

2013 Shelby GT500 Overview

2013 Ford Shelby GT500 Debuts As Most Powerful Production V8 in the World with 650 Horsepower, Top Speed of 200+ MPH

- New Ford Shelby GT500 is powered by an aluminum 5.8-liter supercharged V8 producing 650 horsepower and 600 lb.-ft. of torque, making it the most powerful production V8 engine in the world
- Nearly every vehicle system has been optimized including powertrain, brakes, gearing and suspension
- New Shelby GT500 sets a performance-driven design standard with new downforce-generating front grilles, aggressive splitter, new quad exhaust system and two new forged-aluminum wheels
- Also new for 2013 is an optional Performance Package with SVT-designed Bilstein electronic adjustable dampers and a Torsen limited-slip differential. The offering can be coupled with a track package for all-out racetrack performance

The ultimate Ford Mustang – Shelby GT500 – raises the bar high on performance with the introduction of the new 2013 model that goes on sale next year delivering 650 horsepower and a top speed of more than 200 mph.

“SVT keeps the Shelby GT500 on the cutting edge of technology and takes muscle car performance to new heights,” said Jost Capito, director of Global Performance Vehicles and Motorsport Business Development. “We encapsulated every aspect of performance in this car – whether it’s 0-60, top speed, racetrack or quarter-mile times. Beyond that, the daily driver also will find this car perfectly fits his or her needs.”

The 5.8-liter V8 aluminum-block engine produces 650 horsepower and 600 lb.-ft. of torque, making it the most powerful production V8 in the world. The 3,850-pound car also stays exempt from the gas-guzzler tax.

Nearly every part of the powertrain has been optimized for producing the additional horsepower, including a new supercharger, new cross-drilled block and heads, updated camshaft profiles, a new carbon fiber driveshaft and upgraded clutch, transmission and axle.

A larger, more-efficient supercharger flowing more air through the engine is key to helping produce the massive 650 horsepower. The new TVS series 2300 creates 2.3 liters of displacement and is a unique design to the 5.8-liter engine.

The entire cooling system has been significantly updated on the new 5.8-liter engine. It now includes a larger cooling fan, fan shroud with high-speed pressure-relief doors, a more efficient charge air cooler, a higher-flow intercooler pump and an intercooler heat exchanger with volume increased 36 percent.

Revised gearing

Nearly every gear on the 2013 Ford Shelby GT500 was revised to manage the torque and use more of the power in a way that makes it more driver-friendly. Engineers considered more than 35 gearing combinations, finally deciding on one that balanced torque being transmitted all the way through the wheels and grip to the ground.

A key piece of the driveline, the six-speed manual transmission, offers upgraded gears, bearings and

housing so it can properly manage the torque. The final drive ratio is now 3.31:1 for optimized overall vehicle gearing to complement the massive torque. Every gear besides fourth was optimized for competing performance metrics. The clutch has increased torque and rpm capacity and uses a dual-disc design.

“It might just seem like we’re putting a bigger engine into the car. But it’s been a balanced approach through and through,” said Jamal Hameedi, SVT chief engineer. “We’ve completely redone the car to be even more sophisticated in terms of handling and control than the prior model.”

Other keys for improved traction management include:

- Torsen limited-slip differential: When customers order the optional Performance Package, they will get a Torsen limited-slip differential that helps the rear suspension deliver maximum torque and traction better and longer under track conditions
- Launch control: A new launch control system lets drivers set the desired launch rpm depending on tire temperature, street surface or other conditions. Unique to SVT’s launch control is that it is integrated with both the engine control and traction control
- Brembo braking system: A new Brembo brake system offers drivers enhanced stopping power to help keep their car under control, both on the road and the track. New six-piston calipers in front along with larger front and rear rotors help improve brake fade. New brake pads that are more aggressive also help the car achieve high deceleration and further robustness for more driver confidence

Aero advancements

Significant aerodynamic work was done on the new Shelby GT500 to ensure the car has proper downforce for optimum performance at all speeds. Engineers were able to determine how to harness the air that was moving around and through the car to improve the cooling system, maximize downforce and minimize drag.

The front fascia and splitters were modified to handle the extreme loads at 200 mph, resulting in a car that tracks more securely and feels more planted to the road at higher speeds. It offers 33 percent more effective aero loading at 160 mph compared to the 2011 model.

Superior ride

The new Shelby GT500’s driving dynamics have been improved, now working in concert with all the new content on the car.

Handling, all AdvanceTrac settings and steering assist levels within selectable steering have been tuned to account for the updated content. The previously available unique traction control system and electronic stability control settings help drivers achieve maximum performance on both the street and the track.

Both systems can be completely disabled in controlled track situations where maximum driver skill is utilized, or fully engaged for maximum safety during normal driving or in less-than-ideal traction conditions. Intermediate sport mode allows drivers to push their cars hard at the track without completely disabling the safety systems, permitting more aggressive driving before the traction control and electronic stability control intervene.

“We took a completely different approach with this car so drivers can choose their settings instead of a computer making the selection,” Hameedi said. “Nearly every system the driver interacts with can be tailored to his or her situation including the Bilstein electronic adjustable suspension, launch

control, AdvanceTrac and steering assist levels.”

The 2013 Shelby GT500 offers two new sets of forged-aluminum wheels including a unique wheel for cars with the optional packages. The 19-inch front and 20-inch rear wheels are coupled with Goodyear Eagle® F1 SuperCar G: 2 tires on all vehicle configurations.

Taking it one step further

Sometimes Ford Shelby GT500 customers want to enjoy their car on surface streets. Other times they just want to let loose on the track. Two new optional packages on the 2013 model give them the choice.

Available as part of the optional Performance Package, SVT-designed Bilstein electronic adjustable dampers are accessed on the dash with a simple push of a button. Normal mode gives customers a more comfortable ride over road irregularities. Sport mode is all about performance, delivering improved response time on the track and less body roll while cornering and pitch under braking. The Torsen limited-slip differential also comes with the Performance Package.

“The adjustable shocks let us develop our car on the track without any compromise,” said Kerry Baldori, Ford SVT Global Performance Vehicles chief engineer. “Before, we had to tune the car with street implications in mind. Now we can go as extreme as we want on the track setting and still offer the customer a comfortable ride on the road.”

Enthusiasts can upgrade their Performance Package with an additional Track Package for all-out performance. The option comes with an external engine oil cooler, rear differential cooler and transmission cooler for further durability. The coolers play an essential role in preventing crucial components from overheating under high-speed conditions.

The 2013 Ford Shelby GT500 will be built at AutoAlliance International Plant in Flat Rock, Mich.