

ON TRACK



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New Digital Demand Pump, Raises the Bar

For years almost everyone has been using the same old 150psi pump for meth-injection. Not any more. The new DDP-5800 from LMS reaches new performance levels for methanol-injection.



Higher pressure leads to better atomization and faster intake charge cooling, and this pump delivers. Capable of making up to 250psi, fluid particles can be atomized down to 15-25 microns.

Unlike existing pumps with a pressure cut out switch, the DDP-5800 has an internal bypass which re-circulates fluid. This allows for more consistent pressure without pump cycling. The pump pressure is also user adjustable from 150 – 250psi (Factory preset at 200psi). The DDP-5800 is self priming and compatible with methanol or ethanol.

Another design improvement is the built in 1/4" hose connection fittings. This simplifies install and reduces the number of system leak points for increased reliability. Pump length and mounting base are the same as older 150 pumps allowing for simple upgrade.

The DDP-5800 is now the standard injection pump included with all Labonte MotorSports meth-injection systems. MSRP \$129.00

New Injection Nozzles

Here at LMS, we are always looking for ways to improve system performance and reduce install time. And these new nozzles do both.



First is the 7/16" hex around the nozzle to prevent thread damage during install. Second, each nozzle is stamped with the flow rating to eliminate any guess work.

Each nozzle incorporates an 80 micron fluid filter screen to insure clean injection fluid enters the engine. Nozzles are also Nickel plated for increase life and minimize orifice wear. MSRP \$20.00

Nozzle Selection Guide

When using 50/50 Water Methanol mix
Use N/A column for Naturally Aspirated Engines

HP (flywheel)	W/M (ml/min) for Boost Pressure					
	N/A	5-9psi	10-15psi	16-20psi	21-25psi	25+psi
50	M1	M1	M1	M1	M1	M1
100	M1	M1	M2	M2	M2	M2
150	M1	M2	M2	M2	M3	M3
200	M2	M2	M3	M3	M3	M4
250	M2	M3	M3	M4	M4	M4
300	M2	M3	M4	M4	M5	M5
350	M3	M4	M5	M5	M5	M7
400	M3	M4	M5	M5	M7	M7
450	M3	M5	M5	M7	M7	M7
500	M4	M5	M7	M7	M7	M10
550	M4	M5	M7	M7	M10	M10
600	M4	M7	M7	M10	M10	M10
650	M5	M7	M10	M10	M10	M14
700	M5	M7	M10	M10	M10	M14
750	M5	M10	M10	M10	M14	M14
800	M7	M10	M10	M14	M14	M14
850	M7	M10	M10	M14	M14	M14
900	M7	M10	M14	M14	M14	M10 + M5
950	M7	M10	M14	M14	M14	M14 + M3
1000	M7	M10	M14	M14	M10 + M5	M14 + M3
1050	M10	M14	M14	M10 + M5	M10 + M5	M14 + M7
1100	M10	M14	M14	M10 + M5	M14 + M3	M14 + M4
1150	M10	M14	M14	M10 + M5	M14 + M3	M14 + M5
1200	M10	M14	M10 + M5	M14 + M3	M14 + M3	M14 + M7
1250	M10	M14	M10 + M5	M14 + M3	M14 + M3	M14 + M7
1300	M10	M14	M10 + M5	M14 + M3	M14 + M4	M14 + M7
1350	M10	M14	M10 + M7	M14 + M4	M14 + M7	M14 + M10
1400	M10	M14	M10 + M7	M14 + M5	M14 + M7	M14 + M10
1450	M10	M10 + M5	M10 + M7	M10 + M10	M14 + M7	M14 + M10
1500	M10	M10 + M5	M14 + M5	M14 + M7	M14 + M10	M14 + M10

Tech Tip **Tuning**

Part 3: Tuning with Meth-Injection

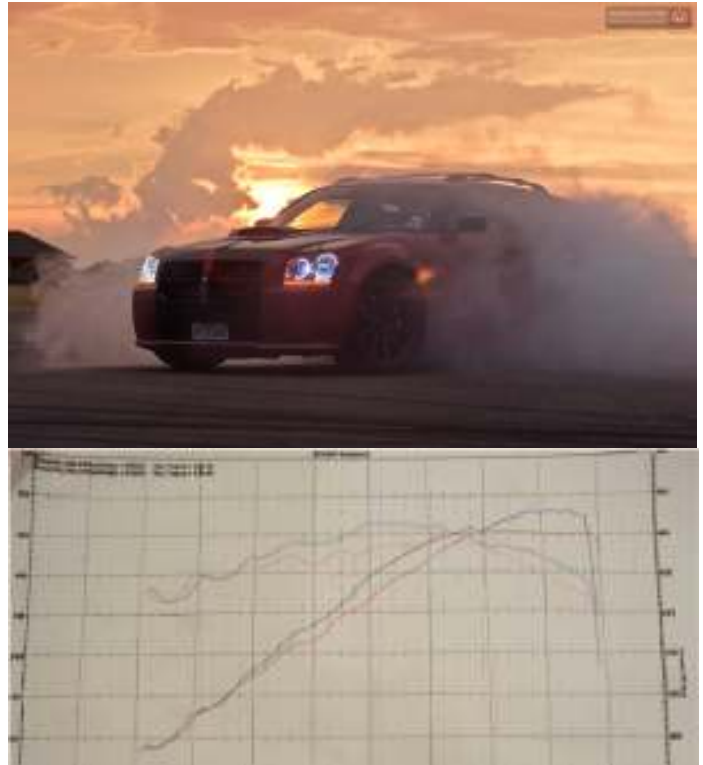
Because the injection of water and methanol acts as an alternative fuel source, you do not need to cool combustion with overly rich air/fuel (A/F) ratios. Most forced induction engines add up to 10% additional gasoline just to cool the cylinder walls and pistons. An injection fluid of 50/50 water/meth will lower A/F up to 1/2pt. 100% methanol will lower A/F a full point or more. This allows for the extra fueling to be reduced, increased boost pressure, or more timing so the engine can operate at its maximum hp potential.

A wideband O2 sensor will greatly simplify tuning and is highly recommend. For tuning do an initial 3rd gear pull and confirm A/F is around 11.5 across the entire RPM band. Next enable the methanol injection and do a second pull. A/F should drop the 1/2point with 50/50 mix. Adjust the system as needed to increase or decrease injection fluid. Horse power may drop slightly from overly rich air fuel charge at this point. This is normal, so no worries.

Now you can safely tune the engine back up to an 11.5 A/F with more boost, timing or pull fueling. This will result in increased power and is a good safe street tune. A/F can be leaned out to 12.0 – 12.5 for maximum hp gains, but a fail safe monitoring system is highly recommended.

A 50/50 water/methanol mix will increase 93 octane pump gas up to 116 during injection (Figure 25% increase in octane with lower grade fuels). As a rule of thumb: for every 3-4point in octane increase to base fuel, 1-2psi of boost can be added, or 2-3 deg of timing.

'06 Dodge Hemi gets Meth



Nathan of RedFox Racing, Abilene TX, picks up 26awhp for a total 480hp with the aid of the new VCS3G-NA injection tuning system. The system reads engine vacuum and fuel injector duty cycle resulting in a more accurate control of injection. When the Hemi's get heat soaked, they pull timing. The system keeps inlet air temps cooler for more consistent track times and increased performance.

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Dealer Inquiries Welcomed

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