## Tonawanda to Build Gen 5 Small Blocks

GM has spent \$400 million to surface finish textures at less update the plant that will produce the new Gen 5 Small Block engine family.

and retained at the 75-year-old Tonawanda (N.Y.) Engine Plant since 2009, said plant manager Steve Finch.

As a result of GM's \$400 million investment, Tonawanda will eventually produce four versions of the Gen 5 Small Block – a 4.3L V6, 5.3L V8 and two variants of a 6.2L V8.

When the plant is at full production, it will produce more than 1,000 engines daily.

The new family of engines will power nine GM models by 2015, starting with the 2014 Chevrolet Silverado and GMC Sierra pickups. and the 2014 Chevrolet Corvette Stingray.

"The Gen 5 Small Block is a cornerstone of GM's powertrain strategy and its production at Tonawanda affirms the commitment to one of the highest-skilled workforces in the industry,' Finch said.

"We have invested 40,000 hours and \$1.8 million in training the workforce to build these engines with uncompromising quality, and we've added some of the most flexible equipment ever used in the industry to make sure we can meet market demand."

Said Bob Coleman, shop chairman of UAW Local 774: "We have hired more than 1,000 people in the last year.

"They are trained by a joint team and learn the Tonawanda culture during an intensive twoweek orientation.

"I believe we have the finest engine builders in GM. Receiving almost \$1 billion of new investment since 2010 proves that GM has the confidence in this workforce, as do I.'

Manufacturing highlights include:

• New coordinate measuring machines that check machining with greater speed and accuracy, including a Zeiss position check machine that examines more than 11,000 data points within 2.5 microns and a Hummel surface finish machine that checks

than a micron - less than 0.001 millimeter or 0.000039 inch;

• A new Track and Trace sys-The result is 1,500 jobs created tem that collects all machining and assembly data for each engine, helping ensure top quality builds;

• A new, smart automated cylinder head assembly system that helps ensure more precise assemblies. It can assemble 48 parts in 40 seconds;

• A fuel system connection inspection that uses helium to detect even the most minute of leaks - less than one part per billion – for the high-pressure direct injection system used on each engine;

 The capability of boring any number of cylinders through the same machine without stopping;

• A new machine featuring three synchronistic robots that perform inspections and checks simultaneously for any engine including thread check, plug assembly and leak test.

Previously, checks were handled one at a time and separate lines were required for the sixand eight-cylinder engines.

> "The Gen 5 Small **Block engines are** among the most advanced..." - Steve Finch GM

The technologies and training enable Tonawanda to build all Gen 5 variants on the same assembly line, Finch said. All feature advanced technologies - including direct injection, Active Fuel Management, continuously variable valve timing and an advanced combustion system which enable the engines to make more power with greater efficiency.

The new 5.3L V8 engine offered in the 2014 Chevy Silverado and GMC Sierra trucks, for example, is the most efficient V8 in the

segment, say GM officials.

It's rated at 23 mpg on the highway (2WD), while the 455horsepower 6.2L LT1 V8 found in the 2014 Corvette Stingray makes it the most efficient sports car on the market, Chevy officials say, adding that it has an EPA-estimated 29 mpg on the highway.

Gen 5 Small Block engines are marketed as EcoTec3 in the truck segment.

The Gen 5 Small Block engines are among the most advanced and high-tech in the world and Tonawanda is now one of the most technologically advanced manufacturing facilities to support them," Plant Manager Finch said.

He added, "From the machining operations and the flexibility for building variants on the same line to state-of-the-art quality advances, Tonawanda's manufacturing capabilities are second to none.'

According to GM, construction on the Tonawanda facility started in 1937 and production began on March 22, 1938.

GM officials stated that the facility is known throughout automotive collector and enthusiast circles as the birthplace of some of the most historic high-performance engines for vintage Chevrolet muscle cars and Corvettes.

Tonawanda also is the birthplace of the Small Block engine, which went into production in 1955.

Tonawanda this year will build its 71 millionth engine. The start of Gen 5 production has contributed to the workforce more than doubling in size from its low in 2009.

A GM spokesman said that Tonawanda is currently building the Ecotec 2.0L Turbo (WardsAuto 10 Best Engine List Winner), and 2.5L engines that power the 2013 Chevrolet Malibu and the 2013 Cadillac ATS and future 2014 Cadillac CTS.

The plant is also ramping up to build a 4.3L EcoTec3 V6, 5.3L EcoTec3 V8 and a 6.2L EcoTec3 V8 for the 2014 Chevrolet Silverado and GMC Sierra pickup trucks, as well as the 6.2L V8 LT1 2014 Corvette Stingray engine.



