

# FINE TUNING THE PEE WEE 020 ENGINE

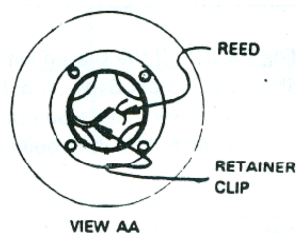
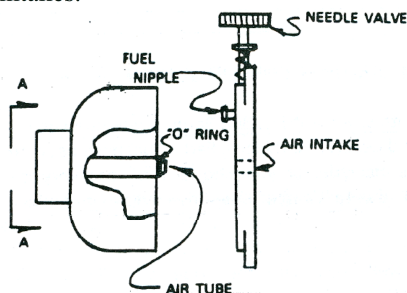
by Don Bartick

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Like all good things there are a few minor drawbacks. In the case of the Pee Wee 30, the weak link is the Cox 020 reed valve engine. Nothing will upset a flyer more than an engine that won't start or run smoothly through the duration of a flight (a measly 15 seconds).

If a Pee Wee 30 is to survive in the hands of a novice or rubber powered flyer, the engine must be manageable. To that end, I offer the following advice for those of you who are expecting to have your little Cox 020 spring start the first or second try. First of all that's too much to expect, but close never the less. I have found that a clean fuel system is an absolute must. Start with the fuel and filter it. Mr Coffee filters work well. Make sure your fuel syringe, pump, etc, are equally clean. Now, most important is the reed valve, reed seat, retainer clip, air intake and needle valve. Cleanliness is next to Godliness. Therefore if your engine is misbehaving, disassemble the tank from the engine. You end up with three big pieces:

- (1) Engine
- (2) Tank with reed valve assembly.
- (3) Tank end plate with needle valve assembly, air and fuel intakes.



Quick check of reed valve is to affix a clean piece of fuel tubing to the air tube leading to the reed valve assembly. Using your mouth or empty fuel syringe, blow air into the air tube. The reed valve, if working at all, will vibrate and an audible sound will be heard. The higher the frequency of the sound, the less flexure of the reed. What sound is right is uncertain, but I understand the engine performance increases as the frequency lowers (more flexure from the reed). Life of the reed reduces also with the increased flexure—so beware. Control of the flexure is dependent on the tightness of the retainer clip across the reed. If it presses the reed against the reed seat, most likely you will get no reed flexure which creates the condition that the engine will not sustain running. Burns off prime only—very frustrating.

To Fix:

Remove retainer clip carefully watching not to damage the reed (and make sure the cross piece is slightly raised).

