

Tiger



OPERATING INSTRUCTIONS

* T3 displacement 2,49 cc (.15pi) * weight 156 gr
* T4 displacement 3,20 cc (.19 pi) * weight 168 gr

The *PARRA TIGERS diesel* engines, was designed for all aeromodellers who love diesel engines and need a modern quality engine for use in competition and sport flying. This is not another replica of legendary Oliver engines, this engine is an improvement and powerful Tiger designed for competition. Tigers incorporates modern design elements and delivers high performance. The TIGERS are made from the finest materials, with precision fits and tolerances made possible by modern CNC machinery and expert workmanship.

TIGER 3 (T3) 2,49cc. Steel chromed sleeve and steel piston. Designed for Oliver Combat 2.5, Vintage racing purposes, Old Time Stunt.

TIGER 4 (T4) 3,2 cc Steel chromed sleeve and steel piston. Designed for Vintage Combat, or Old Time Stunt.

Both versions have radial inlet and exhaust according to Vintage rules. Provided with balanced crankshaft riding in two quality ball bearings and two bronze bushing connecting rod. Is provided with cylinder fix pin. The prop driver design avoids snagging the opponent's combat streamer cord and minimises ingress of dirt. Careful design has resulted in a rugged long-lasting engine of light weight that is easy to start and operate.

RUNNING IN

The engine is accurately fitted and adjusted at the factory, so it requires a relatively short running-in period of about 6 to 8 runs of 5 minutes each, allowing it to cool down between runs. Opening the needle valve to 4 turns will allow starting and running during this period at about 60% of peak power. You may see some burnt colour and grey particles in the exhaust oil during the first few runs, indicating that the moving parts are bedding in. The exhaust colour should clean up to a clear yellow colour (a bit like honey), which indicates correct adjustment for good operation. After the fifth run, you can increase engine speed to approximately 90% of peak and it should hold steady RPM. Maintain this slightly under-compressed and rich setting for the first 8 - 10 flights.

FIRST FLIGHTS

It is very important to not overwork or force the engine during initial flights. Set compression to avoid darkened exhaust oil colour. Never black! Darkened exhaust oil indicates over-compressed condition, which generates excess heat and load on the parts. Remember also that if you close the needle in excess, you also reduce the vital oil supply to the engine. Don't hurry to produce high speed performance too early with your engine. Your care and patience now will be rewarded by a long operating life and top engine performance.

FUEL

These engines are steel cylinder and piston and fuel should contain not less than 18% castor oil. Avoid use of synthetic oil. The recommended mix is 18% Castor Oil, 35% Ether, 47% Kerosene and add 1,2 – 2% Ethyl Nitrate, DII or Amsoil.

RECOMMENDED PROPELLERS

The TIGER'S flexibility allows it to satisfactorily operate on a wide range of propellers. Some experimentation will give optimum performance for your application. The propeller should be the most rigid possible (filled nylon or wood) and balanced in order to prevent vibration. We recommend 8x4 for T3 and 8x6 for T4 during running in period. The following propellers are a good starting point:

Tiger 3 - 8x4, 8x5, 8x6, 7x7 depending on requirements or specific class.

Tiger 4 – 8x6, 9x6, 10x5, 10x6 depending on requirements or specific class.

MAINTENANCE

All parts can be removed without force. If you do not have experience, don't totally dismantle your engine. For cleaning dirt from inside the engine, it is normally enough to remove the head by unscrewing the 4 x M3 bolts and unscrewing the rear cover. Wash with ethyl alcohol and dry. Then lubricate it with a few drops of machine or after run oil into the cylinder and rear ball-bearing before reassembly. Use nothing more aggressive than a plastic scrubber to clean carbon from the head or piston crown, rinsing well before reassembly. For separate cylinder from head and ball bearings from crankshaft it's necessary to heat the parts.

For more information of engine please visit our website www.clubtamaran.com where you can find technical solutions and tips for maximum enjoyment of your PARRA TIGER *diesel* engine.

IMPORTANT NOTE - *To remove the rear cover the piston must be near to TDC (Top Dead Centre). It is important that the rear cover is firmly tightened when replacing because if it comes loose during operation, severe damage to the piston can result.*



Alberto Parra 2014