

## **New HEMI® to Debut in All-New 2009 Dodge Ram**

New HEMI Offers Improved Fuel Economy, Even More Power, Torque

- More fuel economy: New Variable Valve Timing (VVT), higher compression ratio contribute to 4 percent fuel economy improvement
  - Expanded utilization of Chrysler's fuel-saving Multi-displacement System (MDS) operation
- More power: 390 horsepower – a 13 percent increase
- More torque: 407 lb.-ft. of torque – an 8 percent increase

January 12, 2008, Auburn Hills, Mich. - That thing got a new HEMI®?

A new, more fuel efficient and more powerful version of the renowned 5.7-liter HEMI V-8 engine will debut in the all-new 2009 Dodge Ram 1500.

While the new HEMI engine maintains the key architecture that makes "HEMI" synonymous with "power," Dodge powertrain engineers improved engine breathing and added new technologies—including Variable Valve Timing (VVT)—that substantially improve fuel economy and refinement, and maximize performance.

"The new 5.7-liter HEMI V-8 engine will offer our customers better fuel economy, improved idle quality and overall refinement, along with more horsepower and torque," said Bob Lee, Vice President – Powertrain Product Engineering Team, Chrysler LLC. "HEMI has always been synonymous with power, and now—thanks to VVT, expanded four-cylinder mode in our MDS system, and a host of other technologies—Chrysler's new HEMI delivers more fuel efficiency and refinement, along with even more power."

The all-new 2009 Dodge Ram 1500's new 5.7-liter HEMI V-8 will produce 390 horsepower (283 kW), a 13 percent increase, and 407 lb.-ft. (548 N·m) of torque, an 8 percent increase—while delivering an estimated 4 percent improvement in fuel economy.

The HEMI's new VVT improves fuel economy in two ways. First, it reduces the engine's pumping work by closing the intake valve later. Second, it increases the expansion process of the combustion event. This allows more work to be transferred to the crankshaft instead of being rejected out of the exhaust port as heat. Essentially, VVT improves engine breathing, which improves engine efficiency and power.

Dodge's fuel-saving MDS system seamlessly alternates between smooth, high-fuel-economy four-cylinder mode when less power is needed, and V-8 mode when more power from the new 5.7-liter HEMI engine is in demand. This optimizes fuel economy when V-8 power is not required, without sacrificing vehicle performance or capability. An expanded MDS operating range in the new-for-2009 HEMI will allow customers to realize an even-greater fuel economy benefit. Chrysler estimates that since its inception of MDS in 2005, nearly 100 million gallons of gasoline have been saved, along with reduced carbon dioxide (CO<sub>2</sub>) emissions of close to a million metric tons.

When MDS is operating, it is indicated by a "Fuel Saver" readout in the 2009 Dodge Ram's Electronic Vehicle Information Center.

In addition to VVT and expanded MDS operating range, the HEMI's fuel economy and performance improvements result from an increased compression ratio, an active intake manifold with long runners for low-end torque and short runners for high-rpm power, improved cylinder head port flow efficiency, and reduced restriction exhaust and induction systems.

Numerous other hardware upgrades were implemented to build on the quality, reliability and durability reputation of the HEMI engine. These include crankshaft structural upgrades, a dual-mass crankshaft damper, floating pin piston

design, valve spring design and oil pump capacity increase for VVT.

The new 5.7-liter HEMI V-8 engine will be manufactured at the Saltillo Engine Plant in Saltillo, Mexico.

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