8·LUG DIESEL TRUCK

SIMPLE SOLUTIONS YOU CAN USE!

- 5-MIN FRONT END FACE-LIFT
- 20-MIN INTAKE INSTALL
- 40-MIN TIRE SIPING FOR TRACTION

SECRET MPG BOOST:

WATER-METHANOL INJECTION HOW-TO

SINISTER IN BLACK

SPECIAL SHOW COVERAGE:

- FRESNO HAVOC
- SCRAPIN' THE COAST
- COMPD NADM ALABAMA

A SOURCE INTERLINK MEDIA PUBLICATION

OCTOBER 2008 VOLUME 3, NO. 10 $3.99 IN U.S. • $6.99 IN CANADA

TEXT AND PHOTOS: STEPHEN CLARK

The water methanol injectors must be mounted into the aluminum intake manifold that connects among the intercooler, head, and EGT. The intake manifold must be removed from the truck for drilling and tapping.

SNOW WATER METHANOL INJECTION

INSTANT POWER BOOST, LOWER EGT, AND INCREASED FUEL ECONOMY!

INJECTING WATER METHANOL INTO THE INTAKE OF A DIESEL ENGINE is a means to increasing performance, reducing exhaust gas temperature (EGT), and can also increase full economy. Snow Performance has been marketing and furthering water methanol technology over the past few years with kits for gasoline and diesel engines. The theory behind water methanol injection is the water cools the incoming air and the methanol acts as a catalyst to the fuel inside the combustion chamber. Although water methanol is fairly new to the diesel aftermarket (5 to 10 years), after doing some research on the subject, it turns out that the concept was originally developed in the '30s. We also found an interesting wartime report that was conducted by the National Advisory Committee for Aeronautics during World War II validating the use of water methanol on aircraft. Apparently, a few OEMs such as Chrysler and Saab have also used water methanol on production vehicles.

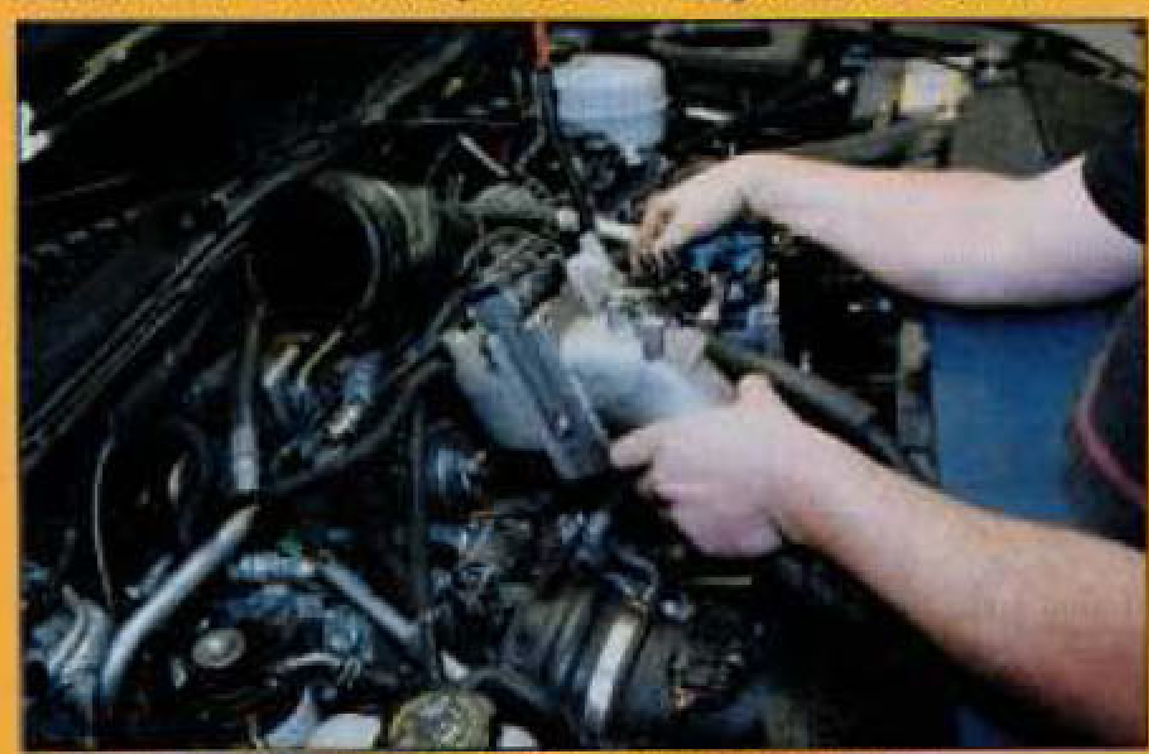
Snow Performance has taken the basic principle of water methanol injection and developed better systems for controlling it. Snow's latest development is the MPG Max kit that controls injection using a 2-D controller, which measures boost pressure and EGT and determines water methanol injection dependent on both variables. This kit injects a steady spray of water methanol across the whole power curve for better economy. It also controls another nozzle for high-performance

use, making the MPG Max kit ideal for daily driving and competition.

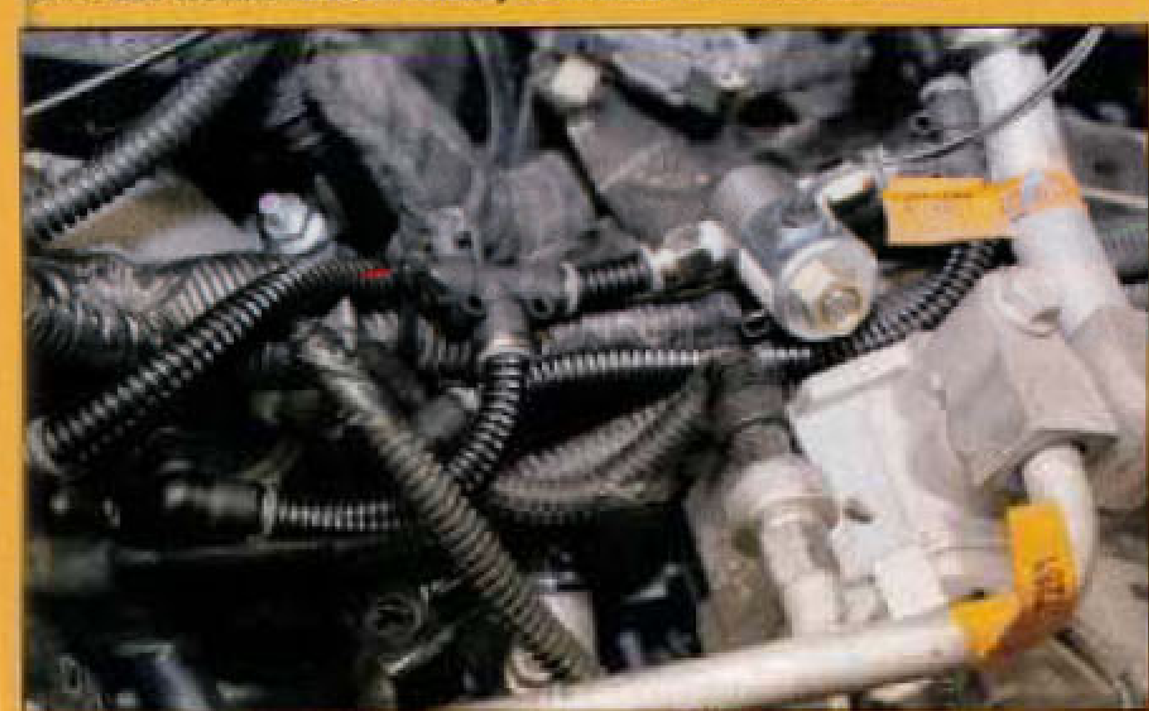
Water methanol is similar to propane and nitrous systems in that it provides an immediate boost of power at the push of a button. But whereas nitrous and propane are in gaseous form and they require special filling at select locations, water methanol is in liquid form—so it can simply be poured into the reservoir and is pretty widely available. Snow Performance sells a premixed liquid it calls Boost Juice, but it is essentially the same as winter formula windshield washer fluid that is available at most gas stations, especially in colder areas. It is important to check the ingredients of windshield washer fluid before using it to inject into the engine.

We visited Brent Wilsley and Jeff Campbell at Powerlabs in Idaho Falls, Idaho, to witness the installation of a Snow Performance MPG Max kit on an '06 GMC Duramax. Snow Performance President Matt Snow also came along to answer questions and assist with the install. E+L

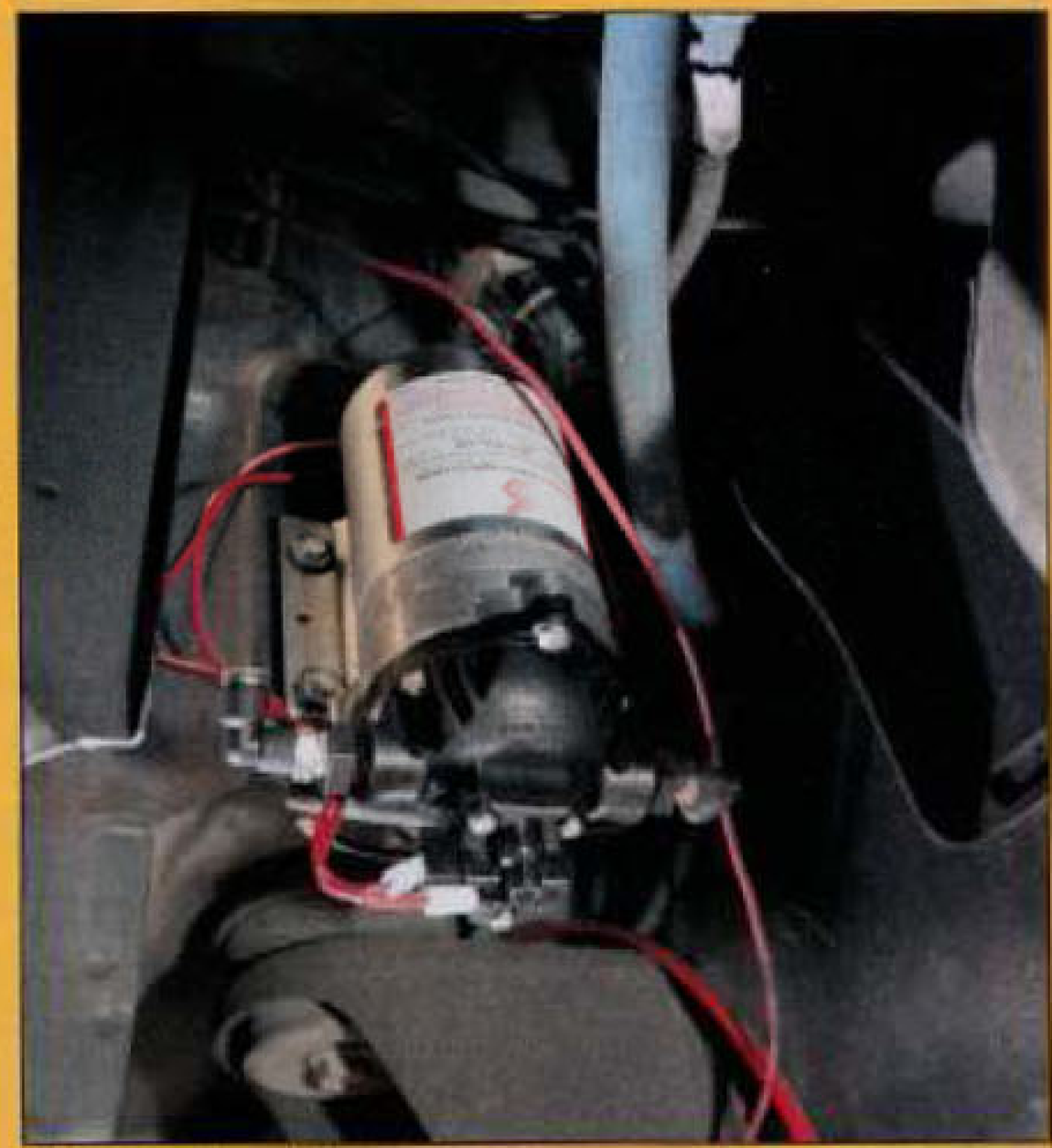
With the intake manifold secured in a vise, it was drilled and tapped for the three nozzles. One smaller nozzle is used for low-load driving conditions and the two larger nozzles are used for high-load situations. Snow Performance recommends only one large nozzle for most trucks, but since the owner of this truck, Troy Sakota, wanted maximum horsepower, a second large nozzle was installed.



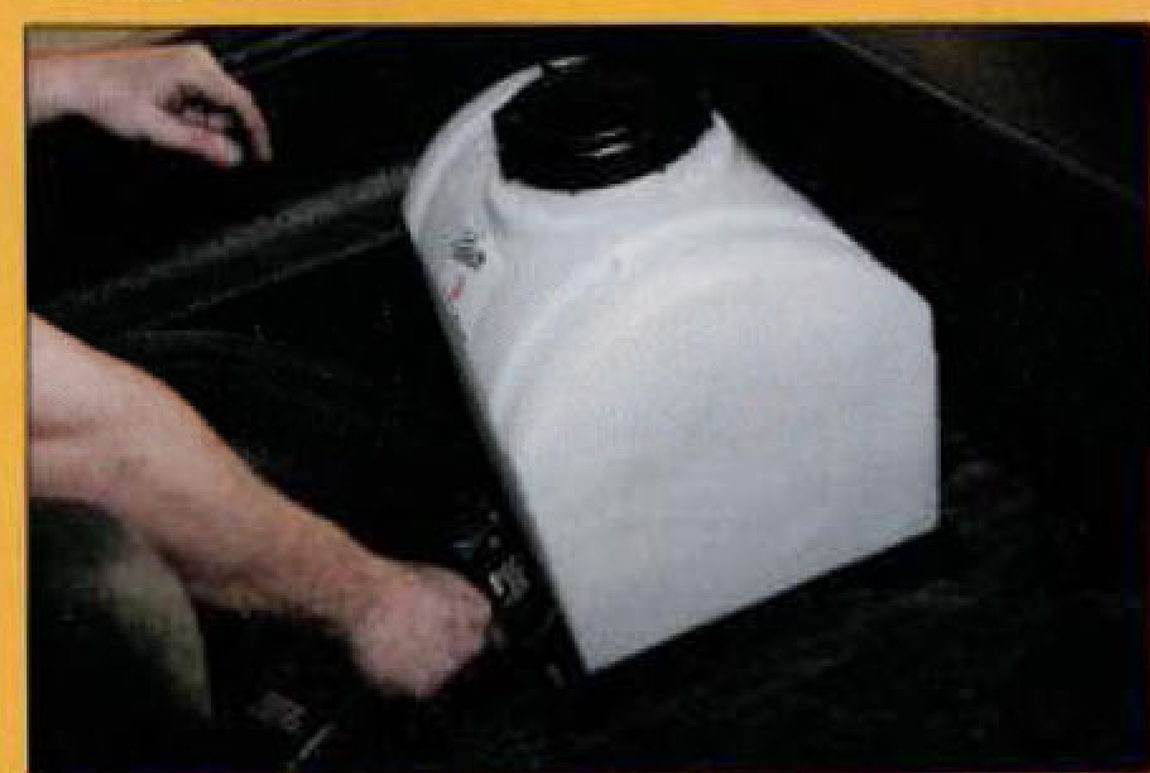
Powerlabs technician Brent Wilsley reinstalled the intake manifold.



All the water methanol lines use push-to-connect fittings, so installation was pretty quick and easy. This shot shows the lines connecting the nozzles to the solenoids.



With the nozzles and solenoids installed under the hood, the crew moved on to installing the pump that moves the water methanol from the tank to the solenoids and nozzles under the hood. For this installation, a large reservoir was mounted in the bed, so the pump was bolted to the frame on the driver side under the bed. The Snow Performance kit can be installed to use the factory windshield washer fluid reservoir for injection, and in that case, the pump would be mounted near the front of the truck.



Since this kit will be used for mileage gains, and a lot of water methanol will be used, a large 7-gallon tank was mounted in the bed. The tank comes with brackets and straps, so installation is simple.

SNOW WATER METHANOL INJECTION

The lines connecting the tank, pump, and solenoid were run along the frame under the truck. This step includes running both water methanol lines and wires.

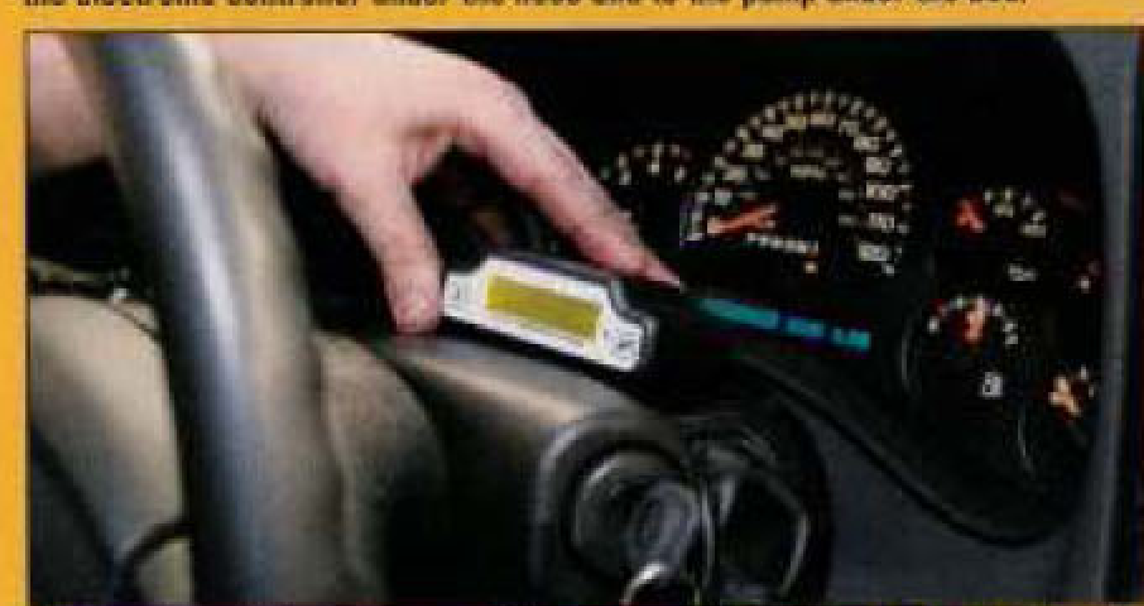
With the system all installed, the reservoir was filled with Boost Juice.

Back under the hood again, the brain of the system was mounted on top of the fuse box. This electronic box processes the variables for injection.

Before starting the truck, the functionality of the system was tested by removing the nozzles from the intake manifold and running it. This step covered Jeff in water methanol (sorry, Jeff!) but showed us the kit was functioning correctly.

With all the mechanical parts of the water methanol kit installed, it is time to wire everything together. This portion of the installation is probably the most time consuming, as wires need to be run from the switch and controller in the cab to the electronic controller under the hood and to the pump under the bed.

We were all eager to experience the benefits of the system and the power it added, so we took the truck out for some testing. We found the water methanol gave a good horsepower increase, which you could feel in the seat of your pants.



The in-cab controller features an LCD screen that tells the driver what is going on with the system and allows the driver to adjust settings. The controller mounts nicely with Velcro on top of the steering column.

PRODUCT PROFILE:

Snow Performance Europe
Elbring 45 - D-21217 Seevetal
+49(0)40-3999 2118
www.snowperformance.de
info@snowperformance.de