

2005 Mustang Safety

"The foundation for the new Mustang is a high-strength-steel body shell that's completely new. With the new structure, we have built the ultimate Mustang. It's safe and secure, and it has outstanding driving dynamics that help drivers avoid accidents in the first place." - Keith Knudsen, *Mustang Package Supervisor*

DEARBORN, Mich., Feb. 3 - With its all-new structure, suspension and braking systems, the dynamic 2005 Ford Mustang helps drivers in the first phase of safety: accident avoidance. Responsive, precise handling, coupled with high levels of overall grip and the strongest brakes ever fitted to a regular production Mustang, help give the driver the controllability that can turn an impending collision into just a close shave.

Four-wheel antilock brakes and all-speed traction control (standard on GT and optional on V-6) provide additional assistance during emergency maneuvers.

Mustang Protection: A Strong Safety Shell

If a crash is unavoidable, a strong structure and a suite of standard and optional safety equipment help protect occupants from injury.

The dramatic leaps in body stiffness that contribute to the 2005 Mustang's driving performance have parallel benefits in accident protection. The body structure is 31 percent stiffer in torsion, meaning that a twisting force of 15,500 foot-pounds can deform the body by only one degree.

Engineering a body with such high stiffness creates a passenger "safety cage" that helps protect the cabin from deformation and intrusion.

The front structure is designed to absorb energy in a controlled manner and dissipate it before it can reach the passenger compartment. The 2005 Mustang's front rails have an octagonal shape to spread forces evenly at the firewall and progressively deform for increased protection in demanding, offset frontal crashes.

Mustang Confidence: Ford Personal Safety System™

Topping the list of Mustang's safety equipment is Ford's Personal Safety System™, one of the industry's most comprehensive safety technology suites. The system is designed to provide increased protection in many types of frontal crashes by analyzing impact factors and determining proper air bag response in milliseconds.

It uses dual-stage driver and front-passenger air bags capable of deploying at full or partial power. In less severe frontal crashes, air bags inflate with less force - or not at all - helping reduce the risk of injury caused by inflation of the air bag.

But seat belts remain the best line of crash defense for vehicle occupants. Mustang's Personal Safety System employs pretensioners to tighten front seat belts in the first milliseconds of a crash; energy management retractors gradually slacken the belt, if necessary, to reduce forces across the occupant's chest during the impact.

Standard Occupant Classification Sensing

Standard occupant classification sensing builds on the strength of the Personal Safety System to tailor deployment of the front-passenger air bag. If the passenger-seat sensor detects no weight or very little weight, like a newspaper or a jacket, the passenger air bag is automatically switched off.

If more weight is on the seat, like a small child, the air bag remains deactivated and an instrument panel light alerts the driver with the message "PASSENGER AIR BAG OFF." Of course, the safest place for children remains the rear seat, properly restrained. If an adult is seated properly in the passenger seat, the air bag automatically is switched on, ready to inflate within milliseconds, if needed.

Among the dozens of standard safety and security features Mustang offers are:

- **Beltminder™**

The most effective way to help save lives on roadways is one of the simplest safety technologies on the market - the safety belt. Ford's BeltMinder system gives occupants a gentle chiming reminder to fasten their seat belts. A Ford innovation introduced in 1999, BeltMinder already is proving to increase safety-belt use.

- **SecuriLock™ Passive Anti-Theft System**

Passive anti-theft systems like SecuriLock help protect against drive-away theft through the use of an electronically coded ignition key. The system is designed to help prevent the engine from being started unless a coded key programmed to the vehicle is used. A miniature transponder with an integrated circuit and antenna is imbedded in the ignition key. A wireless radio-frequency transmission transfers an electronic code between the transponder in the key and the vehicle. If the codes match, a signal passes through the wiring system to the electronic engine control, allowing the vehicle to start.

- **Battery Saver**

Battery Saver helps prevent accidental battery drainage from Mustang's interior lights. The battery saver feature automatically turns off interior lights in a parked vehicle after a few minutes, like when a door is left ajar. If interior lights are left on while the ignition is in the Off position, a relay is deactivated in 10 to 40 minutes cutting power to the interior lights.

- **Fail-Safe Cooling**

A fail-safe cooling system lets Mustang be driven under limited power for short distances if engine coolant is lost, eliminating the cost and inconvenience of towing. If the coolant level sensor reads below a critical level, the engine computer module switches the engine to an emergency limp-home mode, in which only half the cylinders get fuel. With only half the cylinders firing, the engine operates at lower power and generates much less heat. The cylinders alternate between even- and odd-firing pistons in this mode. The engine can move the vehicle at moderate speeds (up to about 50 mph).

Keeping Mustang Where It Belongs

Mustang has an optional, active anti-theft package aimed at combating high performance-car insurance premiums. The package includes:

- **Separate Alarm Sounder**

Mustang employs a separate, remotely located alarm sounder in conjunction with the traffic horn, making it harder for thieves to disable the system and make off with the car or its contents.

- **Anti-Tow Sensor**

An inclination-sensing module records the vehicle's angle of inclination when the anti-theft system is armed. If the sensor detects a change in vehicle inclination, it sends a signal to the alarm system, which triggers a the separate alarm sounder and traffic horn and flashes the car's lights to guard against tow-away thefts.

- **Ultrasonic Interior Motion Sensor**

To detect "smash-and-grab" break-ins, an ultrasonic interior-motion sensor is designed to detect motion inside the vehicle cabin. If an intrusion is detected, the alarm sounder and traffic horn are activated and the exterior lights flash to frighten would-be thieves.

- **Perimeter Anti-Theft Protection**

Perimeter anti-theft sensors also detect the opening of the hood, doors or trunk when the anti-theft system is armed. If the vehicle is parked and the window rolled down, for example, the alarm is sounded if a would-be-thief tries to open the door to gain access to the car.

- **Global Window Open & Close**

Another feature included with the active anti-theft system allows global opening and closing of the vehicle windows. This feature allows the windows to be opened using the remote transmitter or opened & closed by turning the key in the driver door key cylinder, making it easier to properly secure the vehicle.

- **High-Capacity Battery**

A 60-ampere-hour battery is capable of sounding the alarm longer. This more powerful battery lends an extra measure of authority to the active anti-theft system and helps prevent battery run-down from use of Mustang's powerful audio system while the engine is off.