

Safety Belt System

Inspection and Verification

1. Verify the customer's concern by operating the active restraint system to duplicate the condition.
2. Inspect to determine if any of the following mechanical or electrical concerns apply:

Visual Inspection Chart

Mechanical	Electrical
<ul style="list-style-type: none"> Safety belt webbing integrity Safety belt buckle and tongue assembly Safety belt retractor 	<ul style="list-style-type: none"> Open fuse Bare, broken or disconnected wire Connector not tightly engaged Safety belt warning indicator burned out or broken

3. If the inspection reveals an obvious concern(s) that can be readily identified, repair as required. With the exception of removing a twist from the safety belt webbing, do not attempt to repair a component of the safety belt system; new components must be installed.
4. If the concern remains after the inspection, determine the symptom. GO to [Symptom Chart](#).

Symptom Chart

Symptom Chart

Condition	Possible Causes	Action
<ul style="list-style-type: none"> The safety belt warning chime does not operate, the safety belt warning indicator is OK 	<ul style="list-style-type: none"> Circuitry Instrument cluster module 	<ul style="list-style-type: none"> REFER to Section 413-01.
<ul style="list-style-type: none"> The safety belt warning indicator does not operate, the safety belt warning chime is OK 	<ul style="list-style-type: none"> Circuitry Instrument cluster module 	<ul style="list-style-type: none"> REFER to Section 413-01.
<ul style="list-style-type: none"> Neither the safety belt warning chime nor the safety belt warning indicator operates 	<ul style="list-style-type: none"> Circuitry Safety belt buckle switch Instrument cluster module 	<ul style="list-style-type: none"> REFER to Section 413-01.
<ul style="list-style-type: none"> Excessive pressure on the occupant during normal wear, the webbing cannot be extracted, excessive slack in webbing does not retract 	<ul style="list-style-type: none"> Front safety belt retractor and tongue Rear safety belt retractor and tongue 	<ul style="list-style-type: none"> CARRY OUT the Functional Test. REFER to Component Test. INSTALL components necessary.

Component Test

Carry out the appropriate Functional Test(s) as determined in Inspection and Verification.

Functional Test — Buckle and Tongue

The safety belt buckle and tongue assembly must operate freely during the latching and unlatching function. Fasten the safety belt by inserting the tongue (male portion) into the buckle (female portion).

1. Verify the following during the latching sequence:
 - Tongue insertion is not hindered by excessive effort.
 - A click is heard when the buckle latches the tongue.
2. Verify the system integrity by forcefully pulling on the belt webbing.
3. Unlatch the belt by fully depressing the buckle release button and allowing the belt to release and retract.
4. Verify the following during the unlatching process:
 - Push-button depression does not require excessive effort.
 - Tongue can be removed easily from the buckle.
5. Repeat the above steps 3 times.
6. If the inspection reveals an obvious concern(s) that can be readily identified, service as required. Do not attempt to carry out any repair on the buckle and tongue assembly. If a concern exists with either component, a new safety belt buckle and/or safety belt and retractor assembly must be installed.

Functional Test — Retractor

The safety belt and retractor assembly must be freely operational for extraction and retraction of the safety belt webbing between full extension and in-vehicle stowed positions.

1. Extract and retract the safety belt between the full extension and stowed positions.
2. Verify the retractor operates without excessive effort or binding.
3. Install a new safety belt buckle retractor and tongue assembly if no obvious concerns are noticed and the complaint has been verified.

Functional Test — System Road Test Inspection

1. **NOTE:** *If the RH or the rear safety belts are to be tested, the assistance of a passenger is required.*

Fasten the safety belts and proceed to a safe area.

2. Attain a speed of 8 km/h (5 mph).

3.  **WARNING: The driver and passenger must be prepared to brace themselves if the retractor does not lock.**

Test the safety belts.

1. Grasp the shoulder harness and prepare to lean forward.

2.  **WARNING: The maximum brake application should be on dry concrete or equivalent hard surface, NEVER on wet pavement or gravel.**

 **WARNING: The driver and passenger must be prepared to brace themselves in the event the retractor does not lock.**

Make a maximum brake application without a skid.

3. **NOTE:** Do not jerk on the safety belt webbing when carrying out this test.
Lean forward slightly when the brake application is made.
4. The safety belts should lock up with minimum webbing extension.
5. If there is a lockup of both shoulder straps, the safety belt assemblies are functioning correctly. Should either or both retractors fail to lock up at the 8 km/h (5 mph) speed, repeat the test at a constant 24 km/h (15 mph) speed. (This test must be carried out with the assistance of a RH front or rear passenger if the RH front or rear safety belts are to be tested.)
6. **NOTICE: Before installing a new safety belt assembly, inspect the mounting area for damage and distortion. If the retractor of a new safety belt assembly has been bolted into a damaged or distorted mounting area, the retractor could be warped and may not function. If this is the case, remove the retractor and return the sheet metal to the original configuration and install another complete safety belt assembly.**

If a retractor does not lock up at the 24 km/h (15 mph) test, return the vehicle for service of malfunctioning safety belts.

Functional Test — Automatic Locking Retractor



WARNING: After any vehicle collision, the safety belt system at all outboard seating positions (except driver, which has no automatic locking retractor [ALR] feature) must be checked by a qualified technician to verify that the ALR feature for child safety seats is still functioning correctly, in addition to other checks for correct safety belt system function. A new safety belt and retractor assembly must be installed if the safety belt assembly's ALR feature, or any other safety belt function, is not operating correctly when checked according to the procedures in the workshop manual. Failure to install a new safety belt and retractor assembly could increase the risk of injury in collisions.

1. Position the seat back (if adjustable) into the full up position.
2. Position the height adjuster (if equipped) in the full down or up position.
3. Latch the seat belt buckle and tongue assembly.
4. Pull the shoulder belt out until the automatic locking retractor (ALR) feature is activated.
5. Release the shoulder belt and allow it to retract until it stops.
6. Pull on the shoulder belt to check that the belt has remained in the ALR mode. If the belt is not locked, install a new safety belt and retractor assembly.
7. Unlatch the safety belt tongue from the buckle and allow the safety belt to retract to its stowed position.
8. Pull the shoulder belt to verify the retractor assembly has converted automatically out of the ALR mode. If the shoulder belt remains locked in the stowed position, install a new safety belt and retractor assembly.