



# Safety Testing: Technology Torture

Ford Motor Company engineers go to extremes to test the placement, reliability and sensitivity of state-of-the-art airbag sensors used on the new Taurus and F-150. These tests ensure the pressure-based sensors accurately measure the severity of a side impact to determine whether or not the airbag needs to be deployed.



## Floor it

Airbag sensor research also is conducted on a test track rife with jarring, jolting surface imperfections that range from potholes and bumps to curbs and ditches. Certified test drivers are encouraged to push the vehicles to the limit, to find out how much abuse the sensor can take before the airbag will deploy. Engineers then can adjust the system's calibration accordingly.



**“Ford’s efforts to advance vehicle safety are driving more car buyers to the brand, and their interest in safety continues to fuel innovation among our vehicle designers and engineers.”**

*– Mike Harper, Brand and Tracking Manager, Ford Market Research*

## Buy it

According to the 2008 New Vehicle Customer Study, safety features account for one of the top 10 reasons why Ford buyers chose their vehicles. More than 53 percent of Ford buyers indicated that safety features are “extremely important” in their decision.

## Whip it

To refine airbag sensor calibration, Ford safety engineers whip the underside of a stationary vehicle with a multi-tailed, lead-tipped steel whip. They strike where the sensors are mounted to mimic the effect of gravel, trying to trick the sensor into deploying the airbag. The test also may be employed using chains and a variety of hammers.



## Twist it



With the help of a professional Baja race driver and a roll cage, Ford engineers also refine rollover sensors by subjecting test vehicles to off-road extremes in the canyons of Anza-Borrego Desert State Park in California.

