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Cruze's Turbo 'Overboost' Revs on Demand

The new 2014 Chevrolet Cruze Clean Turbo Diesel uses a turbocharging feature called "overboost," designed to enhance performance without harming the car's gas mileage.

Edmunds.com, in a review of the Cruze, stated, "EPA-estimated fuel economy stands at 25 mpg city/36 mpg highway and 29 mpg combined for the Cruze LS with the manual transmission and 22/35/27 mpg with the automatic."

The Cruze is based on GM's Delta II platform, which is used around the world. The platform can be used on a compact front-wheel-drive car or an SUV and it is the successor to the old GM T platform. Variations of the vehicle are made in Australia, Brazil, Russia, South Korea, Thailand and Vietnam.

Cruze Diesel's turbocharged 2.0L engine delivers an SAE-certified 151 horsepower and 264 lb.-ft. of torque, but overboost can increase torque to 280 lb.-ft. for about 10 seconds of stronger acceleration. That's the equivalent torque delivered by the 1972 Camaro Z28's heavier 5.7L V8.

"Overboost provides increased performance when the driver demands it, like when passing on the highway," said Mike Siegrist, GM 2.0L diesel assistant chief engineer. "When the driver leans on the throttle, the

turbocharger increases the air and fuel intake over and above what the engine needs for normal torque demand."

Unlike during the muscle car era, Cruze Diesel is designed to marry that quick burst to an EPA-estimated 46 mpg highway, and demonstrated range of 717 miles on one tank of fuel.

So, taking the "muscle" analogy one step further, overboost is to Cruze Diesel as oxidation is to athletes when their muscles use oxygen to break down carbohydrates, fat and protein to produce energy.

The more oxygen they take in,

the better their performance.

Cruze Diesel can sprint from 0 to 60 in about 8.6 seconds – half a second faster than its chief competitor, the 2013 Volkswagen Jetta 2.0L TDI, Siegrist said.

Cruze's 2.0L turbo-diesel provides the car with better fuel economy than a comparably sized gasoline engine through greater thermal efficiency, a higher compression ratio and an unthrottled combustion process. It features an iron cylinder block and a forged steel crankshaft, each designed to stand up to the

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Michael Siegrist, Chevrolet Cruze Diesel Powertrain Engineer



The 2013 Challenger Rallye Redline with red-hot exterior accents

Chrysler Customers Crown Three Rides 'Best in Class'

by Irena Granaas

Chrysler had the distinction recently of having three of its vehicles win "Best in Class" awards from automotive research group AutoPacific in its 17th annual Vehicle Satisfaction Awards (VSA).

It was a three-peat for the Jeep Grand Cherokee, named Best-in-Class Mid-Size SUV for the third year in a row.

AutoPacific also named the Chrysler Town & Country Best-in-Class Minivan for the second time in the past three years.

And, the Dodge Challenger made a positive impression with

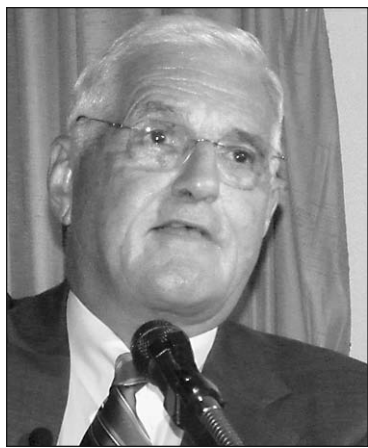
its first appearance at VSA, tied for Best-in-Class Sporty Car.

"Having three Chrysler Group vehicles earn Best-in-Class Vehicle Satisfaction Awards from AutoPacific is a terrific honor," said Reid Bigland, Chrysler Group's head of U.S. Sales.

"It's even more meaningful to us as these awards represent the voice of our customers, who continue to acknowledge the quality of and satisfaction with our vehicles."

AutoPacific's Vehicle Satisfaction Awards determine owner

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Bob Lutz

Lutz Talks About Life in the Automotive Corporate World

by Jim Stickford

Automotive legend Bob Lutz said GM "owes Anne (Asenio) a great debt of gratitude" for changing the interiors of GM cars.

Lutz's remarks came at a special forum called, "CATiA Creative Design and ICEM Day," held June 13 at Lawrence Tech University and sponsored by auto supplier Dassault Systemes.

Lutz discussed creative design in the automotive industry and

his new book, "Idiots and Icons."

He talked about Asenio – who also spoke at the forum – who is currently based in her home country of France, but worked under Lutz at GM for many years.

He said back in the day he tasked Asenio with changing GM's vehicle interiors.

"I wanted her to use as a benchmark the best Japanese and German vehicle interiors," Lutz said. "GM's interiors were not known as being stylish. They used a lot of molded plastic."

He said Asenio faced a lot of opposition. Interior designers and suppliers told her that GM never did things the way she asked, so it must be a mistake.

Lutz said that it was difficult to get people to understand that the new guidelines weren't a mistake and that he and his managers were serious about improving interiors. But things finally changed, he said.

"Changing GM's design culture was a major achievement," Lutz said. "The company owes Anne a

great debt of gratitude. The Buick Enclave's interior is one of the best in the industry and it's because of her."

Lutz then talked about some of the people in his latest book and the lessons he learned from them. He said his first job at GM after he got his MBA was working for a man who said that Lutz used too many fancy words and that he was in a department where they did business the

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1949 Plymouth 'High and Mighty' Travels To St. Ignace for 38th Annual Car Show

by Irena Granaas

When Bob Lees unveils the tricked-out "High and Mighty" at the 38th annual St. Ignace Car Show June 27-29, few will be able to take their eyes off this striking replica of a part of Chrysler performance car history.

With its mirrored headlights, multiple bugle-shaped, "sonically tuned" chrome exhaust pipes extending out to the sides, chopped top and high ground clearance, it little resembles the sedate business class coupe from which it was created.

Lees, a CEMA (Chrysler Employee Motorsport Association) member and Grosse Pointe resident, explained that the original 1949 High and Mighty Plymouth was an historic car that first established Chrysler's winning reputation on the race track.

According to CEMA President Christopher Suminski, the car was the creation of the Ramchargers, a group of Chrysler en-

gineers who loved what they did, so much so that they got together and spent many hours out of their own time, and spent their own money creating and taking their tricked-out cars to the drag strip.

The Ramchargers built the High and Mighty using the 1949 Plymouth business coupe as the body in 1959. The original Plymouth business coupe had a small flathead six-cylinder engine, which was replaced by a 354-cubic-inch HEMI V8 engine.

"Since they knew each other at work and spent a lot of time with each other after work, they decided to build a club car and the Ramchargers were formed," Suminski said. "They were so good at product and development with their own cars that they brought their ideas back to work to help with the race program. The 1949 Plymouth High and Mighty car was born."

Lees, who is going up to the St. Ignace Car Show with his wife

Judy said the Plymouth is a featured car at the event, and the car will be displayed on a trailer and towed during the Friday evening parade.

Lees noted that two members of the original Ramchargers, Pete McNicholl and Troy Simonsen, will be attending the show, and will be in the Ramcharger booth signing autographs. Photographs and T-shirts featuring the car will be available for purchase and can be autographed as well.

Suminski said The High and Mighty was a first in many ways to help develop and change stock drag car racing.

"It first appeared in 1959 at the NHRA (National Hot Rod Association) Nationals at Detroit Dragway," Lees said, "racing against the cream of the crop. It set a record of 109.7 mph in the quarter-mile."

The High and Mighty brought many innovative features that hadn't been seen before at the drag strip, said Lees, including



A first in many ways, this 'rod "helped change stock drag car racing."

the first tunnel Ram-tuned intake manifold and sonically tuned exhaust pipes and rear wheels that were moved forward 11 inches.

"That was done to get a weight transfer to the rear wheels when the car launches to get better traction," Lees said.

As part of that weight transfer, the car's engine was set back further toward the rear and set higher in the car, which also helps transfer weight to the rear wheels for traction. The car's

rear suspension was a four-link coil adjustable rear suspension, which enabled them to adjust the suspension to improve traction.

"The High and Mighty was so named because of the characteristics of the car being set higher – and of course, it was mighty," Lees said.

He added they lowered the top of the car four inches to improve the aerodynamics. According to

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