

## GM's Test System Allows Hands-Free Driving

by Jim Stickford

Popular Mechanics named General Motors' Super Cruise semiautonomous driving technology a winner in its Breakthrough Awards.

The ninth annual Awards recognized innovators and products that advance the fields of technology, medicine, space exploration, automotive design, and more.

GM's new experimental technology, being assessed in testmodel Cadillacs is capable of semi-automated driving, including hands-off lane following, braking and speed control under certain driving conditions, said GM spokesman Daniel Flores.

The system is designed to ease the driver's workload on freeways only, in bumper-to-bumper traffic and on long road trips; however, the driver's attention is still required, hence the name semi-autonomous.

Super Cruise is undergoing real-world driving trials, and could make its way into Cadillac production models later this decade, Flores said.

Honorees were recognized in the November issue of *Popular Mechanics* available on newsstands as of Oct. 15.

The magazine, when describing the technology that impressed the editors, stated "the self-driving car started as a science-fiction fantasy – then DARPA and Google turned it into a real-world experiment. Now GM is working to make automotive autonomy part of an option package."

"The automaker has combined two existing technologies – adaptive cruise control and lane centering – into its Super Cruise system, which allows for hands-free driving at highway speeds. It could be available in a produc-

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tion vehicle as soon as 2018."

This system, said Flores, is just the latest in technology that could lead to the truly "driverless" car.

These kinds of technologies are here today, especially in highend vehicles, Flores said, but the technologies aren't perfect. Lane centering tech doesn't work under certain adverse conditions, he said.

He said as an example, if it's snowing, the cameras won't be able to detect the lane markers and when a vehicle can't "see" the lane markers, its lane centering tech won't work.

"We've been working on this project for a handful of years," Flores said.

"This award is an honor and we're proud to receive it. It's recognition that our approach to a semi-autonomous driving vehicle is a reasonable and responsible approach to the coming age of cars driving themselves."

Flores said that many companies, including ones like Google,

are working on the self-driving car. There is already technology in vehicles that help with things like parallel parking.

The self-driving car won't suddenly appear. Its platform will be built on technologies that already existed and have been in vehicles for some time.

"The movement toward the car that drives itself is well under way," Flores said. "I'd say the trend got its start way back when anti-lock brakes were first introduced.

"These brakes, for the first time, could sense when a vehicle's stopping system needed an adjustment while they were in use without any input from the driver. Right now, there is already technology in cars that help operators drive more safely.

"We think the semi-autonomous driving car will take technology that is already available today to the point where cars can drive themselves. The super cruiser is just the next step in that process."



Police tests placed Ford No. 1 in acceleration – "critical for pursuit."

## Michigan State Police Tests Earn Ford Bragging Rights

Ford, manufacturer of the bestselling police vehicles since 1996, trumped Chevrolet and Dodge in recent instrumented acceleration testing by the Michigan State Police.

The new Ford EcoBoost-powered Police Interceptor sedan bested both the Chevrolet Caprice V8 and Hemi Dodge Charger, while Ford Police Interceptor utility with EcoBoost took down the V8-equipped Chevrolet Tahoe.

"These tests conducted by the Michigan State Police are an important validation of best-inclass performance in outright acceleration – the most critical measure of police pursuit vehicles," said Bill Gubing, Ford chief engineer.

"Agencies tell us if the bad guys see the police vehicle quickly close in pursuit, they're less likely to try to run. If this can help reduce the number of highspeed chases, then we could improve public safety on our nation's roads."

Preliminary results of Michigan State Police testing show the fastest of the fast – the 2014 Ford Police Interceptor sedan with standard all-wheel drive posted a 0-60 mph time of 5.66 seconds, compared with 6.04 seconds for the 5.7-liter Hemi-equipped Dodge Charger with optional all-wheel drive.

The Ford EcoBoost-powered sedan also topped the 6.0-liter V8-equipped Chevrolet Caprice, clocked at 6.01 seconds.

The gap in acceleration only grows in Michigan State Police 0-100 mph testing: Ford Police Interceptor turned a 13.5-second time, while Dodge Charger posted 14.70 seconds and Chevrolet Caprice took 14.35 seconds.

The new Ford Police Interceptor 3.5-liter EcoBoost-powered utility vehicle made its debut in Michigan State Police testing, and while competition was close among sedans, the Ford utility left its rivals in the dust.

Compared with the 5.3-liter V8-powered Chevrolet Tahoe, which posted a 0-60 mph time of 8.22 seconds and a 0-100 mph time of 21.95 seconds, the Ford Police Interceptor utility vehicle with standard all-wheel drive hit 60 mph in 6.28 seconds and 100 mph in 15.51 seconds.

Ford product spokesperson Chris Terry said having a police car that is popular with law enforcement agencies is important, despite the low sales figures.

"Let's face it," Terry said, "the numbers are not huge. We're looking at, maybe, 20,000 units a year sold. But this is a high visability ambassador for the Ford brand. I mean bragging rights are nice, but what's more important is that the public associates our products with the idea of dependable service."

Terry said the California Highway Patrol might buy only 1,000 units a year, but the public has some sort of notion that the organization did research before buying police vehicles from Ford. This puts the brand in a good light because the public assumes there was a good reason for the police going with Ford.

Ford's Police Interceptor utility vehicle is proving particularly attractive to agencies that could use the added space and versatility it provides. Gubing pointed out Michigan State Police tests demonstrate police agencies don't have to sacrifice performance for the additional space and functionality Police Interceptor utility delivers.

Approximately 60 percent of Ford Police Interceptor sales are registered by the utility vehicle, with sedan sales accounting for 40 percent.

Even without EcoBoost, the base 3.7-liter V6 Ford Police Interceptor utility with all-wheel drive is faster than Chevrolet Tahoe V8, Terry said. The Police Interceptor clocked an 8.02-second 0-60 mph time, with Tahoe lagging behind at 8.22 seconds.



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