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Epilog Laser Tube Upgrade

For the Epilog Mini / Helix

9/27/2013

Requirements:

Tools:

- Phillips Head Screwdriver 
- Set of SAE (US Sized) Allen Keys 
- Locking Pliers 
- Nut Driver / Wrench (5/16") 

Parts:

- Epilog Replacement Laser Tube
- Adapter Bracket (MT266)
- Fans (optional)
- PSU Bracket (optional)
- Rear Panel (optional)

Overview:

This document details the process to upgrade your laser with an Epilog Laser Tube.

Procedure A: Removing the Old Laser Tube

Step 1:

Be sure that the engraver is powered off and unplugged. Remove the rear panel of the engraver to expose the laser tube.



Step 2:

Disconnect the Red Dot Pointer which is located on the right side of the laser tube. Follow the thin Red and White wires to the Black Connector. Unplug the connector.



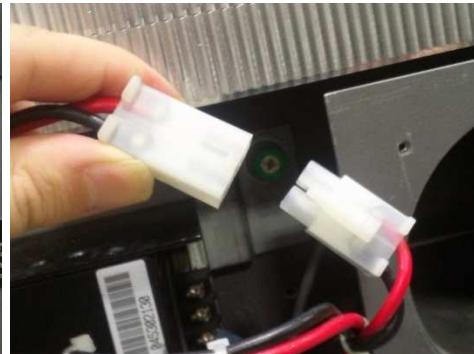
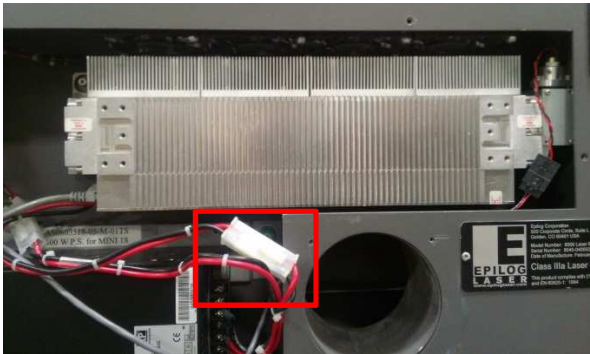
Step 3:

Disconnect the Grey Data Cable from the Left side of the laser tube.



Step 4:

Disconnect the Red and Black Power Harness. Follow the power Wires to the White Connector and unplug the connector.



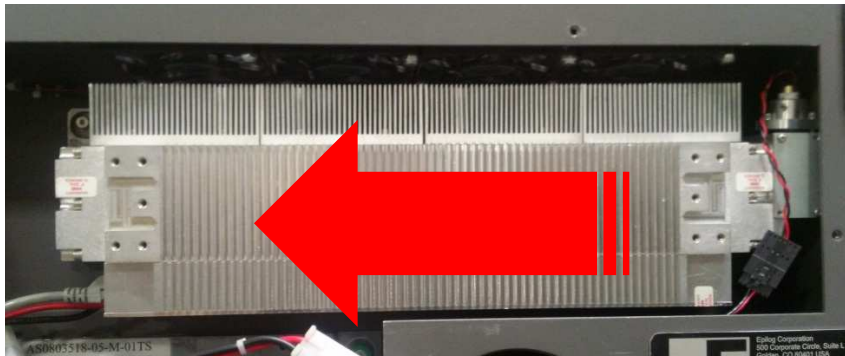
Step 5:

Locate and unscrew the three (3) green thumb screws with a Philips Head Screw Driver. Please note that the screws are captive and will not come completely out of the bracket.



Step 6:

Slide the laser tube to the left. The entire unit will slide up to a half an inch (12mm).



Step 7:

You may now carefully lift the laser tube up and out of the engraver and place it on a flat table.

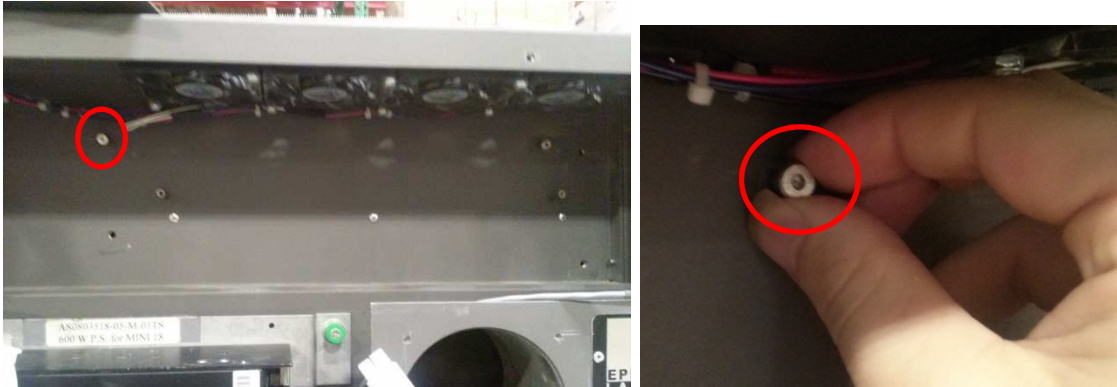


CAUTION: The laser tube can weigh between 10 and 20 lbs. (4.5 to 9 kg). Please take proper precautions when lifting heavy objects.

Procedure B: Installing Adapter Bracket

Step 1:

Locate the left hand shoulder screw and remove it by unscrewing it. When finished please discard the shoulder screw.



Step 2:

Locate the left hand spacing standoff. Using a pair of Locking Pliers, break the standoff away from the body of the engraver. You will not damage the Engraver.



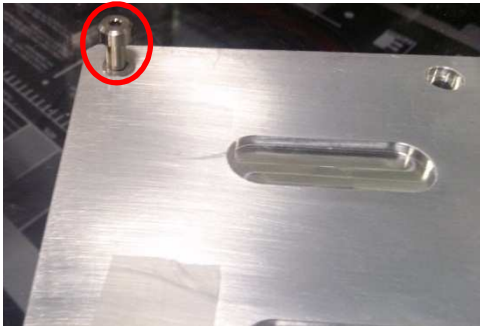
Step 3:

Locate the MT266 adapter bracket that came with the upgrade kit.



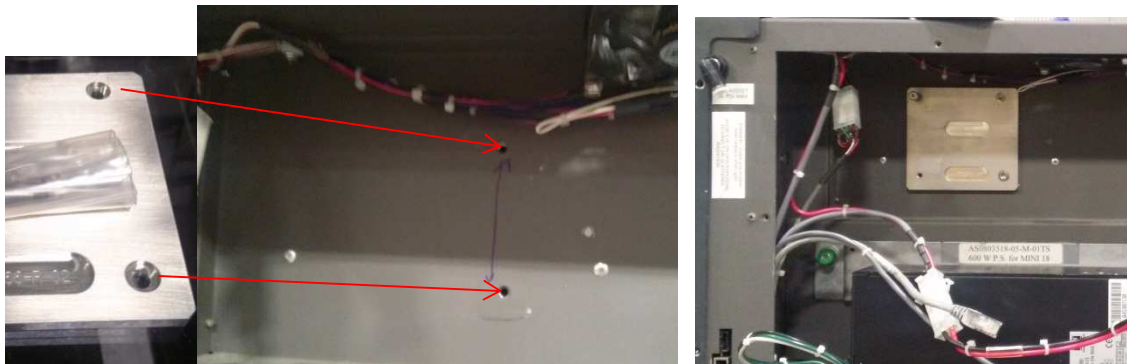
Step 4:

Install the new Shoulder Screw and washer (that came packaged with the MT266) into the top left hand corner of the MT266 Adapter Bracket.



Step 5:

Align the two screw holes on the right hand side of the adapter bracket, with the screw holes on the engraver. Fasten with the provided screws.



Procedure C: Installing the new fans.

NOTE

This procedure is for the Mini 24 and Helix machines only. If you currently have 4 fans but space for 6, please follow this procedure. If you currently have 6 fans or if you own a Mini 18 you can skip this procedure. Please contact Epilog Technical Support if you need assistance.

Step 1:

Locate the Fan Tray inside of the engraver.



Step 2:

Locate and unplug the Fan Wire Harness. The wire harness is on the left side of the Fan Tray.



Step 3:

Remove the Wire Harness holder.



Step 4:

Remove the fan tray by locating and removing the nuts on the left and right sides of the tray.



Step 5:

Insert the new fan tray into the engraver and fasten with the nuts.



Step 5:

Connect the fan Wire Harness. And fasten with holder.



Procedure D: Installing the new PSU Bracket.

NOTE

In some cases the engraver's Power Supply Unit (PSU) will need to be rotated to accommodate the new laser tube. This procedure illustrates the process to rotate the PSU and install a new mounting bracket.

This procedure is only for engravers with the Power Supply Unit (PSU) illustrated in **Figure A**. If your engraver has a power supply unit matching Figure B or Figure C than you may skip this procedure.

Please contact Epilog Technical Support if you need assistance.



Figure A: Silver PSU
(Label facing out)
Follow this procedure.



Figure B: Silver PSU
(Label facing up)
Skip this procedure.

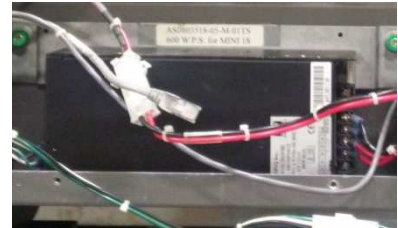


Figure C: Black PSU
Skip this procedure.

CAUTION!

The Power Supply Unit (PSU) may contain hazardous electrical current. Please exercise caution any time you work with Mains power. Be sure that the engraver is **Powered Off** and **Unplugged** before starting work on the PSU. Do not touch **Electrical Contacts, Leads, or Damaged Wires** with your bare hands while performing this procedure. **Do not attempt to open** the PSU's housing.

Electrical charge may still be present in the PSU even after it has been disconnected.

Step 1:

Disconnect PSU output from the engraver. First follow the Red and Black wires from the PSU until you reach a white connector. Disconnect the white connector. Do this for all pairs of Red and Black wires.



Step 2:

Disconnect the PSU from the Power Receptacle. Follow the Green, White and Black wires until you reach a white connector. Disconnect the white connector.



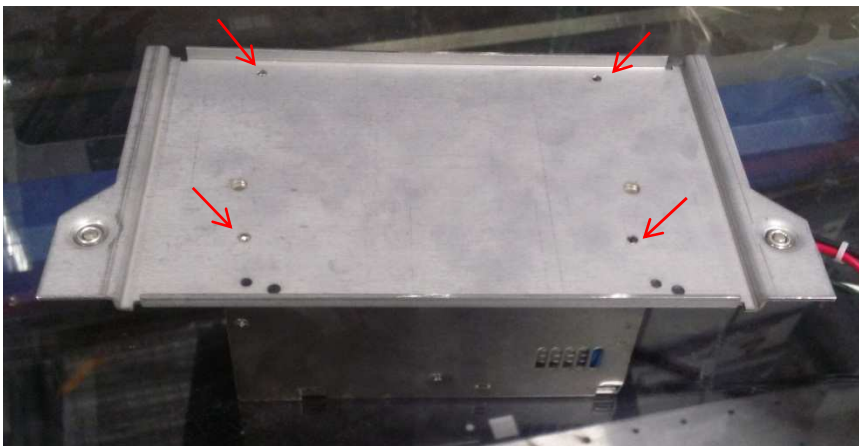
Step 3:

Unscrew the two green thumb screws on the left and right side of the PSU and remove it from the engraver.



Step 4:

Place the PSU on a flat work area with the Mounting Bracket facing up. Orient the PSU so that the thumb screws are on the side closest to you. Remove the four (4) mounting screws and discard the bracket.



Step 5:

'Roll' the PSU toward you 45 degrees. The side of the PSU with the label on it should now be facing directly away from you.



Step 6:

Place the new bracket (MT525) on the top of the PSU with the thumb screws toward yourself. Align the holes on the bracket with the holes on the PSU and fasten them with the mounting screws.

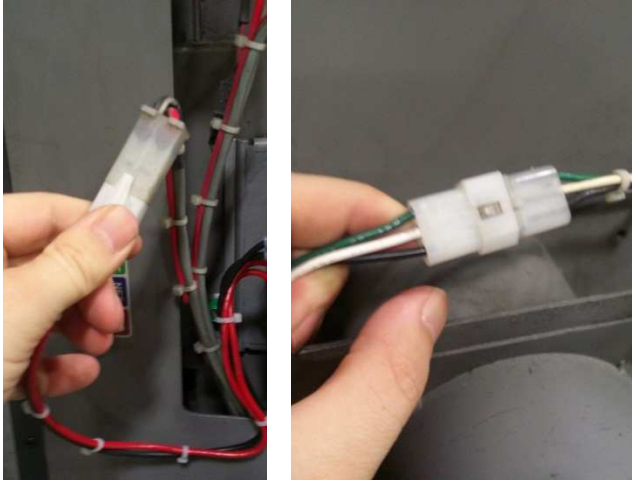


Step 7:

Install the PSU back into the engraver and secure with the green thumb screws.

Step 8:

Reconnect the Red and Black wires as well as the Green, White and Black wires.

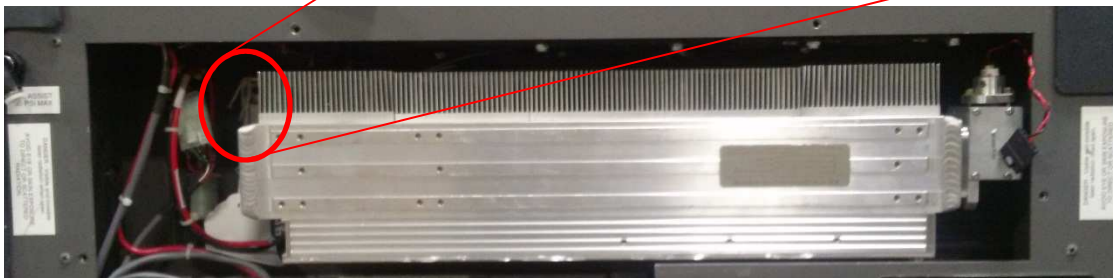
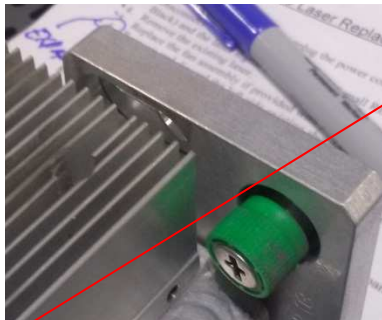
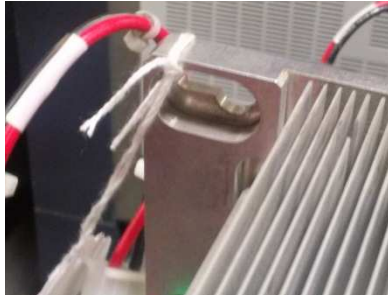


If your engraver has more than one PSU, than repeat this procedure for the second supply as well.

Procedure E: Installing the New Laser Tube.

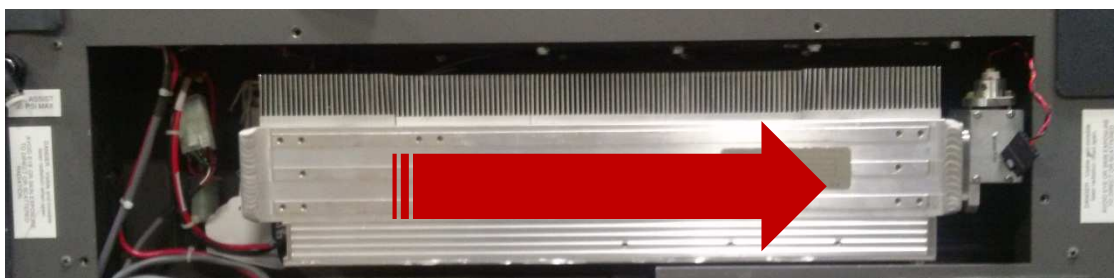
Step 1:

Align the slots on the mounting bracket of the laser tube, with the shoulder screws on the chasses of the engraver. Hang the laser tube on the shoulder screws.



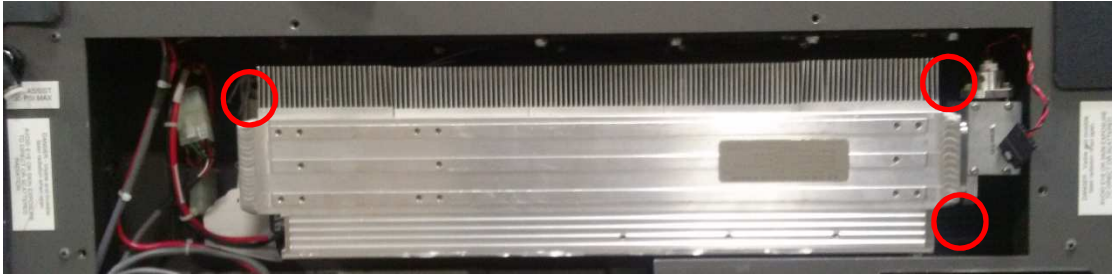
Step 2:

Slide the laser tube to the left. The entire unit will slide up to a half an inch (12mm).



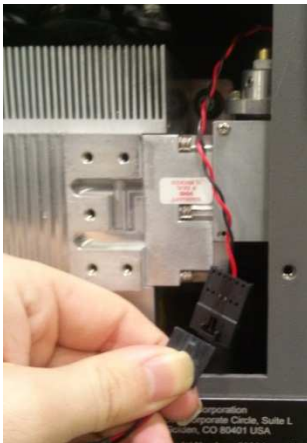
Step 3:

Tighten the three green thumb screws to hold the laser in place.



Step 4:

Reconnect the Red and Black power wires, Grey data cable and thin Red and Black red dot pointer wires.



Step 5:

Tuck any loose wires back in to the engraver and proceed to replace the Rear Panel.

NOTE

If you completed Procedure D (Installing the new PSU Bracket), you will have been provided with a new rear panel to accommodate the new orientation of the PSU. Please use the new rear panel.



Conclusion

You should now be finished installing the Laser Tube Upgrade. Please be sure to align the laser before use. If you require alignment instructions or encounter any problems please contact Epilog Tech Support at (303) 215-9171.