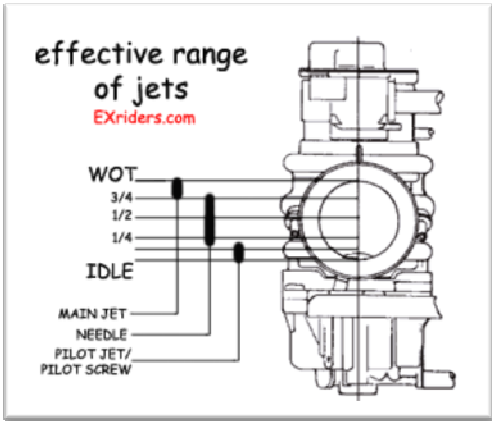
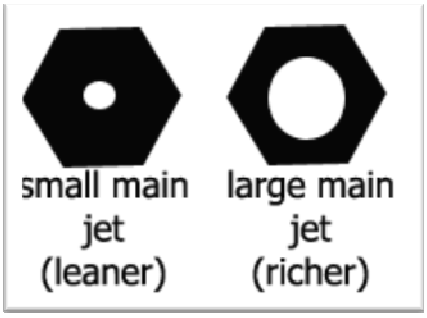
Carb Jetting Guide



Let's start by talking about the effective range of each carb circuit. Remember that the each adjustment effects a range of throttle positions, NOT engine RPMS... Always try to think "throttle position" - not- RPM.

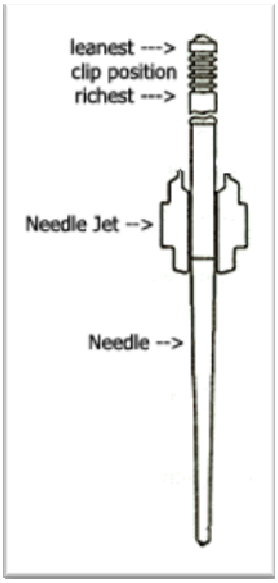
The three main carb circuits are;
- The main jet - 3/4 to full throttle
- The needle + needle jet - 1/8 to 3/4 throttle
- The pilot jet + pilot screw - idle to 1/8 throttle

The Main Jet



The main jet primarily controls fuel flow between 3/4 and WOT (wide open throttle). Once the throttle is open past about 3/4 the needle is pulled high enough out of the needle jet that the size of the main jet begins to control fuel flow. Main jets are identified by a number. The larger the number, the larger the hole in the jet. A larger hole will allow more fuel to flow, giving a richer mixture.
So basically, the higher the main jet number, the richer the fuel mixture will be between 3/4 and WOT.

The Needle and Needle Jet



The needle and needle jet are the components that primarily regulate fuel flow between 1/8 and 3/4 throttle. The needle jet is seldom changed in everyday tuning, but it's still worth mentioning the fact that it's there. The needle itself is a basically a tapered rod connected to the throttle slide. As the slide opens the needle is pulled upwards. The needle is tapered so that as it's pulled up, it takes up less space in the needle jet. This allows the fuel flow to be gradually increased as the throttle is opened. The needle has a clip that allows it to be lowered or raised in relation to the carb slide, which gives an overall richer or leaner setting. Raising the clip up a notch drops the needle down farther, causing a leaner mixture. Lowering the clip raises the needle up, causing a richer mixture. You can also get different diameters, and tapers of needles. If the clip is lowered all the way, and the mixture is still lean, you need the next size smaller needle. If the clip is raised all the way, and the mixture is still rich, you need the next size larger needle.

The Pilot Jet, and Pilot Screw The pilot jet, and pilot screw control fuel delivery from idle to approximately 1/8 throttle. The pilot jet is similar in design to the main jet, basically a small screw with a calibrated hole in it. As with main jets they are identified by number, a larger number pilot jet is richer, and a smaller number pilot jet is leaner. Turning the screw in makes the mixture leaner, and turning it out makes it richer. If the pilot screw winds up being turned almost all the way in, you need the next size smaller pilot jet. If the pilot screw is more than about 2 1/2 turns out, you need the next size larger pilot jet. Basically the pilot screw is an adjustment that allows you to fine tune the pilot circuit.