

INSURANCE INSTITUTE FOR HIGHWAY SAFETY

NEWS RELEASE

February 11, 2009

Contact: David Zuby at 434/985-4600 (cellphone 434/227-9028)
or Russ Rader at 703/247-1500 (home 202/785-0267)

VNR: Wed. 2/11/2009 at 10:30-11 am EST (C) AMC 6/Trans. 20 (dl4100H)
repeat at 1:30-2 pm EST (C) AMC 6/Trans. 20 (dl4100H); dedicated

EMBARGOED
until 12:01 am, Wednesday, February 11, 2009

3 LARGE PICKUPS DON'T LIVE UP TO BRAWNY IMAGE IN SIDE TESTS; NONE RATES BETTER THAN MARGINAL FOR OCCUPANT PROTECTION

ARLINGTON, VA — The Chevrolet Silverado 1500, Dodge Ram 1500, and Nissan Titan are billed as workhorses, but the side crash protection these 2009 model large pickups provide is wimpy, at best. The trio earns either poor or marginal ratings in side tests by the Insurance Institute for Highway Safety. Even with side airbags, occupant protection in these crew-cab pickups is no better than marginal.

"The size, weight, and height of these large pickups should help them ace the side tests just like the other large pickups we've tested. Not these three," says Institute senior vice president David Zuby. "They perform worse than many cars we've evaluated."

The Dodge Ram with standard side airbags earns a marginal rating. The Nissan Titan and Chevrolet Silverado earn poor ratings when tested without their optional side airbags. The Titan's side rating improves to marginal in models tested with side airbags, while the Silverado's optional side airbags don't improve the rating over models without them. The Silverado's ratings also apply to its twin, the GMC Sierra 1500, both of which were redesigned in 2007, so the ratings apply to 2007-09 models. The Ram is a new design for the 2009 model year. The Titan was introduced in the 2004 model year, so results apply to 2004-09 models.

The Institute's side tests assess occupant protection in vehicles struck in the side by SUVs or pickups. Results can be compared across vehicle type and weight categories, while frontal crash test ratings can't. This is because the kinetic energy involved in the side test depends on the weight and speed of the moving barrier, which are the same in every test. In contrast, the kinetic energy involved in the frontal crash test against an immovable barrier depends on the test vehicle's speed and weight.

— MORE —

The Ram, Titan, and Silverado should have an advantage in side crash tests over smaller vehicles, not just because of their size and weight but also because the dummies' higher seating positions put their heads and shoulders above the striking barrier. Occupants of cars, for instance, are more vulnerable because their bodies are in line with the fronts of vehicles, especially tall ones, which might hit them in the side.

"These large pickups don't have to work as hard as smaller vehicles do to protect their occupants. Even with their characteristic advantages, the Ram, Titan, and Silverado still miss the mark when it comes to occupant protection in side crashes," Zuby says.

Without side torso airbags, occupants are vulnerable: What's behind the lackluster performance? In the Silverado's case, it's a combination of a poor side structure plus the lack of side torso airbags. The truck's optional side curtain airbags are designed to protect occupants' heads, and these worked well. But occupants' upper bodies remain unprotected even with the optional side curtains.

"In the Silverado tests, there was a lot of intrusion into the occupant compartment. With no torso airbags to protect the driver and rear passenger, measures recorded on the test dummies showed that rib fractures and internal organ injuries would be likely in a real-world crash of similar severity," Zuby explains. "Chevy needs to improve the Silverado's side structure, as well as add padding or torso airbags to better protect its occupants."

In contrast, the Ram and Titan's side structures are designed to better limit intrusion. The Ram's side structure/safety cage earns a good rating, while the Titan's earns acceptable marks. The Ram has standard head-protecting side curtain airbags but not torso airbags. Both curtain and side torso bags are optional in the Titan. Adding torso airbags might improve the Ram's side protection. The Titan could be improved with some combination of structural, airbag, or door trim modifications.

"It's certainly possible to design a large pickup that offers good occupant protection in side crashes," Zuby says. Three previously evaluated 2009 models are

Institute *TOP SAFETY PICK* award winners. The Honda Ridgeline, Ford F-150, and Toyota Tundra all have standard side airbags with torso and head protection and good-rated structures.

The Ram would be a *TOP SAFETY PICK* contender if its side rating improves to good, Zuby notes. Dodge improved the seat/head restraints in the 2009 model to earn a good rating for protection in rear crashes, while the 2006-08 models earned a poor rating. Electronic stability control, another criterion to earn the award, also is standard.

How vehicles are evaluated: The Institute's frontal crashworthiness evaluations are based on results of 40 mph frontal offset crash tests. Each vehicle's overall evaluation is based on measurements of intrusion into the occupant compartment, injury measures recorded on a Hybrid III dummy in the driver seat, and analysis of slow-motion film to assess how well the restraint system controlled dummy movement during the test.

Side evaluations are based on performance in a crash test in which the side of a vehicle is struck by a barrier moving at 31 mph. The barrier represents the front end of a pickup or SUV. Ratings reflect injury measures recorded on two instrumented SID-IIIs dummies, assessment of head protection countermeasures, and the vehicle's structural performance during the impact.

Rear crash protection is rated according to a two-step procedure. Starting points for the ratings are measurements of head restraint geometry — the height of a restraint and its horizontal distance behind the back of the head of an average-size man. Seat/head restraints with good or acceptable geometry are tested dynamically using a dummy that measures forces on the neck. This test simulates a collision in which a stationary vehicle is struck in the rear at 20 mph. Seats without good or acceptable geometry are rated poor overall because they can't be positioned to protect many people.




End 3-page news release on side crash test ratings of large pickups

Attachment: front, side, and rear crashworthiness evaluations

VNR on 2/11/09 at 10:30-11 am EST (C) AMC 6/Trans. 20 (dl4100H)

repeat at 1:30-2 pm EST (C) AMC 6/Trans. 20 (dl4100H); dedicated

For more information go to www.iihs.org

Large pickup trucks		FRONT EVALUATION	SIDE EVALUATION	REAR CRASH PROTECTION	ELECTRONIC STABILITY CONTROL
	HONDA RIDGELINE WITH FRONT AND REAR HEAD CURTAIN AIRBAGS & FRONT TORSO AIRBAGS front and side: 2006-09 models rear: 2009 models	G	G	G	standard
	FORD F-150 WITH FRONT AND REAR HEAD CURTAIN AIRBAGS & FRONT TORSO AIRBAGS front, side, and rear: 2009 models	G	G	G	standard
	TOYOTA TUNDRA WITH FRONT AND REAR HEAD CURTAIN AIRBAGS & FRONT TORSO AIRBAGS front, side, and rear: 2007-09 models	G	G	G	standard
NEW FRONT, SIDE, & REAR TESTS	DODGE RAM 1500 WITH FRONT AND REAR HEAD CURTAIN AIRBAGS front and rear: 2009 models side: 2009 models (mfg. after September 2008)	G	M	G	standard
NEW SIDE TEST	NISSAN TITAN WITH OPTIONAL FRONT AND REAR HEAD CURTAIN AIRBAGS & FRONT TORSO AIRBAGS front and side: 2004-09 models rear: 2005-09 models	G	M	A	optional
NEW FRONT & SIDE TESTS	CHEVROLET SILVERADO 1500 GMC SIERRA 1500 WITH OPTIONAL FRONT AND REAR HEAD CURTAIN AIRBAGS front, side, and rear: 2007-09 models	G	P	A	optional
NEW SIDE TEST	NISSAN TITAN WITHOUT OPTIONAL SIDE AIRBAGS front and side: 2004-09 models rear: 2005-09 models	G	P	A	optional
NEW FRONT & SIDE TESTS	CHEVROLET SILVERADO 1500 GMC SIERRA 1500 WITHOUT OPTIONAL SIDE AIRBAGS front, side, and rear: 2007-09 models	G	P	A	optional

G GOOD
A ACCEPTABLE
M MARGINAL
P POOR

ORDER OF THE VEHICLES REFLECTS RATINGS IN FRONT, SIDE, AND REAR TESTS FOR MORE DETAILED CRASHWORTHINESS EVALUATIONS, GO TO WWW.IIHS.ORG

FRONTAL RATINGS are based on performance in a 40 mph frontal offset crash test into a deformable barrier. **CAUTION:** Frontal ratings cannot be compared across vehicle type and weight categories because the kinetic energy involved in the frontal test depends on the speed and weight of the test vehicle, and the crash is more severe for heavier vehicles. Given equivalent frontal ratings for heavier and lighter vehicles, the heavier vehicle typically will offer better protection in real-world crashes.

SIDE RATINGS are based on performance in a crash test in which the side of the vehicle is struck by a moving deformable barrier with a front end that represents the front of a typical SUV or pickup. The moving barrier strikes the vehicle at 31 mph in a perpendicular impact. **NOTE:** Side ratings can be compared across vehicle type and weight categories while frontal ratings cannot.

REAR CRASH PROTECTION RATINGS are based on a two-step evaluation. In the first step restraint geometry is rated. Seats with good or acceptable geometric ratings then are subjected to a dynamic test. Seats with head restraints rated marginal or poor, based on geometry, aren't tested because they cannot protect taller occupants.