

# Tech Center News™

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“Covers the Hub of Macomb County’s Auto Industry”

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## 60-Year Evolution Culminates in 7th-Generation Corvette

by Ross Raybin

General Motors celebrated 60 years of the Corvette by rolling out its newest model at the International Auto Show in Detroit on Jan. 13.

The reveal of the 2014 Corvette Stingray during media week at the IAS grabbed the attention of the press and took social media by storm.

The latest Corvette, referred to as “C7” by enthusiasts, represents the seventh generation of the car released by the automaker and the first since 2005 when the sixth-generation Z06 was released.

Over the decades, the Corvette has earned its reputation as America’s sports car through continual refinement and engineering and technological advances.

The first Corvette was introduced at New York City’s Waldorf Astoria hotel in January 1953 during the GM Motorama.

What was unique about the vehicle back then was its body, which

was made of composite materials.

The first-generation (C1) Corvette boasted an all-fiberglass body. Over the years, it has evolved into a more durable carbon fiber body.

The third-generation was the first generation of the vehicle to do away with a fiberglass frame and instead use sheet-molding compound. It was a lighter-weight plastic that was more elastic and prevented cracking.

The first carbon fiber parts were used in the sixth generation of the vehicle to make it lighter, however it was the fifth-generation Corvette that really trimmed the weight.

The C5 was one of the rare instances in the world of cars where a new model weighed less than its predecessor.

According to a press release by GM, the 1997 Corvette was larger than its predecessor and weighed nearly 100 pounds less.

One of the largest contributors to the vehicle’s weight loss was the use of new body panels that



*While the Corvette has changed over 60 years, it has never lost its sense of style or power.*

had a higher plastic content and all-new chassis. They used rails and hydroformed sections to provide more strength with less complexity and weight.

The C5 was also the introduction of a new engine (Gen 3 small-block), which weighed roughly 10 pounds less than previous models.

The type of engine used in the

G1 corvette was a Small Block V8, which wasn’t introduced until the car’s third year of production.

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## Macomb County’s 2013 Economic Growth Predicted to Outpace Nation

In a recent presentation in front of members of the Macomb County Chamber, Macomb College president Jim Jacobs had some good news for county residents and business owners.

In his 2013 economic forecast, Jacobs said Macomb County will actually do better than the national economy when it comes to economic growth and recovery.

This will mark the third straight year that the local economy will outpace the national average, fueled largely by local automotive manufacturing and defense spending.

He predicts that unemployment will go down faster in the county compared with national employment trends, and expects to see continued positive income growth in 2013.

The upward trend was clear in 2012, which saw significant new investments in the automotive industry spur growth in employment in the county, with domestic automakers General Motors Co., Ford Motor Co. and Chrysler LLC leading the charge.

The defense sector is also aiding the county’s economic climate. Jacobs said the defense sector continues to mature and fuel economic growth. For example, TACOM and TARDEC are

spending over \$1 billion in local community contracts. Workforce Employment at Detroit Arsenal increased to 8,000 employees.

New contract announcements for General Dynamics, Navistar and Oshkosh Corporations are also elements adding to Macomb County competitive edge.

Some Macomb County areas are forming their own unique identity, like the “Defense Corridor” and the “Nautical mile area of Lake St. Clair,” a development Jacobs cited as positive for the county. The change to a county executive form of government recently approved by voters has improved the county’s image, and continued auto sale increases make the Metro Detroit region one of the fastest-growing urban areas. The manufacturing sector is continuing to expand, and market demand is creating new jobs.

Jacobs said Michigan has emerged from 2012 in better shape than a lot of other states, with a projected budget surplus of \$633 million.

Michigan has also experienced significant employment growth, adding over 110,000 jobs, and adding to the good news, most of these paying jobs.

A significant decline in government employment and spending is expected to have an impact,

but Jacobs said the jury is still out on whether major tax changes will stimulate new state growth.

Looking at the national picture,

2012 saw the U.S. economy benefiting from slow yet steady gains in employment, a growth rate of over 2 percent and low inflation. There was some expansion in the

banking and financial sectors, but the growth in manufacturing has leveled off.

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## Detroit Big 3 January Sales Figures

### GM Retail Sales Up 24 Percent

General Motors Co. announced last week that it sold 194,699 vehicles in the United States in January, up 16 percent compared with a year ago. Retail sales were up 24 percent. Fleet sales were down 2 percent.

“The year is off to a very good start for General Motors,” said Kurt McNeil, vice president of U.S. sales operations. “There’s a sense of optimism among our dealers that only comes when you pair a growing economy with great new products. We started to see the benefits in 2012 with vehicles like the Chevrolet Sonic, Cadillac ATS and Buick Verano. Now in 2013, we’re entering the sweet spot of our product plan in a growing economy.”

Sales of GM’s full-size pickups were up 32 percent.

### Ford Car Sales Up 34 Percent

Ford Motor Company’s January U.S. sales of 166,501 grew 22 percent year-over-year – with retail sales up 24 percent. Gains were made across the product lineup, with cars up 34 percent, utilities up 23 percent, and trucks up 11 percent for the month.

“Ford is off to a strong start this year, with Fusion and Escape delivering January sales records and F-Series seeing a particularly strong reception this early in the year,” said Ken Czubay, Ford vice president, U.S. Marketing, Sales and Service.

Sales of the all-new Ford Fusion totaled 22,399 vehicles in January, a 65 percent increase versus a year ago and Fusion’s best January sales ever. Fusion broke its January 2011 sales record by 56 percent.

### Chrysler Sales Up 16 Percent

Chrysler on Feb. 1 reported U.S. sales of 117,731 units, a 16 percent increase compared with sales in January 2012 (101,149 units), and the group’s best January sales since 2008.

The Chrysler, Dodge, Ram Truck and FIAT brands each posted year-over-year sales gains in January compared with the same month last year. The Dodge brand’s 37 percent increase was the largest sales gain of any Chrysler Group brand in January. Chrysler Group extended its streak in January to 34 consecutive months of year-over-year sales gains.

The all-new Dodge Dart continued on its upward sales trend with a 17 percent month-over-month increase in January, the car’s best monthly sales performance since its launch.



*General Motors Advanced Restraint Systems Senior Staff Engineer Scott Thomas demonstrates the industry’s first front center air bag in the fall of 2011 at the GM Proving Ground.*

## GM Introduces Two Industry-First Air Bags

Vehicle safety is important and GM has been promoting its advances in passive safety technology with the introduction of two new industry-first air bags on four of its best-selling 2013 cars and crossovers.

The 2013 GMC Acadia and 2013 Chevrolet Traverse equipped with power seats and all 2013 Buick Enclave midsize crossovers come with GM’s front center air bag. Developed in collaboration with safety restraint supplier Takata, this air bag is designed to help provide an energy-absorbing cushion between drivers and front passengers in side impact crashes and rollover

events, as well as added protection to the driver in far-side impacts.

Acadia, Traverse and Enclave are among the Insurance Institute for Highway Safety’s 2013 Top Safety Picks.

“The front center air bag is not required by federal regulation, and no other air bag in passenger vehicles today offers the type of restraint and cushioning this air bag is designed to provide for front occupants,” said Scott Thomas, senior staff engineer in GM’s advanced restraint systems.

Far-side impacts, where the vehicle is impacted on the passenger side of the vehicle, were studied by

GM through an analysis of the National Highway Traffic Safety Administration’s Fatality Analysis Reporting System database.

GM found that far-side impact crashes, which the front center airbag primarily addresses, accounted for 11 percent of the belted front occupant fatalities in non-rollover impacts between 2004 and 2009 involving 1999 model year or newer vehicles.

Far-side fatalities also represented 29 percent of all the belted front occupant fatalities in side impacts.

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