

ON TRACK



Volume 1 Issue 3, March 2008

One Controller, Many MAFs

If you have a Twin-screw, Roots blower, or small fast spooling turbos, you know boost builds quickly at lower RPMs. Using a boost reference water-methanol controller in these applications can result in a loss of hp due to combustion quench. This is a result of too much fluid at too soon of an RPM.



The Labonte MotorSports VC-MAF™ injection controller extends our load based injection technology to these applications. By tapping into the vehicle MAF sensor output, the VC-MAF™ controller accurately senses engine load and commands the correct injection rate for maximum hp gains.

The unique design of our VC-MAF™ is that it can be used on 0-5volt hot wire or Karmen Vortex type Mass Air Flow sensors. With a flip of a switch, the VC-MAF reads all year GM, Mitsubishi, or Ford MAFs to name a few. This makes the VC-MAF the only universal MAF based injection controller on the market today.

Many of today's automotive ECUs send a signal to the MAF during starting. Either as a test signal or to heat up the

sensing element.

Other 0-5v only water-meth controllers will read this signal and spray during key on. This results in hard starting issues on some vehicles. The VC-MAF™ from Labonte MotorSports has a built in power up delay to prevent false injection during key-on and starting. List Price \$94.75

Posi-tap™ now Standard in Injection Kits



Nobody likes to cut into factory wire harness to install after market automotive electronics. There always seems to be a fear of unleashing some hidden Gremlins once a factory wire is cut and that the ECU will not operate correctly.

To help with ease of install, Labonte MotorSports injection systems now



includes Posi-tap connectors. The Posi-tap allows for a reliable connection into

the vehicle wire harness and no tools are required for install.

A small hole is poked through the wire during install. The Posi-tap simply twist together to make the connection. No cutting or soldering is required.



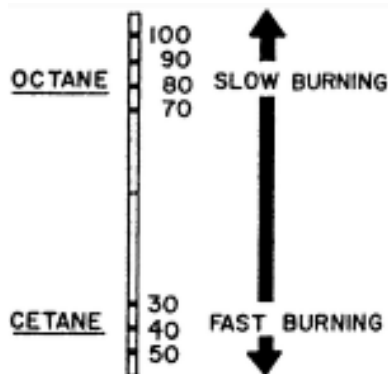
Tech Tips Tuning Part 1: Octane

One of the greatest benefits of water methanol injection is increased fuel octane on demand. Labonte MotorSports load based injection technology delivers this octane boost only when needed, which allows for the same power levels on pump gas that would otherwise require expensive C116 race fuel.

Octane is simply a measure of a fuels resistance to preignition, or spontaneous combustion.

The higher the octane number, the slower the fuel burns.

Water has an infinite octane rating, basically it can't burn.



By adding water to the combustion process, the speed of the flame front can be reduced as the water particles form "micro explosions" in the combustion chamber.

Off course higher octane does not make more horsepower in itself. If you simply add C116 race fuel to a vehicle tuned for 91 pump gas, it will not make more power without changing the tune. A higher octane fuel basically allows for more boost or more timing to be added to the engine which leads to more power.

As a rule of thumb, a 50/50 mix of water methanol injection will increase the octane of the base fuel by 25%.

Can you have too much octane? The answer is yes. If the combustion burn is to slow from excessive octane, power levels can go down.

Chemical / RON / MON

(The octane number you see in the US is $[\text{RON} + \text{MON}]/2$)

Methanol / 133 / 105

Ethanol / 129 / 102

Isopropyl Alcohol / 118 / 98

MTBE / 116 / 103

Toluene / 124 / 112

Meta Xylene / 164 / 124

Dicyclopentadiene / 229 / 167

Labonte MotorSports, LLC
8187 Commerce Dr.
Loves Park, IL 61111
(815) 315-4823

Interested in being a Dealer for Labonte MotorSports Products ?

We make it easy for Qualified Dealers to get started. Send us an email at sales@labontemotortsports.com or call and we will send you our Dealer application kit.