



# SE11 Seats, Power

**Uniform  
Procedures For  
Collision Repair  
UPCR**

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v.4.0



## 1. Description

This procedure describes methods for the repair, replacement, and inspection of a power seat system.



## 2. Purpose

The purpose of this procedure is to provide industry-accepted requirements for performing high-quality repair of power seats. 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
- EL11 Troubleshooting
- EL21 Self-Diagnostics
- PS01 Personnel Safety
- RE01 Seat Belt
- RE11 Seat Belt, Motorized
- RE31 Tensioners, Seat Belt

#### 3.2 Other Information

- Equipment-specific information
- Vehicle-specific repair information



### 4. Equipment And Material Requirements

#### 4.1 Electronic Equipment

Use electronic testing equipment as described in **EL11**.

#### 4.2 Upholstery Tools

The use of these tools is required for working on seat upholstery:

- hog-ring pliers
- snap-ring pliers
- torque wrench



## 5. Damage Analysis

### 5.1 General Damage

Inspect a power seat for these conditions:

- visible damage
- improper previous repairs
- corrosion on frame assembly
- damaged or binding track assembly
- damaged or non-functioning adjustment controls
- damaged or missing trim or mounting fasteners
- damaged or non-functioning hinge lock
- damaged lumbar support or side bolster
- damaged manual seat-belt assembly
- damaged motorized seat-belt assembly
- damage from seat- or door-mounted side airbag deployment
- loose seat back frame (Follow the vehicle maker's recommendations.)
- loose seat-to-floor mounting brackets

Determine the parts of the seat to be replaced. Verify the availability of replacement parts.

Some vehicle makers require replacement of all seat belts in use during a collision of specified severity or if there was an airbag deployment.

Some seat parts also require replacement if there was a seat- or door-mounted side airbag deployment. Follow the vehicle maker's recommendations.

### 5.2 Electrical Parts

Inspect power seat electrical parts for these conditions or types of damage:

- blown fuses
- loose or corroded grounds or connectors
- damaged wiring or connectors
- corrosion on terminal pins
- damaged or corroded switches
- damaged or binding motors
- damaged control module
- improper operation of the seat belt chime or warning lamp, seat cushion heater, lumbar support, side bolster, etc.
- improper operation of the airbag warning lamp

If electrical parts do not function correctly, troubleshoot the seat circuits to isolate the cause. See **EL11**. See **EL21** for troubleshooting self-diagnostic systems. Determine the parts to be replaced and the wiring to be repaired. See **EL01** for wire repair procedures.



## 6. Personnel Safety

### 6.1 General Safety

General safety information is in **PS01**.



## 7. Environmental Safety

Does not apply.



## 8. Vehicle Protection

### 8.1 Seat And Adjacent Parts

To prevent damage to the seat and adjacent parts:

- Protect the seat assembly and adjacent parts from damage during removal, storage, and installation.
- Follow the vehicle maker's torque recommendations.
- Follow the vehicle maker's recommendations on the use of fastener lubricant.

### 8.2 Track Assembly

To prevent damage to the seat track assembly:

- Do not sit on the seat when the seat and track assembly are not installed in the vehicle.
- Follow the vehicle maker's torque recommendations.
- Avoid the use of shims for alignment, unless recommended by the vehicle maker.
- Keep the assembly free of dirt and other contaminants.

Do not straighten or weld seat-track adjuster assemblies.



## 9. Repair Procedure

### 9.1 Removal

To remove power seats:

- 1. Follow the vehicle maker's recommendations for recording and resetting electronic memories.
- 2. Position the seat to allow access to connectors and mounting fasteners.
- 3. Disconnect and isolate the negative battery cable. Follow the vehicle maker's recommendations.
- 4. For vehicles with side airbags, seat-belt tensioners, or seat-mounted airbag sensors, disarm the passive restraint system, even if the airbags or tensioners have deployed. Follow the vehicle maker's recommendations for disarming, removal, and parts replacement.
- 5. Remove the headrest, if required for seat removal.
- 6. Reconnect the battery, if required to reposition the seat for access to connectors and mounting fasteners. Some vehicles may require the use of a special tool to manually reposition the seat, if battery power cannot be provided.
- 7. Remove trim panels or covers to access the seat-mounting fasteners.
- 8. Remove the seat-mounting fasteners. Replace one-time or damaged fasteners. Use replacement fasteners that are the same grade, size, and type as the original fasteners.
- 9. Disconnect the seat power connector and any other electrical connectors attached to, or routed through, the seat. Mark for reinstallation. Remove the wiring harness, if required.
- 10. Disconnect the seat air supply hose, if required.
- 11. Remove the seat assembly from the vehicle.
- 12. Protect and store the seat in a safe area.
- 13. Remove the seat-belt assembly from the vehicle, if required.
- 14. Replace any damaged parts.

### 9.2 Installation

To install power seats:

- 1. Lubricate the track assembly, if required.
- 2. Install the seat-belt assembly, if required.
- 3. Install the seat assembly, aligning the mounting holes. Follow the vehicle maker's location tolerance recommendations, if applicable. Follow the vehicle maker's recommendations for the use of fastener lubricant.
- 4. Torque the fasteners. Follow the vehicle maker's torque recommendations.
- 5. Reconnect the electrical connectors.
- 6. Reinstall the wiring harness. Ensure that the wiring is routed and secured in its original position.
- 7. Reconnect the air supply hose to the lumbar support or side bolster.
- 8. Reinstall the fastener covers and trim.

**(cont'd)**



## 9. Repair Procedure (cont'd)

- 9. Reinstall the headrest.
- 10. Reconnect the battery and reprogram electronic memory settings.
- 11. Re-activate the passive restraint system.



## 10. Use Of Recycled (Salvage) Parts

### 10.1 Salvage Part Requirements

Do not use salvage airbag parts.

Do not install a salvage power seat having any of these defects:

- unrepairable damage
- corrosion that has caused pitting
- improper previous repairs
- missing or damaged mounting locations

Transfer or replace required parts such as trim panels, headrests, upholstery, seat heaters, etc.



## 11. Inspection And Testing

### 11.1 Inspection Of Repaired Or Replaced Power Seat

After installation or repair, inspect a power seat for these conditions:

- smooth operation of all movable parts
- proper installation and lubrication of the seat track assembly
- fasteners torqued to the vehicle maker's recommendations
- proper operation of all switches and mechanical adjusters
- proper operation of the lumbar support or side bolsters
- proper routing of all electrical wiring
- proper installation and operation of the seat belt system
- proper operation of all electronic memory settings
- proper installation and operation of passive restraint systems
- proper operation of the seat belt chime and warning lamp, seat cushion heater, etc.
- proper operation of the airbag warning lamp

Correct any defects.