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# INSURANCE INSTITUTE FOR HIGHWAY SAFETY

## NEWS RELEASE

April 10, 2005

### **FRONTAL CRASH TEST RESULTS: NEW MINIVAN FROM GM SHOWS DRAMATIC IMPROVEMENT AND THREE SMALL PICKUPS EARN GOOD FRONTAL RATINGS**

ARLINGTON, VA — Two new minivans and three small pickup trucks with extended cabs earned the top rating of good in frontal offset crash tests conducted recently by the Insurance Institute for Highway Safety. The Honda Odyssey and Chevrolet Uplander minivans, both new designs for the 2005 model year, are rated good. The Odyssey earned the added designation of "best pick" for frontal crash protection.

Among small pickups the Toyota Tacoma, Nissan Frontier, and Chevrolet Colorado earned good ratings. The Tacoma also is a "best pick" in the frontal test. The Dodge Dakota and Ford Ranger pickups are rated acceptable.

The ratings reflect performance in a 40 mph frontal offset crash test into a deformable barrier. Based on the results, the Institute evaluates the crash-worthiness of passenger vehicles, assigning each vehicle a rating from good overall to poor. The better performers among the vehicles rated good earn the added designation of "best pick." If a vehicle earns a good rating, it means that in a real-world crash of similar severity a belted driver most likely would be able to walk away with only minor injuries.

**Uplander is dramatic improvement compared with earlier minivans from General Motors:** The Uplander (also sold as the Pontiac Montana SV6, Saturn Relay, and Buick Terraza) replaces a minivan design that was sold until this year as the Chevrolet Venture and Pontiac Trans Sport/Montana and until 2004 as the Oldsmobile Silhouette. The

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earlier minivan design was one of the worst performing vehicles in the Institute's frontal crash test.

"When the Institute tested the 1997 Pontiac Trans Sport, there was massive collapse of the occupant compartment," says Institute chief operating officer Adrian Lund. "Major intrusion into the driver's survival space pushed the steering wheel toward the dummy and violently snapped the dummy's head backward. Deformation of the area near the driver's feet was so great that the dummy's metal foot broke off."

If the occupant compartment collapses in a crash, the safety belts and airbag cannot do a good job of protecting the driver. The risk of serious injury is high.

"In contrast, the Uplander performed very well in this test," Lund says. "The occupant compartment stayed intact, so the driver's survival space was well maintained. The dummy's movement was controlled reasonably well. There were high head accelerations when its head hit the steering wheel through the airbag and then struck the pillar between the doors. This means the Uplander's performance wasn't good enough to earn a 'best pick.' Still it's a huge improvement compared with GM's previous minivan design."

Five current minivan designs now earn good ratings in the Institute's frontal offset test: Odyssey, Uplander, Toyota Sienna, Ford Freestar/Mercury Monterey (twins), and the Nissan Quest.

Later this year the Institute will conduct side impact crash tests of minivans.

**Small pickups are getting better:** The newly tested small pickups all have extended cabs, which have become the norm for this class. None of the previous small pickups with regular cabs earned a good rating in the Institute's frontal offset test, but now three small pickup designs earned good ratings based on this test.

"Every small pickup that recently has been redesigned performed better than its predecessor model," Lund points out.

The Tacoma went from acceptable to good and earned the "best pick" designation. The Frontier improved from marginal to good. So did the Chevrolet Colorado compared with its predecessor S-10. The Dodge Dakota improved from poor to acceptable.

"The manufacturers are paying attention to these tests and making improvements in how small pickups protect people in serious frontal crashes," Lund says.

**Institute and government crash tests complement each other:** The Institute's 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 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 restraint system controlled dummy movement during the test.

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 4-page news release on frontal crash test results  
2-page attachment: evaluations of minivans & pickups**

**VNR 4/11/2005 at 10-10:30 am EDT (C) IA 5/Trans. 19  
and 4/11 at 1-1:30 pm EDT (C) IA 5/Trans. 19; in rotation**

**For more information go to [www.iihs.org](http://www.iihs.org)**

## ATTACHMENT: CRASHWORTHINESS EVALUATIONS

		Frontal Offset Crash Test Performance						
		OVERALL EVALUATION	Structure/ Safety Cage	Injury Measures			Restraints/ Dummy Kinematics	
				Head/ Neck	Chest	Leg/Foot Left, Right		
<b>Passenger vans</b>								
BEST PICK frontal	<b>TOYOTA SIENNA</b> 2004-05 models test vehicle = 4,170 lbs. (avg.)	G	G	G	G	G	G	G
	NEWLY TESTED	BEST PICK frontal	<b>HONDA ODYSSEY</b> 2005 models test vehicle = 4,365 lbs.	G	G	G	G	G
	<b>FORD FREESTAR MERCURY MONTEREY</b> 2004-05 models test vehicle = 4,251 lbs.		G	G	A	G	G	G
NEWLY TESTED	<b>CHEVROLET UPLANDER PONTIAC MONTANA SV6 SATURN RELAY BUICK TERRAZA</b> 2005 models test vehicle = 4,184 lbs.	G	G	A	G	G	G	A
	<b>NISSAN QUEST</b> 2004-05 models test vehicle = 4,233 lbs.	G	G	A	G	G	G	A
	<b>KIA SEDONA</b> 2002-05 models (mfg. after March 2002) test vehicle = 4,665 lbs.	A	A	A	G	G	G	M
	<b>MAZDA MPV</b> 2000-05 models test vehicle = 3,657 lbs.	A	A	A	G	G	P	G
	<b>DODGE GRAND CARAVAN CHRYSLER TOWN &amp; COUNTRY</b> 2002-05 models test vehicle = 4,224 lbs. (avg.)	A	A	A	G	A	P	G
	<b>CHEVROLET ASTRO/GMC SAFARI</b> 1996-2005 models test vehicle = 4,350 lbs.	P	P	G	G	P	G	M
	<b>PONTIAC TRANS SPORT/MONTANA CHEVROLET VENTURE</b> 1997-2005 models test vehicle = 3,783 lbs.	P	P	P	G	P	P	M

**G** GOOD      **A** ACCEPTABLE      **M** MARGINAL      **P** POOR

**Caution: Frontal crash test ratings cannot be compared across vehicle type and weight categories.** This is 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.

## ATTACHMENT: CRASHWORTHINESS EVALUATIONS

Small pickup trucks extended cab models		Frontal Offset Crash Test Performance							
		OVERALL EVALUATION	Structure/ Safety Cage	Injury Measures			Restraints/ Dummy Kinematics		
				Head/ Neck	Chest	Leg/Foot Left, Right			
NEWLY TESTED	<b>BEST PICK frontal</b>	<b>TOYOTA TACOMA</b> 2005 models test vehicle = 3,757 lbs.	G	G	A	G	G	G	G
NEWLY TESTED		<b>NISSAN FRONTIER</b> 2005 models test vehicle = 4,103 lbs.	G	G	G	G	A	A	G
NEWLY TESTED		<b>CHEVROLET COLORADO GMC CANYON</b> 2004-05 models test vehicle = 3,631 lbs.	G	G	G	G	A	A	A
NEWLY TESTED		<b>DODGE DAKOTA</b> 2005 models test vehicle = 4,255 lbs.	A	G	G	G	P	A	G
NEWLY TESTED		<b>FORD RANGER MAZDA B SERIES</b> 1999-2005 models test vehicle = 3,541 lbs.	A	A	G	G	A	M	M

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