

Tillotson carb tuning - 2 cycle.

Tillotson HL-389A parts+ prices list .. [here](#) ..

This guide comes from an early, genuine Tillotson factory service brochure. It still applies today as a great starting point.

(Go to .. [here](#) .. if you want a methanol or petrol double pump conversion setup)

Setting up your 2-cycle Tillotson Carburetor.

With today's state of the art motors and stinger type exhaust systems, the following information will help you achieve the desired results that you need from these motors. Before mounting your Tillotson carburetor check the pulse track from the carb mounting surface and make sure that this track through the carb adapter , gaskets and etc is clear and in line with each other.

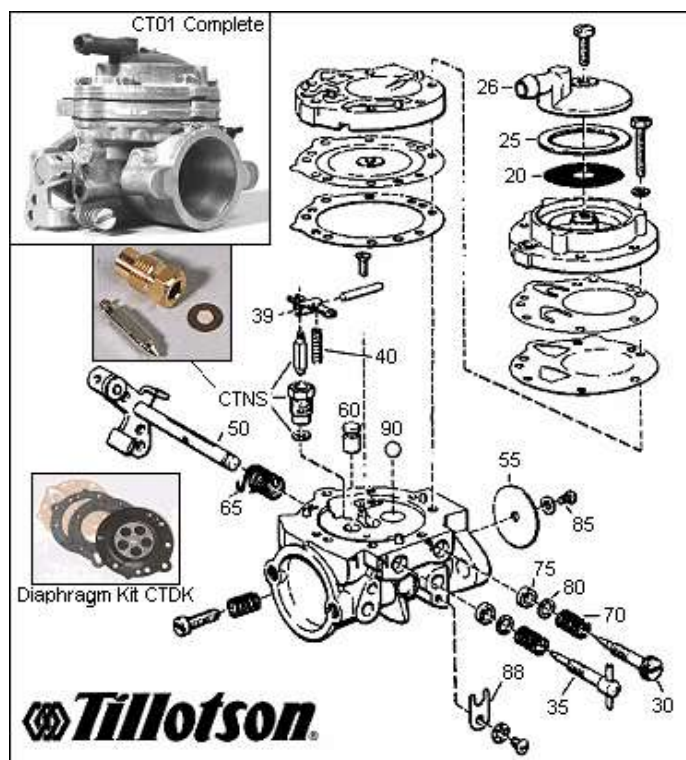
Set the low speed needle at 1+1/2 turns out and the high speed needle at 1+1/8 turns out. Adjust the throttle stop screw on the carburetor so that it just **cushions** the butterfly when the throttle valve goes closed. **Do not** set the carburetor so that the engine will idle as this will cause the engine to lean out in the corners and anytime you are off the throttle.

Track tuning your Tillotson Carburetor.

If the carburetor settings are too rich (too much fuel) the engine will falter at that section of the track corresponding to that particular range of the carburetor settings. A **spluttering or irregular firing sound** will be heard. This sound is also called **4 stroking**. If this sound occurs at low speed while at full throttle, such as coming out of a tight turn, it is usually due to the Low Speed adjusting needle being turned out too far. If the sound occurs at high speed while at full throttle, such as on a straightaway section of the track, it is due to the High Speed adjusting needle being out too far. In either case, needle adjustments must be made **inwards** gradually, in approximately 1/8 turn increments. It is best to adjust the Low Speed needle first for best overall low speed performance and then follow with the final high speed adjustment.

If the engine does not **4 stroke** or give the **too rich** firing sound, any place on the track, it could be because the engine is running too lean (not enough fuel). This is easily checked by **opening** the needles out in 1/8 turn increments until the engine **4 strokes**. In general, the optimum performance and engine reliability will occur at carburetor settings just slightly leaner than the point where the engine will begin to **4 stroke**.

If you find that the engine will not **chop off clean** or is slow to come back from **high rpm's** when you lift the throttle, this is a sign that the pop-off pressure in the carb is too high. The cure for this is to lower the pop-off pressure. If you experience loading-up problems, this is a sign that the pop-off pressure may be too low. The cure for this is to raise the pop-off pressure. As a general rule of thumb, the pop-off pressure will be from 8 to 12 lbs, and is a tuning factor that you can adjust for the altitude of your racetrack and the type of racing that you do.



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