

Description and Operation

System Operation

Emergency Locking Retractor

All retractors have an Emergency Locking Retractor mode, which is a vehicle-sensitive feature designed to activate and lock the safety belt webbing during hard braking, cornering, or an impact of approximately 24 km/h (14.9 mph). The Emergency Locking Retractor feature helps reduce the forward movement of the driver and passengers.

Safety Belt Warning Chime

The conditions of operation for the driver and/or front passenger safety belt warning indicator and chime operate as follows:

- If the driver and/or passenger safety belt is not buckled with the ignition ON, then the safety belt warning indicator illuminates for 1 to 2 minutes and the warning chime sounds for 4 to 8 seconds.
- If the driver and/or passenger safety belt is buckled while the warning indicator is illuminated and the warning chime is sounding, then the indicator and chime turn off.
- If the driver and/or passenger safety belt is buckled before the ignition is in the ON position, the safety belt warning indicator and chime remain off.

Belt-Minder®

The Belt-Minder® feature is a supplemental warning to the safety belt warning function. This feature provides an additional reminder that the driver and/or front passenger safety belt is unbuckled by intermittently sounding a chime and illuminating the safety belt warning indicator in the [IPC \(instrument panel cluster\)](#).

Either the driver or front passenger safety belt systems may activate the Belt-Minder®. If the Belt-Minder® warnings have expired (warnings last for approximately 5 minutes) for one occupant (driver or front passenger), the other occupant can still activate the Belt-Minder® feature.

The passenger Belt-Minder® feature is activated only when the [OCS \(occupant classification system\)](#) detects a passenger in the right front seat.

When a MyKey® is in the ignition, deactivation of Belt-Minder® and the 5-minute Belt-Minder® timer are overridden. The Belt-Minder® feature cannot be deactivated when a MyKey® is in use. Refer to the Owner's Literature for further information on MyKey® functionality.

If...	Then...
the driver and/or passenger safety belt is buckled before the ignition is turned ON or less than 1-2 minutes have elapsed since the ignition has been turned ON...	the Belt-Minder® feature will not activate.
the driver and/or front passenger safety belt is not buckled before the vehicle has reached at least 9.7 km/h (6.0 mph) and 1-2 minutes have elapsed since the ignition has been turned ON...	the Belt-Minder® feature is activated — the safety belt warning indicator illuminates and the warning chime sounds for 6 seconds every 30 seconds, repeating for approximately 5 minutes or until the safety belt(s) is buckled.
the driver or front passenger safety belt becomes unbuckled for approximately one minute while the vehicle is traveling at least 9.7 km/h (6.0 mph) and more than 1-2 minutes have elapsed since the ignition has been ON...	the Belt-Minder® feature is activated — the safety belt warning indicator illuminates and the warning chime sounds for 6 seconds every 30 seconds, repeating for approximately 5 minutes or until the safety belt(s) is buckled.

Inflatable Safety Belt System (if equipped)



Item Description

- 1 Inflatable Belt and Fill Tube
- 2 Buckle Assembly and Tongue

- 3 Compressed Gas Cylinder
- 4 Diffuser and Manifold
- 5 Shoulder Strap
- 6 Lap Strap
- 7 Compressed Gas Cylinder
- 8 Compressed Gas Cylinder
- 9 Buckle Assembly and Tongue

The inflatable safety belt system uses a pyrotechnic device mounted below the seat to release an inert gas which deploys the inflatable shoulder belt. The pyrotechnic device (safety belt inflator) deploys upon receipt of current from the RCM (restraints control module). Upon deployment, gas flows through a manifold tube into the safety belt buckle. From the buckle, gas moves through the safety belt tongue and into the inflatable shoulder belt, causing the belt to expand. The RCM monitors the readiness of the safety belt inflator and uses this information, as well as other information provided by the restraints system, to determine if inflatable safety belt deployment is appropriate.

For any concerns regarding safety belt buckle or retractor function: For additional information, refer to Safety Belt System.

When replacing safety belt buckles, retractor assemblies, or safety belt inflators, use only the replacement parts specified in the Ford parts catalog or equivalent.

Component Description

Child Safety Seat Tether Anchor

Each second row seating position has a child safety seat tether anchor. These are part of the package tray and not serviced separately.

If a child safety seat was in use during a collision, inspect the child safety seat mounting areas and restore the vehicle to the original production configuration.

Safety Belt Buckle - Inflatable Safety Belt

On vehicles equipped with inflatable safety belts, the safety belt buckle has 3 functions:

- Receives the tongue and holds it in place until the release button is pressed.
- Senses if the inflatable safety belt is buckled using a Hall-effect sensor which is hard-wired to the RCM.
- Directs the gas from the safety belt inflator into the tongue for safety belt deployment.

The safety belt buckle is bolted directly to the safety belt inflator. To prevent the inflator gas from leaking during deployment, the buckle is sealed to the inflator with nylon rings.

For any concerns regarding safety belt buckle or retractor function, For additional information, refer to Safety Belt System.

Safety Belt Retractor - Inflatable Safety Belt

Vehicles equipped with inflatable safety belts use 2 retractors, 1 for the lap belt (lower retractor) and 1 for the shoulder belt (upper retractor), however only the shoulder belt inflates. The lap belt retractor can be serviced separately from the shoulder belt retractor.

Lower Safety Belt Retractor (Lap Belt)

The lap belt has a web loop at its end with a steel bushing in the center of the loop. The lap belt connects to the shoulder belt by sliding a pin through two ears on the shoulder belt tongue and the steel bushing on the lap belt. The pin locks into place with a spring clip that is part of the shoulder belt tongue. A plastic cover is fitted over the connection to protect the pin and to keep foreign objects out.

The lap belt retractor has both the Automatic Locking Retractor and the Emergency Locking Retractor features.

Upper Safety Belt Retractor (Inflatable Shoulder Belt)

The shoulder belt includes the tongue, which is unique to the inflatable safety belt system. The tongue is hollow, which allows gas from the inflator to pass through it. Attached to the tongue is the inflatable shoulder belt, which expands as the gas leaves the tongue and fills the belt. The tongue has a non-removable plastic cover on the end to keep foreign objects out.

The safety belt shoulder belt retractor only has the Emergency Locking Retractor feature.

Safety Belt Inflator

The safety belt inflator is a pyrotechnic device that deploys upon receipt of current flow initiated by the RCM. It is a canister that releases inert gas to deploy the inflatable shoulder belt.

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