



Beamo Laser Tube Replacement

Installation Guide



When is it time to replace the laser?

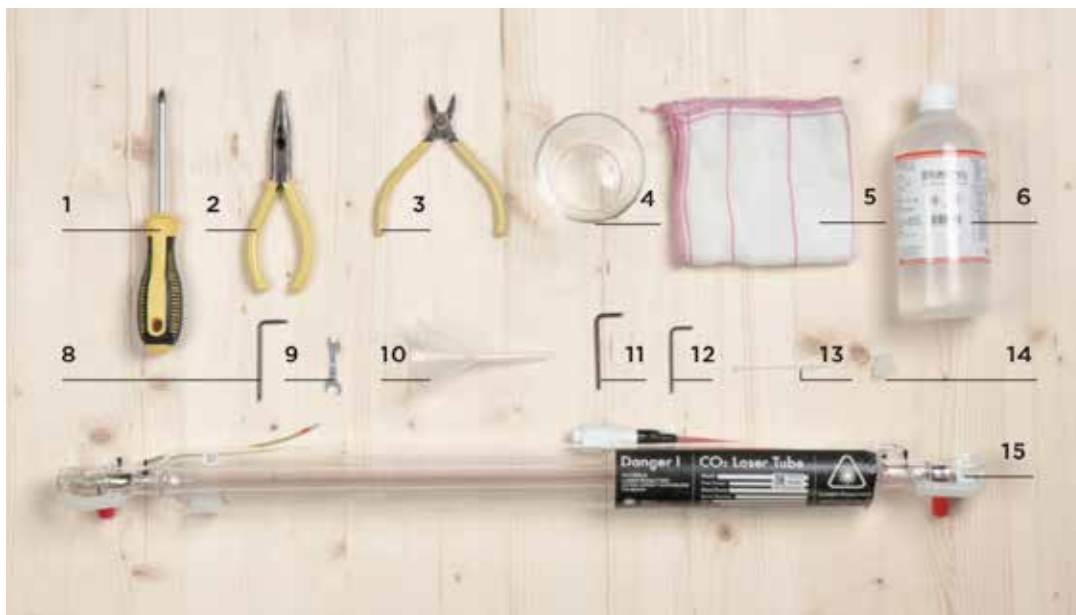
1. The degradation of the laser tube.
2. The failure of the laser tube which has no laser beam output as well as generates a cracking sound. Laser tubes are classed as consumables, the degradation is normal due to use of power, storage, time, and other factors. The higher the power setting, the faster the laser tube degradation.

Tools

Self-preparation: 1. phillips screwdriver 2. needle nose pliers 3. diagonal pliers 4. water container 5. paper towel or rag 6. 75%-99% alcohol 7. Vacuum cleaner or high-pressure spray gun (if you have one, it is better.)

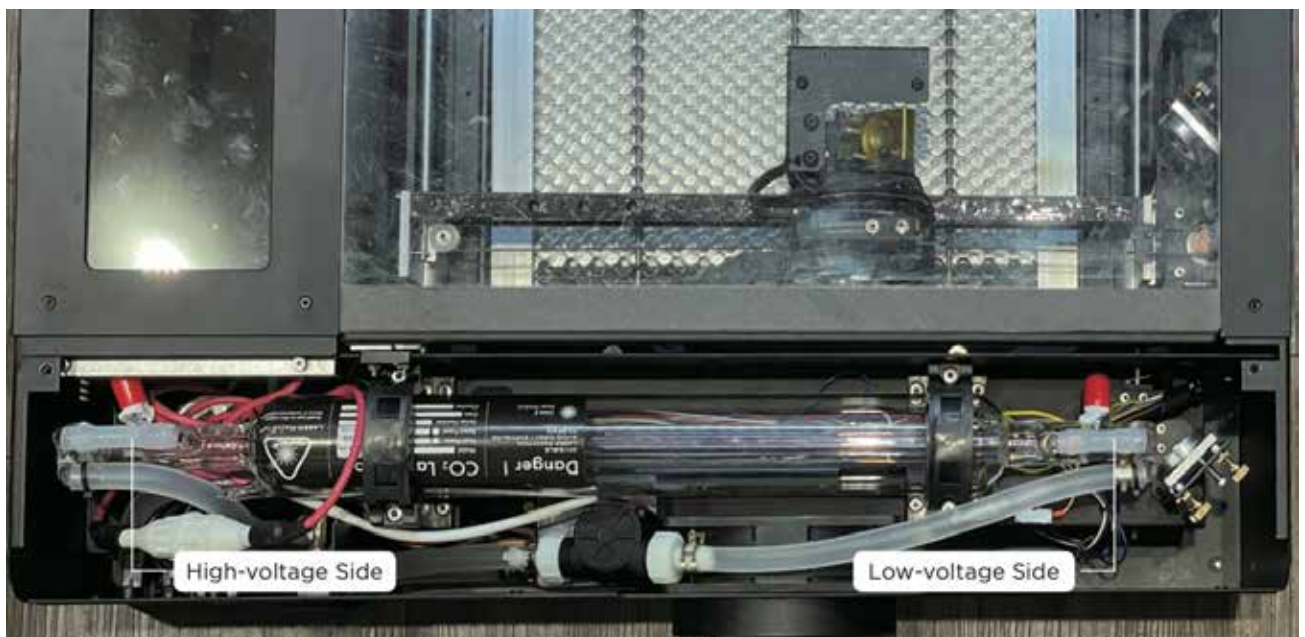
Included in the accessory box: 8. torx screwdriver 9. double head wrench 10. funnel 11. 3mm hexagonal wrench

Included in laser tube box: 12. 2.5mm hexagonal wrench 13. cable tie 14. water pipe plug 15. laser tube



Notes before you start

1. Please unplug the power cord first, then replace the laser tube.
2. Please use the Torx screwdriver to remove the 6 screws on the back cover and then remove the back cover.
3. You can remove the dust from the back chassis first and then replace the laser tube. Use a vacuum cleaner or high-pressure spray gun to remove the dust from the back chassis, and then use a paper towel or rag with alcohol to wipe the dirty area and wait for the chassis to dry before proceeding with the next operation.
- 4. The laser tube has two ends. The high-voltage side is near the screen and the low-voltage side is near the reflective mirror.**



Installation

1. Disconnect the laser tube wires: Unscrew and disconnect the white connector on the high-voltage side. Press the white terminal and pull out the ground wire on the low-voltage side.



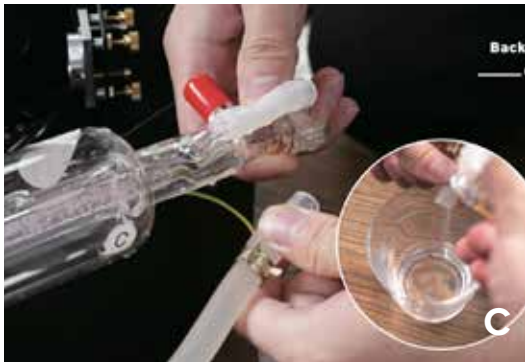
2. Loosen the laser tube holders: Use a 3mm hexagonal wrench to loosen a total of 4 screws on the laser tube holders.



3. Take the laser tube out to drain: (A) Use needle nose pliers to move the hose clamp from the low-voltage side towards the center of the water hose. (B) Use the diagonal pliers to remove the cable tie holder the water hose and move the laser tube out from the chassis.



(C) Aim the water hose on the low-voltage side at the water container, and then pull out the hose to drain the water (when the water outlet position of the low-voltage side is lower than the high-voltage side, the liquid will be discharged due to siphon principle). (D) When the drainage is complete, clog the water outlet by a water pipe plug.



4. Remove the laser tube: (A) To avoid water leakage, place a rag or paper towel under the high-voltage side. Use diagonal pliers to remove the cable tie fixing the water hose. (B) Pull out water hose on the high-voltage side and insert a water pipe plug.

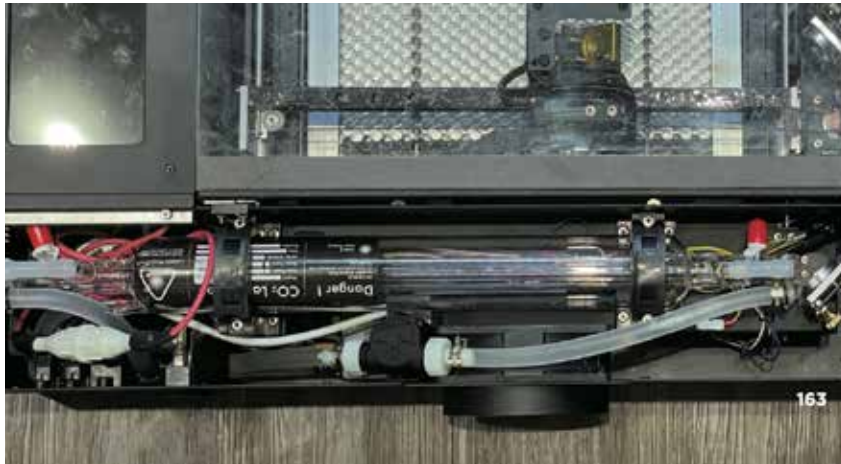


(C) Remove the laser tube completely.



AVOID CONTACTING THE MACHINE PARTS WITH WATER. IF WATER ENTERS, DRY THE WATER, AND WAIT FOR THE AIR TO DRY BEFORE STARTING THE MACHINE.

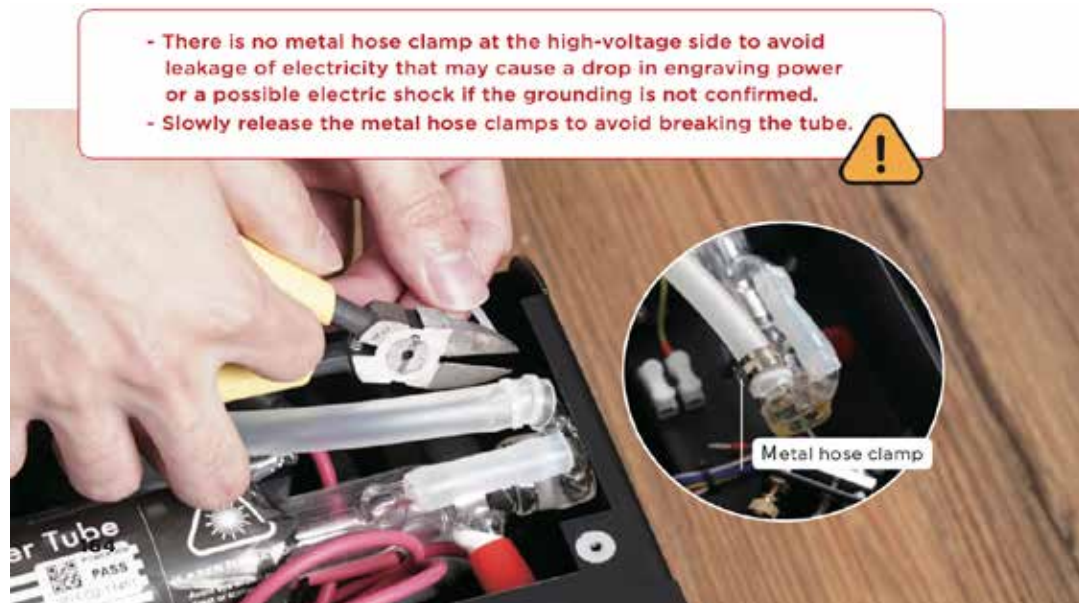
5. Place the laser and water hose in: (A) Place the laser tube according to the picture



(B) Remove the water pipe plug on the high-voltage side and put the water hose on the glass tube. Then remove the water pipe plug on the low-voltage side and put the water hose on the glass tube.



6. Fix the water hose on the laser tube: Fix the water hose at the high-voltage side on the glass tube with cable tie. Tighten the cable tie and cut off the excess cable tie with a pair of diagonal pliers. Fix the water hose at the low-voltage side of the glass tube with a cable tie. Tighten the cable tie and cut off excess cable tie with a pair of diagonal pliers. Put the metal hose clamp back.



7. Connect the laser tube wire: Connect the white connector on the high-voltage side with a red wire back and tighten it. Press down the white terminal on the low-voltage side and insert the ground wire firmly. Release the white terminal and gently pull the ground wire to check if it is stable.



8. Tighten the laser tube holders back: Place the laser tube in position, leaving a finger distance between the head and tail ends. Rotate the red terminal on the high-voltage side towards the inside of the machine chassis. Make sure there are no folds or kinks in the water hoses. Use a 3mm hexagonal wrench to tighten a total of 4 screws in the laser tube holder. Gently shake the laser tube to make sure it will not shift left to right and forwards and backwards.

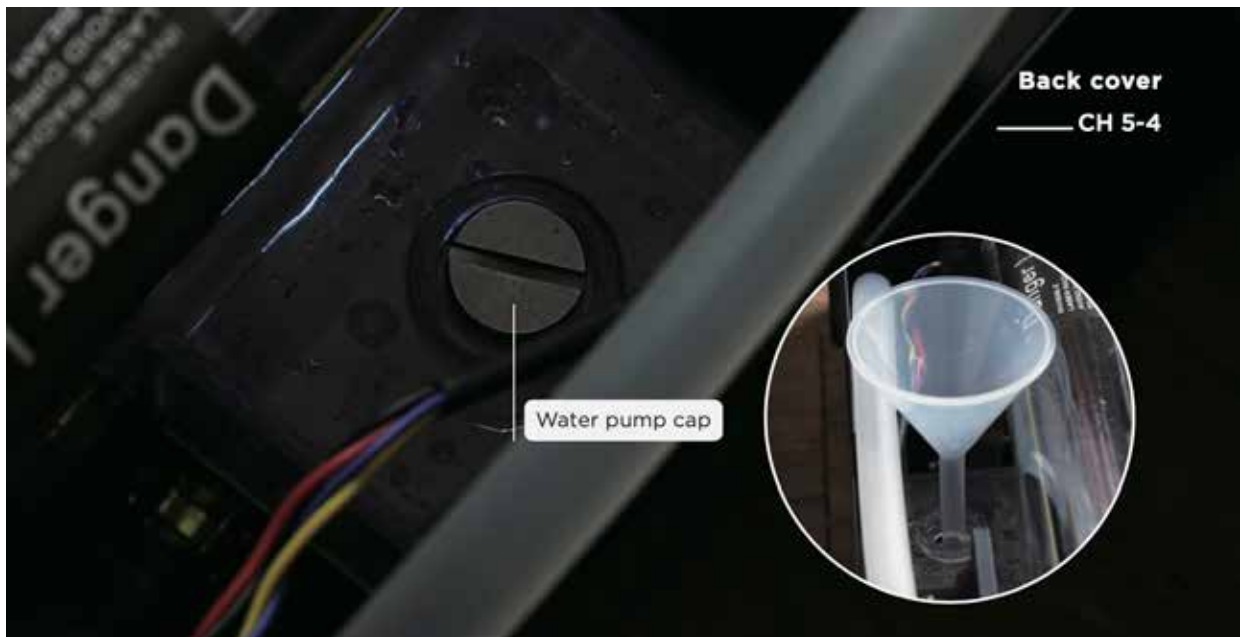


9. Plug in the power cord and start the machine: After confirming that the installation is correct, you can plug in the power cord and start the machine.

10. Activate the “Pump”: After the machine is turned on, click “MAINTAIN” on the screen. Click “Pumps” after the laser head is homed. Then the cooling water will start to enter the laser tube and the water level of the water pump will drop.

11. Turn off the machine and unplug the power cord:

When the water level of the water pump is 1/4 left, turn off the machine and unplug the cord before adding water manually.



- Please do not touch the area near the high-voltage side of the laser tube after plugging the power cord in to avoid electric shock.
- When using the "MAINTAIN" page, avoid touching the laser switch or putting your hand at the laser tube tail end. If the water pump cannot be activated, please contact your reseller.
- Please observe the water level carefully to avoid overflowing.
- Please use distilled water to avoid impurities affecting the water-cooling effect.



12. Add water manually: Use the double head wrench to open the water pump cap. Put in the funnel. Fill the water pump with distilled water.

13. Tighten the water pump cap back: Repeat steps 9-12 until the water pump level reaches 80% full and the water level no longer drops due to adding the laser tube, then use the double head wrench to tighten the water pump cap back to complete the laser tube replacement procedure.

- It is recommended to fill the water to more than 80% full or press the water hose when adding water, so it is less likely to produce air bubbles.
- There should not be a large number of air bubbles inside the laser tube to avoid affecting the heat-dissipation efficiency.

