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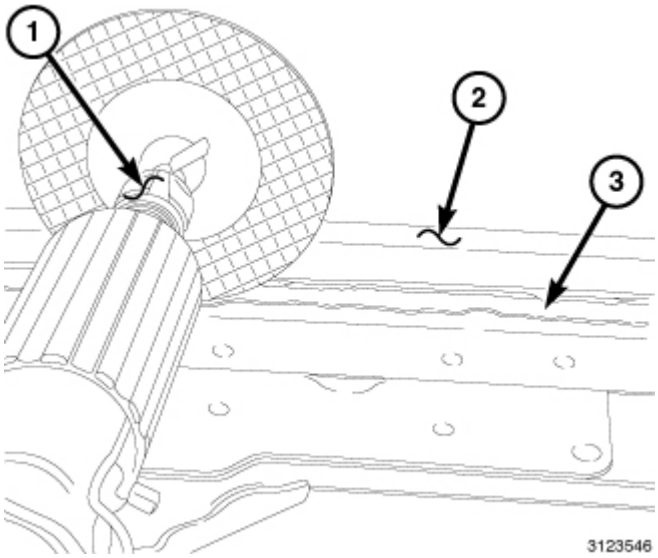
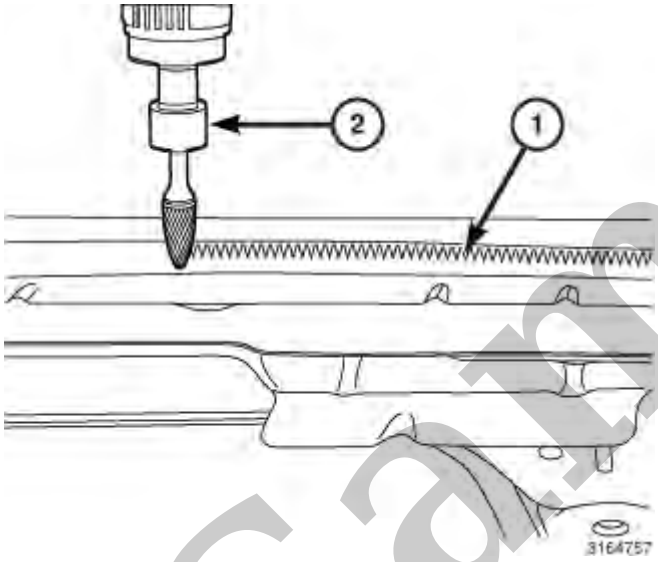
1995 JEEP Wrangler OEM Service and Repair Workshop Manual

Go to manual page



13. Cut off the flange (3) with a cut-off wheel (1) or equivalent.



NOTE

Use extreme care as to not as not to thin or cut through the outer aperture while removing the remaining roof flange and laser braze weldment.

14. Remove any remaining laser braze (1) and roof panel flange by using a die grinder (2) equipped with a 0.5 in. (12.7 mm.) carbide rotary file (tree shaped) to start with and finish with an angle grinder with 50 grit abrasive disc.

15. Using an angle grinder, remove any remaining weldment from the front and rear roof headers.

16. Remove debris from the mating surfaces with a vacuum or pressurized air to ensure proper fit and adhesion.

4. Stitch weld the seam/crack closed using the recommended welding process and in accordance with the welding guidelines (Refer to 31 - Collision Information/Standard Procedures/WELDING AND WELD BONDING).

5. Dress the welds as necessary. **Careful not to thin the base metal.**

> **NOTE**
>
> For approved cavity wax (Refer to Collision Information/Approved Materials/ADHESIVES SEALERS AND ADDITIONAL MATERIALS).

6. Depending on the location and visibility of the repair surface refinishing will vary from body filler, finishing and painting to simply applying an epoxy or anticorrosion primer and rubberized undercoating.

7. Apply inner panel cavity wax corrosion inhibiting materials.

Often the foam can be removed during the removal of the damaged components. If this is not possible, examine to see if access is possible through existing holes or openings. The example above shows the left side C-pillar PUR foam (3) shown for clarity and the right side C-pillar PUR foam (4) accessible through an existing opening. It also shows the left side D-pillar PUR foam (2) shown for clarity and that it is not accessible in the D-pillar area (1).

PUR foam removal options-

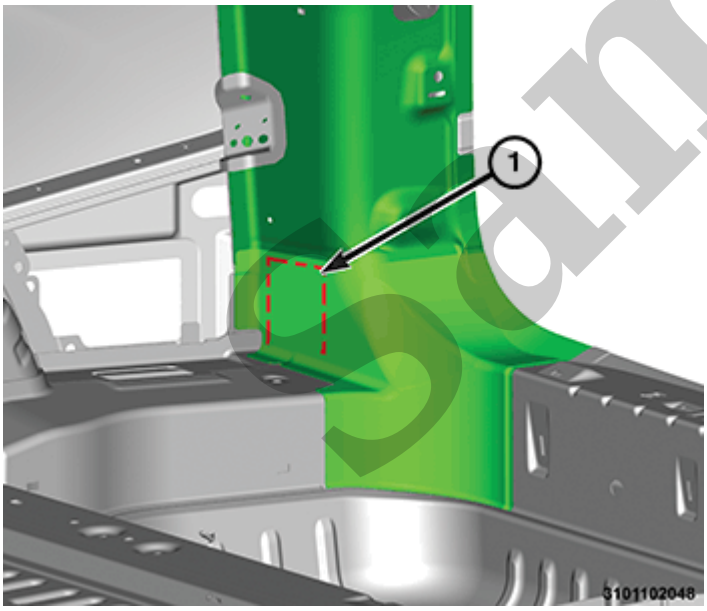
1. When the components to be replaced are removed from the vehicle.
2. Through openings in the adjacent components.

> **NOTE**
>
> Only use the following options when the first two options are not possible.

3. Gain access by performing one of the following procedures.

Determine which procedure will work best in the situation, either the Window Access Procedure or Hole Access Procedure.

Window Access Procedure



1. Remove or protect components and the surrounding areas from sparks and welding spatter as necessary
2. With the use of a cut-off wheel, cut a “U” shaped access point (1) in the area of the PUR foam location.

YOUR CURRENT VEHICLE

Post Collision Scan Tool Inspection

POST COLLISION SCAN TOOL INSPECTION

Before any repair decisions are made, access to FCA US LLC service information is required. Diagnostic Trouble Codes (DTCs) do not identify which part needs to be replaced, rather DTCs are a piece of the diagnostic process that will lead a trained and qualified technician to the correct test to accurately diagnose the damage. Be certain of proper battery support when scanning.

Collision damage pre-scan before repairs- All vehicles that are in a collision need to have a diagnostic scan done at the beginning of the repair process, preferably during the estimating process, to determine damaged systems that may not be obvious. If proper battery support is not possible due to collision damage the scan should be performed during the repair process as soon as the battery can support the system and operate safely. After the repair process is completed the vehicle will need to be scanned again to be certain the systems involved are functioning properly. A Malfunction Indicator Light (MIL) may not illuminate for a particular system yet a DTC may be present, active or stored, compromising the proper function of the system. Identifying system faults will significantly reduce unexpected repairs at or near the end of the repair process. It will reduce the need for additional charges and benefit the vehicle being delivered without delay. The use of the Mopar scan tool wiTECH™ will be necessary to access DTC's. and to perform many of the programming and initialization of modules. If the wiTECH™ scan tool is not available it can be obtained through an FCA US dealership service center. DTC identification is only part of the repair process as it will most likely be necessary to access the service and diagnostic information to understand proper operation, wiring and diagnosis and testing of the system and DTC.

The vehicle will also need to have a diagnostic scan done upon the completion of repairs to determine that all systems are functioning properly and if any of the systems are in need of repair, reprogramming or initialization.

Pre-Scan Process

1. Conduct a customer consultation.
    a. Gain customer authorization to scan the vehicle and to share the data with the appropriate parties involved (sublet technician, insurer, repair facility personnel).
2. Check for Malfunction Indicator Lamps (MILs) and/or information display messages.

the technician must ensure that the additional material thickness does not impede installation of fasteners, etc. that the hole exists for.

All dimensions are to be restored to factory specifications prior to full or partial component replacement.

CAUTION

NVH foam should be removed from the weld area, as material may be flammable.

CAUTION

Do not apply any corrosion protection or NVH foam prior to completion of welding, as materials are flammable.

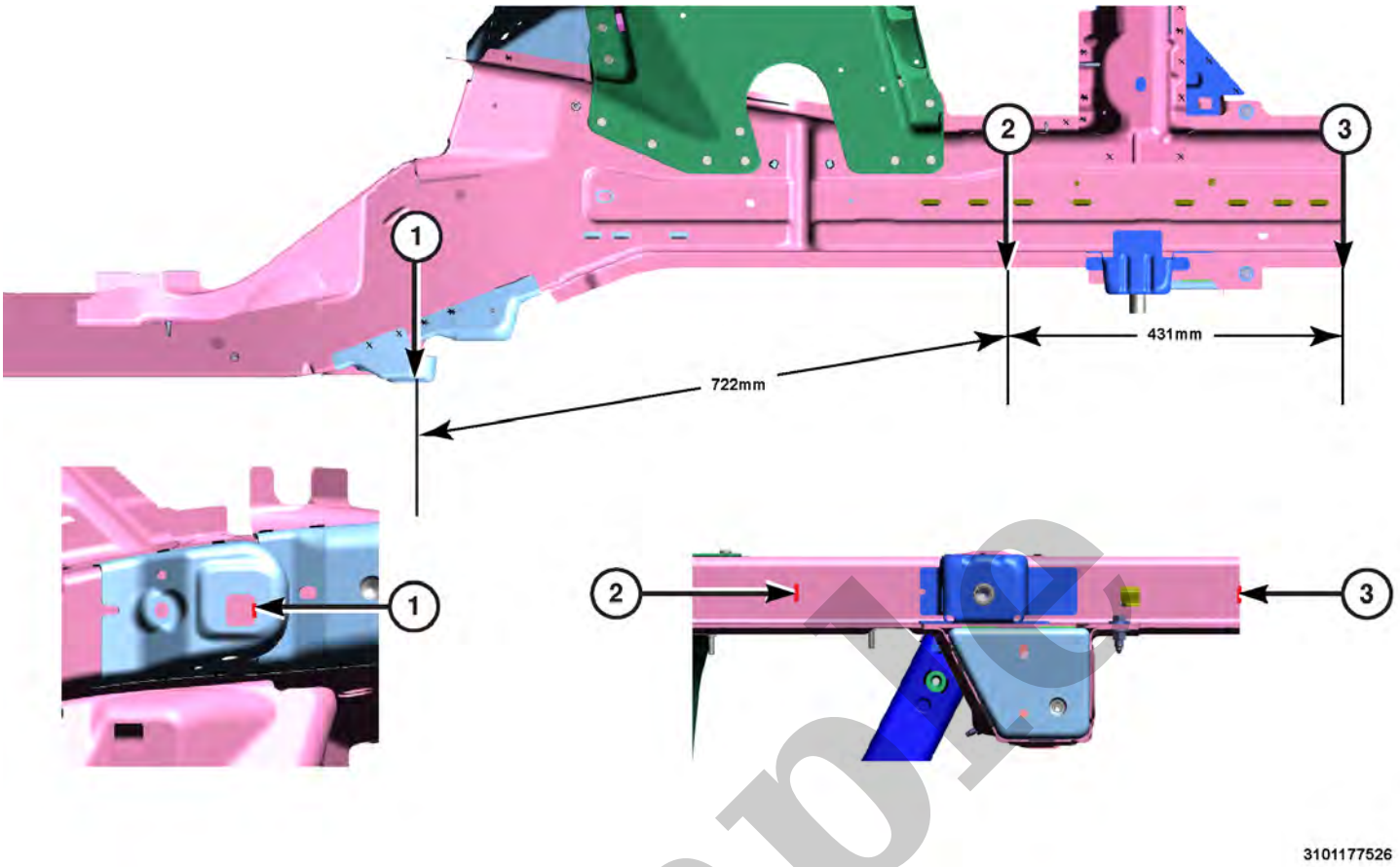
The described sectioning locations only explain joint location and type. All other welds along the sectioned portion of the component must be replaced. Squeeze Type Resistance Spot Welding (STRSW) is the method to be used. If accessibility prevents application of spot welds, MIG plug welds are to be used. Welding of structural panels through 3 or more tiers of panel stack ups will require 9.5 mm. plug welds. Exterior panels should be installed using 8 mm. plug welds. For further information (Refer to Collision Information/Standard Procedures/WELDING AND WELD BONDING).

NOTE

Advanced High Strength Steels that are designated as TRIP Assisted Bainitic Steels have zinc coating that **MUST** be removed prior to welding. Not following proper prepping will compromise the integrity of the steel. To locate components that utilize this metal (Refer to Collision Information/Technical Specifications/Standardized Material Identification). Be certain to follow prepping requirements (Refer to Collision Information/Standard Procedures/Welding and Weld Bonding).

When welding is completed apply inner panel rust proofing cavity wax. Apply to the inner cavity areas in two applications with a 30-minute flash period between the applications. Pay particular attention to areas which have been welded. Corrosion protection should always be restored to manufacturer specifications. For further information on Corrosion Protection (Refer to Collision Information/Standard Procedures/CORROSION PROTECTION)

Finish, sealers, adhesives and silencers should be reapplied or replaced to OEM locations and specifications (Refer to Collision Information/Locations/STRUCTURAL ADHESIVE, FLEXIBLE ADHESIVES AND SEAM SEALER LOCATIONS).



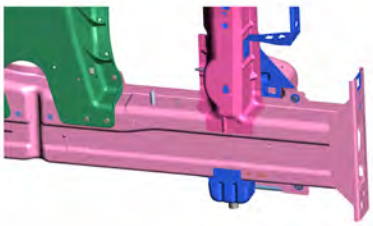
NOTE

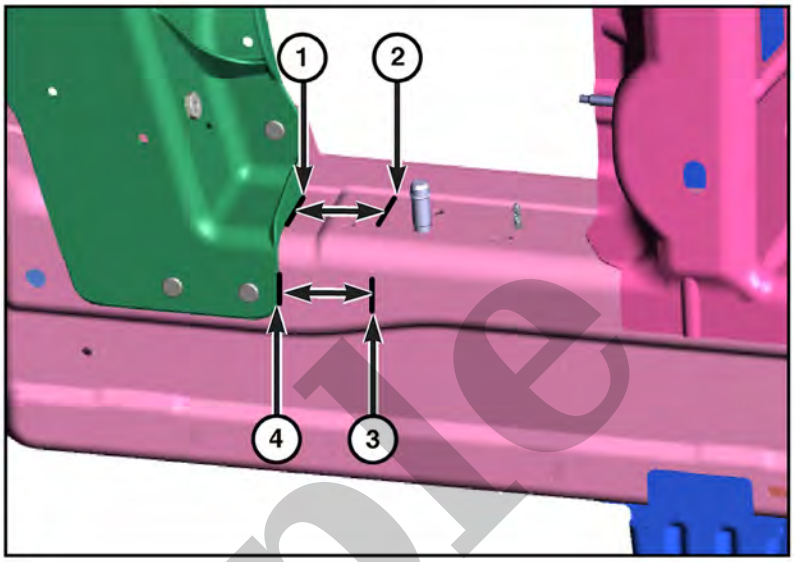
Dimensions shown in figure are in the perspective of a tram gauge with the pointers set to equal lengths.

1- Front frame rail square PLP center of front edge (X= 456.3 Y= 447.4 Z= 45.5)
2- Measure to the center of the bottom surface of front frame rail (X= 246.9 Y= 429.9 Z= 115.0)
3- Front frame rail center of front edge (X= 667.6 Y= 430.7 Z= 115.0)

Removal

1. From the center of the front edge of the front frame rail square PLP (1), on the vehicle, measure forward 722 mm. (28 .4 in) to the center of the bottom surface of the front rail (2) and mark the inner front rail.





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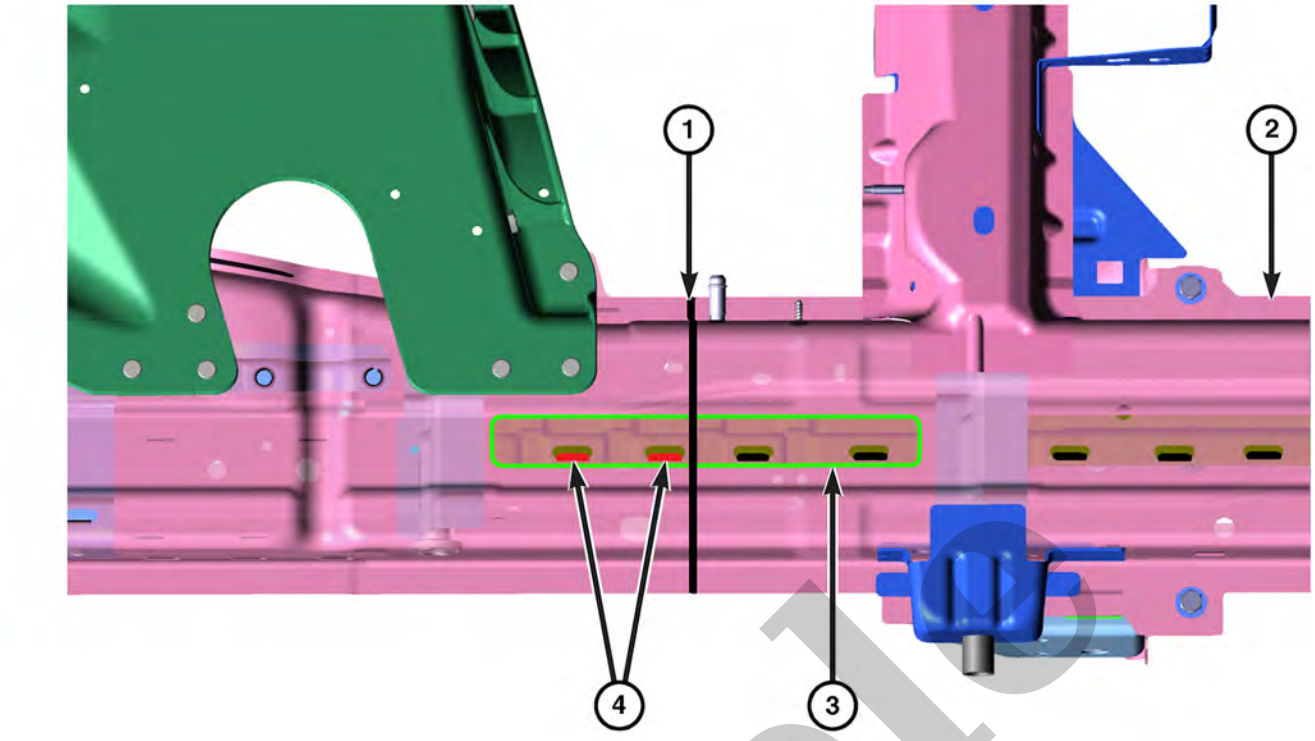
7. From the base of the center front edge at the top of the wheelhouse (1), measure forward 58 mm (2.3 in) and mark (2).

8. From the front edge of the side of the wheelhouse (4), measure forward 58 mm (2.3 in) and mark (3).



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NOTE

Inner front frame rail (2) shown transparent to identify underlying front frame rail reinforcement (3).

CAUTION

To prevent damage to the Inner Reinforcement , extreme care must be taken while cutting the rail.

NOTE

Use care to only remove the weld beads (4) and not the base metal from the inner front frame rail (2) and the inner reinforcement (3).

14. With the use of a grinding disc or equivalent, remove the two slot welds (4) rearward of the cut line (1) on the vehicle. Do **NOT** remove base metal from frame rail and inner reinforcement.

NOTE

Use care to only cut through the inner frame rail (2) and not the inner reinforcement (3). This is