

## Ford Debuts a Sleeker Taurus Sedan in NY

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wheels and unique side fender vents. It's an aggressive while still subtle look, in keeping with the understated ethos of the model."

Inside the next Taurus, driver-focused elements and a fresh interior color – Dune – add elegance and sportier character. Each Taurus series model features unique fabrics and trims with new appliques on the instrument panel, door trim and center console.

"The sportier new Taurus design is backed up by significantly enhanced chassis dynamics," said Mark Lecrone, vehicle dynamics supervisor. "Larger, more aggressive wheel and tire packages, revised spring and damper rates, across-the-board electric power-assisted steering (EPAS) with a hard-mounted steering rack and quicker steering ratio combine to make the car more fun and responsive for the enthusiast. At the same time, the enhanced Taurus dynamics package makes it a confidence builder for less-experienced drivers."

Enthusiast drivers will appreciate the addition of torque vectoring control, a dynamic innovation usually found only in high-ticket sports cars.

When cornering, torque vectoring control uses very slight braking forces applied to the inside front wheel to help Taurus accelerate through a corner. Imperceptible to the driver, this minute braking action helps stabilize the car, allowing for more torque to reach the tarmac. Making the car feel lighter and more responsive, torque vectoring provides an effect similar to a limited-slip differential. Torque vectoring control is standard on the new Taurus.

The new Taurus adds curve control, a unique Ford brak-

ing control innovation aimed at slowing the vehicle, if it senses that a driver inadvertently enters a curve too quickly. With application of four-wheel smart braking, the vehicle can reduce speed swiftly.

Entering a curve, on- or off-ramp too quickly is a situation found to contribute to more than 50,000 crashes each year in the U.S.

Curve control is effective on wet or dry pavement. When the vehicle enters a curve too fast, the system responds by rapidly reducing torque and increasing brake pressure to help keep the vehicle under control.

Based on Ford's exclusive AdvanceTrac®, curve control uses sensors to measure roll rate, yaw rate, lateral acceleration, wheel speed and steering wheel angle, running calculations based on those inputs 100 times every second. Curve control – a Taurus class-exclusive feature – is standard on all Taurus models.

Taurus brakes have been enhanced with a larger master cylinder, revised booster tuning for improved brake feel and upgraded friction material for additional resistance to fade.

"While Taurus dynamics have been elevated across the entire range, we offer an uncompromised package for the serious enthusiast," said Lecrone. "The Taurus SHO Performance Package features a special sport-tuned suspension with specific dampers and springs, combined with recalibrated EPAS and a true off setting to disengage the electronic stability control. Performance summer-compound tires provide the ultimate in sport-sedan handling and responsiveness."

The 2013 Taurus will be manufactured at Ford's Chicago Assembly Plant.

## LTU Motorsports Teams Gather to Kick Off Season

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Patrick McNally, who has his own LTU student race team business cards and is Team Leader for the Formula Hybrid car. He's interning at Advics North America, a supplier of calipers, master cylinders and ABS brake units in Plymouth and he'll begin working there full-time right after graduation as well.

The LTU Formula Hybrid, he explained, is similar in kind to the Chevrolet Volt – it's a series hybrid.

"This vehicle is set up similar to the Chevrolet Volt, it's a series design, meaning that the batteries power an electric motor which is connected to the drivetrain," McNally said.

"However, the combustion engine itself is not connected in any way to the drivetrain, but it does maintain a state of charge on the batteries.

"The batteries maintain a state of charge for the motors to use. We are restricted to 250 cc's (displacement), so we are using a 205-cc Briggs Animal, which is a Kart-racing application, actually.

"We have a year to design and build these vehicles and right now we're 11 months into the process."

The results will play out on the track in May and June and in a larger sense, will play out as the Detroit auto industry scoops up these engineers for full-time jobs like nobody's business, too.

Smart kids, these LTU students, whether on the track or in the classroom, it's difficult to find a more focused group of college students majoring in engineering and trying to have an impact on the car business all the same.

LTU students are making inroads on several fronts including not only engineering, but also in transportation design, a recent major for the university that stresses a more holistic, unified, transportation degree than most traditional design schools tend to offer.

LTU students can also be found interning amongst the Metro Detroit OEMs whether in design studios or engineering laboratories.



PHOTO: ERIC POPE

LTU President Lewis Walker, second from right, checks out the Blue Devil Motorsports student vehicles assembled on the engineering school's Southfield campus last week.

## Edsel Ford House Hosts EyesOn Show

The 24th annual EyesOn Design Car Show will take place on Sunday, June 19, at the historic Edsel & Eleanor Ford House in Grosse Pointe Shores, Mich.

The annual show will feature a collection of more than 200 by-invitation-only domestic and foreign vehicles selected for their unique avant-garde designs.

The theme for this year's show is "Designing for the Future." This exhibition will explore the direction of future vehicle design from basic sketches through computer-aided realities, with an international display of relevant vehicles.

One aspect that makes EyesOn Design unique among car shows is that it celebrates design in all vehicle categories, from pre-war classics, sports cars and exotic foreign makes to muscle cars, hot rods and custom cars.

The show is also unique in

featuring an award by the DIO Visionaries – visually impaired and blind men and women who wear white gloves and select, strictly by touch, a winner in one vehicle category.

This year's show will also present a Lifetime Design Achievement Award to Walter De'Silva, the head of Volkswagen Group Design, which includes Audi, Bentley, Bugatti, Lamborghini, SEAT, Skoda and VW itself). He was chosen by a panel of previous award winners which has included Bob Lutz, Jack Telnack, Chuck Jordan, Tom Gale, Sergio Pininfarina, Nuccio Bertone, Gordon Beuhrig, Shiro Nakamura and William G. Davidson of Harley-Davidson motorcycle fame.

The general chairman for the 2011 EyesOn Design show is Frank Valdez, a past operations committee chairman for the Meadow Brook Hall Concours d'Elegance with over 30 years of classic car show ex-

perience and currently an event coordinator at Macomb Community College.

The 2011 Honorary show chairman is Ken Lingenfelter, owner of Lingenfelter Performance Engineering of Brighton and the Lingenfelter Collection, a private collection of over 200 exotic cars.

Associated events start on June 16 and culminate with the EyesOn Design Automotive Design Show on Father's Day, Sunday, June 19.

The Lifetime Design Achievement Award will be presented to VW's de'Silva on Friday evening, June 17, at Vision Honored, the formal awards dinner to be held at the historical Ford Piquette Avenue Plant in Detroit.

Ford Piquette, of course, is where the Ford Model T was first designed and launched back in the 1908-09 era and is a favorite stop for car designers, car buffs and auto historians alike.

## Ford's Mascarenas Likes Partnerships for Growth

by Christine Snyder  
Staff Reporter  
Tech Center News

Paul Mascarenas, chief technology officer, at Ford Motor Company, doesn't have to grope for examples of collaborations at Ford, they are part of its corporate DNA.

"At Ford we will be celebrating the 60th anniversary of our sci (scientific) labs that I am heading up," said Mascarenas, who moderated the 2011 SAE World Congress panel on collaboration in the automotive industry. "That is a full of examples of collaborations."

As is Ford. Mascarenas spoke about the many different types of partnerships Ford has embarked on and how they have changed.

"It's more than two companies doing business," said Mascarenas. "In today's digital environment, it's multi-faceted, multi-layers."

While most are familiar with traditional partnerships such as joint ventures between two companies and the collaboration between industry and government and academia, it extends beyond that.

"There will always be a place for those types of collaborations," said Mascarenas. "We have also reached out to non-traditional partners, like Silicon Valley for adding technology content in vehicles."

One example of this is Ford's collaboration with Microsoft to bring InSync into Ford vehicles.

Ford is also working with health care providers as it studies wellness in the automotive environment.

"These types of (collaboration) are rapidly expanding and enabled in the world of digital communications," said Mascarenas. "We are all players now in (that world)."

Electric vehicles have sparked a lot of new non-traditional collaborations, said Mascarenas.

"It's a perfect example of OEMs working with new partners to bring EVs to fruition and will be extremely important as we go forward," said Mascarenas.

When it comes to collabora-



Ford's Paul Mascarenas

tion, Chrysler Group has been reinvented due to collaboration: its partnership with Fiat.

Paolo Ferrero, senior vice president of powertrain at Chrysler, said both Fiat and Chrysler brought something to the table of value to the other.

Fiat brought small displacement engines, turbo charging and alternative fuels. Chrysler brought cost-efficient gas engines, electrification and off-road capabilities.

"Our two parts blend well together," said Ferrero, who said the two share one global creative process. "From this synergy we really share the best practices."

Dan Hancock, vice president, global strategy product alliances at GM, said he can remember a time when GM didn't value collaborations.

"GM believed that we could do it all ourselves," said Hancock. "One reason it (collaboration) is a such a hot topic and getting warmer is all the challenges we face."

Hancock said GM has learned differently. "The best way to have a global reach is through partnership."

GM has collaborations across every spectrum, said Hancock. One of the most successful has been in partnership with SAIAC in China.

"This has evolved over 15 years," said Hancock. "With market growth, strength and trust we are look for ways to expand that relationship now."

Ford's Mascarenas, it might be noted, also chaired the 2010 SAE World Congress.

## Ford Edge Earns Salute in IIHS Crash Safety Tests

DEARBORN – The new 2011 Ford Edge, which offers a suite of innovative safety technologies, is off to a fast start and could gain even more popularity after becoming the latest Ford vehicle to earn a Top Safety Pick rating from the Insurance Institute for Highway Safety (for models built after February 2011).

Ford currently has 10 mainstream vehicles on the road in the U.S. that have earned Top Safety Picks, which adds to its leading number of top U.S. safety ratings.

"The new Edge is already the most popular midsize crossover and we believe this Top Safety Pick rating will generate even more interest," said Sue Cischke, Ford group vice president of Sustainability, Environment and Safety Engineering.

To earn a Top Safety Pick, a vehicle must receive a rating of "good" in offset frontal-, side- and rear-impact crash tests and roof strength evaluations, as well as offer electronic stability control.

The Edge, which launched in late 2010, is off to a fast start with sales up 25 percent in 2011 through March – ending the month as the segment leader with 18 percent of medium crossover sales. Initial demand for the Edge's driver-aid technologies Edge has been strong.

Of the first 101,908 vehicles sold, 32 percent include BLIS (Blind Spot Information System) with cross-traffic alert "Edge customers value safety and security," said Eric Peterson, crossover marketing manager. "Safety features are one of the top reasons customers cite for their purchases of Edge and crossovers in general."

The new Edge comes equipped with technologies to help prevent crashes – from parking lot fender benders to high-speed collisions – by warning drivers of the potential for a crash.

"The new Edge delivers features that both help prevent a crash and help minimize occupant injuries when a crash is unavoidable," said Peterson. "It's a comprehensive

safety story from bumper to bumper."

Driver-aid and safety technologies include options such as:

Adaptive cruise control, which slows the vehicle to adapt for traffic conditions and maintain a preset distance between vehicles

Collision warning with brake support, which helps reduce speed, automatically pre-charges brakes, provides a red warning light on the windshield as well as an audible beep to help drivers stop more quickly when the system detects a collision is imminent.

BLIS with cross-traffic alert, which helps detect vehicles in blind spots during normal driving, as well as traffic approaching from the sides when reversing out of parking spots

MyKey, which allows parents to limit speed and audio volume in their vehicles and is designed to help parents encourage safe driving habits in their teens

"The Edge pioneers the mainstream introduction of crash avoidance technologies with two available class-exclusive radar-based features that help detect and warn drivers of potentially dangerous situations," Cischke said.

Edge features a solid unibody construction, which provides an energy-absorbing structure to help protect occupants.

Bumper-to-bumper flow-through side rails, structural design and A-pillars are designed to move crash energy away from occupants. Nearly half of the stiff shell is composed of high-strength steels, such as boron, for both increased strength and reduced weight.

When a crash becomes unavoidable, Edge relies on an array of airbags to protect occupants. Two front dual-stage and two side airbags are joined by a Safety Canopy consisting of side-curtain airbags for front and rear outboard passengers. Personal Safety System™ safety belts feature pretensioners and an energy management system

with adjustable D-ring height in the first row.

Other Ford vehicles that have earned a Top Safety Pick rating include:

- 2011 Ford Explorer
- 2011 Ford Taurus
- 2011 Ford Fusion
- 2011 Ford Fiesta (when built after July 2010)
- 2011 Ford Flex
- 2011 Lincoln MKS
- 2011 Lincoln MKT
- 2011 Lincoln MKX
- 2011 Lincoln MKZ

The 2011 Ford Edge is EPA-rated at an unsurpassed 19 mpg city, 27 mpg highway and 22 mpg combined.

And so the Ford Edge continues to garner more than its share of industry kudos and honors including this latest salute from IIHS.



The 2011 Ford Edge continues to pick up its share of industry kudos and honors including a high IIHS crash safety rating.



The interior of the 2011 Ford Edge featuring the MyFordTouch communications system.