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NEWS RELEASE

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BUMPERS ON 4 OF 6 MIDSIZE SEDANS IMPROVE; NONE EARNS GOOD RATING IN LOW-SPEED TESTS

ARLINGTON, VA — Bumpers on 2009 models of the Honda Accord, Hyundai Sonata, Mazda 6, and Nissan Maxima performed better than their 2007 predecessors in low-speed crash tests conducted by the Insurance Institute for Highway Safety. Bumpers on the 2009 Chevrolet Malibu and 2010 Ford Fusion did worse than earlier models. None of the 6 popular midsize sedans earns the top rating of good in a recent series of tests designed to assess and compare how well bumpers resist damage in everyday fender-benders. The Mazda 6 improves to acceptable from marginal, with an average repair cost of less than $900 after 4 tests at 3 and 6 mph. The Accord and Sonata improve to marginal from poor. The Fusion slips to poor from marginal, and the Maxima and Malibu remain poor.

Bumper performance in low-speed crash tests:
MIDSIZE CAR RATINGS AND REPAIR COSTS

		Front full	Front corner	Rear full	Rear corner	WEIGHTED AVERAGE
MAZDA 6	A	$742	$1,437	$768	$767	$871
HONDA ACCORD	M	$941	$1,461	$974	$1,507	$1,133
HYUNDAI SONATA	M	$1,791	$1,019	$1,131	$729	$1,265
NISSAN MAXIMA	P	$997	$1,787	$2,494	$1,352	$1,687
FORD FUSION	P	$2,529	$1,889	$2,610	$1,073	$2,207
CHEVROLET MALIBU	P	$2,092	$1,685	$3,494	$1,116	$2,329

GOOD G
ACCEPTABLE A
MARGINAL M
POOR P

"Consumers buy midsize cars for practical reasons. There's nothing practical about a $1,000-plus repair bill after a minor bump in commuter traffic," says Joe Nolan, Institute senior vice president.

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This is the second group of vehicles the Institute has evaluated under a new bumper ratings protocol based on repair costs averaged and weighted to reflect real-world damage patterns and insurance claims frequency. The Institute rates bumpers good, acceptable, marginal, or poor based on performance in 4 tests — front and rear full-width impacts at 6 mph and front and rear corner impacts at 3 mph. Each vehicle is run into a steel barrier designed to mimic the design of a car bumper, with the barrier's plastic absorber and flexible cover simulating typical cars' energy absorbers and plastic bumper covers. These tests are designed to drive bumper improvements that lead to better damage resistance in a range of real-world crashes.

"Although midsize car bumpers still allow way too much damage in minor impacts, it's encouraging that some manufacturers are designing better ones," Nolan says. He points out that the front and rear bumpers of the 2009 Mazda 6 are wider, taller, and higher off the ground than the 2007 model. The Mazda 6 is only the fourth car tested under the new protocol to earn an acceptable rating for its bumpers. The others are the Ford Focus, Scion xB, and Smart Fortwo.

"Mazda is trying to protect buyers' pocketbooks while many other carmakers are letting them take a big hit in low-speed crashes," Nolan says.

Mazda, Honda, Nissan, and Hyundai improved the bumpers on their 2009 midsize cars so the bumpers would better resist front underride, which exacerbates collision damage. Bumpers have to be tall enough to engage, and to stay engaged, with the bumpers on other vehicles in collisions, even during emergency braking, or they'll bypass each other when the vehicles collide. Preventing override and underride means crash energy is absorbed by bumpers instead of pricey vehicle parts such as hoods, grilles, and fenders, or safety gear such as headlights and taillights.

The 2009 Accord, for example, has sharply lower repair costs in the full front and full rear tests, compared with the 2007 model, because its bumpers are higher than the previous version, plus the front bumper's reinforcement bar now is bolstered with metal pieces that extend upward from the bar to prevent underride. The changes helped the Accord earn a marginal rating instead

of poor, but another change held back the car's overall performance. The 2009 Accord's bumpers aren't as wide as the 2007 model's, resulting in higher repair costs in both the front and rear corner tests.

Weaker bumpers mean bigger repair bills: Ford and General Motors made design changes that increased repair costs for the 2010 Fusion and 2009 Malibu over repair estimates for 2007 models.

"Ford fit the Fusion's front and rear with weaker bumper beams, and this had a big effect on the test performance," Nolan explains. The difference is easy to see in the 6 mph full rear test, which simulates a common parking mishap like backing into another vehicle. The Fusion's bumper buckled, which caused it to underride the test barrier, resulting in twice as much damage as the 2007 model in the rear test. In the full front test, the Fusion had $2,529 in damage, more than any other vehicle.

GM raised the Malibu's rear bumper so it's higher than on the earlier model, but it's still the lowest among recently tested bumpers. In the full rear test, the bumper underrode the barrier, resulting in almost $3,500 in damage, the highest among the midsize cars evaluated. GM lowered the front bumper, which didn't help in the full front test. Damage totaled $2,092, partly because the Malibu's front grille overlays the center of the bumper. The result is that the grille, Chevy emblem, and decorative chromed plastic trim get hit before the bumper does in this test.

"Essentially you have to go through them to get to the bumper," Nolan says. "Replacing just the front grille and emblem cost more than $625."

Ford and GM, along with other automakers who sell the same vehicles in both the US and Canadian markets, no longer have to meet a tougher Canadian bumper standard. The Canadian government last year weakened bumper rules to match US regulations, which require only minimal protection. The previous Canadian standard required bumpers to prevent damage to vehicle safety equipment such as headlights in 5 mph impacts. Under the new rules, full front and rear tests are run at 2.5 mph and corner tests are run at 1.5 mph.

How 10 other sedans rate: The designs of 10 other midsize cars haven't changed since their bumpers last were tested in the 2007 model year (see attached ratings). Performance in those tests earns the Mitsubishi Galant and Toyota Camry marginal ratings. The Chrysler Sebring, Nissan Altima, Pontiac G6, Saturn AURA, Subaru Legacy, Volkswagen Jetta, Volkswagen Passat, and Volvo S40 earn poor ratings.

Besides the amount of damage sustained in a low-speed impact, repair costs are influenced by both the price of replacement parts and the complexity of repairs. The Volvo S40's poor rating reflects recent increases in parts and labor costs. At $335 the S40's rear reinforcement bar has nearly tripled in price since 2006, while the front bar now sells for $311, up from $195 in 2006.

How they're rated: Bumpers are evaluated under a ratings protocol based on repair costs averaged and weighted to reflect real-world damage patterns. These averaged and weighted repair costs determine each vehicle's overall rating of good, acceptable, marginal, or poor in 4 bumper tests representing full-width and corner crashes at low speeds. Weighted average repairs must be less than $500 for a good rating, less than $1,000 for acceptable, and less than $1,500 for marginal. Repairs of $1,500 or more earn bumpers a poor rating.

Both the full front and rear test results are given double the weight of the corner test results because in the real world full-width impacts occur roughly twice as often as corner impacts. The weighted average of the repair costs determines the overall rating. No vehicle can earn a good or acceptable rating if it's unsafe to drive afterward or can't be driven at all because of headlight or taillight damage, severely buckled hoods, or a compromised engine cooling system.

End 4-page news release on midsize car low-speed bumper tests

For more information go to www.iihs.org

Bumper performance in low-speed crash tests:
MIDSIZE CAR RATINGS AND REPAIR COSTS

		Front full	Front corner	Rear full	Rear corner	WEIGHTED AVERAGE
MAZDA 6 2009	A	$742	$1,437	$768	$767	$871
MITSUBISHI GALANT 2004-09	M	$969	$1,109	$990	$1,185	$1,035
HONDA ACCORD 2009	M	$941	$1,461	$974	$1,507	$1,133
HYUNDAI SONATA 2009	M	$1,791	$1,019	$1,131	$729	$1,265
TOYOTA CAMRY 2007-09	M	$1,041	$1,670	$1,612	$1,127	$1,351
NISSAN MAXIMA 2009	P	$997	$1,787	$2,494	$1,352	$1,687
VOLVO S40 2004-09	P	$2,776	$1,446	$1,065	$1,335	$1,744
NISSAN ALTIMA 2007-09	P	$922	$1,090	$3,309	$1,567	$1,853
SATURN AURA 2007-09	P	$1,201	$1,235	$3,556	$1,091	$1,973
SUBARU LEGACY 2005-09	P	$4,049	$1,275	$1,169	$1,233	$2,157
FORD FUSION 2010	P	$2,529	$1,889	$2,610	$1,073	$2,207
CHRYSLER SEBRING 2007-09	P	$1,393	$2,484	$3,329	$1,346	$2,212
CHEVROLET MALIBU 2009	P	$2,092	$1,685	$3,494	$1,116	$2,329
VOLKSWAGEN PASSAT 2006-09	P	$5,252	$1,783	$1,149	$1,333	$2,653
VOLKSWAGEN JETTA 2005-09	P	$3,033	$1,525	$3,992	$1,959	$2,922
PONTIAC G6 2005-09	P	$5,301	$1,361	$1,913	$1,801	$2,932

GOOD G
ACCEPTABLE A
MARGINAL M
POOR P