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# SNOW AND GO

## INSTALLING SNOW PERFORMANCE'S BOOST COOLER STAGE 3D MPG-MAX DIESEL SYSTEM FOR INCREASED FUEL ECONOMY, MORE POWER AND DECREASED EGTS ON YOUR AVERAGE DODGE RAM 6.7-LITER CUMMINS

Words: Josh Kaylor  
Photography: Snow Performance

WHEN IT COMES TO ADDITIONAL DIESEL PERFORMANCE, THERE ARE SEVERAL ROUTES THAT CAN BE TAKEN TO BUILD MORE REAL-WORLD, USABLE HORSEPOWER. HOWEVER, SOME POWER IMPROVEMENTS DO NOT COME WITHOUT SACRIFICES AND SOME DRAWBACKS, THE LEAST OF WHICH IS AN INCREASE IN EXHAUST GAS TEMPERATURE (EGT). HIGHER THAN RECOMMENDED EGTS ARE NOT RECOMMENDED, ESPECIALLY OVER EXTENDED PERIODS OF TIME. AS EXHAUST GAS TEMPERATURES RISE AND IF THEY ARE ALLOWED TO CONTINUE OVER ANY EXTENDED PERIOD, YOU WILL SEE ENGINE INTERNALS FAIL OR BE QUICKLY DAMAGED.

### SOURCE

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[www.snowperformance.net](http://www.snowperformance.net)

To combat higher EGTS, Matt Snow and his crew of engineers designed a kit to greatly reduce EGTS and improve diesel engine efficiency. The new Snow Performance Boost Cooler Stage 3D MPG-MAX diesel system is a water/methanol injection system designed as a full function kit capable of increasing fuel mileage up to 3 mpg, increasing torque by as much as 150 lb-ft and decreasing EGTS by up to 250 degrees. The Boost Cooler Stage 3D MPG-MAX diesel system is designed to

provide a continuous, steady spray of water/methanol across the entire power curve, even during slow cruising speeds. The Boost Cooler Stage 3D MPG-MAX system is not only designed to increase engine efficiency, but also provide increased torque and power on demand, and it does this by implementing a second nozzle that is activated during power-on mode.

The Stage 3D system seen here is capable of sensing manifold boost pressure and EGTS through a comprehensive controller system. The Stage 3D system is designed to monitor and control EGTS by evaluating and increasing water/methanol, as needed, through extensive 2d mapping. The water/methanol delivery can be monitored, adjusted and evaluated on the fly, allowing for more or less injection depend-

ing upon the rpm and engine parameters.

After taking ownership of this new '07 Dodge powered by the new 6.7-liter Cummins, Snow decided it was time to begin increasing horsepower and torque. Since this truck will be seeing regular towing duties, the decision to add the Stage 3D is a no-brainer, as it will greatly add to the dependability of the engine under those harsh, hot towing demands.

The MPG-MAX system is quite straightforward and includes a new 180psi high-volume pump, the 2d-mapped Digital Variable Controller, 2-stage nozzles, along with all the necessary components needed to complete the installation. The kit can be used on 100 or 1,000hp boost applications.

Before beginning the installation of the MPG-MAX, this Dodge was placed on a dyno for a baseline, where it posted an average of 257 hp to the rear wheels. After the MPG-MAX install, along with the Bully Dog Power Pup programmer set on level 2, the Dodge posted a 49hp improvement for 306 hp. With the addition of the Boost Cooler on top of the Power Pup, the horsepower climbed to 369 hp, for a total of 112 hp over stock! The EGTS, along with torque and horsepower, were improved as well, making this installation a huge success. For more information on the new Dodge MPG-MAX kit as well a complete list of MPG-MAX applications, contact Snow Performance directly or visit its website at [www.snowperformance.net](http://www.snowperformance.net). **DB**

01. The intake air horn is removed from the truck and two small mounting holes are drilled. The primary and secondary nozzles are inserted into the horn with quick release fittings for the incoming line.



02. The two nozzles are located at the end of the air horn. The primary nozzle sprays continuously while the secondary power nozzle opens on full throttle.



03. The two solenoids for the nozzles are mounted inside the fenders.



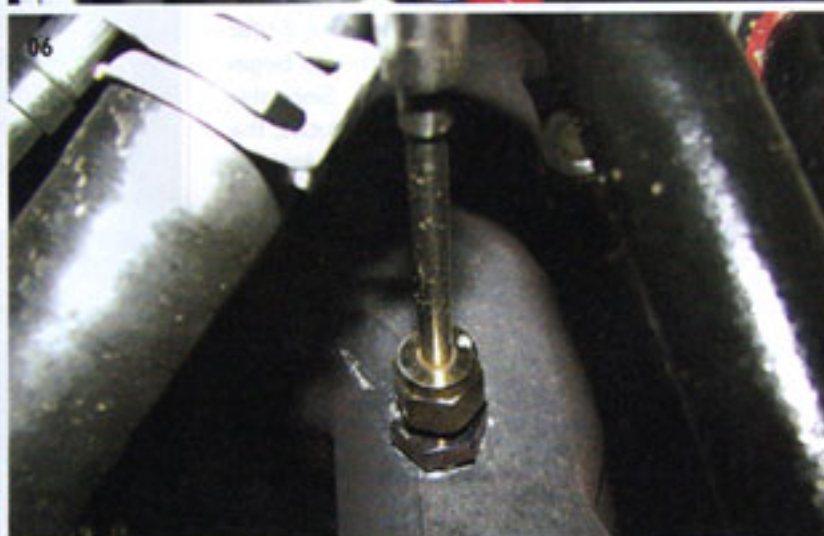
04. After installing the solenoids and nozzles, the supplied tubing is routed through the engine compartment to each of the nozzles.



05. A T-fitting is inserted into the line. This provides an even supply of methanol upon demand to each of the two nozzles.



06. In order to provide needed information to the controller, an EGT probe is installed into the exhaust manifold (pre-turbo). A 7/16 pre-drill is first required followed by a 1/4-inch NPT tap.



07. The red tubing is routed along the driver's-side inner fender and into the intake located in the lower right corner. Be sure to route the tubing carefully to prevent melting the hose.



08. An arming switch is then installed into the system on the dash to enable the driver to either activate or kill the system. Once armed, the system takes over and fully operates the methanol system.





09. In order to monitor the EGTs, the Digital Variable Controller is mounted on top of the steering column. The controller also monitors manifold boost pressure.

10. Since the engine will be constantly fed small amounts of methanol, a 7-gallon reservoir is mounted inside the pickup bed to prevent it from running dry. Snow Performance offers several sizes of methanol reservoirs depending on your needs.

11. Since the kit being installed is the Stage 3D diesel kit, it includes this 180psi high-volume pump, designed specifically for methanol use. The pump mounts beneath the bed on the rear framerails and can be mounted either horizontally or vertically.

12. With the kit installed, the truck is driven onto the dyno and tested using Boost Juice, a 50/50 water/methanol mixture sold through Snow Performance. The methanol kit proved good for around 50 hp. A Bully Dog Power Pup will be combined with the methanol kit for maximum power.

13. The programmer is plugged into the OBDII port and stage 2 power is selected. The Power Pup will help to increase horsepower and torque and really bring the Cummins to life!

14. After installing the Power Pup and Boost Cooler to the Cummins, the dyno results showed a 112hp gain over stock! The '07 Dodge now produces 369 rear-wheel horsepower.

