Mercedes-Benz E-Class Coupe and Cabriolet Feature New Engines

Packed with useful new safety technology, the strikingly-designed Mercedes-Benz E-Class Coupe and Cabriolet feature new powertrains. The E350 is powered by a new 3.5 liter direct-injection V6 engine generating 302hp, and the E550 by a bi-turbo direct-injection 4.6 liter V8 producing 402hp. Both engines produce more power while achieving significantly better fuel economy. A new and more fuel efficient seven-speed automatic transmission is standard on all models along with new steering wheels (with standard shift paddles), a color instrument cluster display, standard LED daytime running lights. In addition, the safety systems Lane Keeping Assist and Blind Spot Assist are now available in the two-door E-Class family. The media interface has also been relocated to a more convenient location in the center console.

Details on the New Engines

The 2012 E350 Coupe and Cabriolet models are powered by a new 3.5-liter V6 engine that features direct fuel injection and multi-spark ignition, not to mention a 12.0-to-1 compression ratio. With 302 horsepower and 273 lb.-ft. of torque, the new V6 gets better fuel economy while producing more pulling power – an impressive feat, considering that increasing either power or fuel economy usually decreases the other. The engine is based on a new block with 60-degree cylinder angles, so that a balance shaft isn't needed for smooth operation.

Twin Turbos with Direct Injection

The E550 Coupe and Cabriolet are driven by a new 4.6-liter V8 that also produces more power while achieving better fuel economy. Based on its highly successful 5.5-liter predecessor, the new V8 engine has 20 percent smaller displacement but generates 402 horsepower and 443 lb.-ft. of torque. Its smaller displacement is more than offset by the power boost of its twin turbochargers – one for each bank of cylinders. Piston crowns are four millimeters thicker to handle the higher combustion pressures, while shorter connecting rods allow existing block dimensions to be retained.

Like their predecessors, both the new V6 and V8 engines have aluminum cylinder heads, pistons and cylinder block (with cast-in Silitec cylinders), as well as a special forged steel crankshaft, connecting roads and valves.

Direct Fuel Injection

While most gasoline engines have used indirect port fuel injection in the past, the new engines make use of industry-leading electronics technology first used on Mercedes-Benz diesels – electronic fuel injectors that spray gasoline directly into the combustion chambers.

Featuring a piezo-ceramic crystalline element that changes shape instantly when electrical current is applied, blazingly fast piezo injectors make it possible to design very sensitive and precise injection systems,

including the ability to program several small injections with each piston stroke.

Multi-Spark Works with Multi-Squirt

Working together with direct injection, a rapid multi-spark ignition system begins combustion with the first spark, but has the capability to recharge and deliver up to three more sparks within a single millisecond, creating a gas plasma with more expansion than conventional ignition.

The time lapse between sparks is adjustable, so combustion duration can actually be controlled, resulting in two percent better fuel economy, and a total of four percent improvement in combination with direct fuel injection.

New Transmission

The 2012 E-Class line also features a new transmission with a more advanced torque converter lock-up clutch that provides even better fuel mileage, more responsive driving, quieter operation and increased durability. The new transmission is also designed to work best with a new type of low-viscosity ATF transmission fluid, colored blue instead of the usual red. Together with new planetary gears, bearings and internal seals, the "FE-ATF" fluid provides less friction and improved fuel mileage. Lower hydraulic pressure and enhanced electronic software helps provide even smoother shifting.

More Safety Systems Assist the Driver

New for the E-Class Coupe and Cabrio line, available Active Lane Keeping Assist alerts the driver by simulating rumble strip vibration in the steering wheel if the car drifts from its lane without the turn signals on. Part of the optional DISTRONIC PLUS system, it operates at speeds above 37 mph via a system that recognizes lane markings, thanks to a small camera in the windshield and a computer that analyzes the video images. DISTRONIC PLUS works in part with the Electronic Stability Program which can sense impending loss of control. The system works in a split second by braking individual wheels and/or reducing excess engine power, something that even the most skilled driver cannot do.

Active Blind Spot Assist, which monitors both blind spots behind and to the side of the vehicle is also part of DISTRONIC PLUS. Whenever a turn signal is activated with a vehicle in the blind spot, the driver gets visual and audible warnings. Both Active Lane Keeping Assist and Active Blind Spot Assist incorporate an intervention feature, in which ESP braking automatically helps correct the car's course if the driver doesn't heed the initial warning.

Innovative AIRCAP

The standard AIRCAP system reduces air turbulence in the new E-Class Cabriolet at all four seats, allowing the convertible to be driven year-round with the top down. Together with the latest version of Mercedes-Benz AIRSCARF, top-down driving is more comfortable, even when the outside temperature plummets.

AIRCAP consists of two parts – a wind deflector with a mesh screen that can extend about 2½ inches above the windshield frame, and a second deflector between the rear seats. In short, the deflector on the windshield frame raises the airflow over the interior while the mesh screen raises the air pressure in the

interior slightly. The second deflector between the rear seats reduces backflow into the cabin. AIRCAP literally creates a pocket of heated air in the winter and cooled air in the summer. Additionally, AIRCAP quiets the interior, making it easier to communicate among all four occupants. In comparison to many other air management devices, AIRCAP doesn't require any installation or removal, and doesn't take up valuable room in the trunk or the rear seats.

In COMAND

A standard COMAND system features a large seven-inch color display screen with a standard in-dash, six-disc CD/DVD changer and a Bluetooth interface that allows a phone still in a pocket or purse to be operated through the car's audio system. The COMAND system can also display maps and directions for the optional GPS navigation system, which can be set up to display Sirius real-time traffic information and Zagat restaurant ratings. The system can also be equipped with an optional iPod/MP3 interface, Sirius satellite radio, HD radio, and an advanced voice control system for audio, navigation and phone systems. Using a consolemounted controller, the central display can be operated by either the driver or front passenger.

ATTENTION ASSIST Cautions "Time For A Rest?"

Among the many standard life-saving features on the E-Class Coupe and Cabriolet is the innovative ATTENTION ASSIST system that can alert the driver to the first signs of drowsiness, a factor that causes more than 100,000 accidents a year in the U.S. A steering sensor is coupled to smart software that uses over 70 parameters to establish a unique driver profile during the first 20 minutes of driving. Between 50 and 112 mph, the system identifies the erratic steering corrections drivers make as they begin to get drowsy and triggers an audible warning, and a "Time for a Rest?" message with a coffee cup icon appears in the instrument cluster.

Adaptive Highbeam Assist Eases Night Travel

Adaptive Highbeam Assist uses a small video camera to sense both headlights and taillights, then softly and automatically transitions between high and low beam operation to avoid dazzling other drivers. With this system, the range of the headlights can be varied infinitely from their current 220 feet to up to 1,000 feet.

PRE-SAFE® Brake Can Apply 100 Percent Braking in Emergencies

When the E-Class is equipped with optional DISTRONIC PLUS, another revolutionary Mercedes-Benz safety feature – PRE-SAFE® brake – can now apply full braking automatically in emergencies, to reduce accident severity.

When PRE-SAFE Brake senses an impending rear collision, the system sounds three warning tones. About 1.6 seconds before impact is likely, partial braking is automatically initiated, and the PRE-SAFE occupant protection system are activated. If the driver still fails to react, full-power braking is initiated about 0.6 seconds before the collision, reducing the impact and effectively acting as an "electronic crumple zone."

The innovative PARKTRONIC system also incorporates Parking Guidance, which utilizes ten ultrasonic sensors mounted behind the front and rear bumpers. At low speeds, the system scans available parking

spaces and displays a "P" in the dash if the car will fit in the space. When the car's in reverse, Parking Guidance displays a pictogram of the steering wheel and provides helpful steering guidance.

PRE-SAFE® Gives The E-Class Reflexes to Protect Occupants

All E-Class Coupes and Cabriolets come with the original PRE-SAFE – the world's first system that can sense and take protective measures before a crash. The innovative PRE-SAFE system first automatically tensions the seatbelts if the car senses an impending collision. PRE-SAFE uses resettable electric tensioners in addition to the existing pyrotechnic belt tensioners.

What's more, if the front passenger seat is overly reclined or forward, PRE-SAFE automatically moves it to a more favorable crash position. If the seat cushion angle of the front passenger seat is too shallow, it is also re-adjusted to help prevent submarining. If the vehicle skids (often a precursor to rollover), the system automatically closes the sunroof and side windows. If a crash is averted, the electric belt tensioners automatically relax and are ready to deploy again.

If necessary, PRE-SAFE reacts to fishtailing (or oversteer) as well as "plowing" (or understeer) by using existing sensors for ESP stability control to measure steering angle, vehicle yaw and lateral acceleration. Emergency braking can also trigger PRE-SAFE, which monitors sensors for the Brake Assist system as well.

AGILITY CONTROL

Standard on the E350, AGILITY CONTROL suspension provides the best of both worlds for a conventional coil-spring suspension. A small piston is connected to a bypass port in the hydraulic flow of each shock absorber. Its design provides a softer, quieter ride on normal roads but retains full shock damping over dips and twisty roads when it's really needed.

The suspension on the E350 can be upgraded to the AGILITY CONTROL Sport Suspension with stiffer damping. The E550 is equipped with the Dynamic Handling suspension which includes electronically-adjustable shock absorbers as well as modified throttle response.

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