





## Vari-Form Uses Hydroform On Jeep's Cross Member

Building a successful vehicle such as the 2014 Jeep Cherokee is a team sport, and the folks at the Troy-based supplier Vari-Form are glad to be on Chrysler's

"We are proud to be a part of the Jeep Cherokee," said Vari-Form Director of Sales & Engineering Doug Viohl. "The cross member is part of a highly-engineered front end module that possesses a complex architectural form and provides a weight reduction solution."

Vari-Form spokesman Terry Nardone, said that early reviews of the 2014 Jeep Cherokee have "given the automotive press, fans, enthusiasts and consumers a first look at an all-new mid-size

And among the essential components of the Cherokee is the upper cross member manufactured by Vari-Form using proprietary Pressure-Sequence Hydroforming technology, Nardone said.

The intricate contours within the cross member facilitate integration of other front-end module components, including the hood seal, latching, wiring harnesses, headlights, and mounts for the cooling system.

The Vari-Form tube hydroforming process is uniquely capable of providing these formations, Nardone said.

"Our patented Pressure-Sequence Hydroforming produces the thinnest hydroformed tubular part," Viohl said. "The part is produced using 0.8 mm steel. The resulting structure is very lightweight.

"Vari-Form technology stretches the limits of thin wall hydroforming, staying within finite tube thickness limits. I'm pleased to say this is something that competing hydroforming processes simply cannot do."

Vari-Form delivers the hydroformed upper cross members to be integrated into a front-end

module for the Cherokee by **Bayloff Stamped Products.** 

Nardone said Vari-Form started working with Chrysler engineers on the 2014 Cherokee about two years ago.

That kind of timeline is typical for us," Nardone said. "We get involved in the design process that early because Chrysler has to make decisions on which supplier to use. They have to decide which type of stamping technology - hot stamping technology, rolling tech or hydroforming - to go with as part of their planning process.

So, early in the design process, suppliers like Vari-Form are given performance and weight criteria by Chrysler's engineers for various parts.

"Once we all get the specs, picking the supplier for that particular part becomes a case of 'may the best man win," Nardone said. "Chrysler picks the process and company it thinks will work best in the production process.

In this instance, Chrysler decided to go with Vari-Form for its cross member parts. Nardone said that Vari-Form's relationship with the company goes back decades.

Starting in 1990, Vari-Form besupplying gan parts Chrysler's minivans.

"Our hydroforming process is tried and true," Nardone said. "We've made 100 million parts with this method since 1990.

Vari-Form also works with Ford and GM, Nardone said. They have just opened a plant in China and are in the process of opening a facility in Germany.

The Chrysler parts were designed at Vari-Form's headquarters in Troy, and are being manufactured at its plant in Ontario.

"I just saw a couple of the new Cherokees on the road," Nardone said. "It's a good-looking vehicle and we're proud to have played a part in getting it on the road."

## **Car Thieves Also Drive Off** In Compacts, Subcompacts

car, but even car thieves understand the value of going for the practical ride

The National Insurance Crime Bureau released the next in its catalog of refreshed vehicle theft reports, this one on "compact and subcompact" vehicles.

The report is based on National Crime Information Center vehicle theft records for 2010, 2011 and 2012: model year vehicles that were stolen during the period April 3, 2009, through December 31, 2012.

The compact class posted 14,258 thefts during this period and the top three were Toyota Corolla (3,664 thefts), Ford Focus (1,797) and Honda Civic (1,725).

The subcompact class had 5,501 thefts with only two subcompact models making the top 10: Nissan Versa (1,499) and Toyota Yaris (1,072).

The other vehicles in the top 10 list include Nissan Sentra (1,216), Hyundai Elantra (1,198), Mazda 3 (1,085), Volkswagen Jetta (993) and Kia Forte (863).

During this reporting period, 19,759 compact and subcompact vehicles were reported stolen in the United States.

The top five states reporting the most combined thefts of these two vehicle classifications were California (4,205), Florida (2,029), Texas (1,584), New York (873) and Illinois (699). Although not a state, Puerto Rico reported 1.021 such thefts.

When reviewed by Core-Based Statistical Areas (CBSA), com-

Everybody loves a good sports pact and subcompact thefts were most reported from the Los Angeles-Long Beach-Santa Ana, Calif., area (1,333). Next was New York-Northern New Jersey-Long Island (1,057), followed by Mia-Lauderdale-Pompano mi-Fort Beach (953). San Francisco-Oakland-Fremont (604) and Atlanta-Sandy Springs-Marietta, Ga. (515), round out the top five

## Demand for New Powertrain Tech Aids BorgWarner

BorgWarner officials say that the company expects a net of \$2.9 billion in new powertrain business for 2014 through 2016, up 26 percent from the previous three-vear net new business.

Demand for its advanced powertrain technologies, such as gasoline and diesel turbochargers, all-wheel-drive systems, engine timing systems – including variable cam timing devices and emissions products - is expected to drive growth, said Borg-Warner CEO James Verrier.

"Improving fuel economy, lowering emissions and enhancing the driving experience are increasingly important strategic initiatives for automakers around the world," Verrier said. "BorgWarner is uniquely positioned among vehicle suppliers to deliver powertrain technologies that help automakers meet these objectives."