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Shelby GT350R Mustang: Most Track-Capable Production Mustang Ever Built Coming to U.S., Canada Later This Year

- A combination of changes to aerodynamics and suspension tuning to the new Shelby[®] GT350R Mustang leads to most race-ready road-legal Mustang ever
- Significant engineering innovations result in weight savings, aero improvements to benefit on-track performance; Ford is the first major automaker to introduce carbon fiber wheels as standard equipment on Shelby GT350R Mustang
- New Shelby GT350R, a limited-production performance Mustang, will be available later this year

Ford today unveiled the new Shelby[®] GT350R Mustang, the most track-ready road-going production Mustang ever built.

In 1965, Ford and Carroll Shelby developed a road-racing version of the popular Ford Mustang – the Shelby GT350 Competition model. Lighter, more powerful and with a highly developed suspension, it is one of the most iconic racing Mustangs ever produced.

Arriving later this year, the new Shelby GT350R has been designed and engineered in the same spirit, delivering never-before-seen track capability from a Mustang – thanks to innovations in aerodynamics, chassis engineering and light-weighting.

“The Shelby GT350R Mustang is a no-compromise car in the pursuit of maximum track capability,” said Raj Nair, Ford group vice president, Global Product Development. “It is a thoroughbred street car making use of technology and ingenuity to deliver performance few enthusiasts have ever experienced.”

The car features the first-ever production V8 from Ford with a flat-plane crankshaft – the most powerful naturally aspirated engine Ford has ever produced – plus a specially tuned suspension. It is fitted with revised spring rates and antiroll bars, lower ride height, unique track-tuned alignment settings, revised bushings

and jounce bumpers, cross-axis ball joints in the front suspension, and revised calibration controlling the MagneRide dampers.

“The Shelby GT350R Mustang is a car with the nimbleness and power delivery you want on a road course,” said Nair. “This isn’t just about horsepower. The Shelby GT350R is an all-around balanced athlete – one that is extraordinarily precise and agile.”

Track technology for the street

Lightweight carbon fiber wheels are standard on Shelby GT350R, making Ford the first major automaker to introduce this innovative wheel technology as standard equipment.

Carbon fiber wheels have been offered on only a handful of exotic supercars and will benefit Shelby GT350R performance by shaving critical unsprung weight and reducing rolling inertia. The 19x11-inch front and 19x11.5-inch rear wheels provide approximately 13 pounds of unsprung weight reduction per wheel and offer higher levels of stiffness than equivalent aluminum wheels.

The lightweight wheels will be shod in Michelin’s top-shelf Pilot Sport Cup 2 high-performance tires with rubber compound and a construction unique to Shelby GT350R. This combination of incredibly stiff and light wheels with bespoke tires offers customers exceptional steering feel and levels of performance.

Weight reduction in pursuit of performance

Ford engineers delivered against aggressive targets for weight reduction on the Shelby GT350R. If a part did not make the car faster around a road course, it was considered for deletion.

Items removed include air conditioning, the stereo system, rear seats, trunk floorboard and carpet, backup camera and emergency tire sealer and inflator. Exhaust resonators also have been removed for weight savings with the benefit of creating a sharper exhaust tone.

Shelby GT350R is more than 130 pounds lighter than the Shelby GT350 Track Pack model, which has proven its durability in multiple 24-hour racetrack tests.

For customers seeking more comfort in their Shelby GT350R, Ford is offering an optional Electronics Package. Included is dual-zone air conditioning, 8-inch touch screen with navigation, seven-speaker audio system, turn signal mirrors and more.

Aggressive aerodynamics

Shelby GT350R has been optimized for aerodynamic excellence. Details including the hood vent for heat extraction and lift reduction, underbody belly pans front and rear, an aggressive diffuser, vented wheel wells and turbulence-reducing fender vents, wheel air curtains and side skirts all remain on Shelby GT350R, but the car’s downforce capability has been increased.

Revisions to the front splitter maximize downforce, while an all-new high-efficiency carbon fiber rear wing has been added in anticipation of competition. The wing moves the vehicle's center of pressure rearward while improving downforce and lift balance – ideal for high-speed track work.

“Shelby GT350R's highly efficient aerodynamics, innovative light-weighting and world-class chassis deliver a truly spectacular driving experience that makes you feel like a professional racing driver,” said Kerry Baldori, Ford Performance chief functional engineer.

World-class powertrain

The new 5.2-liter dual-overhead-cam V8 engine is the first-ever production V8 from Ford with a flat-plane crankshaft – an architecture typically found only in racing applications or exotic European sports cars.

Unlike traditional V8s, where the connecting rods are attached to the crankshaft at 90-degree intervals, this design evenly spaces all crank pins at 180-degree intervals to optimize high-speed engine breathing. It is the most powerful naturally aspirated production Ford engine ever, with more than 500 horsepower and more than 400 lb.-ft. of torque.

An air-to-oil engine oil cooler typically found only on race cars maintains engine temperatures under the most severe conditions, as does a standard cooler for the six-speed manual transmission.

A Ford-tuned limited-slip Torsen differential with 3.73 axle ratio is optimized for cornering grip and straight-line traction, while an electronically modulated rear-mounted air-to-oil differential cooler maintains ideal temperatures during track driving.

Dedicated R design details

Aside from carbon fiber wheels, larger front splitter and rear wing, Shelby GT350R features distinct design details. Exterior touches include red painted brake calipers, red pin striping at the edges of the optional over-the-top racing stripes and Shelby GT350R badging. Inside is high-contrast red stitching, Shelby GT350R badging and the D-shaped steering wheel fitted with a red center mark at the top.

New breed of performance

The limited-production Shelby GT350R will be available in the United States and Canada later this year, and is one of more than 12 new Ford Performance vehicles coming by 2020.

“This is the pinnacle of performance Mustangs today,” said Dave Pericak, director, Ford Performance. “The Shelby GT350R Mustang lays the groundwork for a story that will play out for years to come on the track and the street.”

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