

LS100 Laser Machine Maintenance

Daily:

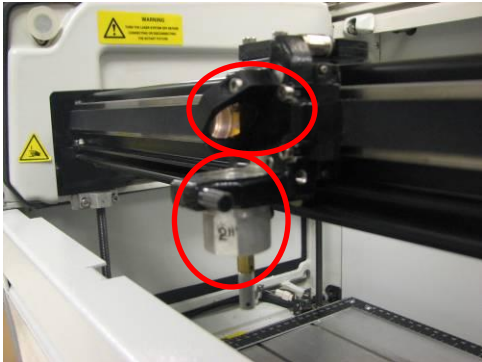
Clean the machine

- ✓ Make sure the laser machine is shut off before cleaning.
- ✓ Spray cleaner onto paper towel, not directly into the machine (to avoid getting cleaner overspray on other surfaces).
- ✓ Use glass cleaner and paper towels to thoroughly wipe the surface of the laser tray and inside panels.
- ✓ Use soap & water or weak vinegar/water solution with a soft (microfiber) cloth to clean both sides of the glass hood. Be gentle, do not scrub.
- ✓ Organize the work area to maintain a clean station for customers and laser operators.

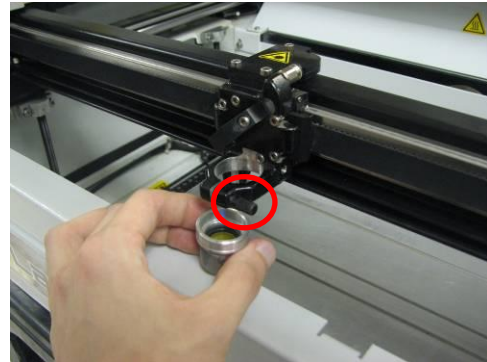
Weekly:

Clean lens (Lens cleaner: ZSPL03. Cotton swabs: ZSPL04)

- ✓ Using a cotton swab or optic wipe and lens cleaner, clean both sides of the laser lens. Be gentle, do not scrub. You can loosen the thumbscrew to remove the lens holder, making it easier to clean the underside of the lens.



Note the mirror (above) and lens holder (below)



Loosen the thumbscrew to remove the lens holder

Changing/Checking Disposable Filters (Particulate filter [6-pack]: ZSPL09)

- ✓ Turn off exhaust system.
- ✓ Unhook clasps on either side of the exhaust lid (which is attached to the hose). Lift entire lid and remove from exhaust system.
- ✓ The top layer is your particulate filter (also known as the 2" disposable filter). Check this for dust and smoke residue – these usually need to be replaced every several weeks, depending on how frequent the machine has been used. Diligent maintenance and replacement of these filters will extend the life of the other more expensive filters in the exhaust system.



Clasp



Particulate filter

*This one is quite dirty and needs replaced

Monthly:

Clean Mirrors (as needed. Lens cleaner: ZSPL03. Cotton swabs: ZSPL04)

- ✓ Using a cotton swab or optic wipe and lens cleaner, clean the mirror above the lens and the mirror on the far right side of the laser arm, as needed. Be gentle, do not scrub.



Far right mirror

Changing/Checking HEPA Filters (HEPA Filter: ZSPL10)

- ✓ The second layer in your exhaust system is the HEPA filter.
- ✓ With proper daily/weekly maintenance of your machine this should only need to be changed every few months, but this filter should still be checked at least monthly
- ✓ Heavy usage will cause it to degrade more quickly. Vector cutting alder wood on a vector tray will also reduce the effective life.



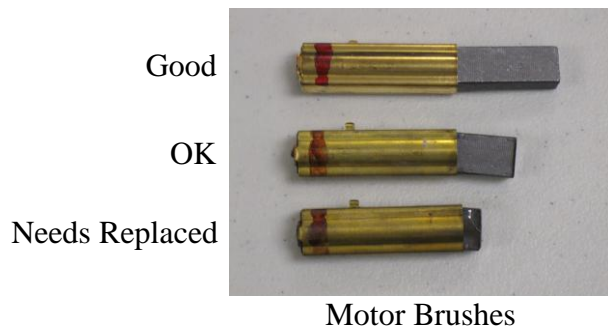
HEPA filter

*This one is quite dirty and needs replaced soon

Long-Term Maintenance:

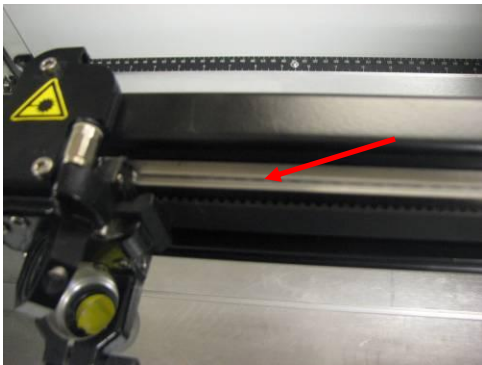
Changing/Checking brushes (Motor brushes: ZSPL13)

- ✓ Your exhaust system will require the brushes to be replaced approximately every 500 hours.
- ✓ It is dependent upon use; we find that with average use it usually needs replaced every 8-12 months, but can vary from machine to machine.
- ✓ Full instructions can be found on the Laser Forum: click “Documentation” at the top and look for “Checking/Changing Motor Brushes”

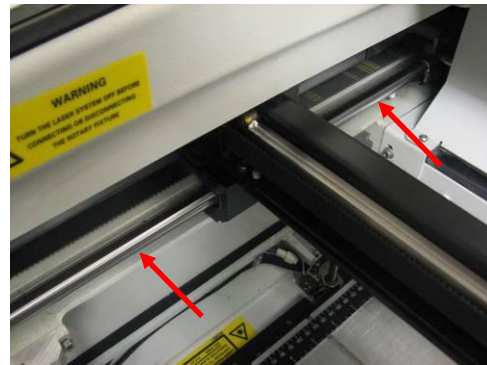


Lubrication

- ✓ Use white lithium grease (in a tube or tub, not an aerosol) to lubricate the X-axis track. The top and bottom surfaces have a groove.
- ✓ Do not lubricate under the belt.
- ✓ Make sure the laser is turned off.
- ✓ Clean out used/dirty grease with a cotton swab, moving the laser head back and forth by hand to expose the grease to the surface.
- ✓ Deposit a thin layer of grease with a cotton swab.
- ✓ Work it in, moving the laser head back and forth by hand. Repeat the wiping/applying steps several times (getting the old grease worked out and the new grease worked in).
- ✓ You can also add a bit of fresh grease to the Y-axis tracks.
- ✓ Apply on the X-axis every 6 months
- ✓ Apply on the Y-axis if you notice discoloration (6+ months).



This is the X-axis track
Note the groove: that is where the grease goes



This is the Y-axis bar (this is the left side – the right side has an identical one as well)

Chemical Filter (Media only: ZSPL12. Module & Media: ZSPL11)

- ✓ The third layer in your exhaust system is the chemical filter. It contains activated charcoal to remove odors.
- ✓ The media in this filter need replaced only if you notice odors.