

INSURANCE INSTITUTE FOR HIGHWAY SAFETY

NEWS RELEASE

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FRONT AND SIDE CRASH TEST RESULTS: 2 GOOD PERFORMERS AUTOMAKERS ARE ACTING QUICKLY TO IMPROVE SIDE IMPACT PROTECTION

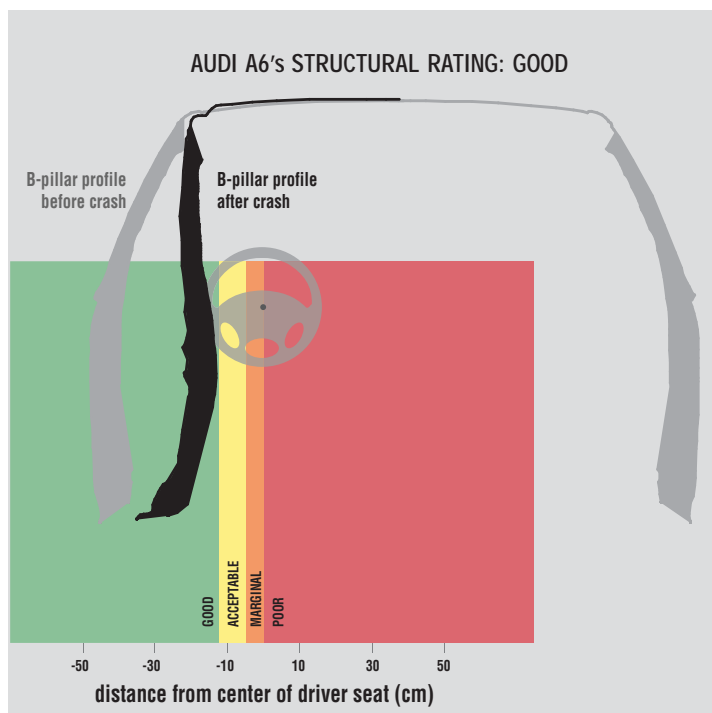
ARLINGTON, VA — Two large luxury cars earned top ratings in both front and side impact crash tests recently conducted by the Insurance Institute for Highway Safety. The 2005 Audi A6 earned good ratings and "best pick" designations for its performance in both tests, making the A6 a "double best pick." The 2006 Infiniti M35 also earned good ratings in both tests and a "best pick" for

crashworthiness in front but not side crashes.

Audi and Infiniti requested the front and side tests of these cars, and the Institute's policy is to grant such requests if a manufacturer provides reimbursement for the cost of the vehicles.

"Audi and Infiniti are ahead of many of their competitors in side impact protection," says Institute chief operating officer Adrian Lund.

"That's why they requested



— MORE —

these early tests. They engineered the new models to do well in both of the Institute's tests, and they want to get the results out more quickly to demonstrate to buyers their cars' state-of-the-art crashworthiness. The A6's 'double best pick' performance, especially, is the kind we hope to see every time we test a vehicle."

Other large luxury cars aren't scheduled for testing until later (see attached list).

Side impact test simulates crash with SUV: These side impact tests are the first the Institute has conducted on large luxury cars. In this crash test, a moving deformable barrier strikes the driver side of a passenger vehicle at 31 mph. The barrier's front end is shaped to simulate the front end of a typical pickup or SUV.

"The Institute's side impact test mimics a real-world crash in which a pickup or SUV runs a red light or stop sign and strikes a vehicle in the side," Lund explains. "It's a challenging test because the top of the side impact barrier, like the hood of an SUV or pickup, is at the same level as the heads of the test dummies in the car."

The frontal crashworthiness rating reflects performance in a 40 mph frontal offset crash test into a deformable barrier. Based on performances in these tests, the Institute assigns ratings of good, acceptable, marginal, or poor. The better performing vehicles among those earning good ratings earn the added designation of "best pick."

Along with another Audi, the A4, the A6 is one of four vehicles that have earned the designation of "double best pick" for exceptional performances in both front and side tests. The other two are the Saab 9-3 and the Toyota RAV4 with optional side airbags.

Side impact performances are improving: When the Institute released the first set of side impact tests in 2003, "there were few good performers," Lund points out. "Automakers are responding very rapidly by designing their new models and re-designing their old ones to earn better ratings in the side test. This is a severe test, so it's to the automakers' credit that they're improving their vehicles so quickly."

A6's frontal performance also improves: In the latest frontal test, the redesigned A6 is much better than its predecessor. When the Institute tested the 1999 model A6, its overall performance in the frontal test was acceptable. Intrusion into the driver's footwell contributed to the possibility of injury to both legs. In contrast, intrusion in the new A6 was minimal. Forces on the left leg indicated the possibility of injury, but otherwise all performance measures were good.

"Even more impressive is the A6's performance across the board in the side impact test," Lund says. "All measures of injury likelihood in the side impact were low. The structural performance was good and so was head protection."

More vehicles have standard side airbags: The A6 is one of an increasing number of cars with standard front and rear curtain-style side airbags designed to protect occupants' heads. Seat-mounted side airbags designed to protect the chest and abdomen also are standard in the front and optional in the rear. In the Institute's side impact test, the heads of the dummies in the front and rear seats were protected from hitting any hard structures, including the test barrier.

M35's performance also is good: This car's overall performances in the front and side crash tests were good. Injury measures generally were low. The M35 has standard side airbags designed to protect the torsos of front-seat occupants. However, in the side impact test injury measures recorded on the driver dummy indicated

the possibility that a person could sustain torso injuries in a real-world crash of similar severity. Plus the structural performance of the M35 was acceptable, not good. These two results kept the M35 from earning a "best pick" in the side impact test.

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







Each vehicle's overall side evaluation is based on injury measures recorded on two instrumented SID-II dummies, assessment of head protection countermeasures, and the vehicle's structural performance during the impact. Injury measures obtained from the two dummies, one in the driver seat and the other in the rear seat behind the driver, are used to determine the likelihood that a driver and/or passenger in a real-world crash would have sustained serious injury to various body regions. The movements and contacts of the dummies' heads during the crash also are evaluated. This assessment is more important for seating positions without head-protecting airbags which, assuming they perform as intended, should prevent injurious head contacts. Structural performance is based on measurements indicating the amount of B-pillar intrusion into the occupant compartment. Some intrusion into the compartment is inevitable in serious side impacts, but any intrusion that does occur should be uniform both horizontally and vertically and shouldn't seriously compromise the driver or passenger space.

End of 4-page news release on latest IIHS crash test results
2-page attachment: front & side ratings of large luxury cars

VNR July 18, 2005 at 10-10:30 am EDT (C) IA 5/Trans. 19;
again 7/18 at 1-1:30 pm EDT (C) IA 5/Trans. 19; in rotation

For more information go to www.iihs.org

ATTACHMENT: CRASHWORTHINESS EVALUATIONS, p.1 of 2

Large luxury cars	FRONT EVALUATION	SIDE EVALUATION	REAR CRASH PROTECTION
<p>NEW FRONT AND SIDE TESTS AUDI A6 SIDE IMPACT TEST CONDUCTED WITH STANDARD FRONT & REAR HEAD CURTAIN AIRBAGS & FRONT SEAT-MOUNTED TORSO AIRBAGS front: 2005 models; test vehicle = 4,109 lbs. side: 2005 models; test vehicle = 4,076 lbs. rear: 2005 models</p>	 G	 G	A
<p>NEW FRONT AND SIDE TESTS INFINITI M35/M45 SIDE IMPACT TEST CONDUCTED WITH STANDARD FRONT & REAR HEAD CURTAIN AIRBAGS & FRONT SEAT-MOUNTED TORSO AIRBAGS front: 2006 models; test vehicle = 3,814 lbs. side: 2006 models; test vehicle = 3,788 lbs.</p>	 G	G	to be tested later in 2005
<p>VOLVO S80 front: 2001-05 models; test vehicle = 3,576 lbs. rear: 2003-05 models</p>	 G	to be tested	G
<p>LINCOLN LS front: 2000-05 models (mfg. after Feb. 2000); test vehicle = 3,818 lbs. rear: 2003-05 models</p>	 G	to be tested	A
<p>BMW 5 SERIES front: 2004-05 models; test vehicle = 3,832 lbs. rear: 2004-05 models</p>	 G	to be tested	A
<p>MERCEDES E CLASS front: 2003-05 models (mfg. after Dec. 2002); test vehicle = 3,942 lbs. rear: 2004-05 models</p>	 G	to be tested	A
<p>INFINITI Q45 front: 2003-05 models; test vehicle = 3,999 lbs. rear: 2005 models</p>	 G	to be tested	M
<p>LEXUS GS front: 2006 models; test vehicle = 3,669 lbs. rear: 2006 models</p>	 G	to be tested	M

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ORDER OF VEHICLES REFLECTS RATINGS IN FRONT, SIDE, AND REAR TESTS
 FOR MORE DETAILED CRASHWORTHINESS EVALUATIONS OF LARGE LUXURY CARS AND EVALUATIONS OF OTHER GROUPS OF VEHICLES, GO TO WWW.IIHS.ORG

FRONTAL RATINGS are based on performance in a 40 mph frontal offset crash test into a deformable barrier. **CAUTION:** Frontal ratings cannot be compared across vehicle type and weight categories because the kinetic energy involved in the frontal test depends on the speed and weight of the test vehicle, and the crash is more severe for heavier vehicles. Given equivalent frontal ratings for heavier and lighter vehicles, the heavier vehicle typically will offer better protection in real-world crashes.

SIDE RATINGS are based on performance in a crash test in which the side of the vehicle is struck by a moving deformable barrier with a front end that represents the front of a typical SUV or pickup. The moving barrier strikes the vehicle at 31 mph in a perpendicular impact. **NOTE:** Side ratings can be compared across vehicle type and weight categories while frontal ratings cannot.

REAR CRASH PROTECTION RATINGS are based on a two-step evaluation. In the first step restraint geometry is rated. Seats with good or acceptable geometric ratings then are subjected to a dynamic test. Seats with head restraints rated marginal or poor, based on geometry, aren't tested because they cannot protect taller occupants.

ATTACHMENT: CRASHWORTHINESS EVALUATIONS, p.2 of 2

Large luxury cars	FRONT EVALUATION	SIDE EVALUATION	REAR CRASH PROTECTION
<p>LEXUS LS 430 front: 2001-05 models; test vehicle = 4,065 lbs. rear: 2001-05 models</p>	 	to be tested	
<p>LINCOLN TOWN CAR front: 2003-05 models (mfg. after May 2003); test vehicle = 4,392 lbs. rear: 2003-05 models</p>		to be tested	
<p>Results also apply to Ford Crown Victoria and Mercury Grand Marquis</p>			
<p>ACURA RL front: 2005 models; test vehicle = 3,999 lbs.</p>	 	to be tested	to be tested later in 2005
<p>CADILLAC CTS front: 2003-05 models (mfg. after Sept. 2002); test vehicle = 3,554 lbs. rear: 2003-05 models</p>	 	to be tested	
<p>BUICK PARK AVENUE front: 1997-2005 models; test vehicle = 3,794 lbs. rear: 2003-05 models</p>	 	to be dropped after 2005 model year	
<p>CADILLAC STS front: 2005 models; test vehicle = 3,909 lbs. rear: 2005 models</p>	 	to be tested	

end of large luxury cars attachment

 GOOD	 MARGINAL
 ACCEPTABLE	 POOR