

INSURANCE INSTITUTE FOR HIGHWAY SAFETY

NEWS RELEASE

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NEW SIDE IMPACT CRASH TEST RESULTS FOR SMALL SUVs: HONDA CR-V IMPROVES FROM MARGINAL TO GOOD WITH STANDARD SIDE AIRBAGS; FORD ESCAPE WITH OPTIONAL SIDE AIRBAGS ALSO RATED GOOD

ARLINGTON, VA — The 2005 Honda CR-V equipped with standard side airbags designed to protect occupants' heads and torsos earned the top rating of good in recent side impact crash tests conducted by the Insurance Institute for Highway Safety. The 2005 Ford Escape also earned a good rating, but only when it's equipped with optional side airbags. Without the side airbags, the Escape is rated poor for side impact protection.



Honda CR-V with standard side airbags (top) and Ford Escape with optional side airbags (above) earn good overall ratings.

These results update the Institute's side impact crashworthiness ratings for 13 current small SUV designs (see attached ratings). The Institute tested the CR-V because of the recent addition of standard curtain-style side airbags. The Escape was tested because Ford changed the optional torso/head combination for front-seat occupants to curtain-style airbags that protect the heads of occupants in both front and rear seats. Separate side airbags designed to protect front-seat occupants' torsos come with the curtains on both the CR-V and Escape.

"Honda and Ford made changes to their small SUVs to improve occupant protection in side

— MORE —

crashes. Still, most small SUVs are rated marginal or poor in this test," says Institute chief operating officer Adrian Lund.

In the Institute's side impact test, a moving deformable barrier strikes the driver side of a passenger vehicle at 31 mph. The barrier weighs 3,300 pounds and has a front end shaped to simulate the front end of a typical pickup or SUV. In each side-struck vehicle are two instrumented dummies the size of a small (5th percentile) woman. One dummy is positioned in the driver seat, and one is in the rear seat behind the driver.

Honda improves from marginal to good: When the Institute tested a 2003 model CR-V, side airbags with head protection weren't available. The CR-V without such airbags earned a marginal rating.

"Without side airbags, there was nothing to cushion the heads of the dummies," Lund says. "The driver dummy's head hit the window sill, and even though this didn't produce high injury measures such contacts should be prevented."

The rear passenger dummy's head was struck by the roof pillar behind the CR-V's rear passenger door. Measures recorded on the driver dummy showed that rib fractures and/or internal organ injuries would be possible in a crash of this severity. Serious neck injuries also would be possible.

For 2005 Honda added head-protecting side curtain airbags as standard equipment. Honda also made front-seat-mounted torso airbags standard (they formerly were optional) and strengthened the pillar between the doors.

"In contrast to the earlier model, the 2005 CR-V is a good performer," Lund says. "The side curtain airbags cushioned the heads of both the front and rear dummies. Honda should be commended for adding these airbags as standard equipment. This is what we want all auto manufacturers to do. Buyers shouldn't have to choose safety from an option list."

Escape is a good performer, but only with optional side airbags: In an earlier test, the 2001-04 Ford Escape earned a good rating for side impact protection when equipped with optional combination torso/head airbags that deploy from the side of the

front seats. But Ford recently made two changes to the side airbags in this vehicle. In 2005 Escapes built through August 2004, Ford replaced the optional combination torso/head airbags in the front seat with curtain-style airbags that deploy from the roof area above the windows to protect the heads of both front and rear occupants. In Escapes built after August 2004, front-seat-mounted torso airbags were added.

The side impact crash test rating for the 2005 Escape applies to Escapes built after August with the optional airbags. This rating also applies to similar vehicles sold as the Mercury Mariner and Mazda Tribute when they're equipped with optional side airbags.

"The earlier Escape with optional airbags was a good performer," Lund points out, "but the airbags only protected the front-seat occupants. Even though injury measures for the rear dummy in the earlier test were low, curtain airbags are an improvement because they protect the rear occupants' heads as well as the heads of people in the front seat."

More small SUVs are rated good for both side and frontal crash protection: The first time the Institute released side impact crash test ratings in 2003, only one small SUV, the Subaru Forester, earned a good rating in both the side and frontal offset crash tests. Now three models do — 2003-05 Forester, 2005 CR-V, and 2004-05 Toyota RAV4 with optional side airbags. The 2005 Escape is acceptable for frontal crash protection.

Side airbags reduce risks in real-world crashes: Institute research shows that side airbags with head protection are reducing deaths by about 45 percent among drivers of cars struck on the driver side. Before the availability of head-protecting airbags, there was virtually nothing to prevent people's heads from being struck by intruding vehicles or rigid objects like trees or poles in serious side impacts. Side airbags that protect the chest and abdomen, but not the head, also are reducing deaths but are less effective (about a 10 percent reduction in deaths).

"These crash test results confirm what the Institute found is happening in real-world crashes," Lund says. "Side airbags designed to protect people's heads can prevent very serious head injuries."

The curtain airbags in both the CR-V and Escape also are designed to provide protection in rollover crashes. Vehicle sensors are designed to deploy the side curtains if they detect a possible rollover. Then the airbags will stay inflated to keep occupants' heads and limbs inside the vehicle.

How vehicles are evaluated: Each vehicle's overall side evaluation is based on injury measures recorded on two instrumented SID-IIIs dummies, assessment of head protection countermeasures, and the vehicle's structural performance during the impact. Injury measures obtained from the two dummies, one in the driver seat and the other in the rear seat behind the driver, are used to determine the likelihood that the driver and/or passenger would have sustained serious injury to various body regions. The movements and contacts of the dummies' heads during the crash also are evaluated. This assessment is more important for seating positions without head-protecting airbags which, assuming they perform as intended, should prevent injurious head contacts. Structural performance is based on measurements indicating the amount of B-pillar intrusion into the occupant compartment. Some intrusion into the compartment is inevitable in serious side impacts, but any intrusion that does occur should be uniform both horizontally and vertically and shouldn't seriously compromise the driver or passenger space.

**End 4-page news release on side impact crash test results
1-page attachment: side impact evaluations of small SUVs
VNR Dec. 10, 2004 at 10-10:30 am EST (C) IA 5/Trans. 19;
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For more information go to www.iihs.org

ATTACHMENT: CRASHWORTHINESS EVALUATIONS, PAGE 1 OF 1

Small SUVs	Side impact crash test performance					STRUCTURE/ SAFETY CAGE	Overall FRONTAL EVALUATION	
	OVERALL SIDE EVALUATION	HEAD PROTECTION	INJURY MEASURES					OVERALL FRONTAL EVALUATION
			Head/neck	Torso	Pelvis/leg			
TOYOTA RAV4 TESTED WITH OPTIONAL SIDE AIRBAGS 2004-05 models; test vehicle = 3,195 lbs.	G	Driver G Rear passenger G	G G	G G	G G	A	G BEST PICK frontal 2004-05 models mfg. after 12/2003	
FORD ESCAPE/MERCURY MARINER MAZDA TRIBUTE TESTED WITH OPTIONAL SIDE AIRBAGS 2005 models (mfg. after 8/2004); test vehicle = 3,569 lbs.	G	Driver G Rear passenger G	G G	G G	A G	A	A 2005 models	
HONDA CR-V TESTED WITH STANDARD SIDE AIRBAGS 2005 models; test vehicle = 3,437 lbs.	G	Driver G Rear passenger G	G G	G G	G G	M	G BEST PICK frontal 2002-05 models	
SUBARU FORESTER TESTED WITH STANDARD SIDE AIRBAGS 2003-05 models; test vehicle = 3,192 lbs. (avg.)	G	Driver G Rear passenger A	G G	G G	A G	A	G BEST PICK frontal 2003-05 models	
HYUNDAI SANTA FE TESTED WITH STANDARD SIDE AIRBAGS 2002 (mfg. after 3/2002)-05 models; test vehicle = 3,922 lbs.	A	Driver G Rear passenger M	G G	G G	G G	M	G 2001-05 models mfg. after 3/2001	
JEEP WRANGLER SIDE AIRBAGS AREN'T AVAILABLE 1997-2005 models; test vehicle = 3,391 lbs.	M	Driver M Rear passenger M	A G	P G	G G	G	A 1997-2005 models	
HONDA ELEMENT TESTED WITHOUT OPTIONAL SIDE AIRBAGS 2003-05 models; test vehicle = 3,508 lbs.	P	Driver M Rear passenger M	A G	P G	G A	A	G BEST PICK frontal 2003-05 models	
FORD ESCAPE/MAZDA TRIBUTE TESTED WITHOUT OPTIONAL SIDE AIRBAGS 2001-2005 models; test vehicle = 3,479 lbs.	P	Driver P Rear passenger A	A G	P G	G G	A	A 2005 models	
MERCURY MARINER 2005 models								
LAND ROVER FREELANDER SIDE AIRBAGS AREN'T AVAILABLE 2002-05 models; test vehicle = 3,546 lbs.	P	Driver M Rear passenger A	G A	P G	A G	P	A 2002-05 models	
SATURN VUE TESTED WITHOUT OPTIONAL SIDE AIRBAGS 2002-05 models; test vehicle = 3,519 lbs.	P	Driver P Rear passenger M	A G	P G	M G	M	G BEST PICK frontal 2002-05 models	
SUZUKI GRAND VITARA SIDE AIRBAGS AREN'T AVAILABLE 1999-2005 models; test vehicle = 3,280 lbs.	P	Driver P Rear passenger A	P G	M G	A G	P	A 1999-2005 models	
SUZUKI VITARA/CHEVROLET TRACKER 1999-2004 models								
TOYOTA RAV4 TESTED WITHOUT OPTIONAL SIDE AIRBAGS 2001-05 models; test vehicle = 3,113 lbs.	P	Driver P Rear passenger M	A G	P M	P M	A 2004-05s M 2001-03s	G BEST PICK frontal 2004-05 models mfg. after 12/2003	
MITSUBISHI OUTLANDER TESTED WITHOUT OPTIONAL SIDE AIRBAGS 2003-05 models; test vehicle = 3,444 lbs.	P	Driver P Rear passenger A	P G	P A	P G	P	G BEST PICK frontal 2003-05	

NOTES: Order of vehicles reflects performance in side impact tests.

Go to www.iihs.org for crashworthiness evaluations of earlier small SUV models and other passenger vehicles.

G GOOD
A ACCEPTABLE
M MARGINAL
P POOR