

Honda: Advanced Compatibility Engineering (ACE)



By Pete Methner

For years I've been talking about airbag safety at extrication challenges and seminars. There are often questions from rescuers who have never seen an airbag deploy, or cut a vehicle with an airbag system. Effective extrication training is difficult because there aren't many vehicles in junk yards either with airbag systems in the first place, or installed airbag systems still intact.

In a previous article, I discussed airbags and seat positioning - how position affects collision outcomes and airbag deployment. Ford was one of the first manufacturers to publish a CD-ROM explaining how seat sensors worked in passenger side airbag deployment. I learned more during my recent visit to the North American International Auto Show.

In Europe, there may also be a seat-mounted airbag that deploys from the under the passenger's thigh region. Its purpose is to stop the body from sliding forward and being caught under the dash. Honda has made changes in this direction with its



Occupant Position Detection System (OPSD).

The OPSD senses when children and small stature adults are improperly positioned in a front passenger seat and deactivates potential deployment of the airbag. Consequently, the seat must be in the upright position with the seatbelt properly fastened. If the occupant reclines the seat back, even with the seatbelt in place, the side impact airbag will not deploy. This is not uncommon among other manufacturers, and appears to be quickly becoming an industry standard.

Honda will also be using HIPS (Head Impact Protection System) in every vehicle. Even the light trucks will have roll-over sensors to deploy side and side curtain airbags in the unlikely event of a roll over.

Honda has also built a state-of-the-art crash test facility in Fairfax, Virginia to provide real-world data, and better simulate what happens on the street. It has also taken Honda three years to create the world's first "Pitching Sled Test" at their new research facility in Ohio. By simulating how the rear end of the vehicle lifts during frontal collision, Honda will be better able to minimize the dangers associated with such collisions.

Honda has also provided superior protection in the Odyssey van with full (HIPS) Head Impact Protection System (every seat position is protected), as well as also



Front side airbags with Occupant Position Detection System (OPDS) - airbag protection that senses when children or small stature adults in the front passenger seat are not in the proper position and stops deployment of the airbag.

improving frontal structure to make vehicles more pedestrian safe. The interior structure has higher impact protection for the occupants, and the exterior now 'gives' a little more when contact has been made with a pedestrian.

With Honda making these technological changes in safety, it's evident that they are committed to producing a safer vehicle. Their willingness to produce and freely disseminate related educational information means they are also willing to help the rescue industry learn more about how to protect themselves and occupants during emergency scenarios.

Stay safe...

Pete

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