Contact: Jodi Tinson

Dodge's Legendary Snake Hand Built in the Heart of Detroit

- First Viper was built at Conner Avenue Assembly Plant 20 years ago
- More than 24,000 Dodge Vipers began life south of 8 Mile Road
- Each vehicle hand built by skilled craftspeople
- A new Viper rolls off the assembly line every 10 days
- It takes 145-160 man hours to prep, paint and finish the Viper's body panels
- Workforce partners with Operation Get Down to support those in need

May 8, 2015, Detroit - Tucked in a Detroit neighborhood south of the famed 8 Mile Road is the birthplace of one of the most exotic American supercars on the road today – the Dodge Viper.

The Conner Avenue Assembly Plant has been hand building the exclusive Dodge performance flagship since 1995. Through 2014, more than 24,000 Vipers have rolled off the line of the nearly 400,000-square-foot facility under the watchful eyes and dedicated hands of 64 of the most skilled auto workers in the industry. (Initially built at the New Mack Assembly Plant, approximately 30,000 Vipers have been built since it was introduced in 1992.)

"The motto of the Conner Avenue plant is 'dedicated people building dreams'," said Doug Gouin, Conner Avenue Assembly Plant Manager, FCA US LLC. "The plant is filled with some of the most amazing car builders in the auto industry, building a vehicle that most people can only aspire to. The workers here are craftspeople, committed to delivering the best quality vehicle possible to our customers. Some of them are Viper owners themselves, so the job becomes very personal. They know they are keepers of the Viper legacy."

The future of Conner was uncertain when the former Chrysler Group idled the nearly 50-year-old plant in 2010. After a two-year hibernation and a new lease on life, the plant reopened in 2012 to build the new fifth generation Viper. Everything was refurbished and improved, from the lobby, where a historical Viper timeline hangs, to the 14 restrooms and the shop floor, which is now hospital-clean, bright and more organized to increase the efficiency of each operation.

With all of the improvements, the Conner Avenue Assembly Plant looks like a modern, state-of-the-art facility, even though it bows to its original coach builder philosophy. After nearly 23 years in production, the plant still maintains the handcrafted build process that added to the mystique of the original Viper. All of the operators were specially selected to meticulously assemble each component with complete attention to detail and quality. For every member of the Viper team, it is truly a labor of love.

"There is a sense of pride about being part of the Viper team," said Greg Rinehart, a Team Leader who has been with Viper since 1994. "Every vehicle that leaves this plant is like one of our children. Each owner becomes part of our family. We were grateful when they decided to bring Viper back and gave us the opportunity to be part of the future."

No Vehicle Before Its Time

The unique character of the Viper means a unique approach to building it. Compared to a regular assembly plant where a vehicle rolls off the line every minute, a Viper cycles down the line every 146 minutes. As a result, each operator is completing 150 elements or tasks in a single cycle. This is equivalent to what 100 people would do in a plant like the Company's Jefferson North Assembly Plant, where the Jeep ® Grand Cherokee and Dodge Durango are built just down the road and which produces more than 300,000 vehicles each year.

There are three main build areas inside the Conner Avenue plant – the chassis line, the engine line and the final line.

The Dodge Viper begins to take shape on the chassis line. The frame is shipped to Conner from an outside supplier in Kentucky to begin its 10-day journey down the assembly line.

With a nod to modern production techniques and a focus on quality, Conner installed its first robots on the floor when production relaunched in 2012. The five robots that make up the Net Form & Pierce cell move the frame in and out five times during one cycle, punching holes and creating 50 features in the Viper frame to establish the dimensional environment to hang panels, such as the hood, deck lids, doors and fenders. The robots then measure 65 vision points to ensure the accuracy of the installation points for other components. Drag strip lights indicate what stage of the process the frame is in. At the conclusion of the cycle, the frame exits the cell and has the instrument panel mounted, which is built up onsite.

Along the chassis line, the operators turn the steel frame into a fully functioning, driveable “go cart” that looks more like something out of a science fiction movie than the sleek, American supercar that will ultimately hit the road. Operators install all of the components that make the Viper run, like front and rear suspension, rear brakes, exhaust, fuel tank and the V-10 engine.

The legendary Viper V-10 engine is also hand built at Conner in six stations, along with its all-important pistons. Prior to 2012, pistons for the previous generation Viper came already assembled from the FCA US Saltillo, Mexico, Engine Plant. To ensure the maximum performance quality of each engine, all V-10s are now 100 percent dyno tested before finding a home in a vehicle.

“The V-10 engine is one of the hallmarks of the Viper, so it is critical that its performance can support the legacy,” said Gouin. “Moving the piston build to Conner and dyno testing every engine allows for better quality control, which is important when you’re building an American supercar like this.”

Before wheels and tires are installed, the vehicle goes through the aligner, a piece of equipment that was fully refurbished from the Prowler production days, to ensure proper camber alignment.

The last stop on the chassis line before moving to the final line is the roll test, where each vehicle is tested up to 90 mph. Conner also repurposed the rolls previously used for Prowler, but needed to make the rolls pit nine feet longer and five feet wider in order to accommodate cars with cladding.

Once the rolling chassis and its V-10 engine are validated in the rolls station, it heads to the final line, where body panels, seats, window glass, and other interior and exterior components come together in sequence to form that easily recognizable and timeless Viper shape.

The next steps after a Viper rolls off the line are headlight aim, which employs the same exacting equipment used at other hi-tech plants, and emissions testing. Every vehicle then goes through a five-minute water test, where it is pounded by 720 gallons of water, which are recycled and reused for a one week period. (Previously, the water was disposed of after each use.)

All vehicles now also go through the shaker. Installed in 2014, the shaker simulates the bumps and rough surfaces found on public roads to identify any buzz, squeaks or rattles. Weather permitting, employees at the plant still take one vehicle a day on a real road test as part of an additional quality audit.

To ensure the Viper has been built to its exacting standards, each vehicle is put through the new Vision Cell to measure 120 points along the body to verify the precision of the fit and finish.

Following a final electrical check, and buff and polish under special lights to make the paint gleam, the Viper heads to the covered shipping area where it will be loaded onto covered carriers for delivery to its anxious new owner.

Like most FCA US assembly plants, Conner also has a state-of-the-art Metrology Center, equipped with upgraded CMM capabilities and a Quality Assurance Fixture, to verify and maintain the dimensional quality of the Viper.

The entire facility was upgraded with WiFi three years ago to support the use of RF (radio frequency) reporting tools throughout. These portable tools are used to assemble the car and help verify that the right torque is used in each

assembly operation. Having wireless tools eliminates possible trip hazards and reduces maintenance costs.

The Conner workforce has spent the last three years implementing World Class Manufacturing (WCM), a methodology that focuses on reducing waste, increasing productivity, and improving quality and safety in a systematic and organized way. WCM engages the workforce to provide and implement suggestions on how to improve their jobs and their plants. WCM was first implemented by Fiat in 2006 and introduced to the former Chrysler Group as part of the alliance between the two companies in June 2009.

As a result of those efforts, Conner is reducing the amount of line side inventory – considered waste – by doing more kitting. Kits, which include specific components for each station, are assembled in an adjacent kitting area and are then delivered just in time and just in sequence to the operator on the line.

"Because the workforce here has embraced the WCM methodology, they have ensured that the highest quality vehicles in the industry are built at Conner," said Gouin.

To pay homage to the Viper's performance roots, Conner has integrated racing themes across the facility. Aisles are named for famous racing venues like Sebring and Nürburgring, and are color coded to match the columns. The walkways have checkered flag decals indicating pedestrian zones.

Painted to Perfection

The painting process of a Viper body is also unique. All Vipers are painted at Prefix Coatings in Auburn Hills, Mich., which has been in business for more than 30 years. Each vehicle is hand painted by skilled craftsmen hired for their reputation for painting show cars and custom cars.

For each Viper, Prefix paints 20 parts, which are spread over two racks and kept together to ensure color harmony. It takes from 145-160 man hours to prep, paint and finish the body panels. The panels spend about two weeks in the Prefix plant, from the time they arrive to when they are shipped to Conner.

Previously, all Vipers were shipped to an outside supplier for the application of stripes. Starting in 2012, Prefix adds the "buried" painted stripe to the Viper in a labor intensive, proprietary process that can take about 18 hours to complete. Panels are then delivered in sequence to Conner. By incorporating the stripe application into the painting process, it eliminated nearly two weeks from the assembly timing and reduced the risk of something happening to the vehicle while in transit.

Giving Back

At the suggestion of an employee, the plant turned more than 4,900 square feet of its green space into a produce garden that includes cucumbers, peas, tomatoes, watermelons, pumpkins, cantaloupe, green peppers and beans. The plant has partnered with Operation Get Down, a nonprofit, community-based agency serving the east side of Detroit since 1971, for the past four years to support those in need in the community. The plant has donated more than 1,500 pounds of fresh produce plus more than 2,200 pounds of non-perishable food items each year.

"While the Viper put this plant on the map, it is the people that make it come alive," said Gouin. "Their passion for the customer, the community and each other is what makes this facility and the vehicle we build, unlike anything else in the industry."

About FCA US LLC

FCA US LLC is a North American automaker based in Auburn Hills, Michigan. It designs, manufactures, and sells or distributes vehicles under the Chrysler, Dodge, Jeep®, Ram, FIAT and Alfa Romeo brands, as well as the SRT performance designation. The Company also distributes Mopar and Alfa Romeo parts and accessories. FCA US is building upon the historic foundations of Chrysler Corp., established in 1925 by industry visionary Walter P. Chrysler and Fabbrica Italiana Automobili Torino (F.I.A.T.), founded in Italy in 1899 by pioneering entrepreneurs, including Giovanni Agnelli. FCA US is a member of the Fiat Chrysler Automobiles N.V. (FCA) family of companies. (NYSE: FCAU/ MTA: FCA).

FCA is an international automotive group listed on the New York Stock Exchange under the symbol "FCAU" and on the Mercato Telematico Azionario under the symbol "FCA."

Follow FCA US news and video on:

Company blog: blog.fcanorthamerica.com

Facebook: https://www.facebook.com/FiatChrysler.NorthAmerica/

Instagram: www.instagram.com/FiatChrysler_NA

Twitter: www.twitter.com/FiatChrysler_NA

Twitter (Spanish): www.twitter.com/fcausespanol

YouTube: www.youtube.com/fcanorthamerica

Media website: media.fcanorthamerica.com

-###-

Additional information and news from Stellantis are available at: https://media.stellantisnorthamerica.com