



ULS MAINTENANCE

Revision: May 2018

WHAT THIS GUIDE IS ABOUT

This guide is designed to help outline the maintenance schedule and requirement for Universal Laser Systems.

It is important to keep your Universal Laser System as clean as possible to ensure trouble free operation and the best possible results from laser processing.

Performing regular maintenance also helps to reduce wear and tear on components to extend their operating life resulting in reduced repair costs.

If you require further help with the information contained in this guide, please contact the LST Group support department at support@lstgroup.com.au

ITEMS REQUIRED

- Kitchen wipes
- Window wipes
- Vacuum Cleaner
- Cotton Swabs
- Lens Cleaner

NOTE:

ALWAYS TURN THE LASER MACHINE OFF AND UNPLUG THE SYSTEM BEFORE CLEANING

MAINTENANCE SCHEDULE

We recommend the following maintenance schedule:

THE START OF EVERY DAY

- Check the beam window, #2 mirror, #3 mirror and focus lens.
- Clean **ONLY** if dirty

EVERY 8 HOURS OF USE

- Clean motion system
- Remove debris and off cuts
- Perform focus calibration

ANNUALLY

- LST Group service to clean machine, inspect/replace parts and perform system calibrations.

AS NECESSARY

- Clean engraving table
- Clean cutting table
- Clean main enclosure
- Clean top door window

MOTION SYSTEM

Clean the X-rail and Y-rail by using alcohol-based kitchen wipes. Pay close attention to the bearing tracks since any debris left to build up in these bearing tracks will cause the bearings to wear and the engraving quality to become uneven. After the rails and tracks are cleaned, use a fresh kitchen wipe to clean all the bearings by holding the wipes against each bearing and moving the motion system by hand to roll the bearings against the wipes.

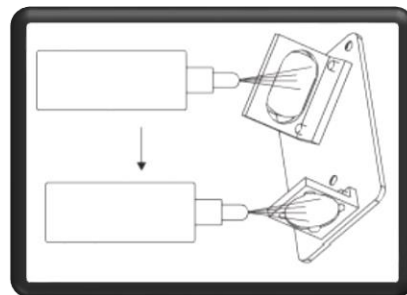
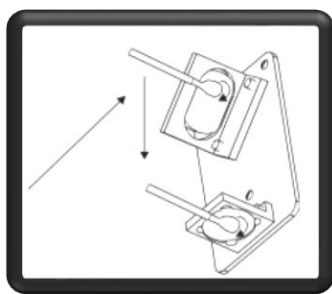
OPTICS

A visual inspection of the #2 and #3 mirrors, beam window and focus lens should be performed before the first use of the laser machine for the day.

CAUTION: Do not clean an optic that is visually clean. Excessive cleaning can damage the optical coatings. Try not to touch the optical surfaces with your fingers, handle optics only by the edge or optical housing. Fingerprints can damage the optical coatings. **NEVER** clean any optic right after engraving or cutting because the optic may be hot, and the cool lens cleaning solution may thermally shock the optic and crack it.

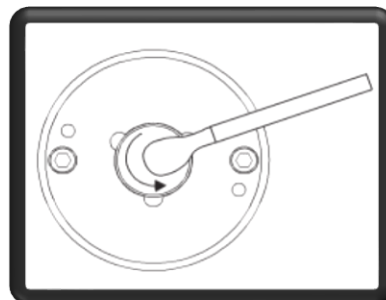
To clean the #2 mirror (VLS desk top and ILS systems only), #3 mirror and lens:

- Squeeze 2 drops of lens fluid cleaner **DO NOT USE** other types of cleaners or solutions, directly onto the optic. If heavy debris is present, let the solution soak in for a minute.
- Roll a fresh cotton swab across the optics in one direction. Use a fresh swab for each pass. Be gentle when cleaning the optic to avoid scratching the surface. Repeat this procedure for the focus lens, but make sure you clean both sides of the lens.



To clean the #2 mirror (VLS platforms and PLS systems) and beam window:

- To clean the optics with a cotton swab, moisten the cotton swab with the lens cleaning solution with 2 drops of fluid.
- Gently roll the cotton swab across the mirror once. Use a fresh swab for each pass.



Note: If your system is equipped with Air Assist, you must remove the optics protection housing to gain access to the optic to clean it. Rotate the beam window cover counter-clockwise (2) and then off at a 45-degree angle (3). If the beam window cover is stuck, use a 1/16 Allen wrench to slightly loosen the screw (1) and try again. Set the cover off to the side and clean the optic, if necessary. Reinstall the beam window cover.



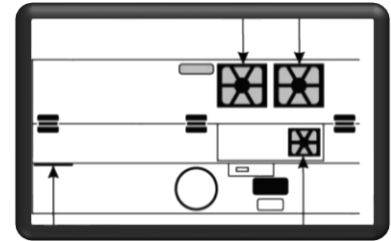
THE MAIN ENCLOSURE

The main enclosure has several different components that require attention:

- Vacuum out debris from the body of the laser machine and empty the off cuts from the cutting table.
- Clean the body of the laser machine with kitchen wipes to remove dust and grime.
- Clean the top window using window wipes when necessary. **DO NOT** use abrasive cleaning cloths or chemicals.

COOLING FAN FILTERS

To clean the filters, simply snap off the black cover and remove the foam element. Wash the filter in a soap and water solution, dry then re-install. The number and location of these filters vary between models, but a quick visual inspection of the machine will help you identify them.



LUBRICATION

The Universal Laser System utilises sealed bearings that will self-adjust to take up any clearances as they begin to wear. **DO NOT** use lubrication on the motion system bearings.

FOCUS CALIBRATION

While performing your maintenance, this is a perfect time to perform your focus calibration, consult our relevant guide for further information.

CONTACT US

LST GROUP

109 Bonds Rd Punchbowl NSW 2196
Phone: 61 2 9584 9499 Fax: 61 2 9584 9550

LSTGroup.com.au

Sales: sales@lstgroup.com.au

Support: support@lstgroup.com.au

More than a million ways to give your business
a major competitive advantage!

