

INSURANCE INSTITUTE FOR HIGHWAY SAFETY

NEWS RELEASE

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BUMPER CRASH TESTS: HYUNDAI ELANTRA PERFORMS BEST; 2 CARS IMPROVE SINCE PREVIOUS TESTS, BUT 4 OTHERS FAIL TO IMPROVE

ARLINGTON, VA — Seven new cars, all 2000 and 2001 models, turned in varying performances in 5 mph crash tests to assess how well their bumpers prevent costly damage in parking lot-type impacts. Six of the seven cars the Insurance Institute for Highway Safety tested are updates of models that were previously tested.

Among the six updated models, only the Hyundai Elantra and Lexus LS 430 improved compared with previous models of the same cars (see attached table). The Honda Civic, Dodge Stratus, and Dodge Grand Caravan failed to improve, while the new Ford Focus performed worse than its predecessor model, the Escort. The seventh car, Mercedes' C 320 model, hadn't been previously tested. Each car was tested in a series of four front and rear impacts at 5 mph — front- and rear-into-flat-barrier plus front-into-angle-barrier and rear-into-pole.

Hyundai cuts damage repair costs in half, then cuts them in half again: The only car to turn in a good performance, sustaining less than \$1,000 total damage in the latest round of Institute bumper tests, is the Hyundai Elantra. This is the third time this car has been tested, and each time after the first test it improved. After a 1997 Elantra sustained more than \$3,100 damage in the series of four low-speed crash tests, including about \$2,000 damage in two rear impacts, Hyundai redesigned the rear bumpers. The result was damage reduction in the rear-into-pole test from \$1,709 (1997 model) to only \$8 (1999 model). Overall damage in all four tests was cut by almost half, from \$3,131 to \$1,714.

Hyundai improved the front bumper for the 2001 model year. Foam has been added to absorb the energy of low-speed impacts, and the bumper reinforcement bar, which

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formerly was plastic, now is made of steel. Virtually no weight increase is associated with these changes, but the damage reduction is dramatic — from \$534 in repair costs for the 1999 model to \$247 for the 2001 model in the front-into-flat-barrier test and from \$1,131 (1999) to \$407 (2001) in the front-into-angle-barrier test. Overall damage again was reduced by half, from \$1,714 repair costs to \$839.

“This is excellent, exactly what automakers should be doing,” the Institute’s chief operating officer Adrian Lund points out. “Hyundai is designing its bumpers to prevent damage and reduce repair costs after low-speed impacts like the ones that occur so often in commuter traffic and parking lots. The result is that the new Elantra is one of the best low-speed performers among the cars we’ve tested.”

Lexus improves while Ford doesn’t: Lexus also improved the bumpers on the new LS 430 model compared with the predecessor model, the LS 400. Total damage in the Institute’s four tests still tops \$2,700, but this is more than \$1,000 better than for the 1998 LS 400.

In contrast, repair costs are higher for the new Ford Focus compared with the 1997 Ford Escort — \$2,614 damage in all four impacts compared with \$1,893 for the Escort. “The result for the Focus is particularly disappointing for two reasons,” Lund says. “One is that the Focus is a brand new design, so Ford had every opportunity to design the bumpers to do a better job of reducing damage. The other reason is that the predecessor model, the Escort, had an illustrious early history of bumper performance. The 1981 model sustained \$0 damage in the same four tests at 5 mph, the only car to do so. We would have preferred for Ford to go back to this performance level for the bumpers on the Focus instead of equipping the new model with even flimsier bumpers than those on the recent model Escorts it replaces.”

Highest repair costs for Dodge Grand Caravan and Mercedes C 320: The Dodge Grand Caravan and Mercedes C 320, both 2001 models, sustained by far the highest damage repair costs — more than \$4,000 for each vehicle. “A problem with the new Grand Caravan is that the welding of rear body parts failed in the 5 mph rear-into-pole test,” Lund explains.

“This allowed the pole to intrude far into the Grand Caravan’s tailgate, which had to be replaced. If the welding hadn’t failed, the tailgate probably could have been repaired. This would have somewhat lowered the \$2,268 repair total after the pole test, but the damage still would have been extensive.”

Two tests of Civic: Honda requested a repeat test of the Civic in the angle-barrier impact because the company thought the frame damage the Institute identified had occurred before the first test, not because of it. However, the second test verified the first one, producing the same type of damage.

How replacement parts are packaged and sold affects repair costs: Repair costs obviously are influenced by the extent of the damage in the crash tests. Another factor is how manufacturers market the parts necessary to repair the damage, particularly whether those parts are sold separately or packaged together, making it impossible to replace a single specific damaged part. The Dodge Stratus provides a good example. Damage to one section of its rear body panel would have involved replacing the whole panel at a cost of \$275 for the part plus more than 7 hours labor for installation and painting. However, at the Institute’s suggestion the specific segment of the panel that was damaged now is being sold separately from the entire panel. The segment costs only \$23, and it takes only about 4 hours to install and paint — a significant savings.

Likewise for the Mercedes C 320. It used to be that when any part of the headlamp assembly on this car broke, the whole assembly had to be replaced. But now Mercedes has agreed to make a kit available in the U.S. market (the kit previously was available in Europe but not the United States). This kit, which costs only \$15.50, allowed for repair instead of replacement of one of three headlamps broken in the Institute’s frontal impacts. In contrast, replacing the headlamp assembly would have cost \$250 for the part alone.

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 Tuesday, January 30, 1:30-2:00 p.m. EST
(C) Telstar 6/Trans. 8; includes crash test footage, related video

Internet: 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
UPDATES OF CARS PREVIOUSLY TESTED:						
Hyundai Elantra small car						
2001 models	\$247	\$0	\$407	\$185	\$839	\$210
1999 models	\$534	\$41	\$1,131	\$8	\$1,714	\$429
1997 models	\$272	\$401	\$749	\$1,709	\$3,131	\$783
Ford Focus small car						
2000 models	\$31	\$1,137	\$507	\$939	\$2,614	\$654
1997 Escort models	\$267	\$172	\$805	\$649	\$1,893	\$473
Honda Civic small car						
2001 models	\$403	\$447	\$404	\$227	\$1,481	\$370
1997 models	\$60	\$104	\$895	\$511	\$1,570	\$393
Dodge Stratus/Chrysler Cirrus midsize inexpensive car						
2001 Stratus models	\$278	\$174	\$626	\$1,473	\$2,551	\$638
1995 Cirrus models	\$403	\$708	\$288	\$1,554	\$2,953	\$738
Lexus LS 430 large luxury car						
2001 LS 430 models	\$75	\$395	\$1,526	\$765	\$2,761	\$690
1998 LS 400 models	\$708	\$418	\$2,154	\$523	\$3,803	\$951
Dodge Grand Caravan passenger van						
2001 models	\$329	\$822	\$703	\$2,268	\$4,122	\$1,031
1996 models	\$904	\$406	\$1,248	\$1,998	\$4,556	\$1,139
NOT PREVIOUSLY TESTED:						
Mercedes C 320 midsize luxury car						
2001 models	\$463	\$958	\$658	\$2,369	\$4,448	\$1,112

Notes: All repair costs reflect December 2000 prices.

At Honda's request, the front-into-angle-barrier impact was repeated for the Civic. Results were identical (\$404 damage).