All-New Ford Mondeo First to Offer New Ford Pedestrian Detection Technology Amid Suite of Smart Innovations

- Ford's new Pre-Collision Assist with Pedestrian Detection can detect people in the road ahead – or that could cross the vehicle's path – and automatically apply the brakes if the driver does not respond to warnings

- The technology – debuting on the all-new Ford Mondeo – can potentially reduce the severity of collisions involving pedestrians or help drivers avoid an accident altogether. The radar- and camera-equipped system cross references a "pedestrian shapes" database to distinguish people from roadside objects

- Ford also announced today it will offer all-new Ford Mondeo with a powerful 210 PS 2.0-litre TDCi engine that features twin-sequential turbocharging for power and reduced emissions

- Mondeo benefits extensively from light-weight, high strength materials. Advanced hydro-forming for high strength steel, as well as magnesium and smart plastic, reduce overall vehicle weight and improve strength

- Integral link rear suspension, stiffer chassis, and new brakes deliver class-leading driving dynamics and improved stopping distances. Superior refinement offered with up to 3 decibels less interior noise and best-in-class cooling

- http://mondeo.fordpresskits.com/

COLOGNE, Germany, Sept. 23, 2014 – Ford Motor Company announced today the all-new Ford Mondeo will be its first car globally to offer a new pedestrian detection technology that could help reduce the severity of accidents or help drivers avoid them altogether.

Ford also today announced additional news about the new Mondeo, including a high-power diesel engine that will lead a range of efficient EcoBoost petrol and TDCi diesel engines.

Ford's new Pre-Collision Assist with Pedestrian Detection can detect people in the road ahead, or who could cross the vehicle's path, and automatically applies the brakes if the driver does not respond to warnings. The system processes information collected from a windshield-mounted camera, and radar located in the bumper, and checks it against a database of "pedestrian shapes" to distinguish people from typical roadside scenery and objects.

"The new Mondeo is the most technologically advanced Ford vehicle ever introduced in Europe," said Ulrich Koesters, vehicle line director, Ford of Europe. "Features like Pre-Collision Assist with Pedestrian Detection add safety and security for drivers in busy urban conditions."

Pedestrian Detection is among a raft of new features and improvements detailed by Ford today, which enhance the all-new Mondeo. The system is part of the Pre-Collision Assist package that also introduces Active Braking, which can autonomously apply braking to help mitigate rear-end collisions, right up to the vehicle's maximum speed.

Range-topping diesel
Ford also announced the all-new Mondeo will offer an optional high-powered 2.0-litre TDCi diesel engine featuring twin sequential-turbocharging and delivering 210 PS and 450 Nm of torque. The all-new Mondeo goes on sale later this year as a four-door hybrid, five-door or wagon in dealerships across Europe later this year. The high-powered diesel will be available in early 2015.

Sensing danger
Pedestrian Detection identifies people and reduces the severity of collisions at speeds of up to 80 km/h (50 mph).

If a pedestrian is detected in front of the car, and a collision becomes imminent, the driver will first receive an audible and visual warning. Should the driver not respond, the system then shortens the time required to apply the brakes by reducing the gap between brake pads and discs. If there is still no response from the driver the brakes are applied autonomously and the vehicle speed is reduced.

Engineers tested the system on closed circuits using rigs fitted with life-size dummies. They also spent months testing and refining the system on roads around the world to prove system reliability under real world conditions.

"The real world testing was crucial. Pedestrians come in all shapes and sizes, and adopt an infinite number of postures," said Gregor Allexi, active safety engineer, Ford of Europe. "We covered more than 500,000 kilometres to make sure that we tested Pedestrian Detection against the widest range of people and situations possible."

The all-new Mondeo also will apply automatic braking to mitigate or avoid a collision with a vehicle ahead. Active City Stop operates at speeds of up to 40 km/h (25 mph). At higher speeds new Pre-Collision Assist uses radar and camera technology to scan up to 200 metres ahead, and can autonomously apply up to full braking force to help the driver mitigate or avoid many types of rear-end collision.

Radar technology further enables the new Distance Indication feature and Adaptive Cruise Control technology. Distance Indication provides an intuitive visual interface to inform the driver of the time gap to the vehicle ahead. Adaptive Cruise Control automatically maintains a chosen distance from the vehicle ahead.

In addition, the forward-facing camera supports Lane Keeping Aid, which applies steering torque to guide the all-new Mondeo back in to lane if unintended drifting towards the lane marking is detected; and Traffic Sign Recognition, which provides the driver with the latest detected speed limit, cancellation signs and overtaking regulations via the instrument cluster display.

Parking and night driving made easier

Mondeo drivers will be able to see more clearly with the introduction of Ford's adaptive LED headlamp technology to Europe. The sophisticated technology combines full-LED headlamps offering daylight-mimicking light clarity with Ford's Adaptive Front Lighting System that adjusts the headlight beam angle and intensity to match driving environment. It can choose one of seven settings according to vehicle speed, ambient light conditions, steering angle, distance to the vehicle in front and windscreen wiper activation.

Mondeo also is designed to help drivers in and out of parking spaces. An advanced version of Active Park Assist featuring Perpendicular Parking enables drivers to detect suitably-sized spaces and reverse hands-free into those parallel to the road or side-to-side with other cars.

This advanced parking feature will be supported by both Park-Out Assist, which helps drivers to exit parallel parking spaces; and Side Parking Aid, which delivers an on-screen visual representation and audible warning of obstacles to the sides of the vehicles, as well as to the front and rear.

Multi-faceted engine range

A powerful new twin sequential turbocharged 2.0-litre TDCi engine will in 2015 offer 210 PS and 450 Nm of torque – delivered from 2000 rpm – with significantly reduced CO_2 compared to the outgoing 200 PS 2.2-litre TDCi engine.

"The new high-powered TDCi diesel engine follows the downsizing trend we've led with our EcoBoost petrol technology. Smaller engines deliver better fuel efficiency and emissions, and we claim the power back with advanced technology," said Andrew Brumley, chief engineer, Ford Engine Programs. "Twin sequential turbocharging delivers the seamless performance consumers want every day in all conditions, and makes turbo-lag a distant memory."

Electronically-controlled twin sequential turbocharging enables faster engine response. A small, low-inertia turbine is used to respond quickly to initial boost demand, and a larger high-inertia turbo is able to sustain greater boost pressure for peak performance.

The turbochargers are supported by both charged air-cooling and water air-cooling for a more efficient feed of air into the engine; an Active Thermal Management System that improves warm-up times by supplying cooling to specific components on-demand to reach peak efficiency faster; and a variable oil pump that reduces parasitic losses by increasing oil pressure on-demand.

A revised 2.0-litre TDCi diesel engine with single variable geometry turbocharger technology delivers 150 PS and 180 PS. All three 2.0-litre TDCi variants feature a revised engine block, and new cylinder-head and fuel injection designs, and Ford's lean NO_X trap exhaust after-treatment system for even cleaner emissions.

The 150 PS and 180 PS diesel engines will be available with Ford's Intelligent All-Wheel Drive system, which offers a seamless transition between front-wheel drive and all-wheel-drive performance to automatically enhance traction and road-holding when needed. The system continually measures how the car's wheels are gripping the road surface every 16 milliseconds, and can adjust power delivery to individual wheels in 100 milliseconds.

All-new Mondeo also will be the first vehicle in its segment equipped with a 1.0-litre petrol engine. Ford's 1.0-litre EcoBoost engine was in 2014 named International Engine of the Year for an unprecedented third time in a row, and will join the Mondeo engine line-up in early 2015 with 125 PS and CO_2 emissions of 119 g/km.* The engine calibration has been refined to deliver optimised performance for a larger vehicle.

Ford's new 1.5-litre EcoBoost engine also will be available in Mondeo for the first time with 160 PS and delivering 134 g/km CO_2 emissions,* while the 2.0-litre EcoBoost is available with 203 PS and 240 PS.

An ECOnetic Technology model will be available, powered by a 1.6-litre diesel engine with anticipated class-leading diesel CO_2 emissions of 94 g/km.*

The all-new Mondeo is the latest vehicle from Ford to deliver Power of Choice to customers with a range of fuel-efficient EcoBoost petrol, TDCi diesel and Hybrid Electric Vehicle powertrains.

First Mondeo Hybrid
The all-new Mondeo Hybrid will be the first Ford Hybrid Electric Vehicle to be manufactured in Europe alongside the petrol- and diesel-engine Mondeo range at Ford's state-of-the-art facility in Valencia, Spain. It will deliver 99 g/km CO_2* from a specially-developed 2.0-litre petrol engine combined with two electric motors – one to drive the wheels and another to supply regenerative charging – and 1.4 kWh lithium-ion battery with an anticipated life-span of 10 years and 240,000 km (150,000 miles).

The Mondeo Hybrid represents the third generation of Ford global hybrid technology, and utilises in-house battery, control software and continuously variable transmission technology. It also is the first generation of Ford hybrid globally to operate without engine accessory drives for significantly reduced drag.

Fuel efficiency and emissions are further reduced across the range by aerodynamics that cut drag by up to 10 per cent; Active Grille Shutter; smart regenerative charging; and Electronic Power Assisted Steering and Auto-Start-Stop with all powertrains.

"The all-new Mondeo delivers power of choice to consumers with the most diverse range of powertrain options we've ever delivered for a car in this segment," Brumley said.

Stronger and safer
The all-new Ford Mondeo uses sophisticated materials and production techniques to deliver greater strength and improved safety with reduced weight and enhanced sustainability.

An industry-first application of hydro-formed high strength steel is used to produce the A-pillars, B-pillars, and roof rails. A new magnesium inner tailgate structure for the four- and five-door models delivers a weight-saving of approximately 40 per cent compared to a traditional steel equivalent. Also helping save up to 115 kg for the 1.5-litre EcoBoost model for re-investment elsewhere is a recycled Front Energy Absorber, Ford's first design to meet pedestrian protection requirements in both the U.S. and Europe.

"The weight saved during development has been carefully re-invested into fuel-saving features such as aero-shields and Auto-Start-Stop technology; comfort and convenience features; and a

stronger and safer body structure," Koesters said. "We've improved the strength of safety relevant areas by 40 per cent, and verified the performance with thousands of computer simulations and more than 180 real-world crash tests."

Hydro-forming uses high pressure hydraulic fluid to press metal into more complex shapes than is possible using traditional stamping methods for better strength-to-weight-ratios and bending stiffness.

The Mondeo's hydro-formed roof rails are assembled from fewer sections and laser welded; removing joints that can act as weak-spots while saving 2.5 kg in weight on each side. The B-pillar design reduces side impact intrusion by 64 mm while saving 6 kg in weight.

The Mondeo body structure features 61 per cent high strength steel. Bake-hardened steel is used in the roof structure to reduce weight by a further 0.5 kg.

Further structural developments include:

- An anti-roll bar uniquely designed to limit transmission travel in a frontal impact, minimising steering rack movement
- Sill rocker panels made of martensitic boron steel for improved side impact protection
- Bumper crash cans optimised for energy absorption and harmonised with chassis rail characteristics
- A flanged front cowl design that allows for flex under impact to increase energy absorption
- An integrated rear underbody wheel-arch-to-rail connector that increases torsional stiffness by up to 25 per cent compared with a traditional design

Ford also uses a pioneering technique to transform discarded plastic water bottles into front bumper components. Recycled plastic is used to produce the Xenoy material that accounts for 38 per cent of the all-new Mondeo Front Energy Absorber. The component sits behind the front bumper and is designed to help mitigate severity of collisions with pedestrians.

Ford's industry-first Inflatable Rear Seatbelt technology will make its European debut on the all-new Mondeo. It will be the first vehicle in its segment to feature belts that, in the event of an accident, rapidly expand in 40 milliseconds to disperse crash forces across a body area five times greater than that achieved by a conventional seatbelt.

Inflatable Rear Seatbelts are joined by nine further airbags including a driver-knee bolster airbag, a driver airbag optimised for chest protection, and deeper side airbags shaped to more effectively protect the occupant and direct them away from the impact area.

Class-leading dynamics

The first model for Europe to be built on Ford's new global CD-segment platform, the all-new Mondeo will debut Ford's new integral link rear suspension configuration for improved refinement and more dynamic performance.

The new suspension design delivers the compliance required for greater comfort, while retaining lateral stiffness for enhanced steering and handling. It also allows the wheel to move rearwards on impact with bumps. This delivers improved impact absorption for a smoother ride and reduced noise levels.

The all-new platform and body structure combination delivers 10 per cent more torsional stiffness than the outgoing model for the most responsive and versatile Mondeo driving experience yet. The chassis is enhanced with active systems including Torque Vectoring Control, Pull-Drift Compensation, Active Nibble Compensation, Continuous Control Damping and Torque Steer Compensation.

The introduction of Electric Power Assisted Steering to Mondeo for the first time also enables steering weight to adapt and match the "comfort," "normal" and "sport" chassis settings of Ford's Continuous Control Damping. Drivers will notice a greater difference between the chassis characteristics delivered by the three settings.

An optimised anti-lock braking system helps reduce stopping distances by more than 1 metre from 100 km/h (62 mph).

"We've tuned the all-new Mondeo specifically to meet the needs of European drivers and continue the class-leading driving dynamics delivered with every Mondeo generation," said Geert van Noyen, vehicle dynamics manager, Ford of Europe. "We went through five designs just for the rear suspensions bushes – with each taking two months – before we were satisfied, and also placed a lot of emphasis on tuning steering to deliver a smooth and fluid feel for a class-leading driving experience."

Superior refinement
Mondeo driver and passengers will benefit from a quieter and more refined experience that better enables conversation even at high speed.

Road noise reductions of around 3 decibels in the rear and 2 decibels in the front have been achieved with integral link rear suspension and additional sound deadening material within the underbody shields, wheel arch liners and front and rear doors to block tyre noise. The number of holes within the body shell also has been reduced to minimise noise transfer.

Wind noise is reduced to levels previously only experienced in the premium segment through optimised window pillar and door mirror shape, enhanced door and window seals, and improved interior noise absorption. The thickness of the rear window glass is increased by 0.4 millimetres, helping reduce passing traffic noise for rear seat passengers.

More seals have been added between the bonnet and front wings, and the engine bay sound insulation changed from fibreglass to foam, saving 1.5 kg in weight while contributing to a reduction of between 1.5 and 2 decibels for powertrain noise transmitted to the cabin.

In addition, all-new Mondeo features a humidity sensor that enables pre-emptive measures against flash-fogging of window interiors, and delivers best-in-class cooling from 55 degrees C to 18 degrees C in 15 minutes.

Mondeo will enhance comfort and convenience for drivers with features including first-in-class power-adjustable, memory-equipped steering column; power tailgate; heated steering wheel; and heated and cooled multi-contour seats with unique Active Motion massage function.

Better connected with SYNC and MyKey

Ford's SYNC 2 connectivity system with advanced voice control and an 8-inch colour touchscreen will enable drivers to operate phone, entertainment, climate and navigation systems using simple conversational language. Drivers can even bring up a list of local restaurants by using the command: "I'm hungry".

Segment-first enhanced MyKey technology will enable Mondeo owners to programme a key – usually for younger drivers. MyKey now can inhibit incoming phone calls as well as restricting the top speed; preventing deactivation of driver assistance and safety features; reducing the maximum volume of the audio system, and disabling the audio system altogether if driver and passengers are not using safety belts.

Sophisticated design
The all-new Mondeo will deliver best-ever quality and craftsmanship for both the refined, elegant, sporty and highly expressive exterior, and the interior that features optimised ergonomics and comfort, with premium finishes and equipment.

A sports coupe profile with low roofline incorporates a retractable panoramic glass roof for the wagon bodystyle. The lean side-profile is sculpted to convey "visual lightness," while the sophisticated and technical front end design features Ford's more prominent trapezoidal grille, a power-dome bonnet and adaptive, slim-line, laser-cut headlamp design.

Inside, Mondeo drivers are greeted by a digital analogue instrument cluster, while a sleek, wrap-around centre console design delivers a sporty, cockpit-like feel. A soft-touch instrument panel and flock-lined central front storage area and glovebox are representative of the high material quality and craftsmanship throughout. Smart-design front seats feature a thinner seat back – enabling rear seat passengers to enjoy additional legroom without sacrificing comfort for driver and front passenger.

"This is the most elegant, upscale but also athletic Mondeo yet; we wanted owners washing their car on a Sunday afternoon to be able to appreciate the subtle sculpturing that delivers that sportiness," said Christopher Hamilton, Mondeo chief designer.

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* The declared fuel consumption and CO_2 emissions are measured according to the technical requirements and specifications of the European Regulations (EC) 715/2007 and (EC) 692/2008 as last amended. Fuel consumption and CO_2 emissions are specified for a vehicle variant and not for a single car. The applied standard test procedure enables comparison between different vehicle types and different manufacturers. In addition to the fuel efficiency of a car, driving behaviour as well as other non-technical factors play a role in determining a car's fuel consumption and CO_2 emissions. CO_2 is the main greenhouse gas responsible for global warming. Results in MPG also correspond to this European drive cycle and are stated in imperial gallons. The results may differ from fuel economy figures in other regions of the world due to the different drive cycles and regulations used in those markets.

About Ford Motor Company
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Ford of Europe *is responsible for producing, selling and servicing Ford brand vehicles in 50 individual markets and employs approximately 50,000 employees at its wholly owned facilities and approximately 69,000 people when joint ventures and unconsolidated businesses are included. In addition to Ford Motor Credit Company, Ford Europe operations include Ford Customer Service Division and 24 manufacturing facilities (13 wholly owned or consolidated joint venture facilities and 11 unconsolidated joint venture facilities). The first Ford cars were shipped to Europe in 1903 – the same year Ford Motor Company was founded. European production started in 1911.*

Ford in Belgium & Luxemburg
Ford Belgium (Brussels) distributes Ford vehicles and Ford original parts in Belgium & Luxemburg, since 1922.
Ford Genk produces all large cars (Mondeo, S-MAX, Galaxy) for Ford in Europe, with 3.800 employees.
Ford Lommel Proving Ground is the lead test facility for validation of all Ford models in Europe, with 350 employees.

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