

INSURANCE
INSTITUTE
FOR
HIGHWAY
SAFETY

NEWS RELEASE

RESPONSE TO MANUFACTURER'S CLAIMS REGARDING INSTITUTE'S 40 MPH FRONTAL OFFSET CRASH TEST

ARLINGTON, VA – November 20, 1996 – The Insurance Institute for Highway Safety's crashworthiness evaluations are based primarily on a vehicle's performance in a frontal offset crash test. In response to the performance of its vehicles in the latest round of tests, one automaker has criticized the Institute, claiming its test doesn't reflect real crashes. However, these criticisms are invalid.

General Motors claims that the Institute's 40 mph offset crash into a deformable barrier is "highly unusual" and that it represents "only about 4 hundredths of 1 percent" of the passenger vehicles in a federal database of crashes. What's relevant is not the percentage of all crashes but rather the percentage of serious or fatal crashes represented by the Institute's offset test. According to the same federal database General Motors cites, frontal crashes with severities equivalent to or greater than the Institute's offset test include about 25 percent of serious injuries and about half of all deaths that occur in real-world offset crashes.¹

General Motors further claims that the Institute's test "duplicates a crash of one vehicle with a 40% overlap into an identical parked vehicle at approximately 74 to 76 mph." In a footnote to this claim, the company acknowledges that this unusual parked-vehicle crash scenario involves about the same severity as a far more common two-vehicle collision with "left-front to left-front impact at a speed of 37 mph to 38 mph" – a scenario represented by the Institute's test. General Motors ignores published research showing that frontal offsets are common in the real world and that an offset test into a deformable barrier provides a good indication of vehicle performance in serious on-the-road offset crashes.² This is why the same test as the Institute's at 40 mph is the focus of government crash test programs comparing new car performance in both Australia and the United Kingdom.

¹ O'Neill, B.; Preuss, C.A.; and Nolan, J.P. 1996. Relationships between computed delta V and impact speeds for offset crash tests. Presented at the 15th International Technical Conference on the Enhanced Safety of Vehicles. Arlington, VA: Insurance Institute for Highway Safety.

² O'Neill, B.; Lund, A.K.; Zuby, D.S.; and Preuss, C.A. 1994. Offset frontal impacts – a comparison of real-world crashes with laboratory tests. Presented at the 14th International Technical Conference on the Enhanced Safety of Vehicles. Arlington, VA: Insurance Institute for Highway Safety.