

Latest Notes on QM-II Quarter Midget engine

Thank you for buying a Jett. We hope it performs up to your expectations.

This engine may or may not have been run. I run them from time to time as a quality check. Treat it as a new, unrun engine that needs breaking in.

Set up: Standard TDC is .150-.151 (all in inches)**. Standard head clearance is .015-.016. This is usually .004-.006 of head shims. Nelson LS shims fit a Jett too. A Stock head is .140 deep. Expect this engine to be tight-tighter than you have seen.

Break in: Since this engine is tight you can expect that break in must be done more carefully than usual. There is a higher load on the rod and before it seats and wears in properly there is a great danger of ruining your engine if you do not follow these simple rules.

Take a stock 7.4 carbon APC prop and run the engine at 15000 for 10 minutes, 19000-20000 for 10 minutes and finally 22000 for 10 minutes. Then cut off a Stock APC Carbon prop to 6.0" long and balance. This will give you high rpms while running rich. Run the engine at 25000 for 5 minutes.

(If you are at an altitude above 3000ft or you are using zero nitro, you may want to use a smaller prop) Never peak the engine hard during this process, but it is acceptable to "zoom" the engine up and down occasionally. The most common mode of failure during break in is "welding the rod to the crank". This is caused by running the engine too hard before it is broken in.

After Bench Break in: You may now fly the engine. We use the Carbon APC 7.4 x 7.5. This prop is currently available from Jett, Cady, and APC (Landing Products) The QM-1 (not the 1.1) is a better prop for the first few runs. Otherwise scrape or sand the back trailing edge to get your rpm higher for the first few flights. You need a prop that peaks above 23500 and preferably 24000 with a hot engine and muffler. This will give you the best runs in the air. Any prop that turns at least 23000 can be flown (after break in), but we have not achieved the best speeds with the larger props. Test a few props and mark the rpms so you will have a reference at the field. If you are using zero nitro, adjust the prop size accordingly.

Note!! This engine is not a Nelson. Do not assume that it will behave like a Nelson. The peak rpm will be less on the ground, but usually higher in the air.

First flight: Use a prop that peaks at 24000 or above on a hot engine. Start the engine rich, about 1 turn from peak. Lean the engine in slowly until you find the peak at 24000. As soon as it nears peak open up the needle and let the engine drop down to 23000. **For the first flight, open the needle 1/2 turn from this spot.** This will give you a rich run so you can trim your airplane and give the engine a bit more break in. **If the engine hits the pipe hard, kill it immediately and go to a richer setting for the next flight.** Before it runs out of fuel, kill the engine and land. Do not run all the fuel from your tank---ever! ! On the next flight lean in the needle *Y*. turn from the previous setting and fly again. This time it may hit the pipe for a few laps, but do not run it hard for the entire flight. After two flights lean in the needle one or two hundred rpm at a time until you achieve a full run at high speed without blowing plugs.

** 25.4mm /inch

e.g., .150" = .150 x 25.4 = 3.81mm