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Mission Accomplished: Pentastar Engine Family Accounts for All Chrysler Group V-6 Offerings

- China-market introduction of 3.0-liter Pentastar marks replacement of seventh Chrysler Group V-6
- Innovative “plug-and-play” feature of award-winning Pentastar design enables multiple applications with minimal changes
- Accounting for all derivatives, Pentastar engines power 16 models across 11 segments – from mid-size car to full-size commercial van
- Pentastar proliferation leverages engine family’s acclaimed blend of performance and refinement

August 28, 2013, Auburn Hills, Mich. - When the Pentastar V-6 engine family was introduced under the hood of the 2011 Jeep Grand Cherokee, it arrived with the promise of superior customer value and greater manufacturing efficiency.

That promise has been fulfilled with today's unveiling of a 3.0-liter Pentastar at the Chengdu Motor Show in Chengdu, China. Exclusive to China, the engine’s debut in the 2014 Jeep Grand Cherokee and Jeep Wrangler marks Chrysler Group’s consolidation of seven V-6 offerings into a single, stellar architecture.

“The Pentastar program is a milestone in Chrysler Group’s ongoing journey,” said Bob Lee, Vice President and Head of Engine, Powertrain and Electrified Propulsion Systems Engineering. “It not only is proof positive of our technical proficiency, it is tangible evidence of our deep-rooted commitment to excellence in powertrain development.”

Since 2009, Chrysler Group has poured more than $2.2 billion in projects that benefit the production of advanced engines and transmissions – nearly half of the company’s total investment in manufacturing.

“As the old adage goes, there has never been a great car that did not have a great engine,” added Lee. “Pentastar engines enhance every vehicle in which they are offered.”

The port-injected 3.6-liter version, named one of Ward’s 10 Best Engines three years running, is tuned so precisely, it delivers top fuel economy in two key segments, besting competitors that utilize costlier direct-injection technology. The 2013 Chrysler 300 and Dodge Charger full-size cars are rated at 31 mpg on the highway, while the Ram 1500 full-size pickup boasts 25 mpg.

In terms of character, a Pentastar can be mannerly, as demonstrated in the Chrysler Town & Country. Or it can be beastly, as in the rugged Jeep Wrangler and the all-new 2014 Jeep Cherokee, which will mark the debut of a 3.2-liter Pentastar V-6.

In addition, the 3.6-liter Pentastar V-6 is available in the Ram Cargo Van and ProMaster full-size van; Chrysler 200 mid-size sedan and 200 convertible; Dodge Avenger mid-size sedan, Challenger sport coupe, Charger Pursuit police vehicle, Grand Caravan minivan, Durango full-size SUV and Journey mid-size crossover.

That’s 16 models across 11 segments, according to WardsAuto segmentation.

The Pentastar architecture distinguishes itself with flexibility that can best be described as “plug-and-play.” With little or no modification, the 3.6-liter version accommodates longitudinal and transverse orientations; front-wheel-, rear-wheel-, all-wheel- and four-wheel-drive systems; and 6-speed manual and 6-, 8- and 9-speed automatic transmissions.

It has just two intake manifolds – one for the Ram 1500 and Jeep Wrangler and another for all the rest.
The payoff is in simplification, from assembly line to service bay.

“When the Pentastar was conceived, we started with a clean sheet of paper and the goal of producing an engine that made the most sense for the customer and for us,” Lee said.

Production of the 3.0-liter Pentastar launched July 3 at Chrysler Group’s engine plant in Trenton, MI – home to the 3.6-liter and 3.2-liter versions. The plant began shipping the engines July 22.

The 3.0-liter V-6 generates 230 horsepower at 6,350 rpm. Its peak torque – 210 lb.-ft . (285 Nm) – arrives at 4,400 rpm.

It carries over all the design attributes that have earned acclaim for the 3.6-liter engine. A 60-degree, deep-skirt, die-cast-aluminum cylinder block with six-bolt main caps afford optimal stiffness for mitigation of NVH. Also contributing to NVH reduction are:

- A structural windage tray to complement block stiffness
- A structural aluminum oil pan
- Direct-mounted alternator and A/C compressor that increases stiffness
- Select-fit pistons with polymer-graphite-coated piston skirts
- “Silent chain” timing drive with inverted teeth for minimal sprocket NVH
- Contoured composite cylinder-head covers
- Glass-reinforced nylon composite intake manifold

Further enhancing the driving experience is the specially designed intake manifold, which also feature low-rumble tuning.
The engine boasts forged-steel connecting rods and piston-squirter jets, and its cam drive and valve-train components require no scheduled maintenance.

About Chrysler Group LLC
Chrysler Group LLC, formed in 2009 from a global strategic alliance with Fiat S.p.A., produces Chrysler, Jeep, Dodge, Ram, SRT, Fiat and Mopar vehicles and products. With the resources, technology and worldwide distribution network required to compete on a global scale, the alliance builds on Chrysler Group’s culture of innovation, first established by Walter P. Chrysler in 1925, and Fiat’s complementary technology that dates back to its founding in 1899.

Headquartered in Auburn Hills, Mich., Chrysler Group’s product lineup features some of the world's most recognizable vehicles, including the Chrysler 300, Jeep Wrangler, Dodge Challenger and Ram 1500. Fiat contributes world-class technology, platforms and powertrains for small- and medium-size cars, allowing Chrysler Group to offer an expanded product line including environmentally friendly vehicles.

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