

## REJETTING BASICS

These Re-jetting instructions are for engines that have had high performance parts added. These instructions are a general guideline to use. If you have never done this before, it *can be* frustrating to dial in a carb and you may want to take your buggy to a qualified service technician if you don't have the time to mess with it. These instructions may help you "dial in" from a modification however.

### **What symptoms indicate the engine is too lean?**

- a. Acceleration poor, surging.
- b. Performance improves slightly as engine warms.
- c. Better performance when choke/starter is used.
- d. No or white color, overheated spark plug electrode
- e. Removal of air cleaner makes condition worse.
- f. Popping back thru carburetor.
- g. Engine pings or knocks, excessive engine heat.

Always make sure to **clean the Air filter and Carb before adjusting the jets**. If the carb or filter is dirty when the re-jetting is performed, the engine will not run properly! DON'T ASSUME!

### **What jets do I buy?**

First determine what jets are in your carb. There are two ways.

- (1) Open the carb and visually check the carburetor jets to confirm the number on the jets (note: if the engine was rejetted by a previous owner the jets may be generic and the numbers will be meaningless) .
- (2) If this a new vehicle new then look in the service manual to see if they tell you what size you have.

Remember, all engines are unique and using a jet size just because someone else says it will work, may not. Buy a few sizes on either side to what your other sources said to make sure you can get it dialed in, in one sitting.

### **THE REJETTING PROCEDURE:**

Do not change more than 1 thing at a time, for example don't change the pilot jet AND the main jet. If more than one item is changed no determination can be made with regard to which change caused the result you're getting.

### **In what order do I rejet?**

This is the order which provides the best performance:

- 1) adjust to correct idle at stock,
- 2) install slow or pilot jet if needed,
- 3) re-adjust the idle with the new slow or pilot jet, and finally,
- 4) Install the main jet.

As the temperature fluctuates thru the year, re-jetting will be needed to compensate for the change in the A/F (Air/Fuel). Since the A/F changes it is good to have a few extra sizes of slow or pilot jets and several extra main jets.

**Spark plug:** Always rejet with a fresh plug, the old plug will have color from how the engine was before the rejetting process.

**Idle screw:** (*on the throttle mechanism*). Let engine warm up before adjusting for smooth idle.

**Pilot screw:** (sometimes called the mixture screw if you have one) Turn screw in GENTLY until it bottoms. Turn out 1/4 turn at a time until smooth idle is obtained. Normally do not turn the pilot screw out more than 2.5 turns. If you must turn it out more than 2.5 turns go up to the next larger pilot jet.

**How do I get to the jets?** Shown below is a typical carburetor. The jets are located in the bottom of the carb. Remove the 3- 4 screws which attach the fuel bowl to the carburetor.



Once the 4 screws are removed the main jet and slow or pilot) jet can be removed.



**Pilot jet (Slow jet):** If unable to obtain a smooth idle with pilot screw, increase the pilot/slow jet until a smooth idle can be obtained.

The pilot/slow jet will eliminate or reduce popping that occurs when letting off wide open throttle, (WOT). Changing the pilot/slow jet will can also improve cold weather starts. Go up 1 pilot/slow jet at a time, don't skip sizes. After installing a larger pilot/slow jet, re-adjust the pilot screw.

**Main jet:** Start with the biggest numbered main jet you think you would need and run at wide open throttle. The engine should *BOG* at wide open throttle. Install the next smaller size until the *stumble* is gone. Once the main jet is correct re-adjust the pilot screw first and the pilot(or slow) jet if needed until proper idle is obtained.

**Needle:** It is common for some to recommend changing the needle. We suggest not spending money on a needle (which may or may not improve performance) until every clip position available on the needle has been tried. If needle is not adjustable try shimming it with a small washer from the hardware store.

**Accelerator pump:** If a rich stumble occurs when the throttle is opened, try delaying delivery from the accelerator pump by widening the gap on the accelerator pump linkage to the actuator lever.

To deliver fuel from the accelerator pump *earlier*, reduce the gap.

**What to do when the weather changes:** The temperature, humidity, elevation etc, all affect the jetting. Extra jets are always needed so the engine can be adjusted to meet changes in the climate. Hot weather will normally require smaller numbered jets and cooler weather will need larger numbered jets.