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## IIHS ADDS A NEW SAFETY TEST TO PROTECT PASSENGERS



The Insurance Institute for Highway Safety, or IIHS, exists to reduce fatalities and property damage that results from motor vehicle accidents. This organization is an independent non-profit that was founded in 1959. Today, this highly esteemed group awards yearly “Top Safety Pick” rankings to vehicles that perform well in all tests. We owe a lot to IIHS for holding automobile manufacturers to a higher standard, and helping to keep us safe on the road!

Since 2012, IIHS has conducted a test on vehicles that simulates what would happen if the driver side of the vehicle struck a wall at 40mph. The test is designed to show what happens to the driver if the vehicle is involved in a collision at an angle. This test is called the driver-side small overlap frontal test, and has resulted in many vehicle manufacturers stepping up their driver’s side safety by improving vehicle structure and airbag function.

Unfortunately, there has been a noticeable oversight in recent years; manufacturers have been improving driver-side safety specifically to score higher ratings in these tests, and have neglected to also strengthen the passenger side under similar accident conditions. As a result, IIHS is introducing a new test for its 2017 rankings. The passenger-side small overlap frontal test will hold automakers to the same standards as the driver’s side test, except on the opposite side of the vehicle. Also, instead of just one dummy in the vehicle, there are both driver and passenger test dummies present.

Realistically, this new test makes perfect sense – passengers should be protected just as well as the driver in case of accident. Although preliminary reports don’t show any major structural concerns on the vehicles tested, they do show that passenger-side airbags as well as safety belts need to be optimized for better head protection for passengers. For example, of the 9 vehicles that were part of a set of initial tests, only two earned a rating of “Good” – four received “Acceptable,” two were “Marginal,” and one was “Poor.”

It’s great that IIHS is taking steps to keep both drivers and passengers safe and sound while continuing to develop better tests to raise the standards of our manufacturers.

**A ROAD TO SAFETY**  
**EVOLUTION OF CAR SAFETY FEATURES**

Since the introduction of the first automobile in the late 1800s, car manufacturers have been constantly working on new techniques and technologies to improve the safety and comfort of their cars.

- 1800s**: Electric headlamp - Optional extra on Columbia Electric Car in US
- 1900s**: Windscreen Wipers - First hand operated windscreen wipers (1903); Electric windscreen wipers created by Bosch (1926); Rain sensing wipers introduced by Cadillac (1996)
- 1930s**: Safety glass - Became standard on all Ford cars (1930)
- 1940s**: First crash test dummy - "Sera Sam" created by Samuel W. Alderson (1949)
- 1950s**: Airbags - Motor Linkage gas Capstan patent for airbag, released by bumper contact or by the driver (1951); Crumple zone - Concept invented by John Baren and patented by General Motors for the Pontiac (1952); Anti-lock braking systems (ABS) - Tested in the Real-World Super Motor motorcycle (1958); 3 Point Seat Belts - Volvo 122 first to fit 3 point seatbelts as standard (1959)
- 1980s**: 1995: Traction control went electric - First electronic stability control system by Bosch on the Mercedes-Benz W 140 S-Class (1995); Traction Control - Mercedes-Benz and BMW introduced first systems (1987)
- 1990s**: Brake Assist - Mercedes invent the brake assist system because even with quick reaction people still don't apply enough pressure to the brake pedal (1996); First Blind spot warning system on the Volvo S80 sedan (1998)
- 2000s**: 2011: Mercedes becomes the first car for safety from 1 March 2012 (2011); DARPA (2005); Google wins the DARPA Grand Challenge for their driverless car concept (2005); First lane departure warning systems introduced in Europe for Mercedes Actros trucks (2000)
- 2010s**: Volvo develops a pedestrian detection system that automatically brakes a car to a halt whenever someone steps out in front of it (2010); The Volvo V40 with pedestrian airbag has now gone on sale (2010)

**THE ROAD AHEAD**

- SELF DRIVING CARS**: Google continues to lobby for driverless car laws and develop their self-driving technology along with accessories such as Audi and Lexus.
- VEHICLE TO VEHICLE COMMUNICATION**: Could warn the driver of an occurring car when they're likely to pass a vehicle or when the car is from a busy to brake suddenly.

## WHAT OTHERS SAY: READ OUR REVIEWS!

**Erica S.**  
10/31/17



As always, GREAT, fast efficient service! I dropped off my car and my rental was ready. I received updates throughout the process and am very pleased with the repairs. Quality work every time! Thanks Art and Ron!

**Bonnie C.**  
8/12/17



Great experience! Very professional and friendly as well as doing a fantastic job fixing my car. If I need a body shop again I will definitely go to Tom's.

**Margarito j. M.**  
6/23/17



Satisfied with the work. Efficient and helpful, all done in a timely manner. I would recommend to others. I felt they were honest and their charges for the work were reasonable.

**Kay M.**  
6/13/17



Best service ever! My car looks like new, inside and out, thanks to the expert services of Ron, Art and Tom. I would recommend Tom's Auto Body to anyone looking for excellent body work and great customer service in a friendly environment. It was the best experience...  
[read full review](#)

READ ALL REVIEWS AT: [www.garagefly.com/shop/Toms-Auto-Body-Inc-Phoenix](http://www.garagefly.com/shop/Toms-Auto-Body-Inc-Phoenix)

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and

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Offer valid November 1 - December 31 2017.  
Customer must input their email address by January 15 to receive an e-gift card.

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## WHO IS GARAGEFLY?



GarageFly.com is an Arizona-based, comprehensive online resource that delivers automotive peace of mind to consumers. Drivers seeking information about reputable auto repair shops and auto body shops can read validated reviews for shops throughout the area, and quickly book an appointment online. GarageFly empowers consumers with information from reviews so they feel confident in their choice. To find out about our latest promotions, please visit us online at [www.GarageFly.com](http://www.GarageFly.com)!

### Crash Test Dummy

The crash test dummy's job is to simulate a human being during a crash, while collecting data that would not be possible to collect from a human occupant. All frontal crash tests in the United States are conducted using the same type of dummy, the Hybrid III dummy.

- HEAD**  
Made of aluminum which is covered in rubber to mimic flesh. Inside the dummy's head, there is an accelerometer that measures the acceleration in all three directions (fore-aft, up-down, left-right).
- NECK**  
The neck contains sensors to detect bending and other tension forces.
- CHEST**  
Movement sensors are used in the dummy's chest. They measure how much the chest deforms during a crash.
- ARMS**  
The arms contain no sensors. In a crash, arms flail and, although serious injuries are uncommon, it is difficult to provide worthwhile protection against them.
- PELVIS**  
The pelvis contains sensors that record if forces may result in fractures or hip-joint problems.
- LEGS**  
The legs contain sensors that measure how much they bend and if the bones would break.

### Quick facts on Crash Test Dummies

- Crash test dummies come in different sizes, and they are referred to by percentile and gender e.g. the 50th percentile male dummy represents the median sized male - it weighs 170 lbs (77 kg) and is 70 inches (5 ft 10 inches or 1.78 m) tall.
- Japanese company, Sleepypod, have designed and created crash test dogs since 2007. They aim to test the crashworthiness of pet carriers and safety harnesses.
- Up to fifty-eight data channels located in all parts of the Hybrid III, from the head to the ankle, record between 30,000 and 35,000 data items in a typical 100-150 millisecond crash.
- The most advanced new models of crash test dummies can cost at least \$400,000.