

2011 Fiesta Safety

- Ford Fiesta arrives in North America designed to advance small car safety with high-strength boron steel and the most standard air bags in the segment, including a class-exclusive driver's knee air bag
- Fiesta features technologies designed to help prevent and mitigate crashes, including standard AdvanceTrac® electronic stability control, Belt-Minder® reminders to fasten seat belts and smart sensors to optimize deployment of its class-leading array of air bags
- Ford's SYNC® communications and entertainment system is available for Fiesta, enabling drivers to operate their mobile phone, car stereo and other technology without taking their eyes off the road or hands off the wheel
- Ford's global safety engineers worked together to prepare the Fiesta to meet stringent U.S. crash protection requirements by leveraging 2010 Taurus development, Ford of Europe's small car expertise and virtual, actual and hydraulic servo sled-simulated crash testing

Ford leveraged the global engineering tools and processes used in the redesign of its top safety-rated flagship – the 2010 Taurus – to raise the bar on small car safety with the new Fiesta. Incorporating the Trinity front crash structure, Side Protection And Cabin Enhancement (SPACE) Architecture® and advanced air bag technologies, Fiesta brings world class safety in a small platform package, while kicking off the global roll-out of the Taurus crash safety approach.

The new Fiesta's expressive body is rigidly crafted with high-strength steels that form an advanced crash structure. The Fiesta also features the most standard air bags in the segment and standard stability control.

"Fiesta is proof that a small car can deliver big safety," said Steve Kozak, chief safety engineer. "The North American Fiesta combines rigidity, more air bags – smartly deployed – than the small car competition as well as standard stability control."

Healthy bones

Beneath Fiesta's stylish exterior is a robust structure, crafted from high-strength steels engineered to preserve quality and enhance driver and passenger safety. Working together with SPACE Architecture® side-impact protection, these elements form a protective safety cage to help protect Fiesta occupants in a crash situation.

Fiesta uses significant cold- and hot-formed high-strength steel in the body structure. These components add rigidity and save weight, increasing structural efficiency while also helping Fiesta deliver high fuel efficiency.

More than 50 percent of Fiesta's body structure uses these high-strength or ultra-high-strength steels in the floor structure, front rails, beams and in the ultra-rigid, integrated body reinforcement ring designed to help better protect occupants in side impacts.

The Fiesta A- and B-pillars are fashioned from ultra-high-strength aluminized boron steel, adding robustness while allowing for slim width and rake to honor Fiesta's distinctive design. Rocker panels – with welded baffles to absorb impact – also are crafted from very high-strength, dual-phase steels, known for their energy-absorption qualities. The side roof arch employs dual-phase steel construction.

Fiesta's under-floor support beams – so-called sled runners – and lateral floor reinforcements also use high-strength, dual-phase steel.

These light but strong metals in the Fiesta's robust body shell help enhance crash protection by

adding strength, rigidity and durability.

More standard air bags, smartly deployed

The Fiesta body shell is well-equipped with safety features to help protect its occupants in the event of a collision, including the most standard air bags in the small car segment.

Fiesta offers a segment-exclusive driver's knee air bag, developed to help reduce lower leg injuries in the event of a frontal collision and to work together with other safety features. The knee air bag joins a suite of Fiesta safety features including dual-stage first-row air bags, side-impact air bags and side curtain air bags.

A knee air bag won't be found in Honda Fit, Nissan Versa or Toyota Yaris. Move up to Civic, Sentra and Corolla and you still won't find a driver's knee air bag.

"Smart" Passenger Occupant Detection System (PODS) sensors determine occupant weight and safety belt status to optimize deployment force. Smart sensors include the class-exclusive side impact sensor that uses pressure to react up to 30 percent faster than previous sensor offerings.

Also available on the Fiesta is Ford's AdvanceTrac with ESC® (Electronic Stability Control), which uses sensors to detect and measure yaw, or side-to-side skidding conditions, by monitoring the vehicle's speed, throttle position and steering wheel angle. When AdvanceTrac senses wheel slip, engine torque is reduced and braking is applied, where needed, to help the driver keep the car tracking on its intended path.

Additional features include rear door child safety locks, height-adjustable retractable seat belts with pretensioners and a Tire Pressure Monitoring System (TPMS).

The power of the voice

Early indicators suggest that Fiesta will attract tech-savvy young drivers. Ford encourages drivers of all ages to keep their hands on the wheel and eyes on the road by using Ford's SYNC® hands-free, voice-activated communications and entertainment system which is optional on the Fiesta. Ford research shows that SYNC significantly reduces the level of distraction when drivers select a phone number or choose a song on their MP3 player compared with the same operations used in hand-held cell phones and music players.

Leveraging global safety expertise

Ford's global safety engineers worked together to prepare the Fiesta to meet stringent U.S. crash protection requirements by leveraging Ford of Europe's small car expertise as well as an array of virtual, actual and hydraulic sled-simulated crash tests.

"Ford has been sharing safety processes and technology around the world since the 1990s," said Kozak. "This has laid the groundwork for us to quickly manage complex regulatory and crash-testing differences between Europe and the U.S. as we accelerate the introduction of exciting, fuel-efficient products such as the new Fiesta and next-generation Focus in the U.S."