






Laser Engraver/CorelDraw Instructions

To create a design, you can draw, add shapes or text, or import images.

- To draw, select the Freehand tool () on the left and start drawing!
Alternatively, you can use the artistic media tool (), which uses a calligraphy style brush.
- To add shapes, click the square or the circle tool on the left, or if you want to make a different shape, use the polygon tool directly below them. For all shapes, the width of the line can be adjusted by changing the Outline Width () value toward the top of the window. To change the number of sides on the polygon tool, adjust the Points or Sides () value toward the top of the window.
- To add text, click the text (A) tool on the left. The font and text size can be changed toward the top of the screen. Then, just click anywhere and start typing! After you're done, the text can be moved and resized by clicking and dragging it.
- To add images, simply save your image to the computer and drag it from where it is stored into the CorelDraw window. Then simply click it to move it and resize it.
- To adjust any shape (including drawing!) using points along them, use the Shape tool ().
- Remember that if you are making a design for a water bottle, you should rotate the design by clicking it and typing 270 as the rotation value at the top of the window so that the top of the design is on the right of the canvas.

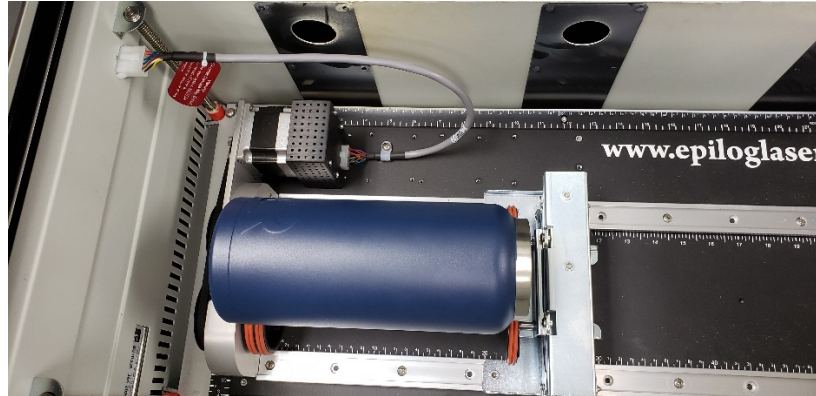
Once you have your design, it's time to print!

- Place your material you are engraving your design onto into the printer. If you are using a flat piece of wood, ensure that the flat base is in position and place it flush with the top left corner of the grid. If you are engraving a water bottle, ensure that the correct base is in use.
 - To switch the base from flat to the water bottle base, first turn on the printer, **press the X-Y lock button**, open the top, and push the engraving arm to the back of the machine.



- Next, **power off the engraver before swapping the bases.**

- Remove the vector grid by simply lifting it out of the printer. Replace it with the water bottle base as shown.

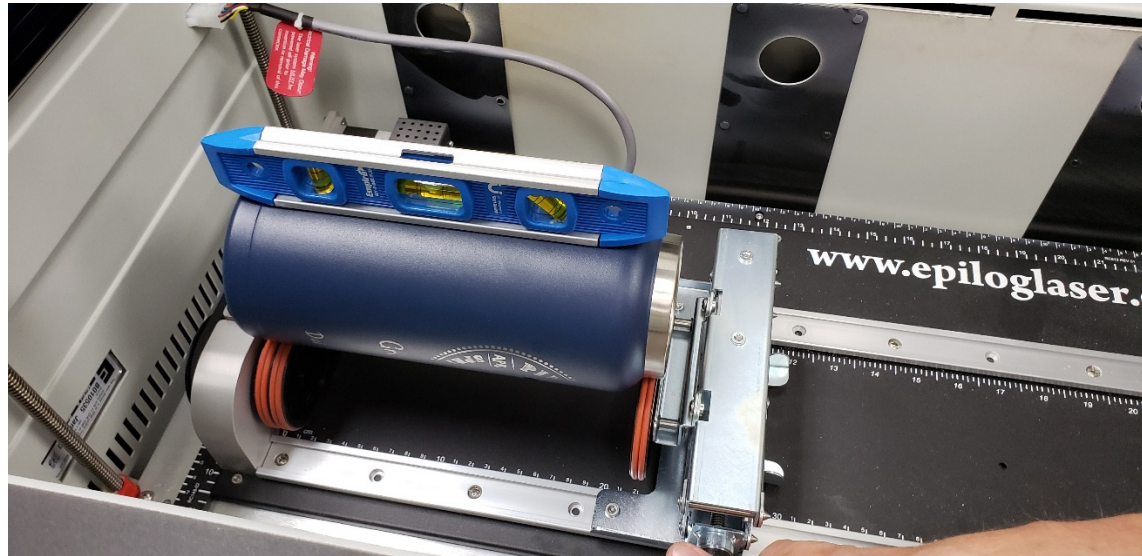


- Plug in the cable as shown. The clip on top of the cable should snap into place. When removing it, ensure that the clip is unhooked before pulling.



- To swap back, simply reverse this process.
- When placing the water bottle in the printer, ensure that there is a tiny gap between the water bottle and the black bumper on the left. Otherwise, this can create drag that prevents the bottle from turning as intended.

- Once the water bottle is placed in the printer, use a level and the dial on the left of the base as shown to ensure that the water bottle is flat.

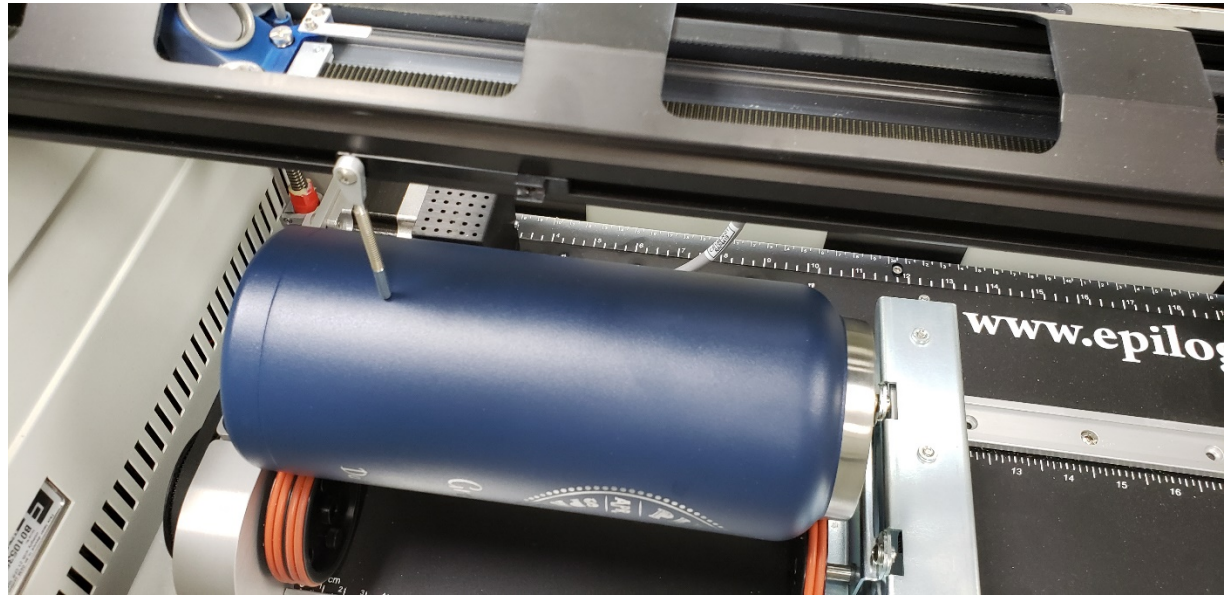


- First, ensure that the air compressor and fume extractor are turned on. Plug in the air compressor (white box) and press the power button on the fume extractor.
- Make sure the CorelDraw and Epilog Job Manager software are both open. If they are not, they can be opened from either the desktop or by searching their names in the bottom left search bar.
- Next turn on the printer and ensure that it is plugged into the laptop.

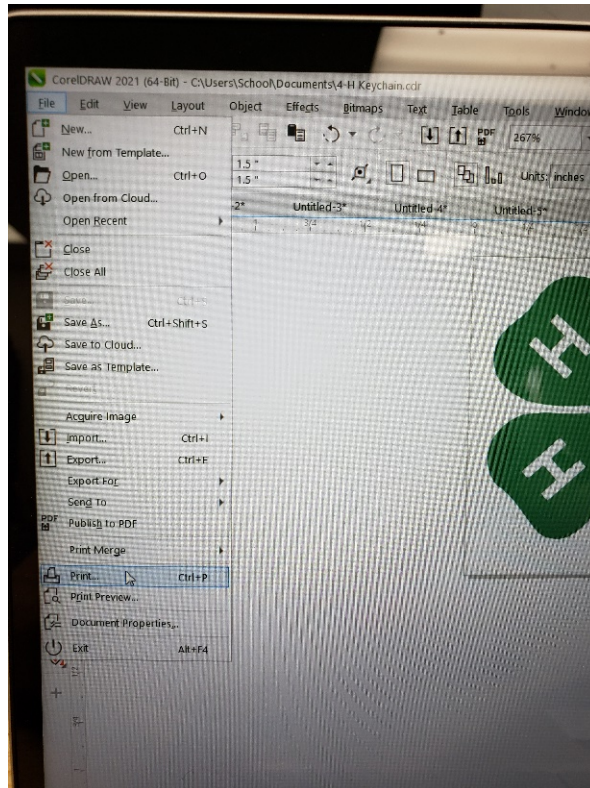


- Disable the X/Y lock (see earlier step) and move the arm above the material. Then use the small hanging piece magnetically attached to the arm to gauge the distance of the water bottle. It should almost touch the water bottle but swing freely. If it is too close or too far, use the arrow buttons on the control panel to

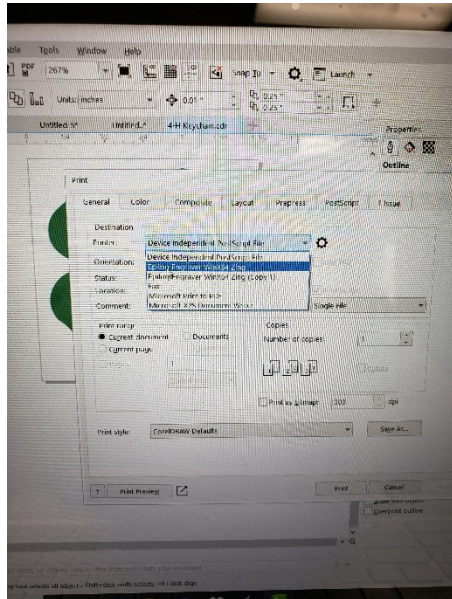
raise and lower the base until it is the correct distance from the material.



- In CorelDraw, click “File” in the top left corner and select “Print.”

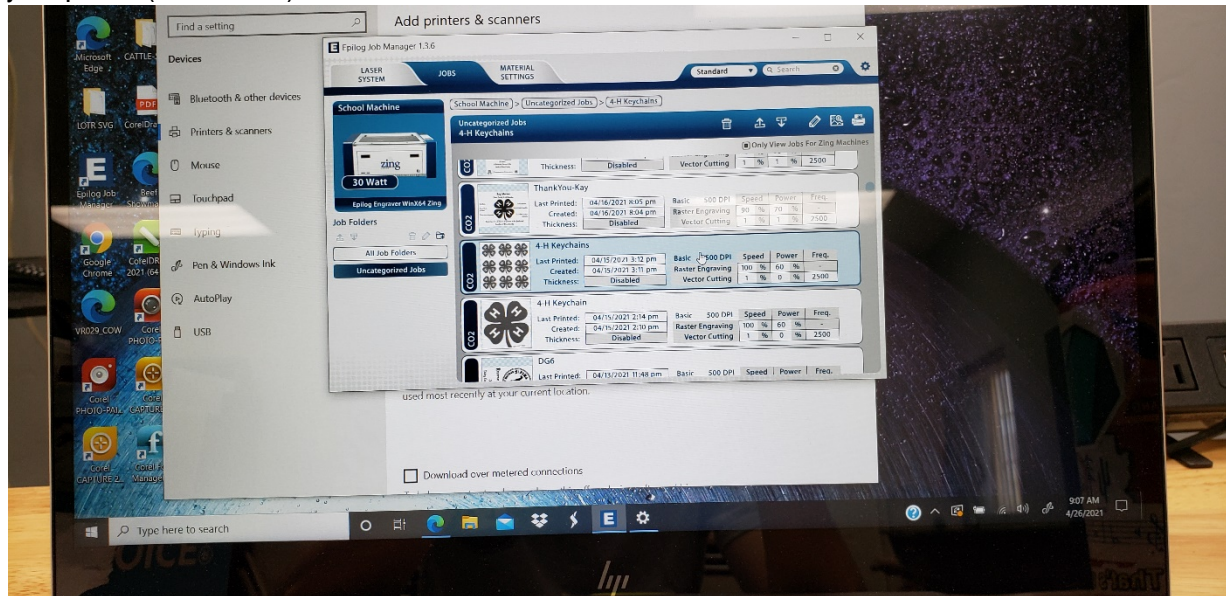


- Once in the print menu, open the “Printer” dropdown and select “Epilog Engraver WinX64 Zing.” Then click “Print” in the bottom right.

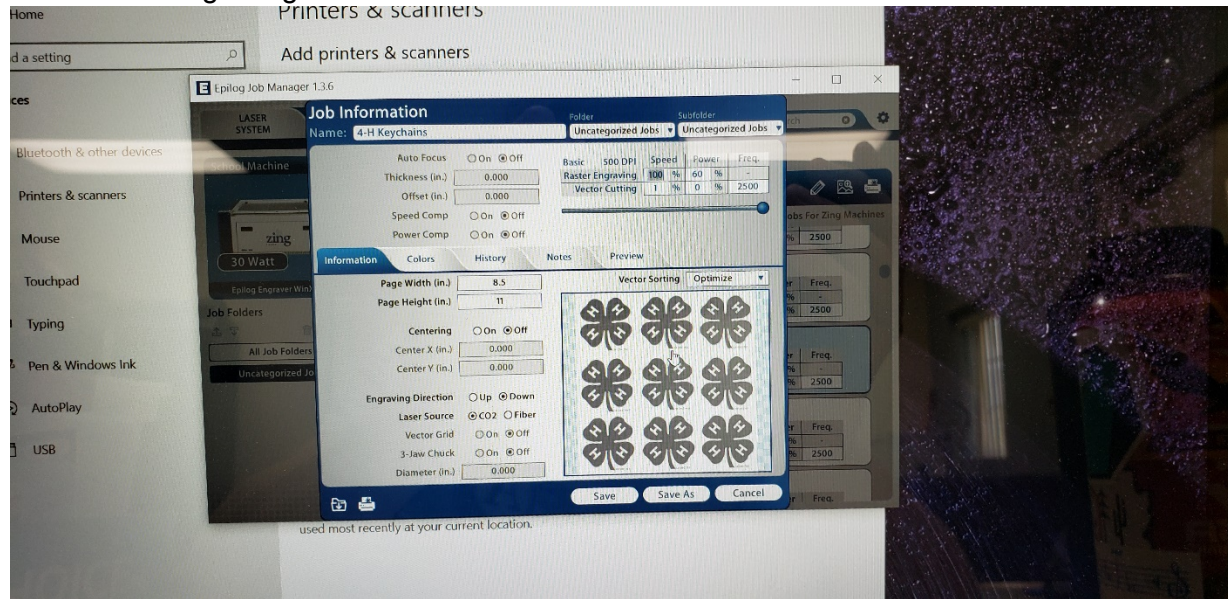


If it says that the printer is not online when selected, restart the printer, unplug it from the laptop, and plug it back in. If the issue persists, turn off the printer and unplug it, search for “Printers and Scanners in the search bar in the bottom right on the laptop, then remove any items in the list that are similar to “Epilog Engraver WinX64 Zing.” After doing this, turn on the printer and plug it into the laptop. You should see at least one list entry that reads “Epilog Engraver WinX64 Zing.” Then CorelDraw should allow you to select the printer from the dropdown.

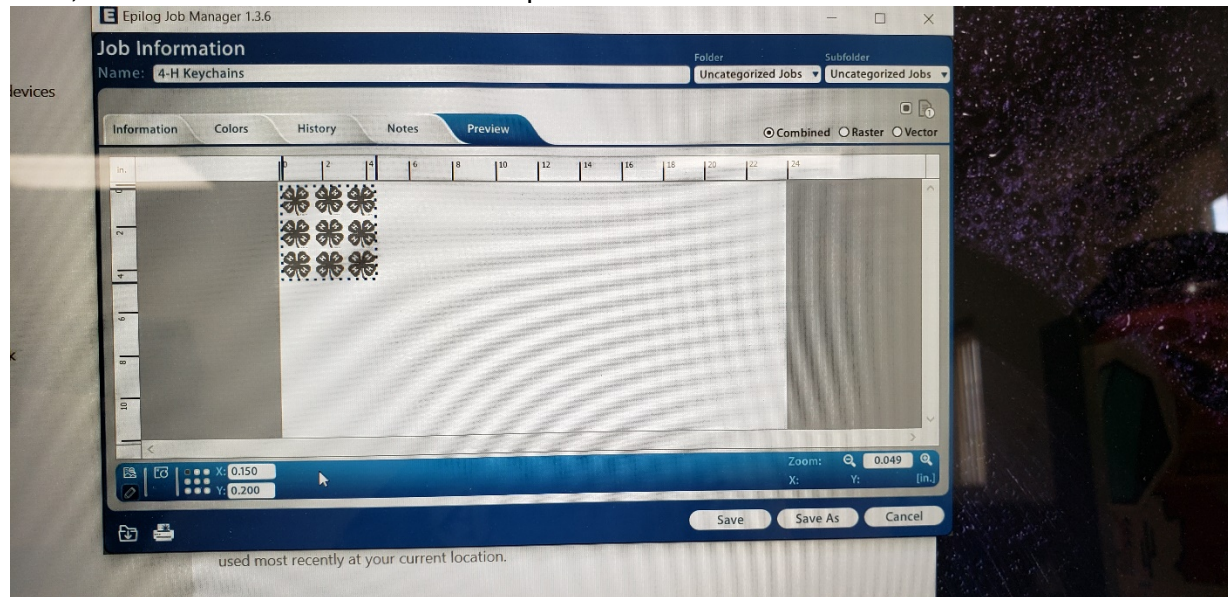
- Navigate to the Epilog Job Manager software. You should see your design in the job queue (see below).



- Double click on your design. You should now see a window like below. In the top right, select your settings. In testing, we have found 100% speed, 60% power raster engraving and 50% speed, 70% power vector cutting to be effective for wood engraving. We have found 60% speed, 80% power raster engraving to be effective for engraving metal water bottles.

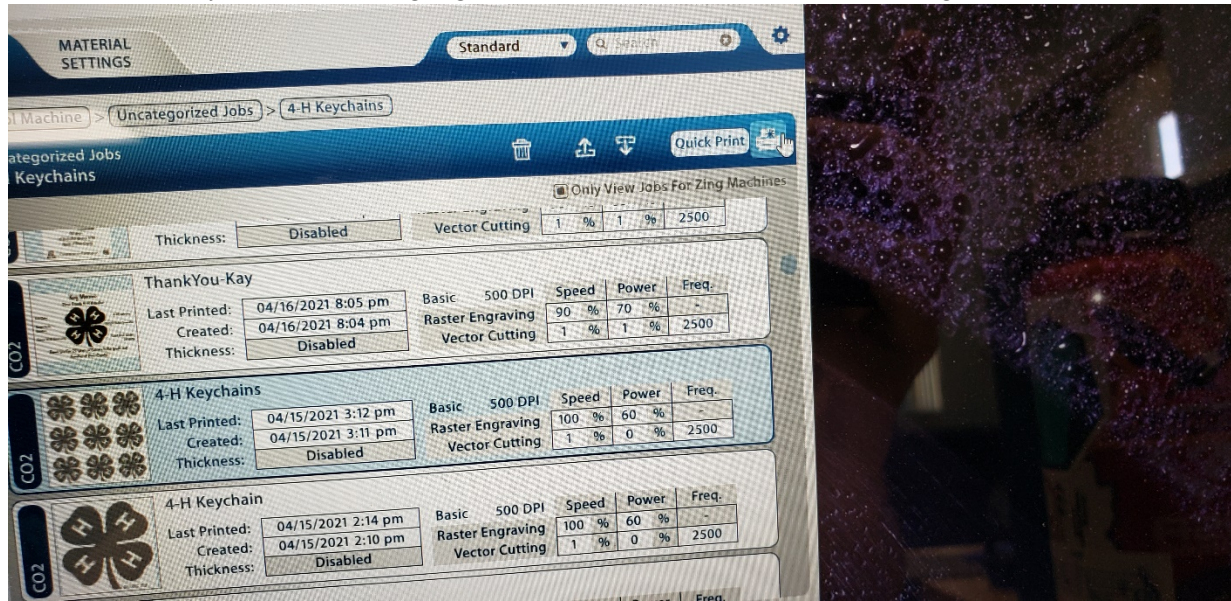


- Next, click “Preview.” You should see a panel like below:



- On this panel, you can set where, in inches, the machine prints your design. On water bottles, set the X value to the height that you would like your design to be placed on the bottle and the Y value to 0. After setting this, click “Save” in the bottom left of the window.

- Next, with your job selected (highlighted), click the print icon in the top right.



- After doing this, your job's name should appear on the display on the engraver as shown below. If this is the case, then press the green button to begin printing.




- On the next two pages are photos of the cleaning steps that must be performed. To view these better when viewing this document digitally, simply zoom in. These procedures can be found in the manual for the machine as well.

SECTION 8: CLEANING & MAINTENANCE
Spare Parts and Wear Parts

Spare Parts and Wear Parts

Use of spare parts or wear parts produced by third-party manufacturers involves unforeseeable risks not covered by the manufacturer. Use only original parts or parts recommended by the Epilog Corporation.


Reduce Fire Risk with a Clean Laser

 Clearing the laser is an excellent way to prevent fire with the laser. A buildup of cutting and engraving residue and debris is dangerous and can create a fire hazard in its own right. Keep your laser system clean and free of debris. Regularly remove the Vector Cutting Table to clean any small pieces that have fallen through the grid. For more information on fire safety, see "Fire Warning" on page 5.

Cleaning the Optics


About once a week, or if you notice dust building up, you will need to clean the optics (mirrors and lenses) of your laser. If smoke, resin, or other contaminants are allowed to accumulate they will reduce the available laser power and may cause damage to the optics.

The two optical components most likely to require cleaning are the focus lens and the mirror directly above it. The lens and mirror are a single assembly and can be removed from the machine for cleaning, but it is generally not necessary. If you need to remove the assembly for a more complete cleaning, remove the two 3/32" hex screws that hold the lens to the carriage.



To clean the optics, use a high-quality cotton swab moistened with the optics cleaner supplied in the accessory kit. Please read the label on the bottle carefully.

If you run out of the cleaner supplied by Epilog, Reagent or laboratory grade Acetone can be substituted. Another option is a 10 to 1 water to white vinegar mixture. This is very good at removing finger prints and other minerals which can be left behind on the optics. Also, if "Golden Grain" or "Everclear" are available in your area these are also good substitutes for the optical cleaning solution.

 Never use Alcohol or Hardware grade Acetone, they contain impurities which can damage the optics in your machine.

Wet the swab thoroughly with the solvent, and then blot it against a piece of cotton so that it is no longer soaking-wet. Then daub the optic gently, rotating the swab after each daub to expose clean cotton to the surface until the optic is free of visible contamination. At that point, prepare a fresh swab and clean the surface with a gentle zigzag motion across it.

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SECTION 8: CLEANING & MAINTENANCE
Exhaust Cleaning

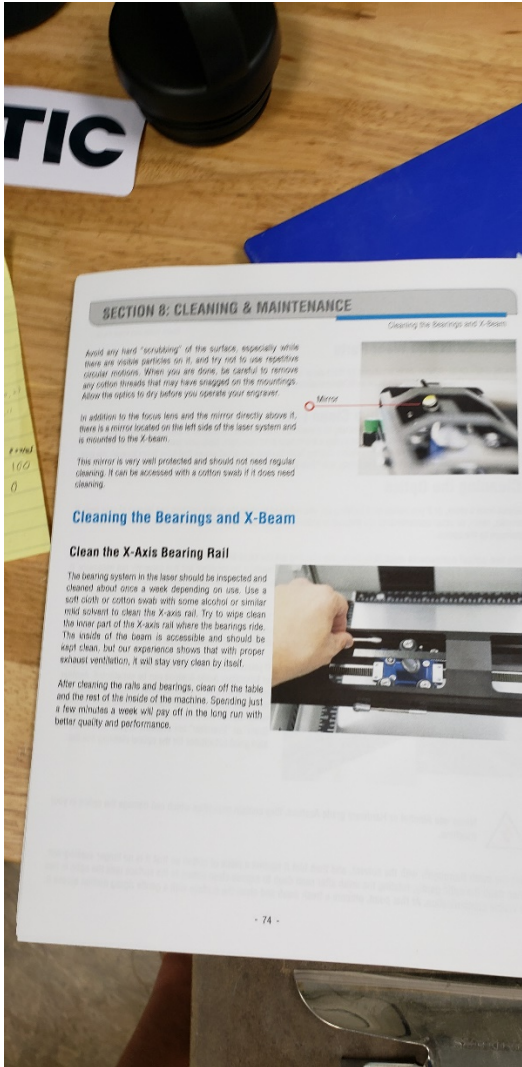
Laser Tube

The laser tube used in your system does have a maximum service life, and there is very little maintenance that is required. At some point in the life of the laser you will need to replace it for gas recharge, electrical repair or mechanical repair. Replacing laser tubes is common practice and Epilog has made the process of changing tubes extremely easy for users to perform with a minimum amount of effort. The laser tubes can be refurbished and are available on an exchange basis by contacting Epilog technical support.

Ensure that all of the laser cooling fans are properly working at all times. The fans keep the laser tube cool and prevent it from overheating. An overheated laser tube will produce erratic output and may fail completely.

If the laser system is in a dirty or dusty environment, make sure that the cooling fins on the laser tube are kept free of dust buildup. Use compressed air to blow the dust and debris off of the laser tube fins. Be sure that the system is unplugged before performing any maintenance on the machine!

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SECTION 8: CLEANING & MAINTENANCE

Cleaning the bearings and X-Beam

Avoid any hard "scrubbing" of the surface, especially while there are visible particles on it, and try not to use repetitive circular motions. When you are done, be careful to remove any cotton threads that may have snagged on the mountings. Allow the optics to dry before you operate your engraver.

In addition to the focus lens and the mirror directly above it, there is a mirror located on the left side of the laser system and is mounted to the X-beam.

This mirror is very well protected and should not need regular cleaning. It can be accessed with a cotton swab if it does need cleaning.

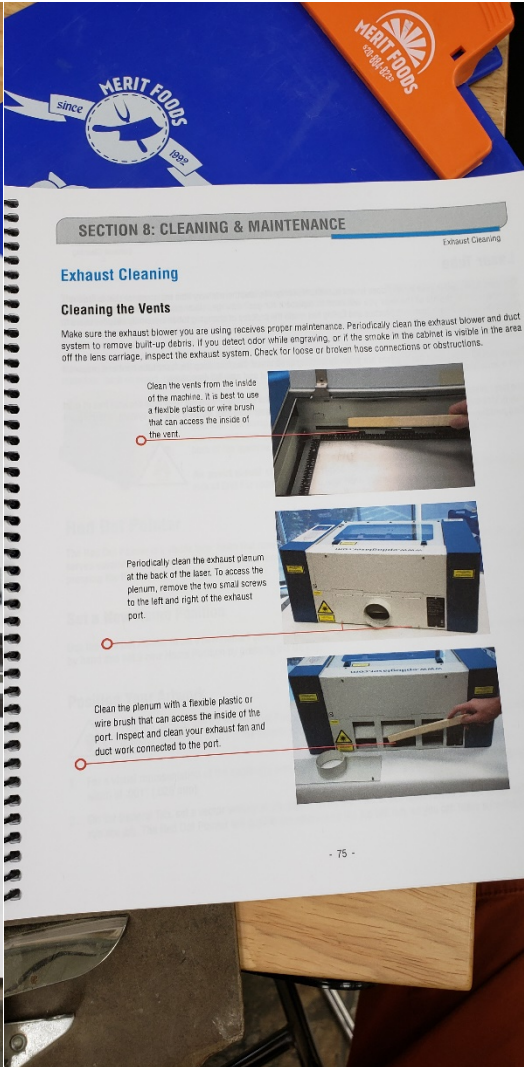
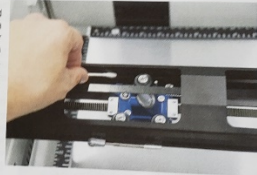


Cleaning the Bearings and X-Beam

Clean the X-Axis Bearing Rail

The bearing system in the laser should be inspected and cleaned about once a week depending on use. Use a soft cloth or cotton swab with some alcohol or similar mild solvent to clean the X-axis rail. Try to wipe clean the lower part of the X-axis rail where the bearings ride. The inside of the beam is accessible and should be kept clean, but our experience shows that with proper exhaust ventilation, it will stay very clean by itself.

After cleaning the rails and bearings, clean off the table and the rest of the inside of the machine. Spending just a few minutes a week will pay off in the long run with better quality and performance.



SECTION 8: CLEANING & MAINTENANCE

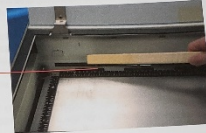
Exhaust Cleaning

Exhaust Cleaning

Cleaning the Vents

Make sure the exhaust blower you are using receives proper maintenance. Periodically clean the exhaust blower and duct system to remove built-up debris. If you detect odor while engraving, or if the smoke in the cabinet is visible in the area off the lens carriage, inspect the exhaust system. Check for loose or broken hose connections or obstructions.

Clean the vents from the inside of the machine. It is best to use a flexible plastic or wire brush that can access the inside of the vent.



Periodically clean the exhaust plenum at the back of the laser. To access the plenum, remove the two small screws to the left and right of the exhaust port.



Clean the plenum with a flexible plastic or wire brush that can access the inside of the port. Inspect and clean your exhaust fan and duct work connected to the port.

