

HOW TO CLEAN THE LASER CUTTING MACHINE LENS?

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laser cutting machine lens

The protective laser cutting machine lens is located at the lower part of the centering module, which is easily polluted by smoke and dust. It is recommended to clean once a day when you start working. First, completely loosen the screws of the mirror box, pinch both sides of the mirror box drawer with your thumb and forefinger, slowly pull out the mirror box drawer, be careful not to lose the seals on the upper and lower sides of the drawer, and then seal the drawer with tape. Prevent dust from contaminating the focusing lens. The protective lens is a flat mirror, and the sealing ring and the protective lens can be released by pressing the lens. When installing the lens, place the lens first, then press the sealing ring. The collimating mirror and focusing mirror are located inside the fiber cutting head. Record the disassembly sequence during disassembly to ensure the accuracy of reinstallation.

1. Precautions for using lenses

Do not touch optical surfaces such as focusing mirrors, protective mirrors, and QBH heads directly with your hands to avoid scratches or corrosion on the mirror surfaces. If there is oil stain or dust on the mirror surface, it will seriously affect the use of the lens, and the lens should be cleaned in time.

Do not use water, detergent, etc. to clean the surface of the optical lens. The surface of the lens is coated with a special film, if these are used to clean the lens, it will damage the surface of the lens.

Do not place the lens in a dark and humid place, otherwise the surface of the lens will be aged. When installing or replacing reflectors, focusing mirrors and protective mirrors, do not use too much pressure, otherwise it may cause lens deformation and affect beam quality.

2. How to install or replace optical lenses

Before installing or replacing the optical lens, please pay attention to wear clean clothes, clean your hands with soap or detergent, and wear light and clean white gloves; it is strictly forbidden to touch the lens with any part of your hand; when taking the lens, please take it from the side of the lens, Do not touch the coated surface of the lens directly. When assembling the lens, do not blow air on the lens with your mouth; the lens should be placed on a clean table, and a few pieces of professional lens paper should be placed under the table. When taking out the lens, be careful not to bump or drop it, and do not apply force to the coating surface of the lens; the frame where the lens is installed should be cleaned, and the dust and dust inside the frame should be cleaned with a clean air gun. dirty, then gently put the lens into the lens holder. When installing the lens on the lens holder, do not use too much force when fixing the lens, so as not to deform the lens and affect the

beam quality.

3. Steps to clean the lens

Different lenses have different cleaning methods. When the mirror surface is flat and there is no frame, it can be wiped with mirror paper; when the mirror surface is curved or has a frame, it should be cleaned with a cotton swab. Specific steps are as follows:

Steps to clean the lens with lens paper: Blow off the dust on the lens surface with a clean air gun; clean the lens surface with alcohol or lens paper, put the smooth side of the lens paper on the lens surface and drop 2-3 drops of high-purity alcohol or acetone, slowly pull out the lens and point the paper horizontally towards the operator, repeat the above action several times until the surface of the lens is clean. Do not put pressure on the lens paper. In order to prevent scratches, if the mirror surface is dirty, you can fold the lens paper in half 2 to 3 times, and repeat the above steps until the mirror surface is clean. It is forbidden to drag the dry lens paper directly on the mirror surface. Steps to clean the lens with a cotton swab: first use a spray gun to blow off the dust on the lens; then use a clean cotton swab to remove the dirt; dip a new cotton swab into high-purity alcohol or acetone, and make a circular motion from the center of the lens to scrub the lens, after a week Change another clean cotton swab and repeat the above operation until the lens is clean; observe the cleaned lens until there is no dirt or spots on the surface of the lens; place the cleaned lens on the frame according to the above method. Do not use used cotton swabs. If there are sundries on the surface of the lens that are not easy to remove, you can blow the surface of the lens with rubber air. Both sides should be cleaned. After cleaning, reconfirm that there are no residues of the following: detergent, absorbent cotton, foreign matter, impurities. Do not expose the cleaned lens to the air, install it as soon as possible or store it in a clean airtight container temporarily.

4. Storage of optical lenses

Proper storage of optical lenses can keep the quality of the lenses intact. The storage environment temperature is 10-30°C, the lens should not be placed in a freezer or similar environment, otherwise it will be dewed and frosted when taken out, and the lens will be easily damaged; the storage environment temperature should not be higher than 30°C, otherwise it will affect the coating on the surface of the lens. Store the lens in a box. The lens should be placed in a vibration-free environment, otherwise it will easily cause lens deformation and affect the performance of the lens.

5. Replacement of wearing parts. When assembling a new ceramic body, align the two positioning

piles with the positioning holes of the induction seat, flatten and straighten the ceramic body by hand, and then tighten the pressure ring. After the ceramic body is pressed, the nozzle should be tightened. If the above installation requirements are not met, the components of the sensor base module may be damaged and the system may not work properly.