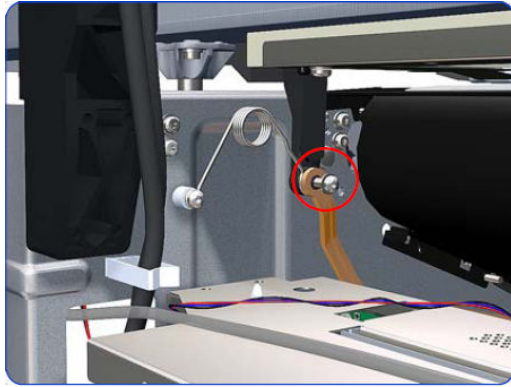
12. Disconnect the linkage from the pinchwheels cam arm.
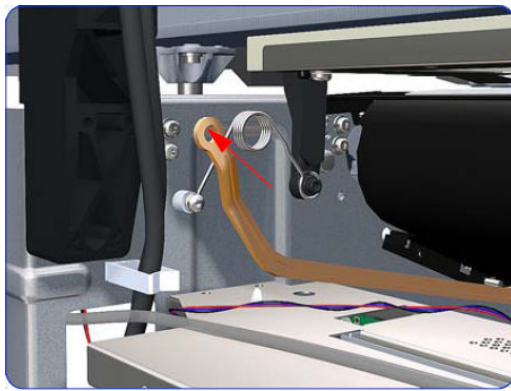
13. Remove two T-20 screws (**Type M**) that secure the roller gear protector to the scan axis.
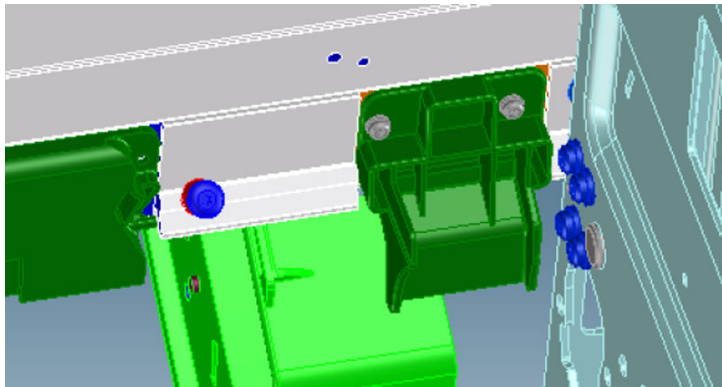
Print-zone lockers

Removal

⚠ WARNING!   Turn off the printer and disconnect both power cords.

1. Remove the .

2. Remove the .

3. Remove the removable print zone (see the ink collector section in the user's guide).

4. Remove three T-8 screws (**Type C**) that secure the lock receptor assembly to the vacuum beam.
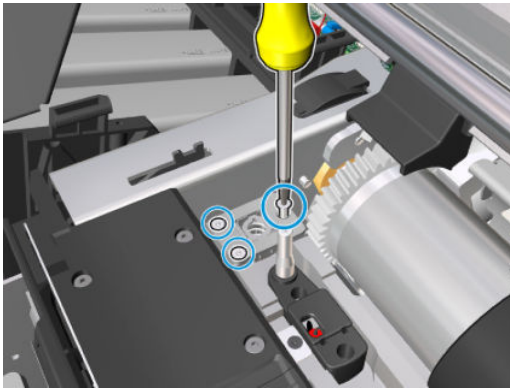
5. Remove the lock receptor assembly from the vacuum beam.
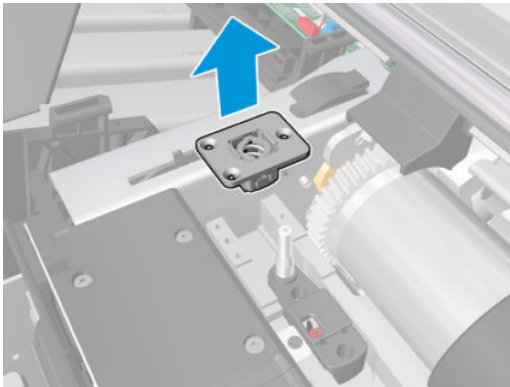
6. Repeat step 4 for the lock receptor assembly on the other side of the printer.
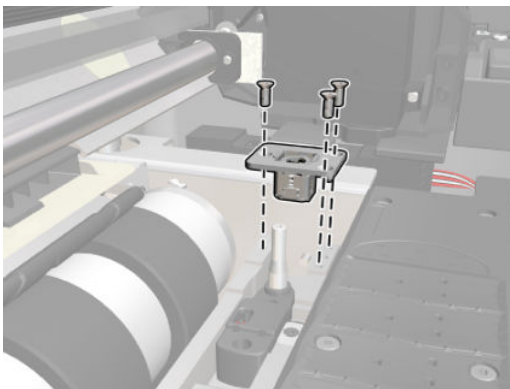
7. Remove four T-10 screws (**Type C**) that secure the central removable print-zone retainer to the vacuum beam.
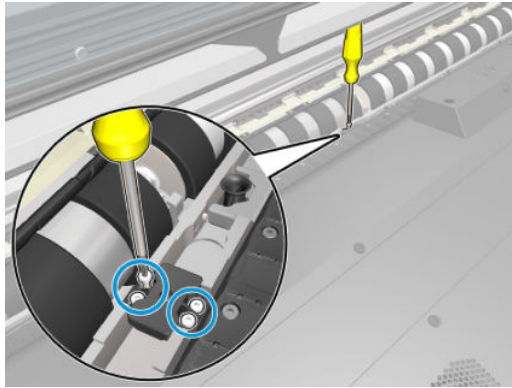
8. Remove the central removable print-zone retainer from the vacuum beam.
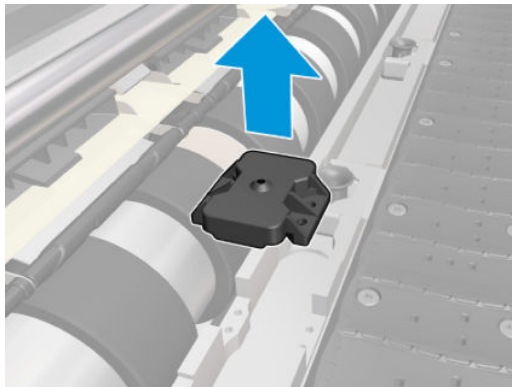
Static front platens (330/335)

Removal

1. Remove the .

2. Remove the .

3. Move the Carriage Assembly fully to the right.
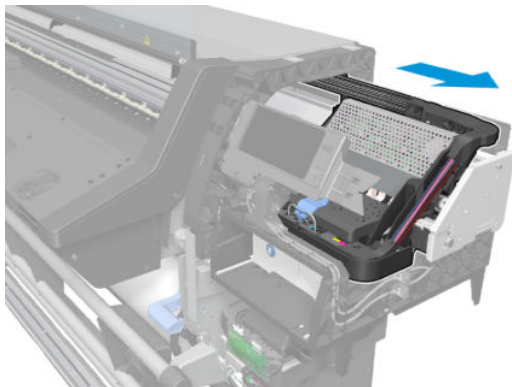
4. Remove 152 T-10 screws (**Type C**) that secure the static front platen to the Vacuum Beam.
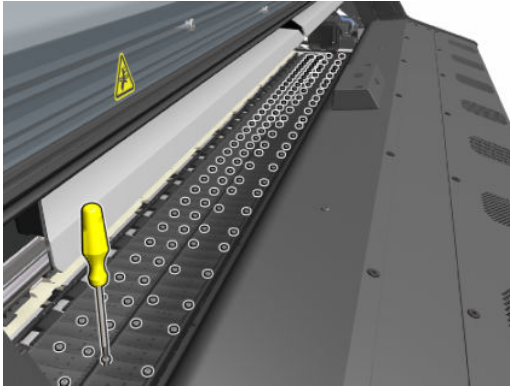
5. Remove all the platens from the printer.
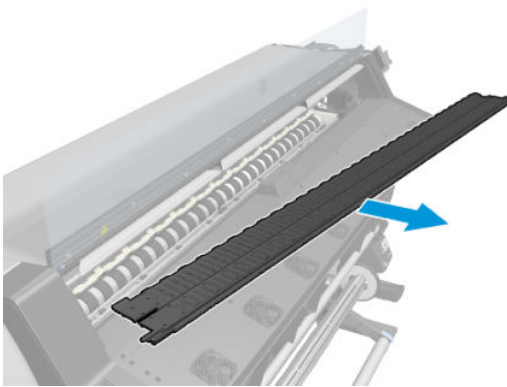
Static front platens (310/315/115/110)

Removal

1. Remove the .

2. Remove the .

3. Move the Carriage Assembly fully to the right.
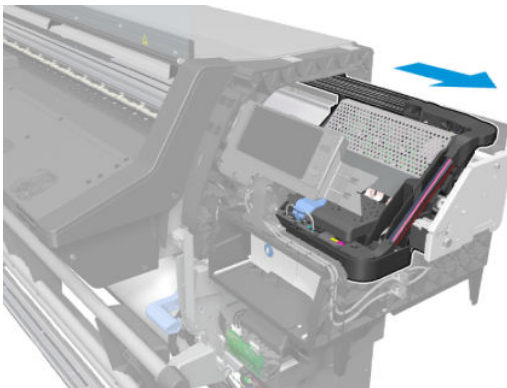
4. Remove 128 T-10 screws (**Type C**) that secure the static front platen to the Vacuum Beam.
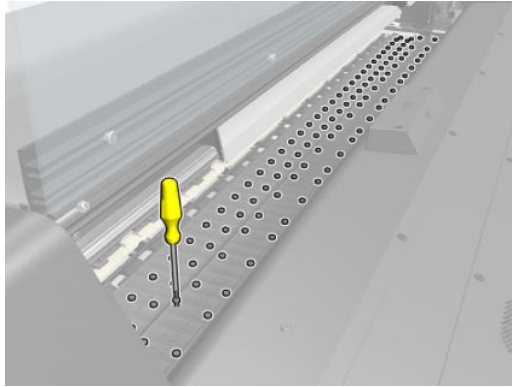
5. Remove all the platens from the printer.
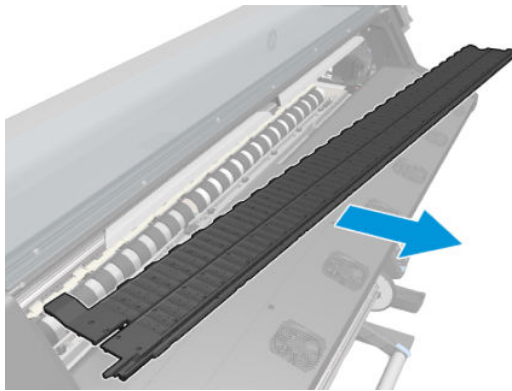
> **NOTE:** After installing the NEW Static Front Platen, perform the following Service Calibration:

- Substrate Advance Calibration — See 4.1.1 Substrate advance calibration on page 273

Take-Up Reel

Take-up reel motor

Removal

⚠️ **WARNING!**   Turn off the printer and disconnect both power cords.

1.   Raise the loading table.
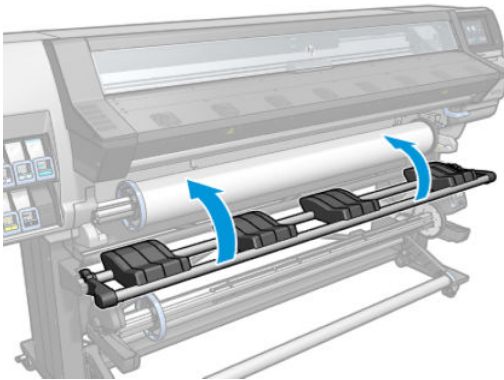
2.   Remove the take-up reel spindle.
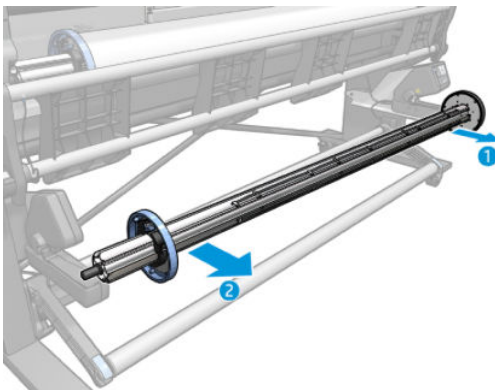
3.   Disconnect the take-up reel motor from the parallel port at the rear of the printer.
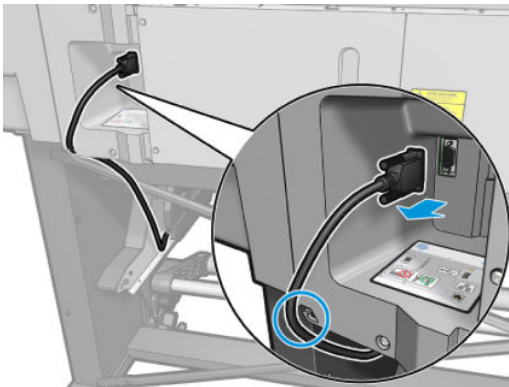
4. Disconnect the take-up reel sensors from the take-up reel motor.
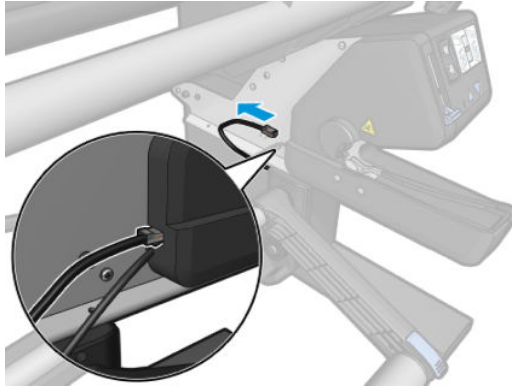
5. Remove the three T-20 screws that attach the take-up reel motor to the right leg assembly.

6. Remove the take-up reel motor from the right leg assembly.

Take-up reel left module

Removal

⚠ **WARNING!**   Turn off the printer and disconnect both power cords.

1. Raise the loading table.
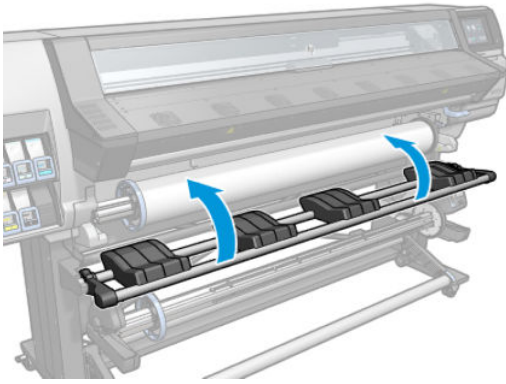
2. Remove the take-up reel spindle.
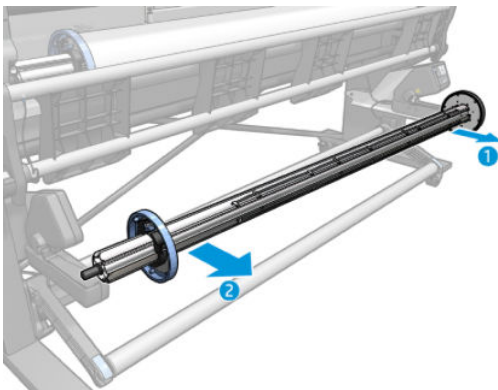
3. Remove the three front T-20 screws that attach the take-up reel left module to the left leg assembly.
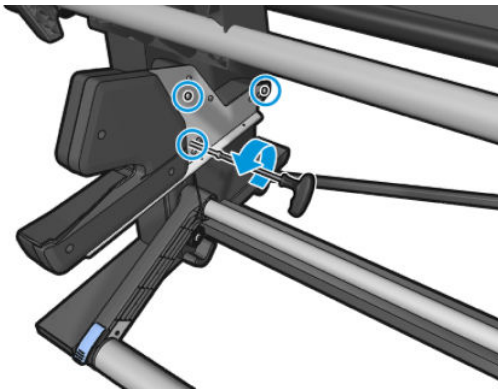
4. Remove the take-up reel left module.
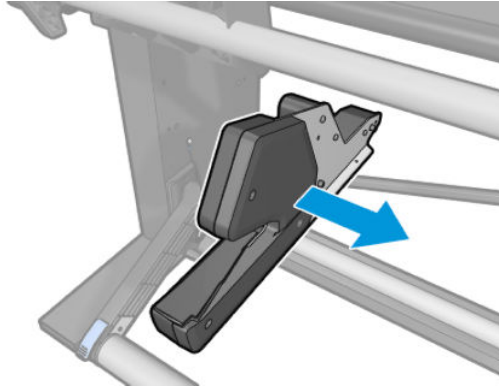
Take-up reel deflector supports

Removal

⚠ **WARNING!** Turn off the printer and disconnect both power cords.

1. Disconnect the take-up reel cable.
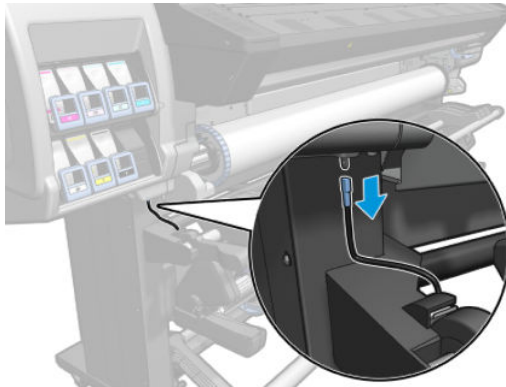
2. Remove the take-up reel deflector from the printer.
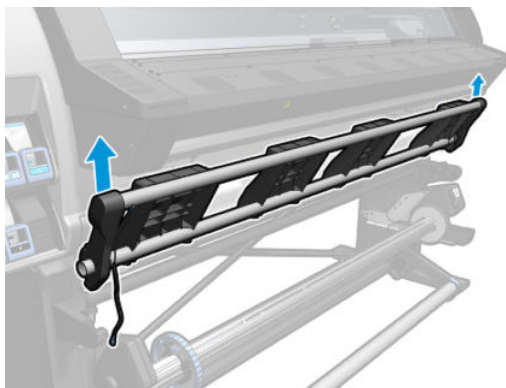
3. Remove the two T-20 screws that attach the left deflector support to the left leg assembly.
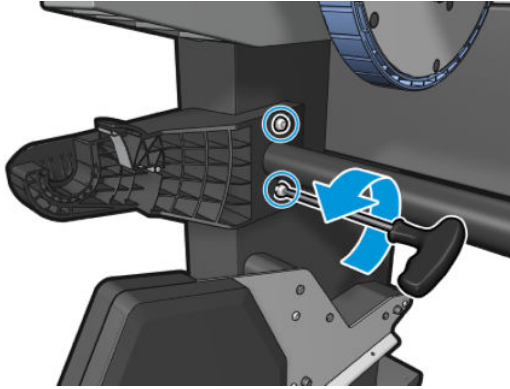
4. Remove the left deflector support.
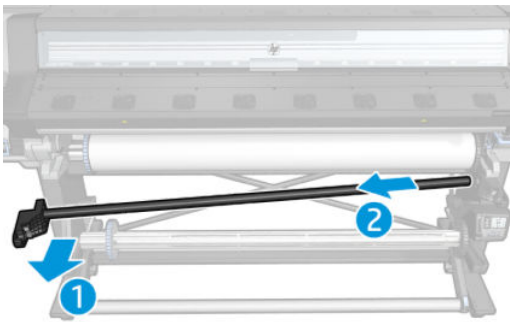
5. Remove the two T-20 screws that attach the right deflector support to the right leg assembly.
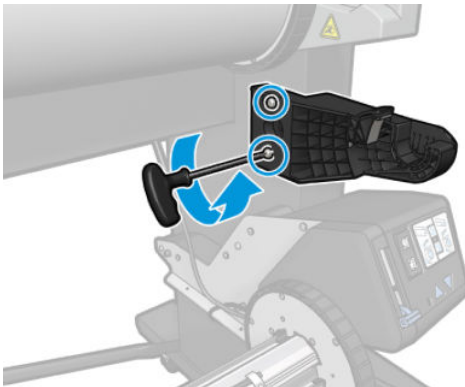
6. Remove the right deflector support.
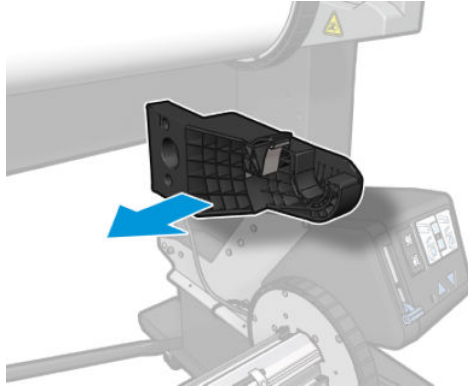
Tension bar

Removal

1. Remove the retaining clip on the right side.
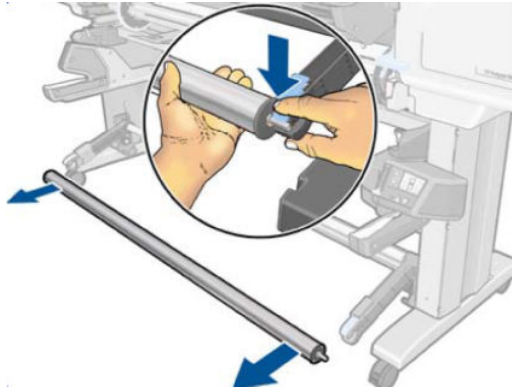
2. Remove the T-10 screw securing the earthing cable to the legs of the printer.

⚠ **WARNING!** When installing the tension bar, ensure that the earth cable is reinstalled.
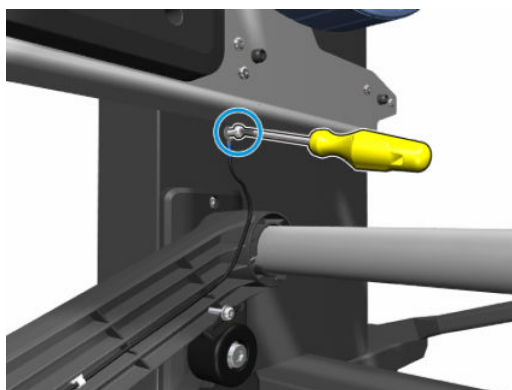
3. Remove three T-10 screws that secure the left side of the tension bar to the legs of the printer.
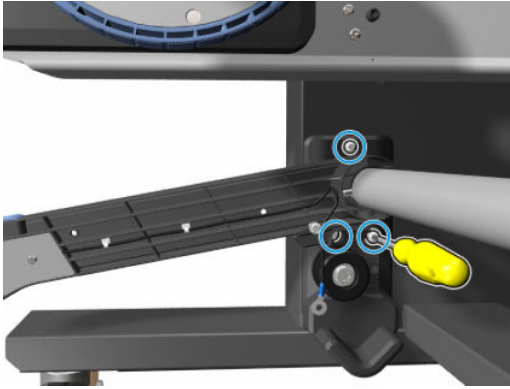
4. Remove the left side of the tension bar.
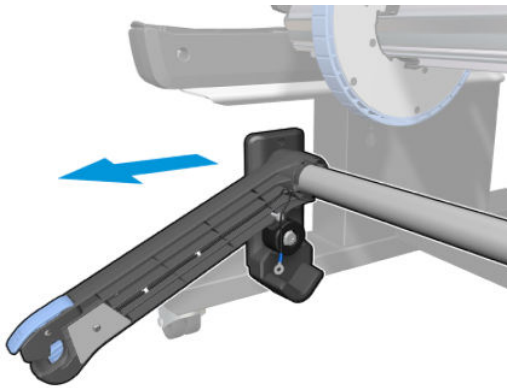
5. Remove the bracket shown from the left side of the tension bar.
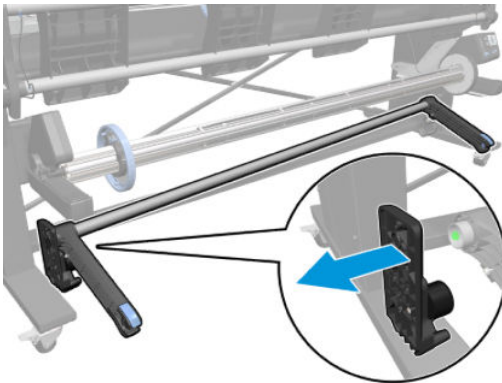
6. Remove the right side of the tension bar from the legs of the printer.
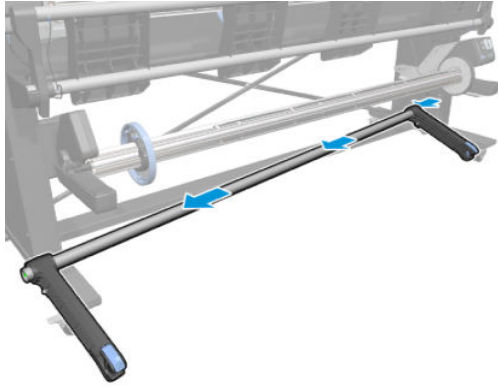
7. Remove the cable.
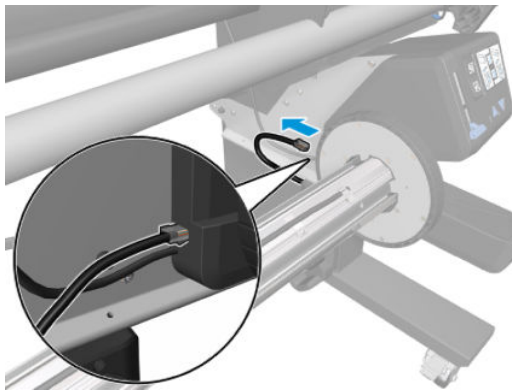
8. Remove three T-10 screws that secure the right bracket to the legs of the printer.
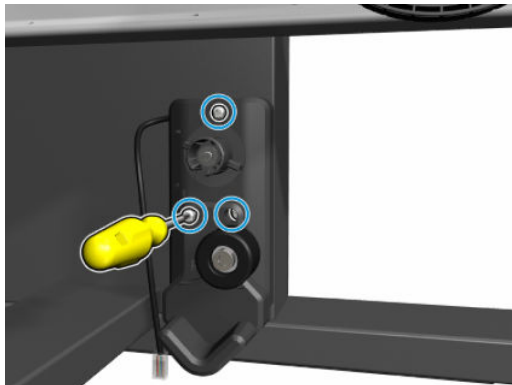
9. Remove the bracket shown from the right side of the printer.
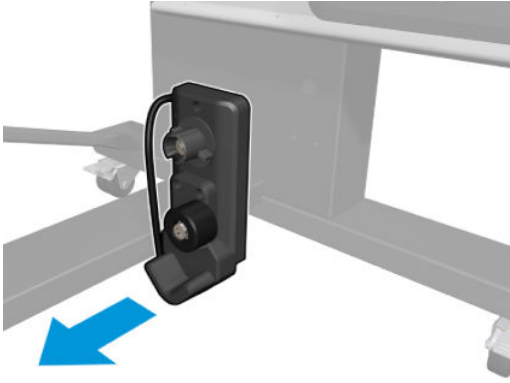
Take-up reel sensors

Removal

⚠ **WARNING!** Turn off the printer and disconnect both power cords.

1. Disconnect the Take-Up Reel Sensors, removing three T-10 screws.
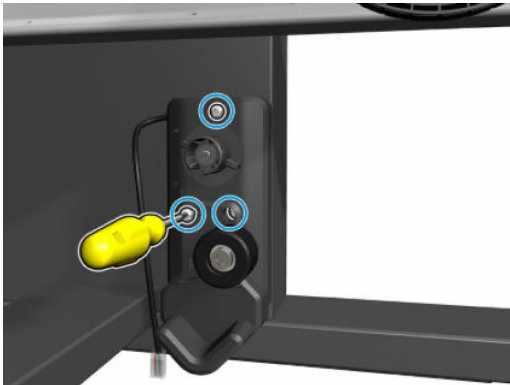
2. Remove the take-up reel sensors.
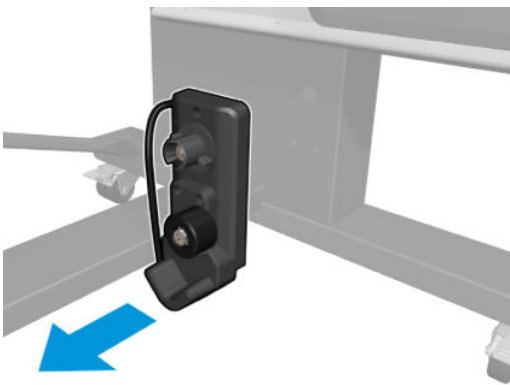
Rewinder

Removal

1. Remove the Right cover on page 360

2. Lift up the Spindle lock and remove the Spindle.
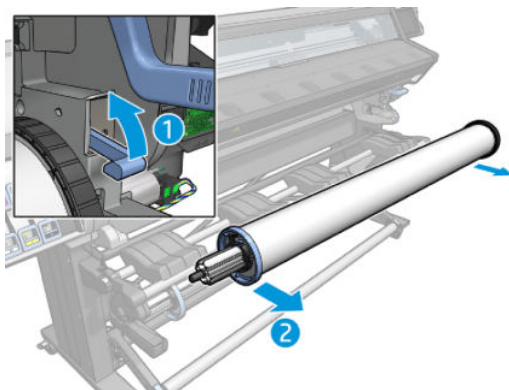
3. Unclip the Ferrite attached to the Sideplate.
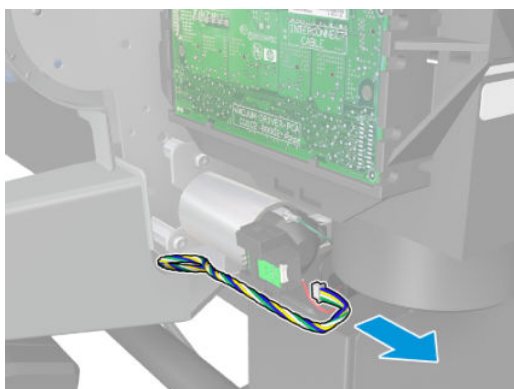
4. Disconnect the encoder cable from the Rewinder motor.
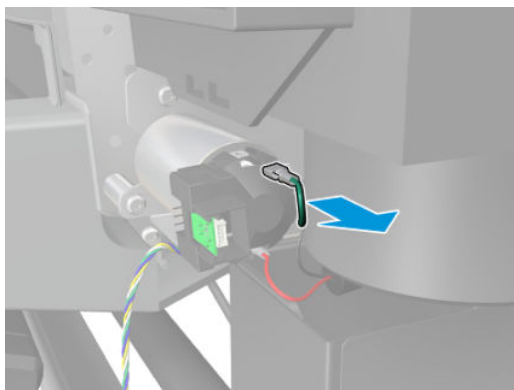
5. Disconnect the Black Cable from the Left side of the Rewinder Motor.
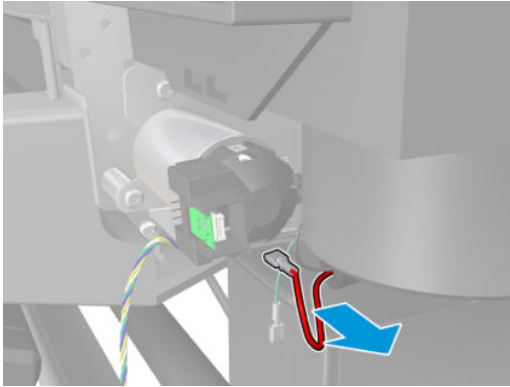
6. Disconnect the Red Cables from the Right side of the Rewinder Motor.
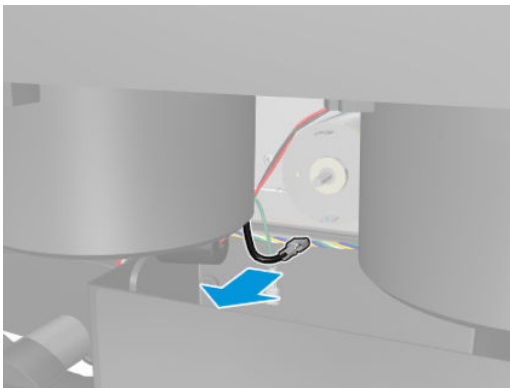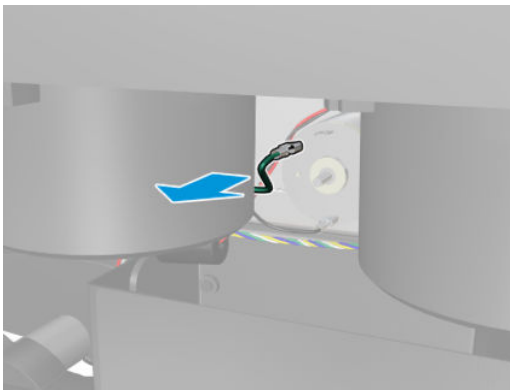
7. Remove two T-20 screws from the left side of Rewinder Assembly.

📝 **NOTE:** A long screwdriver is required to reach the screws.
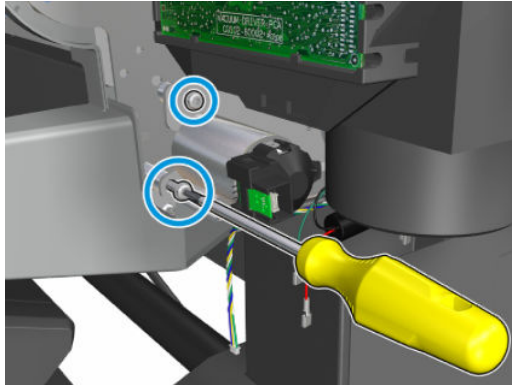
8. Remove two T-20 screws from the right of Rewinder Assembly.

📝 **NOTE:** A long screwdriver is required to reach the screws.
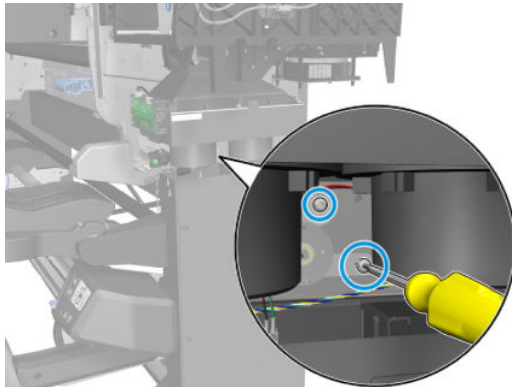
9. Remove the Rewinder Assembly making sure that you do not drop the gears.

📝 **NOTE:** The gears of the Rewinder Assembly are loose and could fall as you remove the assembly.
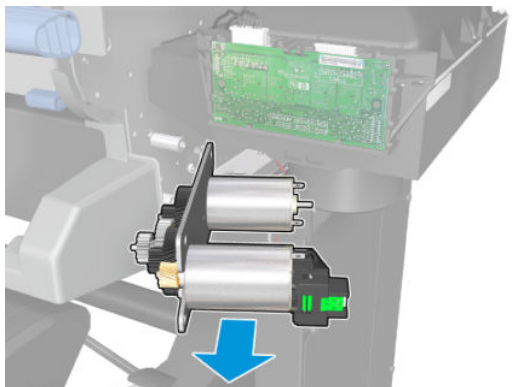
Installation

📝 **IMPORTANT:** Note the position of the gears when installing the Rewinder Assembly, as they can fall from the assembly while being installed.
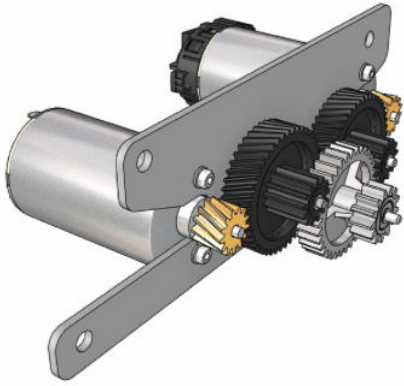
NOTE: 64–inch printers have two Rewinder Motors. 54–inch printers have only one Rewinder Motor.

1. When you have installed the new Rewinder Motor, ensure that the correct cables are connected to the correct terminals of the Rewinder Assembly:

   ● Black cable on the right.

   ● Red cable on the left.

   Verify correct terminal connections by performing the diagnostic test "3.6 Rewinder motor polarity":
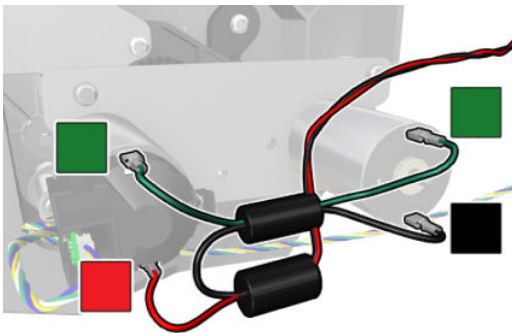
2. Perform the following Calibrations:

   ● "5.3.5 Rewinder C0 voltage calibration".

   ● "4.3.1 Rewinder motor cycles".

3-liter Ink Upgrade accessory

3–liter PCA

Removal

⚠️ **WARNING!** Turn off the printer and disconnect both power cords.

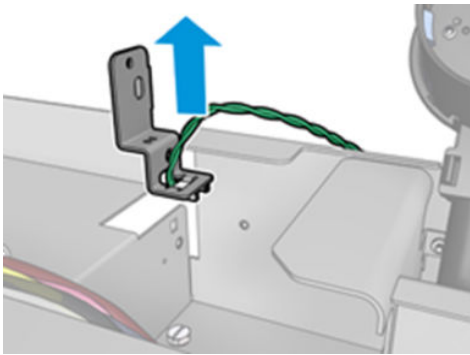1. Remove the 3–liter Top Cover on page 600.

2. Unplug the accessory port cable and the take-up reel accessory port cable.
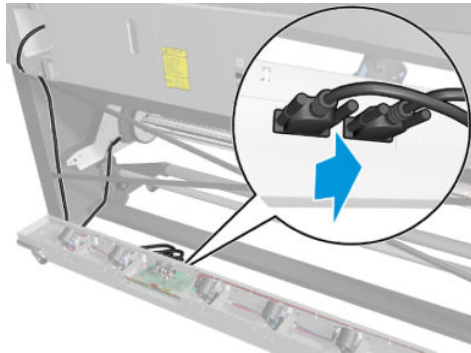
3. Unplug all cables from the 3–liter PCA.
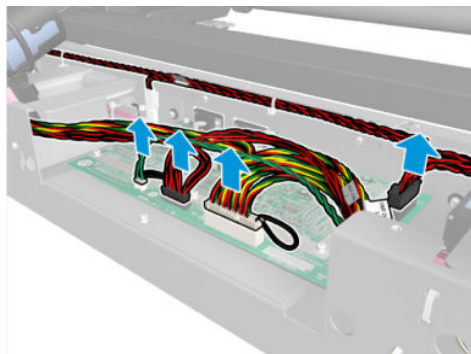
💡 **TIP:**   If it is not possible to remove some connectors by hand, use a prroper tool to help.

4. Remove five T-10 screws from the 3–liter PCA.
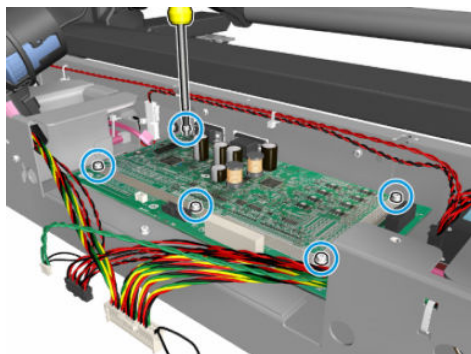
5.   Remove the 3–liter PCA.
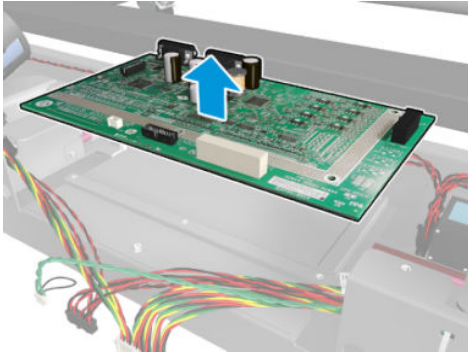
Installation

▲   Follow removal instructions in reverse.

3–liter "x" color Ink Line

Removal

> ⚠ **WARNING!**   Turn off the printer and disconnect both power cords.

> 📝 **NOTE:**   The following procedure involves handling of ink tubes. You are recommended to protect areas around the repair zone to avoid undesired ink stains, and to wear gloves and protective clothes.

1.   Remove the Ink Drawer Lockout.
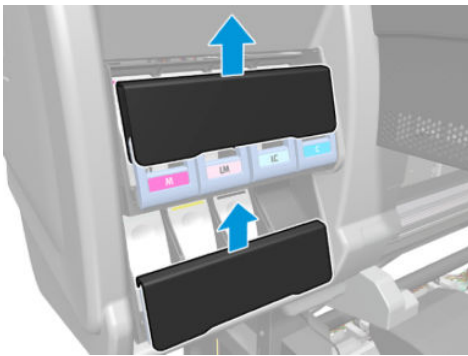
2.   Remove the Left Cover (see the Left cover section in the Latex 300 Series Service Manual).
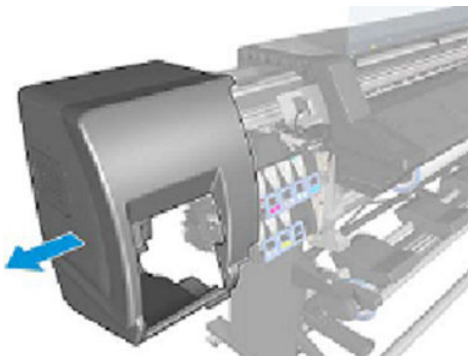
3. Remove the 3–liter Top Cover on page 600.

4. Remove the three T-25 ISS tubes protector screws.
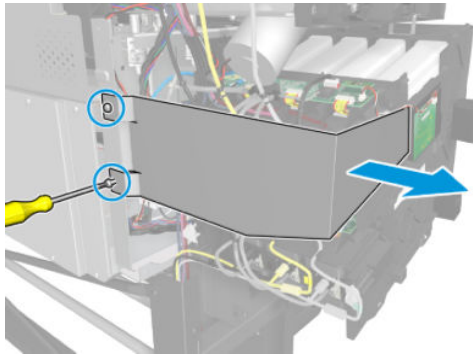
5. Remove/disconnect the corresponding Intermediate Tank.
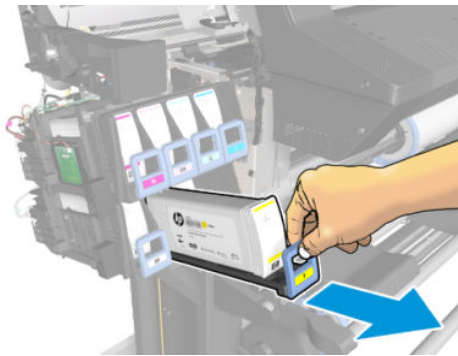
6. Disconnect the ink tube.
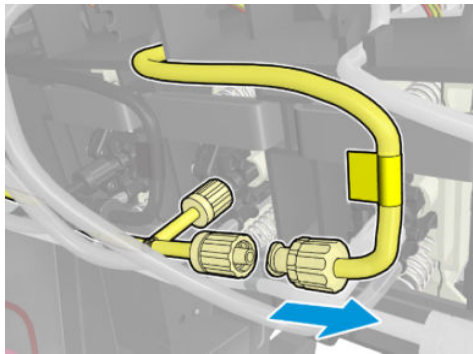
7. Cover ink tubes with female luer thread cap and male lock ring plug closed.
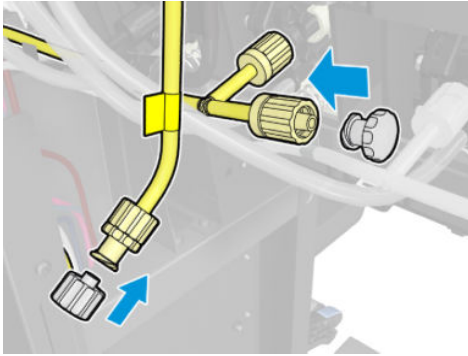
8. Disconnect the ink tube from the PIP.
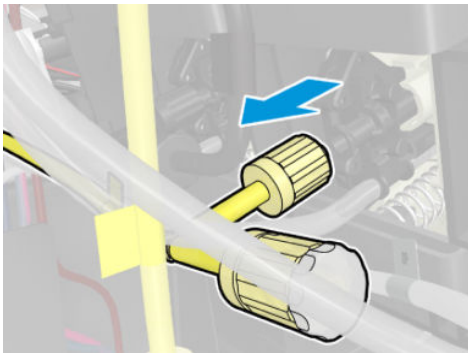
9. Cover ink tube and the PIP with caps.
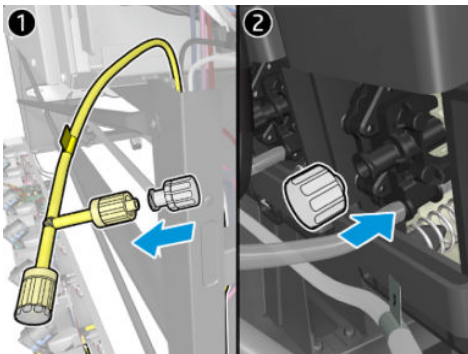
10. Unroute ink tube.
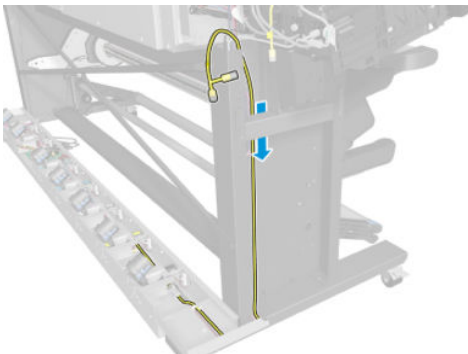
11. Remove the two T-25 screws to undo the clamps.
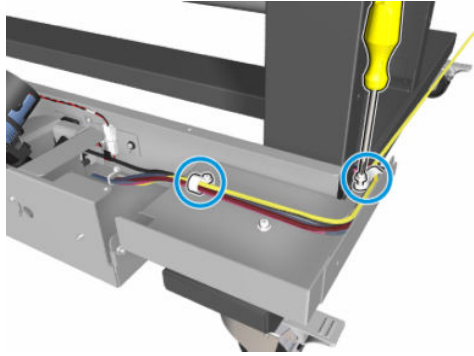
12. Cut all necessary ties that attach the tube to the SIM Support Sheets.
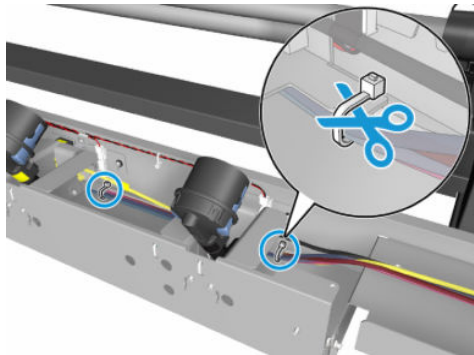
13. Remove one T-10 screw and the Pumps Grounding Spring.
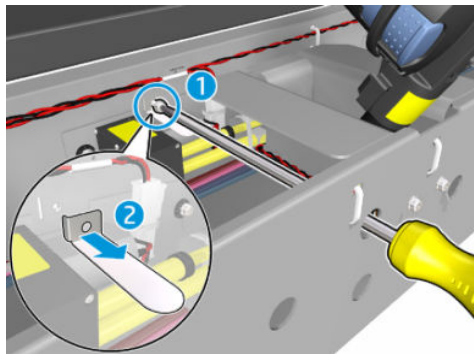
14. Loosen three T-10 screws from Pump support using a long screwdriver.
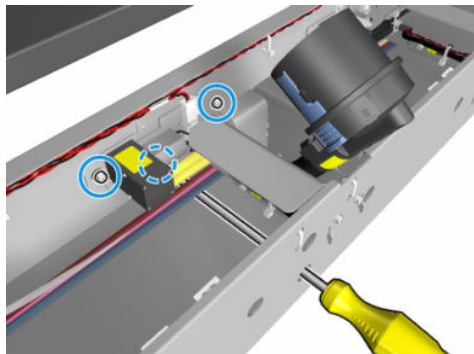
15. Remove two T-10 screws from Sim Support Sheet.
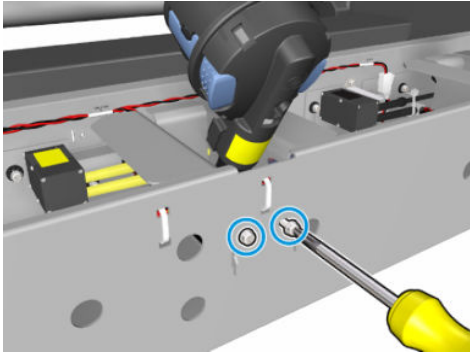
16. Cut two ties that attach the cables of the Barb Cap carefully.
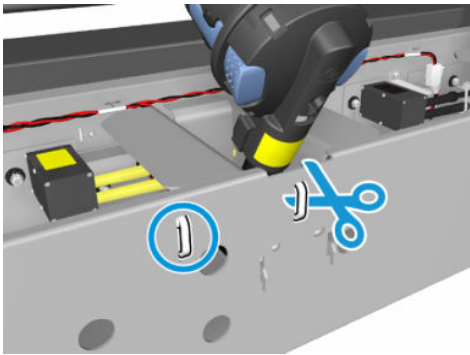
17. Disconnect one connector from the pump.
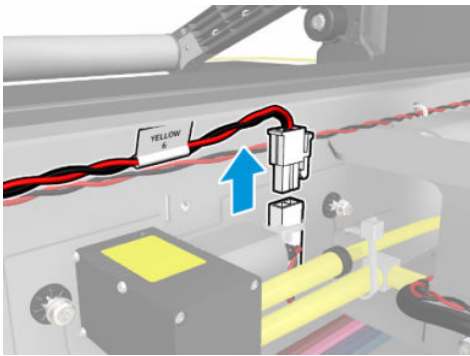
18. Disconnect two connectors from the Barb Cap.
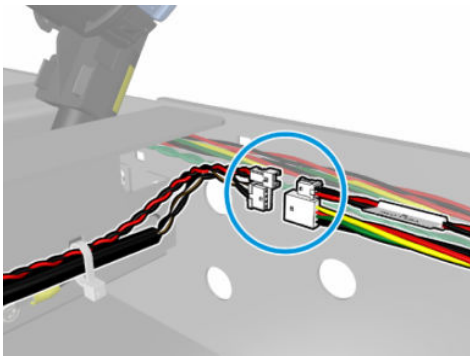
19. Remove the kit.
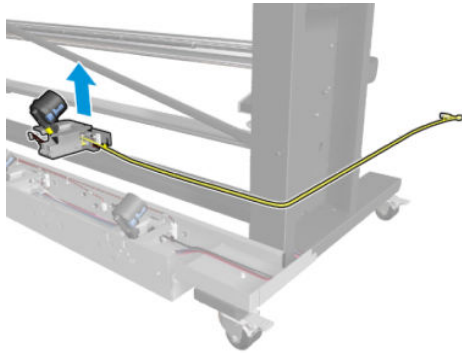
Installation

▲ Follow removal instructions in reverse..

📝 NOTE: It is very easy to mount the cables incorrectly. See the image that follows for correct placement.
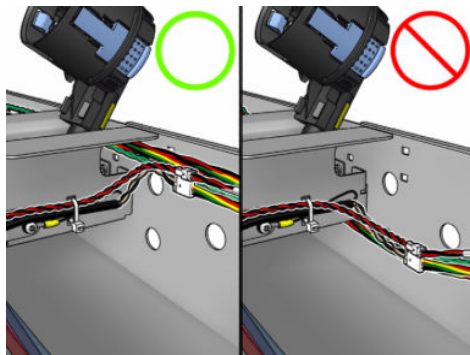
3–liter Cables

3–liter ink cartridges Acumen cable

Removal

⚠ WARNING! Turn off the printer and disconnect both power cords.

1. Remove the 3-liter Top Cover (see [3–liter Top Cover on page 600](#)).

2. Unplug the 3-liter ink cartridges Acumen cable from the 3–liter PCA.
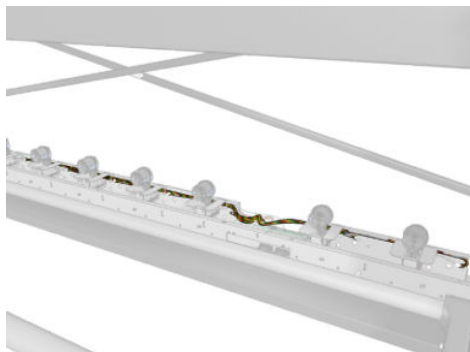
3. Unplug the 3-liter ink cartridges Acumen cable in each color connector.

4. Cut all the ties of each color to unroute the cable.

Installation

▲ Follow removal instructions in reverse.

📝 NOTE: It is very easy to mount the cables incorrectly. See the image that follows for correct placement.
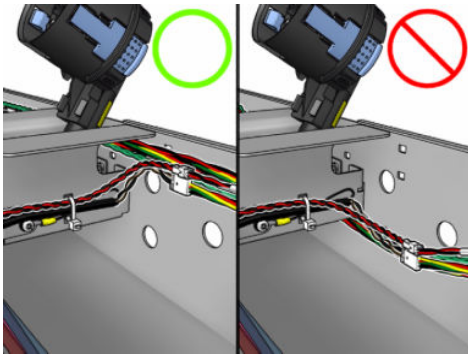
3-liter ink cartridges Presence cable

Removal

1. Remove the 3-liter Top Cover (see).

2. Unplug the 3-liter ink cartridges Presence cable from the 3–liter PCA.
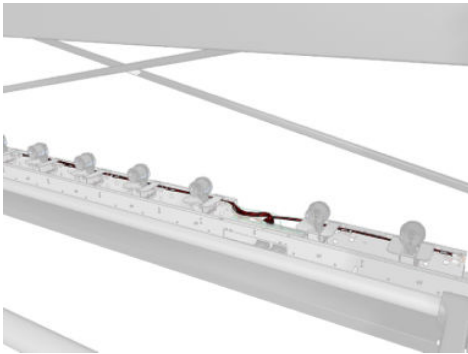
3. Unplug the 3-liter ink cartridges Acumen cable for each color connector.

4. Cut all the ties of each color to unroute the cable.

Installation

▲ Follow removal instructions in reverse.

📝 NOTE: It is very easy to mount the cables incorrectly. See the image that follows for correct placement.
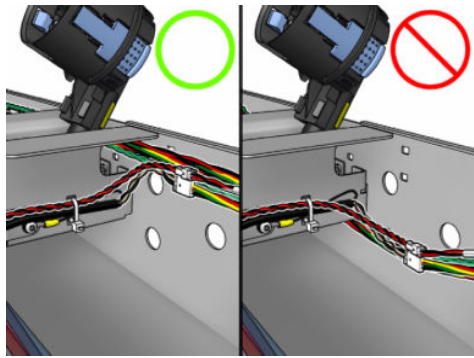
3–liter ink cartridges Pump cable

Removal

1. Remove the 3–liter Top Cover (see 3–liter Top Cover on page 600).

2. Unplug the 3-liter ink cartridges Pump cable from the 3–liter PCA.
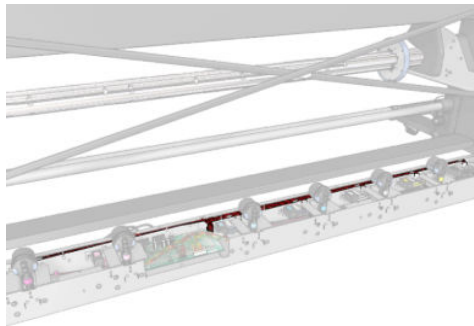
3. Unplug the 3-liter ink cartridges Acumen cable for each color connector.

4. Cut all the ties of each color to unroute the cable.

Installation

▲ Follow removal instructions in reverse

📝 NOTE: It is very easy to mount the cables incorrectly. See the image that follows for correct placement.
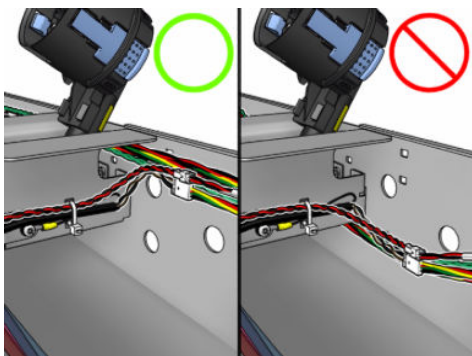
3–liter Top Cover

Removal

1.   Disconnect the Barb Caps from the large ink cartridges.
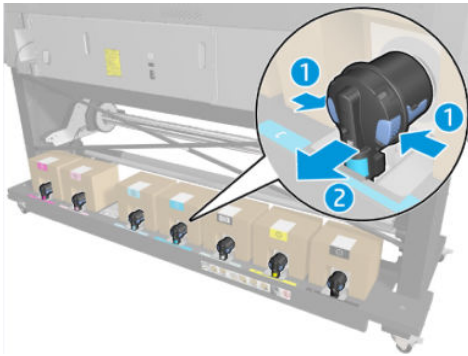
2.   Remove the 7 the large ink cartridges.
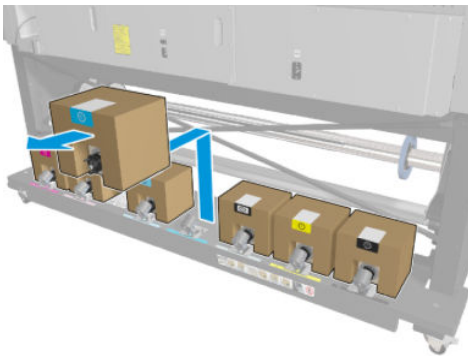
3.   Remove the Left Foot Cover (loosen two T-25 screws and remove four T-25 screws shown below).
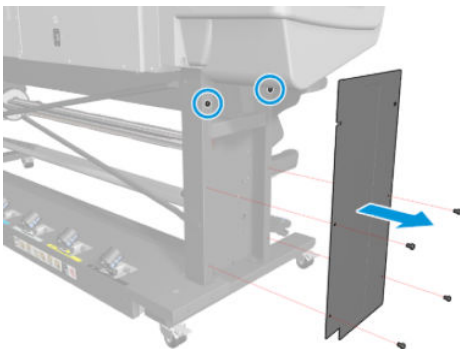
4. Remove seventeen T-10 screws from the 3–liter Top Cover (see).
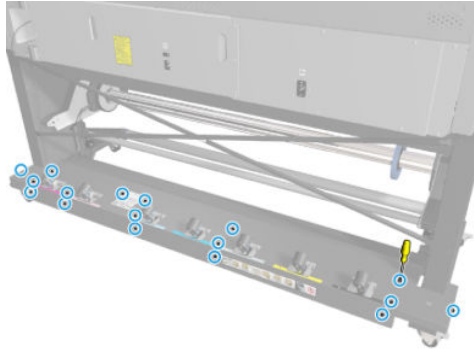
5. Remove the 3–liter Top Cover (see).

3–liter Ink Sump

Removal

⚠ **WARNING!** Turn off the printer and disconnect both power cords.

1. Remove the .

2. Remove the .

3. Remove there T-10 screws from the 3–liter PCA Base.
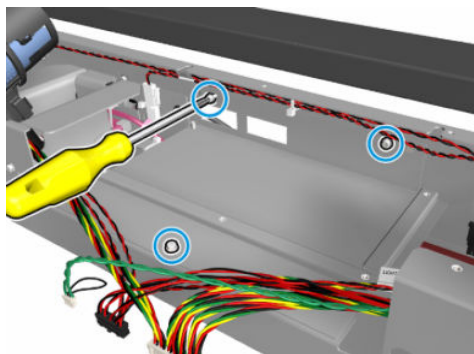
4. Remove 3–liter PCA Base.
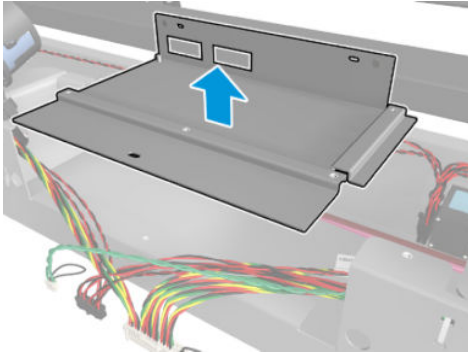
5. Remove all 3–liter color Ink Lines (M,LM,LC,C,OP,Y,K).
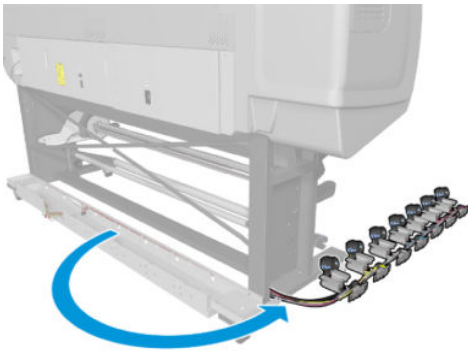
6. Remove all cables.
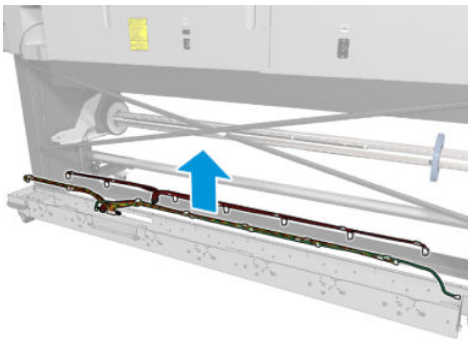
7. Remove two T-25 screws.

8. Remove the 3–liter accessory Ink Sump.
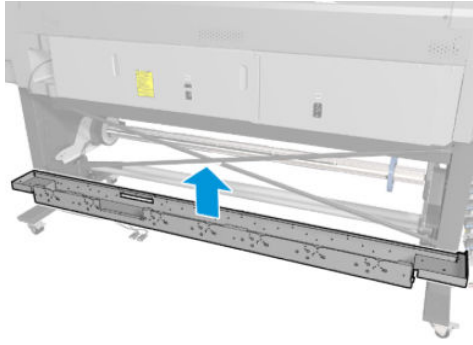
Ink leak detector cable

Removal

1. Remove the .

2. Disconnect cable from the PCA.
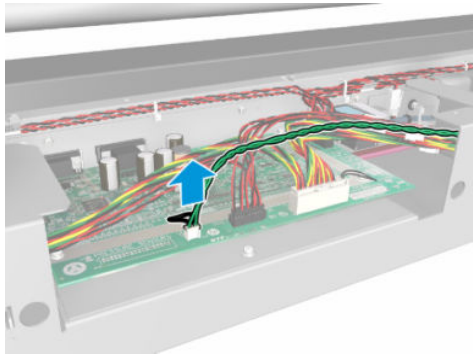
3. Cut all ties from barb caps (LC, C, OP, Y, K) and unroute cable.
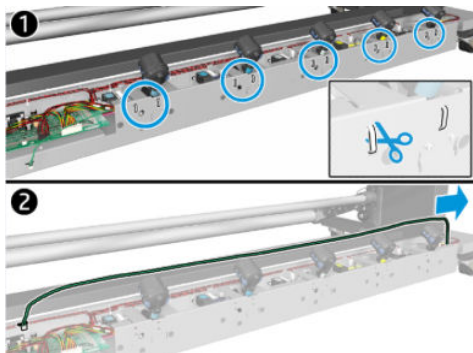
4. Remove one T-25 screw from the Ink Leakage Sensor Holder.
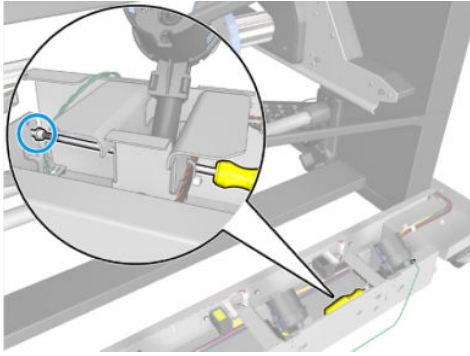
5. Remove the Ink Leakage Sensor Holder and the cable.

Installation

▲ Follow removal instructions in reverse. Take care not to mount the connector in reverse. The image below shows the proper way to mount the connector.
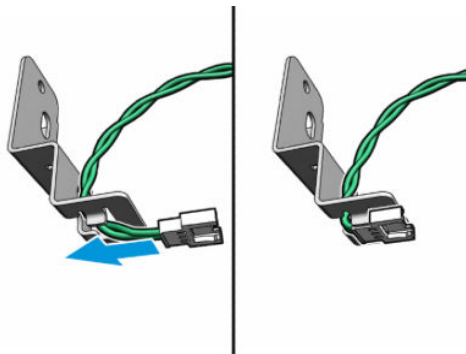
Accessory port cable

Removal

⚠ **WARNING!** Turn off the printer and disconnect both power cords.

1. Remove the 3–liter Top Cover on page 600.

2. Unplug the accessory port cable and the take-up reel accessory port cable.
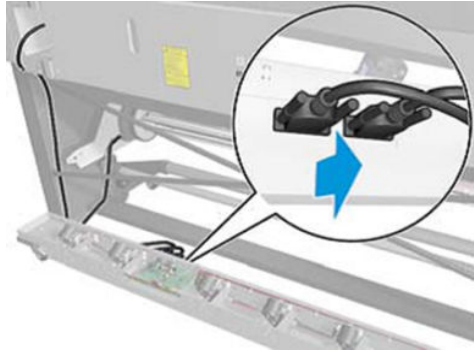
Installation

▲ Follow removal instructions in reverse.

9 Preventive maintenance

Moisture on the printer

Moisture condensation can appear on certain different places around the printer, mostly over surfaces which are not hot.

To prevent this, please keep the following considerations in mind:

- Use the printer in an environment between 20% and 80% relative humidity (for additional information check Table 2-2 Printer environmental specifications in the User's Guide).

- Ensure that the air-conditioning system is not blowing cold air directly on the printer. This will increase the possibilities of having "cold" printer areas.

- Use print-modes that uses less ink per second:

    - Reduce speed, maintaining the ink quantity

    - Maintain speed, reducing the ink quantity

Condensation droplets appear in different places:

- On the Impinging nose

- On the Recirculation cover

- On the Print platen

- Inside the Output platen (occasionally dropping to the sides)
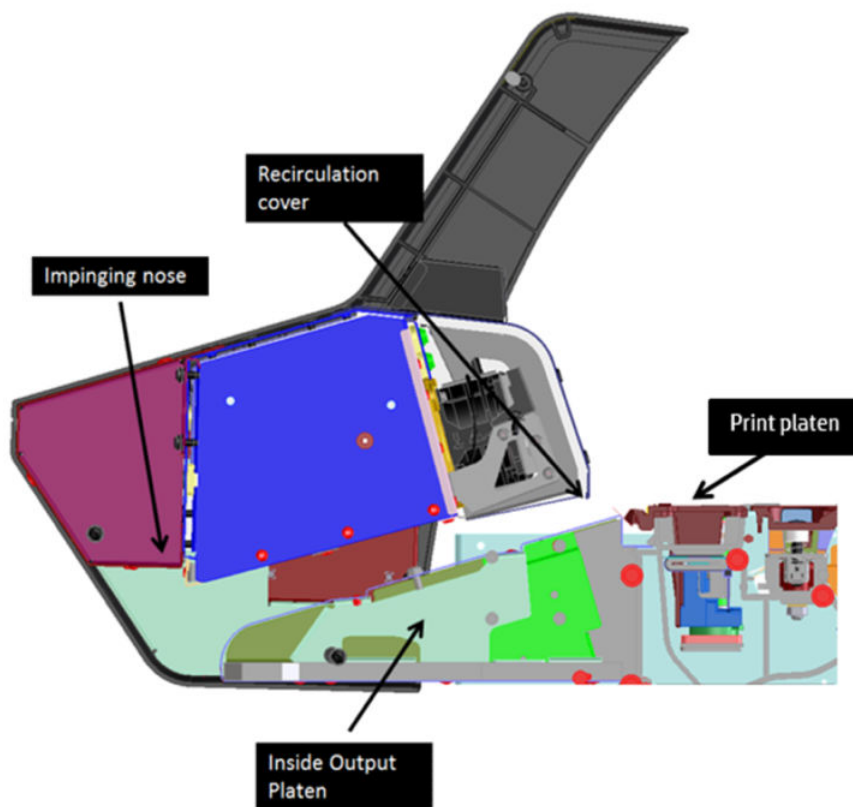
To recover from moisture condensation, turn the printer off, and clean the following parts with a dry cloth:

- Impinging nose: Rub a cloth along the Air curtain. It is very accessible and easy to do.

- Recirculation cover: Rub a cloth along the Recirculation cover lip. It is more difficult to reach, requires that you open the Window.

- Print platen: Rub a cloth along the Print platen. It is very accessible and easy to do but requires that you open the window.

- Inside output platen: It is not possible to clean this piece.

Wait until the printer is completely dry before using it again.

Clean the printer

To maintain the printer in good operating condition, keep it free of dust accumulation, ink, and other contamination. Cleaning intervals are determined by the printer environment and by the types of printer supplies used.

Clean the exterior of the printer

This cleaning should be performed by the customer; for this reason this information is also included in the User's Guide.

Use a damp sponge or a soft cloth and a mild household cleaner such as non-abrasive liquid soap to clean the outside of the printer and all other parts of the printer that the customer regularly touches during normal operation.

There may be some dampness from condensation under the fans of the curing module, which should be wiped with a dry cloth.

⚠ **WARNING!** To avoid an electric shock, make sure that the printer is turned off and unplugged before you clean it. Do not let water get inside the printer.

⚠ **WARNING!** Do not use abrasive cleaners on the printer.

Cleaning the drive roller

⚠ **CAUTION:** 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. Refer to 1.3.1 Turn Drive Roller on page 260.

2. Open the window and apply any common household cleaning solution (water based only) to a soft, lint-free rag and apply it to the Drive Roller while it is rotating. Make sure that you thoroughly clean the Drive Roller.

3. Press **Cancel** when you have completed the cleaning procedure.

4. Allow the Drive Roller to dry before loading substrate in to the printer.

Clean the platen

This cleaning can be also performed by the customer; for this reason some of this information is also included in the User's Guide.

Customer should clean the printer's Platen every few months, or when necessary.

NOTE: If, when cleaning the Platen, you see that any sticker is missing or out of place, you can replace it with one of the spare stickers provided in the User Maintenance Kit.

CAUTION: Be careful not to damage the Substrate-advance sensor when cleaning the platen.

TIP: You are recommended to wear gloves.

Follow these instructions to clean the platen:

1. Unload all the substrate from the printer.

2. Turn off the printer.

3. Open the printer Window.

4. Use a clean, absorbent lint-free cloth to wipe any wet ink thoroughly from the Cutter groove, Cutter ramp (360/365/370/375 only), and Platen.

5. With a dry brush, remove dry, loosened ink deposits from the Cutter groove and Cutter ramp (360/365/370/375 only).
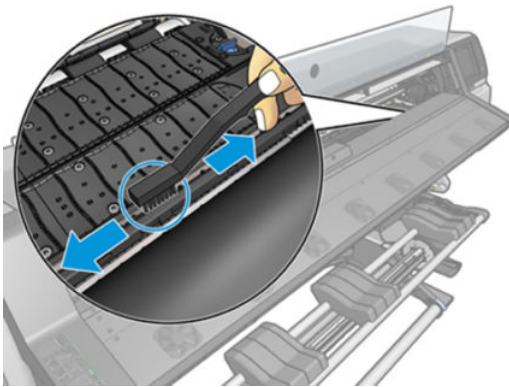
6. With the same dry brush, remove dry, loosened ink deposits from the Platen surface.
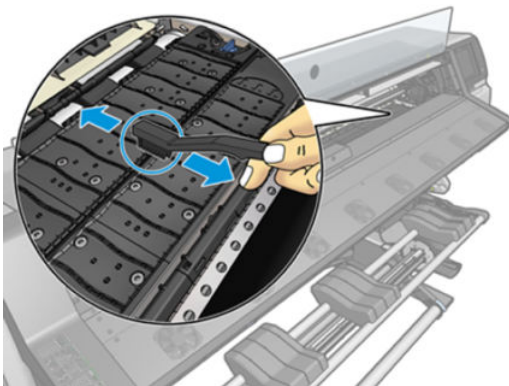
7. Slightly dampen the used cloth with 95% ethanol to wipe the remaining dry ink deposits from the Platen.

📝 **NOTE:** Dry ink deposits take longer to remove.

⚠️ **CAUTION:** Ethanol is highly flammable. Observe the manufacturer's safety precautions.

CAUTION: Do not use commercial cleaners or abrasive cleaners. Do not wet the Platen directly, because if you do you will leave too much moisture behind, which could damage the Substrate advance sensor.
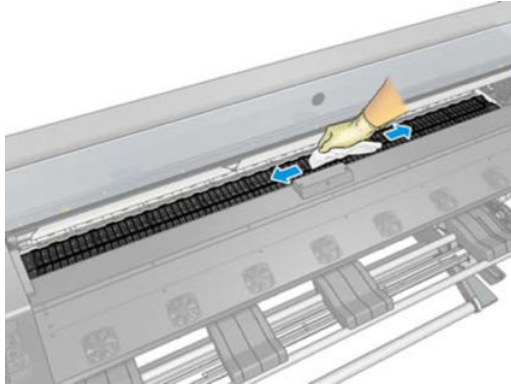
8. Use the damp cloth to remove remaining dry ink deposits from the cutter ramp (360/365/370/375 only).
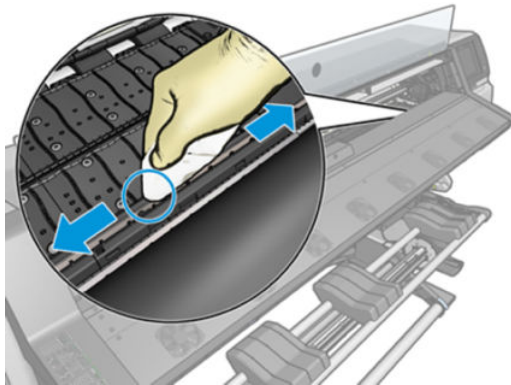
9. Close the 95% ethanol container and remove it and the cloth from the vicinity of the printer.

10. Wait 3 or 4 minutes to let the ethanol evaporate before turning on the printer and reloading the substrate.

11. With a 1 mm diameter pin, ensure that the vacuum holes are not obstructed, especially the holes that are covered by the most-used substrate sizes.
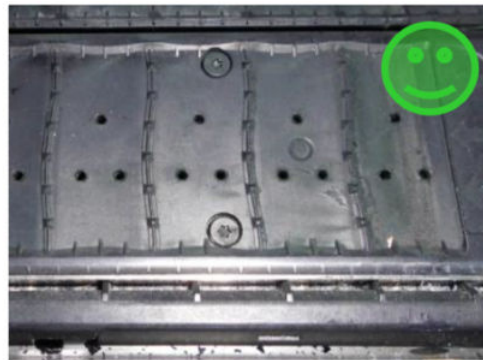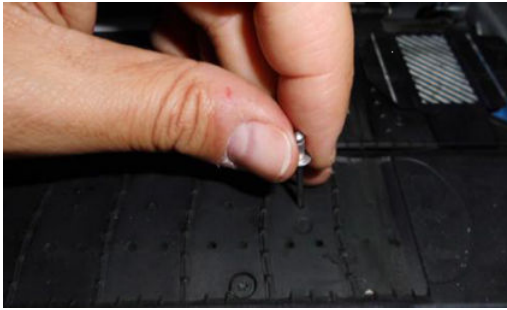
NOTE: If you do not have a 1mm diameter pin, you can also use a 1.5 mm Allen key:

Clean the substrate-advance sensor window (HP Latex 360/365/370/375 only)

The cleaning of the Substrate-advance sensor window (OMAS) can be also performed by the customer; for this reason this information is also included in the User's Guide.

It is recommended to clean the OMAS whenever the Print platen is cleaned and if and when it has experienced a print quality issue.

Follow these instructions to clean the OMAS:

1. Unload the substrate from the printer.

2. Turn off the printer and wait until it has cooled down.

3. Wipe the sensor with a cotton swab to remove wet ink.

4. Wipe the sensor with a cotton swab, slightly dampened with 95% ethanol, to remove dried ink. If the sensor window is heavily coated with dried ink, you may need to apply some pressure while wiping, helping the cotton to absorb the ink. Continue cleaning with fresh swabs until the cotton remains clean and the sensor window looks clean. When reflecting ambient light, a clean sensor shows a blue-colored reflection that should extend uniformly across its whole surface. You can see this reflection by moving closer and slightly changing your viewing angle.

5. Remove the closed 95% ethanol container and the cotton swabs from the vicinity of the printer.

6. Wait three or four minutes to let the ethanol evaporate before turning on the printer and reloading the substrate.

Clean and lubricate the carriage rail

This cleaning should be performed by the customer; for this reason this information is also included in the User's Guide.

📝 NOTE: In some circumstances, such as in ambient temperatures above the printer's operational specification, or if there is a significant amount of dust in the air, Slider rod lubrication may be impaired, which can affect the performance of the printer

Follow these instructions to clean and lubricate the Carriage rail:

1. At the Front panel, press the **Settings** button, then **Preventive maintenance tasks**, then **Carriage lubrication**.

2. Open the Window.

3. Clean the Carriage rod using a lint-free cloth dampened with 95% ethanol. You should clean the whole rod, including the area under the Left cover.

> ⚠ **CAUTION:** Ethanol is highly flammable. Observe the manufacturer's safety precautions.

> **CAUTION:** Do not use commercial cleaners or abrasive cleaners. Do not wet the Platen directly, because if you do you will leave too much moisture behind, which could damage the Substrate advance sensor.

> ⚠ **WARNING!** Avoid moving parts. You are recommended to wear gloves.

> ⚠ **CAUTION:** While cleaning, be careful not to damage the plastic Encoder strip located on top of the rail.
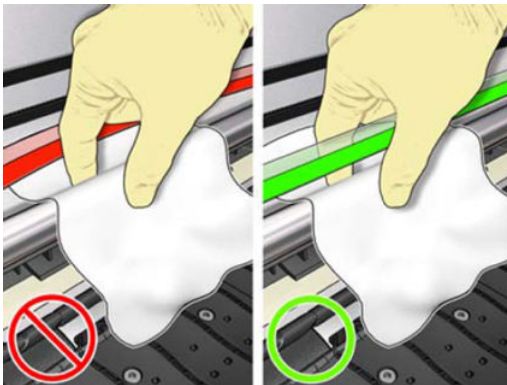
4. Wait until the rod is dry, then close the Window. The Carriage moves to the left side of the printer so that you can reach the part of the rod under the Right cover.

5. Open the printer Window.

6. Clean the Carriage rod area under the Right cover as described in step 3.

7. Take the bottle of oil from the Maintenance Kit that is supplied with your printer (a replacement kit can be ordered if necessary).

8. Deposit a very thin zig-zap trickle of oil along the rod.
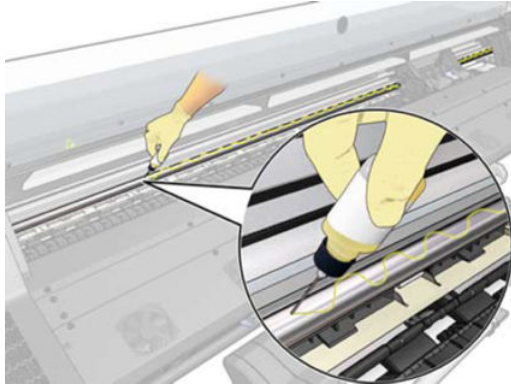
📝 **NOTE:** While lubricating, be careful not to drop oil on the Encoder strip located on top of the rail.

9. Press **OK** at the Front panel.

10. Close the Window.

11. The Carriage moves from one side of the printer to the other to distribute the oil along the rod.

12. The Front panel asks you to confirm that lubrication has been completed. Press **OK** to confirm.

Clean the encoder strip

The cleaning of the Encoder strip can be also performed by the customer; for this reason this information is also included in the User's Guide.

It is recommended to clean the Encoder strip when it's requested by the printer.

Follow these instructions to clean the Encoder strip:

1. At the Front panel, press the **Settings** button, then **Preventive maintenance tasks** then **Clean scan axis encoder**.

2. Open the Window.

3. Clean the Encoder strip on both sides with a cloth dampened with water, as instructed in the Front panel, and press **Continue** when finished.

4. Close the Window. The carriage moves to the left-hand side of the printer.

5. The front panel prompts you to reopen the Window and clean the right-hand side of the Encoder strip (inside the Service station). Press **Continue** when finished.

6. Close the Window. The Carriage returns to its ready position in the Service station.

Clean the impinging module

This cleaning process must be performed along with any SMK#3 interventions. Remember that SMK#3 is included in SMK#1 and SMK#2 (SMK#2 is not required in the Latex 3x5 series)..

⚠ CAUTION: Switch off the printer and disconnect the Power cords before starting the process.

The Impinging module cleaning process is also explained in a video:

● Employees and contingent workers: http://thesml.hp.com

● HP Channel Partners, external Call Centers (requires registration): http://www.hp.com/go/psml

Select **Printers and Multifunction** → **Latex Printers** → **HP Latex 360/365 Printer** → **FRU Remove/Replace** → **Cleaning the curing module and replacing the pressure sensor.**

Follow these instructions to clean the Impinging module:

1. Clean ALL air curtain fans using the angle brush (included in SMK#3) by introducing its bristles along the cover holes.

2. Disassemble the Air curtain module and place it on a protective table.

3. Clean the external surface of the Air curtain exit holes using the flat brush (included in SMK#3).

4. With the angle brush, clean ALL fans precisely, wing by wing. Use your finger to block the fan.

5. Clean the internal surface of the Air curtain exit holes using the angle brush.

6. Disassemble the Curing module. Place the Curing module onto the table.

7. Disassemble the Pressure sensor.

8. Disassemble the Recirculation cover.

9. With the angle brush, clean ALL Heater fans precisely, wing by wing. Use your finger to block the fan.

10. Remove the Fan-heater assemblies. Note the position of each module to ensure it is assembled at the same location.

11. With the flat brush, push firmly downwards on the Curing nozzle plate to allow the bristles to enter the holes and remove as much dirt as possible. Using a circular motion, clean the whole surface. REPEAT this operation 3 times.

12. Pay special attention to both Impinging ends: this is where more dirt can accumulate.
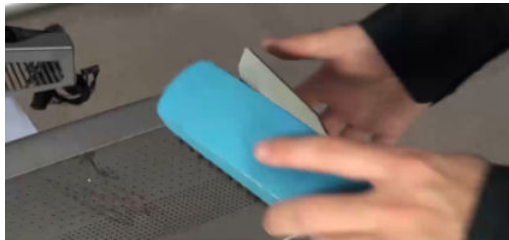
13. With the angle brush, remove dust and dirt from the entire internal Curing nozzle plate area.

14. Pay special attention to the corners: usually there is more dust in this area than anywhere else. There could be image quality defects in the future if those areas are not clean enough.

15. With the angle brush and a wet cloth, remove all dirt from the Bottom face.

16. Assemble the Fan-heater assemblies on the curing module. Remember the original position of each module

17. Assemble the recirculation cover and the new pressure sensor included in the SMK3 box.

18. Assemble the curing module on the printer.

19. Assemble the air curtain module and all the covers.

20. Switch on the printer and launch the Curing pressure calibration service test.
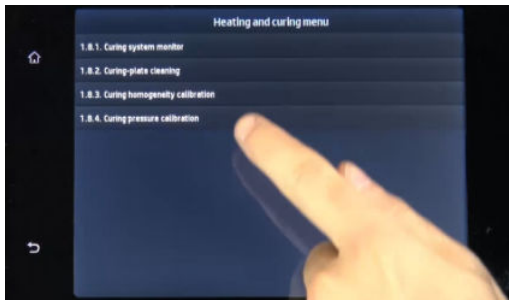
21. **Without media loaded in the printer**, switch it off and on. This helps to correctly calibrate the new pressure sensor.

NOTE: Dust may be deposited on the media under the Curing module when printing the first plots after the Curing module cleaning process.

NOTE: Only for L360/365/370/375, because some dirtiness falls on front tubular resistors, once resuming production, the first time booting up the printer, you could see some smoke coming out the air curtain cover and a particular burning smell.

Clean the service station maintenance cartridge rods

This cleaning process must be performed along with the SMK#3 intervention. Remember that SMK#3 is included in SMK#1 and SMK#2 (SMK#2 is not required in the Latex 3x5 series).

The objective is to remove the "dust" that may have settled on top of the rods where the Maintenance cartridge is inserted:

Follow these instructions to clean the Service station maintenance cartridge rods:

1. Turn off the printer.

2. Open the Service Station door.
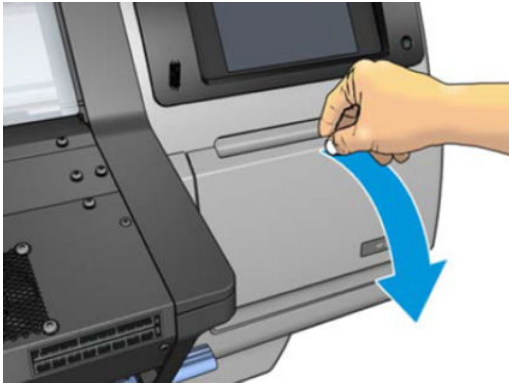
> NOTE: When removing the maintenance cartridge, remember that it is full of ink. Therefore:

    ● Wear gloves

    ● Remove it carefully and horizontally to avoid spilling.

3. To remove the maintenance cartridge, just slide it out.
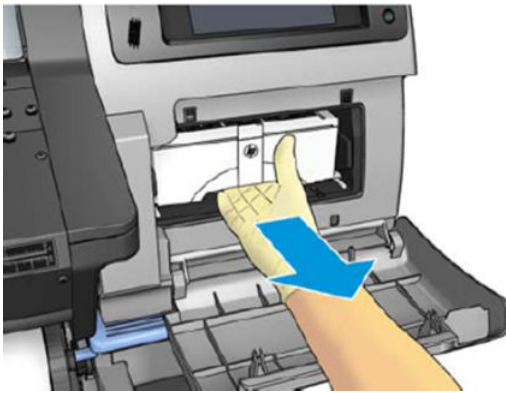
> NOTE: The maintenance cartridge will be located under the carriage, capping the printheads.

4. When you have slid it out partway, hold it on each side with both hands: it could be heavy. Then put it in a safe place.
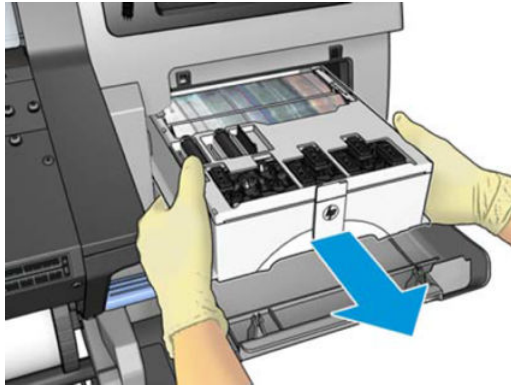
📝 **NOTE:**   Slide it out horizontally to prevent spills, as it will be full of ink.

5. With a clean cloth, clean the Service station maintenance cartridge rods.

Clean those rods

6. Insert the Maintenance cartridge into the slot again, in the direction indicated by the arrow.

📝 **IMPORTANT:**   Ensure that the Maintenance cartridge is inserted all the way back to the end of the Service station, otherwise the printheads will not be correctly capped.

7. Close the Service station door.

Clean the vacuum rubbers under the removable PZ (HP Latex 360/365/370/375 only)

This cleaning process must be performed along with the SMK#3 intervention. Remember that SMK#3 is included in SMK#1 and SMK#2 (SMK#2 is not required in the Latex 3x5 series).

The objective is to remove the dust that may be obstructing the Rubbers.

Follow these instructions to clean the Vacuum rubbers:

1. Turn off the printer.

2. Open the Window.

3. Unlock the Platen using the two blue Locks located at the left and right of the printer.
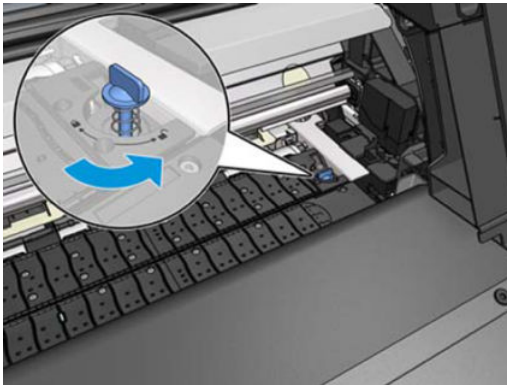
4. Remove both parts of the Platen in the same way.
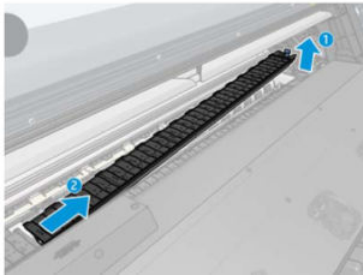
5. With a 1 mm diameter pin ensure that ALL the Vacuum holes are not obstructed, especially the holes that are covered by the most-used substrate sizes.
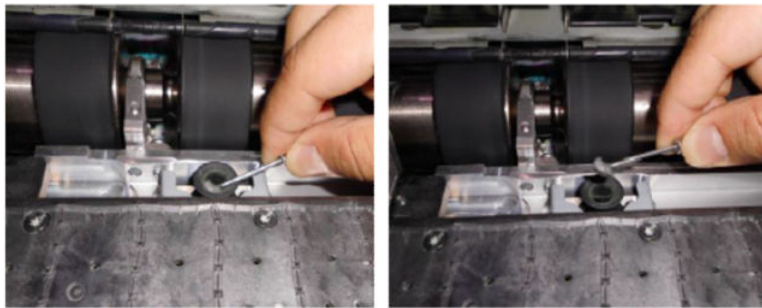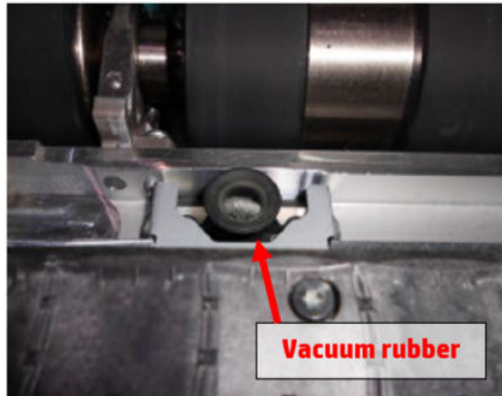
NOTE: If you do not have a 1mm diameter pin, you can also use a 1.5 mm Allen key:
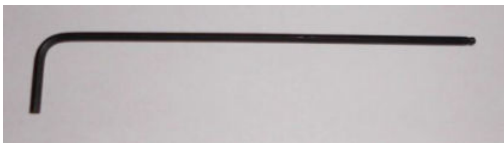
6. Reinsert both parts of the Platen.

Scheduled maintenance

In some segments of the printer market, the customer tends to print more than the maximum number of prints that the throughput allows, exceeding by far the limit of the design. When this happens the customer runs into print quality problems and continuous printer failures.

The purpose of scheduled preventive maintenance is to avoid these failures - ensuring a good performance during all the product life.

Level of printer usage

Non-Volatile Memory (NVM) counters are assigned to counting the number of carriage cycles, carriage distance, service station cycles, and ink in the waste management module. When certain components of the printer exceed preset amounts of any of these counters, the front panel displays the following messages:

- "Service Maintenance #1 required" (related to Carriage cycles and distance)

- "Service Maintenance #2 required" (related to Service Station cycles) (for Latex 3x0 only)

- "Service Maintenance #3 required" (related to Carriage distance and ink consumed)

When one of these messages is displayed, the appropriate service maintenance kit must be used to replace the relevant parts of the printer. See "Removal & Installation" on page 271 when replacing the parts.

📝 NOTE: Service Maintenance Kit #2 is not required in the Latex 3x5 series, only Service Maintenance Kit #1 and #3 will be available for the Latex 3x5 series.

📝 IMPORTANT: Both Service Maintenance Kit #1 and Service Maintenance Kit #2 contain, among the printer parts replaced, all the parts contained in Service Maintenance Kit #3.

Therefore, when Service Maintenance #3 is required, you should check the status of Service Maintenance #1 and #2. If the status of #1 or #2 is close to 100% (for example, above 95%), it is best to perform that Service Maintenance instead of #3, to avoid two interventions within a short period of time.

Service Maintenance Kit 1

Service Maintenance Kit #1 (part number B4H70-67103 for Latex 330, 335, 360, 370 and 375 or B4H69-67046 for Latex 310, 315, 115 and 110) normally includes the following parts, although the list of parts may vary slightly:

- Ink Supply Tubes & Trailing

- Cable Carriage Assembly (with encoder sensor)

- Cutter Assembly (Latex 360/365/370/375 only)

- Belt Assembly and Tensioner

- Encoder Strip

- Scan Axis Motor

- Carriage PCA Cover

- SMK3

Clean the Impinging module. See Clean the impinging module on page 616.

Clean the Printzone platen holes (see Clean the platen on page 609). Clean the Service station rods (see Clean the service station maintenance cartridge rods on page 621), and for the Latex 360/365/370/375, clean the vacuum towers (see Clean the vacuum rubbers under the removable PZ (HP Latex 360/365/370/375 only) on page 624).

Reset the SMK1 life counter, see 3.1 Reset Maintenance Kit usage on page 271. Perform all of the user maintenance procedures after the replacement:

- Clean the exterior of the printer

- Clean the Drive roller

- Clean the OMAS (315/335/360/365/370/375 only)

- Clean the Encoder strip

- Clean and lubricate the Carriage rail

Service Maintenance Kit 2 (for Latex 3x0 only)

Service Maintenance Kit #2 (part number B4H70-67104) normally includes the following parts, although the list of parts may vary slightly:

- Aerosol Fan Assembly

- SVS including SVS motor, rack

- Drop detector

- SMK3

Clean the Impinging module (see Clean the impinging module on page 616).

Clean the printzone platen holes (see Clean the platen on page 609). Clean the Service station rails (see Clean the service station maintenance cartridge rods on page 621). For the Latex 360/370: clean the vacuum towers (see Clean the vacuum rubbers under the removable PZ (HP Latex 360/365/370/375 only) on page 624).

Reset the SMK2 life counter: see 3.1 Reset Maintenance Kit usage on page 271. Perform all the user maintenance procedures after the replacement:

- Clean the exterior of the printer

- Clean the Drive roller

- Clean the OMAS (360/370 only)

- Clean the Encoder strip

- Clean and lubricate the Carriage rail

Service Maintenance Kit 3

Service Maintenance Kit #3 (part number B4H70-67105) normally includes the following parts, although the list of parts may vary slightly:

- Line sensor

- Pressure sensor & tube

- Oiler + Lubricant bottle + clean and lubricate both slider rods

- Carriage felts & Clean bushings

- UCP (Under Carriage Protector)

- Spit roller motor & Clean SVS PHC rods

Clean the Impinging module (see Clean the impinging module on page 616).

Take into account that there are units (SN => MY5BR69010) that don't have the Pressure sensor installed by default, so when the Service Engineer implements SMK#3 the first time on said units, he or she will find that there is no pressure sensor on the unit, yet the piece is included in the kit. How should you proceed?

1. Follow the same process as of until now, but when you get to the Replace the pressure sensor step, you will notice that the unit doesn't have one.

2. Install the Pressure sensor included in SMK#3 as explained in this manual.

   📝 NOTE: Service Engineer will observe that the cable that connects the sensor with the Impinging control PCA is already installed on the unit.

   📝 NOTE: Service Engineer will see that there is a Stopper on the tube that connects to the Pressure sensor. Remove the Stopper and connect the tube as is explained in this manual.

3. After cleaning the Curing module and installing the new Pressure sensor, it is very important to switch on the printer; be sure that there is no substrate loaded in it and launch service test 1.8.4 Curing pressure calibration.

   📝 NOTE: The sensor can be left installed on the printer without it causing any issues.

Clean the Printzone platen holes (see Clean the platen on page 609). Clean the Service station rails (see Clean the service station maintenance cartridge rods on page 621). For the HP Latex 360/365/370/375: clean the vacuum towers (see Clean the vacuum rubbers under the removable PZ (HP Latex 360/365/370/375 only) on page 624).

Reset the SMK3 life counter: see 3.1 Reset Maintenance Kit usage on page 271. Perform all user maintenance procedures after the replacement:

- Clean the exterior of the printer

- Clean the Drive roller

- Clean the OMAS (315/335/360/365/370/375 only)

- Clean the Encoder strip

- Clean and lubricate the Carriage rail

10 Repackaging instructions

Reuse packaging material

Do not discard the packaging that the printer came with as it is reused every time the printer needs to be shipped.

There are generic packaging components such adhesive tape, plastic strips, etc. that cannot be reused in all the cases. Ensure that you have some spare tape to complete the packaging process (industrial tape can be used in most of the cases).

There are critical packaging elements designed to lock-down specific printer components during transportation. These components must be stored until repackaging is required.

Removing consumables

⚠ **WARNING!**   Turn off the printer and disconnect both power cords.

1.   Remove the substrate. See the user's guide.

2.   Remove the printheads. See the user's guide.

3.   Remove the ink cartridges. See the user's guide.

4.   Remove the maintenance cartridge. See the user's guide.

5. Turn off the printer and disconnect both power cords.

6. Replace the orange caps onto the printheads.

7. Place the printheads into the original packaging, and seal with adhesive tape.

8. Wrap the printheads in protective covering: bubble-wrap, paper, or something of the sort.

9.   Place the plastic cover onto the top of the maintenance cartridge.

10. Place the maintenance cartridge into a plastic bag and seal with adhesive tape.

⚠ CAUTION:

- Wear gloves.

- Take the cartridge carefully and horizontally.

- Handle, store, and transport it upright.

11. Clean any excess ink from the rear of the ink cartridge.

12. Place the ink cartridges, printheads, and maintenance cartridge into a box.

NOTE: It may be worth transporting the maintenance cartridge in a different container to avoid ink spillage.

Reinstalling retention parts

Secure the parts inside the carriage path for transportation:

1. Add packing foam to the left side of the carriage, and secure with the red adhesive tape.

2. Push the carriage to the transport position at the right side of the printer.

3. Add packing foam to the left side of the carriage, and secure with the red adhesive tape.

4. Install the ink-tubes carton pad.

    IMPORTANT:

    ●   The ink tubes have to be clearly attached to the bottom of the tube guide.

    ●   Ensure that it is secure, attaching adhesive tape if necessary; remember to remove it when installing the printer.

5.   Fix the spindle in place with adhesive tape.
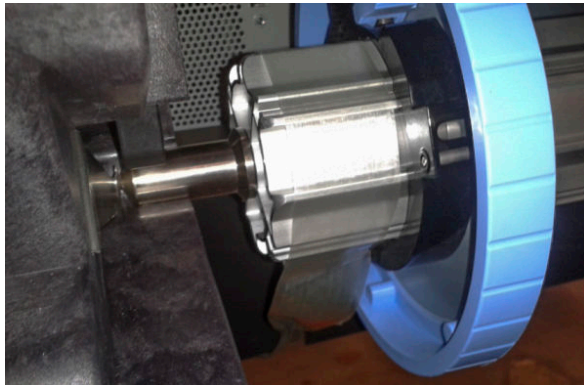
Securing with adhesive tape

1.   Place foam and adhesive tape on the corners of the left window to protect the cover from top-cover vibration damage.

2. Place foam and adhesive tape on the corners of the right window to protect the cover from top-cover vibration damage.
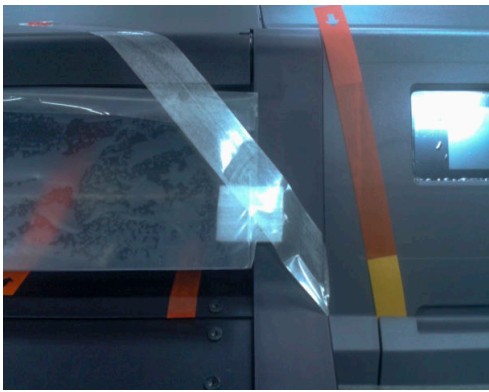
3. Place adhesive tape on the maintenance cartridge cover.

4.	Place two lines of adhesive tape along the back of the printer.

5.	Place foam and adhesive tape on the front of the window to protect it from vibration damage during transport.
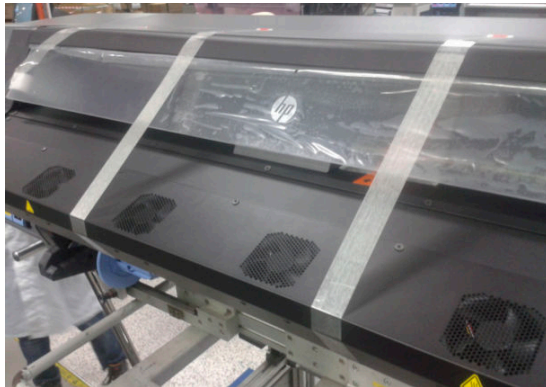
Covering the printer

1.	Place a dust cover over the top of the printer.

2. Install the left and right end caps.
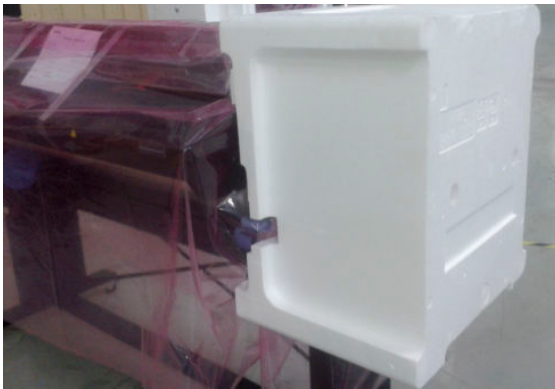
3. Disassemble the loading table and supports

4. Disassemble the take-up reel and supports

5. Disassemble the tension bar and supports.

6. Remove the 3 screws (1 from right, and 2 from left) from underneath the printer that secure the printer to the legs.

7.   Use a crane to lift the printer off of the leg assembly, using cardboard to protect the area that comes into contact with the crane straps.

⚠ CAUTION: Take special care because the printer weighs more than 150 Kg.

8.   Secure the bag underneath the printer.

9.   Make sure the pallet is in place, base down, on the floor.

10.   Lower the printer onto the front of the pallet.

11. Rotate the printer 90º so that the back of printer is on the bottom, and the bottom of the printer faces to the front.
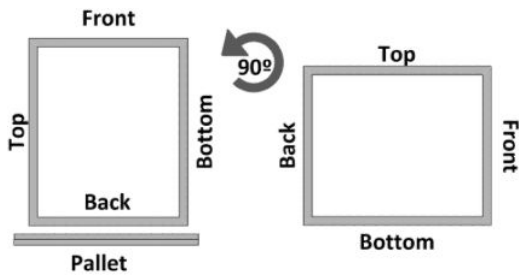
12. Place desiccant bags at the bottom of the printer.

13. Secure the four corners of the pallet.

14. Place the left foam packing part, and secure with adhesive tape.

15. Place the right foam packing part, and secure with adhesive tape.

16. Disassemble the legs.

17. Place the components of the TUR, loading table, and tension bar into their respective boxes. Secure the boxes with adhesive tape.

18. Insert the anti-slip material over the back part of the two feet.

19. Place the leg assembly into the plastic bags, and place them into the original box with the rest of the components.

20. Place all the boxes on top of the printer, adding strapping to secure the boxes.

21. Cover the printer with the large cardboard box, ensuring the front and rear are correctly placed and secure with straps.

Special checks before turning on the printer

To ensure that there are no functionality issues when starting the printer, check the following before switching on:

- Use the setup poster and follow the installation instructions.

- Once the packaging elements have been removed, open the window and check that the tubes are correctly installed. The tubes must be in the rail (or tube shelf), so the carriage moves freely along the print zone without clashing with the tubes.

3-liter Ink Upgrade accessory

To repackage the 3-liter Ink Upgrade accessory follow the following sections:

Uninstall 3–liter Ink Upgrade accessory from the printer

Run the Printer in Diagnostic Mode and select 3.5.1.1. Install/uninstall (see 3.5.1.1 Install/uninstall *(Latex 370/375) on page 246*) to uninstall the kit.

Uninstall all tubing from accessory to printer

Disconnect all supplies from the printer. Both Intermediate Tanks (IT) and large ink cartridges need to be disconnected from the printer. For the large ink cartridges you only need to unplug the SIM connector. For IT you will need to remove the IT lockouts (black sheet metal part that covers the IT) and afterwards you will need to remove the supplies by using blue lever part on the ISS.

Now you need to remove the printer's Left Cover by unscrewing it from the printer.

Remove the tube protector part.

Access rear ISS part and disconnect all tubes from PIP sensor using luer ring part.

Flush all ink tubes with distilled water.

Plug up all tube connectors with proper caps.

Unroute all 3–liter Ink Upgrade accessory tubing through the left leg of the stand assembly.

Cover the printer

Place the Left cover on the printer.

Package 3–liter Ink Upgrade accessory

Use 3–liter Ink Upgrade accessory packaging to repackage the 3–liter Ink Upgrade accessory.

11 Safety precautions

General safety guidelines

Before servicing the printer, read the following safety precautions to make sure that you can work on the printer safely.

- Before servicing the printer, turn it off, and disconnect electrical power. See Safety precautions on page 643.

- Before removing and replacing parts, see Removal and installation on page 347.

Service personnel are expected to have appropriate technical training and experience necessary to be aware of hazards to which they may be exposed in performing a task, and to take appropriate measures to minimize the risks to themselves and other people.

Electrical shock hazard

⚠ **WARNING!**   The curing modules operate at hazardous voltages capable of causing death or serious personal injury.

The printer uses two power cords. Disconnect both power cords before servicing the printer to avoid the risk of electric shock. The printer must be connected to earthed mains outlets only.

The internal circuits of curing zones, print-zone heaters, impinging module, vapor removal, e-box, and e-box extension operate at hazardous voltages capable of causing death or serious personal injury. Disconnect both power cords before servicing the printer.

Heat hazard

The curing subsystems of the printer operate at high temperatures and can cause burns if touched. To avoid personal injury, take the following precautions.

- Let the printer cool down before performing servicing or maintenance operations.

- Take special care when accessing the substrate path.

Fire hazard

The curing modules operate at high temperatures. To avoid the risk of fire, take the following precautions.

- Check that the power supply meets the requirements specified in the site preparation guide. For additional information, see Printer systems on page 1.

- Connect the power cords to dedicated lines, each protected by a branch circuit breaker according to the rating of the wall socket. Do not use a power strip (relocatable power tap) to connect the power cords.

- Do not use aerosol products that contain flammable gases inside or around the printer.

- Do not use a damaged power cord. Do not use the power cords with other products.

- Do not block or cover the openings of the printer.

- Ensure that the operating temperature of the substrate, as recommended by its manufacturer, is not exceeded. If this information is not available from the manufacturer, be sure to use only substrates suitable for operating temperatures of 125°C (257°F) or higher.

- Do not load substrates with auto-ignition temperatures below 250°C (482°F). If this information is not available, printing must be supervised at all times.

📝 **NOTE:** Test method based on EN ISO 6942:2002; Evaluation of materials and material assemblies when exposed to a source of radiant heat, method B. The test conditions, to determine the temperature when the substrate starts ignition (either flame or glow) were: Heat flux density: 30 kW/m², copper calorimeter, K type thermocouple.

Mechanical hazard

When the carriage moves, it can crush or cut body parts if they are in the way.

Best practice

- Keep your clothing and all parts of your body away from the printer's moving parts.

- Avoid wearing loose clothing, jewelry like necklaces or bracelets, or any kind of hanging objects.

- If your hair is long, try to secure it so that it will not fall into the printer.

- Take care that sleeves and gloves do not get caught in the printer's moving parts.

- Stay clear of the print path when the carriage is moving.

- Make sure that there are no tools obstructing the operation of the printer.

There is a risk of ink spillage on your body, your clothing and on the floor surrounding the accessory.

Best practice

- Wear safety gloves when installing the assembly, taking caution not to injure yourself with edges and corners.

- Wear gloves when you refill ink tubes or purge ink from the system.

- Take provisions to minimize any ink leakage that could damage the floor, covering it before handling any ink components.

Scan-axis encoder strip hazard

The scan-axis encoder strip is very sharp, and can easily cut your hands if you need to work near it.

Best practice

- Wear protective gloves if you must touch the scan-axis encoder strip.

- Do not wear loose clothing or jewelry.
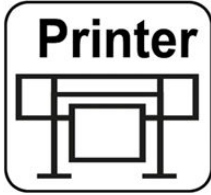
Lifting and handling
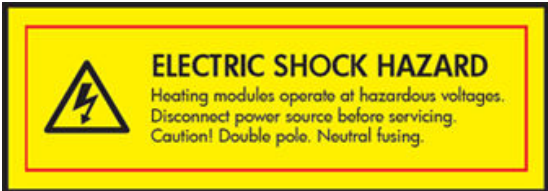
Improper handling of heavy materials can lead to serious bodily injury.

Best practice

- When handling substrate rolls, care must be taken to avoid back strain and/or injury.

- Consider using a forklift, pallet truck, or other handling equipment.

- When handling heavy substrate rolls, wear personal protective equipment including boots and gloves.

- Follow any manpower instructions included in this service manual when you replace components. Many components, require at least two people for removal.

Warning labels

Label	Explanation
	Printer label. To identify the printer's power cord.
	Curing label. To identify the curing power cord.
	Electric shock hazard. Heating modules operate at hazardous voltages. Disconnect power source before servicing.
	CAUTION: Double pole. Neutral fusing.
	Equipment to be connected to earthed mains outlet only. Refer servicing to qualified service personnel. Disconnect all power cords before servicing. No operator serviceable parts inside the printer.
	Before starting, read and follow the operating and safety instructions. Ensure that the input voltage is within the printer's rated voltage range. The printer requires up to two dedicated lines.
	This label is located on the e-box.
	Risk of burns. Do not touch the curing zone or the output platen of the printer: they could be hot.
	This label is located on the front of the curing module.
	Risk of trapped fingers. Do not touch moving gears.
	These labels are located at the rear of the printer, one on the substrate input gear and one on the take-up reel gear (330, 335, 360, 365, 370 and 375 only).

Label	Explanation
	Moving part. Keep away from the moving printhead carriage. When printing, the printhead carriage travels back and forth across the substrate. This label is located on the rear of the scan axis window, behind the plastic.
	You are recommended to wear gloves when handling the maintenance cartridge, the platen, or the ink collector. This label is located on the maintenance cartridge.
ELECTRIC SHOCK HAZARD Heating modules operate at hazardous voltages. Disconnect power source before servicing. Caution! Double pole. Neutral fusing.	Electric shock hazard. Heating modules operate at hazardous voltages. Disconnect all power sources before servicing. This label is located on the curing control PCA enclosure. For service personnel only.
	Electric shock hazard. The printer has two input power cords. Power supplies operate at hazardous voltages. Disconnect all power cords before servicing. This label is located internally (in the 360/365/370/375 only), close to the print-zone heating-coils enclosure between fans. For service personnel only.
	Hazardous moving parts. Rotating fan blades. Keep hands clear. These labels are located internally, close to the print-zone heating fans between fans (360/365/370/375 only), one near the vacuum fan and one near the aerosol fan. For service personnel only.

Label	Explanation
⚠ **WARNING** ⚠ 警告 **HAZARDOUS AREA** HEATING MODULES OPERATE AT HAZARDOUS VOLTAGES. **ELECTRIC SHOCK HAZARD** EQUIPMENT HAS INPUT POWER CORDS. DISCONNECT ALL POWER CORDS BEFORE SERVICING. DOUBLE POLE, NEUTRAL FUSING. EQUIPMENT TO BE CONNECTED TO EARTHED MAINS OUTLET ONLY	Hazardous area. Heating modules operate at hazardous voltages. Electric shock hazard. Equipment has two input power cords. Disconnect all power cords before servicing. Power supplies operate at hazardous voltages. Double pole, neutral fusing. Equipment to be connected to earthed mains outlet only. This label is located in the scan and air-curtain heater control enclosure (360/365/370/375 only). For service personnel only.
	Be careful not to step on ink supplies, as this could damage them. This label is located on the front of the Top cover of the 3–liter Ink Upgrade accessory.

📝 **NOTE:** The final label position and its size on the printer may vary slightly, but should always be visible and close to the potential risk area.

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