

# INSURANCE INSTITUTE FOR HIGHWAY SAFETY

## NEWS RELEASE

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### BUMPERS ON 3 SMALL CARS FAIL TO RESIST LOW-SPEED DAMAGE; FRONTAL AIRBAGS IN KIA SEDONA MINIVAN INFLATE IN 5 MPH IMPACT

ARLINGTON, VA — In low-speed crash tests, the bumpers on the new Mitsubishi Lancer, Subaru Impreza, and Volvo S40 didn't bump very well. Total damage sustained in four crash tests at 5 mph ranged from \$2,515 to \$3,169. The four tests conducted by the Insurance Institute for Highway Safety are front- and rear-into-flat-barrier plus front-into-angle-barrier and rear-into-pole.

The Kia Sedona passenger van's bumpers are even worse. This vehicle sustained more than \$1,000 damage in each of the four tests at 5 mph. Damage in the simplest impact, front-into-flat-barrier, totaled more than \$4,000. The big problem in the flat-barrier test was that the airbags deployed. Both driver and passenger airbags had to be replaced. The passenger airbag cracked the windshield during deployment so it, too, had to be replaced, as did the top of the instrument panel. The cost of these and other

#### 5 MPH CRASH TEST RESULTS

	Front into flat barrier	Rear into flat barrier	Front into angle barrier	Rear into pole	Total damage 4 tests	Average damage per test	Bumper rating
<b>SMALL CARS</b>							
2002 Subaru Impreza	\$413	\$456	\$1,040	\$606	\$2,515	\$629	<b>MARGINAL</b>
2002 Mitsubishi Lancer	\$347	\$522	\$1,224	\$1,011	\$3,104	\$776	<b>MARGINAL</b>
2002 Volvo S40	\$406	\$435	\$1,116	\$1,212	\$3,169	\$792	<b>MARGINAL</b>
<b>PASSENGER VAN</b>							
2002 Kia Sedona	\$4,305	\$1,246	\$1,225	\$2,971	\$9,747	\$2,437	<b>POOR</b>

Repair costs reflect January 2002 prices.

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repairs came to \$4,305. Airbags shouldn't deploy in low-speed impacts because they aren't needed, cost a lot to repair, and could harm out-of-position occupants. They should deploy in the equivalent of a 12 to 14 mph barrier crash — not a 5 mph impact. Kia is investigating why this happened. But even without the airbag-related repair costs, the front-end damage to the Sedona in the flat-barrier test topped \$1,200.

Other damage to the Sedona included \$2,971 in repair costs after the rear-into-pole test, in large part because the bumper system doesn't incorporate adequate absorption capabilities. The result is that the tailgate and rear body panels were damaged beyond repair. Lights were damaged in both the pole and front-into-angle-barrier impact.

"It was the worst performance of any minivan we've tested," says Adrian Lund, Institute chief operating officer. "The Sedona's bumpers simply failed — the plastic bar cracked in all four tests and the bumper cover had to be replaced after three of the four tests. The worst result was the airbag deployment in the flat-barrier test. This shouldn't happen."

When it comes to the three small cars the Institute tested, "bumpers that bump apparently weren't a consideration during the design phase," Lund says. All three of the small cars have plastic bumper covers over steel bumper bars plus foam intended to absorb crash energy, "but these components don't do the job very well. Foam can be an effective energy absorber, but it isn't in these systems."

Lund concludes that "designing good bumpers is no great engineering challenge. Compare the bumpers on the three small cars we recently tested to those on the 1998 Volkswagen New Beetle, which sustained only about \$200 damage in the same four tests. As Volkswagen has demonstrated, automakers know how to design good bumpers, but unless this is a priority we're going to continue seeing many manufacturers using inferior designs."

**End 2-page release on damage in 5 mph tests  
Video news release Wed. 3/13, 1-1:30 p.m. EST  
(C)Telstar 6/Trans. 8; crash test footage & more**

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