## How the Electrifying Ford Mustang Mach-E Driving Experience Will Put Smiles on Faces Across Europe

- Perspectives of European customers influential to delivering a spirited MustangMach#E experience worthy of the iconic Mustang badge
- Fun-to-drive character of Ford's first purpose-built all-electric model tailored to European roads and driving styles by specialist team during global development programme
- First Mustang Mach-E tour of Norway highlights energy-efficient performance and provides insight into dayto-day operation using existing charging infrastructure

Whether testing on frozen lakes, in searing deserts, or using state-of-the-art driving simulators, Ford's engineering teams worked across the globe to develop an all-electric Mustang Mach#E that delivers a true Mustang driving experience for customers around the world.

And when it comes to knowing exactly what sets European drivers' pulses racing, or helps them unwind and relax, nobody understands the region's customers better than the team at Ford's testing facility in Lommel, Belgium.

Here, unique suspension, steering, powertrain and even driver assistance technology characteristics were combined to produce a Mustang Mach-E that matches European drivers' expectations of Ford's first-ever purpose-built all-electric vehicle.

"With today's technology we can tailor a vehicle in the virtual world so that our early prototypes are well on their way to delivering the right character – however, that critical last 10percent can only be defined on the road," said Geert Van Noyen, manager, Vehicle Dynamics, Ford of Europe. "Mustang Mach-E's balanced and responsive all-electric platform meant we could tailor the fun-to-drive experience whether on Norway's twisty Trollstigen mountain road, high-speed German autobahn or bumpy British B-road."

Key to Mustang Mach-E's inherently sporty character are responsive electric motors powering the wheels and a battery located centrally, beneath the floor for a low centre of gravity.

Using the Lommel test facility's 100 km of test tracks – which recreate road surfaces from Belgian pavé to French cobbles, and feature replicas of road surfaces from countries including the UK, Germany and Spain – Ford engineers delivered a distinctive European feel.

Europe's typically narrower, more twisty roads with higher speed limits than other regions require unique responses from the Mustang Mach-E's connected and confident steering, supported by specially selected settings for the suspension system's shock absorbers, springs and anti-roll bars.

Even the tyres have been specially chosen to deliver the ideal balance of grip and ride comfort across the region's wide variety of road surfaces and weather conditions.

Mustang Mach-E's smooth and stable ride is even more essential for the high speeds encountered on European motorways. Evaluation of the all-electric model's high-speed cruising characteristics – including interior refinement – took place on German autobahns and at the Lommel facility's 220 km/h, 4.2 km, banked circuit.

"Using pure-electric power means the Mustang Mach-E interior is very quiet, and that makes preventing unwanted noise and vibration from reaching the interior even more important," van Noyen said.

Driver assistance technologies including Adaptive Cruise Control with Stop & Go, Speed Sign Recognition and Lane Centring<sup>1</sup> are able to interpret road signs and lane markings across the continent, to ensure drivers benefit from the same intuitive and stress-free driving experience regardless of where they live, work or holiday.

In addition, the immediate electric power delivery provides the sporty responses favoured by European drivers. Mustang Mach-E's all-wheel drive system applies torque independently to the front and rear wheels for improved acceleration and handling. Ford's engineers rigorously tested the system to ensure it delivers the quintessential rear-wheel drive Mustang feel in conditions from Scandinavian snow to a Spanish summer.

And the ability to adjust the Mustang Mach-E driving experience isn't only in the hands of Ford engineers. Drivers can choose from Whisper, Active and Untamed Drive Modes. Each mode delivers unique settings for steering, accelerator pedal and deceleration feel, ambient lighting and even vehicle sounds to match the experience to the driver's mood.

Ford also recently completed a tour of Norway – one of Europe's most progressive markets for electrified vehicles – with Mustang Mach-E, helping provide insight into the model's day-to-day operation using the existing charging infrastructure.

In real-world conditions, the extended-range battery, all-wheel drive model with a targeted WLTP driving range of 540 km (335 miles) exceeded energy-efficiency expectations, travelling 484 km (301 miles) non-stop from Oslo to Trondheim, finishing the journey with 14 per cent battery capacity remaining.

Mustang Mach-E is targeted to deliver a pure-electric WLTP driving range of up to 610 km (379miles) in extended range-battery, rear-wheel drive configuration. Latest testing shows charge time has improved by nearly 30 per cent from early estimates, reaching an average of 119 km (73 miles) of range within 10 minutes using IONITY fast charging, when equipped with an extended-range battery and rear-wheel drive.

"If there was one thing we wanted to achieve globally with the Mustang Mach-E, it was to produce an electric vehicle that would deserve to wear the Mustang badge," Van Noyen said.

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<sup>1</sup>Driver-assist features are supplemental to and do not replace the driver's attention, judgement and need to control the vehicle

<sup>2</sup>Officially homologated energy efficiency figures will be published closer to on-sale date. Actual vehicle range varies with conditions such as external elements, driving behaviours, vehicle maintenance, and lithium-ion battery age and state of health. The declared fuel/energy consumptions, CO<sub>2</sub>-emissions and electric range are determined according to the technical requirements and specifications of the European Regulations (EC) 715/2007 and (EU) 2017/1151 as last amended. Light Duty Vehicle type-approved using the World Harmonised Light Vehicle Test Procedure (WLTP) will have fuel/energy consumption and CO<sub>2</sub>-emission information for New European Drive Cycle (NEDC) and WLTP. WLTP will fully replace the NEDC latest by the end of the year 2020. The applied standard test procedures enable comparison between different vehicle types and different manufacturers. During NEDC phase-out, WLTP fuel consumption and CO<sub>2</sub> emissions are being correlated back to NEDC. There will be some variance to the previous fuel economy and emissions as some elements of the tests have altered, so the same car might have different fuel consumption and CO<sub>2</sub> emissions.

<sup>3</sup>Targeted range and charge time based on manufacturer tested values and calculation according to the WLTP drive cycle. Estimated miles added are based on the first 10 minutes of charging, beginning when the vehicle begins receiving charge.

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