# Tech Center News.

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"Covers the Hub of Macomb County's Auto Industry"

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More than four inches of fresh snowfall during testing in Michigan's Upper Peninsula helped validate final specifications on pre-production versions of the ELR's ride and handling dynamics.

#### ELR Aces Winter Testing in Upper Peninsula

by Irena Granaas

The Cadillac ELR extendedrange electric luxury coupe moved an important step closer to hitting dealer showrooms with the successful completion of winter weather chassis testing.

Fresh off its debut at the North American International Auto Show in Detroit, the ELR was accompanied by a crack GM engineering team recently as the vehicle was put through its paces under winter weather conditions in Michigan's Upper Peninsula.

With the Detroit Metro area ex- conditions . . . (Weather is) pretperiencing another mild winter, General Motors engineers needed some place with extreme winter road conditions to challenge the ELR

Kevin Kelly, GM manager of Electrification Technology Communications, noted the U.P. provides an ideal winter testing ground. "We had about four inches of

fresh powder the day we were up there, so weather conditions were perfect for us to put the car through the test for the winter

ty predictable there," he said.

"You're pretty much guaranteed that this time of year you'll have ideal conditions for doing testing like we were doing, whether that would be riding around on an icy surface to test ABS traction control or just to test the suspension system and the overall handling through some of the imperfections you would get in a winter environment.'

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#### N.A. Sales Drive GM Profits; Hourly Employees to Receive \$6,750 Bonus

by Jim Stickford

GM achieved its "third consecutive year of strong earnings" when it made \$4.9 billion in net income for 2012.

The company reported that revenue for 2012 was \$152.3 billion, up from \$150.3 in 2011. Net income attributable to common stockholders was down \$4.9 billion in 2012 versus \$7.9 billion in 2011, attributed "primarily to unfavorable special items.'

We recorded another solid year in 2012 as we grew the business, delivered a third straight year of profitability and took significant actions to put the company on a solid path for future growth," said Dan Akerson, chair- U.S. hourly employees. man and CEO.

"This year, our priorities will be executing flawless new vehicle launches, controlling costs and delivering more vehicles to our customers at outstanding

GM North America (GMNA) reported Earnings Before Interest and Taxes (EBIT)-adjusted of \$1.4 billion in the fourth quarter of 2012 compared with \$1.5 billion in 2011. Full-year EBIT-adjusted was \$7.0 billion in 2012 compared with \$7.2 billion in 2011. Based on GMNA's 2012 financial performance, the company will pay profit sharing of \$6,750 to approximately 49,000 eligible GM

Like Ford, GM reported big losses in Europe. The company stated that GM Europe reported EBIT-adjusted loss of \$699 million in the fourth quarter of 2012, compared with \$600 million in 2011. The full-year EBIT-adjusted loss was \$1.8 billion in 2012, compared with \$700 million in 2011.

GM International Operations, which includes the Chinese market, reported EBIT-adjusted of \$500 million in the fourth quarter of 2012 compared with \$400 million in 2011. Full-year EBIT-adjusted income was \$2.2 billion in 2012 compared with \$1.9 billion

GM South America reported

EBIT-adjusted of \$100 million in the fourth quarter of 2012, compared with \$200 million in 2011. Full-year EBIT-adjusted was \$300 million in 2012 compared with EBIT-adjusted of \$100 million in

GM Financial reported earnings before taxes (EBT) of \$100 million in the fourth quarter of 2012, compared with \$200 million in 2011. Full-year EBT was \$700 million, compared with \$600 million in 2011.

GM's U.S. defined benefit pension plans earned asset returns of 11.6 percent in 2012 and ended the year 84 percent funded.

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GM CEO Dan Akerson called 2012 a good year for the company and expects 2013 to be even better.



Former Army mechanic Ihor Stetkewycz, left, reviews a Jeep engineering bill of material issue with human intelligence collector - and former Army ranger - Troy Smith and their manager Victoria Michalak.

### Prestige 'Top Gun' Program Matches **Veterans with High-Tech Careers**

by Irena Granaas

All too often, men and women returning home from military service face unemployment or have to settle for minimum-wage

But a recent study ranked Macomb County as one of the top 10 areas of the nation for veterans to live and work, and programs like the one described in this article can only add to the area's desirability.

It's a program that offers returning veterans training in highpaying automotive careers. It was initiated by Mt. Clemensbased Prestige Engineering, an engineering and design staffing agency serving a broad range of industries and founded in 1998 by Bill Fritts.

Prestige saw a need to fill a growing number of engineering positions. The company worked closely with area colleges and workforce development agencies to create an apprenticeship program to train veterans as design engineers.

It is the first and only program

of its kind in the United States.

"The apprenticeship was really a joint corporate initiative that the president (of the company), Bill Fritts, and myself had started, to combat off-shoring in 2007," said Tom Nichols, executive vice president of Prestige and a veteran himself.

"We figured since no one is training any young people in drafting anymore, there's no one to do the work even if we could get it back.

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## Fusion, Hybrid Earn NHTSA's 5-Star Overall Safety Rating

Fans of green and safe vehicles got some good news from Ford last week when the National Highway Traffic Safety Administration (NHTSA) announced that the 2013 Ford Fusion and Fusion Hybrid received a top vehicle safety rating.

The Fusion and Fusion Hybrid received a five-star Overall Vehicle Score in NHTSA New Car Assessment Program (NCAP) testing, which combines vehicle performance in frontal and side-impact crash tests and resistance to rollover.

The Fusion and Fusion Hybrid exemplify the new face of Ford vehicles and demonstrate Ford's commitment to safety in all its vehicles across the globe," said Steve Kenner, global director of the Ford Automotive Safety Office (ASO).

The new five-star safety award

from NHTSA is in addition to the 2013 Fusion being named a Top Safety Pick+ from the Insurance Institute for Highway Safety (IIHS) last month. The Top Safety Pick+ designation is the organization's highest rating for vehicle safety.

The new Fusion features the Personal Safety System with new safety belt technologies and front impact airbags.

The Personal Safety System is a network of components that work together to tailor the deployment of the front airbags during frontal collisions. The restraint control module (RCM) translates information collected by the front crash sensors, front outboard safety belt buckle switches, driver-seat track position and passenger seat weight

Using this information, the RCM activates the safety belt



2013 Ford Fusion Hybrid

pretensioners and determines how the dual-stage front airbags will deploy. This tailored airbag deployment is based upon system inputs received about the size, seat track position and safety belt usage of the front seat occupants.

The redesigned seat-mounted side airbags deploy lower in the pelvis area and incorporate new

venting technology. The side airbag's venting technology takes into account the size of the occupant, and varies the pressure so smaller occupants receive a lower pressure.

The tunnel vent is lined up with the shoulder area of the occupant.

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#### Troy's Vari-Form **Earns GM Award** For Top Quality

The Troy-based company Vari-Form, a manufacturer that specializes in pressure-sequence hydroforming for the auto industry, was just awarded the General Motors Supplier Quality Excellence Award for 2012.

Terry Nardone, head of Sales and Business Development, said the company has three facilities in Ontario that use water and hvdraulic presses to make auto parts for GM.

He said the company is making C6 frame rails for the current model Corvette.

They also produce instrument panel beams for the Corvette and will be making parts for the new Stingray.

"The instrument panel beams are both steel and aluminum," Nardone said.

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