

# Tillotson HB-15A Carburetor Manual



Connect a pulse tube between the two fittings as shown

Install the carb using a 5mm Hex bit -- the sleeve nuts are held captive inside the carb -- tighten each side equally until carb is secure

## Recommended Pop-Off Pressure: (Using 37g Spring)

Opening: 0.75bar (10.9 psi)

Closing: 0.55bar (8 psi)

## Recommended Initial Settings:

Idle Air Screw: 1T 15mins

Low Speed Fuel Screw: 1T 30mins

High Speed Fuel Screw: 1T 30-45mins

## Functionality:

Idle AIR Screw: Inside the metering chamber a fixed jet is fitted to deliver a set quantity of fuel for the idle function. The Idle air screw on the outside of the



body is used to regulate air to this idle jet. By opening this jet it will deliver more air and lean the mixture only at idle.

Note: this adjustment is not sensitive -- in order to see any change you will need to adjust by minimum  $\frac{1}{4}$  of a turn.

Low Speed FUEL Screw: The low speed fuelling is affecting mainly the throttle response and partially the mid-range fuelling. By closing the low speed fuel screw you can make the engine more responsive and reactive however it can become too lean and can start to lose some power in the mid-range.

High Speed FUEL Screw: This is the most important adjustment on this carburetor. This jet is responsible for the majority of the fuel delivery and has the biggest affect to increasing and decreasing the exhaust gas temperature to find the optimum setup.

Enrichment Circuit: There is an additional fuel circuit which is delivering fuel from the metering chamber through the throttle shaft into the bore of the carburetor from throttle opening 50-100% approximately. This is a fixed volume of fuel governed by the machining in the Tillotson factory and is not adjustable.

Butterfly Opening: It is recommended not to open the butterfly speed screw on this carburettor. By doing so will open the fuelling passage from the Low speed system and will start to overfuel off-throttle and typically the throttle response will be worse.

Adjustability: There will be a protection plate mounted which will not allow the driver to adjust the Low and High screws while driving in competition. For the mechanic to make adjustment in the pits it is necessary to use the Tillotson QuickJet tool to make the setup and then return to the track.

### **Maintenance:**

The recommended interval for maintenance or overhauling of this carburettor would be after 6 days of operation approximately. At this point the metering and pump diaphragms can start to lose their shape and the pump capacity can be less which will mean it would be necessary to have a richer settings to



compensate for the lack of pumping capability of the diaphragm. It will still function however if the kit is not replaced so regular.

Once the pressure is sealing well it is only necessary to fit a DG Half Kit (DG1HB) which is replacing the diaphragms and gaskets. If there is a slight leak found when popping off the carb it is then necessary to fit a complete repair kit (RK1HB).