INSURANCE INSTITUTE
FOR HIGHWAY SAFETY

NEWS RELEASE

May 28, 2002

NEW CRASH TEST RESULTS: 9 MIDSIZE CARS EARN GOOD OVERALL RATINGS

ARLINGTON, VA — In recent frontal offset crash tests of nine new or redesigned 2002 model midsize cars, every car earned the top crashworthiness rating of good. The tested cars include two inexpensive models (Toyota Camry and Nissan Altima), two moderately priced cars (Acura TL and Hyundai XG300/XG350), and five luxury models (Lexus ES 300 and IS 300, Saab 9-5, Volvo S60, and Jaguar X-Type). The two Lexus models plus the Acura TL, Toyota Camry, and Saab 9-5 also earned the "best pick" designation.

The Insurance Institute for Highway Safety's ratings (attached) reflect performance in a 40 mph frontal offset crash test into a deformable barrier. Based on the results of this test, the Institute evaluates the crashworthiness of passenger vehicles, assigning each vehicle a rating of good, acceptable, marginal, or poor.

"This set of results demonstrates the effectiveness of consumer safety information in improving crashworthiness," says Institute president Brian O'Neill. "We started this program with 1995 model year midsize cars. We tested 14 cars, and at that time only 3 were rated good. Now it's becoming unusual for us to test a new vehicle design in any size class and not get a good performance."

O'Neill adds that "the nine cars we tested this time around vary widely in price, but our tests demonstrate that even inexpensive models like the Camry can turn in good performances." The Institute has tested 29 current midsize car designs in 3 price ranges, and 17 of the 29 are rated good overall. Only 3 are poor (for detailed results, go to www.highwaysafety.org; click on "vehicle ratings," and choose a midsize car category).

Structural design is key to good performance: Eight of the nine 2002 models the Institute tested (all except the Hyundai XG300/XG350) earned good ratings for structural performance

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in the offset test. The occupant compartments of these cars held up well, preserving the space around the driver dummy. The Hyundai's structural rating is acceptable.

A vehicle's structural design is key to its crashworthiness performance because the Institute's frontal offset crash test into a deformable barrier is especially demanding of this aspect of vehicle design. The driver side hits the barrier, so a relatively small area of the vehicle's front-end structure must manage the crash energy. This means intrusion into the occupant compartment is much more likely to occur than in a full-width test.

"If a vehicle's front-end structure absorbs and manages the crash energy so the occupant compartment remains largely intact, with little or no intrusion into the driver's space, then the dummy's movement during the crash is likely to be well controlled, and injury measures are likely to be low. In contrast, poor structural design means greater likelihood of poor control of the dummy and high injury measures," O'Neill notes.

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

The federal government has been testing new passenger vehicles in 35 mph full-front crash tests since 1978. This New Car Assessment Program has been a major contributor to crashworthiness improvements —— in particular, improved restraint systems in new passenger vehicles. The Institute's offset tests, conducted since 1995, involve 40 percent of a vehicle's front end hitting a deformable barrier at 40 mph. This test complements the federal test involving the full width of the front end hitting a rigid barrier. Both tests are contributing to improvements in crashworthiness —— in particular improved crumple zones and safety cages.

The same 40 mph offset crash test is used to evaluate new cars by the European Union in cooperation with motor clubs, by an Australian consortium of state governments and motor clubs, and by a government-affiliated organization in Japan.

End 2-page release on vehicle crashworthiness; 4-page attachment
Video news release 5/28/2002, 1-1:30 p.m. EDT, (C)Telstar 6/Trans. 8

Internet: www.highwaysafety.org

Evaluations

Midsize inexpensive cars	OVERALL EVALUATION	Frontal Offset Crash Test Performance: Structure/ Safety Cage	Injury Measures: Head/ Neck	Injury Measures: Chest	Injury Measures: Leg & Foot Left/Right	Restraints/ Dummy Kinematics	Other Evaluations: Head Restraint Design	Other Evaluations: Bumper Performance
best pick **TOYOTA CAMRY** 2002 models test vehicle wt. = 3,276 lbs. NEWLY TESTED	G	G	G	G	G A	G	G or A depending on vehicle seat	A
best pick **SUBARU LEGACY** 2000-02 models test vehicle wt. = 3,298 lbs.	G	G	G	G	G A	G	A	A
NISSAN ALTIMA 2002 models avg. test vehicle wt. = 3,150 lbs. NEWLY TESTED	G	G	G	G	A G	A	A or M depending on vehicle seat	M
DODGE STRATUS **CHRYSLER SEBRING** 2001-02 models test vehicle wt. = 3,252 lbs.	G	A	G	G	G M	G	G to P depending on vehicle seat	M
MAZDA 626 2000-02 models test vehicle wt. = 2,866 lbs.	G	A	A	G	G G	G	P	A
MITSUBISHI GALANT 1999-2002 models test vehicle wt. = 3,069 lbs.	A	A	G	G	G A	A	M	A
HONDA ACCORD 1998-2002 models test vehicle wt. = 3,047 lbs.	A	A	G	G	G P	G	A or M depending on vehicle seat	A
SATURN L SERIES 2000-02 models test vehicle wt. = 3,192 lbs.	A	A	G	G	G P	A	P	G
CHEVROLET MALIBU 1997-2002 models test vehicle wt. = 3,058 lbs. **OLDSMOBILE CUTLASS** 1997-99 models	A	A	G	G	G A	P	M or P depending on vehicle seat	M
HYUNDAI SONATA 1999-2002 models test vehicle wt. = 3,131 lbs. **KIA OPTIMA** 2001-02 models	A	M	G	G	A M	G	A	M

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More crashworthiness evaluations of inexpensive midsize cars ▶

Evaluations

Midsize inexpensive cars (continued)

	OVERALL EVALUATION	Frontal Offset Crash Test Performance: Structure/ Safety Cage	Injury Measures: Head/ Neck	Injury Measures: Chest	Injury Measures: Leg & Foot Left/Right	Restraints/ Dummy Kinematics	Other Evaluations: Head Restraint Design	Other Evaluations: Bumper Performance
PONTIAC GRAND AM OLDSMOBILE ALERO 1999-2002 models test vehicle wt. = 3,080 lbs.	P	M	A	G	G M	P	A or M depending on vehicle seat	M
CHEVROLET CAVALIER PONTIAC SUNFIRE 1995-2002 models test vehicle wt. = 2,716 lbs.	P	P	A	G	P G	P	P	A
DAEWOO LEGANZA 1999-2002 models test vehicle wt. = 3,192 lbs.	P	P	A	G	P A	P	A	M
Crashworthiness evaluations of earlier designs:								
best pick **TOYOTA CAMRY** 1997-2001 models test vehicle wt. = 3,128 lbs.	G	G	A	G	G G	G	M	G
MAZDA 626 1998-99 models test vehicle wt. = 2,866 lbs.	A	A	A	G	G G	G	P	A
TOYOTA CAMRY 1994-96 models test vehicle wt. = 3,056 lbs.	A	A	A	G	A G	G	M	M
SUBARU LEGACY 1995-99 models test vehicle wt. = 2,818 lbs.	A	A	G	G	P G	G	M	A
HONDA ACCORD 1994-97 models test vehicle wt. = 2,897 lbs.	A	A	G	G	P A	G	M or P depending on vehicle seat	A
NISSAN ALTIMA 2000-01 models test vehicle wt. = 3,025 lbs.	A	M	G	G	M A	M	P	A
FORD CONTOUR MERCURY MYSTIQUE 1995-2000 models test vehicle wt. = 2,851 lbs.	P	M	G	G	P P	G	M or P depending on vehicle seat	P
HYUNDAI SONATA 1995-98 models test vehicle wt. = 2,954 lbs.	P	P	G	G	P G	M	P	P
MITSUBISHI GALANT 1994-98 models test vehicle wt. = 2,912 lbs.	P	P	G	G	P A	P	A	P
CHRYSLER CIRRUS DODGE STRATUS 1995-2000 models test vehicle wt. = 3,131 lbs. **PLYMOUTH BREEZE** 1996-2000 models	P	P	G	G	P P	M	M or P depending on vehicle seat	M

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Evaluations

Midsize moderately priced cars	OVERALL EVALUATION	Frontal Offset Crash Test Performance: Structure/ Safety Cage	Injury Measures: Head/ Neck	Injury Measures: Chest	Injury Measures: Leg & Foot Left	Injury Measures: Leg & Foot Right	Restraints/ Dummy Kinematics	Other Evaluations: Head Restraint Design	Other Evaluations: Bumper Performance
best pick **TOYOTA AVALON** 2000-02 models test vehicle wt. = 3,468 lbs.	G	G	G	G	G	G	G	A	A
best pick **VOLKSWAGEN PASSAT** 1998-2002 models test vehicle wt. = 3,170 lbs.	G	G	G	G	G	G	A	M	G
best pick **ACURA TL** 1999-2002 models test vehicle wt. = 3,475 lbs. NEWLY TESTED	G	G	G	G	G	A	G	P	M
HYUNDAI XG300/XG350 2001-02 models test vehicle wt. = 3,739 lbs. NEWLY TESTED	G	A	G	G	G	A	G	A	P
SAAB 9-3 1999 (mfg. after 12/98)-2002 models test vehicle wt. = 3,137 lbs.	A	A	A	G	G	A	M	G	A
MAZDA MILLENIA 1995-2002 models test vehicle wt. = 3,183 lbs.	A	M	G	G	P	G	G	M	M
NISSAN MAXIMA **INFINITI I30/I35** 2000 (mfg. after 11/99)-02 models test vehicle wt. = 3,220 lbs.	A	A	G	G	P	P	G	G	M
Crashworthiness evaluations of earlier designs:									
best pick **VOLVO 850/S70** 1993-2000 models test vehicle wt. = 3,131 lbs.	G	A	G	G	G	G	G	G	M
NISSAN MAXIMA **INFINITI I30** 1997-99 models test vehicle wt. = 3,104 lbs.	A	A	G	G	M	A	A	A or M depending on vehicle seat	G
TOYOTA AVALON 1998-99 models test vehicle wt. = 3,404 lbs.	A	A	G	G	P	G	A	A or P depending on vehicle seat	A
TOYOTA AVALON 1995-97 models test vehicle wt. = 3,225 lbs.	M	M	G	G	P	A	G	P	P
SAAB 900 1995-98 models test vehicle wt. = 3,020 lbs.	M	P	G	G	G	A	M	A	A
VOLKSWAGEN PASSAT 1995-97 models test vehicle wt. = 3,131 lbs.	P	M	G	G	P	G	P	P	M
NISSAN MAXIMA 1995-96 models test vehicle wt. = 3,012 lbs. **INFINITI I30** 1996 models	P	A	M	G	P	P	P	M	P

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Evaluations

Midsize luxury cars	Overall Evaluation	Frontal Offset Crash Test Performance: Structure/ Safety Cage	Injury Measures: Head/ Neck	Injury Measures: Chest	Injury Measures: Leg & Foot Left/Right	Restraints/ Dummy Kinematics	Other Evaluations: Head Restraint Design	Other Evaluations: Bumper Performance
best pick **MERCEDES C CLASS** 2001-02 models test vehicle wt. = 3,395 lbs.	G	G	G	G	G G	G	G	P
best pick **VOLVO S80** 2001-02 models test vehicle wt. = 3,576 lbs.	G	G	G	G	G G	G	G	P
best pick **LEXUS ES 300** 2002 models test vehicle wt. = 3,461 lbs. NEWLY TESTED	G	G	G	G	G G	G	A	A
best pick **LEXUS IS 300** 2002 models test vehicle wt. = 3,395 lbs. NEWLY TESTED	G	G	G	G	G G	A	G	P
best pick **SAAB 9-5** 2002 models (mfg. after 11/01) test vehicle wt. = 3,602 lbs. NEWLY TESTED	G	G	G	G	G A	G	G	P
best pick **BMW 3 SERIES** 2000 (mfg. after 11/99)-02 models test vehicle wt. = 3,347 lbs.	G	G	G	G	G G	A	A	M
VOLVO S60 2001-02 models test vehicle wt. = 3,422 lbs. NEWLY TESTED	G	G	G	G	A A	G	G	P
JAGUAR X-TYPE 2002 models (mfg. after 12/01) test vehicle wt. = 3,598 lbs. NEWLY TESTED	G	G	G	G	A G	A	A or M depending on vehicle seat	P
AUDI A6 1998-2002 models test vehicle wt. = 3,766 lbs.	A	A	G	G	M M	A	G	A
Crashworthiness evaluations of earlier designs:								
VOLVO S80 2000 models test vehicle wt. = 3,576 lbs.	G	G	G	G	G G	M	G	P
CADILLAC CATERA 1997-2001 models test vehicle wt. = 3,847 lbs.	G	A	G	G	G G	A	A	P
SAAB 9-5 1999-2001 models test vehicle wt. = 3,527 lbs.	A	A	G	G	G P	G	G	M

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