

GM Unveils Industry-First Dual Depth Frontal Air Bag Technology tailors front-seat passenger restraint



CHICAGO (Feb. 9, 2005) – General Motors today introduced the industry’s first passenger-side frontal air bag that customizes restraint by deploying in two different sizes and at different pressures, depending on seat position, safety belt usage, and crash severity.

GM’s dual depth air bag technology will debut on the 2006 Buick Lucerne and 2006 Cadillac DTS, which were unveiled at the Chicago Auto Show. Including the dual depth bag, six air bags are standard on each vehicle.

The dual depth air bag represents the next generation of air bag technology because of its potential to help restrain front-seat passengers in a greater variety of seating and crash situations. A conventional dual-stage air bag inflates to a single shape with different pressures.

“We cannot control where our customers will sit in our vehicles or every crash scenario they could encounter,” said Robert C. Lange, GM executive director, Structure and Safety Integration.

“The dual depth air bag helps us tailor front passenger restraint based on the location of the passenger seat and the force of the crash,” he said.

“In addition, people should always wear safety belts because they help to keep them in the proper position if the air bag does inflate. And children under 12 should always be properly restrained in a rear seat.”

The dual depth air bag deploys from the front passenger side within the instrument panel. When the small air bag is required, a tether holds the air bag back to the smaller size, and gas is vented from the module housing. For the larger air bag deployment, the tether is released, the module-housing vent is shut off, and the air bag is allowed to expand to its full size.

The dual depth air bag is the latest technology in support of GM's commitment to passenger safety. GM recently announced a commitment to make electronic stability control and the OnStar safety and security system standard on every retail vehicle sold in the U.S. and Canada, except for some commercial trucks.

"Only GM offers a full range of cars, trucks and SUVs that provide safety features that operate before, during and, thanks to OnStar, after a crash," Lange said. "Early indicators show that the dual depth passenger frontal air bag may help us achieve improved scores in frontal crash tests."

Advanced sensor technology is an integral part of GM's dual -depth air bag system. Using, among other indicators, a seat-position switch located in the seat track, the vehicle's Sensing Diagnostic Module (SDM) takes only milliseconds to determine the shape of the air bag to deployed.

In addition to the industry debut of the dual -depth air bag, both the Lucerne and DTS will feature GM's front passenger occupant detection system, which disables the air bag if a child or smaller person is sensed sitting on the passenger seat.

In 2002, GM was the first automaker to offer passenger seat occupant detection, which features an indicator that lets the driver and passenger know whether the air bag is on or off.

Despite the evolution of advanced air bag systems, GM continues to recommend that children 12 and under ride in the rear seat, properly restrained.

General Motors (NYSE: GM), the world's largest automaker, has been the global industry sales leader since 1931. Founded in 1908, GM today employs about 324,000 people around the world. It has manufacturing operations in 32 countries and its vehicles are sold in 200 countries. In 2004, GM sold nearly 9 million vehicles, up 4 percent and the second-highest total in the company's history. GM's global headquarters are at the GM Renaissance Center in Detroit

