

# INSURANCE INSTITUTE FOR HIGHWAY SAFETY

## NEWS RELEASE

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### **BUMPERS ON LARGE FAMILY CARS AND LUXURY CARS DON'T BUMP; EVERY MODEL TESTED SUSTAINS EXTENSIVE DAMAGE IN 5 MPH IMPACTS**

ARLINGTON, VA – Seven large family and luxury cars sustained extensive and costly damage in a series of four low-speed crash tests. The 5 mph impacts conducted by the Insurance Institute for Highway Safety compare how well bumpers resist damage in the kinds of impacts that frequently occur in commuter traffic and parking lots. In these tests, none of the seven cars' bumper systems did an effective job of preventing unnecessary damage.

<b>5 MPH CRASH TEST RESULTS</b>						
	<u>Front Into Flat Barrier</u>	<u>Rear Into Flat Barrier</u>	<u>Front Into Angle Barrier</u>	<u>Rear Into Pole</u>	<u>Total Damage 4 Tests</u>	<u>Average Damage Per Test</u>
<b>LARGE LUXURY CARS</b>						
<b>Buick Park Avenue</b> 1999-2000 models	\$189	\$253	\$559	\$805	\$1,806	\$452
<b>Cadillac Seville</b> 2000 models	\$567	\$162	\$1,072	\$934	\$2,735	\$684
1997 models	\$303	\$182	\$578	\$895	\$1,958	\$490
<b>Lexus GS 400</b> 1998-2000 models	\$240	\$270	\$1,828	\$408	\$2,746	\$687
<b>LARGE FAMILY CARS</b>						
<b>Buick LeSabre</b> 2000 models	\$264	\$85	\$1,101	\$634	\$2,084	\$521
<b>Dodge Intrepid</b> 1999-2000 models	\$136	\$279	\$443	\$1,257	\$2,115	\$529
<b>Chevrolet Impala</b> 2000 models	\$548	\$776	\$674	\$344	\$2,342	\$586
<b>Chrysler LHS</b> 1999-2000 models	\$633	\$278	\$520	\$975	\$2,406	\$602
Note: Repair costs reflect September 1999 prices.						

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Every car sustained more than \$1,500 damage in the four tests. Six of the seven models sustained more than \$2,000 damage, and two models sustained closer to \$3,000 damage. Headlights and other safety-related parts had to be replaced. Every car sustained damage extending beyond the bumpers to the fenders and other expensive sheet metal parts.

“With all this damage, it’s obvious that car bumpers still aren’t being designed to do what they’re supposed to do, which is bump and absorb the energy of a low-speed impact so there’s little or no damage,” Institute president Brian O’Neill points out. “One problem is that some of the bumpers are simply too close to the car body. This puts styling before function because there’s not enough room to absorb energy and prevent damage. The result is huge repair costs.”

The Institute’s series of four bumper tests includes front-into-flat-barrier, rear-into-flat-barrier, front-into-angle-barrier, and rear-into-pole.

**Worst performers:** The Lexus GS 400 and Cadillac Seville performed worst of the seven models, sustaining more than \$2,700 damage in four crash tests. Most of the damage to the Lexus — more than \$1,800 — was in the angle-barrier impact.

**Lots of damage in simplest crash tests:** The least demanding impacts are front- and rear-into-flat-barrier because the energy of the crash tests is spread across the whole width of the vehicle. All cars used to have to withstand these impacts at 5 mph without damage. But the Chevrolet Impala sustained more than \$1,300 damage in these two tests. The Chrysler LHS sustained more than \$900 damage. “When you can’t bump a car straight on into something flat at 5 mph without damage, there’s something wrong with the bumper design. When the damage runs to hundreds of dollars, the bumper clearly wasn’t designed to bump at all,” O’Neill says.

**Bumper design isn’t improved on all-new Cadillac Seville:** General Motors completely redesigned the Seville after the 1997 model year. “This means the bumpers could have been improved, but they weren’t,” O’Neill points out. “In fact the new Seville sustained more damage than the 1997 model we tested a couple of years ago.” Part of the reason for the 2000

Seville's high repair costs is that, even though the bumper covers weren't damaged enough in any of the crash tests to require replacement, the energy-absorbing foam underneath did need replacing after two of the tests — and General Motors doesn't sell the foam separately. "You have to buy the whole bumper cover along with the foam, which is wasteful and expensive," O'Neill points out.

**Designing safety-related parts into bumpers 'makes no sense':** It's especially bad when a 5 mph impact damages safety-related parts like lights. In the angle-barrier test, the right headlight assemblies on both the Lexus GS 400 and Buick LeSabre broke, costing more than \$250 each to replace. The Buick Park Avenue's parking light and turn signal also broke — the parking lights are built into the bumper. "This design makes no sense," O'Neill says. "Something that's needed for safety and relatively easy to break shouldn't be located at the very place on the car that's supposed to absorb the energy of an impact. Obviously, the light is going to break."

The decorative front grille on the Chrysler LHS also is built into the bumper system. This doesn't involve safety, but it does run up the cost of repairs when the grille has to be replaced because of a bumper impact.

"All of the damage could have been avoided if the bumpers had been designed to absorb the energy of a minor impact," O'Neill says. A federal bumper standard used to require no damage in the flat-barrier impacts, and the 1981 Ford Escort withstood all four of the Institute's bumper tests with no damage at all. The 1998 Volkswagen New Beetle sustained only minimal damage in the same impacts.

"Designing effective bumpers needs to be a higher priority among automakers than it is for most of them today or else we'll see the kind of inferior designs that are on most of the large and luxury cars we tested," O'Neill also says.

**End 3-page release on damage repair costs after low-speed tests.**  
Video news release on Tuesday, September 28, 2-2:30 p.m. EDT  
(C) Telstar 6/Trans. 8; includes crash test footage, related video

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