**DRIVEN TO DESTRUCTION**

Dummies who don’t wear seat belts can experience accelerations of several thousand g’s before hitting the windshield. Ouch.

How do you know that the car sitting in your driveway right now isn’t a deathtrap on four wheels? Thank some dummies in the government — crash-test dummies. Since 1978, the National Highway Traffic Safety Administration (NHTSA) has husked and crashed car after car in order to provide consumers with comprehensive crash test information. All of this is made possible by the Hybrid III family of dummies and their relatives. So the next time your passengers complain that you drive like a dummy, just say you’re doing your part for safety. They’ll understand.

**Got your back**

Of course, known as the Biological Dummy Impactor, or BDII, the Hybrid III family of dummies was developed in Sweden in 1979 specifically for studying the effects of low-speed impacts such as those found on the Hybrid III dummy. BDII is equipped with a skin that is made of silicone that is designed to resemble the soft tissue of a human spine.

A need for speed

Strain gauges located throughout the dummy measure acceleration. The protective outer layer and inner core of this inertial accelerometer is made from three layers of silicon.

Crash into me

There are two kinds of frontal-crash tests: full-width, frontal-impact and frontal offset. Full-width tests are great for testing the effectiveness of safety restraints because the occupant compartment or safety cage is not tested. In frontal-offset tests, the safety cage is often smashed open, testing the strength of a car’s structure. Right now, the NHTSA only uses full-width, frontal-impact testing.

You big dummy

Meet America’s favorite dummy, the 50th percentile male Hybrid III. At 5 feet 10 inches tall and 170 pounds, he represents the average driver on the road. Crash testers subject him to all manners of punishment in order to give you a safer ride. But being a dummy doesn’t mean he’s cheap — a fully instrumented Hybrid III costs approximately $160,000.

Blue greasepaint is used to mark the dummy’s face. After the crash, testers can see where the face hit the airbag or the dashboard by using a red greasepaint.

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**Get your vehicle’s crash test rating at:** www.nhtsa.dot.gov/cars/testing/ncap

**Full-width**

In a full-width, frontal-impact test, the primary test used by the NHTSA, the entire front of this vehicle hits a concrete barrier at 35 mph. Safety cage remains intact; good for testing seat belts and airbags.

**Frontal offset**

In a frontal offset crash test, the car is accelerated along a pulley track into a barrier on the driver’s side. The offset impact causes the front end to crumple unevenly, greatly increasing the risk of damage to the safety cage.

**Standard crash speed: 35 miles per hour**

**Meet the family**

Just like the families they protect, the Hybrids are a diverse group. Although the 50th percentile male is the most common, different dummies are needed for different tests. A new addition, a 4-foot-10-inch, 75-pound 10-year-old child, is on the way.

**Car maintenance**

The make and model of your car, along with how you drive it and the climate are all factors that affect basic car maintenance. For maintenance needs specific to your car, consult your owner’s manual.

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