Body Repair Tech Note: Structural Repair Procedures Not Requiring a Frame Bench

Body Repair Tech Notes provide information about Tesla-approved methods and practices for body repair. These instructions assume knowledge of motor vehicle and high voltage electrical component repairs, and should only be executed by trained professionals. Tesla Motors assumes no liability for injury or property damage due to a failure to properly follow these instructions or for repairs attempted by unqualified individuals.

This Body Repair Tech Note supersedes BR-16-10-001, dated 30-Nov-2016. Each content change is marked by a vertical line in the left margin. Discard the previous version and replace it with this one.

All structural repairs must be performed with the vehicle properly mounted to an approved frame bench, with the exception of the following procedures:

⚠️ CAUTION: Some of the procedures listed require that the spring assemblies be disconnected or removed with the vehicle raised off the suspension and supported with jack stands in the jack pad locations. Additionally, the sub-frame assemblies must be removed or supported with screw jacks. This reduces stress on the vehicle structure during the repair where a frame bench is not used. Refer to Figure 1.

Figure 1 (Example of vehicle setup with jacks and spring assemblies highlighted in red)
Model S

- A-Pillar Outer (Complete)
- A-Pillar Outer (Section)
- Body Side Outer (Complete)
- Body Side Outer (Lower Section)
- Fender Brackets
- Front Frame Rail Cap (Rear Wheel Drive)
- Front Header Assembly
- Front Rail Outer Extension Reinforcement
- Front Right Motor Mount
- Front Shock Tower Reinforcement
- Front Torque Box Repair
- Lower Torque Box Plate
- Quarter Outer (Complete)
- Quarter Outer Skin (Complete)
- Quarter Outer Skin (Lower Section)
- Rear Panel (Complete)
- Rear Header Assembly
- Rear Motor Cover Floor
- Rear Node Outer Reinforcement
- Rear Shock Tower Reinforcement
- Rear Trunk Floor Assembly
- Rear Trunk Floor Panel Extension
- Roof Assembly – Remove and Install
- Roof Assembly – Remove and Replace
- Shotgun Outer Assembly
- Shotgun Upper Assembly (Complete)
- Shotgun Upper Assembly (Section)
- Sill (Flange Area Section)
- Wheel Arch Outer Panel (Section)
- Wheelhouse Extension Panel

1. Spring assemblies must be disconnected or removed, the vehicle must be raised off suspension and supported with jack stands in the jack pad locations, and the sub-frame assemblies must be removed or supported with screw jacks.

Refer to Figure 2: Components highlighted in green can be replaced with no special vehicle setup. Components highlighted in yellow do require special vehicle setup.

Figure 2
Model X

- A-Pillar Upper Outer (Complete)
- A-Pillar Upper Outer (Section)
- A-Pillar Upper Outer Lower Bracket
- B-Pillar Header Upper ¹, ³
- Body Side Outer (Lower Section)
- Body Side Outer (Section)
- C-Pillar Lower Extension
- Fender Brackets
- Front Right Motor Mount
- Front Shock Tower Reinforcement
- Front Torque Box Repair
- Rear Header Upper ¹
- Rear Node Outer Reinforcement
- Rear Panel (Complete)
- Rear Quarter Outer ²
- Rear Quarter Outer Lower
- Rear Shock Tower Reinforcement ¹
- Rear Trunk Floor Panel
- Rear Trunk Floor Panel Extension
- Rear Trunk Waterfall
- Rear Wheel Arch (Complete)
- Rear Wheel Arch (Section)
- Shotgun Assembly (Complete)
- Sill (Flange Area Section)
- Wheelhouse Extension Panel

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1. Spring assemblies must be disconnected or removed, the vehicle must be raised off suspension and supported with jack stands in the jack pad locations, and the sub-frame assemblies removed or supported with screw jacks.
2. Lower Falcon Wing door on the repair side must be removed and the opposite side must remain closed during repair.
3. Both Falcon Wing door assemblies must be removed.

Refer to Figure 3: Components highlighted in green can be replaced with no special vehicle setup. Components highlighted in yellow do require special vehicle setup.

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Figure 3
Model 3

- Body Side Outer Assembly
- Cowl Top Assembly (Section)
- Fender and Lamp Support Bracket
- Fender Attachment Brackets
- Fender Front Inner Bracket
- Fender Support Bracket
- Front Header Assembly
- Front Jack Pad Bracket
- Frunk Bracket
- Parcel Shelf Rear Extension
- Quarter Outer Complete
- Quarter Outer Skin
- Rear Aero Shield Brackets
- Rear Body Panel
- Rear Center Trough
- Rear Fascia Bracket
- Rear Header Assembly
- Rear Jack Pad Bracket
- Rear Quarter Outer Lower
- Rear Rail to Lower Quarter Extension
- Shock Tower Closeout ¹
- Shotgun Inner ¹
- Shotgun Outer
- Torque Box Cover Assembly ¹
- Trunk Floor Assembly (Complete)
- Trunk Floor Assembly (Side Panel)
- Trunk Floor Extension
- Wheelhouse Extension

1. Front Suspension must be removed and the front of the vehicle must be supported with jack stands in the front jack pad locations.

Refer to Figure 4: Components highlighted in green can be replaced with no special vehicle setup. Components highlighted in yellow do require special vehicle setup.

Figure 4

For feedback on the accuracy of this document, email bodyrepair@tesla.com.