

2016 FCA Canada Inc.
QUALITY

FCA Canada: Quality is Everyone’s Mission at FCA US LLC

- **“Customer first” approach keeps customer needs and feedback at the forefront of vehicle development**
- **FCA US LLC has the world’s only automotive headquarters where a vehicle can go from a sketch to a manufactured vehicle that’s subjected to extensive engine, driveline durability and performance testing as well as wind tunnel aerodynamic/acoustic development and extreme weather validation all under one roof**
- **FCA US continues to heavily invest in its future across the board to enhance quality, efficiency, safety and technology**

FCA US LLC continues to invest in product improvements while attracting new customers into dealer showrooms and steadily increasing market share. The Company is strengthening its quality development with the ultimate goal of converting new and existing customers into loyal owners who proudly recommend Chrysler, Jeep®, Dodge, Ram and FIAT products to their friends and family.

‘Customer first’ approach

At the earliest stages of vehicle creation, before designers’ sketches have evolved into clay models, research is conducted to collect, analyze and integrate the voice of the customer into a new vehicle concept. A “customer first” approach to quality keeps the customers’ needs at the forefront of decision-making and planning through all stages of vehicle development.

Chrysler Technology Center’s unique combination of people, technology

Much of the vehicle development process occurs at the Chrysler Technology Center (CTC) in the Auburn Hills, Michigan–based headquarters for FCA US. With approximately 14,000 employees under one roof, it is the only automotive headquarters in the world where vehicles can go from the sketch stage to prototype vehicles that are manufactured and subjected to extensive engine, driveline durability and performance testing as well as wind tunnel aerodynamic/acoustic development and extreme weather validation all under one roof.

Some of the most punishing vehicle tests at CTC involve the Road Test Simulator (RTS), also known by its well-earned nickname – “The Shaker.” It recreates the abuse vehicles endure at the hands of a 95th per centile customer – meaning a customer who drives the vehicle in more severe conditions than

95 per cent of all drivers. The Shaker mimics a wide range of on-road and off-road driving surfaces and puts a lifetime of wear and tear on a vehicle in only one month's time.

Going the extra mile

The thousands of simulated and laboratory tests conducted at CTC set the foundation for the regimented reliability, capability and durability testing that continues at FCA's proving grounds around the world.

In addition to the extensive testing facilities at the proving grounds in Chelsea, Michigan, and Balocco, Italy, the Company also conducts extreme weather testing at FCA's Arizona Proving Grounds in Yucca and the Arjeplog (Sweden) Proving Grounds within the Arctic Circle. At the Company's Florida Evaluation Center in Naples, vehicles undergo coast-down testing to assess overall frictional drag, aerodynamics and tire rolling resistance.

Engineering and Quality teams also study how vehicles perform in less predictable environments. Reliability test fleet vehicles are driven day and night on all kinds of public road surfaces, at high and low altitudes and through blizzard conditions, as well as dry, desert heat and hot, humid locations all over the globe.

The Company has also partnered with the University of Windsor in establishing the FCA Canada/University of Windsor Automotive Research and Development Centre (ARDC) in Windsor, Ont. The facility opened in May, 1996 with a \$30 million (CDN) investment. It was the first partnership of its kind in Canada. With a total investment now exceeding \$600 million, the ARDC benefits all partners. It is equipped with six road-test simulators and a range of research and development support facilities, including the Automotive Coatings Research Facility and the Automotive Lighting Research Facility.

Building quality into each vehicle

Since 2009, FCA US has announced significant investments in its manufacturing facilities, making substantial progress to enhance quality, efficiency, safety and technology in its plants. Supported by World Class Manufacturing (WCM) principles, workers play an integral role in ensuring success and reducing warranty repairs.

Inside an assembly plant's Quality Assurance Centre, randomly selected vehicles undergo audits and detailed technical measurements on more than 400 vehicle functions, such as heating, cooling, emissions, and fit-and-finish. FCA US assembly plants also employ state-of-the-art metrology centres – a high-tech laboratory with a clean-room environment. The metrology labs use laser scanners and a complex set of fixtures that mimic the body shop's process so that engineers and technicians can find

the root cause of any build variations – even when components appear perfect to the naked eye. All these tools are used to find and resolve any issues before vehicles are shipped to dealers.

Quality development at FCA US prioritizes customers' needs with the goal of designing and building vehicles owners will be proud to recommend to their friends and family.

