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1995 JEEP Grand Cherokee OEM Service and Repair Workshop Manual

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If faults were stored in the DTC memory for any safety or security system, then these systems **MUST** be serviced according to the repair procedures in Service Information. After performing repairs, re-check the system to determine if any active or stored DTCs remain; if so, take appropriate service action to ensure proper function.

SRS AIR BAG SQUIB STATUS

Multistage air bags with multiple initiators (squibs) **MUST** be checked to determine that all squibs were used during the deployment event. The Driver Air Bag (DAB) and Passenger Air Bag (PAB), are deployed by electrical signals generated by the Occupant Restraint Controller (ORC) through the driver or passenger squib circuits (up to 3) to the initiators in the air bag inflators. Typically, all initiators are exhausted and all potentially hazardous chemicals are burned during an air bag deployment event.

However, it is possible for only one initiator to be exhausted; therefore, you **MUST** always confirm that all initiators have been cycled, in order to minimize the risk of improper handling or disposal of potentially live pyrotechnic or hazardous materials. This procedure should be performed using the Mopar wiTECH diagnostic scan tool to verify the status of all air bag squibs, prior to removing deployed air bags from the vehicle for disposal.

Reference Websites

- **Service Information can be obtained at https://www.techauthority.com
- Mopar wiTECH scan tools can be purchased from https://aftermarket.witechtools.com .**

YOUR CURRENT VEHICLE

Use Of Heat While Repairing Damaged Structural And Non-Structural Components

USE OF HEAT WHILE REPAIRING DAMAGED STRUCTURAL AND NON-STRUCTURAL COMPONENTS

Structural Components:

Structural components are designed to help ensure occupant safety and structural integrity of the vehicle. If this type of component becomes damaged, it requires repair and/or replacement. Some repair methods may require damaged areas to be heated and “pulled” to relieve stress before disassembly.

If heat is used to straighten structural high-strength steels, advanced high-strength steel, or ultra high-strength steel, the component must be replaced. If the damaged component requires heat for making a pull, the adjacent component, to which it is attached, must not be affected by heat transfer. Cold straightening may be used without replacement of the component.

Heat produced by oxy-fuel cutting torches and other heating/cutting equipment has a negative effect on high-strength steels microstructure, making the affected steel incapable of meeting manufacturer requirements. Always validate the type of steel being repaired or replaced and follow the procedures required for welding and joining those steel strengths.

Some steels are unable to weld or may be difficult to weld using standard body shop equipment such as MIG/MAG welders and squeeze type resistant spot welders. Steels such as Press Hardened Steel (PHS), TRIP steel (TR, TRC), TRIP Assisted Bainitic steel (TB, TBC), or Quenching and Partitioning steel (QP, QPC), may present certain joining challenges. Refer to individual model repair procedures for joining/welding requirements.

Non-Structural Components:

Damaged non-structural mild steel components will require repair or replacement. Mild steel, in non-structural applications, can be repaired or replaced using common methods that apply heat or produce heat during the repair procedure.

Damaged non-structural mild steel components may require may require heat for the purpose of straightening the metal. If the damaged component requires heat for straightening, heat may be used to realign the component. If the mild steel component is attached to any type of high-strength steel component, heat must not transfer to the adjacent high-strength steel component.

Corrosion Protection

CORROSION PROTECTION

Corrosion Protection Restoration

"Corrosion protection" encompasses all the materials and coatings which protect a vehicle from corrosion and include:

- Coated steels
- E-coat primer on the complete body
- Body sealing to eliminate water and air intrusion where panels join
- Structural adhesives in some joints
- Chip resistant primer applications on the entire body
- Paint application
- Underbody corrosion protection
- Inner panel corrosion protection added to repair areas

Corrosion protection must be restored during a repair anytime it may have been compromised. All areas that have been subjected to structural pulls, clamping, straightening, welding, or any other any other operation that may have imparted damage to the corrosion protection system will need to be addressed.

In the repair process corrosion protection is addressed in three phases: pre-refinish, refinish and post-refinish.

Pre-refinish

In the pre-finish phase, structural adhesives, seam sealers and other applied coatings are installed. Sheet metal seams are sealed to prevent water intrusion into the "dry" areas of the vehicle, such as passenger compartment, and also to prevent intrusions of contaminates, such as water and road salt, into seams causing corrosion. Lap joints, hem flanges, and any panel mating locations need to be addressed during the repair and treated to duplicate the original vehicle build.

All bare metal should be epoxy primed prior to applying seam sealer, following the refinish material provider's instructions for doing so, unless the manufacture of the sealer specifically states otherwise.

When working around pinch weld flanges, seam sealer should be installed to duplicate the original appearance and function. If it is unclear whether the original sealing material **between** the flanges is strictly

Hoisting And Jacking

HOISTING AND JACKING

GRAND CHEROKEE LIFTING POINTS

fender tower mounts, and rear body header will utilize washers as spacers where a specific spacer does not exist. The shims and spacers should be sealed between each other and to the stationary surface. Care should be taken when smoothing sealer around washers to give an undetectable repair. Refinish the repair area per the paint manufacturer's recommendations for corrosion resistance and appearance purposes.

NOTE

Refer to the structural adhesives manufacturer for information on work, handling and curing times.

7. Apply a 10 - 13 mm. (3/8 - 1/2 in.) bead of structural adhesive to the bare metal mating surfaces of the backer panels. Evenly apply the adhesive over the complete bonding surface. Apply a 10 - 13 mm. (3/8 - 1/2 in.) bead of structural adhesive to bare metal mating surfaces. Use a body filler applicator to level the adhesive, making sure to cover all bare metal to protect against corrosion.
8. Position the new backer panel(s), making sure not to separate after contact. Lifting will create air bubbles and weaken the bond. **Adjustments must be made by sliding, not lifting the panel(s).**
9. Clamp tightly and evenly. Adhesive has glass beads that will prevent complete squeeze out. Install screws to the "hard to clamp areas".
10. Remove excess adhesive from all joints prior to adhesive cure.
11. Allow adhesive to cure, per manufacturer recommendations. When fully cured, expect the acrylic adhesive to be a little tacky, as this is a normal characteristic of the adhesive.
12. Remove clamps and screws.
13. Repeat procedure for installation of new panel.
14. Remove any remaining adhesive with a grinder or abrasive disc. All adhesive must be removed from the cosmetic repair area to ensure proper adhesion of further repair and refinish materials.
15. Bevel the center of the screw holes and apply fiber-reinforced waterproof body filler to the screw holes and section seam. When cured, sand and apply conventional body filler and block sand as necessary. Prime and paint per paint manufacturer recommendations.

NOTE

For cavity wax that meets FCA US LLC's approved replacement materials (Refer to Collision Information/Approved Materials/ADHESIVES SEALERS AND ADDITIONAL MATERIALS).

16. Apply inner panel cavity wax corrosion inhibiting materials to panel areas that do not have foam injected in them.

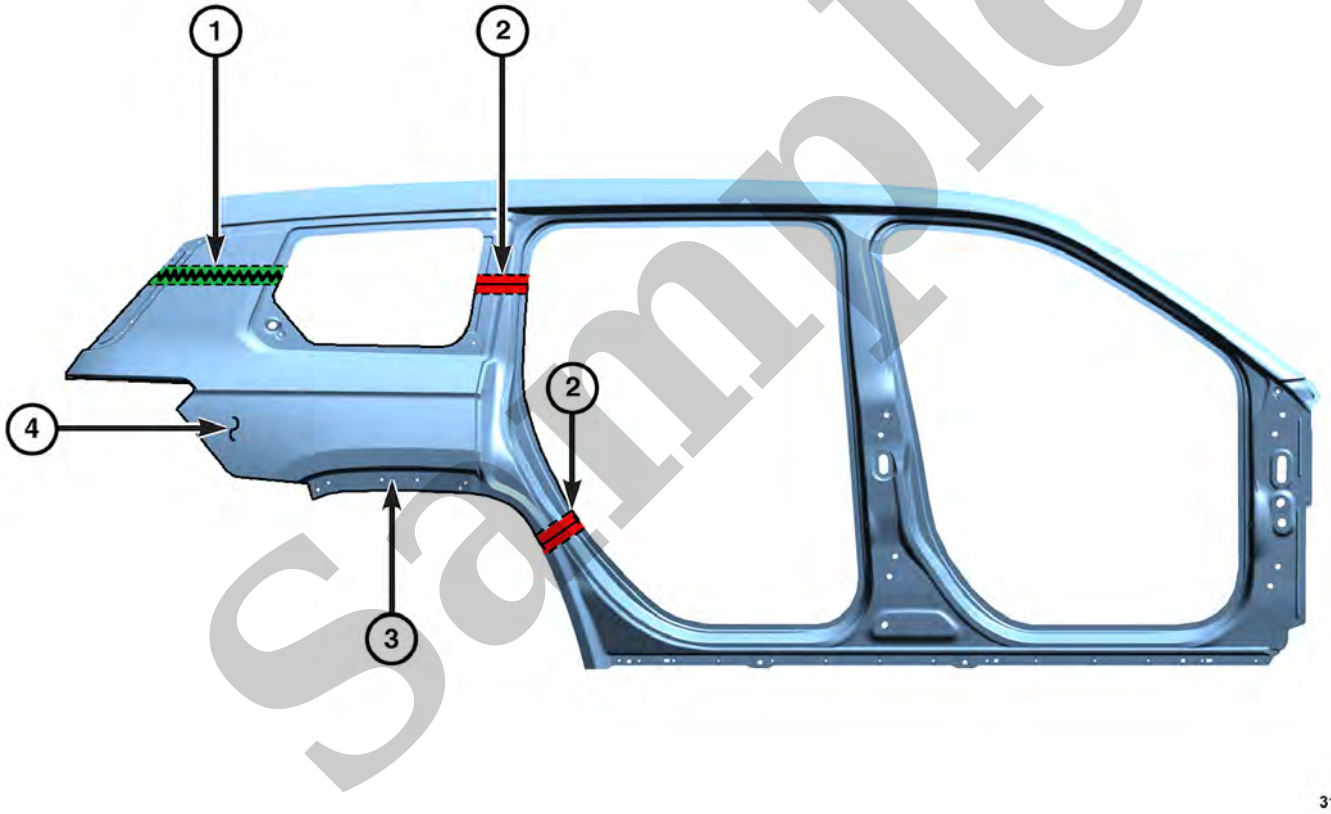
Door Skin Replacement

Overview: Depending on the type of door to be repaired, a full skin or a belt cut will be required. Belt cut replacement is necessary when a door with a full skin, around the window opening, has an angle that makes it to difficult to get tools into to do a quality hem flange installation. A butt-joint is used at this seam.

from the OEM". For further information on Welding and Weld Bonding (Refer to Collision Information/Standard Procedures/WELDING AND WELD BONDING). GMAW (plug or puddle) welds may be used in place of Squeeze Type Resistance Spot Welding (STRSW) only in areas that specifically use spot welds and in areas that access limitations will not allow STRSW. GMAW cannot be used in the weld bonding process. Never weld with GMAW within 25 mm. (1 in.) of any area where structural adhesive is used. The weld "heat zone" will destroy the properties of the adhesive.

Vehicle design will determine if the sectioning location is to be in the pillar or the roof line area. For locations and warnings that may apply to the body side aperture / quarter panel sectioning locations (Refer to Collision Information/Standard Procedures/SECTIONING LOCATIONS AND PROCEDURES).

Body Side Aperture/Quarter Panel WL75 - Long Wheelbase (3 Row)



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1 - WELDED SECTION JOINT WITH BACKER PANEL
2 - SECTION JOINT WITH BACKER PANEL
3 - WELD BONDING (AREAS WHERE ACCESSIBLE)
4 - REAR BODY SIDE APERTURE

23. Apply fiber-reinforced waterproof body filler to screw holes and joint. Complete the repair using conventional body filler, and block sanding.
24. Apply an epoxy or anti-corrosion primer. When cured, lightly scuff and then apply seam sealer as necessary.
25. Prime and paint per paint manufacturer recommendations.

NOTE

For cavity wax that meet FCA US LLC's approved replacement materials (Refer to Collision Information/Approved Materials/ADHESIVES SEALERS AND ADDITIONAL MATERIALS).

26. Apply inner panel cavity wax corrosion inhibiting materials.

Laser Braze Roof Replacement

SAFETY PRECAUTIONS-

WARNING

Always wear an approved respirator, as well as skin and eye protection per adhesive manufacturer recommendations as stated in the product Safety Data Sheets (SDS).

WARNING

Failure to follow these instructions may result in possible serious or fatal injury.

- Safety Data Sheets (SDS) must be available and understood before adhesives are handled.
- All personnel should be instructed on the proper procedures to prevent skin contact with solvents, curing agents, and uncured base adhesives, which could cause allergic reactions and / or sensitization.

1. Be certain vehicle is setting level on its suspension.

NOTE

Interior removal is required due to physical positions required by the technician to perform the repair.

2. Remove windshield, backglass, headliner, seats, console and all necessary interior trim.
3. Cover any remaining interior, glass and painted surfaces with clean welding blankets to ensure complete protection against sparks and debris.