

MaxxGlo 1.05 Installation Instructions

MaxxGlo is designed to fit on O.S. 1.05 engines (standard or DRS versions) as a direct OEM replacement. Installation is the exact same as an OEM engine head, however, shimming and glow plug set-up can vary depending on fuel and desired performance – suggested combos below.

Installation:

There are 6 x M3 screws that hold the head to the engine. It is possible to use hand drivers or a torque wrench to remove/install.

- 1) Remove the OEM head; loosen the head bolts in a star shaped pattern. Once loose, in some cases, the head can be tight on the piston sleeve/liner. If this is the case lightly heat the head with a heat gun until the OEM head slips off without force.
- 2) Clean the top and outside of the sleeve and engine case with 91% or higher alcohol or break cleaner to remove any debris from previous use to avoid that entering the engine on reassembly.
- 3) Using Marvel Mystery Oil lightly recoat the top and side of the sleeve with your finger.
- 4) Clean the bottom side of the MaxxGlo with 91%+ alcohol or break cleaner to make sure there is no debris from the packaging, etc.
- 5) Clean off the shims and install the shim set you want to use into the bore on the bottom of MaxxGlo – see below for the recommended set-up for your fuel/flying style.
- 6) Slide the MaxxGlo onto the top of the engine where it rides on the top of the sleeve. There is no specific orientation that must be used; however, it is suggested to mount the plugs parallel with the crankshaft and with the angled plug facing downward for possible access to the second plug once installed in the helicopter. If the head is snug on the sleeve, use a heat gun to lightly heat until it slips on.
- 7) Tighten the 6 bolts lightly at first and in a star pattern until tight, if using a torque wrench start with 3 in-lb. Then proceed to 6 in-in, 9, 12, and end with 16. Do not apply Loctite at all to the engine head bolts.
- 8) Check that there is no debris on the top of the head, in the plug holes, or on the glow plugs. Install the glow plugs into the engine head which should be snug, but not cranked down. Be cautious not to cross thread the plugs when installing inside a helicopter. – see below for suggested plug type.

Shim Set-up:

Start with the below based on fuel type, then based on your local DA adjust if needed to get peak performance.

- 15%-23.5% “Low Viscosity” fuels install the stock 0.008” (0.2mm) shim by itself
- 15%-23.5% non LV labeled fuels install 0.008” (0.2mm) + 0.004” (0.1mm) shim set
- 30% “Low Viscosity” fuels install 0.008” (0.2mm) + 0.004” (0.1mm) shim set
- 30% non LV labeled fuels install 0.008” (0.2mm) + 0.008” (0.2mm) shim set

Glow Plug Set-up:

- 15%-23.5% fuel for general performance an O.S. 7/7 combination works very well. If you want peak power an O.S. 7 and O.S 5 (also named "A10") on the angled plug will have a slightly narrower tuning window but produce a bit more power.
- 30% fuel for general performance an O.S. 8/8 combination works very well. If you want peak power an O.S. 8 and O.S. 5 (also named "A10") on the angled plug will have a slightly narrower tuning window but produce a bit more power.

Unique situations or flying styles:

- If you happen to live in an area that is high elevation and DA (4000'+), it may be useful to step down 0.004" less than the above recommendation and use a lightly colder plug combo (O.S. 8 and O.S. 5 on the angled plug).
- If you are looking for a very smooth and soft running engine without aiming for peak power (like F3C or sport flying), on the "Low Viscosity" fuels you can add 0.004" (0.1mm) to the recommendation above and run a slightly hotter plug combo (O.S. 7/7). For the non LV fuels you might add a 0.008" (0.2mm) but keep a little colder plug on the angled (O.S. 7/5 combo).

Maintenance:

There is no maintenance to the head per say. When you take the engine apart to change bearings, clean all the surfaces well with 91%+ alcohol or break cleaner and ensure there are no divots or anything that appears that the engine ate something. If a brown "burn" starts to appear on the port side of the head and piston that is completely normal with use. Some fuels do stain the inside internals as well, but as long as there are no divots, chunks, or scratches on the parts, performance will be unaffected.

If installing on a brand-new engine change the glow plugs after the engine is broken in (1-2 gallons) as sometimes debris from break in will stick to the plug element.

If the engine is running well and no outside elements have drastically changed the first thing to check would be:

- 1) Air leaks in the exhaust assembly
- 2) Debris in the fuel filter/carb
- 3) Glow plugs which picked up debris or are starting to go bad (if the element is a bright silver/whiteish color the plug has been run lean and needs replaced. If the plug element has a deformed coil or is raised it also needs replaced).

Warranty:

NMP warranty does not apply to heads which damage has been noted after being run or damage to engines due to poor running (improper mixture settings/set-up). If an un-used head shows defects directly out of the package, please email nickmaxwellproducts@gmail.com