

# DAILY MAINTENANCE OF LASER CUTTING MACHINE

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The price of a [laser cutting machine](#) is not low, ranging from hundreds of thousands to millions. Therefore, prolonging the service life of the laser cutting machine as much as possible can better save production costs and win greater benefits. It can be seen that the daily maintenance and maintenance of the laser cutting machine is very important. The following mainly explains from several aspects:

## **Replacement of circulating water and cleaning of water tank:**

Make sure that the laser tube is filled with circulating water before the machine works. The water quality and temperature of the circulating water directly affect the service life of the laser tube. Therefore, it is necessary to replace the circulating water and clean the water tank regularly. This is best done once a week.

## **Cleaning of protective lenses:**

There will be some reflective mirrors and focusing mirrors on the machine. The laser is reflected and focused by these mirrors and emitted from the laser head. The lens is easily stained with dust or other pollutants, causing loss of laser or damage to the lens. So clean the lenses every day. Attention should be paid while cleaning: 1. The lens should be wiped gently, and the surface coating should not be damaged; 2. The process of wiping should be handled with care to prevent falling; 3. When installing the focusing lens, please be sure to keep the concave side down.

## **Guide rail cleaning:**

As one of the core components of the equipment, guide rails and linear shafts function as guides and supports. In order to ensure that the machine has high machining accuracy, its guide rails and straight lines are required to have high guiding accuracy and good motion stability. During the operation of the equipment, a large amount of corrosive dust and smoke will be generated during the processing of the workpiece. Based on the long-term deposition of a large amount of these smoke and dust on the surface of the guide rail and the linear shaft, it will have a great impact on the processing accuracy of the equipment, and will Corrosion spots are formed on the surface of the linear axis of the guide rail, shortening the service life of the equipment. So clean the guide rails of the machine every half a month. Turn off the machine before cleaning.

## **Fastening of screws and couplings:**

After using for about a month, the equipment can be strengthened for the first time. After the motion system has been working for a period of time, the screws and couplings at the motion connection will become loose, which will affect the stability of the mechanical motion. Therefore, it is necessary to observe the transmission parts during the operation of the machine. Whether there is any abnormal sound or abnormal phenomenon, if the problem is found, it must be strengthened and maintained in time. At the same time, the machine should use tools to tighten the screws one by one after a period of time.

## **Inspection of optical path:**

The optical path system of the machine is completed by the reflection of the mirror and the focusing of the focusing mirror. In the optical path, the focusing mirror does not have the problem of shifting, but the three mirrors are fixed by mechanical parts, and the possibility of shifting is relatively large. It is recommended to check whether the optical path is normal before each work.

1. It is necessary to check the lubricating oil filling of X-axis guide rail and screw, Y-axis guide rail and screw, Z-axis guide rail and screw every other week, keep the lubrication of each moving part, and extend the X, Y, Z-axis guide rail and screw. lifespan of the bar. At least once a month) Check the pollution on the surface of the reflector and focusing mirror, and clean the optical lens in time to ensure its service life
2. Regularly clean up the sundries in the air outlet to ensure the ventilation effect.
3. Regularly check the filter in the air circuit, and remove the accumulated water and sundries in the filter in time.
4. Regularly check whether the travel switch bracket and the bumper bracket screws are loose.
5. It is necessary to clean up the dust on the filter screen of the ventilation fan of the electric control cabinet in time to ensure good ventilation so as to facilitate the heat dissipation of the internal electrical components. the
6. Clean the guide rails in time to protect the sundries in the skin cavity, so as not to damage the

guide rails, thereby prolonging the service life of the guide rails.

7. After the machine tool is installed and used for a period of time, the level of the machine tool should be readjusted to ensure the cutting accuracy of the machine tool.