

## SCANNER

## NEW E-CLASS WITH ACTIVE HOOD



## 50 MILLIMETERS OF ADDITIONAL SAFETY

Pedestrians are the most defenseless road users, and they frequently suffer serious injuries when struck by a car or motorcycle. To address this problem, Mercedes-Benz engineers have installed an innovative protective system in the new E-Class: Known as the “active hood,” it can reduce the risk of injury to pedestrians during accidents.

The hood does this by almost instantaneously rising 50 millimeters during a collision, thus increasing the deformation space and reducing the force of the impact. The crash-active system has three collision sensors in the front bumper and cross-member as well as two actuators with strong, pre-tensioned springs for the hood. Another advantage of the system is that its activation can be reversed. If the hood is unnecessarily raised as a result of a minor impact during a parking maneuver, for instance, the driver can push it back to its original position and thereby reset it. To satisfy legal requirements, the active hood is available in the new E-Class in Europe and Japan.

## PRE-TENSIONED SPRING ACTUATORS

During a collision, the sensors report the impact to an electronic control unit that immediately activates the two electromagnets in the hinge elements. This releases the locks for the pre-tensioned steel springs, raising the rear part of the hood by five centimeters.

- 1 Upper section of the hood hinge
- 2 Hinge link 3 Hood hinge 4 Actuator lid
- 5 Actuator interior with pre-tensioned springs and trigger magnets
- 6 Actuator housing 7 Carrier plate for actuator unit



## If you invent the car, you're also committed to Energy for the Future.

To reach that goal, alongside our efforts to enhance existing engines and optimize alternative powertrains, we are also focusing on eco-friendly fuels. Now, in cooperation with our partners, we have developed a fuel called SunDiesel. This diesel of the future is derived from biomass, such as waste wood or straw. It taps into the solar energy stored in plants. And the best thing about SunDiesel is that, when it's burned in the engine, it releases only as much CO<sub>2</sub> as the plants took up from the atmosphere as they grew. At Daimler, we are continuously working on this idea and offer you a variety of possibilities to shape the future.

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