

IIHS Low-Speed Crash Test

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INSURANCE INSTITUTE
FOR HIGHWAY SAFETY

Low-speed crash test

Goals of new program

General:

- ◆ Reduce the real-world property damage costs associated with low-speed crashes by promoting stability, compatibility and energy absorption

Front tests:

- ◆ Encourage taller and more stable front bumpers to prevent front underride
- ◆ Encourage wider bumpers to protect corners

Rear tests:

- ◆ Protect against SUV override and car underride
- ◆ Encourage wider bumpers to protect corners

IIHS will conduct first public test program in fall 2006

- ◆ 2006 program will evaluate bumpers on cars
- ◆ 2006 program will involve four tests of each car
- ◆ Will continue to monitor RCAR working group and may alter procedures in the future

Low-speed crash test

Fall 2006 program

- ◆ Evaluation consists of four tests:
 - Full front, full rear, front corner, rear corner
- ◆ Tests conducted into contoured bumper-like barrier with an energy absorbing element
 - Assembly drawings of the barrier and the absorber can be found on IIHS website:
www.iihs.org/ratings/protocols/pdf/iihs_rcar_barrier.pdf
 - Rigid steel backstop (mounted to barrier)
 - 25 mm rearward of barrier face
 - 200 mm tall
 - 340 cm radius to match the radius of the steel bumper barrier
- ◆ Public information will include damage costs and a rating (good, acceptable, marginal or poor)
 - Rating procedures to be determined



Full Frontal Test

Test Configuration

- ◆ Barrier height:
 - 457 mm from the ground to the lower edge of the barrier
- ◆ Speed: 10 km/h



Front Corner Test

Test Configuration

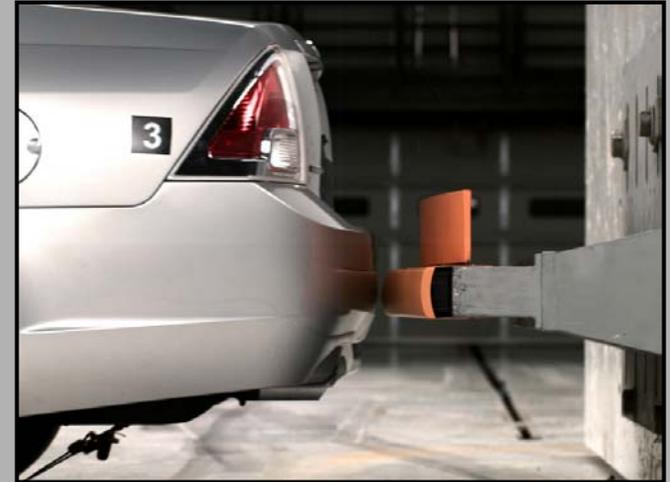
- ◆ Barrier height:
 - 406 mm from the ground to the lower edge of the barrier
- ◆ Speed: 5 km/h
- ◆ Overlap: 15%
 - Based on vehicle width at the front axle (excluding exterior mirrors, flexible mud flaps and marker lights – SAE J1100)



Full Rear Test

Test Configuration

- ◆ Barrier height:
 - 457 mm from the ground to the lower edge of the barrier
- ◆ Speed: 10 km/h



Rear Corner Test

Test Configuration

- ◆ Barrier height:
 - 406 mm from the ground to the lower edge of the barrier
- ◆ Speed: 5 km/h
- ◆ Overlap: 15%
 - Based on vehicle width at the rear axle (excluding exterior mirrors, flexible mud flaps and marker lights – SAE J1100)



Low-speed crash test

Vehicle Preparation

- ◆ Tires are inflated to the manufacturer recommended inflation for lightly loaded condition
- ◆ Fuel tank is filled to at least 90% of capacity
- ◆ All other fluid reservoirs are filled to at least their minimum indicated levels
- ◆ Front and rear license plates and brackets are removed along with all fasteners
- ◆ Bolt-on trailer hitches that are optional equipment are removed but fasteners are reattached, if possible
- ◆ All lights, wipers, climate control and sound systems are turned off except daytime running lights
- ◆ Ballast weight of 77.1 kg is added to the driver seat
- ◆ The ignition switch is turned on but the engine is not started
- ◆ The transmission is placed in the neutral position and the parking brake is fully released