

BASIC ADJUSTMENTS FOR CONSTANT FLOW METERING

MAIN FUEL MIXTURE

An engine that "pops and crackles" out of the intake manifold under full power is probably lean. An engine that seems lazy is probably rich. An engine running on methanol can be difficult to tune; as it will run cool and cause you to think it is rich but actually it can be lean enough not to build power (generate heat), having the symptoms of running rich. If you are uncertain if the engine is running rich or lean, it is generally safer to richen the engine and try it. If it is lean and you lean it more, you may damage the engine.

SPARK PLUG READINGS: While plug color should not be used as the only indication of proper fuel mixture, cracked porcelain, melted cement, and melted electrodes are all indications of extreme heat or detonation from lean fuel mixture, improper timing, bad fuel, etc. If the plugs show any of these signs, find the cause and correct it before further damage results!

Drag Racing - Do not put too much emphasis on spark plug readings, as they can be misleading. Time slips give the best indication of proper mixture. Go richer and leaner and then use the jet that runs the best. Note: for top end mixture, see: HIGH SPEED BYPASS VALVE on Pages #90-91.

- A) Engine runs strong off the line but bogs 1/3 of the way down the strip. The unit is usually rich when running gasoline and may be rich or lean when running methanol. Install a larger (leaner) main bypass jet when running gasoline and install a smaller (richer-safer) jet when running methanol.
- B) Engine crackles at the top of each gear, either the main jet is too lean (too large), or the high speed bypass is set too lean (see HIGH SPEED BYPASS Pages #90-91).
- C) Engine is sluggish and seems rich at the start but cleans out and runs good 1/2 way down. The idle is set too rich; lean out the idle only, not the main jet. Note : If you reset the idle too lean, the engine will lose throttle response.

Oval Track and Road Racing - There are too many variables involved to use lap times to determine jetting. It is a must to watch the spark plugs carefully as the primary indication of fuel mixture. Also look at the tops of the pistons and the inside of the exhaust ports.

- A) Car (or boat) runs strong off the corner but bogs 1/3 of the way down the straightaway. The unit is usually rich when running gasoline and may be rich or lean when running methanol. Install a larger (leaner) main bypass jet for gasoline; install a smaller (richer-safer) jet for running methanol and try it.
- B) Engine crackles at the end of the straightaway. Either the main jet is too lean (too large), or the high speed bypass is set too lean (see HIGH SPEED BYPASS Pages #90-91).
- C) Vehicle is sluggish and seems rich off the corner but cleans out and runs good 1/2 way down the straightaway, the idle or secondary is set too rich. Lean out the idle or secondary only, not the main jet. If you reset the idle too lean, the engine will lose throttle response.



Eddie Shea's Super Modified uses a Kinsler cross-ram manifold with constant flow system on a big block Chev

ENGINE OVER-RUN

The engine is in an over-run condition when you back out of the throttles at high RPM, such as at the end of a burnout or end of a run in drag racing, or when going into a turn in oval track and road racing. See section on **SECONDARY BYPASS VALVE** on Pages #88-89.



Chris Cherry's 'Pro-Street' Thames panel van. Kinsler modified Hilborn 4-port blower hat on a 6-71 supercharged small block Chev on gas. Uses a Kinsler Jet Selector Valve and Vapor Separator Tank.

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