

# INSURANCE INSTITUTE FOR HIGHWAY SAFETY

## NEWS RELEASE

March 29, 2000

### **PASSENGER VEHICLES SUSTAIN HUGE DAMAGE IN 5 MPH CRASH TESTS: MAZDA PROMISES IMPROVEMENT; VOLVO LOOKS INTO AIRBAG DEPLOYMENT**

ARLINGTON, VA – Seventeen new cars, all 1999 and 2000 models, turned in mostly disappointing results in 5 mph crash tests conducted to assess how well the bumpers resist costly damage in the kinds of impacts that frequently occur in commuter traffic and parking lots. Six of the 17 cars the Insurance Institute for Highway Safety recently tested are previously untested midsize inexpensive models, 5 are midsize luxury models, and the other 6 are updated models of cars and a passenger van the Institute previously tested.

In a series of 4 front and rear tests at 5 mph, the worst performers overall were the 2000 model Mazda MPV and Volvo S80 (see attached table). These vehicles sustained an average of more than \$1,000 damage in each of the 4 crash tests, which include front- and rear-into-flat-barrier, front-into-angle-barrier, and rear-into-pole.

**Mazda MPV and Protege performances:** "We were disappointed when our tests revealed the Mazda MPV had a very weak bumper," says Institute president Brian O'Neill. "In last year's tests, the Mazda Protege's rear bumper included a flimsy plastic bar that allowed about \$2,800 damage in the rear-into-pole test. Stung by the negative publicity about this result, Mazda improved the bumper on the 2000 model, and damage was reduced to about \$500. Surprisingly the 2000 MPV, a brand new design, was introduced with an almost identical flimsy plastic bumper bar on the front end, which allowed more than \$1,700 damage in the simple 5 mph flat-barrier test."

After observing the MPV's test results, Mazda officials quickly went back to the drawing board, and the company already has a redesign of the front bumper in production. MPVs

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equipped with the improved bumper will begin arriving in dealer showrooms at the end of April. And in an unprecedented action, this automaker says it will “install front bumper reinforcement plates for vehicles currently in stock and for those customers who have already purchased 2000 MPVs.”

O’Neill notes that “this is an encouraging response, and we commend it. We also hope next time the automaker will simply install effective bumpers to begin with.”

**Volvo S80 performance:** In the 5 mph flat-barrier test of the Volvo S80 “we saw something this year we’ve never seen before,” O’Neill points out. “There was about \$500 damage to the front end of the vehicle, most of it hidden under the bumper cover. In addition – and this is what was so surprising – both airbags deployed, resulting in another \$4,500 in repair bills. The Institute and Volvo are working together to try to understand the significance of the airbag deployment in this impact. Obviously, airbags shouldn’t deploy in low-speed crashes.”

Volvo’s investigation leads the company to conclude this particular deployment was a rare quirk, and the company believes the test result won’t translate into frequent airbag deployments in low-speed crashes on the road. The Institute is studying real-world crash deployments in S80 models, and “if low-speed deployments are rare,” O’Neill says, “then we would agree with Volvo. But if we find many low-speed deployments, then Volvo should redesign the airbag sensors for the S80.”

**Midsized inexpensive cars:** The best performer among all 17 vehicles the Institute tested is the Saturn LS, an inexpensive midsize car that sustained an average of about \$200 in repair costs per bumper test. “There was no damage whatsoever in the front-into-flat-barrier test and very little damage in the rear, which is what we expect from a good bumper system,” O’Neill says. In contrast is the Daewoo Leganza, which averaged about \$650 in repair costs per test. This includes about \$800 damage in the rear-into-pole test and more than \$1,000 damage in the angle-barrier test.

**Midsized luxury cars:** As a group, these cars fared even worse. Besides the problem with the Volvo airbags, which multiplied the overall cost of repairs, the Cadillac Catera sustained an average of more than \$900 damage per test. The car in this group with the least damage overall is the Audi A6. It allowed no damage in either flat-barrier impact, but it did allow more than \$1,000 damage in each of the other two impacts, front-into-angle-barrier and rear-into-pole.

“When you spend more than \$30,000 for a new car, you ought to get bumpers that prevent damage in low-speed impacts like our tests,” O’Neill says, “but two of the five luxury models we tested failed – the Catera and Volvo S80 are rated poor. Two other models are marginal, and only the A6 is rated acceptable.”

**End 3-page release on damage repair costs after low-speed tests**  
**1-page attachment: summary of repair costs after low-speed tests**  
**Video news release on Wednesday, March 29, 1-1:30 p.m. EST**  
**(C) Telstar 6/Trans. 8; includes crash test footage, related video**

**Internet: [www.highwaysafety.org](http://www.highwaysafety.org)**

### 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>MIDSIZE INEXPENSIVE CARS</b>							
2000 Saturn LS	\$0	\$138	\$390	\$295	\$823	\$206	good
2000 Nissan Altima	\$380	\$17	\$299	\$668	\$1,364	\$341	acceptable
1999 Mazda 626	\$143	\$526	\$924	\$178	\$1,771	\$443	acceptable
1999 Chevrolet Malibu	\$656	\$369	\$588	\$619	\$2,232	\$558	marginal
1999 Pontiac Grand Am	\$0	\$256	\$1,262	\$947	\$2,465	\$616	marginal
1999 Daewoo Leganza	\$281	\$413	\$1,081	\$799	\$2,574	\$644	marginal
<b>MIDSIZE LUXURY CARS</b>							
1999 Audi A6	\$0	\$0	\$1,012	\$1,017	\$2,029	\$507	acceptable
1999 Saab 9-5	\$92	\$116	\$1,087	\$803	\$2,098	\$525	marginal
2000 BMW 328i	\$0	\$999	\$759	\$672	\$2,430	\$608	marginal
1999 Cadillac Catera	\$809	\$660	\$935	\$1,358	\$3,762	\$941	poor
2000 Volvo S80	\$5,137	\$347	\$1,028	\$1,550	\$8,062	\$2,016	poor
<b>UPDATES OF CARS PREVIOUSLY TESTED:</b>							
<b>Subaru Legacy midsize inexpensive car</b>							
2000 models	\$378	\$92	\$688	\$332	\$1,490	\$373	acceptable
1995 models	\$336	\$304	\$754	\$710	\$2,104	\$526	acceptable
<b>Ford Taurus large family car</b>							
2000 models	\$62	\$0	\$839	\$634	\$1,535	\$384	acceptable
1996 models	\$0	\$0	\$707	\$671	\$1,378	\$345	good
<b>Toyota Avalon midsize moderately priced car</b>							
2000 models	\$326	\$377	\$656	\$572	\$1,931	\$483	acceptable
1998 models	\$486	\$310	\$693	\$293	\$1,782	\$446	acceptable
<b>Nissan Maxima midsize moderately priced car</b>							
2000 models	\$1,042	\$339	\$423	\$734	\$2,538	\$635	marginal
1998 models	\$250	\$177	\$651	\$323	\$1,401	\$350	good
<b>Mazda Protege small car</b>							
2000 models	\$174	\$318	\$1,017	\$549	\$2,058	\$515	marginal
1999 models	\$174	\$645	\$1,017	\$2,872	\$4,708	\$1,177	poor
<b>Mazda MPV passenger van</b>							
2000 models	\$1,710	\$1,031	\$1,730	\$1,198	\$5,669	\$1,417	poor
1996 models	\$676	\$1,387	\$1,396	\$560	\$4,019	\$1,005	poor

Notes: Repair costs reflect January 2000 prices. Bumper ratings of previously tested models are based on total repair costs at time of testing. Front bumpers on 2000 model Mazda Protege weren't tested because no design changes were introduced since previous model year.