

Uniform Procedures For Collision Repair

RE01—Seat Belt

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v.2.3



1. Description

This procedure describes methods for the replacement, inspection, and testing of seat belt assemblies.



2. Purpose

The purpose of this procedure is to provide industry-accepted requirements for performing high-quality inspection and repair of seat belt systems. This procedure is intended for use by professionals who are qualified through training and experience.



3. Referenced Documents

The following documents are considered part of this procedure by reference.

3.1 Procedures

- EL01 Wire Repair
- PS01 Personnel Safety

3.2 Other Information

Vehicle-specific repair information



4. Equipment And Material Requirements

Does not apply.



5. Damage Analysis

5.1 Webbing

Extend the belt and inspect the seat belt webbing for these types of damage:

- visible damage, especially to the assembly, mounting locations, and retractor
- cut loops at the belt edge
- color fading
- stains or burns
- bowing**
- broken or pulled threads
- visible seat belt replacement warning or indicator labels



If any of these types of damage exist, replace the affected part.

Check for proper extension and retraction of the webbing. If the action is not smooth and easy, inspect for the following:

- twisted webbing
- dirt or other contamination on the webbing or in the retractor housing
- proper movement on the anchor bolts
- damaged retractor, see **5.2**

5.2 Mechanical Parts

Inspect the mechanical parts of the seat belt assembly for these types of damage:

- damaged or non-functioning buckle
- damaged or non-functioning retractor
- webbing that locks when slowly pulled out of the retractor
- damaged **D-ring** or D-ring mounts
- damaged or loose anchors

Replace the seat belt assembly if there is any improper operation.



(cont'd)



5. Damage Analysis (cont'd)

Some vehicle makers require replacement of all seat belts in use during a collision of specified severity, or if there was an airbag deployment. Follow the vehicle maker's recommendations. Replace all mounting fasteners that have visible damage or are required by the vehicle maker. Torque all fasteners to the vehicle maker's recommendations.

Some vehicle makers require a road test of seat belts equipped with motion sensors. If the vehicle cannot be driven, the road test must be done after repairs, but before vehicle delivery.

5.3 Electrical Parts

Turn the ignition switch to ON or RUN to check the operation of the seat belt warning sound and dash lamp. If there are no warnings, inspect for these types of damage:

- blown fuse or circuit breaker
- burned out bulb
- damaged wiring, switches, or buzzer
- loose connections

See **EL01** for wire repair procedures.



6. Personnel Safety

6.1 General Safety

General safety information is in **PS01**.

Identify explosive type seat belt tensioners.



7. Environmental Safety

Does not apply.



8. Vehicle Protection

8.1 Seat Belt Parts

To prevent damage to seat belt parts:

- Do not bleach or dye belt webbing. Clean webbing only with mild soap and water.
- Start mounting fasteners by hand to prevent cross-threading.
- Do not install anything in or on trim panels that will obstruct movement of the seat belt.
- Torque mounting fasteners to the vehicle maker's recommendations.



9. Repair Procedure

Do not attempt to repair seat belt retractors. Defective retractors must be replaced with new retractors.

9.1 Removal

To remove a seat belt assembly:

1. Remove seats and trim panels for access, if necessary.
2. Remove bolts holding the seat belt assembly to the vehicle.
3. Remove the seat belt assembly.

9.2 Installation

To install a seat belt assembly:

1. Install a replacement assembly in the reverse order of removal. Use thread-locking lubricants where applicable. Make sure that the webbing is not twisted and is routed correctly.
2. Torque all fasteners to the vehicle maker's recommendations.
3. Re-install trim panels.
4. Re-install seats.
5. Check for proper operation. See **11.1**.





10. Use Of Recycled (Salvage) Parts

10.1 Salvage Part Requirements

Do not use salvage seat belt parts.



11. Inspection And Testing

11.1 Inspection Of A Replaced Seat Belt Assembly

Inspect a replaced seat belt assembly for these conditions:

- webbing retracts smoothly and easily
- buckle functions properly
- warning light or buzzer operates properly

Correct any defects.

11.2 Testing Retractor Operation

Test **webbing-sensitive seat belt retractors** by grasping the belt and jerking it. The retractor should lock up.

To test retractors equipped with a motion sensor:

- 1. Drive to a safe test area. If passenger-side or rear seat belts must be tested, passengers should be aboard with seat belts fastened.
- 2. On a dry, hard road surface, reach a speed of 8 kph (5 mph) and stop suddenly without tire skid.
- 3. The driver and passengers will be forced forward slightly into the shoulder harness.

The retractors should lock up without additional webbing feed. If the retractors lock up, the system is functioning properly. If the retractors do not lock up, repeat the test at 24 kph (15 mph). If the retractors do not lock up during the 24 kph (15 mph) test, the retractor is defective and must be replaced.