

2005 GRAND CHEROKEE



DODGE

2005 Dodge
Dakota





2005 GRAND CHEROKEE

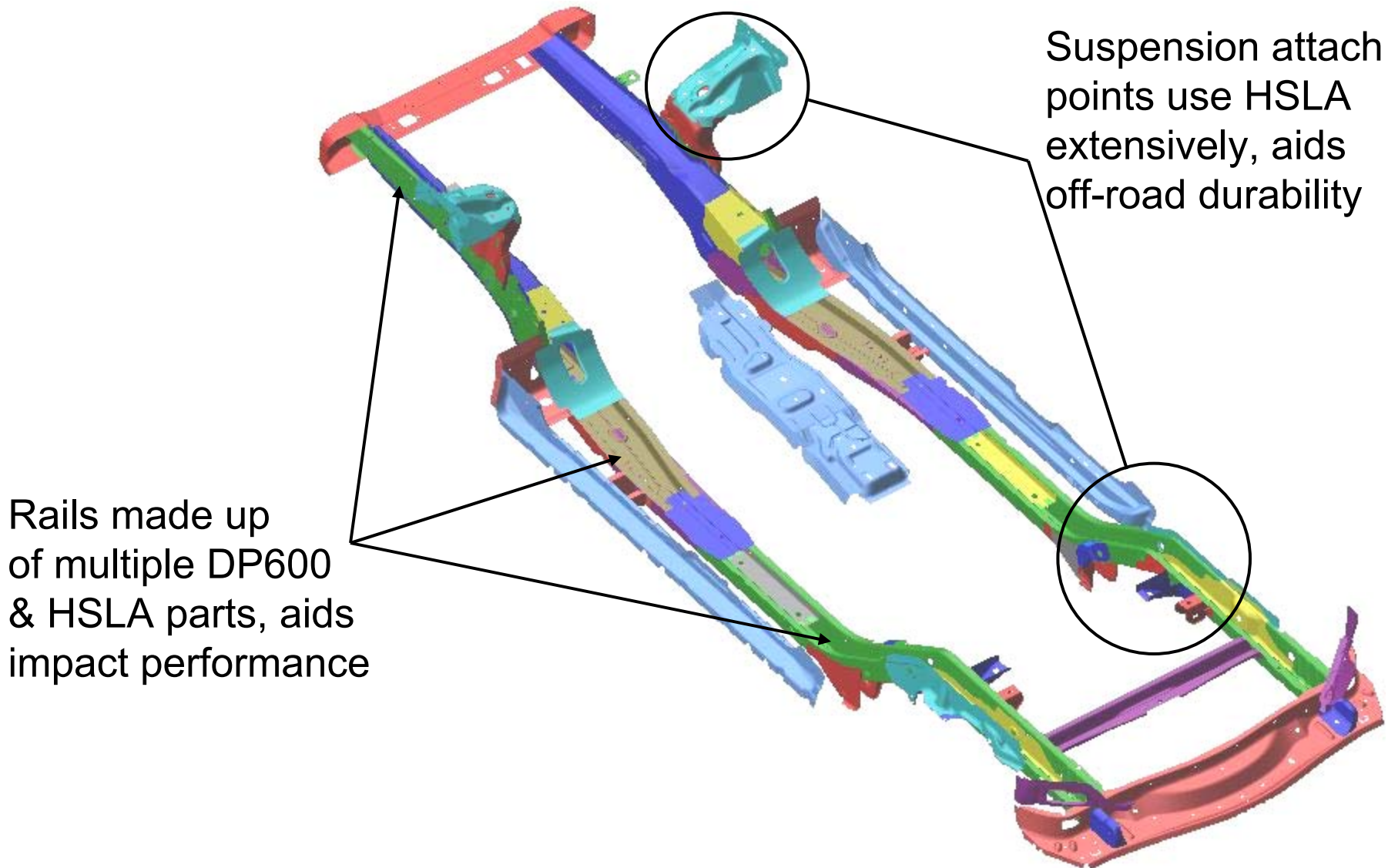




2005 Grand Cherokee Body Structure Overview

- Greater use of HSLA steel
- Extensive use of Dual Phase (DP600) steel (primarily for improved impact performance)
- Continued application of structural adhesive
- Stiffer vehicle structure for improved NVH performance & better suspension response
- Use of laminate steel for dash & wheelhouses
- Aluminum hood and hood reinforcements
- Multiple laser welded panels
- Bake Hardenable steel used in door outer skins

Underbody High Strength Steel Applications



Suspension attach points use HSLA extensively, aids off-road durability

Rails made up of multiple DP600 & HSLA parts, aids impact performance

Upperbody High Strength Steel Applications



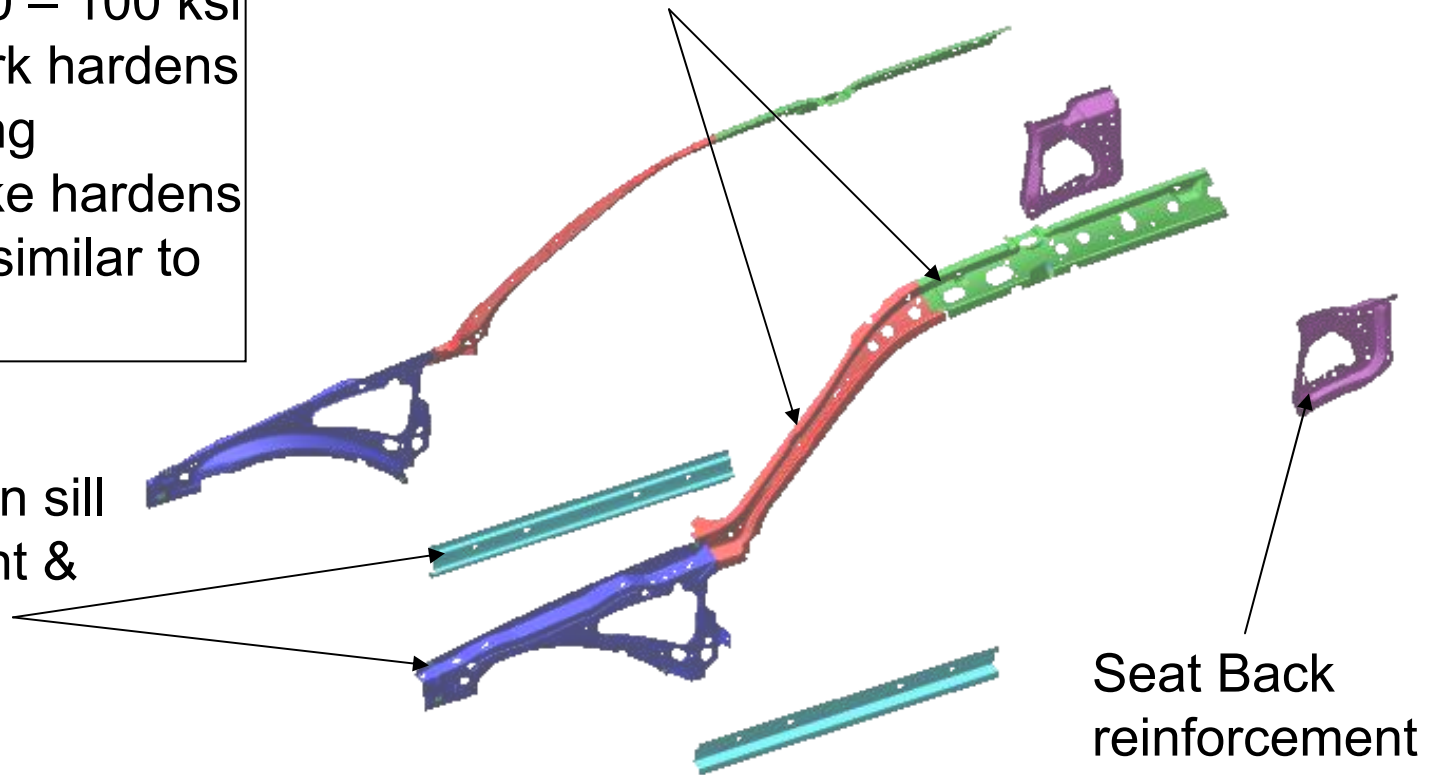
DP600 Notes:

- Typical yield strength as high as 90 – 100 ksi
- Material work hardens during forming
- Material bake hardens
- Weldability similar to HSLA steel

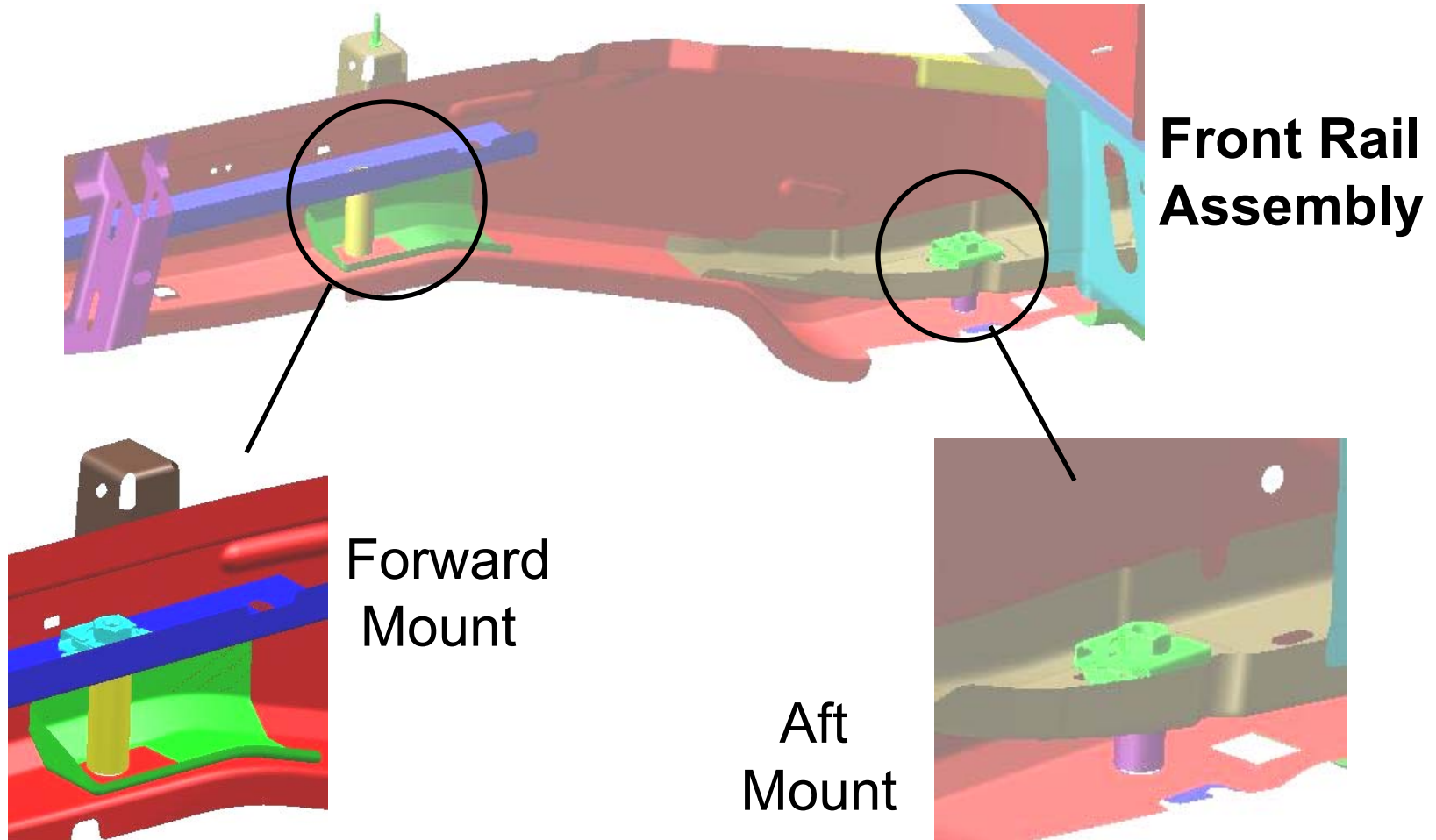
A Pillar reinforcements are DP600 for impact

HSLA used in sill reinforcement & shotgun

Seat Back reinforcement uses HSLA



Front Cradle Attachment Points

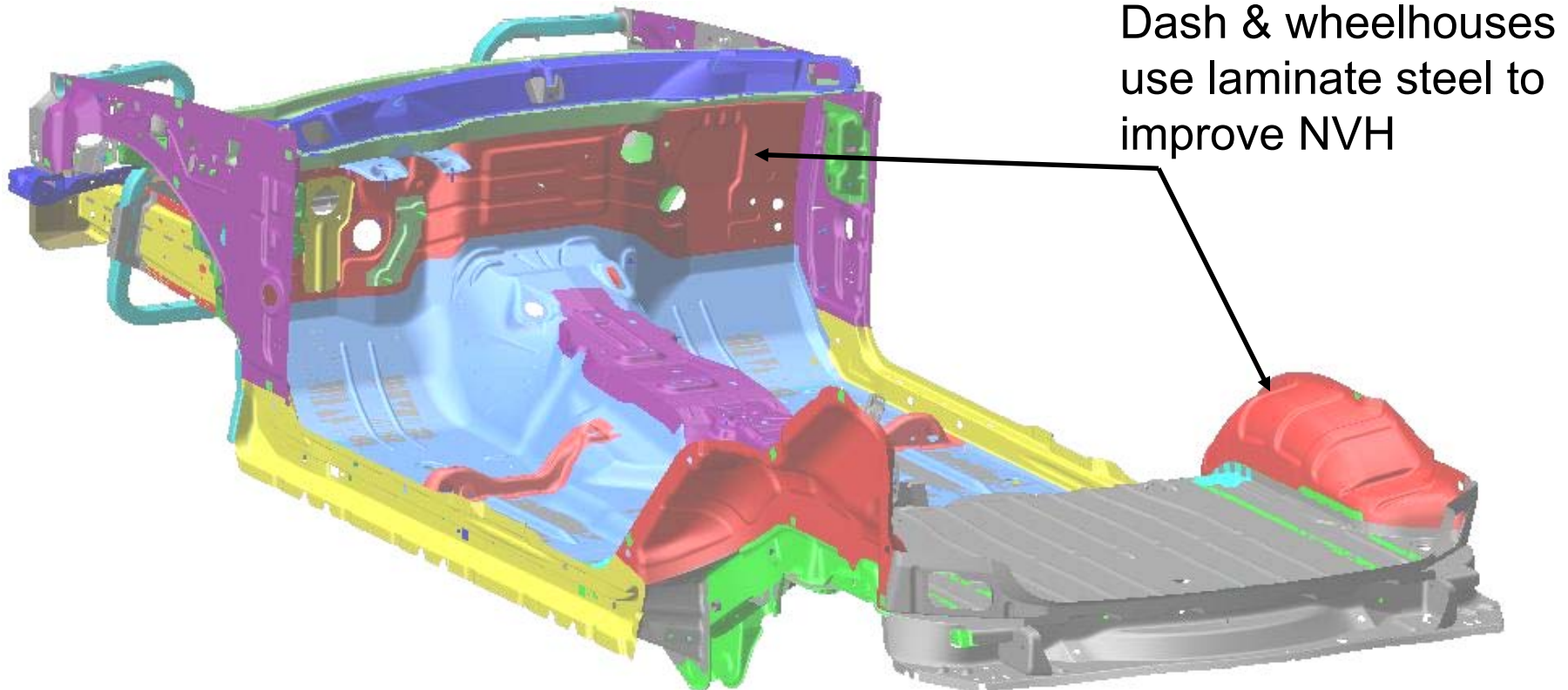


Note: The actual Cradle Bolts specified must be used in this application

Laminate Steel Applications



- Laminate steel consists of a pair of steel outer skins sandwiching a viscoelastic polymer. It substantially benefits NVH performance.
- Repair procedures should not be significantly different from regular steel.



Dash & wheelhouses use laminate steel to improve NVH

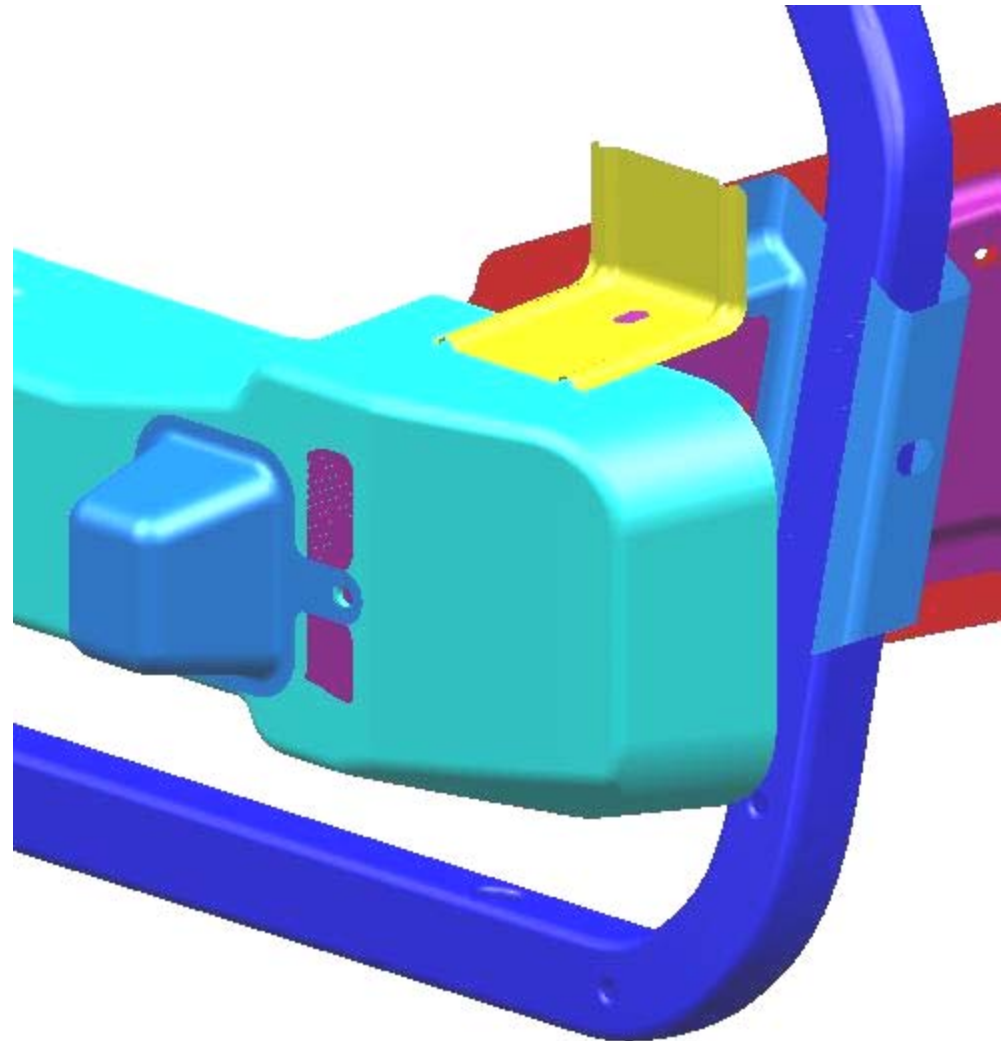
Energy Absorption Parts Crush Cans



- Crush cans are common with Jeep Liberty
- Cans are non-handed
- Replace if damaged
- Installation is accomplished with a single fastener & a location tab in the front crossmember

Other notable EA parts;

- Stroking steering column
- Stroking prop shaft



Structural Adhesive & Sealant Application

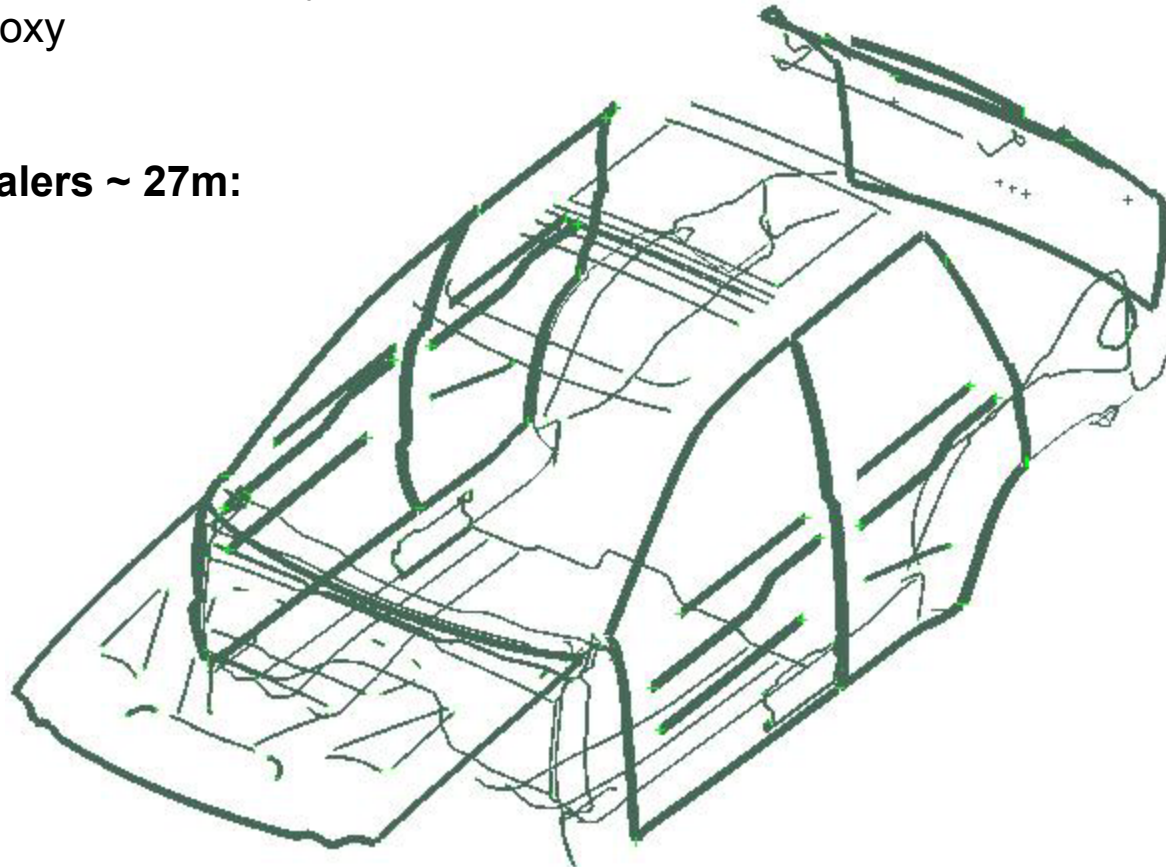


Epoxy Adhesives ~ 62m:

- 2250 psi shear strength, 1 part heat cured, 50% expandable
Used for overall body stiffness and to aid durability performance
- 1900 psi 2 component acrylic epoxy
Used in hem flanges of closure

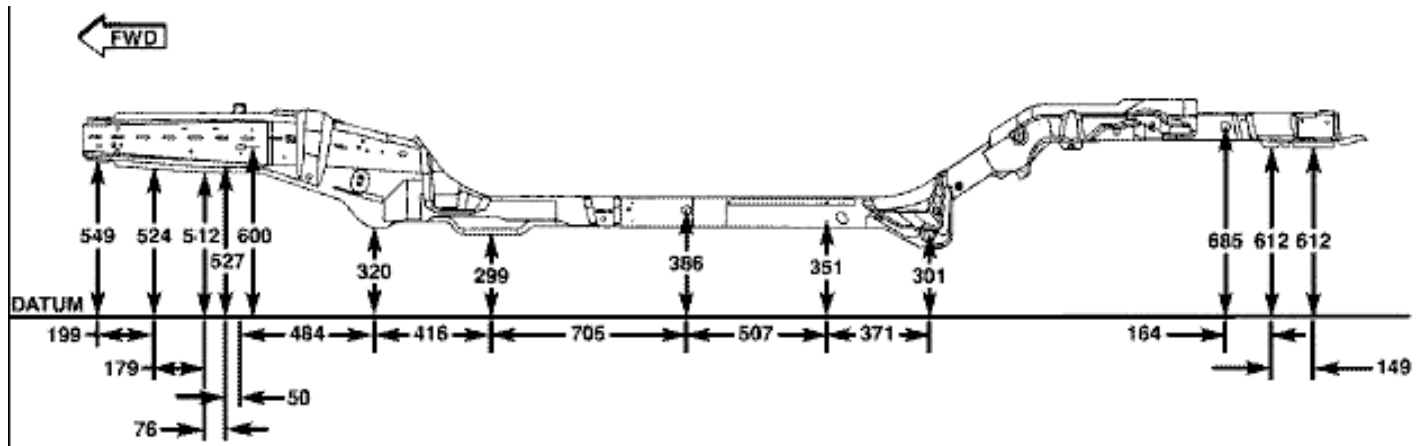
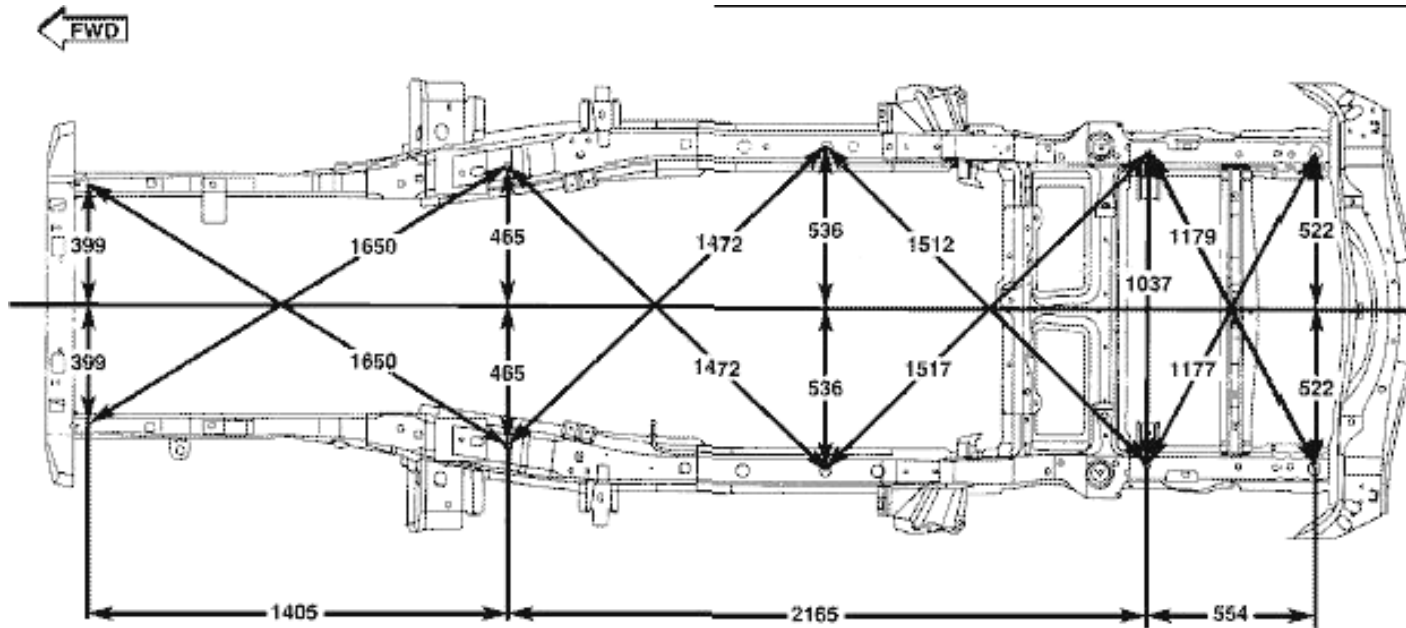
Vinyl Plastisol (Thumbable) Sealers ~ 27m:

- 120 psi shear strength,
provides watertight sealing in a
variety of locations
- 80 psi shear strength
expanding adhesive used for
anti-flutter in roof bows

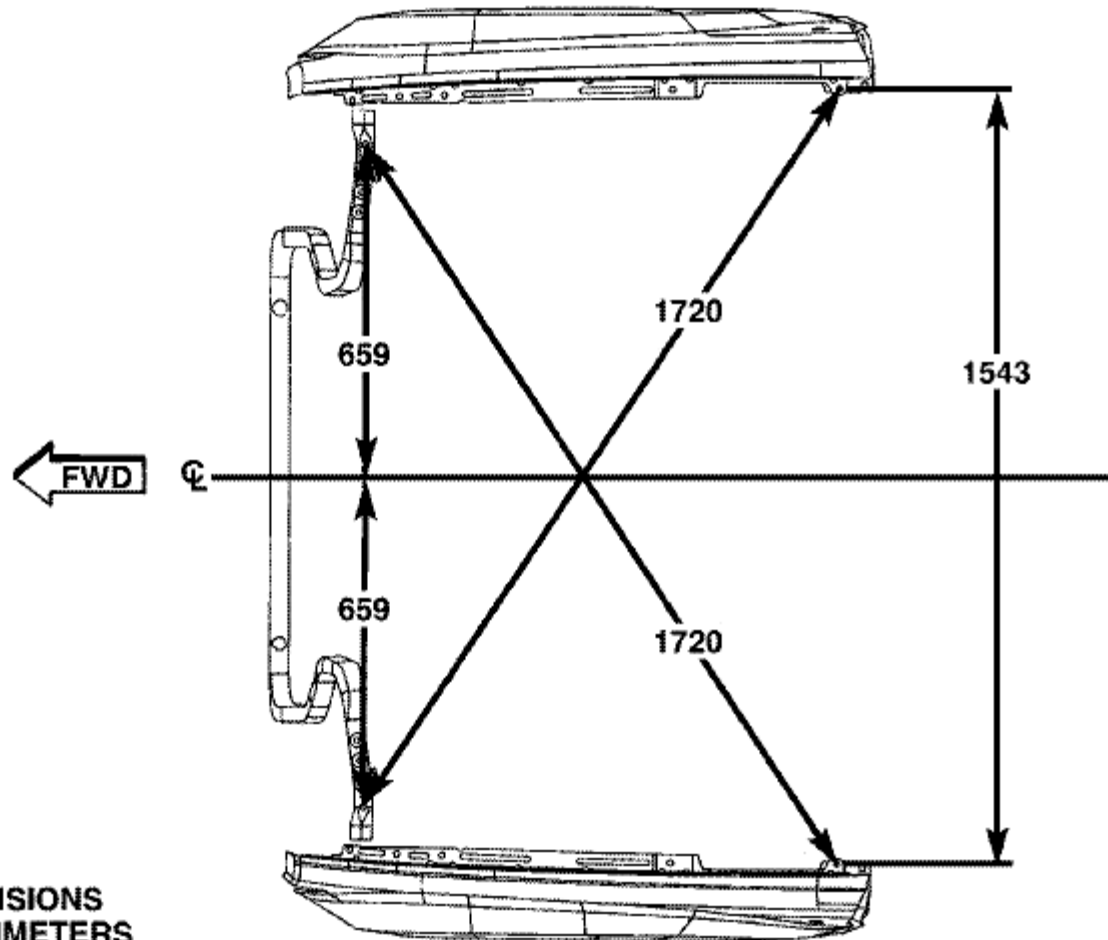




Underbody Dimensions PLP Locations



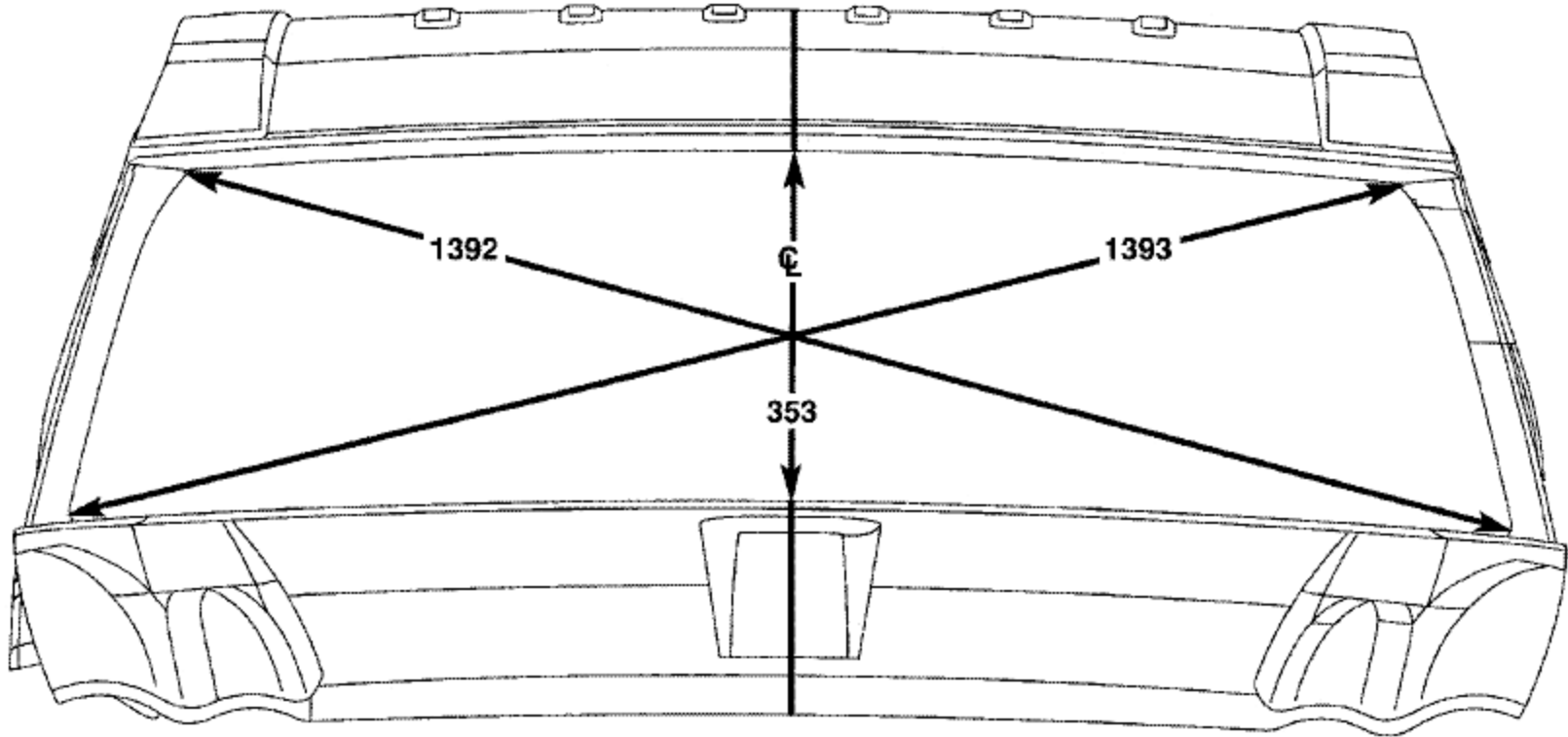
Dimensions Engine Compartment



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Fig. 1 ENGINE COMPARTMENT

Wind Shield Opening



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Fig. 6 WINDSHIELD OPENING



Front Door Opening

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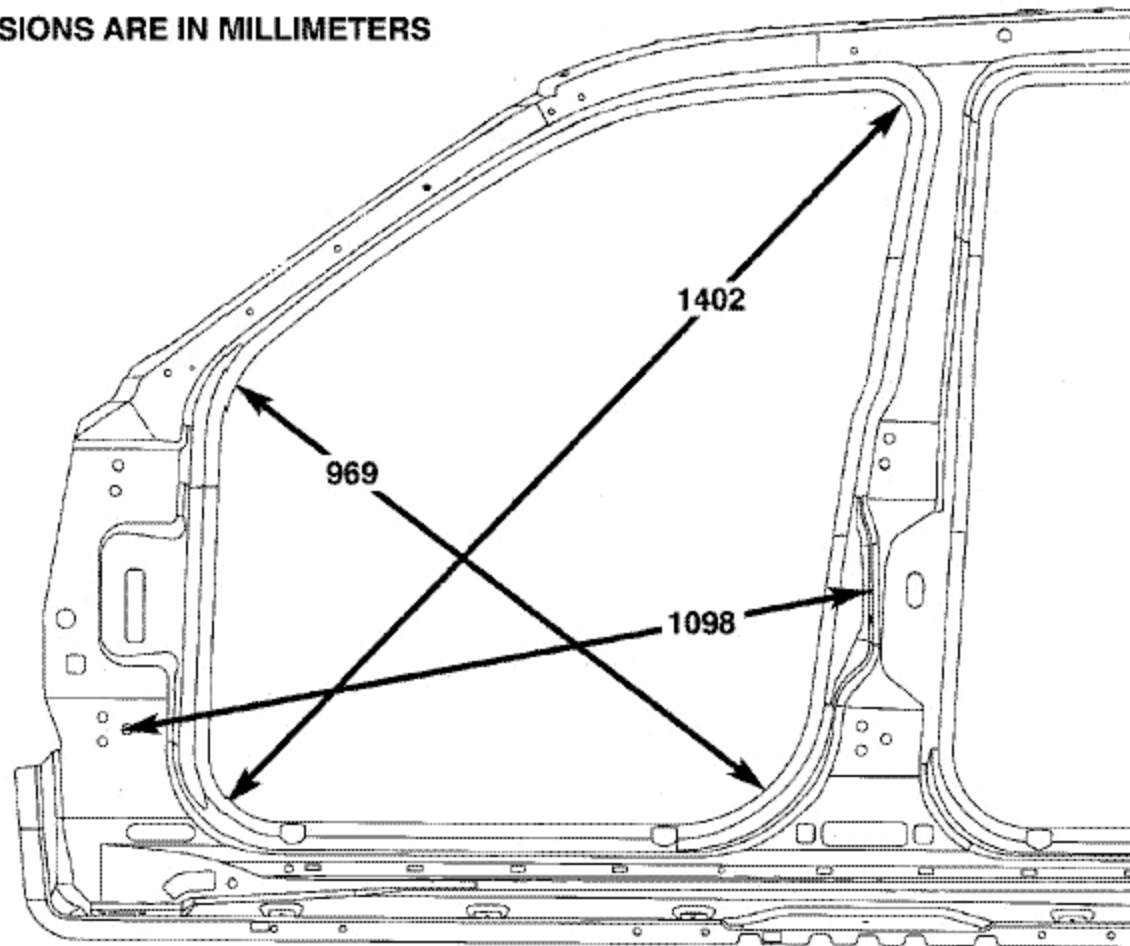


Fig. 2 FRONT DOOR OPENING



Rear Door Opening

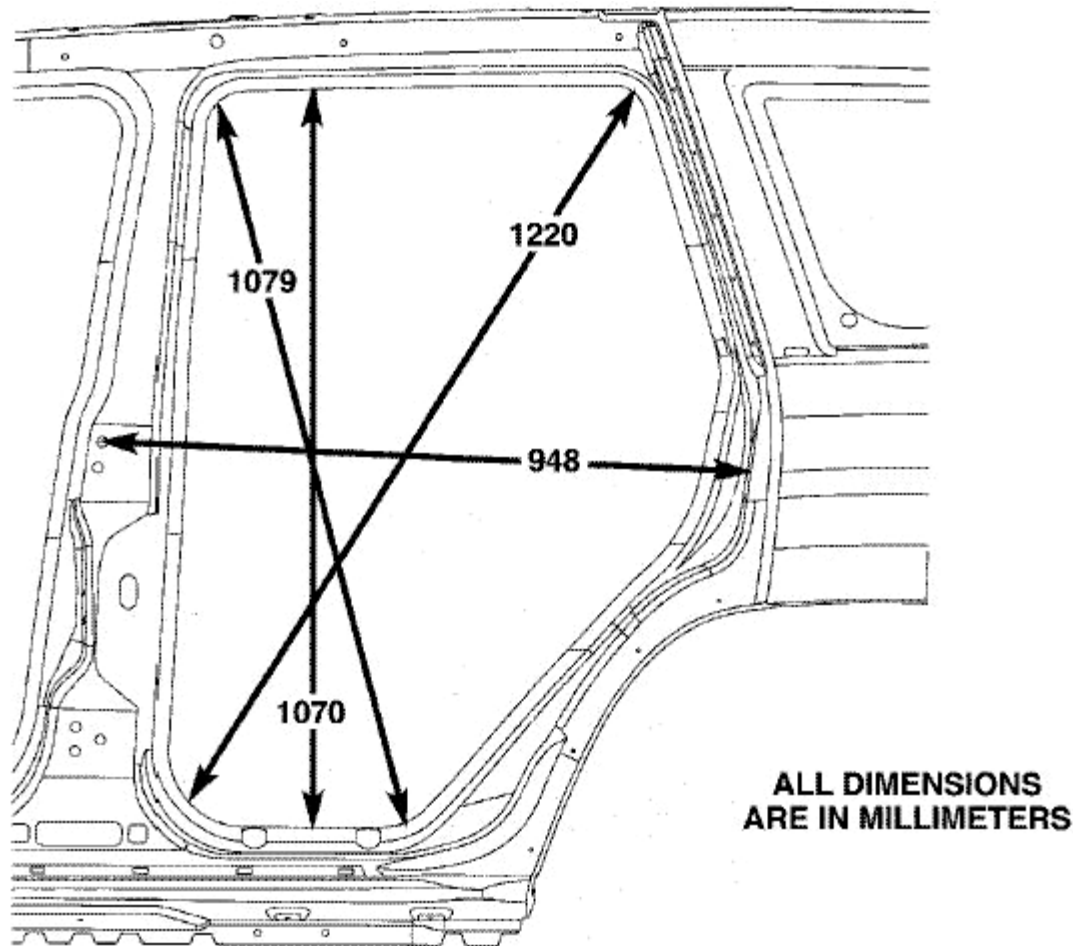
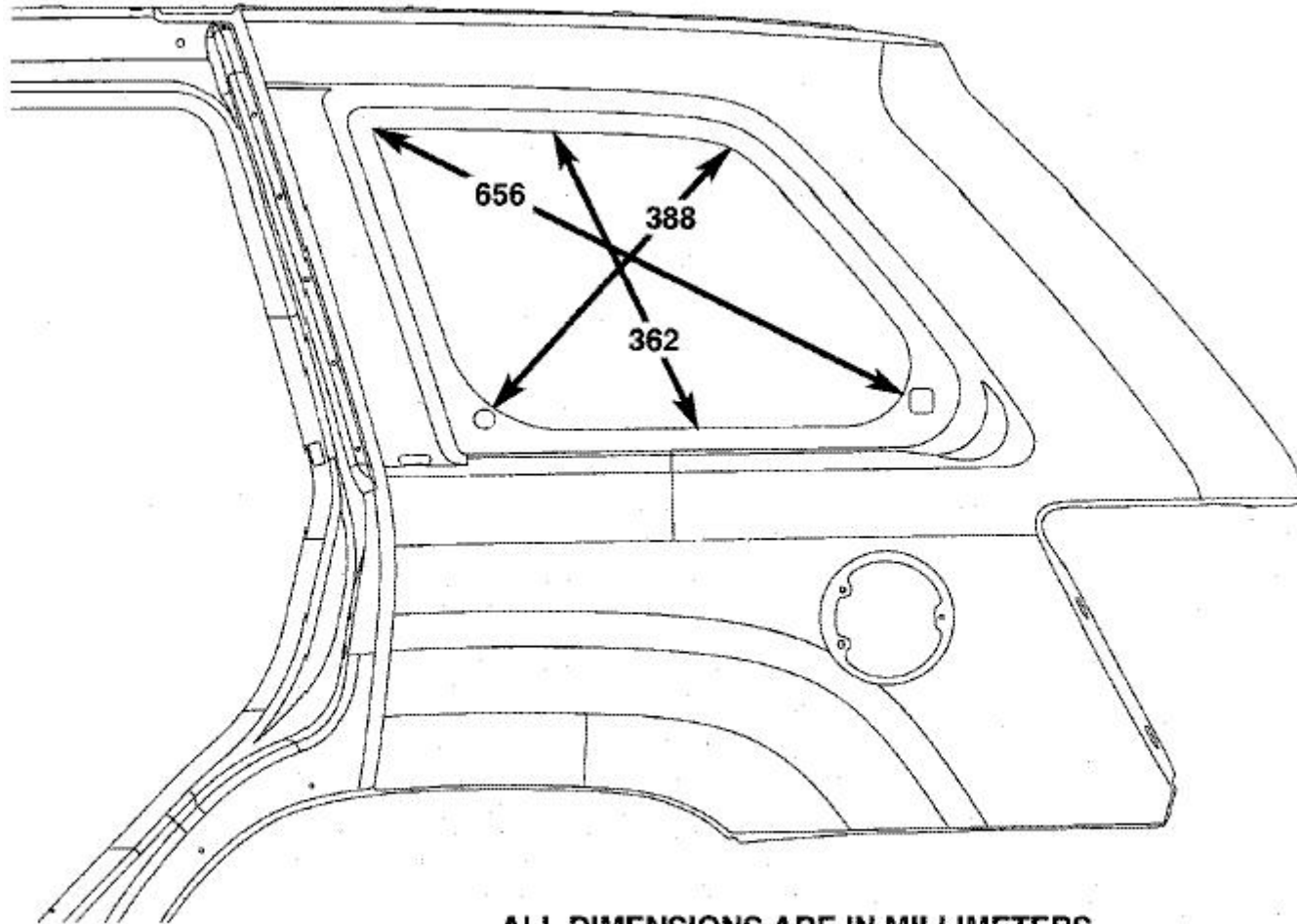


Fig. 5 REAR DOOR OPENING



Quarter Glass Opening

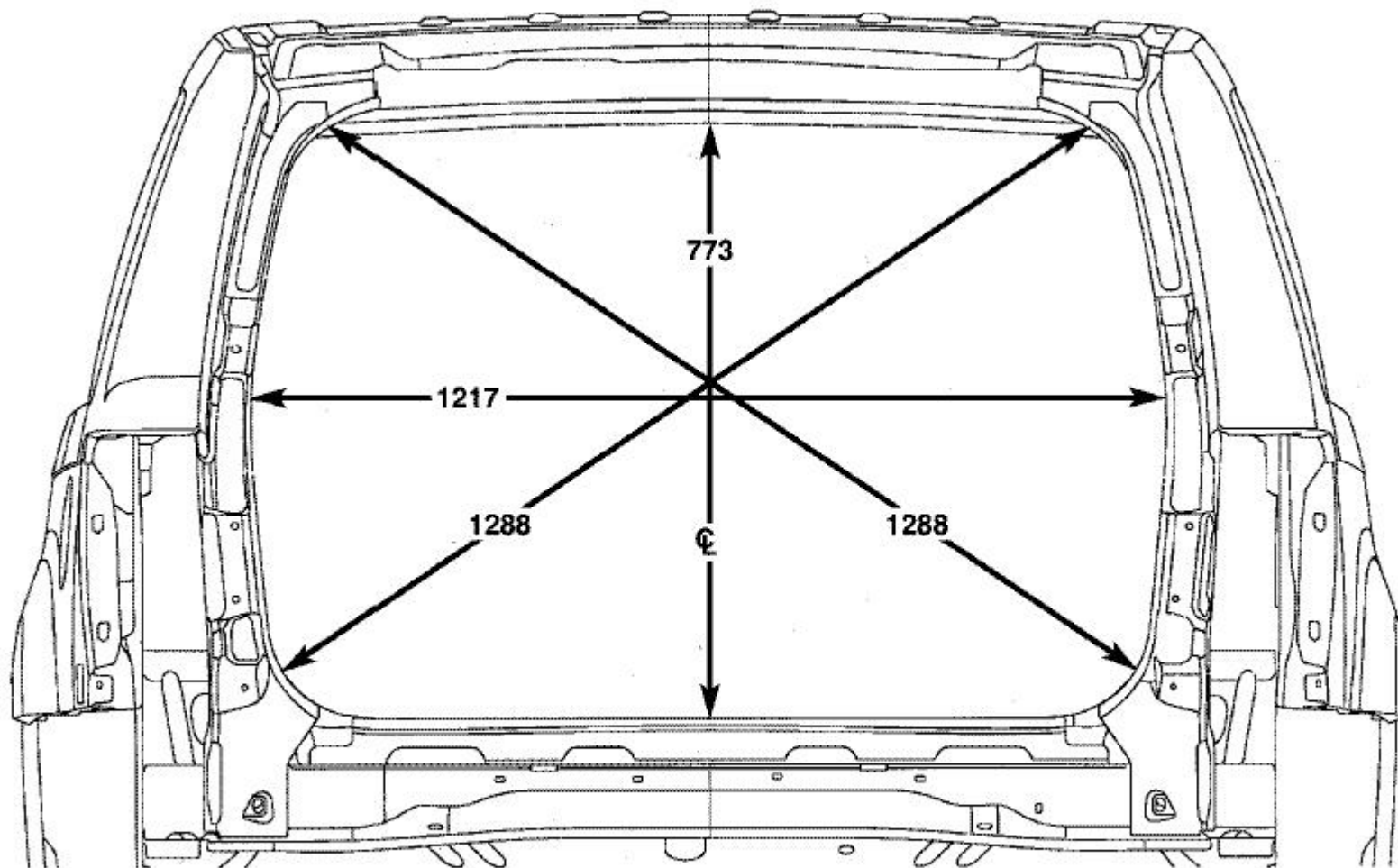


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Fig. 4 QUARTER WINDOW OPENING



Lift Gate Opening



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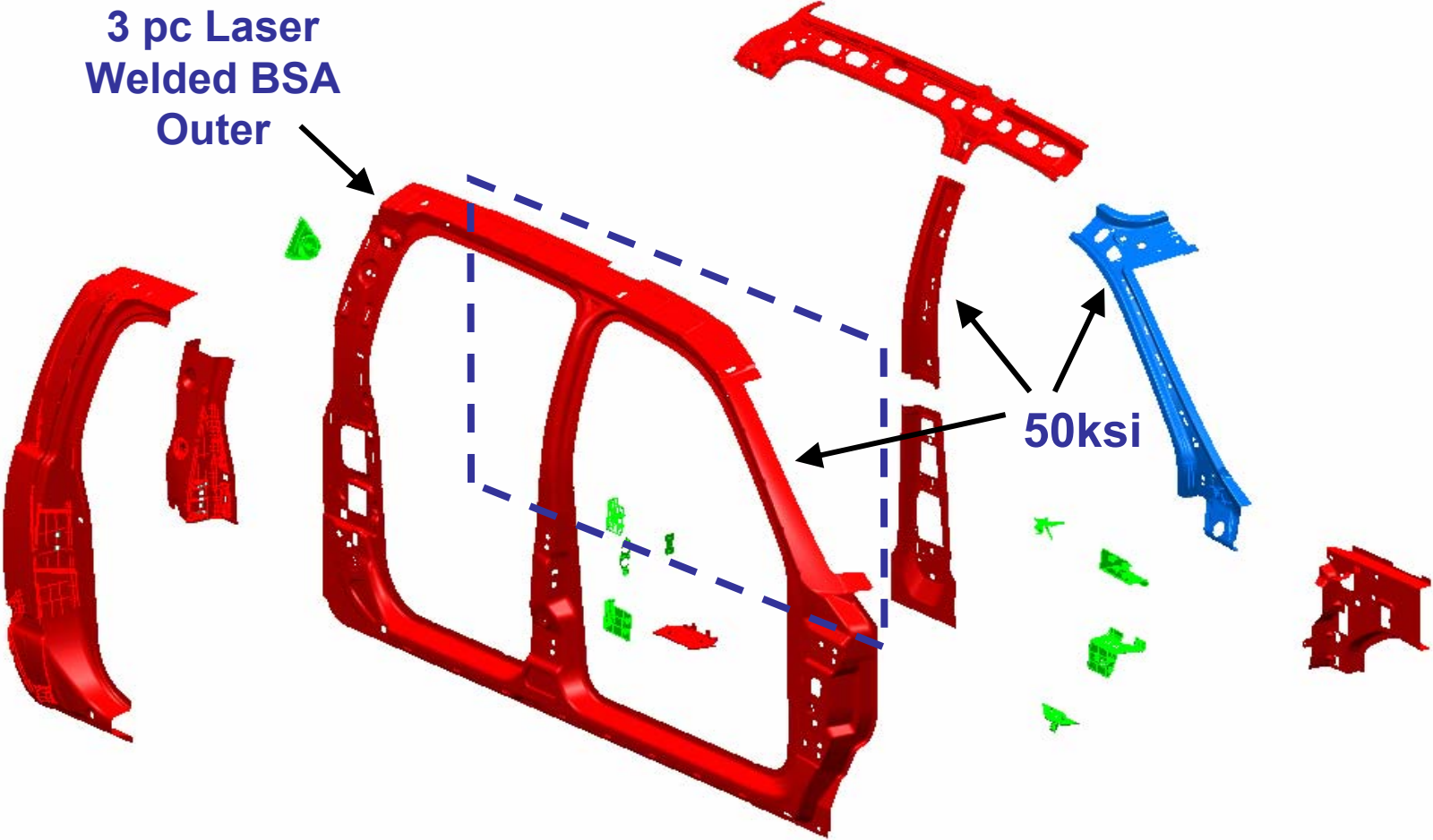
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Fig. 3 LIFTGATE OPENING

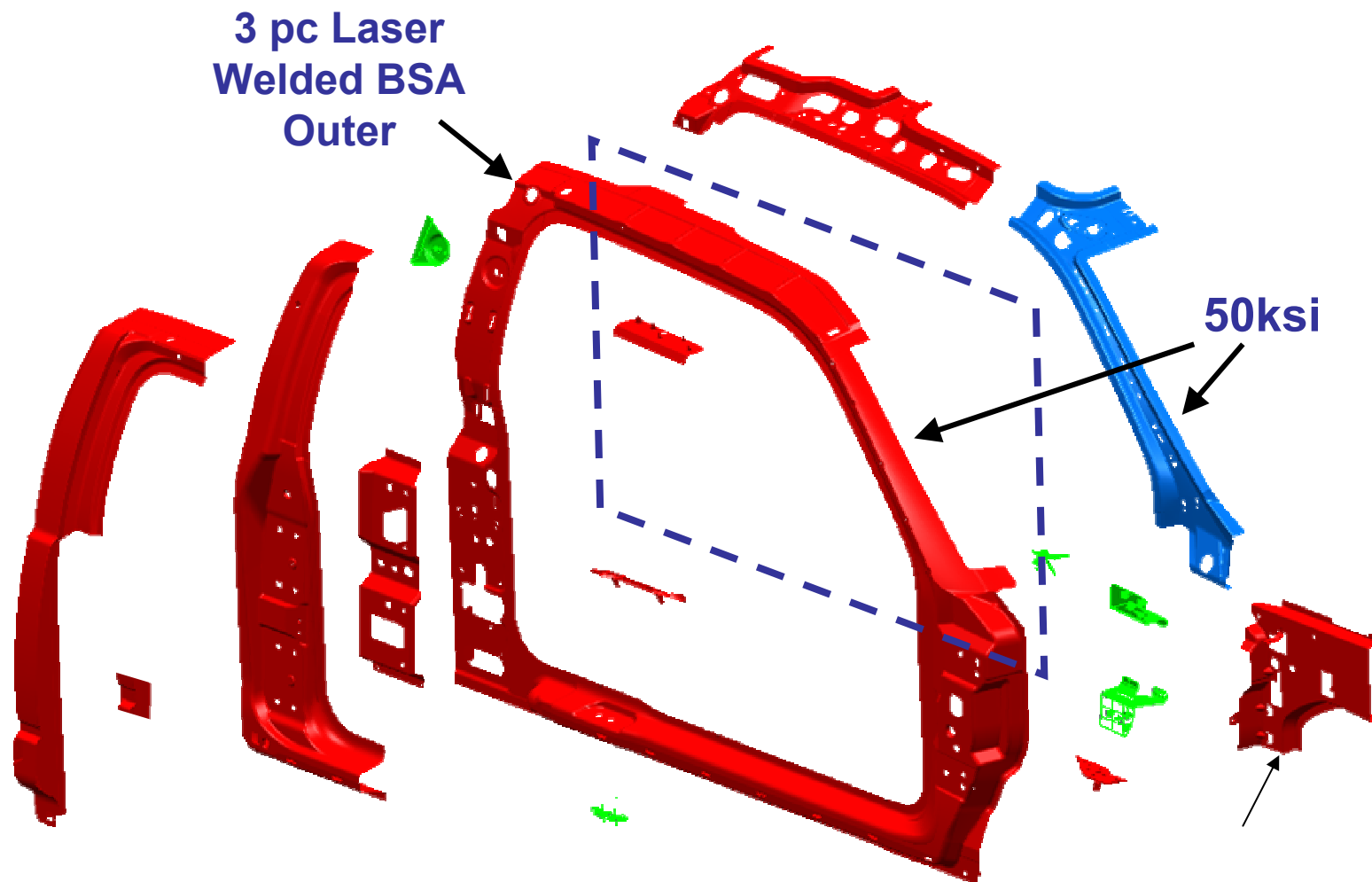
DAKOTA BODY REPAIR MANUAL



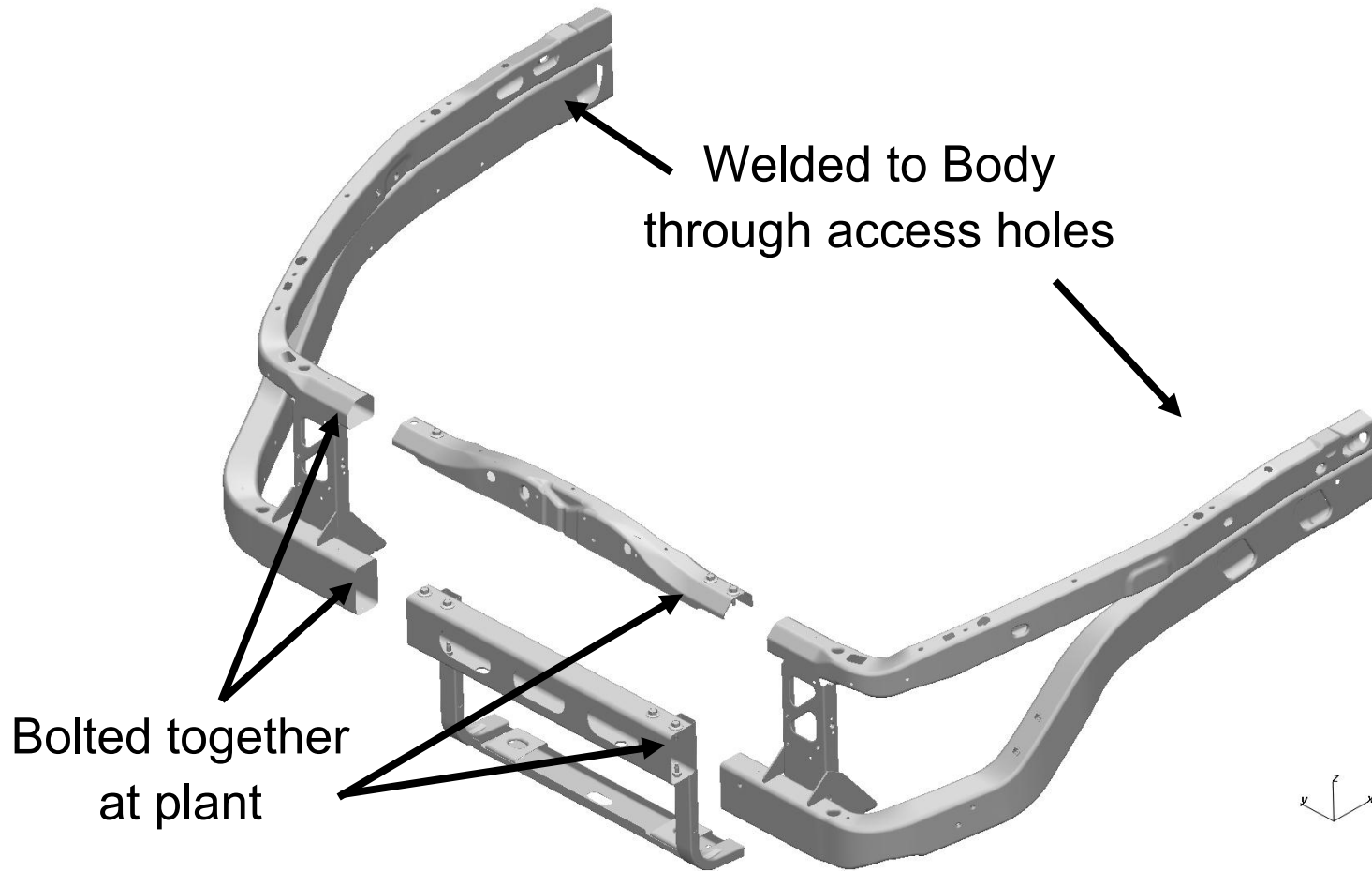
Quad Cab Body Side

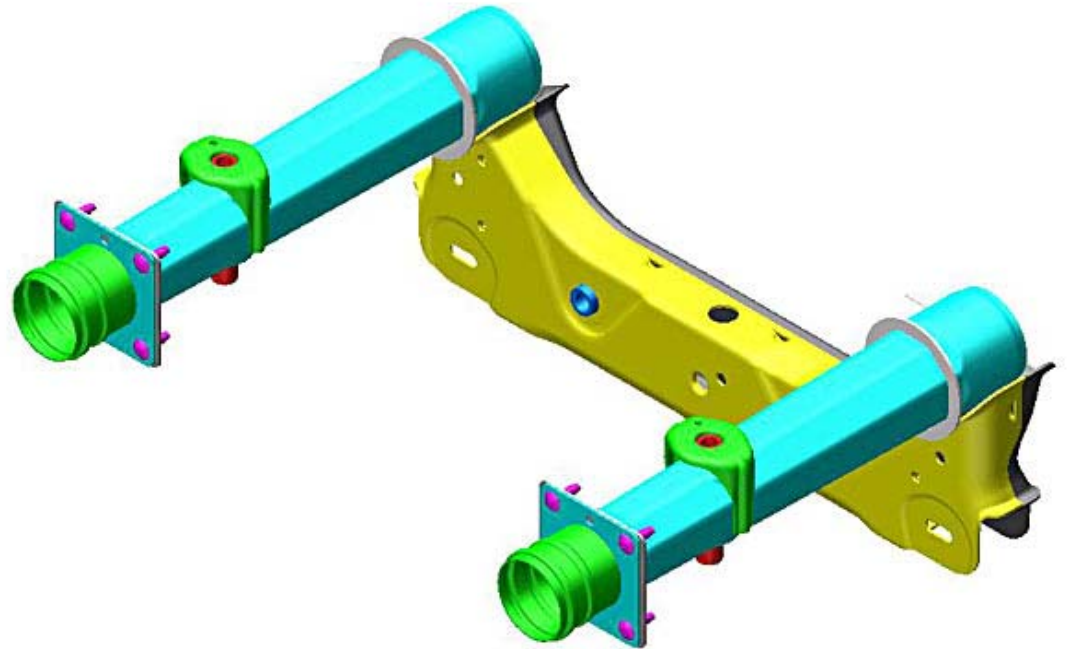
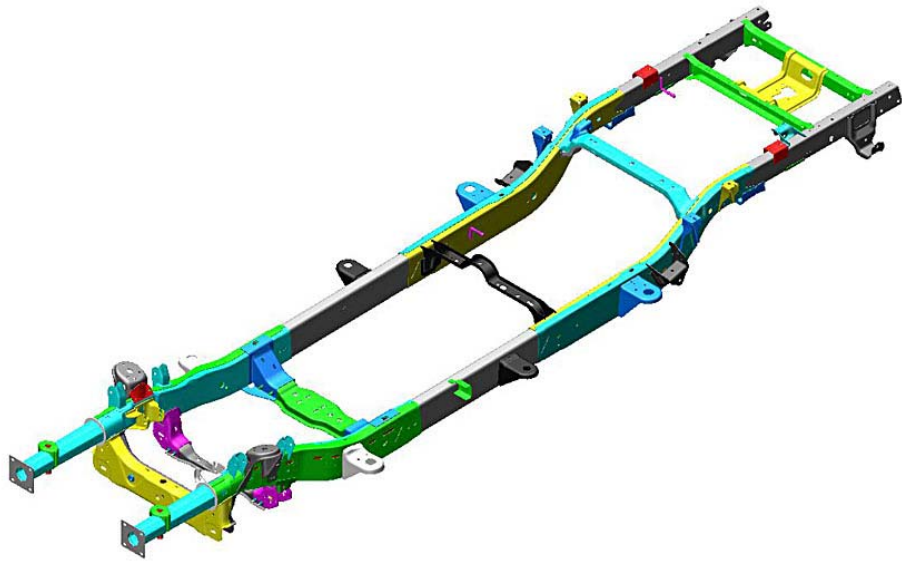


Club Cab Body Side



Hydroform like DR/HB

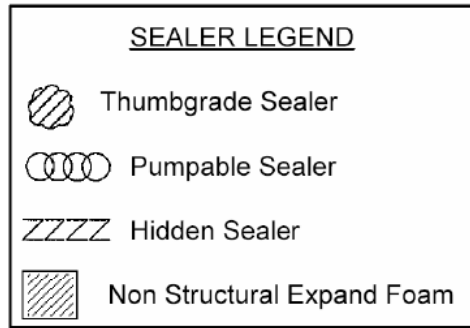




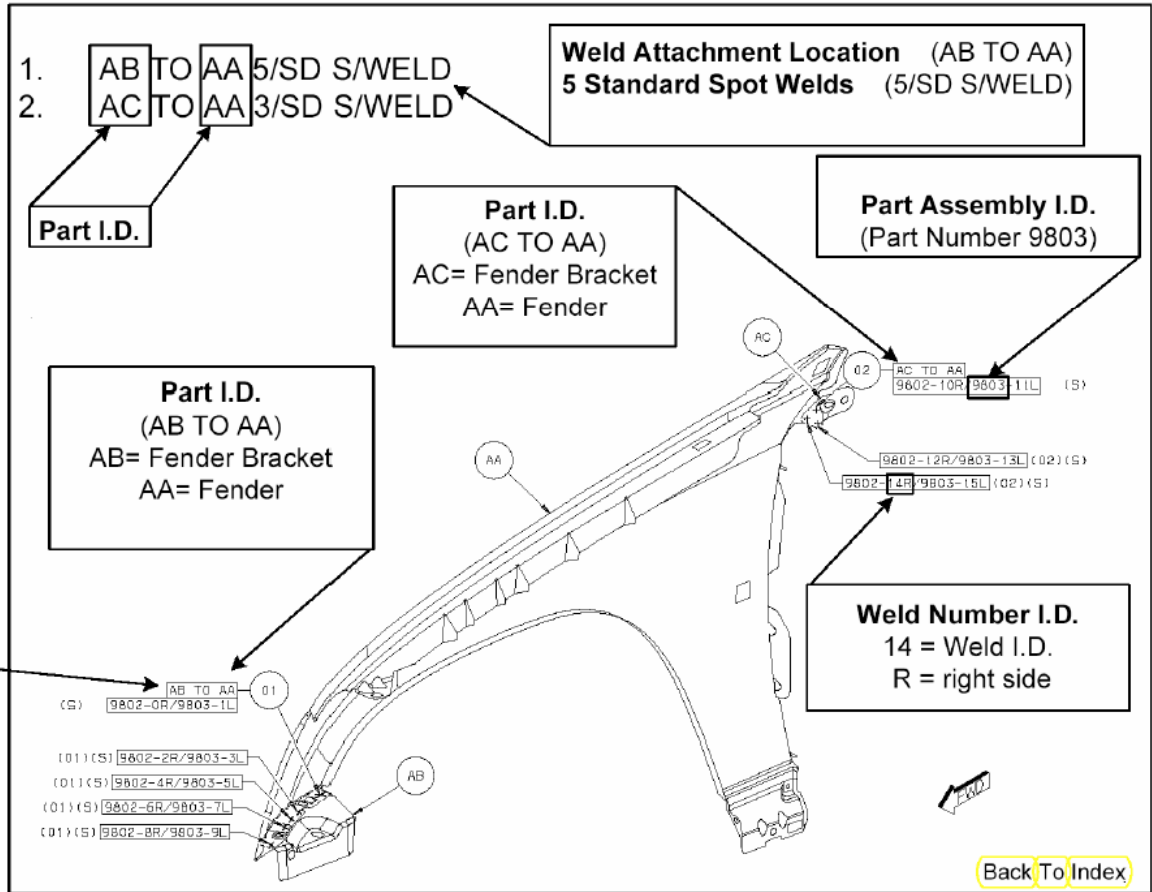
Explanation of Welding/Sealer Information

The major construction of a unibody vehicle consists of welded panels that create the supporting structure for all components and assemblies of the vehicle. Here are some examples for replacement of these parts.

Certain body components must use sealers to ensure proper assembly. Be sure to check the **Body Sealing Locations** and **Structural Adhesive Sections** for location and sealer type.

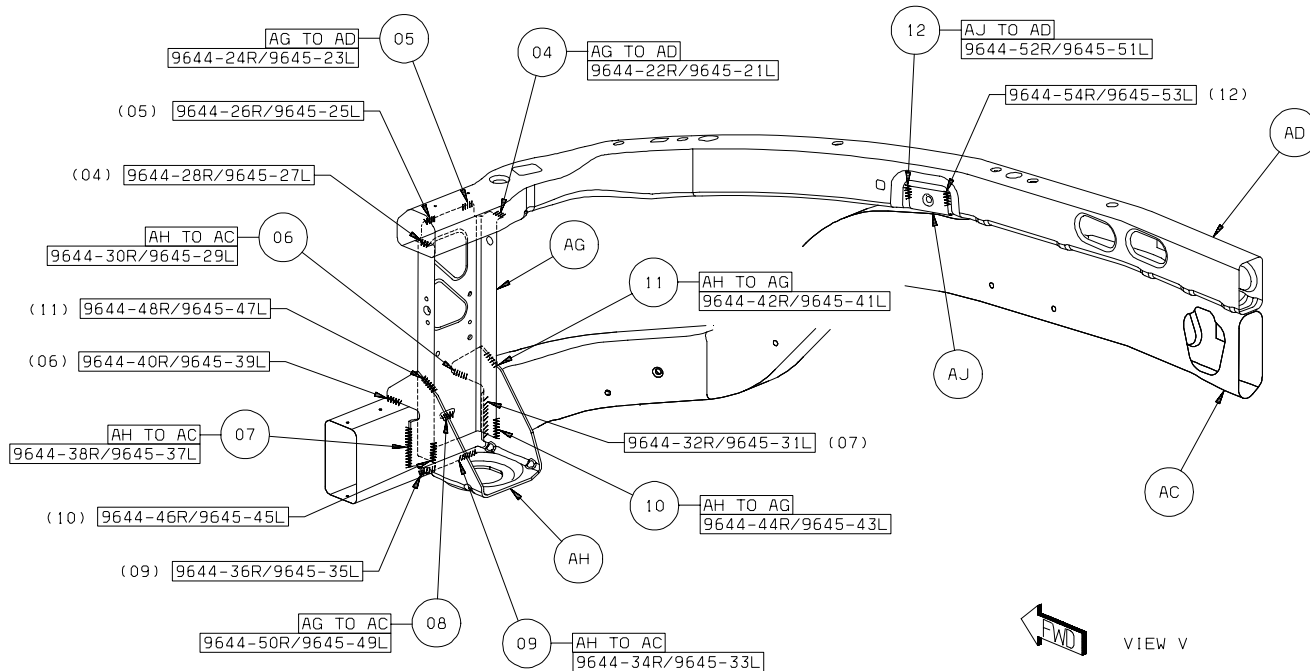


The welded components are indicated by using the designations given in the illustration below: For example, "AB to AA" indicates that component "AB" and component "AA" shown in this illustration are welded together.



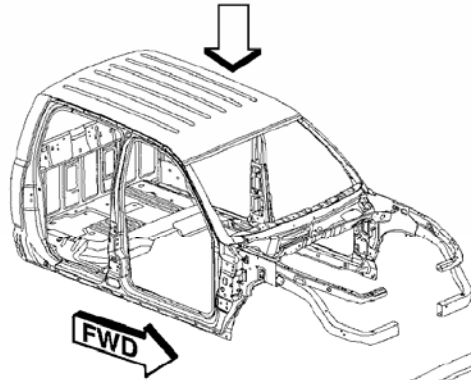
HYDROFORM/DASH/PLENUM-VENDOR

AH TO AC 2/SD MIG BRZ (ORD)
 AH TO AG 2/SD MIG BRZ (ORD)
 AJ TO AD 2/SD MIG BRZ (ORD)
 AG TO AD 2/SD MIG BRZ (ORD)
 AG TO AC 1/SD MIG BRZ (ORD)



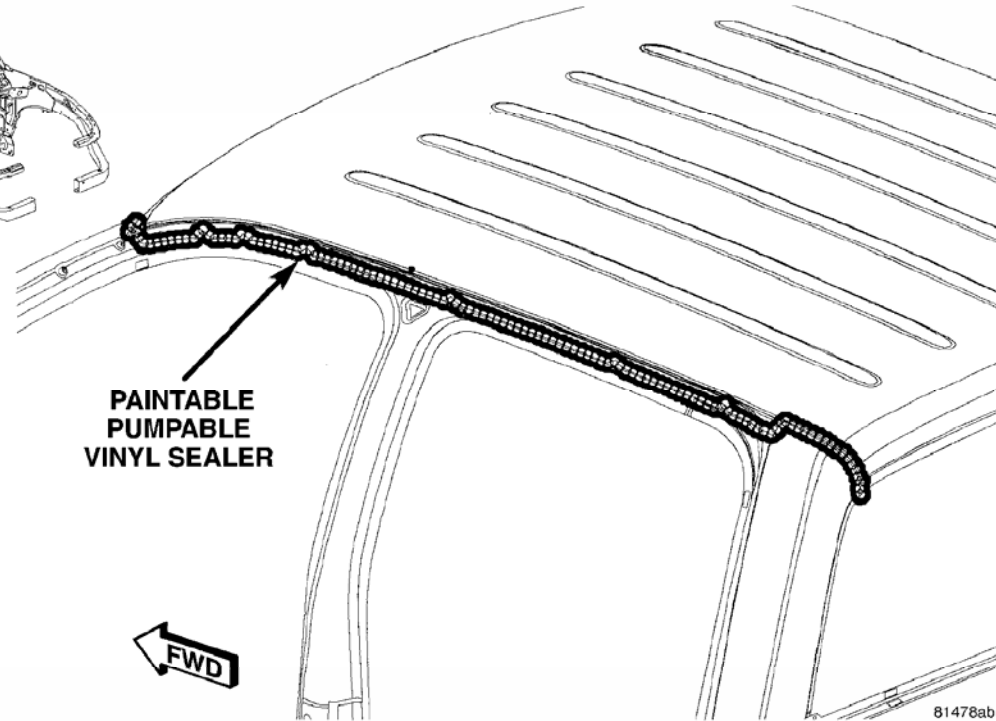
[Back to Index](#)

Quad Cab (ND84)



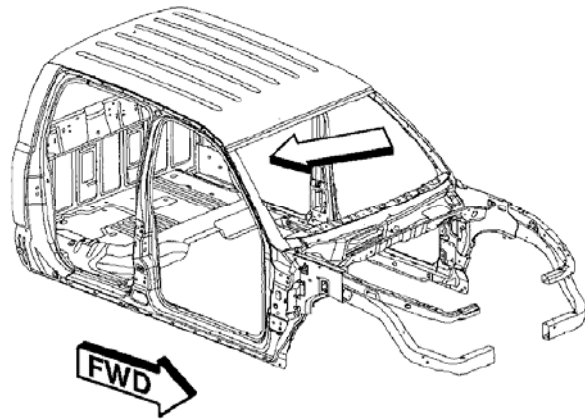
LEFT SIDE SHOWN,
RIGHT SIDE TYPICAL

PAINTABLE
PUMPABLE
VINYL SEALER

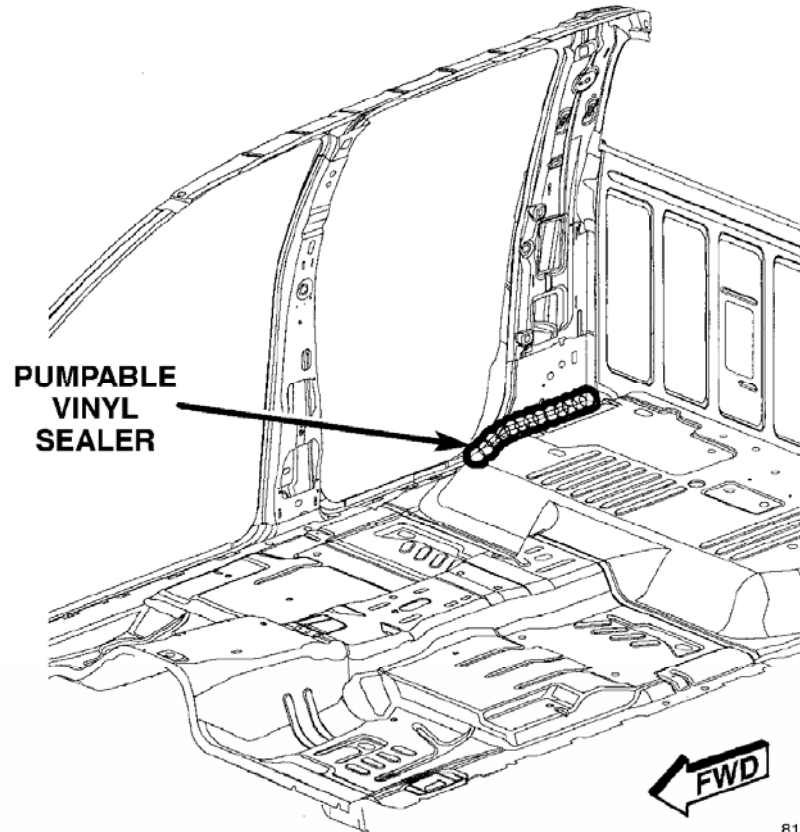


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Fig. 9 ROOF/APERTURE - 84 ONLY



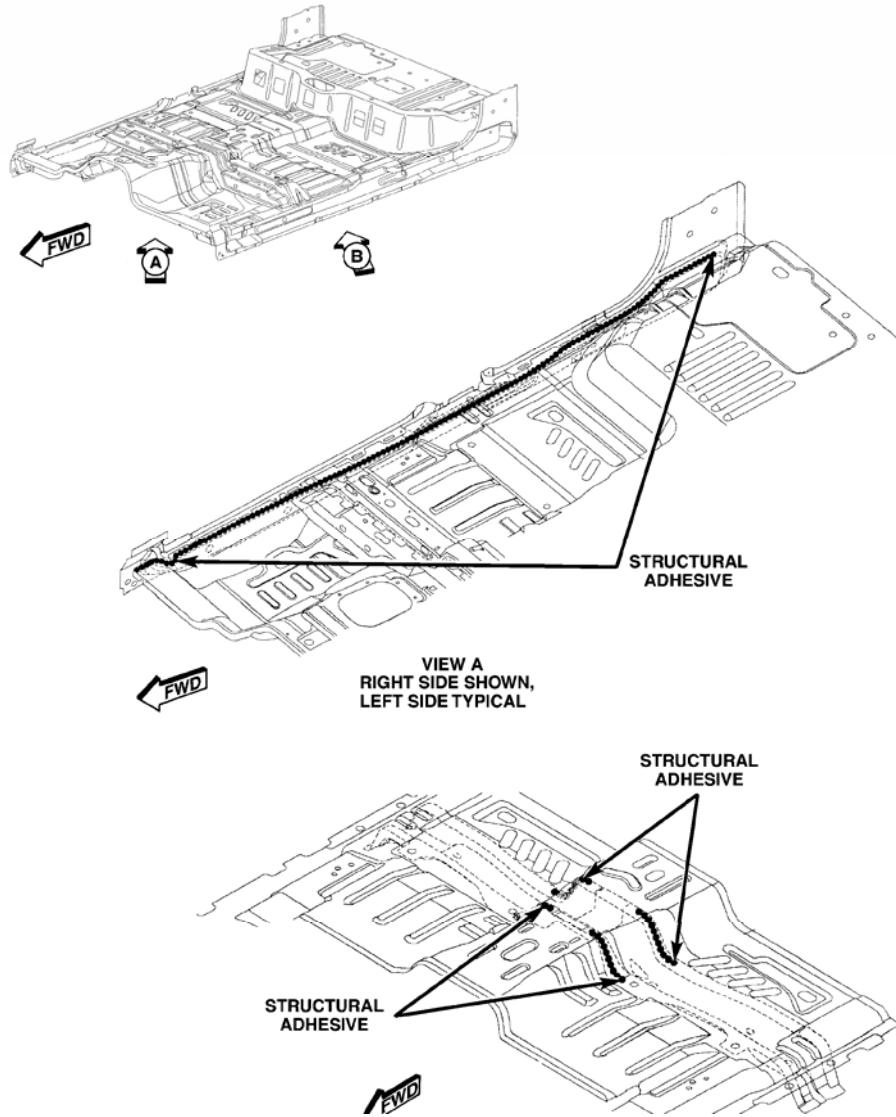
**RIGHT SIDE SHOWN,
LEFT SIDE TYPICAL**

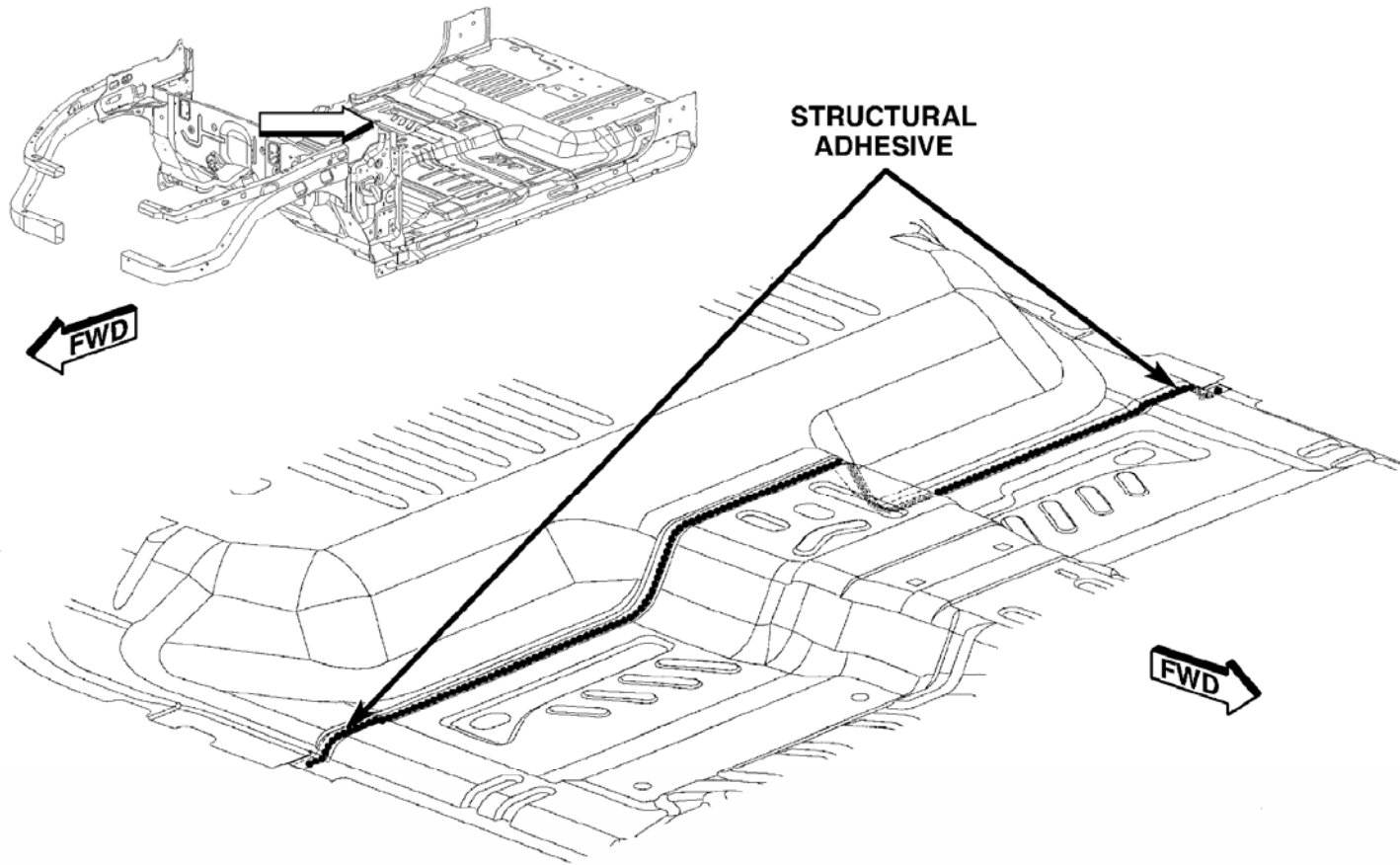


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Fig. 10 SILL/REAR FLOOR PANEL - 84 ONLY

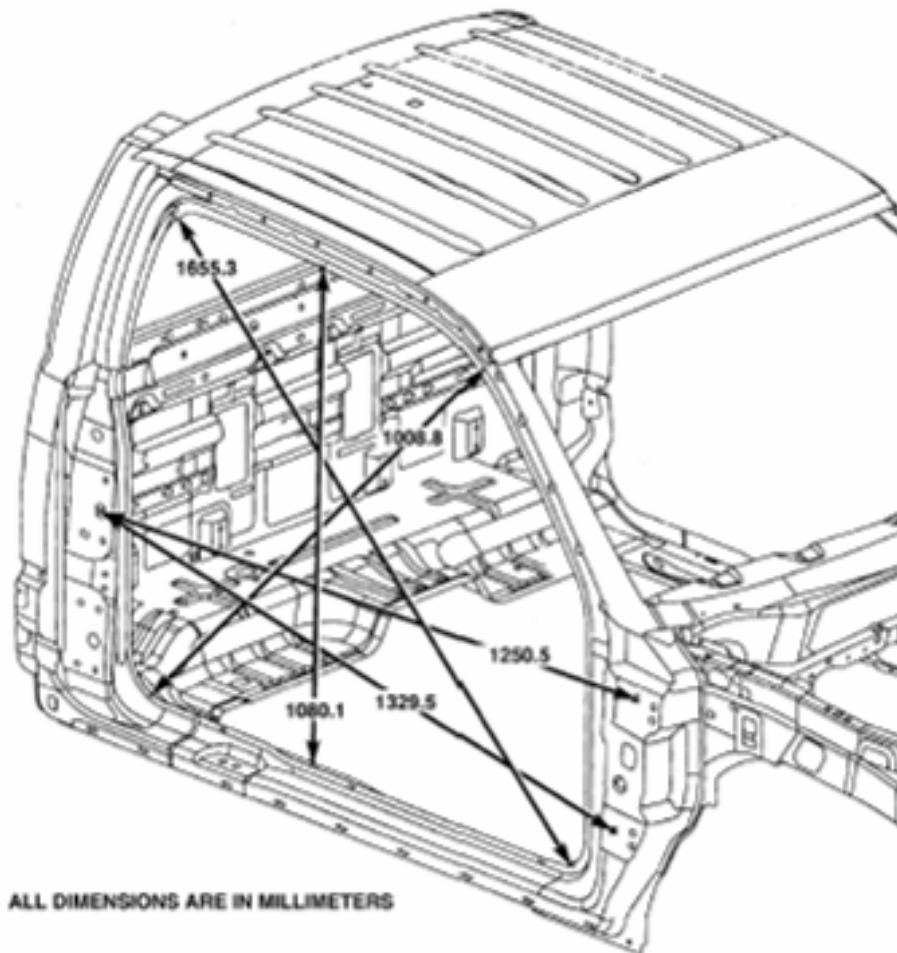
Quad Cab (ND84)





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Fig. 32 UNDERBODY COMPLETE - 84 ONLY



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Fig. 6 DOOR OPENINGS - CLUB CAB (33) ONLY

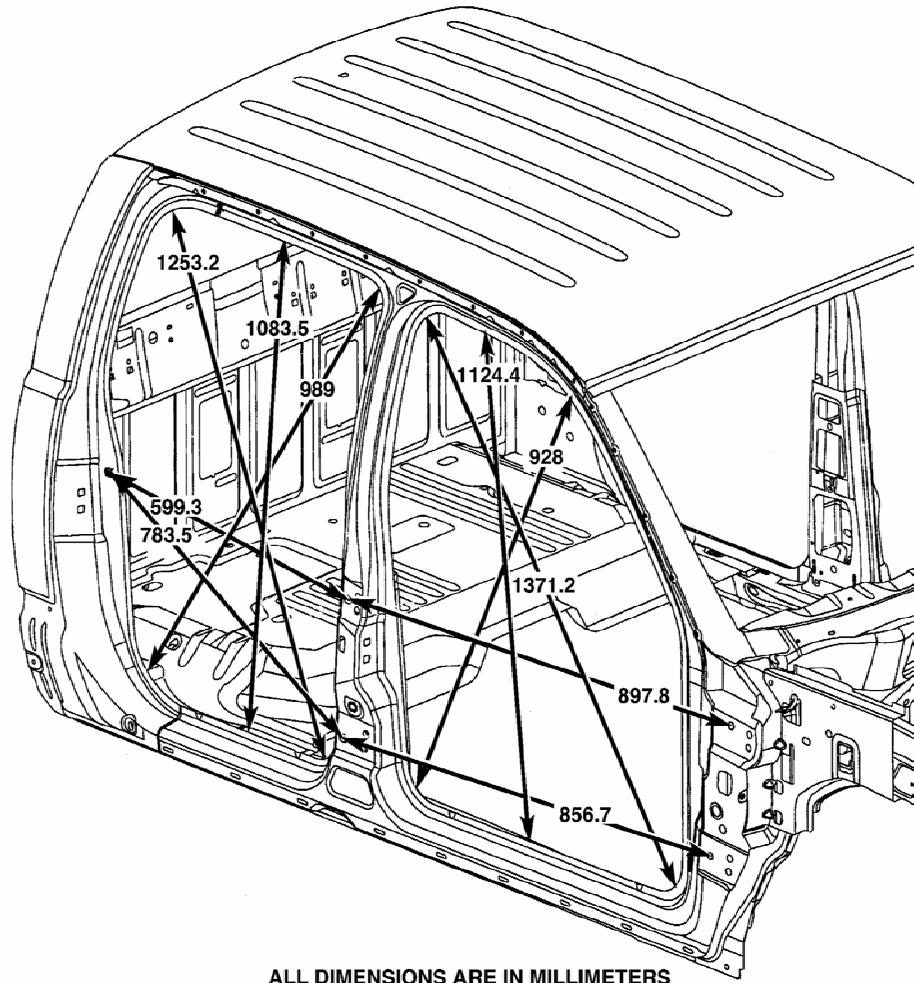
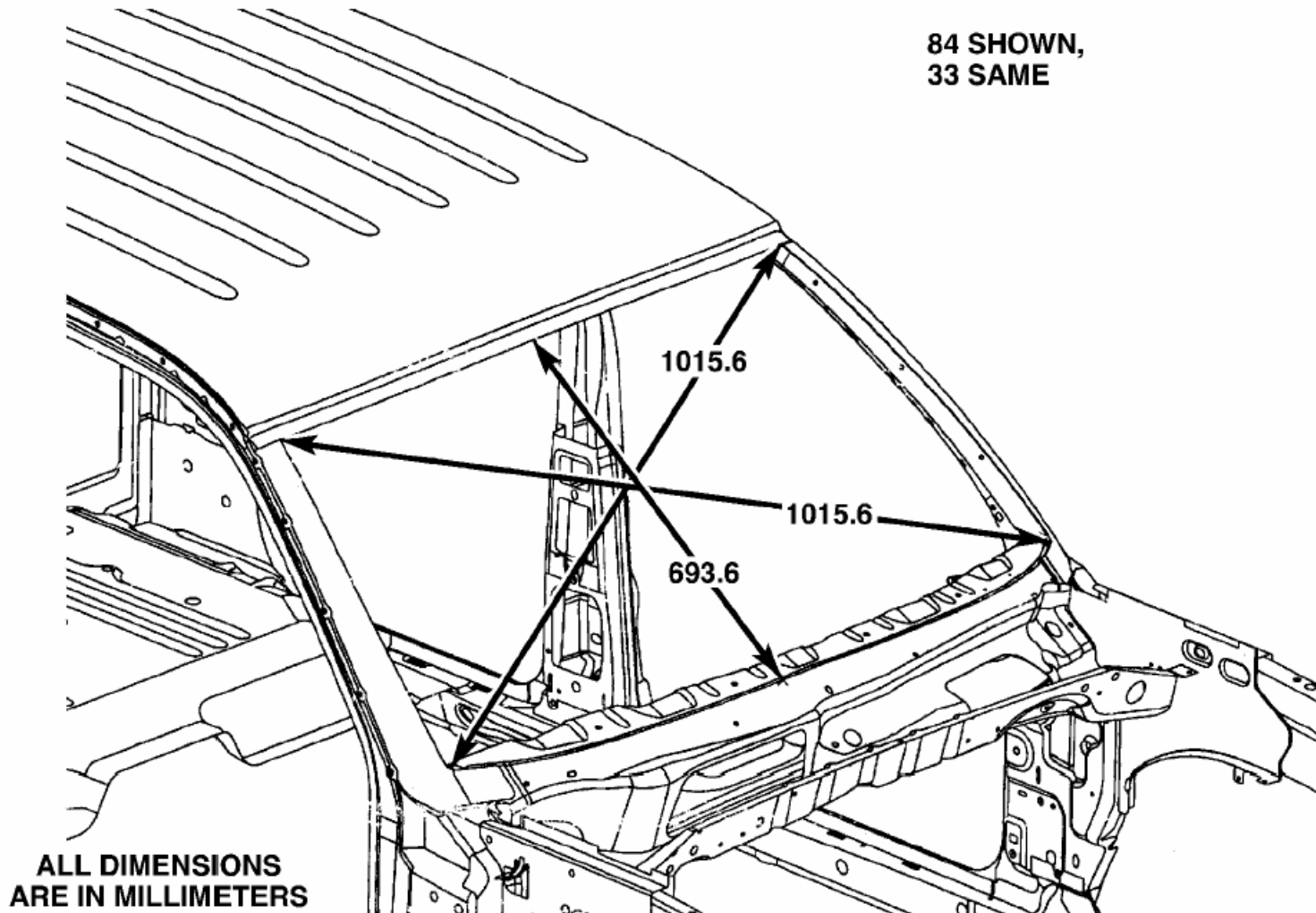


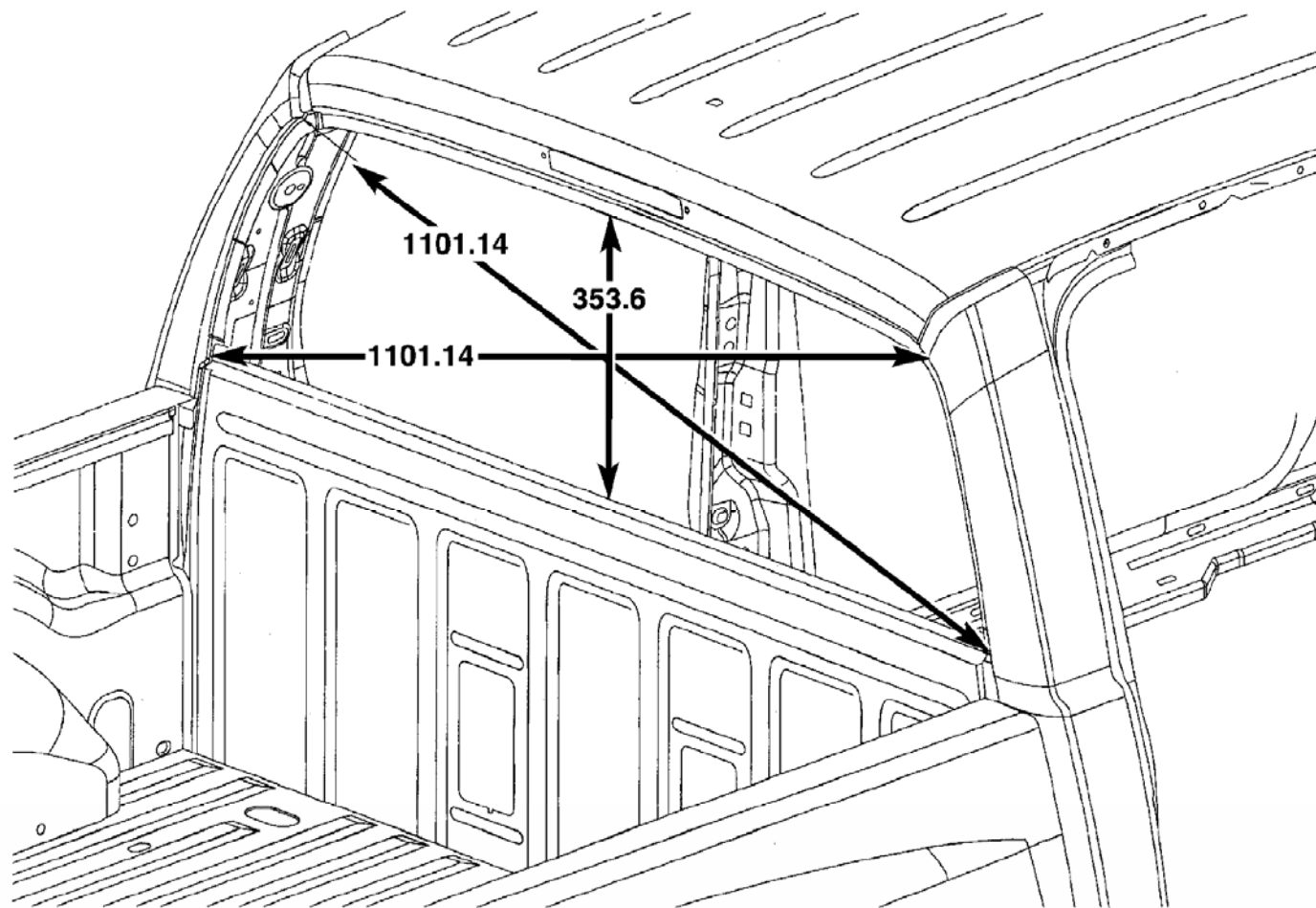
Fig. 7 DOOR OPENINGS - QUAD CAB (84) ONLY

84 SHOWN,
33 SAME



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Fig. 5 WINDSHIELD OPENING - CLUB CAB (33) AND QUAD CAB (84)



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Fig. 8 CAB REAR WINDOW - CLUB CAB (33) AND QUAD CAB (84)



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		SIZES	APPLICATIONS	WORK TIME	DCX APPROVALS
SECONDARY METAL BODY PANEL INSTALLATION	1088/1098/T30	1088: 7.6 oz (225 ml) 1098: 1.7 oz (50 ml) T30: 7.6 oz (225 ml)	Secondary panel bonding of bare metals including aluminum. Quarter panels, rear body panels, roof panels and door skins.	40 to 50 min. @ 70°F His Mts 0:15 0:30 0:45 1:00 1:15+	Weld bonding per #81-170-03005
	1128/1138	1128: 7.6 oz (225 ml) 1138: 1.7 oz (50 ml) Mopar #05083855AA 7.6 oz (225ml)	Secondary panel bonding of bare metals including aluminum. Quarter panels, rear body panels, roof panels and door skins.	35 to 40 min. @ 90°F 40 min. @ 70°F His Mts 0:15 0:30 0:45 1:00 1:15+	Weld bonding per #81-170-03005, meets MS-CD507, TSB#23-026-02, TSB#23-044-02
	114/TR9	114: 5.1 oz (150 ml) TR9: 5.1 oz (150 ml)	Finishing adhesive for minor scratches and gouges for all plastic including TPO, TE0, PP and urethane.	3 to 5 min. @ 70°F His Mts 0:15 0:30 0:45 1:00 1:15+	
SMC AND FIBERGLASS INSTALLATION AND REPAIR	100E2/101E2/T10	100E2: 10.1 oz (300 ml) 101E2: 1.7 oz (50 ml) T10: 10.1 oz (300 ml)	Structural and cosmetic repair of all types of rigid body plastics such as body panels, hoods, decks and doors.	40 min. @ 70°F His Mts 0:15 0:30 0:45 1:00 1:15+	
	129	129: 10.1 oz (300 ml)	Two-component, controlled flow cosmetic sealer is excellent for standing and sloping seams. No tooling needed.	5 to 8 min. @ 70°F His Mts 0:15 0:30 0:45 1:00 1:15+	
	800/801/803	800: 10.3 oz (305 ml) 801: 10.3 oz (305 ml) 803: 10.3 oz (305 ml)	Single-component sealer/adhesive duplicates factory look on seams and bonds to all primed or painted metals and most plastics.	30 min. @ 70°F His Mts 0:15 0:30 0:45 1:00 1:15+	
FOAM APPLICATION	121/124	121: 10.1 oz (300 ml) 124: 1.7 oz (50 ml)	Sound deadening, sealing and filling of door skins to crash bar, hood panel to supports; trunk panel to supports; gas tank filler area.	5 to 10 sec. @ 70°F His Mts 0:15 0:30 0:45 1:00 1:15+	

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