VUTEk® GS 2000, 3200 & 3250, LX3 Pro

Digital Inkjet Printers

Maintenance Guide

EFI Inkjet Solutions

United States

1 Vutek Place

Meredith, New Hampshire 03253 USA

http://www.efi.com/products/inkjet-printing-and-proofing/

Americas	EU, Middle East, Africa	APAC
Customer Care	**Customer Care**	**Customer Care**
United States: 855-EFI-4HLP (855-334-4457)	+31 20 658 8070	+1 650 357 4790
412-690-4321		
Customer.Care@efi.com	Email EuroInk@efi.com	
Canada/Mexico/South America: +1 650 357 4790		
InternationalOrders@efi.com	Part Orders EuroParts@efi.com	Email InternationalOrders@efi.com
Technical Support	**Technical Support**	**Technical Support**
North America: 855-EFI-4HLP (855-334-4457)	+32 2 749 94 50	+65 6221 2765
Mexico and South America: +1 412-690-4321	DE +49 2102 745-4500	
	NL +31 20 658-8080/8069	
	UK +44 12462-98085	
	Email: EuroSupport@efi.com	
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Revision History

G	08/16/2016	Released	
H	09/08/2016	Corrected obsolete PN 45098331 to be 45116069.	
I	09/21/2016	Moved "Verify carriage head-height as outlined in the Basic Operator's Guide" from Every 40 Hours of Production to Every Eight Hours of Production in section 5.5.	
J	04/04/2017	• Layout fixes, new images for figures 2-3, 2-12, and 2-48. • Added section 2.6.10 Clean Belt Steering Paddle	DR 3862 DR 4163
K	04/18/2017	• Added section 2.9.1 step B: Fill the new primary ink filters with PE2009 to prevent major amounts of air from being introduced into ink system	DR 4233
L	05/08/2017	• Administrative edits	DR 4233
M	10/09/2017	• Added warning on use of dampened wipes near the Lamps or Static Bars.	DR 4660
N	12/15/2017	• Clarified timing on replacing LED lamps; updated Maintenance Log with live links.	DR 4783
O	05/16/2018	• Reinserted image 2-4	email
P	06/18/2018	• Clarified that Microlube® GL-261 is for Carriage Bearings and AeroShell® 7 Grease for Lead Screws. Updated Fig. 2-55 and 2-56, plus headings 2.7.3 and 2.7.4, which also updates Maintenance Log. • Corrected Maintenance Log missing item 3 in 8 Hr. tasks (cleaning vacuum purge tray).	• DR 5083 • DR 5061
Q	10/02/2018	Added printer model to top of Maintenance Log. Removed contact table and instruction text from Log.	DR 5294
R	10/10/2018	Added image on pg. 27 of new lead screw mounting block with grease fitting on brass piece.	DR 5299
S	11/02/2018	• Combined with OMM-00109 LX3 Maintenance Guide. Moved Common Maintenance Items table to section 1.4 and added separate table for different lamp filters. • Added images of new style LED lamps as Fig. 2-6 and 2-9.	• DR 5351 • DR 5352
T	11/21/2018	Added Maintenance Items to Maintenance Log.	DR 5374
U	01/08/2019	Adjusted Lamp Filters table layout on pg. 8. Removed #6 from Every 40hrs in Maintenance Log, as this was a duplicate from Monthly.Added "Replace as necessary" to 2.7.7 Check nitrogen system filter status, if so equipped - replace as necessary. on pages 37 and 55	DR 5468
V	03/07/2019	Added new Monthly item 2.7.1 Perform a System Backup	DR 5568
W	04/03/2019	Corrected link in Maintenance Log to 2.7.1 Perform a System Backup	DR 5651
X	05/21/2019	Corrections to Maintenance Log: Added shift columns to "Every 8 Hours" section. Added link to item 2.7.2, and updated photo of KIT, AIR FILTER, (4) FJ200 375MM, 45173951	DR 5721

Y	09/04/2019	Added lamp filter 45173955 to COMMON LAMP FILTERS Added note about older quick-disconnect filters in 2.9.1 Replace all primary ink filters. and in COMMON MAINTENANCE ITEMS	DR 5915 DR 5886
Z	11/18/2020	New P/N for Vacuum Purge Container in COMMON MAINTENANCE ITEMS and possibility to empty rather than replace in 2.10.1 Empty or Replace the vacuum purge container..	DR 6444
AA	05/05/2021	Updated Head Cleaning/Maintenance Fluid P/N to 45119466.	DR 6630
AB	06/13/2022	Updated P8166-A Aeroshell 7 grease to general purpose/high-temperature grease.	DR 6999
AC	06/14/2022	Updates to 2.5.9, 2.8.2, and 2.8.4	DR 7005
AD	05/16/2023	Added video links throughout	DR 7400
AE	07/03/2023	Updated FILTERS, AIR, 10 PACK, FJ200 375 to P/N 45242746	DR 7448

Table of Contents

1.0 Introduction

This guide contains a list of maintenance tasks, and procedures for completing each task.

1.1 Maintenance Procedures

The maintenance log contains maintenance procedures that are performed every four hours of production, every 8 hours of production, every 40 hours of production, monthly, quarterly, semi-annually and annually.

Caution! You must read and understand the following documents prior to operating or servicing this printer.

- http://inkjet.support.efi.com/doc.php?doc=683 - **Inkjet Solutions Printer Safety Guide**
- http://inkjet.support.efi.com/doc.php?doc=3190 - **GS Operations Guide**
- http://inkjet.support.efi.com/doc.php?doc=3192 - **HS125 Maintenance Guide**

These documents are available at http://inkjet.support.efi.com/.

1.2 Before Starting

Follow these guidelines for the most efficient maintenance routine.

- Verify that you have all the materials required to complete each maintenance procedure.
- Perform all maintenance tasks on a routine schedule.
- When filling out the Maintenance Log, record the current date and time (if applicable), and write your initials in the space provided.
- Perform maintenance activities either before or after printing.
- The maintenance guidelines are based on an eight hour print production schedule, five days per week. Adjust your maintenance intervals if your operating shifts are longer than eight hours, five days per week.

1.3 About the Maintenance Log

Please keep your EFI VUTEk GS 2000, 3200 & 3250, LX3 Pro Printer Maintenance Log. During service visits, a field engineer will often review your maintenance records.

The Maintenance Log provides you with a list of preventative maintenance tasks, as well as the means for tracking the completion of each task. The log has sections for hourly, daily, weekly, monthly quarterly, semi-annual, and annual maintenance procedures.

Note: Use the maintenance log to record your **completed** maintenance tasks.

1.4 Common Maintenance Items

COMMON MAINTENANCE ITEMS				
Description	**EFI P/N**		**Description**	**EFI P/N**
Grease, General Purpose	P8166-A		Primary Ink Filter	P0029-A
Hi Temp Lamp Grease (Arc lamps only)	45098081		Clean room wipes	45077321
Microlube® GL-261	45086492		Head Conditioning Fluid – GS Series	45084854
3-In-ONE Oil, 3 oz	P2191-A		Filter set elements Nitrogen System, LED only	45096220
Head Cleaning/Maintenance Fluid	45119466		20 Micron Luer Simriz filter	45072843
Nylon Brush	P4920-A		Filter, 3 Micron, UV Resistant, QD-Style	45098981
Vacuum Purge Container	45168692		Filter 3 Micron UV Resistant	P0029-A

COMMON LAMP FILTERS		
Description and P/N	**Description and P/N**	**Description and P/N**
FILTER, ROLL PLYESTR, 12INX180INX1IN, UL CLS 2, 45116069	KIT, AIR FILTER, FIREJET FJ200, 10-PACK, LED UV LAMP, 45134204	FILTER, AIR, ONE PIECE, FJ200 225, 45173955
		

2.0 Periodic Maintenance Procedures

This guide contains a list of maintenance tasks and procedures for completing each task.

2.1 Maintenance Procedures

The Maintenance Log contains maintenance procedures that are performed Every 4 Hours of Production, or are Every 8 Hours of Production, Every 40 Hours of Production, Monthly Maintenance, Quarterly Maintenance, Semi Annual Maintenance, and Annual Maintenance items.

Caution!You must read and understand the following documents prior to operating or servicing this printer:

- **Printer Safety Guide:** https://inkjet.support.efi.com/doc.php?doc=683

2.2 Before Starting

Follow these guidelines for the most efficient maintenance routine.

- Verify that you have all the materials required to complete each maintenance procedure.
- Perform all maintenance tasks on a routine schedule.
- When filling out the Maintenance Log, record the current date and time (if applicable), and write your initials in the space provided.
- Perform maintenance activities either before or after printing.
- The guidelines for maintenance are based on a production schedule of eight hours of printing, five days per week. Adjust your maintenance intervals if your operating shifts are longer than eight hours, five days per week.

Please keep your EFI VUTEk GS 2000, 3200 & 3250, LX3 Pro Printer Maintenance Log current. During service visits, a Field Service Engineer often reviews your maintenance records.

2.3 Maintenance Log

The EFI VUTEk GS 2000, 3200 & 3250, LX3 Pro Printer Maintenance Log provides you with a list of preventive maintenance tasks, as well as the means for tracking the completion of each task. The log has sections for hourly, daily, weekly, monthly, quarterly, semi-annual, and annual maintenance procedures.

Note: Use the Maintenance Log to record your completed maintenance tasks. adding more words adding more words adding more words

2.4 Every 4 Hours of Production

Perform the following task every four hours of printer operation.

2.4.1 Clean print heads and print head plate surfaces.

How-to Video: CLICK TO PLAY

A. Follow the instructions in the Operations Guide for proper print head and print head plate wiping procedures.

Caution! Wipes that are dampened with Isopropyl Alcohol present a Fire hazard when exposed to heat or ignition sources.

B. Wipe the print heads and the print head plate as described.

2.5 Every 8 Hours of Production

Perform every eight hours of printer operation.

2.5.1 Clean ends of top and bottom carriage rails.

How-to Video: CLICK TO PLAY

A. Power the printer **OFF** and perform a lockout/tagout.

B. With a clean, dry, lint-free wipe, wipe down ends of top and bottom carriage rails to remove all debris.

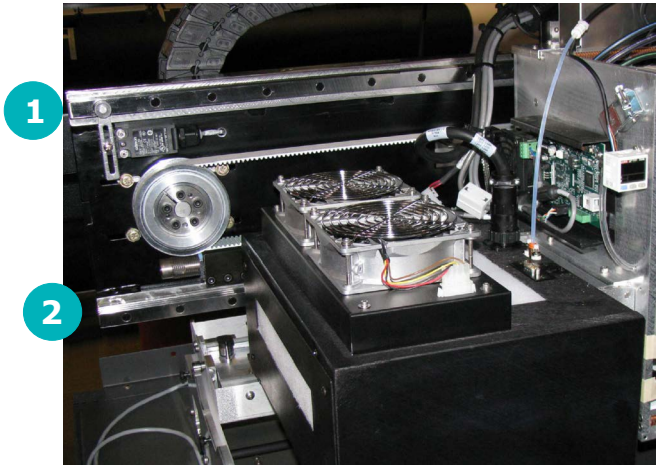


Figure 2-1: Carriage Rails

1 Upper carriage rail end
2 Lower carriage rail end

2.5.2 Wipe down purge tray rails and lubricate with 3-In-ONE oil.

How-to Video: CLICK TO PLAY

A. From the **Service** menu, select **Service Aids**. The **Service Aids** dialog box opens.
B. In the **Carriage Maintenance** section, click the **Maintenance** button. This moves carriage to center of printer.
C. Click the **Capper** button. The capper moves out to front of carriage compartment.
D. Power the printer **OFF**.
E. Wipe down purge tray rails with a clean wipe.
F. Lubricate tray rails and rollers with a clean wipe saturated in **3-IN-ONE**® Oil.
G. Proceed to 2.5.3

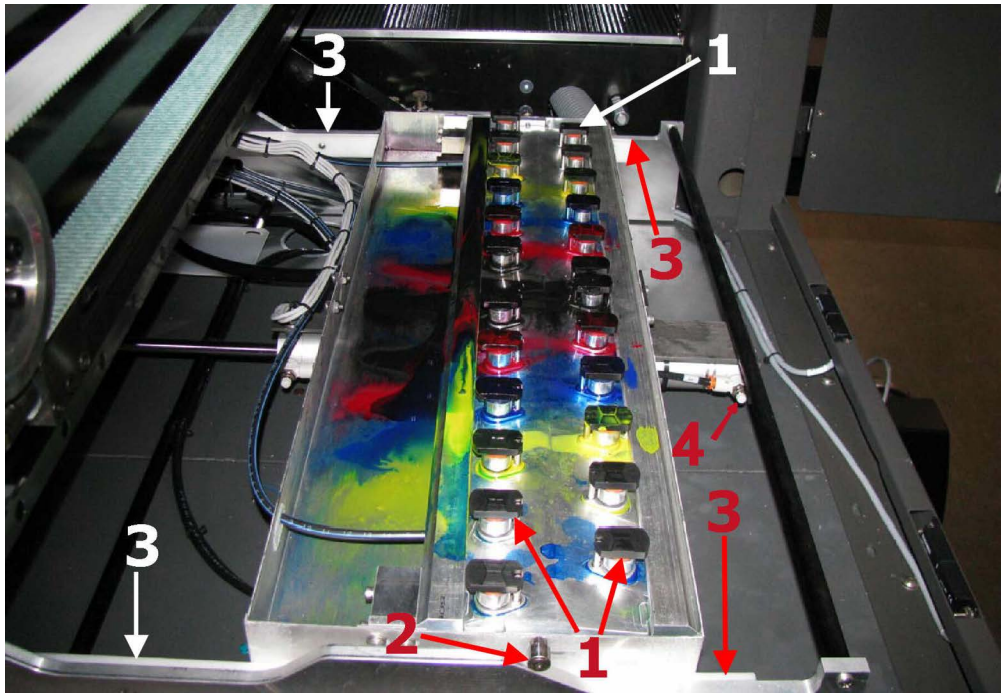


Figure 2-2: Vacuum purge tray

1 Vacuum purge blocks, one for each print head
2 Tray rollers, both sides
3 Tray rails, both sides

2.5.3 Clean vacuum purge tray and purge blocks.

How-to Video: CLICK TO PLAY

A. Move the carriage to the center of the printer.
B. Manually pull out the vacuum purge tray.
C. Wipe down the entire vacuum purge tray and purge block orifices using a wipe with the appropriate maintenance fluid to remove debris and ink.
D. Click the **Home** button to return carriage Home.

2.5.4 Check ink supply levels.

A. From the **Diagnostics** menu, select **Ink Maintenance**. The **Ink Details** window opens, Figure 2-3.
B. Replace empty ink bottle as outlined in the Basic Operator's Guide.

Note: Check ink bottle levels more often during times of increased printing production.

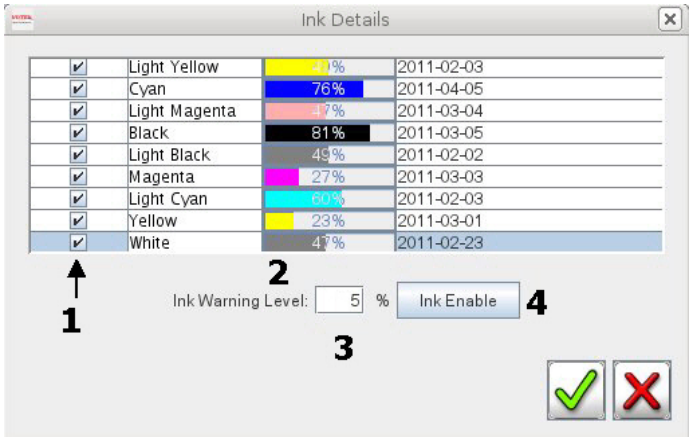


Figure 2-3: Ink Details

1 Ink colors enabled if checked
2 Percentage of ink remaining
3 Set Ink Warning Level to 5%
4 Ink enable button

Note: GS Series printers contain white ink, located in the waste cabinet.

2.5.5 Verify carriage head height.

How-to Video: CLICK TO PLAY

- Verify the carriage head height as outlined in the **GS3250 Basic Operator's Guide**: https://inkjet.support.efi.com/doc.php?doc=1649.

2.5.6 Check waste tank level.

How-to Video: CLICK TO PLAY

A. Open waste cabinet.
B. Check waste tank level. If tank is greater than 3/4 full, proceed to the next step. If it is less than 3/4 full, no action is necessary.
C. Unscrew waste tank cover.
D. Remove waste tank and empty into an approved waste container.
E. Re-install waste tank and cover.

Figure 2-4: Waste container cabinet

1 Maintenance fluid container (labeled Solvent Bottle)
2 Vacuum purge container (See Annual Maintenance.)
3 Waste container (Waste Bottle)
4 Do not fill maintenance fluid container above (approximately) the 3/4 mark

2.5.7 Check air compressor water trap.

Caution! Water in the air system is a major cause of print defects.

A. Contact your facilities manager and the air compressor documentation for information on checking and emptying compressor's water trap.

2.5.8 Wipe nitrogen applicators, if equipped.

How-to Video: CLICK TO PLAY

A. Wipe down the undersides of both nitrogen applicators on each lamp assembly (two per lamp) using a lint -free wipe dampened with isopropyl alcohol. Location of nitrogen applicators is shown in Figure 2-5 and Figure 2-6.

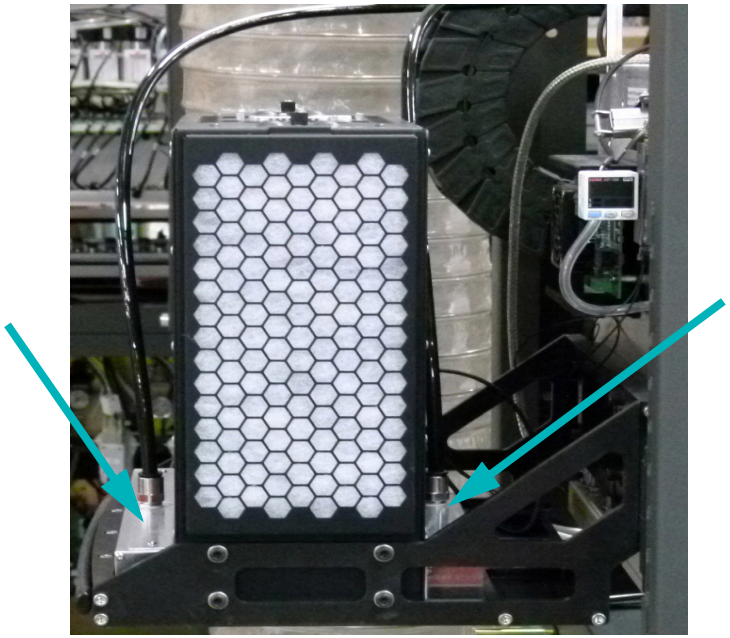


Figure 2-5: Nitrogen Applicator
(Legacy Style Lamp)

Figure 2-6: Nitrogen Applicator
(New Style Lamp)

2.5.9 Inspect and clean the UV lamp lenses, using a lint-free cloth and isopropyl alcohol.

How-to Video: CLICK TO PLAY

Danger! Ensure printer lamps are off and lenses cooled before wiping.

A. Wipe down lamp lenses with a clean wipe and isopropyl alcohol.

B. If necessary, scrape the lenses gently using a razor blade to remove any debris that didn't come off in the previous step.

Caution! Avoid scratching lamp lens surfaces.

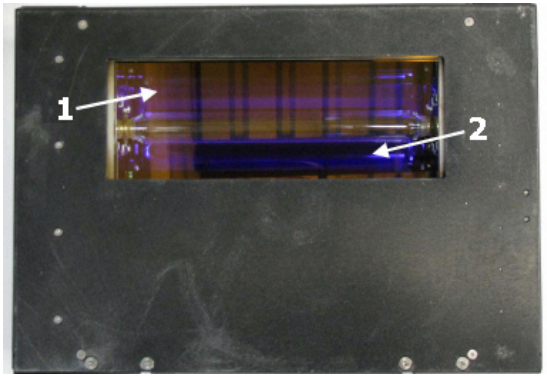


Figure 2-7: Bottom view of Arc Lamp assembly

1 Lamp lens
2 UV bulb

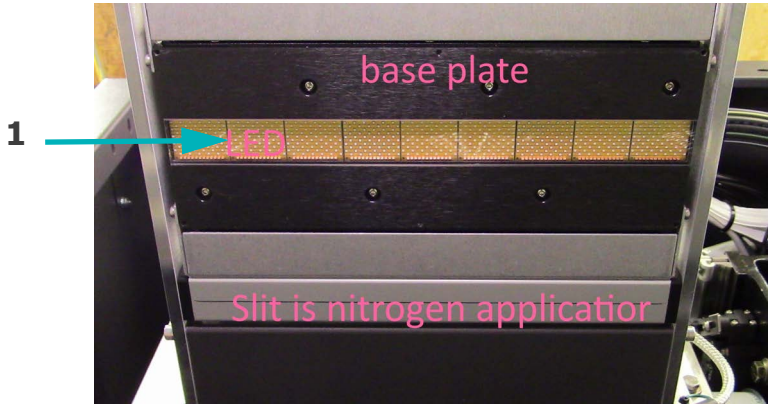


Figure 2-8: Bottom of (Legacy) LED Lamp Assembly

1 Lamp lens

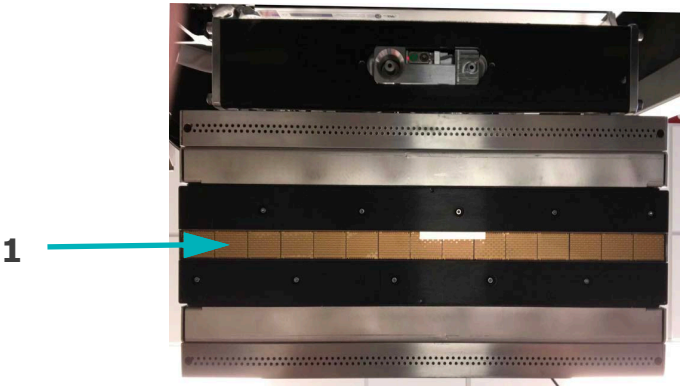


Figure 2-9: Bottom of (New) LED Lamp Assembly

1 Lamp lens

2.6 Every 40 Hours of Production

Perform the following tasks every 40 hours of printer operation.

2.6.1 Clean static bars and pins using nylon bristle bush and Isopropyl Alcohol.

How-to Video: CLICK TO PLAY

A. Turn off the Static Bar power supply on rear of carriage.
B. Locate the Static Bars on the printer carriage between the lamp enclosures and the main carriage.
C. Brush the Static Bars and pins on both sides of the carriage with a nylon cleaning brush (P/N P4920-A) to remove debris.
D. Turn Static Bar power supply back ON.

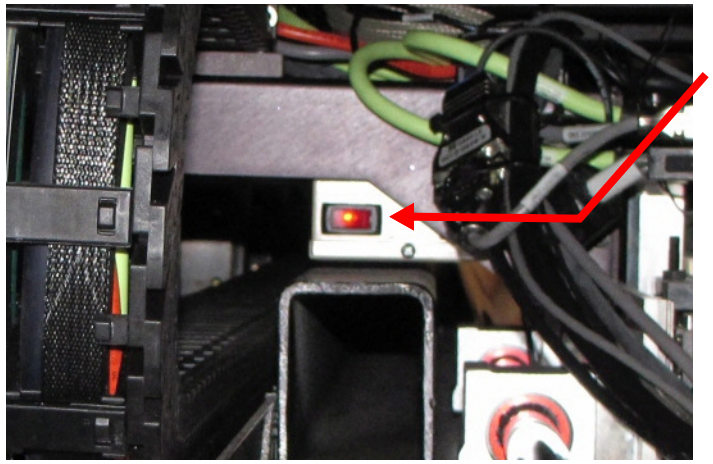
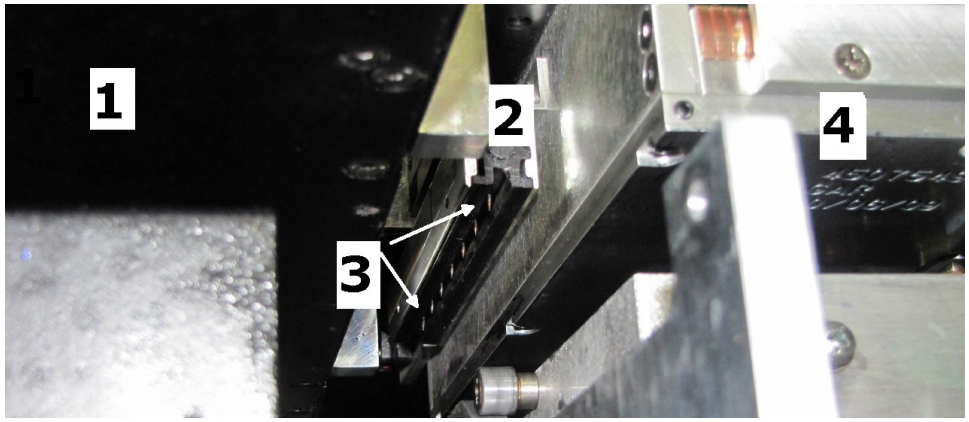


Figure 2-10: Static bar power supply switch



1 Lamp enclosure
2 Static bar
3 Static bar pins
4 Carriage jet plate

Figure 2-11: Bottom view of static bar

2.6.2 Grease Capper.

Supplies: MPG Red grease (H2073-A)

A. Lift the carriage and with the capper in its back-most position, apply grease to the areas labeled “701” in Figure 2-12. These areas include:
   - Capper side rails
   - Around the ball joint on the end of the piston
   - On the clevis pin and slot through the bottom piece directly under the capper

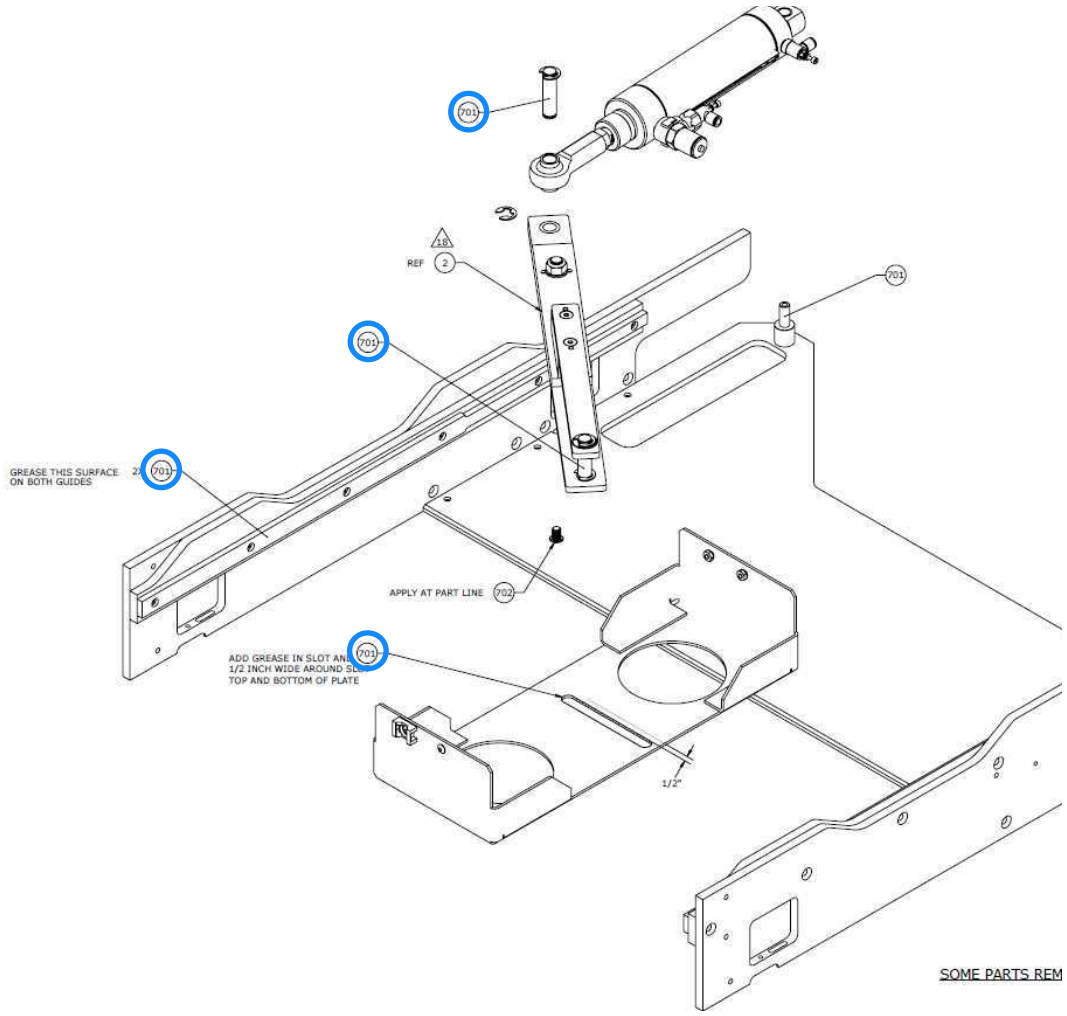


Figure 2-12: Grease Locations Labeled “701”

2.6.3 Replace Lamp filters - Arc Lamps and LED Lamps.

Refer to Replacing Arc Lamp Filter. or Replacing LED Lamp Filter.

How-to Video: CLICK TO PLAY

A. Ensure printer is powered **OFF** and a lockout tagout has been performed prior to removing or installing a filter.
B. New filters should be cut from bulk roll stock, P/N 45116069. Consider making a template to ensure consistent sizing when cutting filters.

2.6.3.1 Replacing Arc Lamp Filter.

A. Gently grasp old filter and pull filter out of lamp housing. There are two filters per lamp.
B. Discard old filters.
C. Cut four replacement filters from bulk roll, P/N 45116069, 2.3” W x 10.5” L, and remove any stray fibers.

Note: Use one continuous piece. Never assemble scrap pieces to meet the dimensions.

D. Install replacement filters.
E. Repeat process for opposite lamp.

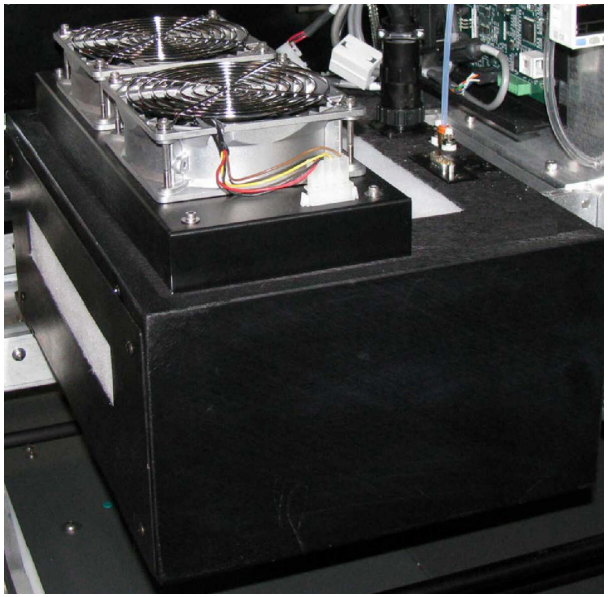


Figure 2-13: Arc Lamp filters

1 Lamp filters, 2 per lamp

2.6.3.2 Replacing LED Lamp Filter.

A. Loosen filter housing set screws and open filter baskets.
B. Remove old filters and discard.
C. Cut four replacement filters from bulk roll, P/N 45116069, 4.75" W x 10" L, and remove any stray fibers.

Note: Use one continuous piece. Never assemble scrap pieces to meet the dimensions.

D. Install replacement filters.
E. Repeat the process for the opposite lamp.

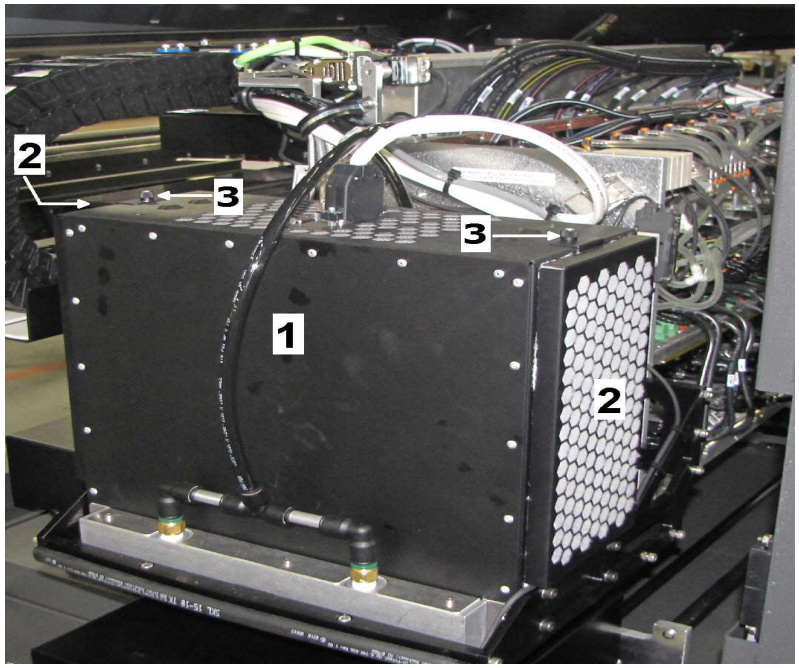


Figure 2-14: LED Lamp filter (Legacy Style)

1 LED Lamp housing
2 Lamp filter and filter basket, 2 per lamp
3 Filter set screw, 2 per lamp

Figure 2-15: LED Lamp filter (New Style)

1 LED Lamp housing
2 Lamp filter and filter basket
3 Filter set screw

2.6.4 Clean linear encoder strip using a lint-free cloth and Isopropyl Alcohol.

How-to Video: CLICK TO PLAY

A. Wipe entire length of optical encoder strip with a clean wipe dampened with isopropyl alcohol to remove ink and debris, moving carriage as necessary.

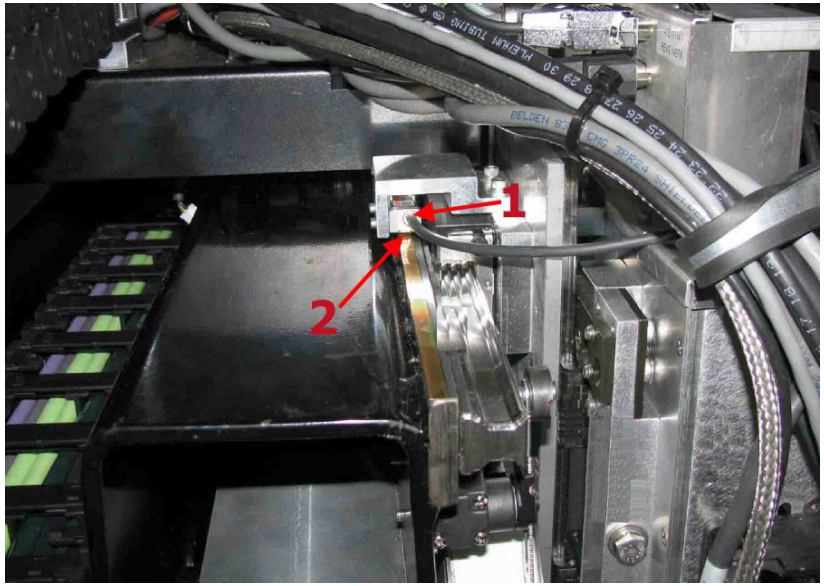


Figure 2-16: Top left side of carriage

1 Carriage linear encoder read head 2 Carriage linear encoder strip

2.6.5 Clean Media Infeed/Outfeed Rollers.

How-to Video: CLICK TO PLAY

A. Using a clean wipe saturated with isopropyl alcohol, wipe down metal media infeed and outfeed rollers to remove any ink, debris, and contaminants.

2.6.6 Clean media edge detector using a lint-free cloth and Isopropyl Alcohol.

How-to Video: CLICK TO PLAY

A. Locate media edge detector at left bottom rear of carriage.
B. Clean media edge detector lens using a wipe dampened with isopropyl alcohol.

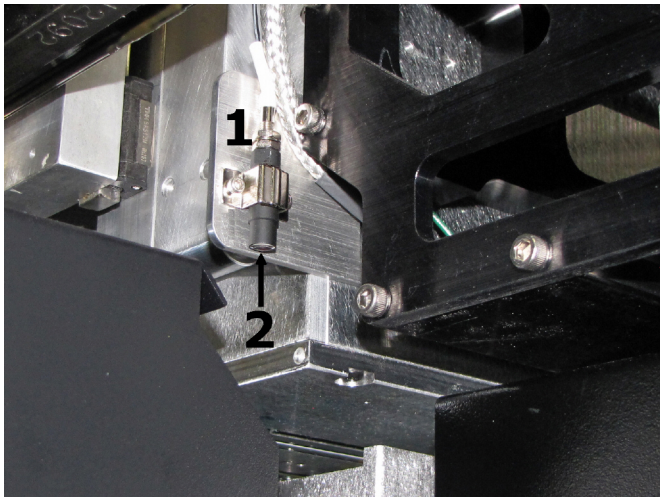


Figure 2-17: Media edge detector, bottom of carriage

1 Media edge detector
2 Media edge detector lens

2.6.7 Check Arc Lamp bulb life, and replace Arc lamp UV bulbs every 1,000 hours of operation.

A. In printer VUI, from the **Diagnostics** menu click **Lamp Control**. The **Lamp Control** dialog opens.

B. In the **Lamp Life** pane, the percentage of lamp life consumed displays.

C. If the consumed life is 100%, or curing problems exist, the arc lamp bulbs need replacement. Refer to Replacing the Arc Lamp UV Bulbs..

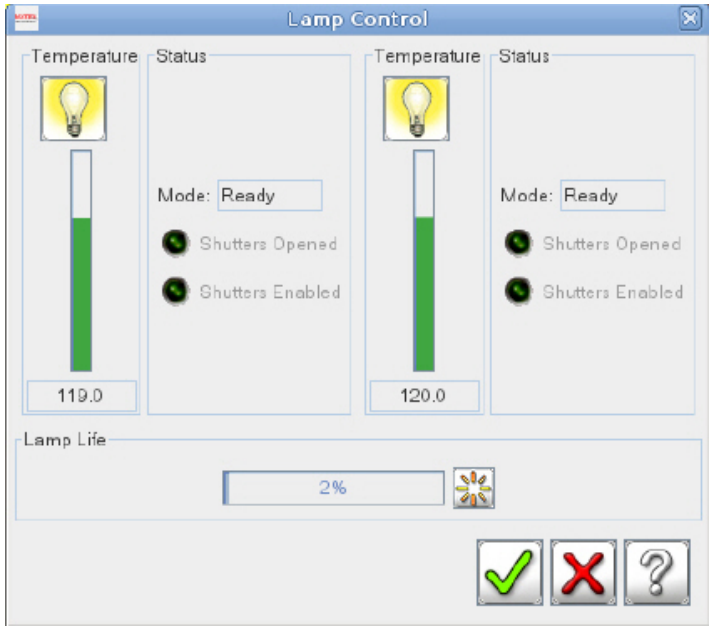


Figure 2-19: Lamp Control dialog

2.6.7.1 Replacing the Arc Lamp UV Bulbs.

Perform the following task every 1000 hours of printer operation, or as needed.

A. Power the printer **OFF** and perform a Lockout/Tagout .

B. Remove two top red printer end panels. This allows access to lamp assemblies.

Note: Push carriage to right-most maintenance position to access right carriage lamp.

C. Remove 4 air filter plate bolts shown in Figure 2-20 item 1.

Figure 2-20: Side view of lamp assembly

1	Air filter plate bolts
2	Air filter plate
3	Air filter
4	Cooling fans

D. After removing 4 air filter plate bolts, push plate upwards, pull out on bottom of plate, then pull air filter plate down.

E. To remove UV bulb enclosure, remove four bolts shown in Figure 2-21 item 2. There are two bolts at either end.

F. Unplug two UV bulb voltage connectors by pulling gently on each connector, , item 3.

Note: Do not pull on wires or damage may occur.

G. Slide UV bulb enclosure out of lamp assembly by grasping both sides of lamp assembly.

Note: Do not allow UV bulb enclosure to touch or drop onto lens.

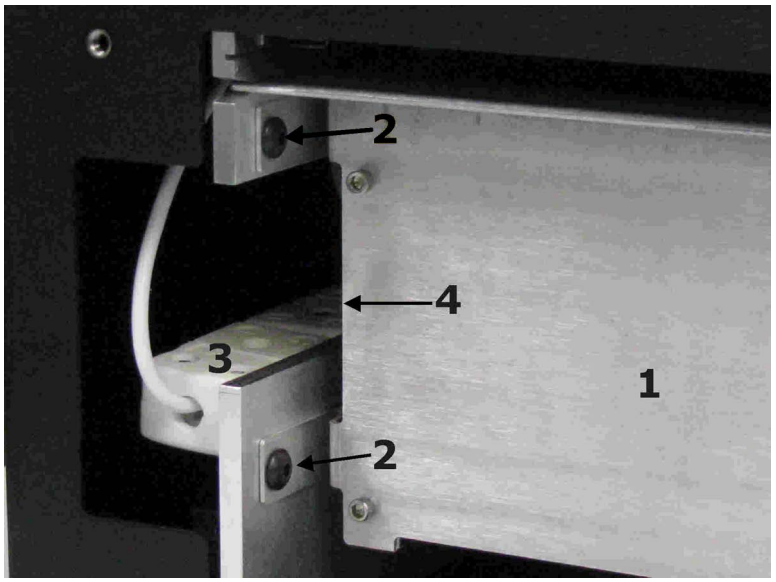


Figure 2-21: Lamp assembly with air filter plate removed

1	UV bulb enclosure and reflector
2	Bolts to remove UV bulb enclosure, two at either side
3	Voltage connectors for UV bulb
4	Grasp lamp assembly at this point to slide assembly out of lamp housing

H. To remove lens, remove two bolts shown in . Remove lamp lens clamp and carefully lift quartz lens out of lamp assembly.

Warning! Wear cotton gloves before touching lens or UV bulb. Failure to wear cotton gloves will deposit oil from your skin onto lens and bulb causing premature failure.

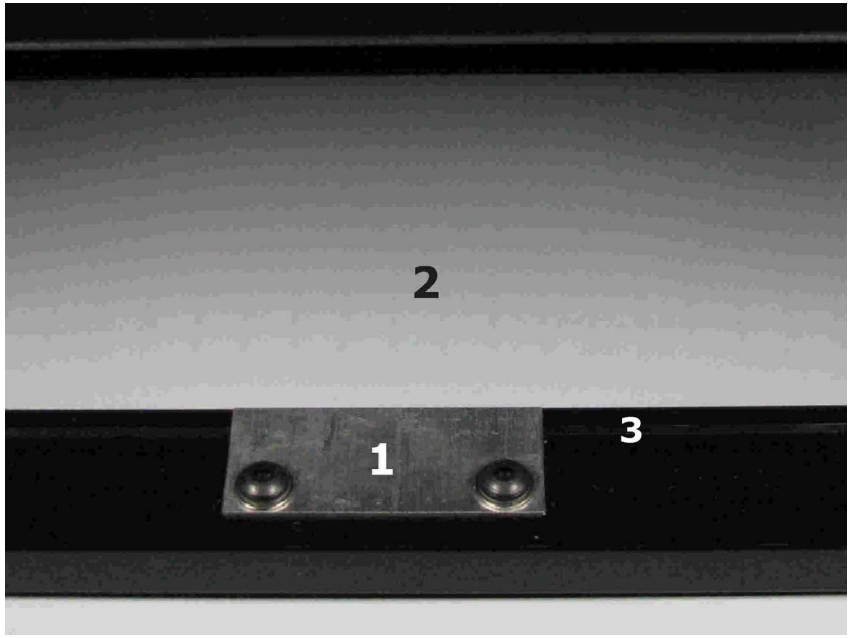


Figure 2-22: Lamp lens clamp

1	Lamp lens clamp
2	Quartz lamp lens
3	Front edge of quartz lamp lens

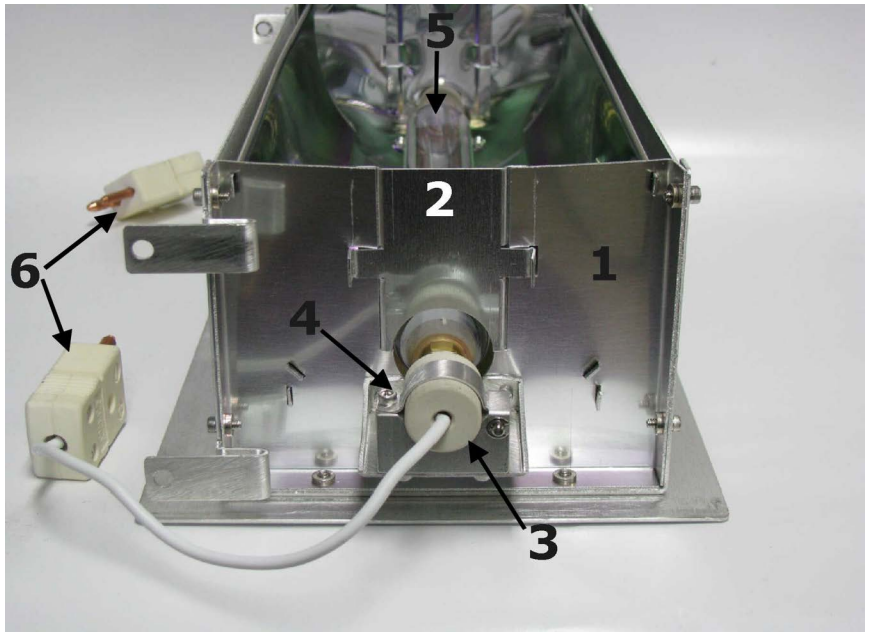


Figure 2-23: End view of UV bulb enclosure

1	UV bulb enclosure and reflector	4	Bulb clamp
2	End plate	5	UV bulb
3	End of UV bulb	6	Voltage connectors for UV bulb

I. Remove end plates at both ends of UV bulb enclosure, Figure 2-23, item 2.

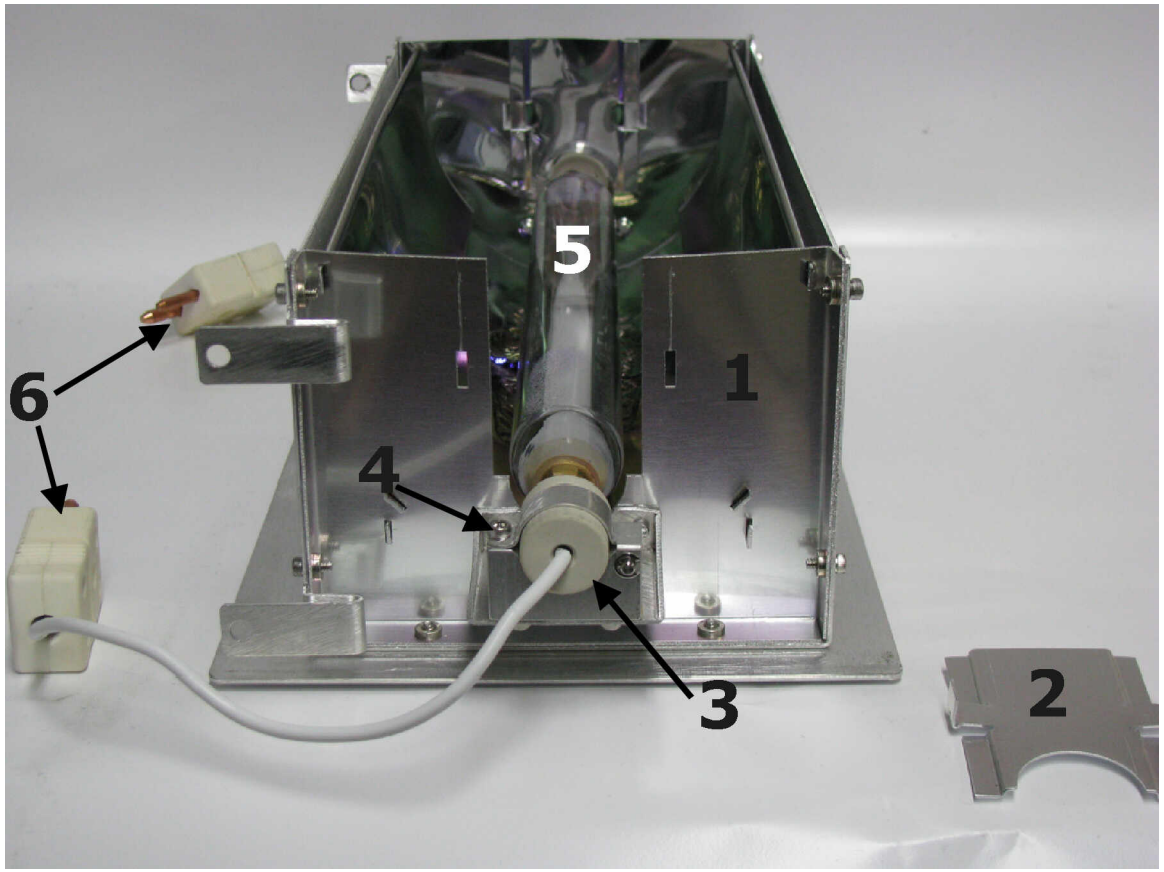


Figure 2-24: End view of UV bulb enclosure, end plate removed

1	UV bulb enclosure and reflector
2	End plate
3	End of UV bulb
4	Bulb clamp bolt
5	UV bulb
6	Voltage connectors for UV bulb

J. Remove bulb clamp bolt at both ends of UV bulb and lift clamp off bulb. Do not remove the pin and clips at the bulb clamp pivot point, , item 3.

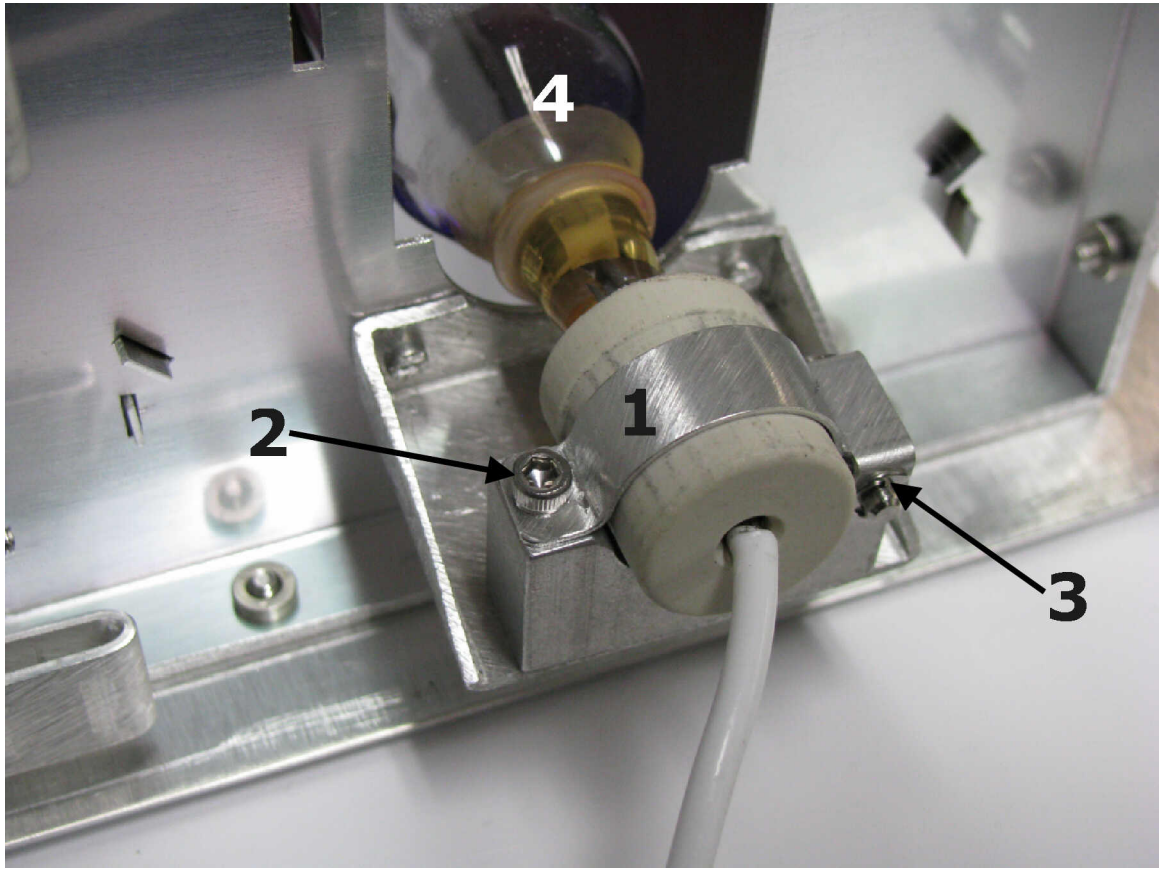


Figure 2-25: Lamp bulb clamp

1 Bulb clamp
2 Bulb clamp bolt
3 Bulb clamp pivot point
4 UV Bulb

K. Install replacement UV bulb.

L. Reverse above procedure to reinstall lamp assembly.

2.6.8 Clean UV light deflectors.

How-to Video: CLICK TO PLAY

A. Move carriage to center maintenance position.
B. On each side of media belt, wipe down UV light deflectors with a clean wipe dampened with isopropyl alcohol to remove debris and ink.

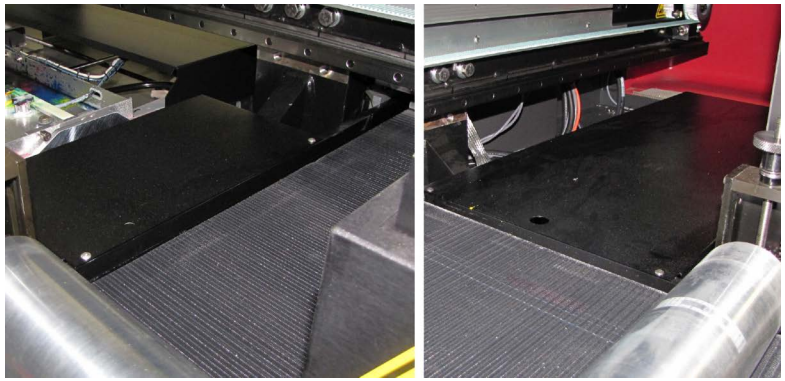


Figure 2-26: UV light deflectors, (L) and (R) of media belt

2.6.9 Inspect exhaust fans, and vacuum clean as necessary.

How-to Video: CLICK TO PLAY

There are two large exhaust fans located over the print area.

A. Inspect the exhaust fans for cleanliness and damage. Clean, if needed.

2.6.9.1 Clean the exhaust fans.

There are two large exhaust fans located over the print area.

A. Power the printer **OFF** and perform a lockout/tagout.
B. Unscrew the four screws that attach the bottom finger guard.
C. Clean the upper finger guard using a vacuum cleaner wand. Insert the wand between the fan blades to reach the finger guard.
D. Wipe fan blades or finger guards with a cloth as needed.
E. Clean the bottom finger guard with a vacuum cleaner and/or cloth as needed, and reinstall.

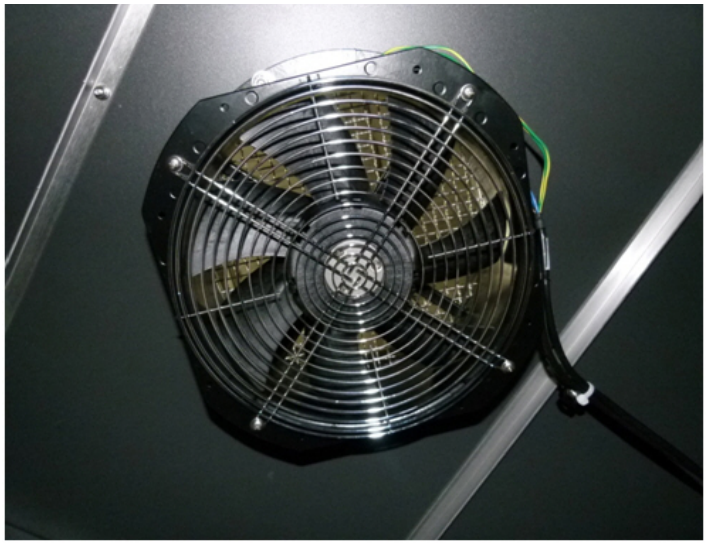


Figure 2-27: Exhaust fan

2.6.10 Clean Belt Steering Paddle, if so equipped.

A. The belt steering paddle is located on the capper input side of the printer on the bottom of the e-stop cover.
B. If the printer has belt guides on the bottom side of the belt under the media table, white debris can be noticed occasionally.
C. Using compressed air from the printer air nozzle, blow into and around the slot that this paddle travels.
D. Pushing paddle into/away from the belts edge and allowing it come back to the belt 2-3 times helps clear debris.
E. Ensure that the belt steering paddle is clean and moving freely. If the paddle is pushed away from the belt's edge, it should return back to the edge of the media belt.

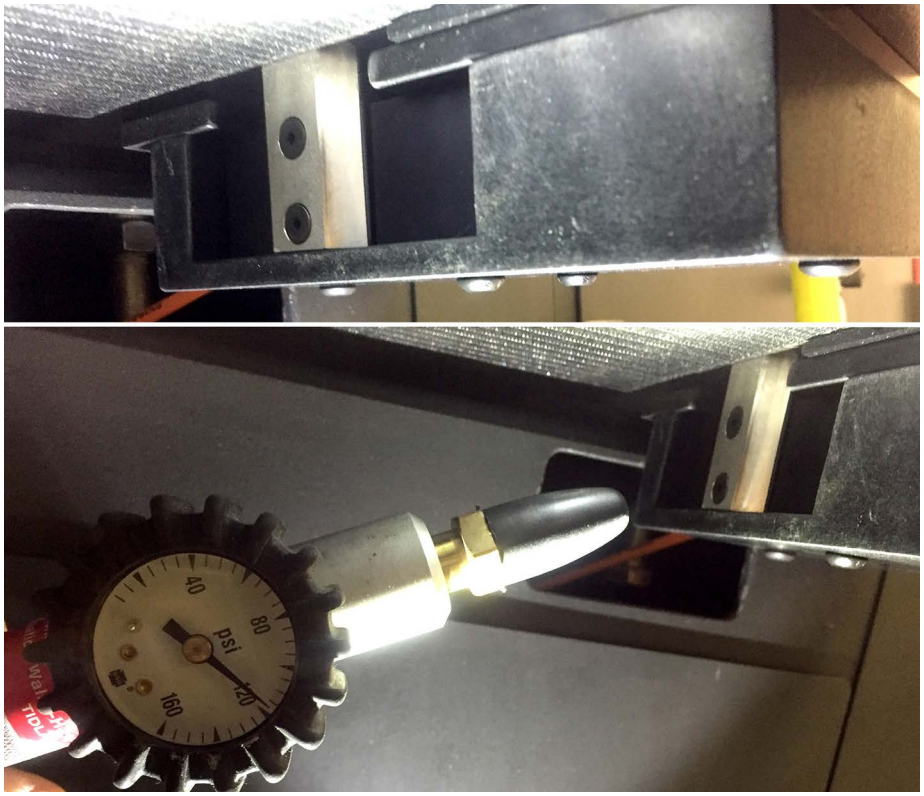


Figure 2-28: Belt steering paddle, TOP and air nozzle, (BOTTOM)

2.7 Monthly Maintenance

Perform the following tasks every month of printer operation.

2.7.1 Perform a System Backup

A system backup saves image files, offsets and ink settings, media database, and default settings.

A. Go to **File** > **Data Files** > **Export**.

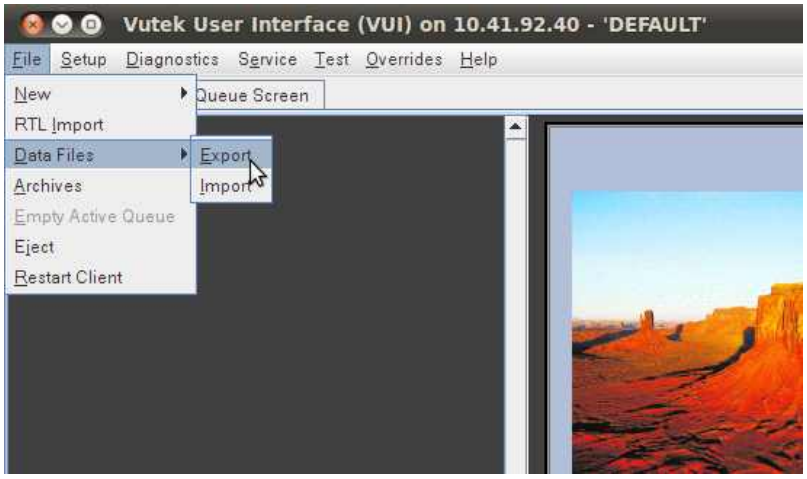


Figure 2-29

B. In the Export Settings dialog box, select **System Backup** from the pull down menu.

Figure 2-30

C. A dialog box displays indicating that the system backup has successfully been saved to the location. Click **OK**.

Figure 2-31

D. Click the green check mark.

E. Repeat steps 1-4 to export the file to your USB drive for extra security.

2.7.2 Vacuum the umbilical assembly and shelf.

How-to Video: CLICK TO PLAY

A. Move carriage to operator end of printer.
B. Vacuum umbilical assembly and carrier shelf, C..
C. Return carriage to home.

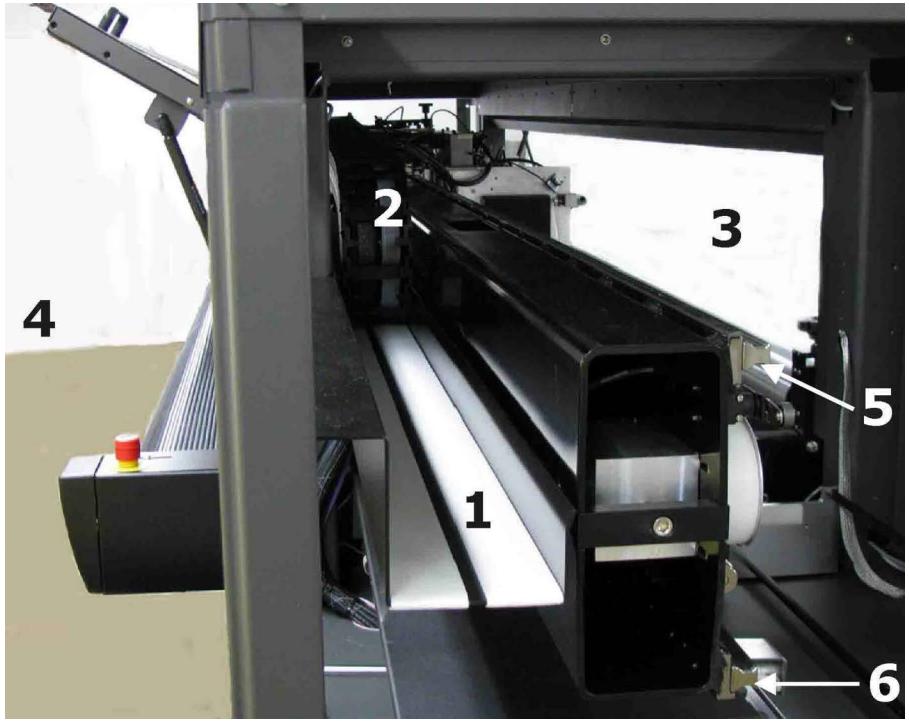


Figure 2-32: Cable and ink bundle carrier shelf

1	Cable and ink bundle carrier shelf	4	Back of printer
2	Cable and ink bundle carrier	5	Upper carriage rail
3	Front of printer	6	Lower carriage rail

2.7.3 Clean door flaps and rollers using lint-free cloth and Isopropyl Alcohol.

How-to Video: CLICK TO PLAY

A. Wipe down rear door flaps and front door rollers with a clean wipe and isopropyl alcohol to remove ink and debris.

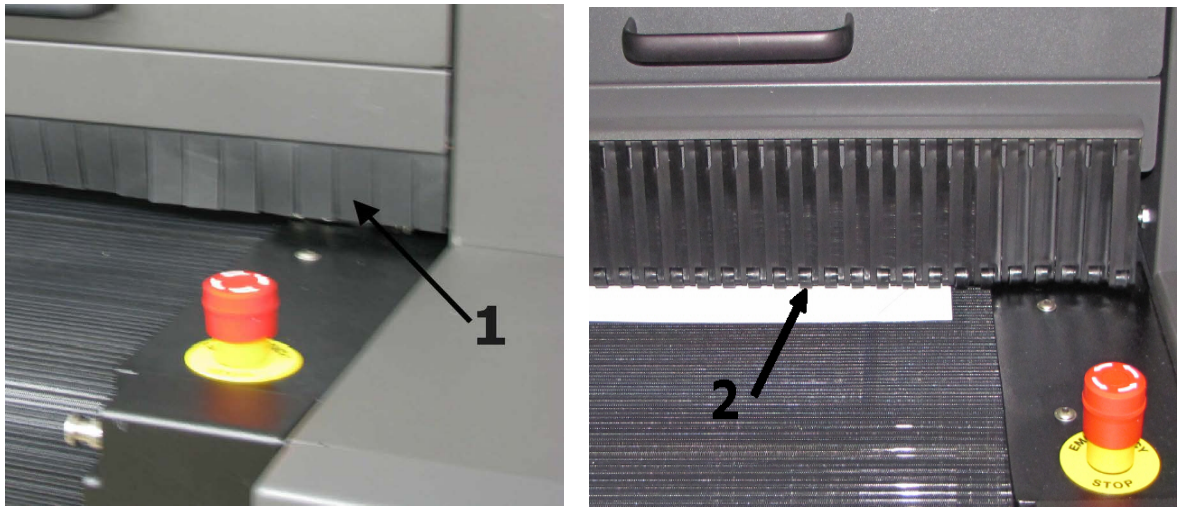


Figure 2-33: Door flaps

1 Door flaps, rear
2 Door rollers, front

2.7.4 Clean the Four FOD (Foreign Object and Debris) Trays

How-to Video: CLICK TO PLAY

A. Open the printer FRONT door.
B. Wipe down the inside of the LEFT and RIGHT Print Bed side trays to remove debris.

Danger! Ensure the FOD tray is fully seated after cleaning.

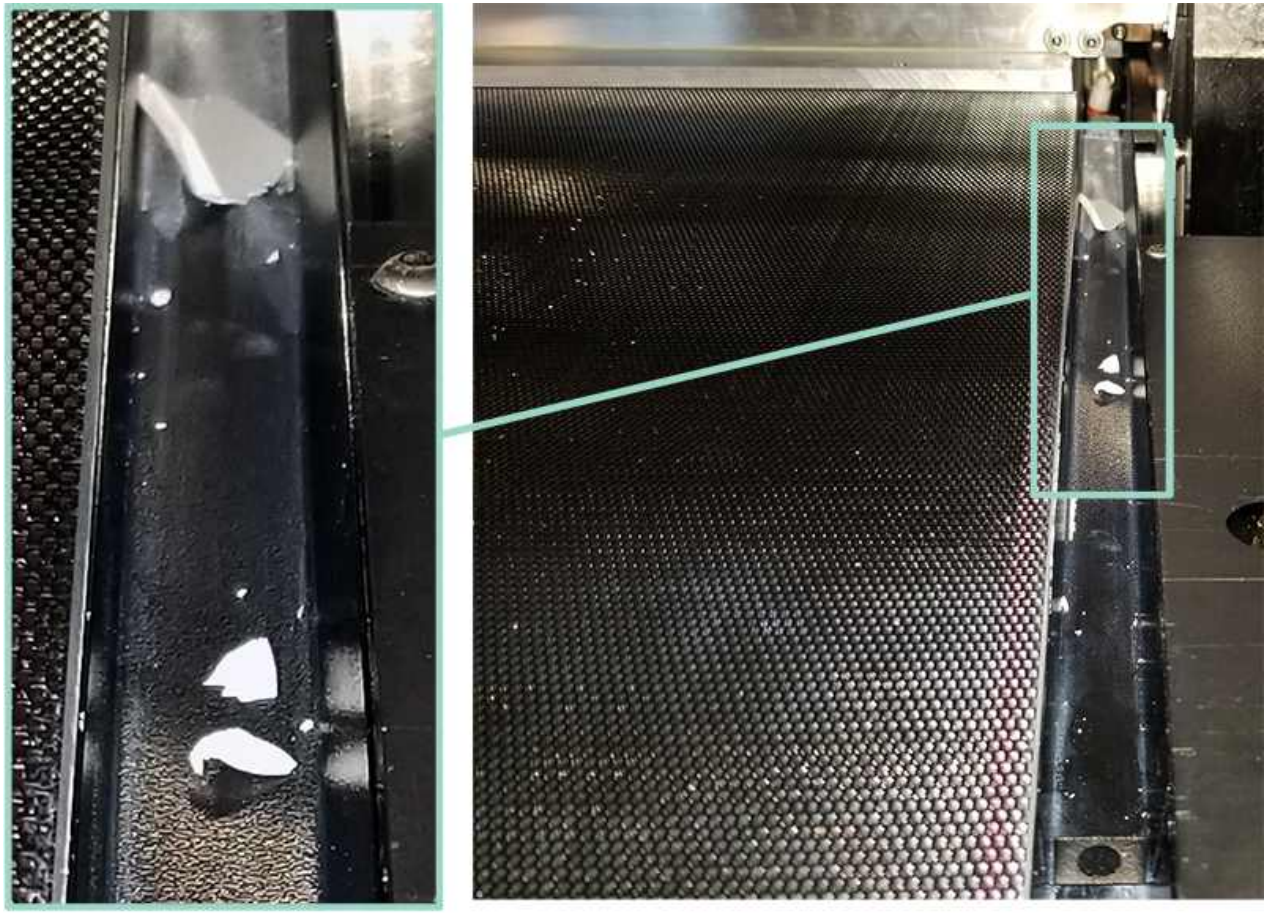


Figure 2-34 FOD Tray

2.7.5 Grease Four Carriage Bearings using Microlube® GL-261.

How-to Video: CLICK TO PLAY

A. Position carriage at **Home** position and remove top left red end panel.

B. Using a grease gun with Microlube GL-261 grease, insert grease gun tip into fitting shown in Figure 2-35. There is a fitting on the top and bottom of carriage on both sides. See Grease Gun for additional information.

C. Pump grease into grease fittings slowly and repeat until grease starts to overflow from grease fitting or bearing.

Note: Wipe off any excess grease on carriage bearing or carriage rail. Ensure there is no grease on carriage drive belt.

D. Repeat process for lower carriage rail bearing.

E. Move carriage to right most side of printer and remove top right red end panel.

F. Grease top and bottom bearings as outlined in step C.

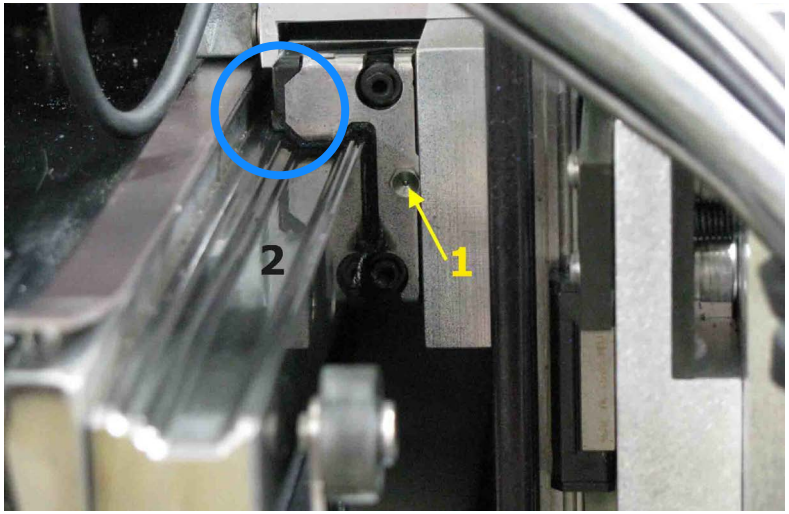


Figure 2-35: Carriage bearing grease fitting

1 Carriage bearing grease fitting; bearings at each corner of carriage
2 Upper carriage rail

2.7.6 Grease Carriage Lead Screw using High-temperature Grease.

How-to Video: CLICK TO PLAY

A. Move carriage to far right side of printer.

B. Remove top right red end panel. Removing panel activates the E-stop circuit, disabling carriage movement and allows access to the three nuts securing access panel, Figure 2-36, item 1 and 2.

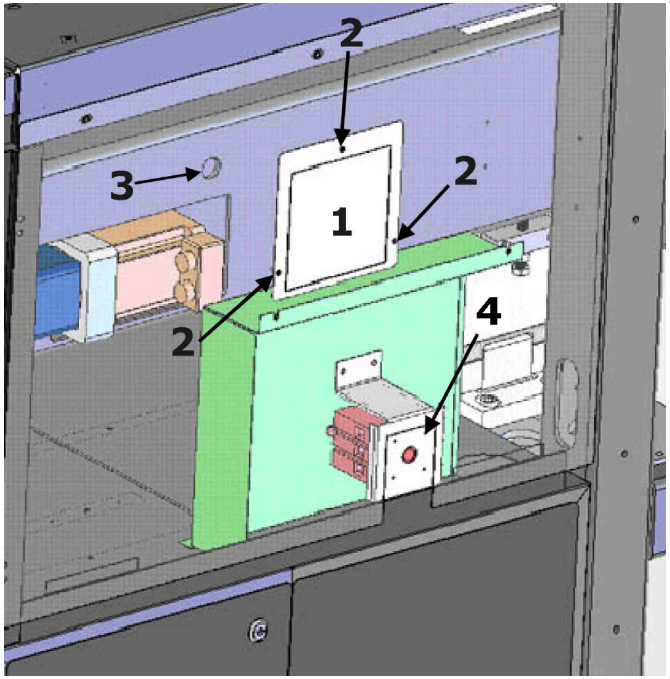


Figure 2-36: Lead screw access panel

1 Access panel
2 Nuts on inside secure access panel to rear panel
3 Lead screw access port, rail beam rear, see , item 1
4 Main AC disconnect switch

C. Remove three nuts securing access panel.

D. Position carriage so Lead screw is accessible through access panel and access port in rail beam.

Note: The red end cap must be installed to move carriage using the printer VUI.

E. Apply a small quantity of quality general purpose, high-temperature grease to lead screw.

F. Remove grease gun and rigid adapter.

Note: Ensure there is no grease on carriage drive belt.

G. Replace access panel and top right red end panel.

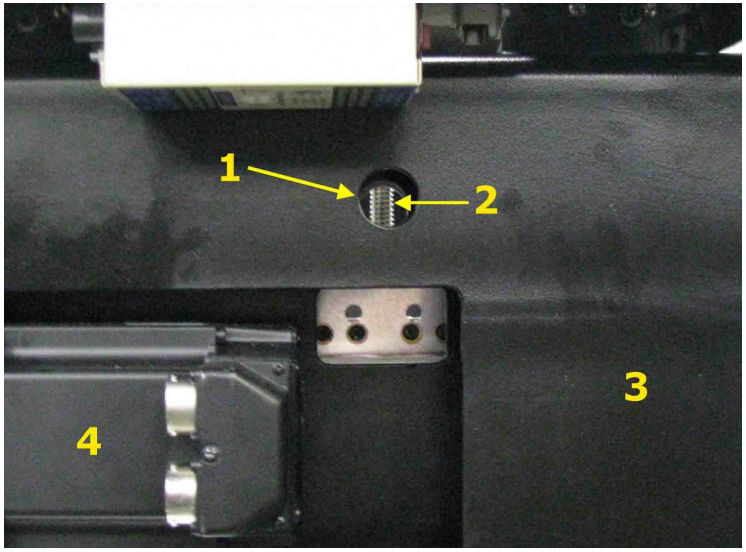


Figure 2-37: Carriage lift Lead screw, rear of printer

1 Access port right rear of rail beam behind monitor and access hole in carriage mounting plate
2 Lead screw
3 Carriage rail beam, right side of printer
4 Carriage drive motor

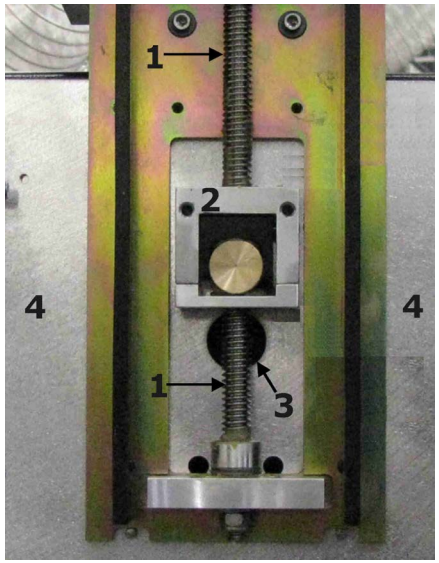


Figure 2-38: Front view of Lead screw assembly with carriage removed

1 Lead screw
2 Lead screw carriage mounting block
3 Access port in carriage mounting plate
4 Carriage mounting plate

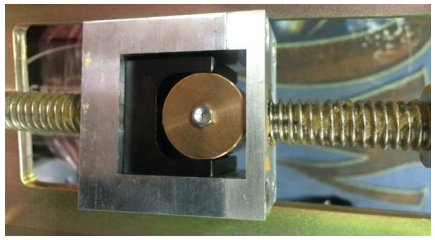


Figure 2-39: Lead Screw Mounting Block With Grease

2.7.7 Check nitrogen system filter status, if so equipped - replace as necessary.

How-to Video: CLICK TO PLAY

A. **For printers with LED lamps**, remove lower end cap at printer carriage home.
B. Check nitrogen filter window. Green indicates **Clean**, red indicates **Change**.
C. If the filter requires changing, refer to Replacing nitrogen filters..

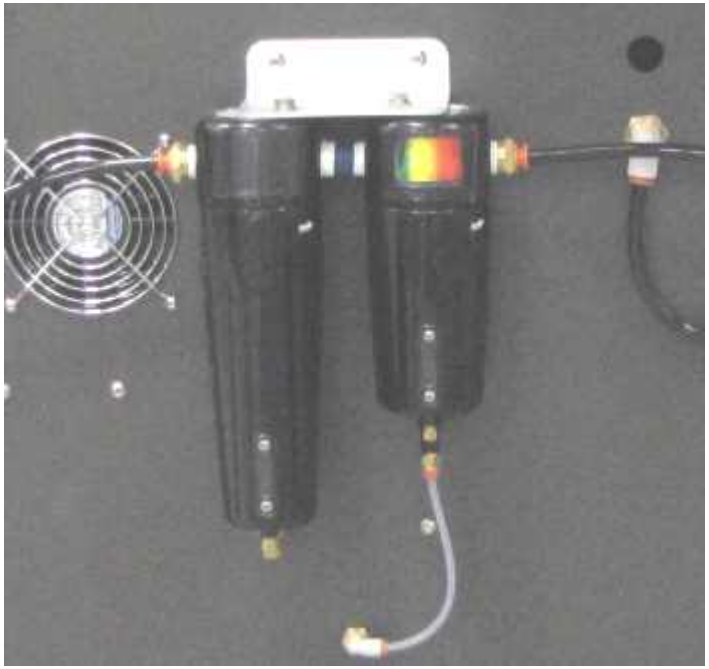


Figure 2-40: Nitrogen system filters

2.7.7.1 Replacing nitrogen filters.

Follow these instructions if the filters require replacement.

A. Power the printer **OFF** and perform a lockout/tagout.
B. Remove left filter cover.
C. Unscrew blue filter base and remove filter.

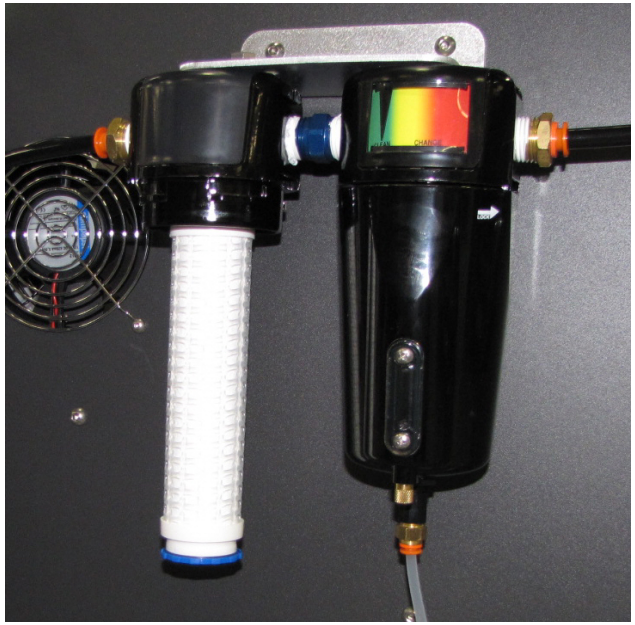


Figure 2-41: Filter with cover removed

D. Install new filter, tighten blue filter base, and replace cover.
E. Repeat process for right hand filter and remove Lockout/Tagout.

2.7.8 Grease Arc Lamp Shutters, if so equipped.

(Apply hi-temp grease to the shutter mechanism components.)

Note: LED lamp assemblies do not contain lamp shutters.

A. Power the printer **OFF** and perform a lockout/tagout.
B. Remove four screws holding left UV lamp cover and remove cover.

Caution! Never touch Arc lamp UV bulb unless you are wearing cotton gloves.

C. Wipe down shutter slide rail with a clean room wipe.
D. Ensure shutter piston is fully closed and apply a small drop of hi-temp grease, P/N 45098081, underneath slide block and to each side of slide rail. See Figure 2-42 and Figure 2-43.

Note: Do not apply grease to shutter piston.

E. Manually open and close shutter five times, or more, to apply grease all along rail.
F. Wipe off any stray or excess grease.
G. Replace Arc UV lamp cover and screws.
H. Repeat process for right side lamp.

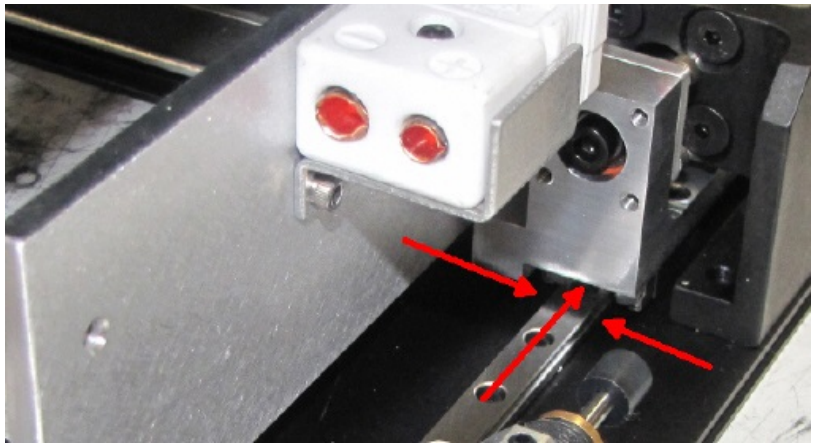


Figure 2-42: Grease in locations indicated by red arrows

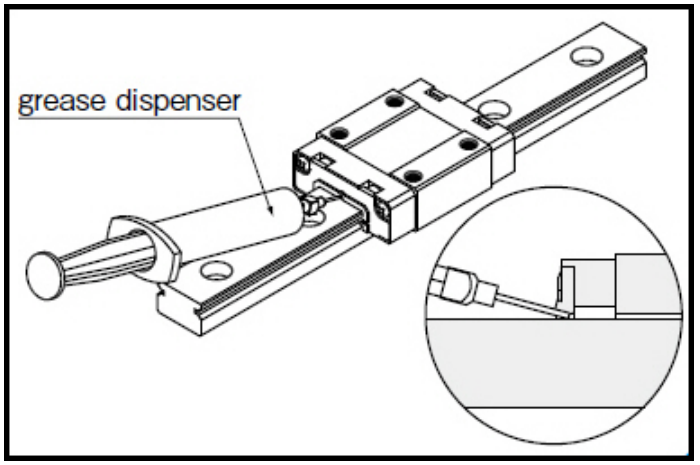


Figure 2-43: Greasing the slide rail

2.8 Quarterly Maintenance

Perform the following task every three months of printer operation.

2.8.1 Clean printer cabinets and components.

How-to Video: CLICK TO PLAY

A. Power printer **OFF** and perform a lockout/tagout.

B. In power distribution, computer, ink and waste cabinets, remove used/soiled gloves, wipes, and other large debris.

C. Using a brush attachment, vacuum up dust and debris from components, fans, boards, and any other locations where dust and debris collects, such as cabinet corners. See Figure 2-44 and where arrows indicate.

D. Vacuum dust off of smoke detector, located inside printer above media table.

Note: Check that all cable connections are secure after cleaning.

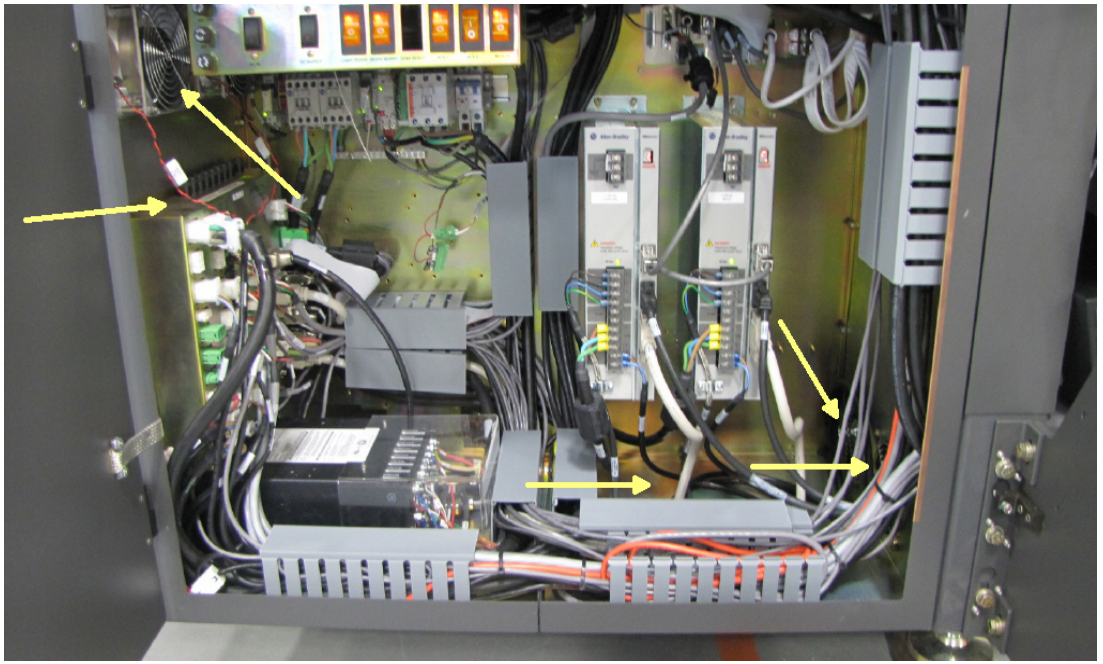


Figure 2-44: Power distribution cabinet

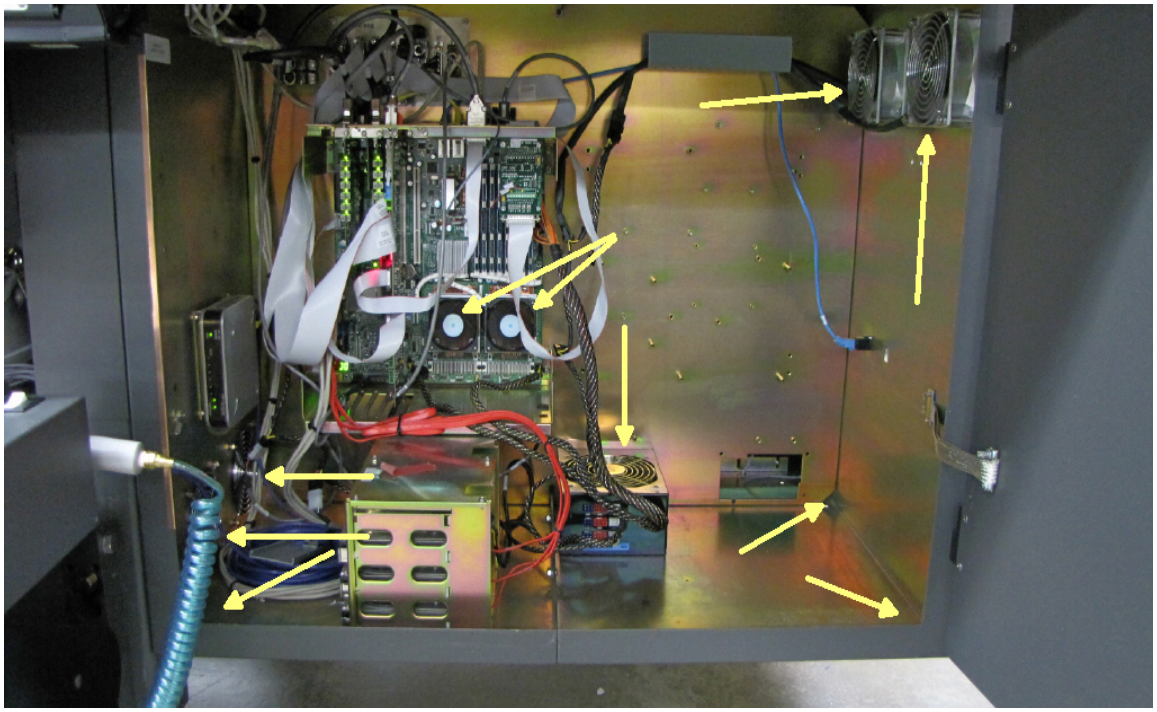


Figure 2-45: Computer/Electronics Cabinet

Figure 2-46: Smoke detector

1 Smoke detector
2 Inside front of printer
3 Front door

Note: Some printer configurations contain only a single motherboard.

2.8.2 Check head conditioning fluid level.

Verify the expiration date on the ink jet head conditioning fluid bulk supply container for the currently installed/loaded fluid. If beyond the expiration date, empty and refill the fluid from an unexpired bulk supply container.

A. If expired, slowly unscrew maintenance fluid container cover to release air pressure inside the bottle.
B. Empty the currently installed expired ink jet head conditioning fluid (solvent) container to an appropriate liquid disposal vessel.
C. Refill the ink jet head conditioning fluid into the container until it is approximately 3/4 full.
D. Replace the cover.

Note: Do not fill this container more than 3/4 full. When purging, the long-term storage fluid is pressurized.

2.8.3 Clean Arc Lamp assembly.

Note: LED lamp assemblies do not require internal cleaning. Only clean LED lamp lens exterior.

A. Power the printer **OFF** and perform a lockout/tagout.
B. Clean the inside of the UV lens, reflector, and bulb with isopropyl alcohol.

Warning! Use cotton gloves when handling the UV bulbs; never touch these components with bare hands.

2.8.4 Replace carriage fan filters.

How-to Video: CLICK TO PLAY

A. Power the printer **OFF** and perform a lockout/tagout.
B. Unscrew carriage fan filter housing using a 3/32 Allen key or remove cover using a small flat blade screwdriver. See Figure 2-47.
C. Remove the old carriage fan filter and replace it with a new one.
D. Repeat the process for the opposite side of the carriage.

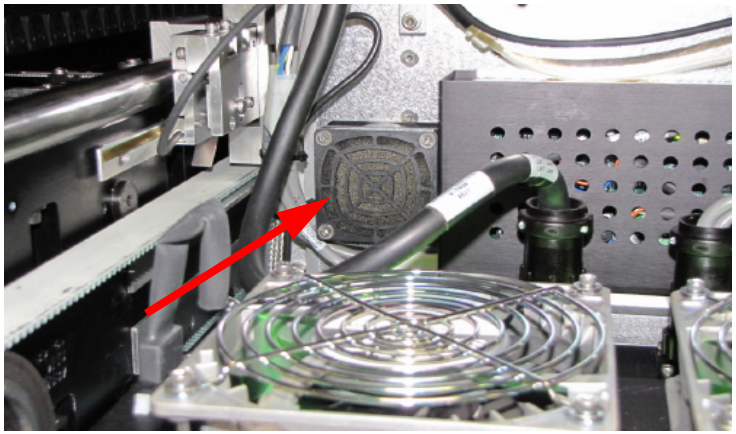


Figure 2-47: Carriage Fan Filter, Left side of Carriage

2.8.5 Replace cabinet air intake filters.

A. Power the printer **OFF** perform a lockout/tagout.
B. Locate filters at cabinet bases.
C. Remove filter covers and replace filters.

Figure 2-48: Cabinet air filters - ink cabinet (L) and computer cabinet (R)

2.8.6 Replace transformer enclosure air intake filters.

How-to Video: CLICK TO PLAY

Note: Transformer filters are installed only on GS LED lamp printers.

A. Power the printer **OFF** and perform a Lockout/Tagout.

B. Remove the inner-facing air intake filter and filter housing on the transformer enclosure, .

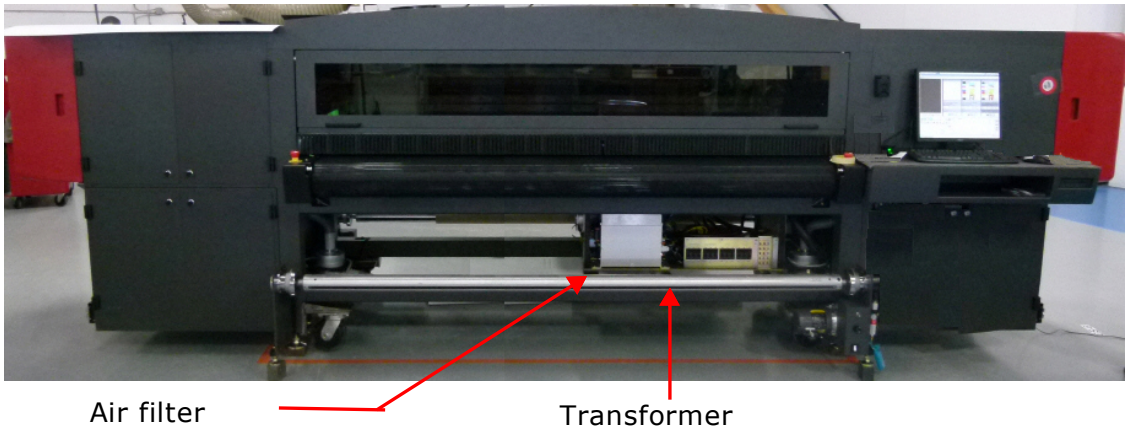


Figure 2-49: Front of printer showing transformer enclosure location

C. Insert new filter in filter housing, part number P7442-A, and replace assembly. Filter location is shown in .

.

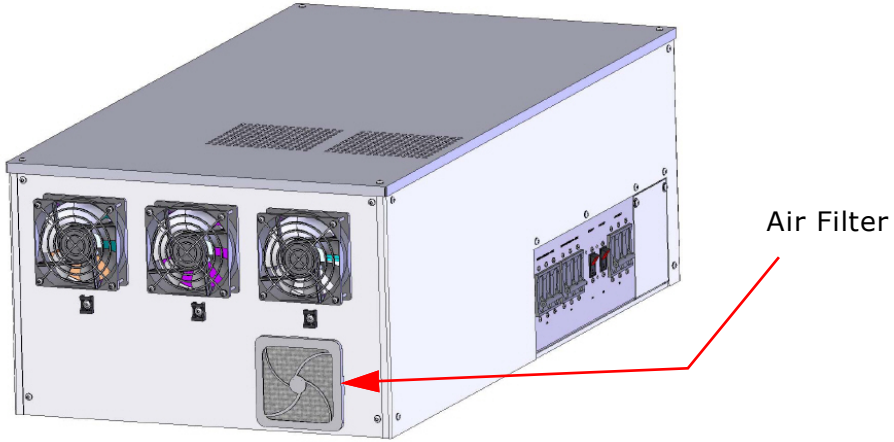


Figure 2-50: Transformer Enclosure end showing location of air intake filter

2.9 Semi Annual Maintenance

2.9.1 Replace all primary ink filters.

How-to Video: CLICK TO PLAY

A. Locate primary ink filter for each color.

Note: Also replace white primary ink filter located in Waste cabinet.

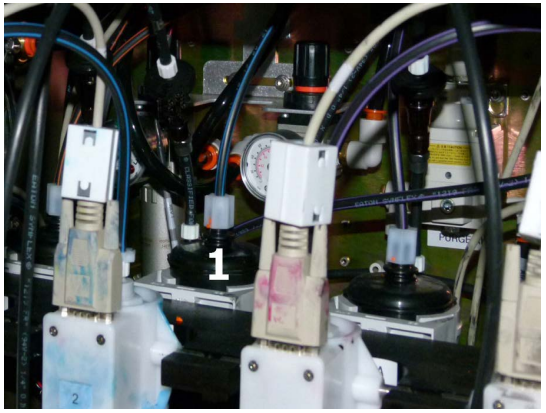


Figure 2-51: Primary Ink filters

1 Primary Ink Filter

B. Remove primary ink filter from filter clamp by inserting a flat bladed screwdriver at point shown in Note:. Twist screwdriver to open clamp.

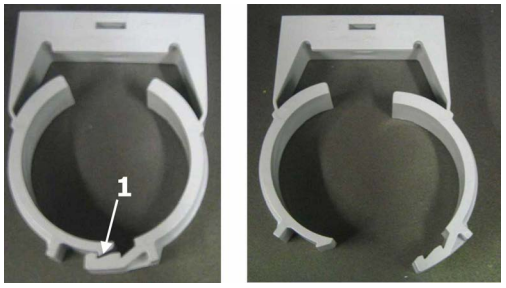


Figure 2-52: Primary ink filter clamp

1 Insert flat bladed screwdriver

Note: Older printers may have quick disconnect filters (P/N 45098981 & P0029-A) instead.

C. Remove one ink line at a time and install onto replacement filter.

Note: Place a cloth under each fitting, as ink will flow from ink filter and tubes.

D. Hand-tighten ink line to new primary ink filter.

E. Place Primary Filter Compression Fitting gauge, P/N 45094233, between filter and ink line.

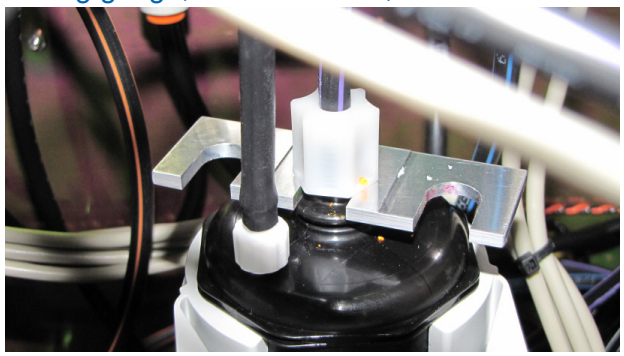


Figure 2-53: Proper positioning of gauge, P/N 45094233, on filter

F. Hold tube while tightening fitting to prevent tube from twisting.

Figure 2-54: .130" is the optimal specification within a range of +/- .010"

G. Do not over-tighten fitting as tube will compress and restrict ink flow to carriage; see H..

H. Do not under-tighten as air can transfer into ink system. Under and over-tightening can cause jet dropout and ink starvation.

Figure 2-55: Tubing damaged due to over-tightening fittings

2.9.2 Replace 20 micron Luer Simriz filter.

A. Release the quick disconnect at bottom of filter.
B. Unscrew filter at top and remove old filter.
C. Screw new filter to the top of the bleeder line and attach quick connector.

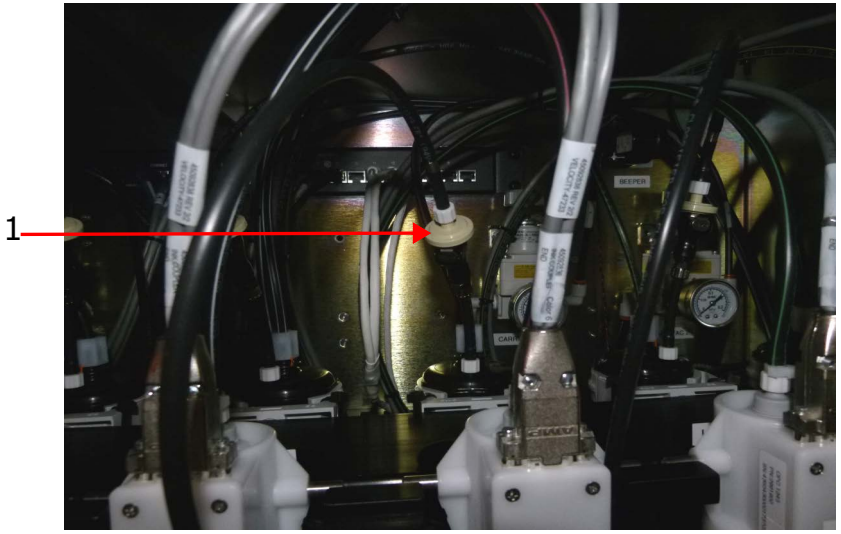


Figure 2-56: Simriz filter

1 Simriz filter

2.10 Annual Maintenance

Perform the following task every year of printer operation.

2.10.1 Empty or Replace the vacuum purge container.

How-to Video: CLICK TO PLAY

A. Open waste cabinet.
B. Unscrew vacuum purge container cover.
C. Empty container according to site disposal policy or, If necessary, discard old container.
D. If replacing container, remove each of the lines, one at a time, and replace lines into the new cover in the same configuration.
E. Place vacuum purge container in cabinet.
F. Replace container cover.

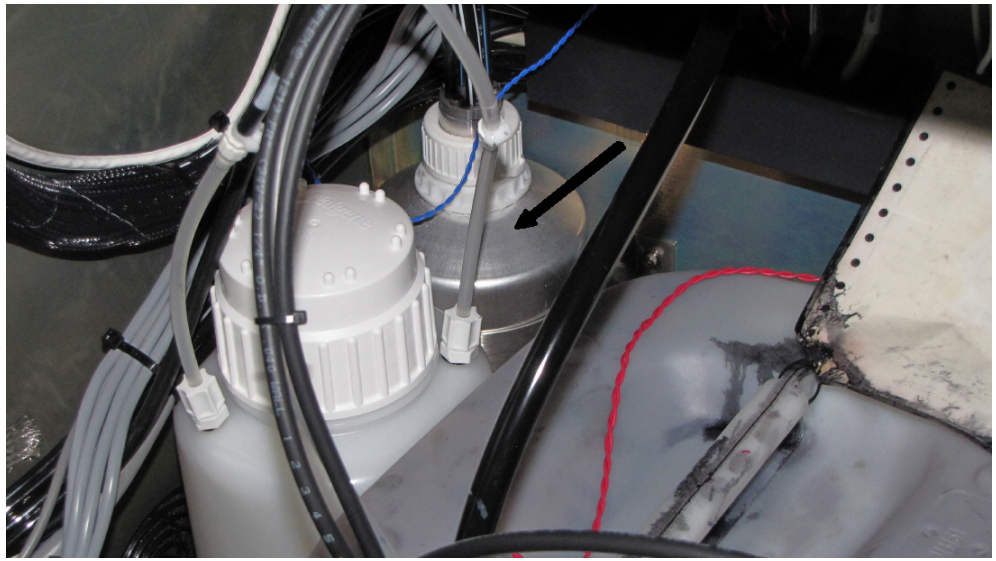


Figure 2-57: Vacuum Purge Container

1 Vacuum Purge Container

2.11 Grease Gun

Included with your printer are two grease guns. Each grease gun box will contain a 12” (30.5 cm) flexible hose. Packed separately will be the 18” (45.7 cm) flexible hose used for greasing the lead screw.

Note: When installing grease tubes into grease gun, label each grease gun with the grease type installed.

2.11.1 Installing or Replacing the Grease Tube.

A. Remove grease gun head assembly.

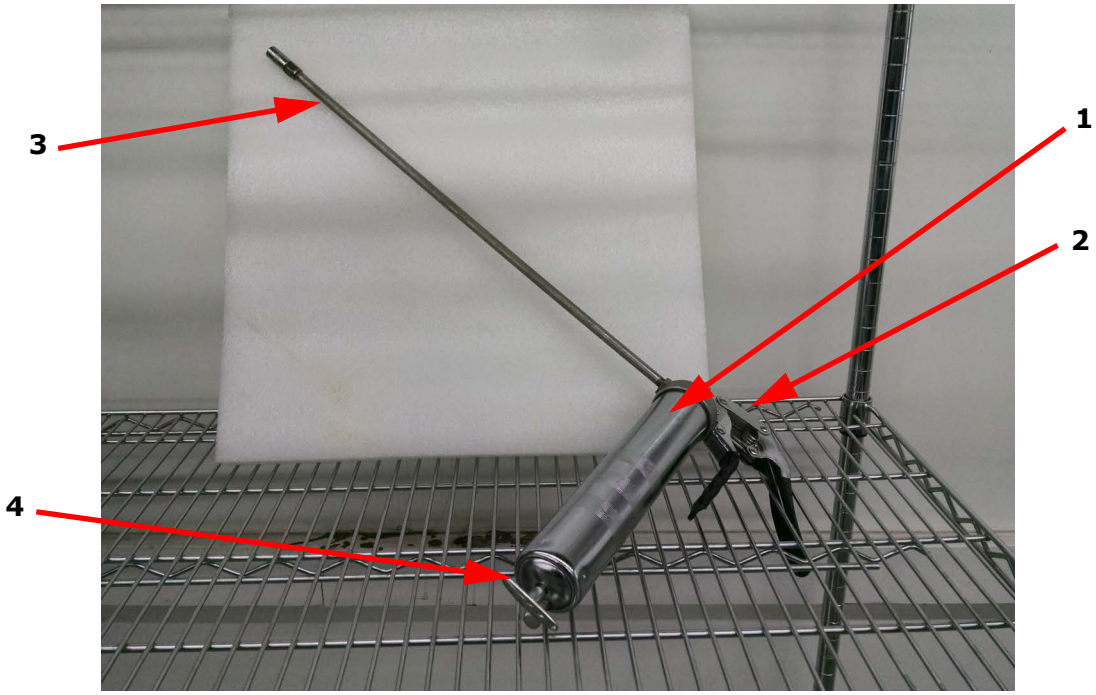


Figure 2-58: Grease gun

1 Grease gun metal tube
2 Grease gun head assembly
3 Hose
4 Plunger rod handle

B. Pull plunger rod out and slide it to side locking plunger rod in place.

Figure 2-59: Grease gun tube, head removed and plunger rod out and locked

C. Remove plastic cap from end of grease tube, 2.11.2, item 1, and insert this end into grease gun metal tube.

Figure 2-60: Grease tube inserted into grease gun metal tube

D. Remove metal end cap on grease tube.

Figure 2-61: Grease tube inserted into grease gun with cap partially removed

E. Reinstall head assembly and connect flexible hose.
F. Unlock plunger rod and push rod into metal grease tube.
G. Install correct length flexible tube to outlet fitting on grease gun, .

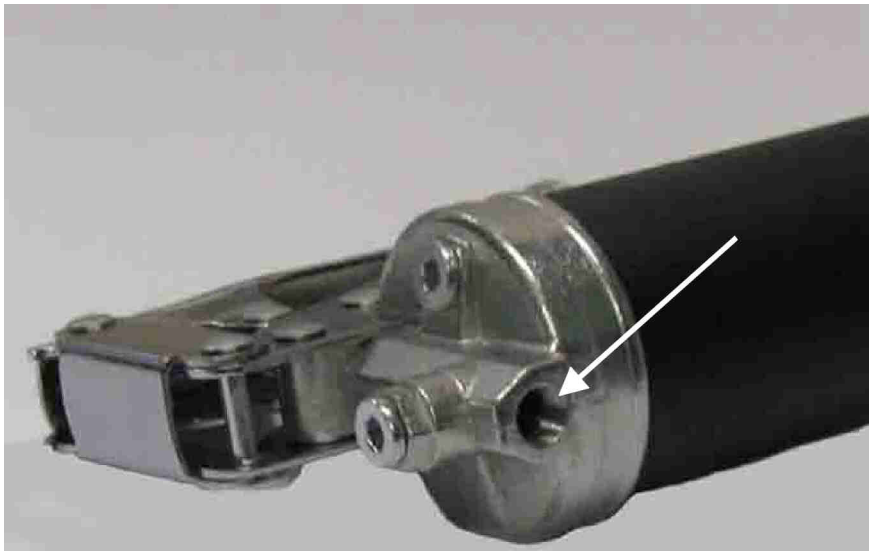


Figure 2-62: Grease gun with head assembly installed

H. Pump grease gun until grease exits nozzle. This indicates that any air within grease gun has been removed.

If grease does not exit needle, carefully unscrew air bleeder screw on head of grease gun, .

Caution: Do not remove air bleeder screw completely.

Slowly pump grease gun until grease exits air bleeder screw or needle. When grease exits, retighten air bleeder screw and pump grease gun until grease exits needle in a smooth flow.

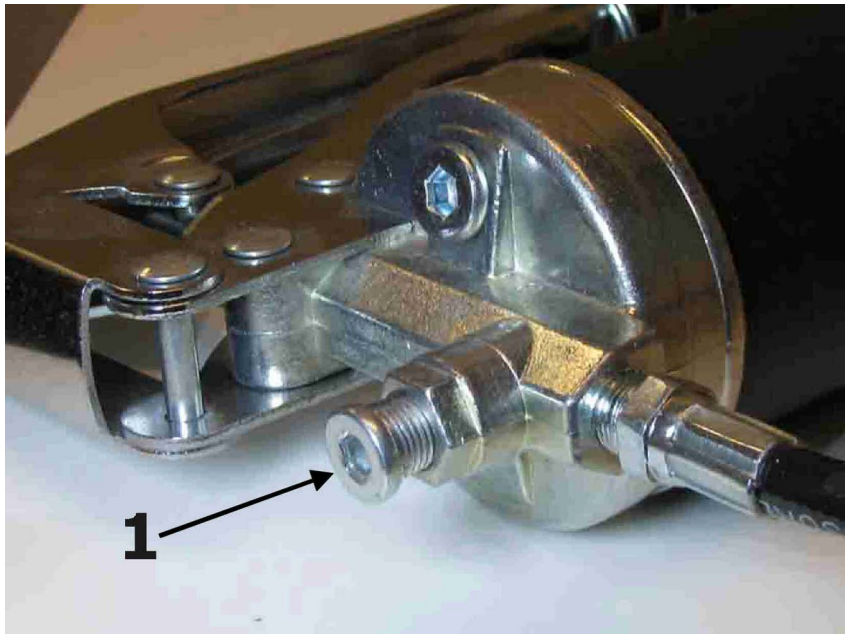


Figure 2-63: Air bleeder screw

1 Air bleeder screw

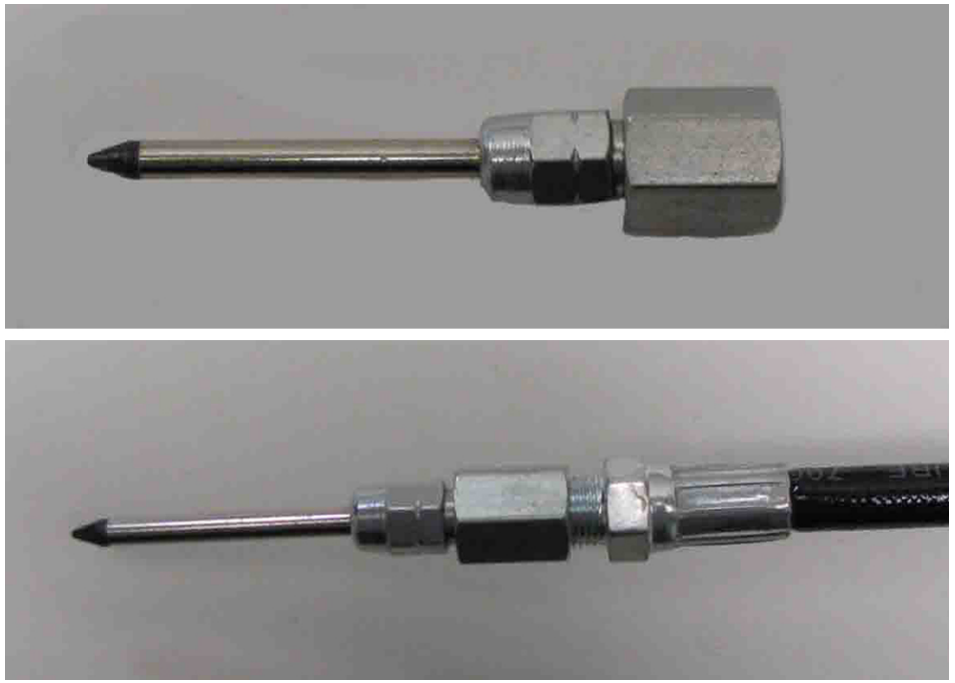


Figure 2-64: Grease gun needle and adapter for bearings

2.11.2 Grease Types

Part number 45086492 greases are specifically formulated for greasing carriage bearings; do not use a substitute. Any high quality wheel bearing grease is acceptable for greasing lead screw.

EFI VUTEk GS 2000, 3200 & 3250, LX3 Pro

Printer Maintenance Log

Weekly Maintenance Chart: ___ /___ /___ to ___ /___ /___

Every 4 Hours of Production	Day 1			Day 2			Day 3			Day 4			Day 5			Day 6			Day 7		
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
1. Clean print heads and print head plate surfaces.																					

Every 8 Hours of Production	Day 1			Day 2			Day 3			Day 4			Day 5			Day 6			Day7		
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
1. Clean ends of top and bottom carriage rails.																					
2. Wipe down purge tray rails and lubricate with 3-In-ONE oil.																					
3. Clean vacuum purge tray and purge blocks.																					
4. Check ink supply levels.																					
5. Verify carriage head height.																					
6. Check waste tank level.																					
7. Check air compressor water trap.																					
8. Wipe nitrogen applicators, if equipped.																					
9. Inspect and clean the UV lamp lenses, using a lint-free cloth and isopropyl alcohol.																					

Every 40 Hours of Production	Date	Initials
1. Clean static bars and pins using nylon bristle bush and Isopropyl Alcohol.		
2. Grease Capper.		
3. Replace Lamp filters - Arc Lamps and LED Lamps.		
4. Clean linear encoder strip using a lint-free cloth and Isopropyl Alcohol.		
5. Clean Media Infeed/Outfeed Rollers.		
6. Clean media edge detector using a lint-free cloth and Isopropyl Alcohol.		
7. Check Arc Lamp bulb life, and replace Arc lamp UV bulbs every 1,000 hours of operation.		
8. Clean UV light deflectors.		
9. Inspect exhaust fans, and vacuum clean as necessary.		
10. Clean Belt Steering Paddle, if so equipped.		

COMMON MAINTENANCE ITEMS				
Description	**EFI P/N**		**Description**	**EFI P/N**
Grease, General Purpose	P8166-A		Primary Ink Filter	P0029-A
Hi Temp Lamp Grease (Arc lamps only)	45098081		Clean room wipes	45077321
Microlube® GL-261	45086492		Head Conditioning Fluid – GS Series	45084854
3-In-ONE Oil, 3 oz	P2191-A		Filter set elements Nitrogen System, LED only	45096220
Head Cleaning/Maintenance Fluid	45119466		20 Micron Luer Simriz filter	45072843
Nylon Brush	P4920-A		Filter, 3 Micron, UV Resistant, QD-Style	45098981
Vacuum Purge Container	AA90647-FS		Filter 3 Micron UV Resistant	P0029-A

The maintenance guidelines are based on a production schedule of eight hours of printing, five days/week.
Adjust your maintenance intervals if your operating shifts are longer than eight hours of printing.

EFI VUTEk GS 2000, 3200 & 3250, LX3 Pro

Printer Maintenance Log

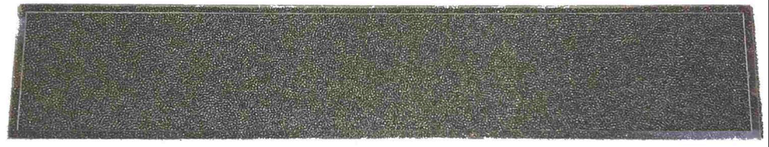
Maintenance Chart for 20___

Monthly Maintenance	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
1. Perform a System Backup												
2. Vacuum the umbilical assembly and shelf.												
3. Clean door flaps and rollers using lint-free cloth and Isopropyl Alcohol.												
4. Clean the Four FOD (Foreign Object and Debris) Trays												
5. Grease Four Carriage Bearings using Microlube® GL-261.												
6. Grease Carriage Lead Screw using High-temperature Grease.												
7. Check nitrogen system filter status, if so equipped - replace as necessary.												
8. Grease Arc Lamp Shutters, if so equipped.												

Quarterly Maintenance	Quarter 1	Quarter 2	Quarter 3	Quarter 4
1. Clean printer cabinets and components.				
2. Check head conditioning fluid level.				
3. Clean Arc Lamp assembly.				
4. Replace carriage fan filters.				
5. Replace cabinet air intake filters.				
6. Replace transformer enclosure air intake filters.				

Semi Annual Maintenance	January	July
1. Replace all primary ink filters.		
2. Replace 20 micron Luer Simriz filter.		

Annual Maintenance	One Year Anniversary of Installation
1. Empty or Replace the vacuum purge container.	

COMMON LAMP FILTERS			
Description and P/N	**Description and P/N**	**Description and P/N**	**Description and P/N**
FILTER, ROLL PLYESTR, 12INX180INX1IN, UL CLS 2, 45116069	KIT, AIR FILTER, FIREJET FJ200, 10-PACK, LED UV LAMP, 45134204	FILTER, AIR, ONE PIECE, FJ200 225, 45173955	FILTERS, AIR, 10 PACK, FJ200 375, 45242746
			

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