Procedure Title: Replacing the Auto Focus plunger

Machine Type: Legend Mini/Helix

About the safety messages used in this document
Throughout this document, certain items are labeled Note, Safety Glasses, Caution, Warning or Danger. These terms alert you to precautions that may result in damage to your engraving system or a risk to your personal safety. Read and follow them carefully.

WARNING ELECTRICAL HAZARD: This symbol indicates a potentially hazardous electrical situation which, if not avoided, could result in Death or Serious personal injury.

SAFETY GLASSES: indicate a direct hazardous situation which, if Safety glasses are not worn may result in eye injury or permanent loss of vision.

NOTE: A ‘Note’ is not necessarily safety related but indicates a recommendation or special point of information that could assist in understanding the use or care of a feature item.
Tools Needed:  
# 1 Phillips screw driver  
5/64 Allen wrench  
Safety Glasses

Introduction:  
This procedure details steps to replacing the auto focus plunger on the Mini 18, the Mini 24 and the Helix machines.

Procedure:  

1. Power up the machine and allow it to start up.

2. Lower the table to about the midpoint of its travel. This will give you room to work.

3. SAFETY GLASSES: Please locate and wear the safety glasses provided with your machine or the replacement parts sent for your machine.

4. Turn off the engraver.

5. WARNING ELECTRICAL HAZARD: Disconnect the engraver from its power source. Never perform maintenance or repair to your engraving system while it is connected to its power source.

6. Gently and slowly move the X-axis rail toward the center of the machine.

7. Remove the X-Axis cover from the rail. There are 2, #1 Phillips screws securing the front of the cover and 5 #1 Phillips screws securing the rear of the X-axis assembly.
8. Once the cover is removed, locate the PCB that is attached above the lens carriage. This is the area we will be working in.

9. Remove the 5/64 hex screw from the Auto Focus plunger shaft and gently pull down on the Auto Focus Plunger to remove it from the lens carriage assembly.

**NOTE:** If you are having difficulty in locating the Auto Focus Plunger Shaft when it is installed in the machine, push up on the Auto Focus plunger and watch for the black plastic cap to move up. This is the top of the Auto Focus Plunger.

10. Locate the replacement Auto Focus Plunger and remove from the bag. Loosen and remove the 5/64 Allen Screw which secures the black plastic cap to the shaft and remove the cap, but not the spring located on the shaft.

11. Slide the Auto Focus plunger up in to the opening in the lens carriage and gently push up on the shaft until you can see the top of the shaft.

12. Install the black plastic cap on to the Auto Focus shaft and ensure that the magnet is facing the rear or away from you. Install the 5/64 Allen Screw through the black plastic cap and in to the Auto Focus Plunger shaft and tighten.
13. Install the X-axis Rail cover and tighten all of the mounting screws.

14. Reconnect the machine to its power source.

15. Restart the machine and verify the correct operation of the Auto Focus feature.

If you have any questions, please contact Epilog’s Technical Support:

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