
INSURANCE INSTITUTE FOR HIGHWAY SAFETY

NEWS RELEASE

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NEW CRASH TEST RESULTS: 3 SMALL SUVs EARN GOOD RATINGS, AND 1 IS ACCEPTABLE

ARLINGTON, VA — In recent frontal offset crash tests of four new or redesigned small sport utility vehicles, three earned the top crashworthiness rating. The 2002 Honda CR-V, 2003 Subaru Forester, and 2002 Saturn VUE are rated good overall. The CR-V and Forester also earned “best pick” designations. Another small SUV, the 2002 Land Rover Freelander (an older design that has been newly introduced in the U.S. market), is rated acceptable.

The Insurance Institute for Highway Safety’s ratings (attached) reflect performance in a 40 mph frontal offset crash test into a deformable barrier. Based on the results of this test, the Institute evaluates the crashworthiness of passenger vehicles, assigning each vehicle a rating of good, acceptable, marginal, or poor.

“Before this set of tests, only the Hyundai Santa Fe and previous Forester design, among small SUVs, earned good overall crashworthiness ratings. Adding more small SUVs to those with good ratings is further proof that manufacturers are working to improve the performances of their new designs in offset tests. This will mean improved protection for people in serious real-world crashes,” says Institute president Brian O’Neill.

In addition to the small SUVs with good ratings, four other current designs are rated acceptable and two are marginal (see attached list; for more detailed results, go to www.highwaysafety.org, click on VEHICLE RATINGS, and choose SMALL UTILITY VEHICLES).

Structural design is key to good performance: The CR-V, Forester, VUE, and Freelander all earned good ratings for structural performance in the offset test. The occupant compartments of these vehicles held up well, preserving the space around the driver dummy.

A vehicle’s structural design is key to its crashworthiness performance because the Institute’s frontal offset crash test into a deformable barrier is especially demand-

— MORE —

ing of this aspect of vehicle design. The driver side hits the barrier, so a relatively small area of the vehicle's front-end structure must manage the crash energy. This means intrusion into the occupant compartment is much more likely to occur than in a full-width test.

"If a vehicle's front-end structure absorbs and manages the crash energy so the occupant compartment remains largely intact, with little or no intrusion into the driver's space, then the dummy's movement during the crash is likely to be well controlled, and injury measures are likely to be low. In contrast, poor structural design means greater likelihood of poor control of the dummy and high injury measures," O'Neill says.

Honda CR-V improves compared with performance of 1998 model: The structural performance of the new CR-V was especially good compared with the previous CR-V design. There was very little intrusion into the occupant compartment of the new model, and all of the injury measures recorded on the dummy were good. In contrast, measures recorded on the dummy's head and left leg in the crash of the predecessor (1998) model indicated significant injury likelihood.

MEASURES OF OCCUPANT COMPARTMENT INTRUSION (cm), 40 MPH FRONTAL OFFSET CRASH TEST										
	A-pillar movement rearward	Footwell intrusion				Brake pedal intrusion	Instrument panel movement		Steering column movement	
		left	center	right	footrest		left	right	upward	rearward
2002 Honda CR-V	1	6	7	6	4	3	0	0	5	-3
1998 Honda CR-V	7	24	19	13	15	27	8	14	9	8

Institute and government crash tests complement each other: The Institute's crashworthiness evaluations are based on results of 40 mph frontal offset crash tests. Each vehicle's overall evaluation is based on three aspects of performance — measurements of occupant compartment intrusion, injury measures from a Hybrid III dummy positioned in the driver seat, and analysis of slow-motion film to assess how well the restraints controlled dummy movement during the impact.

The federal government has been testing new passenger vehicles in 35 mph full-front crash tests since 1978. This New Car Assessment Program has been a major contributor to crashworthiness improvements — in particular, improved restraint systems in new passenger vehicles. The Institute's offset tests, conducted since 1995, involve 40 percent of a vehicle's front end hitting a deformable barrier at 40 mph. This test complements the federal test involving the full width of the front end hitting a rigid barrier. Both tests are contributing to improvements in crashworthiness — in particular improved crumple zones and safety cages.

The same 40 mph offset crash test is used to evaluate new cars by the European Union in cooperation with motor clubs, by an Australian consortium of state governments and motor clubs, and by a government-affiliated organization in Japan.

End 3-page release on vehicle crashworthiness
1-page attachment: crashworthiness ratings
Video news release Tues. 7/9/02, 1-1:30 pm EDT
(C)Telstar 6/Trans. 8; crash test footage & more

Internet: www.highwaysafety.org

Evaluations

		Frontal Offset Crash Test Performance						Other Evaluations	
		OVERALL EVALUATION	Structure/ Safety Cage	Injury Measures			Restraints/ Dummy Kinematics	Head Restraint Design	Bumper Performance
				Head/ Neck	Chest	Leg & Foot Left/Right			
Small sport utility vehicles									
NEWLY TESTED	best pick	HONDA CR-V 2002 models test vehicle wt. = 3,347 lbs.	G	G	G	G	G	G	P
NEWLY TESTED	best pick	SUBARU FORESTER 2003 models test vehicle wt. = 3,197 lbs.	G	G	G	G	A	G	G
NEWLY TESTED		SATURN VUE 2002 models test vehicle wt. = 3,534 lbs.	G	G	A	G	G	A	P
		HYUNDAI SANTA FE 2001 (mfg. after 3/02/01)-2002 models test vehicle wt. = 3,836 lbs.	G	G	A	G	G	A	P
		JEEP WRANGLER 1997-2002 models test vehicle wt. = 3,247 lbs.	A	A	G	G	A	A	M
		TOYOTA RAV4 2001 (mfg. after 10/00)-2002 models test vehicle wt. = 3,104 lbs.	A	G	A	G	A	A	P
		SUZUKI GRAND VITARA SUZUKI VITARA CHEVROLET TRACKER 1999-2002 models test vehicle wt. = 3,223 lbs.	A	A	A	G	G	G	A
								G or A depending on vehicle seat	P
NEWLY TESTED		LAND ROVER FREELANDER 2002 models test vehicle wt. = 3,549 lbs.	A	G	G	G	A	G	P
		KIA SPORTAGE 1998-2002 models test vehicle wt. = 3,338 lbs.	M	M	G	G	M	G	P
		FORD ESCAPE MAZDA TRIBUTE 2001-02 models test vehicle wt. = 3,408 lbs.	M	M	A	G	G	P	A
									A or P depending on vehicle seat
		Crashworthiness evaluations of earlier designs:							
		SUBARU FORESTER 1999-2002 models test vehicle wt. = 3,168 lbs.	G	A	G	G	G	A	G
		TOYOTA RAV4 1996-2000 models test vehicle wt. = 3,007 lbs.	M	A	A	A	P	G	M
		JEEP CHEROKEE 1997-2001 models test vehicle wt. = 3,479 lbs.	M	M	G	G	P	A	M
		HONDA CR-V 1997-2001 models test vehicle wt. = 3,214 lbs.	M	A	M	G	P	G	A
		ISUZU AMIGO 1998-99 models test vehicle wt. = 3,598 lbs.	P	P	G	G	M	G	P
									A or P depending on vehicle seat
									P
									P

G GOOD A ACCEPTABLE M MARGINAL P POOR