

Product Report

DLA-64 TWIN CYLINDER GAS ENGINE



Xi'an Feiao Model, home to the DLA engine series, released a new twin cylinder engine, answering the need for a twin cylinder 60cc class power plant. When I learned of the twin, I had to have one. If it was anything like its predecessors, it has to be the prime ticket for the 30% / 90-110" inch class machines. As for quality, I expected to see something at least as equal to, if not better than the other DLAs I have.

When I received the engine and opened the box, I was very pleased to see all the CNC machining that was done. The outside color is of all natural aluminum alloy with CNC machining on the crankcase and fine "bead-blasted" cylinders. The

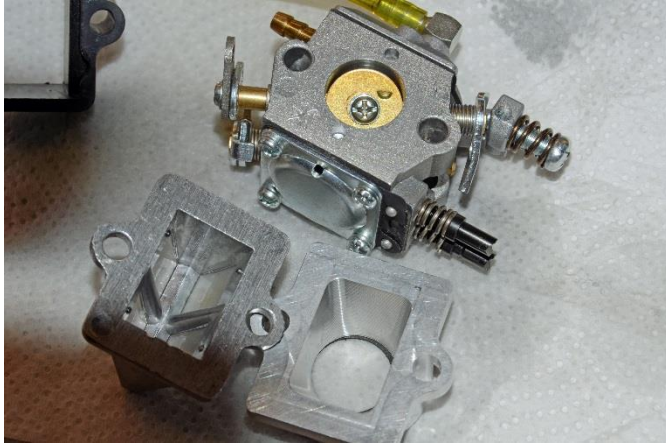
prop is attached by four socket head bolts with the accompanying washer. I noticed the DLA logo etched into both muffler cans, the main crankcase and prop washer. Xi'an Feiao Model spared no expense in presentation!

Xi'an Feiao performs the manufacturing process for all the major components of the DLA series engines and outsources only the Carburetors and bearings. The bearings used in the DLA series engines are superior! The main FAG bearings are imported from Germany and the IKO connecting rod bearings are imported from Japan

The Walbro carburetor is a very popular and reliable carburetor used on small gas engines. What are the benefits? Asside from the reliability, parts are available from most lawn equipment repair centers and on-line. Fortunately for us modelers, we benefit! This engine sports the "WT" series carburetor model 805.

On to the inner workings....

I photographed each sub-assembly as it was removed. The first thing was the carb, flange and reed valve assembly.



All three components are attached with two machine screws and sealed to the crankcase with a durable gasket. A machined aluminum flange fits in between the carb and reed valve assembly to provide adequate clearance. The reeds are attached with machine screws/washers to an aluminum reed valve "cage".

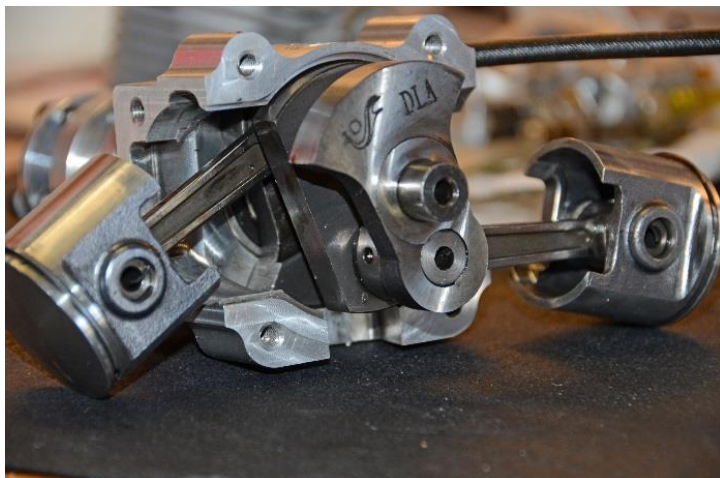
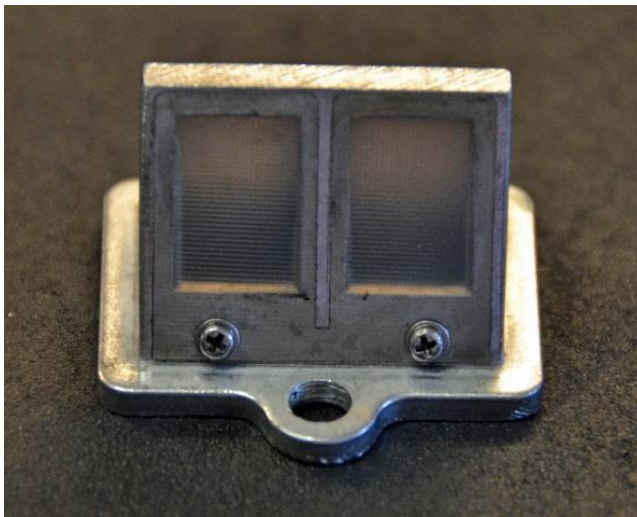
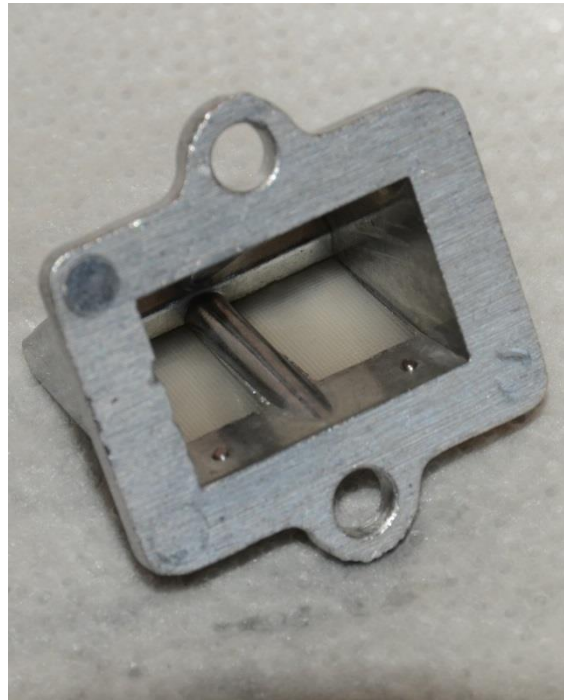
Below, I disassembled the reed valve assembly to get a better look at how it was put together. I

found the quality of the reed valve "system" to be flawless!



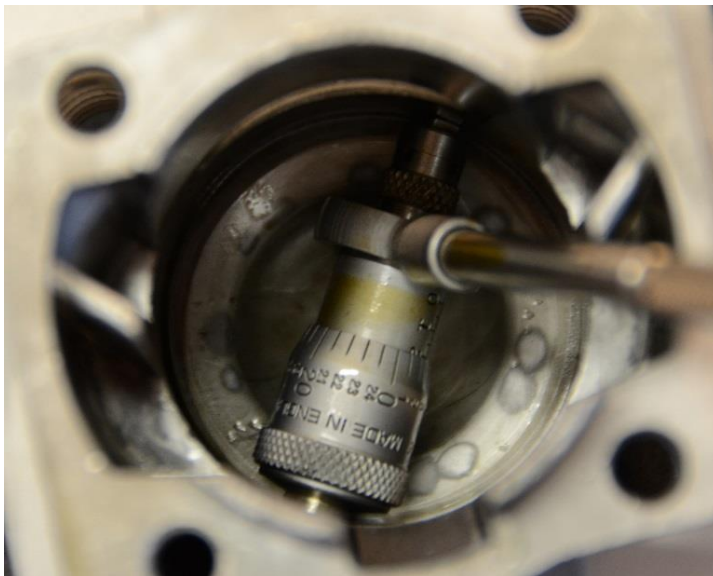
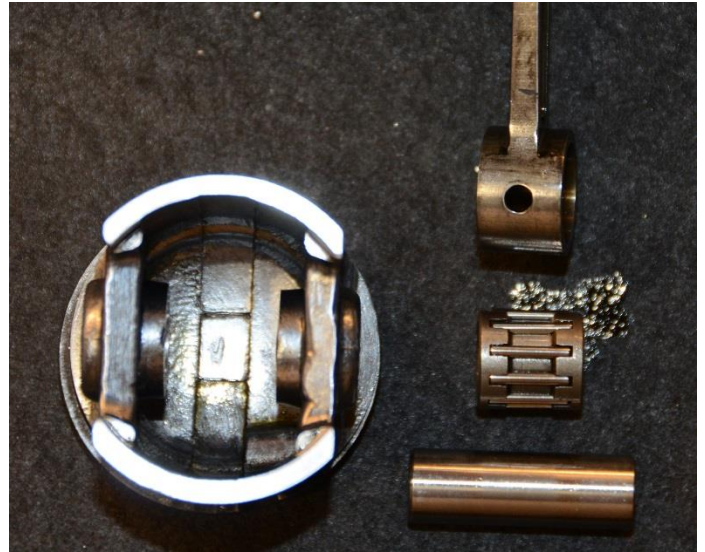
The reeds each have the appropriate amount of "bow". The screw-holes are very clean around the edges and free of any burrs. Unlike the "sheet-metal screw" counterpart, the machined screw renders a smooth hole with no burrs or ridge to distort or otherwise compromise integrity of the reed's ability to make full contact on the cage frame. Small washers increase the area of the screw head to reduce stress on the reeds and assure the reeds are held in place against the frame...

On the right, and below, a neat and clean reed cage will provide many hours/years of reliable service



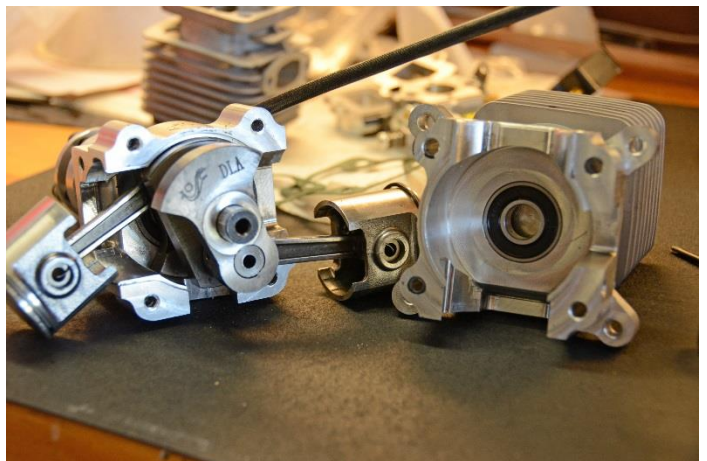
The rear half of the crankcase was removed to reveal the inside of the engine. Again, I was very pleased with the quality of machining DLA invested into the quality of this motor. The image to the left was slightly under-exposed to bring out the contrasting textures and surface details of each part. Yes! The "DLA" logo is etched into the rear of the crank, just above the rear bearing "button" in this view.

Here, the main components of the piston, piston pin and connecting rod with needle bearing assembly, can be seen. Note the "oil-hole" in the upper end of the connecting rod. The shiny "glob" in the upper view of the needle bearing assembly is oil residue from the bearing. The piston pin is secured in the piston on each end with "C" spring clips.



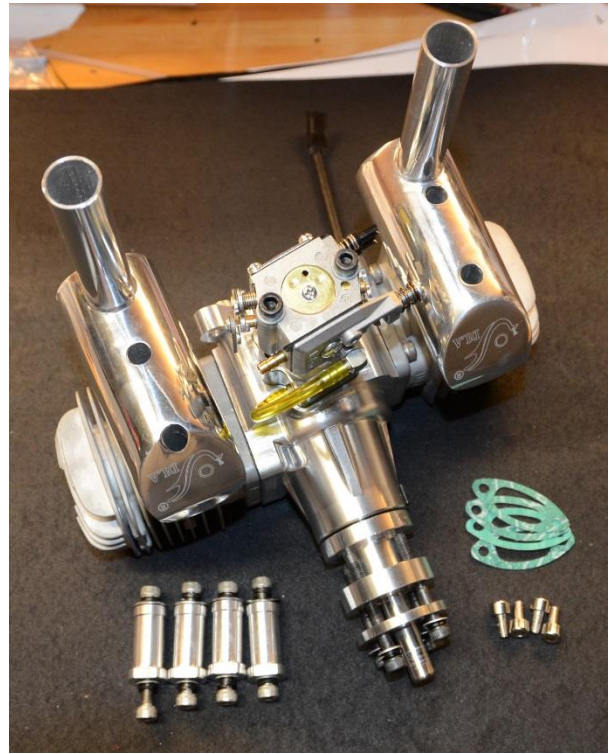
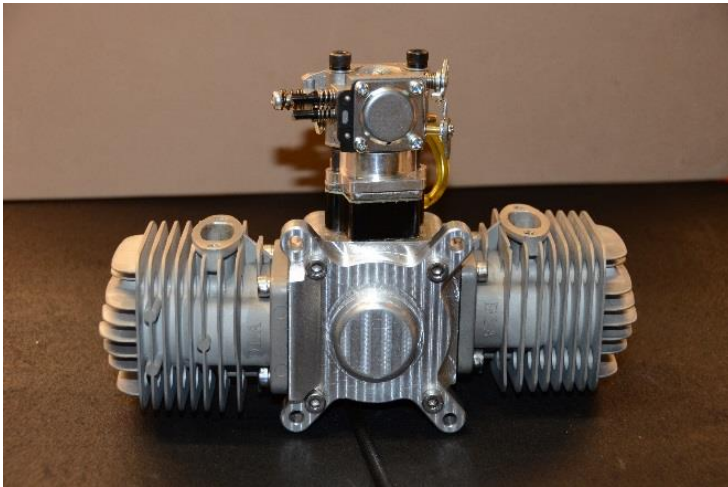
Both cylinders were "miced" for comparison to specifications and tolerance. Both cylinders were measured at the top of the stroke and bottom of the stroke. Two measurements were taken at 90 degrees apart to insure symmetry. Again, DLA came through with flying colors. None of the measurements showed any evidence of taper between the top and bottom of the stroke and the bore of both cylinders were within .005" of each other.

This view shows the rear crankcase in relation to the forward case and crankshaft assembly. The rear bearing is sealed.





The muffler cans have a taper in the forward end to accommodate in-cowl installation reducing and in most cases, eliminating the need of cutting large clearance holes in the cowl.



All the 'gleam and glamor' of CNC machining just does something to a modeler who appreciates fine workmanship!! The DLA-64 is made to provide the modeler with a reliable, smooth running engine for many years, at a very reasonable price!

Ron Mock....