Kuzak: 'Ford's New 1.0L Engine is a Little Dynamo'

DEARBORN – Ford is expanding its industry-leading range of fuel-efficient powertrains in North America with the addition of a new 1.0-liter EcoBoost™ three-cylinder – the smallest engine Ford has ever built – and an all-new eight-speed automatic transmission.

In addition, Ford's next generation of hybrid vehicles, including a new plug-in hybrid that will launch next year, will have a Ford-engineered transmission that will be built in Michigan.

The arrival of the latest member of the EcoBoost family, Ford's first eight-speed automatic and its new hybrid transmission will further strengthen the company's lineup of fuel-efficient vehicles. Today, Ford Motor Company has 12 vehicles that lead their sales segments in fuel economy and four vehicles that deliver at least 40 mpg, a lineup no other automaker can match.

"In the last five years, we have made a record investment in new powertrains and fuel-saving technologies," said Derrick Kuzak, Ford group vice president of Global Product Development. "Today, we have the freshest powertrain lineup in the industry. And there is plenty more coming."

Engineers at Ford's Dunton Technical Centre in the U.K. began designing the new EcoBoost 1.0-liter engine long before the current spike in fuel prices pushed the cost of a gallon of gas over $4. Their goal: To design a technically advanced, super-efficient three-cylinder engine that delivers the same performance as a four-cylinder, but with much higher fuel economy and lower emissions.

To do that, engineers at Dunton, Ford's global center of excellence for small-capacity engines, focused on improving thermal efficiency and reducing friction of the engine's internal moving parts, especially during warm-up.

That's when an engine emits higher levels of CO2 and other pollutants. The new engine introduces many new technologies that could someday be part of the DNA of future Ford engines, said Joe Bakaj, Ford vice president of Global Powertrain Engineering.

The new three-cylinder engine will be available globally in the company's small cars. It will also play an important role in North America.

"Consumers are telling us they want to buy affordable vehicles that get many more miles per gallon," said Kuzak. "Our new 1.0-liter EcoBoost engine will give consumers looking for hybrid-like fuel economy a new, more affordable choice."

Final calibrations of the new EcoBoost 1.0-liter are under way. Kuzak said the new engine will deliver horsepower and torque outputs equivalent to or better than most normally aspirated 1.6-liter gasoline engines.

"The 1.0-liter engine is a little dynamo," Kuzak said.

Bakaj said the new 1.0-liter EcoBoost might be small in size, but it's big on advanced technology.

The 1.0-liter engine features:

An offset crankshaft that helps improve fuel economy
An advanced, Ford-designed split cooling system that allows the cylinder block to warm up before the cylinder head. Faster cylinder block warm-ups save fuel, especially in cold weather

An exhaust manifold cast into the cylinder head. The one-piece assembly lowers the temperature of the exhaust gases. This enables the engine to run in a wider rpm band with the optimum fuel-to-air ratio. The new design also saves weight and allows the engine to operate more smoothly

EcoBoost technologies, such as turbocharging, direct injection and twin independent variable camshaft timing (Ti-VCT).

"No one's ever built a three-cylinder engine quite like this. Not only is it one of the most technically advanced and efficient engines we've ever designed, but it will introduce a number of new technologies to the Ford engine lineup," said Bakaj.

For comparison, the newest member of Ford's global EcoBoost engine family has about the same displacement as a cruiser motorcycle.

Ford has never built a regular production car engine with fewer than four cylinders.

"Drivers are going to like the new 1.0-liter EcoBoost engine for many of the same reasons the EcoBoost F-150 is such a big hit," said Bakaj. "It will deliver great low-speed responsiveness, power, torque and smoothness."

First seen in the Ford Start concept car that debuted at Beijing in 2010, the engine more recently made its European debut in the Ford B-MAX at the 2011 Geneva Motor Show. More technical and application details for the new 1.0-liter EcoBoost engine will be released in September at the Frankfurt Motor Show in Germany.

Ford is on track to deliver on its promise in 2006 of offering EcoBoost on 90 percent of its North American lineup by 2013 and to be producing 1.5 million EcoBoost engines globally.

The next vehicles to get EcoBoost engines, Edge and Explorer, arrive late this summer.

"With our global family of EcoBoost engines, we've replaced V8s with V6s and V6s with four-cylinders – with no loss of performance and with impressive fuel economy improvements," Kuzak said.

"The new 1.0-liter EcoBoost engine will come in at the lower end of the global range and will take the place of a four-cylinder engine, again with no loss of performance or refinement. Above all, drivers win because this new engine is specifically designed and engineered for terrific fuel economy."

Ford Figo Is Resonating With Hot India Market

NEW DELHI, India – The phenomenal Figo helped Ford India increase sales for the year by 71%, compared to last year, with 51,420 wholesale units sold, including exports, from January to May 2011.

In May, Ford India sold more than 9,000 wholesale units – 7,046 domestically, and more than 2,000 exported.

Based on continued high demand, the company began exporting the Figo to Bahrain and Kenya this month. Ford Figo remains in high demand in South Africa, where it was a runner up for South African Car of the Year.

"The Ford Figo's fuel efficiency, value and innovation continues to grow in reputation and popularity here in India as well as internationally, and this is driving exports into new markets," said Michael Boneham, president and managing director of Ford India.

Ford recently announced an investment of US$72 million to expand its powertrain facility in Chennai as well as to support its sales and export growth plans in the country, bringing Ford's total investment in India to more than US$ 1 billion.

"From growing our product portfolio and expanding our presence, Ford's commitment to India has only deepened with time," Boneham added.

Ford India is also expanding its dealership network across the country. The company opened three new integrated 3-S (Showroom, Sales and Service) dealerships – AVK Ford in Mumbai, Odisha Ford in Cuttack and Omie Ford in Itanagar – expanding its footprint to 173 outlets across 102 cities.

All of the automakers have been targeting the BRIC markets, which includes, of course, Brazil, Russia, India and China, so for Ford to have its Figo resonating as much as it is speaks volumes, experts say.

Ford Earns Two 'Euro NCAP Advanced' Honors from Focus Car Development

CONTINUED FROM PAGE 1

braking input), the car applies the brakes automatically and reduces engine torque.

Lane Keeping Aid uses a camera mounted at the top of the windscreen to monitor the road ahead of the vehicle. The images from the camera are continuously analysed to detect lane markings, typically solid or dashed white lines that delineate the edges of a lane or carriageway. Information about the position of the car relative to the lines is then used to help the driver stay within the intended lane.

If it detects an unintentional lane departure, it applies a steering torque to alert the driver. The system has been programmed to recognise manoeuvres such as overtaking. Both Active City Stop and Lane Keeping Aid are fully automatic but can be deactivated by a switch on the indicator stalk.

"At Euro NCAP, we are constantly seeing new and exciting innovation in the field of automotive safety from all manufacturers and the pace of these changes can only be good for road users across Europe," said Michiel van Ratingen, Secretary General of Euro NCAP.

Euro NCAP's 5-Star safety award for new Focus confirms the structural excellence of Ford's global C-Car platform. Ford C-MAX and Grand C-MAX share the same architecture as new Focus and were both awarded 5 stars by Euro NCAP last year.

New Ford Focus is engineered to meet or exceed safety standards around the world and has been crash-tested more than 12,000 times in real and virtual worlds to guarantee the best possible protection for occupants of various ages and sizes.

"We were committed from the beginning with the new Focus to design and engineer a vehicle that leads the way both in terms of technology and safety," said Gunnar Herrmann, Global C Car vehicle line director. "The inherent strength of our new Focus is the structural rigidity of the body and our extensive use of high-strength steels."

Fifty-five per cent of the body shell is made of high-strength steels, of which 31 per cent is ultra-tough boron steel, more than any other Ford built to date.

Boron features in the A pillars, B pillars, rocker panels and door reinforcement beams to create an extremely rigid, crush-resistant passenger cell. Meanwhile, high-strength steel is used in the integrated door opening reinforcement rings and door load paths to provide excellent protection from side impacts.

New Focus also features a patented front chassis subframe, which de-couples during severe frontal impacts, avoiding deformation in the passenger cell footwell area. Pedestrian protection has been boosted by the addition of a "soft" cowl design in the front body structure and Ford has also relocated the windscreen wiper system to help further reduce injury risks.

New Focus is equipped with Ford's Intelligent Protection System restraint system that includes next-generation front airbags for the driver and front passenger, as well as unique side airbags for all, complete with shoulder vents that stay open and reduce pressure for smaller occupants.

A horizontal stroking steering column reduces loads on head and chest by stroking away from the driver in high speed frontal impacts. Both front seats are fitted with more effective retractor pretensioners, providing increased retraction travel, along with belt load limiters. Rear seat passengers are protected by three-point safety belts and all models have provision for ISOFIX as standard.

Another plus is Ford's Child Lock function, which allows the driver to electronically activate or release the rear-door child locks via a simple control switch. The locks are automatically disengaged in the event of an accident.

As NHTSA tightens domestic safety rules, Ford engineers have been responding in kind with innovations.

Going into its 17th year, the Woodward Dream Cruise is enjoying new sponsorship as Chevy steps up to celebrate its centennial by joining with the event.

Chevrolet Signs Three-Year Contract To Sponsor Woodward Dream Cruise

by Christine Snyder
Staff Reporter
Tech Center News

What epitomizes Motown better than a vintage Chevy cruising down Woodward Ave.?

There will be plenty of collector Camaros and Corvettes on hand at this year's Woodward Dream Cruise, but also glimpses into the future of automotive culture as well.

Chevrolet announced June 2 that it will be the presenting sponsor of this year's Woodward Dream Cruise Aug. 20, the first in a three-year sponsorship agreement.

Rick Sheidt, vice president of Chevrolet marketing, said the sponsorship will help the brand celebrate its centennial.

"Chevrolet as a global brand is celebrating its centennial with locally focused events that recognize the passion people have for their Chevrolets," said Sheidt.

"The Woodward Dream Cruise is the ultimate grassroots automotive event. It's open to everyone. It's free to attend. You can drive, or just watch. You can bring the family. It is a true celebration of automotive passion and performance."

Greg Rassel, president of the Woodward Dream Cruise, said the event organizers are thrilled Chevrolet has stepped up to sponsor the cruise.

"Chevrolet allows the Woodward Dream Cruise to continue on as a safe, family event," said Rassel.

Rassel said that for decades, people have cruised up and down Woodward Ave, and the Dream Cruise recreates fond memories of the automotive culture heyday of the 1950s and 1960s.

"That's what it's all about," said Rassel.

Sheidt said Chevrolet's presence will of course include historic Chevrolets owned and driven by fans, employees and retirees.

It will also include a showcase for Chevrolet's current and future vehicles, including a Dream Cruise-related event involving Volts and their owners.

"It will be the first time electric cars cruised in significant numbers on Woodward," said Sheidt.

The "Volt Cruise" is expected to take place prior to the main Woodward Dream Cruise event, but no date has been set yet, said Sheidt.

Sheidt said Woodward Ave., the nation's first paved street, has been an important thoroughfare for the automotive industry.

The first Chevrolet was built in a Detroit workshop on Woodward in 1911 and now the brand is part of GM, the headquarters of which is one block from Woodward in Detroit.

Visteon Expands Its Automotive Testing Laboratory in Brazil

GUARULHOS, Brazil – Visteon Corp. is expanding automotive component testing capabilities at its engineering test center in Brazil – one of the most advanced technical centers in all of Latin America.

The Visteon Tech Center, located at the company's Arbor manufacturing facility in Guarulhos (SP), will now start performing thermal cycle tests on internal and external components for vehicles.

"The thermal chamber simulates extreme climate and environmental conditions, and has been equipped with six new solar panels, broadening the spectrum of tests that can be performed," said Andreas Jancso, director of Visteon's climate group for South America.

A wide range of tests can be performed at the Visteon laboratory, including field tests to validate products and vehicle climate systems.

In addition to performing technical measurements for electronic, climate and audio systems – as well as thermal chamber tests – the Tech Center features a laboratory with an engine dynamometer.

This lab carries out tests for torque/power performance, fuel economy, ignitions system mapping and several other facets of engine operation. Tests can be performed at many temperatures.

Big 3 Gathers At AIDS Charity Event in Troy

Barbara Murray, executive director of AIDS Partnership Michigan in Detroit, says that ticket sales for the charity's upcoming function are brisk thanks to the response of GM, Ford and Chrysler employees who saw earlier notices about the event in this newspaper.

Called Summer Solstice III, the fund-raiser is a "chez fabulous" wine and cheese party scheduled for June 11 at the Michigan Design Center in Troy.

Running from 6:30 to 10 p.m., the social event will include entertainment by the Ben Sharkey Trio, dancing, great food and wine, and an auction, all to raise funds for local HIV / AIDS education and services.

Tickets are $95 per person and all proceeds benefit the educational and treatment programs offered by AIDS Partnership Michigan, which is located on East Jefferson Ave., just two blocks from the GM RenCen headquarters in downtown Detroit.

Murray said that she has sold a number of tickets to a variety of Big Three employees, including those from GM Design in Warren, Ford Engineering in Dearborn and Chrysler's marketing team in Auburn Hills.

Emancipation Document Visits The Henry Ford

by Gerald Scott
Editor
U.S. Auto Scene

Visitors to the Henry Ford are in for a real treat later this month as the original Emancipation Proclamation will make a rare visit to the area.

In a special, two-day-only, once-in-a-lifetime event, The Henry Ford will display the original Emancipation Proclamation in the "Discovering the Civil War" exhibit on display in the Henry Ford Museum.

Doors will open to the public on 6 p.m. on Monday, June 20, followed by a brief opening ceremony at 6:45 p.m. and viewing beginning at 7 p.m.

The museum will remain open around the clock until 6 a.m., June 22.

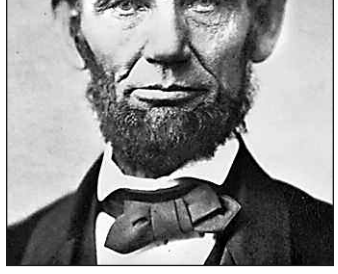
This scheduled appearance marks the first time since 1948 that the Emancipation Proclamation was last displayed in Michigan.

"It is truly both an honor and privilege to be able to have this precious document on display for everyone to view," said Patricia Mooradian, president of The Henry Ford.

"This is one of our most treasured pieces of American history and Henry Ford Museum, with our 'With Liberty and Justice for All' exhibition just steps away, provides the perfect setting for this emotionally stirring event."

For this special viewing, The Henry Ford wil put on a series of recitations, musical performances and other presentations, including a re-creation of a Civil War encampment to be erected on Henry Ford Museum's front lawn.

Meanwhile, the Emancipation Proclamation was originally issued on Sept. 22, 1862,



Abraham Lincoln

by President Lincoln, and became effective on Jan. 1, 1863, and formally proclaimed the freedom of all slaves.

This document invited black men to join the Union Army and Navy, resulting in the enlistment of approximately 200,000 freed slaves and free black people before the War's end.

"Discovering the Civil War," the most extensive display of Civil War records ever assembled from the incomparable holdings of the National Archives, presents little-known stories, seldom-seen documents and unusual perspectives in celebration of the 150th anniversary of the Civil War, which began in 1861.

It gives visitors the chance to walk in the shoes of researchers in unlocking secrets, solving mysteries and uncovering unexpected events from one of the most pivotal points in our history.

The larger exhibit, displayed in Henry Ford Museum, runs until Sept. 5, 2011.

The Emancipation Proclamation, as noted, runs in that tight window between June 20-22 for public viewing.