

TECHNICAL BULLETIN # 10

Ongoing research to improve Perfect Laser product quality and performance has resulted in a number of recommendations.

Safety and cleanliness of your laser machine

One of the most important things you can do regarding maintenance of your laser machine is to keep it clean.

Dust (especially from cutting or engraving MDF) combined with humidity in the air creates mud. Your laser machine's high-voltage power supply (that drives the laser tube) outputs between 25 and 50 THOUSAND Volts, high enough to easily arc across a dust-filled, moist area, causing all sorts of problems - and dangers.

If you allow the cooling intake fan on the power supply to clog up like the picture on the left, not only do you run the risk of causing it to fail, and possibly catch alight, but then also causing massive damage to your laser machine. This will not be covered by insurance.

So, the lesson for today is : Clean your machine - inside and out - on a regular basis.

If you have a compressor, a quick blow-out of your machine (or a quick vacuum if you don't have a compressor) at the end of each day will save you plenty in the long run.

And while we're about it, if you are cutting a lot of MDF, get yourself some disposable dust masks. Available at a variety of hardware stores, these masks are normally just disposable cloth with an elastic band. Some of the better ones have an exhalation valve on the front.



If we find your machine looking the way it does in the pictures on the left, it is an automatic warranty void.



Same goes for mirrors and the lens. The mirror on the far left has a burn mark caused by dirt build-up, while the lens next to it is destroyed because the laser was run with dust on the lens.

Probably the most critical safety aspect of owning / running a laser machine is to be aware of things that can catch alight. Consider that your laser can burn through wood. If the air assist is faulty /clogged / not working, you **will** get flames.

A relatively cheap CO² fire extinguisher will prevent your laser (and possibly your house) from going up in flames. Make sure it is just CO² though, the powder ones leave a nasty mess.



The high-voltage connector between the power supply and the tube **MUST** be kept dust-free & clean at all times.



This tube's life was greatly reduced, costing the owner a lot to replace. Keeping it clean would have helped.



Not only will this cause overheating and thus eventually destroy the power supply, it is also a huge fire danger.

This is a vacuum cleaner. If you don't have one, go and buy one now. It is as important to keep your laser machine dust-free as having a pure CO² fire extinguisher near to your laser machine in case of an emergency.

