INSURANCE INSTITUTE
FOR HIGHWAY SAFETY

# NEWS RELEASE

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## FIRST TIME INSTITUTE RATES SMALL PICKUPS FOR ROLLOVER PROTECTION; ONLY ONE MODEL RATES GOOD IN TEST THAT ASSURES STRENGTH OF ROOF

ARLINGTON, VA — The Nissan Frontier has the strongest roof and the Chevrolet Colorado the weakest among 5 small pickup trucks, all 2010 models, that recently were tested for rollover protection by the Insurance Institute for Highway Safety. The Frontier, also sold as the Suzuki Equator, is the only pickup in the group to earn the highest rating of good. The Ford Ranger is rated acceptable while the Dodge Dakota, Toyota Tacoma, and Colorado (also sold as the GMC Canyon) earn the second lowest rating of marginal.

The rating system is based on Institute research showing that occupants in rollover crashes benefit from stronger roofs. Vehicles rated good must have roofs that are more than twice as strong as the minimum required under the current federal safety standard. The ratings, products of the Institute's new roof strength testing program, add to consumer information tests that rate vehicles' front, side, and rear crashworthiness. The rollover test is designed to help consumers pick vehicles that will protect them the best in one of the most serious kinds of crashes.

"As a group, small pickups aren't performing as well as small cars or small SUVs in all of the Institute's safety tests. None of the ones we tested is a top-notch performer across the board. In fact, no small pickup earns our *TOP SAFETY PICK* award," says Institute senior vice president David Zuby. The Frontier came close to winning the 2010 award, but it's rated acceptable instead of good for protection against neck injury in rear crashes. To earn *TOP SAFETY PICK*, a vehicle has to earn good ratings for protection in front, side, rear, and rollover crashes. It also has to have electronic stability control.

Nearly 10,000 people a year are killed in rollovers. When vehicles roll, their roofs hit the ground, deform, and crush. Stronger roofs crush less, reducing the risk of

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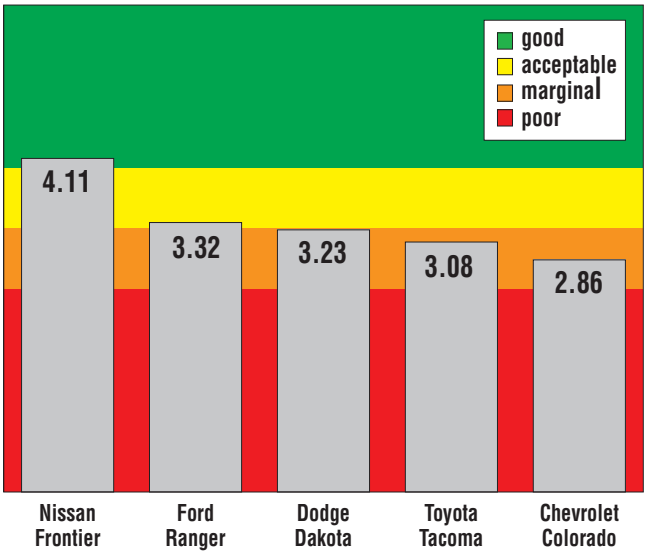
injury from contact with the roof itself. Stronger roofs also can prevent people, especially those who aren't using safety belts, from being ejected through windows, windshields, or doors that have broken or opened because the roof deformed. Roofs that don't collapse help keep people inside vehicles when they roll.

Rollovers are much more common for SUVs and pickup trucks than for cars. In 2008 almost half (47 percent) of all pickup occupants killed in crashes were in trucks that rolled over. This compares with 58 percent of deaths in SUVs and 25 percent in cars.

The best occupant protection is to keep vehicles from rolling in the first place. Electronic stability control is significantly reducing rollovers, especially fatal single-vehicle ones. When vehicles roll, side curtain airbags help protect people. Safety belt use is essential.

In the Institute's roof strength test, a metal plate is pushed against 1 corner of a roof at a constant speed. To earn a good rating, a roof must withstand a force of 4 times the vehicle's weight before reaching 5 inches of crush. For an acceptable rating, the minimum strength-to-weight ratio required is 3.25. A marginal rating value is 2.5, and anything lower than that is poor. The Frontier withstood a force of just over 4 times its weight. This compares with 2.9 times weight for the Colorado. A strength-to-weight ratio of 4 reflects an estimated 50 percent reduction in serious or fatal injury risk in single-vehicle rollover crashes, compared with the current federal standard of 1.5.

**ROOF STRENGTH-TO-WEIGHT RATIO WITHIN 5 INCHES OF CRUSH**




In April 2009, the National Highway Traffic Safety Administration ended numerous delays by unveiling a new rule that raises the

federal roof strength requirement, currently a strength-to-weight ratio of 1.5, to 3 for vehicles with weight ratings up to 6,000 pounds. Roofs on vehicles with weight ratings 6,000 to 10,000 pounds will be required to withstand a force equal to 1.5 times their unloaded weight, whereas these vehicles' roofs are not regulated under the old standard. Another requirement is that roofs maintain sufficient headroom during testing. For the first time, the government will require the same performance on both sides of a roof when tested sequentially. Phase-in begins in September 2012, and all vehicles must comply by September 2016.

"The long phase-in of the new standard means roofs won't have to get stronger right away," Zuby points out, "so we plan to continue rating vehicle roof strength for the foreseeable future. We want to reward manufacturers who are ahead of their competition for protecting people in rollovers."

In addition to the new roof strength ratings, the Institute conducted side tests of small pickup truck models. Earning good ratings are the Frontier, with standard front and rear head curtain airbags plus front torso airbags. Also earning good ratings are the Ranger, with standard front-seat mounted combination head and torso airbags, and the Tacoma, which the Institute tested in 2008.

In contrast, the Colorado is rated poor for occupant protection in side crashes. It's equipped with standard curtain side airbags but lacks additional airbags designed to protect a driver's torso. The Colorado's poor structure, along with poor protection for the driver dummy's chest and pelvis, contributed to its poor rating overall. Plus the dummy's head came close to moving around the curtain airbag during the impact by the intruding barrier.

"A slightly different crash configuration could have resulted in a direct hit from the barrier on the dummy's head," Zuby explains.

The test of the Dakota produced a different problem. Its optional curtain side airbags failed to deploy. This is the first time this has happened in an Institute side test. Chrysler engineers say they've identified a problem with the computer program algorithm that calculates when to fire the airbags and are working on a

remedy. When the computer program is fixed, the Institute will conduct another test of the Dakota and publish the results.

Zuby notes that "the Dakota is the only 2010 small pickup the Institute tested that has optional rather than standard side airbags. Most of the auto industry pledged to get standard side airbags in every new passenger vehicle by now."

Chrysler was among 15 manufacturers who got together in 2003 and agreed on the first set of rules designed to reduce the risks for people in front and side crashes involving larger and heavier SUVs and pickup trucks. Although the compatibility agreement specified performance criteria and not features, the idea was to make safety improvements like installing side airbags in all passenger vehicles more quickly than would have been the case with a government regulation.

"Chrysler is the only manufacturer we know of that isn't living up to the spirit of the 2003 agreement," Zuby says.

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 another pickup or SUV. Ratings reflect injury measures recorded on 2 instrumented SID-IIs dummies representing 5th percentile women, assessment of head protection countermeasures, and the vehicle's structural performance during the impact.

## For more information go to www.iihs.org