

Quality 'Built-In' From Earliest Stages of Developing All-New 2009 Dodge Ram

Dodge Truck Engineers Will Log Nearly 6.5 Million Customer-Equivalent Miles

Auburn Hills, Mich. - Chrysler LLC's ability to react to quality issues in the field is quick, but keeping issues from ever happening was the real priority from the very first day of the 2009 Dodge Ram project kickoff. Prevention played a big part in the development processes that led to the creation of the all-new 2009 Ram.

"The truck segment is a very important part of any major manufacturer's lineup," said Doug Betts, Vice President - Chief Customer Officer, Chrysler LLC. "We developed the iconic Ram truck years ago with a distinctive look but, more importantly, with overwhelming capability and the strength that our customers demand. People want a great-looking workhorse that is dependable and reliable. The all-new Ram will benefit from the hard work and quality initiatives that were started nearly five years ago."

Engineers have conducted approximately 40,000 hours of full-scale vehicle and system testing for durability and reliability of the all-new 2009 Dodge Ram. Testing and validation in various climates included road trips to a variety of locations including Death Valley, Nev., Bemidji, Minn., Tampa and Denver. A full battery of lab testing included full-frame fatigue testing, door-slam testing and a road test simulator.

In addition, the 2009 Dodge Ram has gone through more than 200 hours of wind noise and aerodynamic evaluations in Chrysler LLC's state-of-the-art aerodynamic and acoustic test facility in Auburn Hills, Mich.

By the time the 2009 Dodge Ram goes on sale, nearly 6.5 million customer-equivalent miles will be logged by Dodge Truck engineers.

The company is also employing techniques of Design for Six Sigma, which is folding in "voice of the customer" data along with lessons learned to ensure any vehicle reaching the customers' hands is the highest quality. Since 1998, the company has seen its warranty costs drop nearly 50 percent.

Every facet of the development of the 2009 Dodge Ram was aimed at quality improvement. A few examples include:

- A hydroformed tubular front body structure is both stiff and light. The natural frequency of this structure and the continuity of its weld attachments to the cab were developed using computer-aided structural analysis
- The 2009 Dodge Ram's sloping windshield is composed of two layers of solar glass for thermal protection and glare reduction
- Fenders are now bolted to a hydroformed inner structure for the engine compartment, and no longer serve as structural elements. This makes fenders

easier and less costly to replace when damaged

- The overall cab construction uses a full-length roof ditch with continuous molding where cab and roof surfaces meet. One-piece bodyside outer panels match inner panels to form door openings with exceptional dimensional control
- To make the cab as quiet as possible, every path that leads to the interior is sealed. Joints are made as tight as possible and applied sealers are often expandable, which causes them to swell to form a tight seal
- The air-tight cabin forces air to flow through the cab and out via the cab-back air exhausters, rather than taking a shortcut that might leave some occupants uncomfortable
- Computer-aided analysis was used to develop bead (rib) patterns and mastic patch dampers that stiffen the floor pan and dash panel. The resulting panels achieve a natural vibration frequency that prevents them from amplifying with the frequencies of other vibration sources
- Doors are triple-sealed to keep out weather and noise
- Bake-hardened steel door panels provide greater dent resistance than conventional steel doors because the steel hardens when subjected to high heat during the paint-curing process. Inner and outer door panels are also galvanized for corrosion protection
- Expandable baffles are used at the base of the structural pillars to block noise
- In crew cab models, a reinforced structural pillar between front and rear doors provides a solid attachment for the front door latch striker, supports the roof in a vehicle rollover, supports the rear door hinges and gives side-impact protection for occupants. Rear door side impact beams are placed at a height where a car or truck bumper would make first contact
- Dual-bulb taillamps use acrylic lenses with optical reflectors to distribute light. Reflectors are vacuum metallized to provide a brighter appearance
- All-new top covers on pickup bed rails reduce box marring and scratching for long-term durability