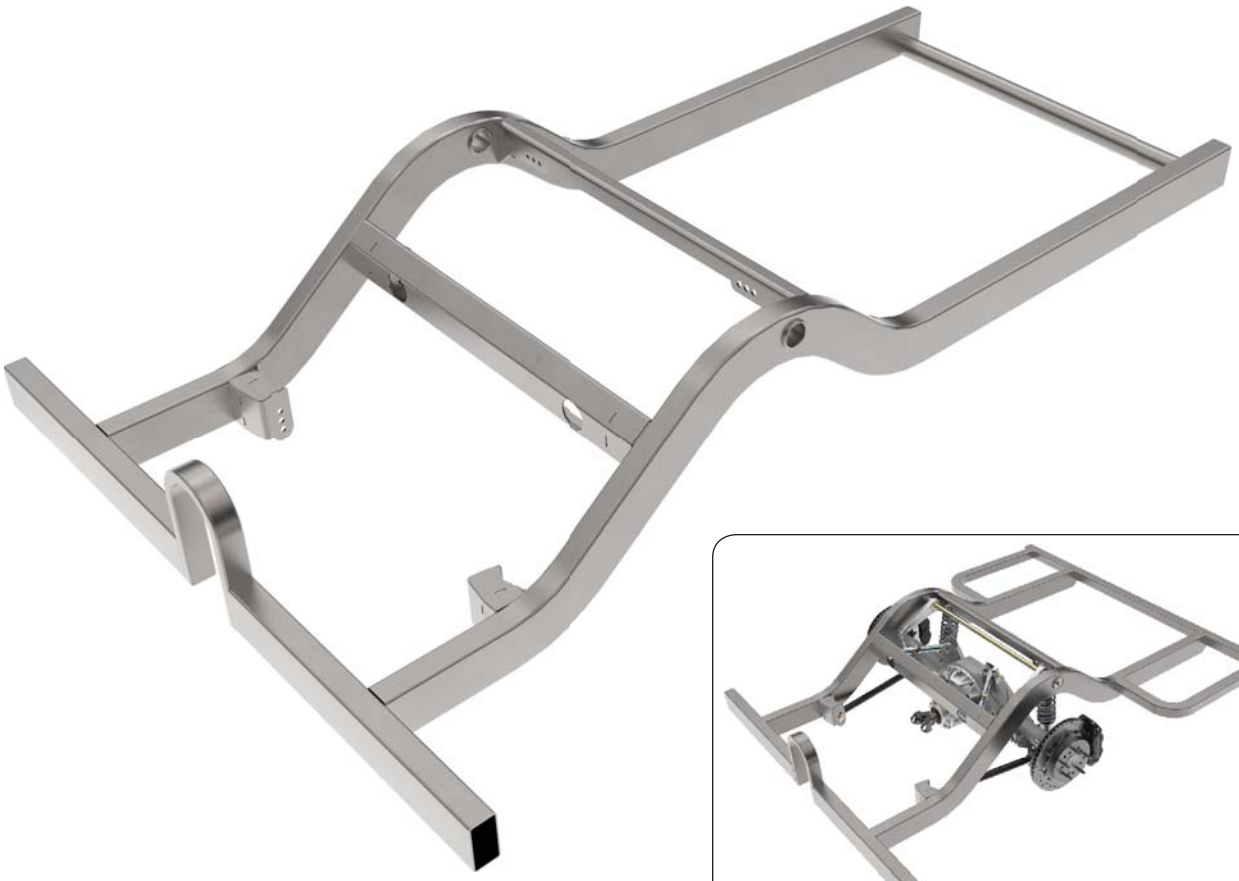
READ ALL INSTRUCTIONS COMPLETELY AND THOROUGHLY UNDERSTAND THEM BEFORE DOING ANYTHING.
CALL CHASSISWORKS TECH SUPPORT (916) 388-0288 IF YOU NEED ASSISTANCE.

INSTALLATION GUIDE

CHRIS ALSTON'S Chassisworks
THE HOME OF HIGHER TECHNOLOGY

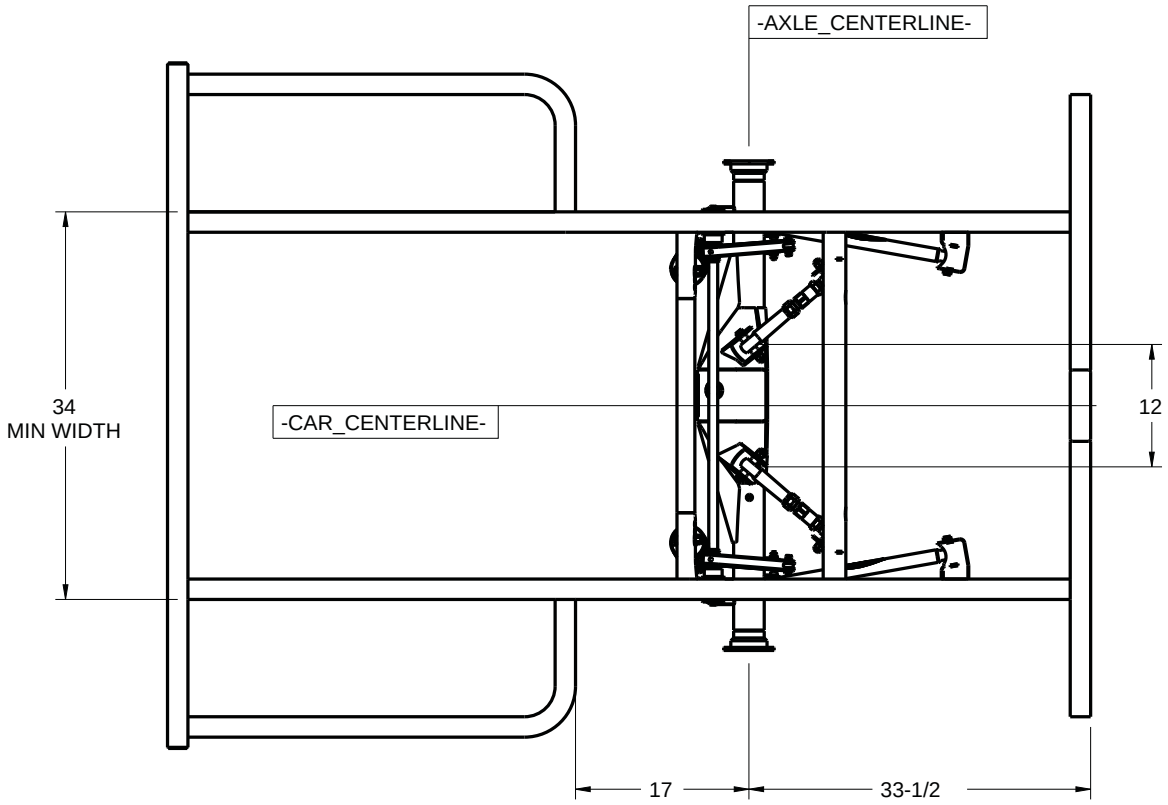
7720-U01
4x2” Rear Frame Clip for Canted 4-Link Suspension

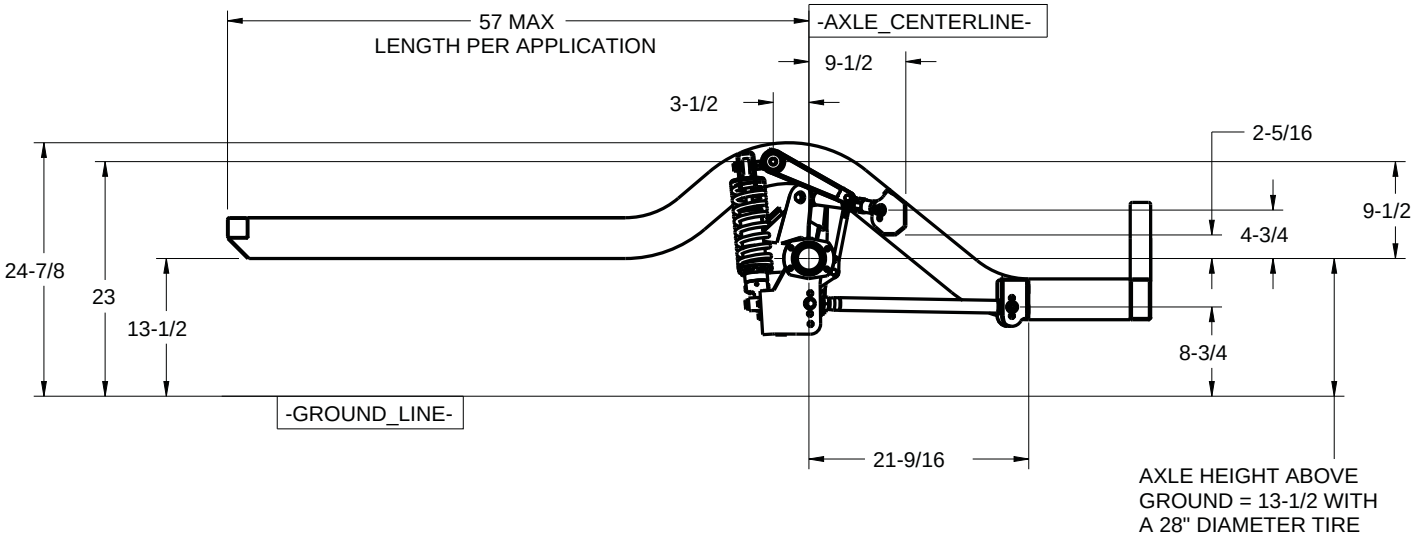


Optional 2x2 outrigger

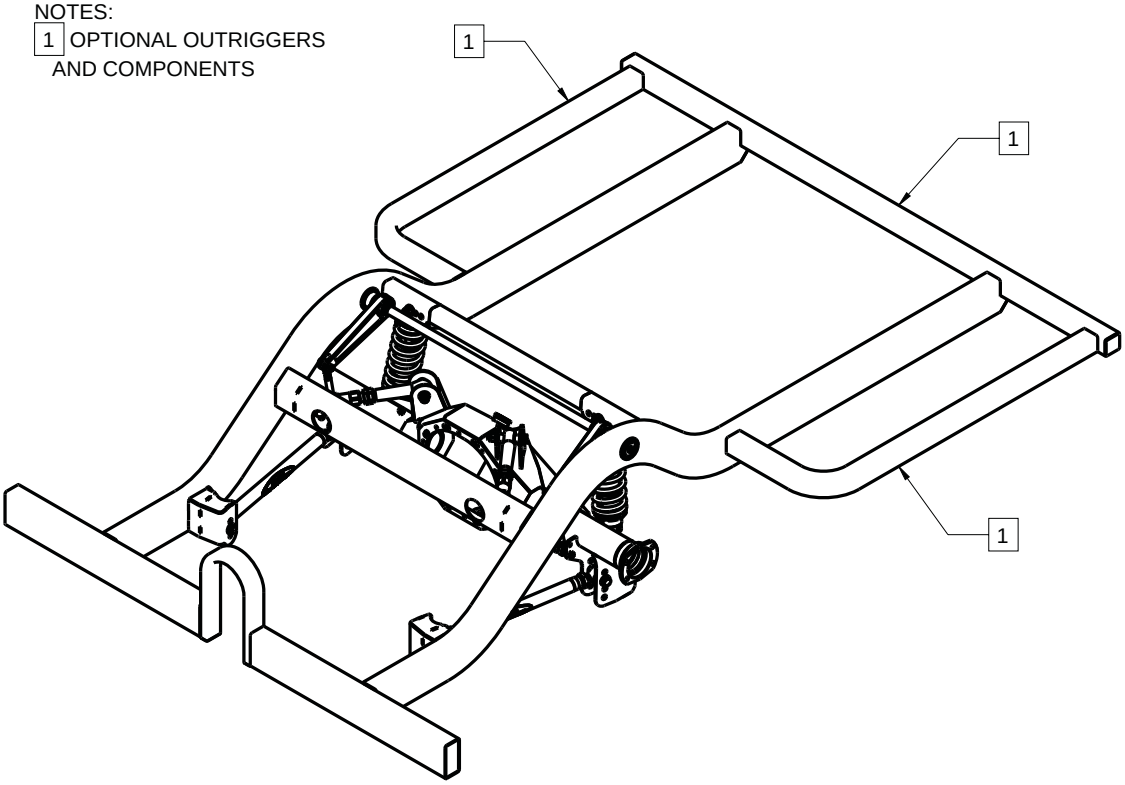
Description: Non-application specific, weld-in, 4 x 2” rear frame for use with Chassisworks Canted 4-Link suspension system.

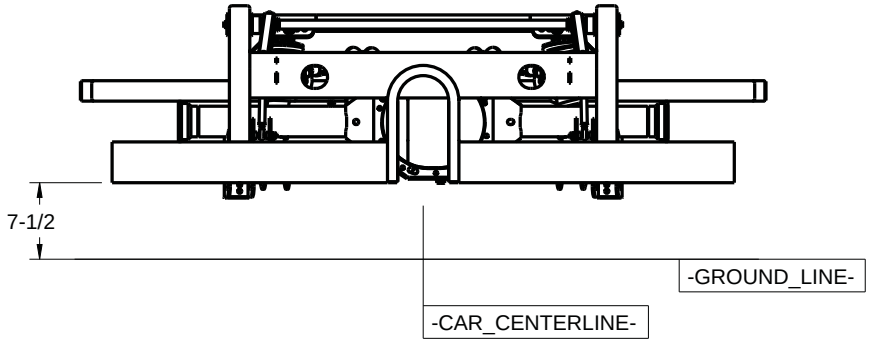
FRAME RAILS SHIP WITH EXTRA LENGTH AT THE BUMPER END AND MUST BE TRIMMED TO FIT EACH INSTALLATION. STANDARD REAR CROSSMEMBER IS 1-5/8” ROUND TUBING. ASSEMBLY DRAWING SHOWS OPTIONAL 2x2 REAR CROSSMEMBER WITH OUTRIGGERS.





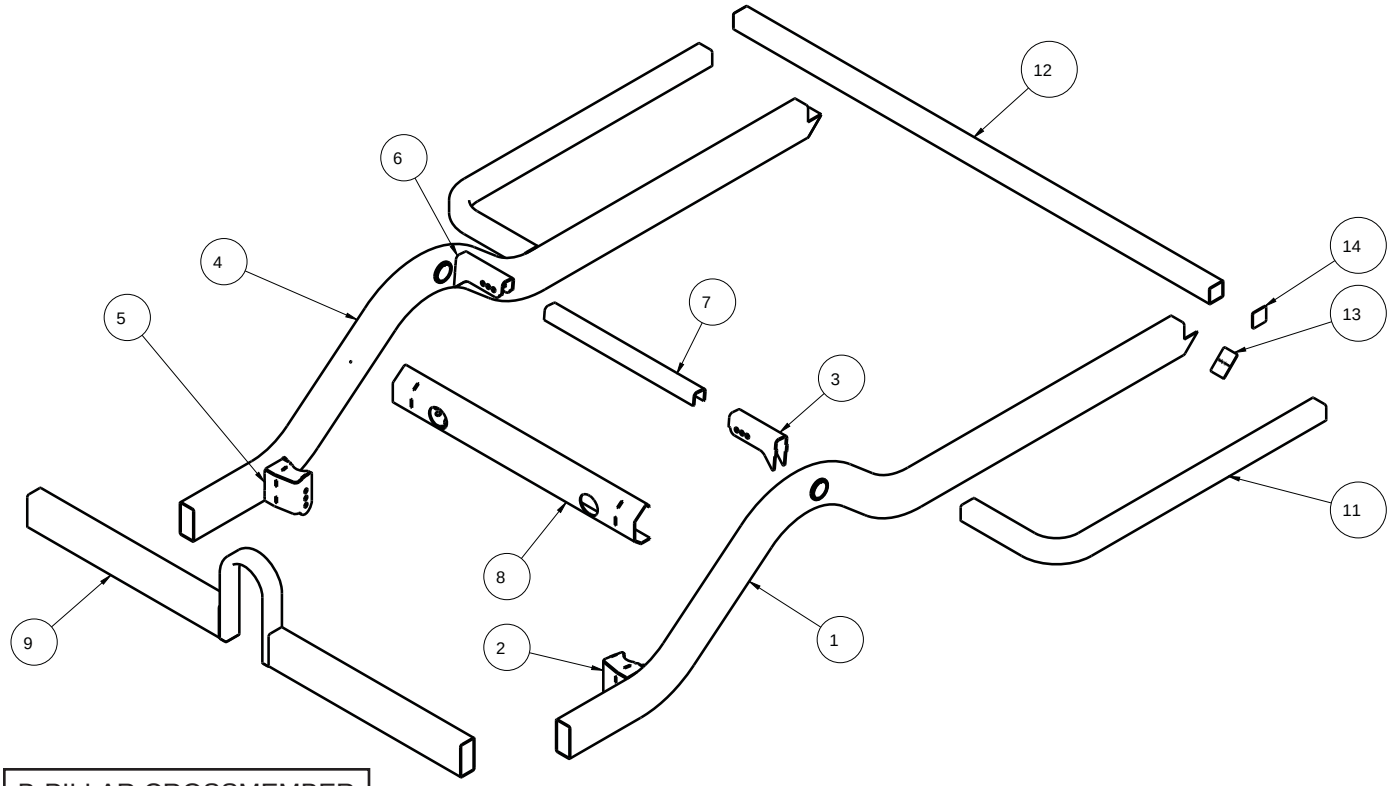
NOTES:
1 OPTIONAL OUTRIGGERS
AND COMPONENTS





DESCRIPTION: 4 x 2 REAR FRAME, CANTED 4-LINK	
Chris Alston's **CHASSISWORKS INC.** 8661 YOUNGER CREEK DRIVE SACRAMENTO, CA 95828 (916) 388-0288 FAX 388-0295	PART NO. 7720-U01
6/25/18	DWG: 7951-7720U01

ITEM	QTY	PART NO.	DESCRIPTION
1	1	5144	4 x 2 FRAME ASSEMBLY CANTED 4-BAR DRIVER RAIL
2	1	5332	CHASSIS MOUNT LOWER CONTROL ARM, DRIVER SIDE, CANTED 4-BAR
3	1	230174	UPPER SHOCK CHASSIS BRACKET, CANTED 4-BAR
4	1	5145	4 x 2 FRAME ASSEMBLY CANTED 4-BAR PASSENGER RAIL
5	1	5333	CHASSIS MOUNT LOWER CONTROL ARM, PSGR SIDE, CANTED 4-BAR
6	1	230174	UPPER SHOCK CHASSIS BRACKET, CANTED 4-BAR
7	1	230175	UPPER SHOCK CROSSMEMBER U-CHANNEL, CANTED 4-BAR
8	1	5331	UPPER LINK CROSSMEMBER ASSEMBLY, CANTED 4-BAR ASSEMBLY
9	1	7972-5002	B-PILLAR CROSSMEMBER - 1 x 2 LOOP, 4 x 2 XMEMBER, 7 1/2 LOOP HEIGHT
10	1	E26.134-036.000	STEEL TUBE ∅ 1 5/8 x 36
11	2	4564	OUTRIGGER, REAR FRAME RAILS, PERIMETER CHASSIS
12	1	B3216.120-67.00	TUBE, 2 x 2 x .120 WALL ERW x 67.00 LONG
13	2	7972-5014	TUBE CAP, REAR CLIP, 2 x 4 PERIMETER FRAME
14	2	7972-5015	TUBE CAP, 2 x 2, 12 GA



B-PILLAR CROSSMEMBER
SHIPS UNASSEMBLED

DESCRIPTION

4 x 2 REAR FRAME, CANTED 4-LINK

Chris Alston's **CHASSISWORKS INC.**
8661 YOUNGER CREEK DRIVE
SACRAMENTO, CA 95828
(916) 388-0288 FAX 388-0295

PART NO. 7720-U01

6/25/18 | DWG: 7951-7720U01

PARTS LIST

Prior to beginning installation use the following parts lists to verify that you have received all components required for installation.

STANDARD COMPONENTS

7720-U01 – Rear Frame for Canted 4-Link Suspension

Part Number	Qty	Description
4405	1	B-pillar crossmember components
4419	1	Canted-4-bar components
4420	1	Rear frame rail set

4405 – B-Pillar Crossmember Components

Part Number	Qty	Description
4516	2	Box tubing bend 180° 2 x 1 x 11 tall x 5” inside width
7972-5001	2	Tube cap, 1 x 2” 12-gauge
B3232.120-30.00	2	Box tubing 2 x 4 x .120 wall x 30” long
E26.134-040.000	2	Round tubing 1-5/8 x .134 wall x 40” long (Optional use as additional bracing)

4419 – Canted-4-Bar Components

Part Number	Qty	Description
230174	2	Canted 4-bar upper shock mounts for frame
230175	1	4-bar upper shock crossmember
5331	1	Upper link crossmember canted 4-bar assembly
5332	1	Chassis mount lower control arm, driver side
5333	1	Chassis mount lower control arm, passenger side
904419	1	Hardware bag
E26.134-060.000	1	Tube 1-5/8 x.134 wall x 60” long

4420 – Rear Frame Rail Set

Part Number	Qty	Description
5144	1	4 x 2” frame rail with anti-roll-bar threaded boss, driver side
5145	1	4 x 2” frame rail with anti-roll-bar threaded boss, passengerside

904419 – Hardware Bag

Part Number	Qty	Description
3100-050F2.50Y	2	Bolt 1/2-20 x 2-1/2” hex head Grade 8
3101-050-20C	2	Locknut 1/2-20 nylon insert, clear zinc

OPTIONAL COMPONENTS

Forward Frame Connectors

Part Number	Qty	Description
4668	1	Box tubing 2 x 4 x .120 wall x 60” long, pair

Frame Exhaust Ports

Part Number	Qty	Description
1070	2	Round tubing 4-1/2 x .250 wall x 2.10” long

Floor Kit and Wheel Tubs

Part Number	Qty	Description
5907-34X21	1	Builder wheel tubs, 34”-diameter x 21”-wide (pair)
5907-EXT	1	Builder tub extension (pair)
5907-R4BR	1	Rear floor kit for Canted 4-Link or Torque-Arm suspension

Rear Frame Outrigger

Part Number	Qty	Description
5909-OFR	1	Rear frame outrigger, 2 x 2”

INSTRUCTIONS

This rear subframe kit is for use with Chassisworks Canted 4-Link suspension; (Chassisworks part number 5852-U01). This subframe can be used with a unibody or full-frame vehicle. The first step is to determine your new frames outside width (minimum 34”) using a Chassisworks rear end worksheet, available through our website or by contacting our sales support staff.

The frame rail has been designed with the least amount of rise over the axle so it can be installed under the stock floor of most vehicles. There is also the option of a complete rear floor kit (Item 5907-R4BR) to replace the OEM floor, which is highly recommended to allow additional tire clearance.

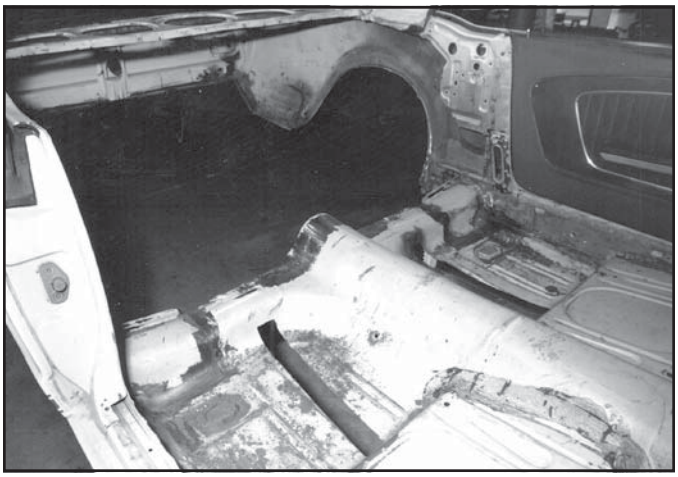
NOTE: Images were taken during installation of a different style rear frame and suspension, however the basic procedure and methods shown and described apply directly your own installation.

Once you have removed the factory rear suspension, the frame rail can be test fit against the floor. On a unibody car you will need to remove the OEM frame rails before starting the installation. If you plan to install the frame under the stock floor, skip ahead to the next section.

Removing Rear OEM Firewall, Wheel Tubs and Trunk Floor - OPTIONAL

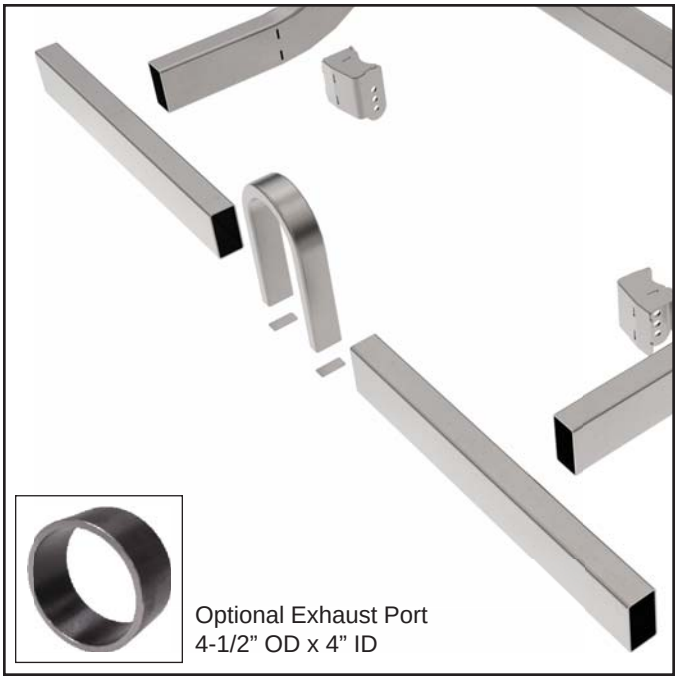
1. From the rear axle centerline, measure 33-1/2” forward and place a mark on each rocker panel.
2. Draw a line between the two points across the car floor. This may be easier to do along the bottom of the car to avoid the driveshaft tunnel.
3. Cut the entire floor and wheel wells out of the car from the marked line to the rear tail-light panel. Leave the inner part of the rocker panel in place for attachment of the B-pillar crossmember.
4. Cut out the package tray and double panels against the sides of the car.

Windown Crank Mechanism - In some cases, you may have to remove some of the rear window crank mechanism to make room for the new wheel wells. Usually a simple bracket welded to the inner body panel and bolted to the window will hold the windows up.

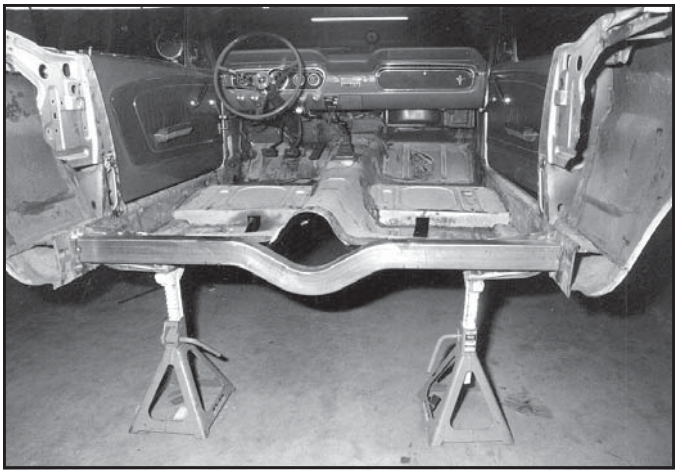


5. After removing the rear floor, go back and neatly trim any jagged edges.
6. Using the door sills as a reference plane, level the car front to rear and right to left.
7. Find the center at the front and rear of the car, then tape a string to the floor to represent the chassis centerline.

Assembling the B-Pillar Crossmember



8. Cut the driveshaft half-loop to an overall height of 9-3/8”.
9. Tack weld the 1x2” tube caps to the open ends.
10. The crossmember can now be assembled with the capped ends of the driveshaft half-loop flush with the bottom of the crossmember.
11. Mark the outside frame width onto the crossmember, accounting for the driveshaft (pinion) offset taken from the previously completed rear end worksheet.
12. Marks for the inside edge of the frame rails should be made 2” inboard at this time.
13. Install optional exhaust ports at this time. The outside edge of the exhaust port must be positioned four-inches inboard of the inside of the frame rail to clear the lower control arm mounts.
14. Drill a pilot hole 2-1/4” down from the top edge of the crossmember and make cutout using a 4-1/2” hole saw, then tack weld the ports into place.
15. Accounting for the correct pinion offset, trim the crossmember and rocker panel to allow for a good fit. *The image at right shows a different style crossmember. Placement will be similar.* ***Driveshaft half-loop arch must be at the top.***

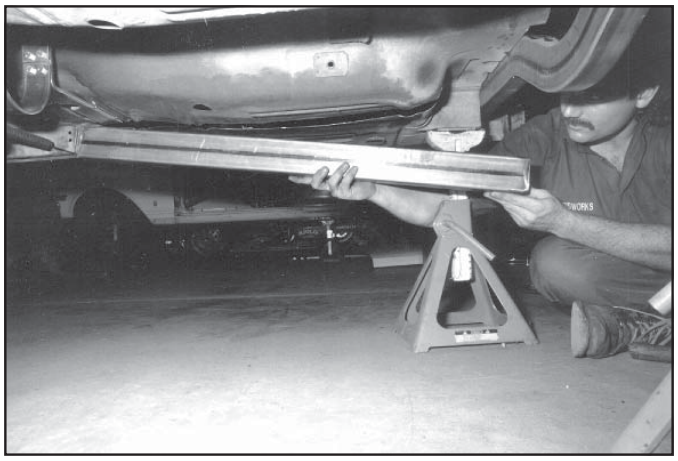


16. Tack weld the crossmember in place so the front side is 33-1/2” forward of the rear axle centerline. The bottom edge should be even with the bottom of the rocker panel or stock frame. The stock floor should butt-up against the front of the crossmember.

17. In unibody vehicles the stock floor position may hang below the crossmember. If this occurs, push the floor upward and tack weld to the crossmember.

18. In some cases it may be easier to replace the rear section of the driveshaft tunnel with Chassisworks item 5907-DST to gradually transition to the height of the driveshaft hoop.

Subframe Connectors - OPTIONAL



19. On unibody vehicles, the optional subframe connectors must run from the 2x4" crossmember forward to the stock front subframe. The floor will usually have to be slotted for the connectors. In most cases, the connector will be wider spaced at the front than at the 2x4" crossmember, where it should meet the crossmember at the same width as the rear frame rails.

20. Once properly fit, the frame connectors can be tack welded into place.

Assembling the Rear Frame

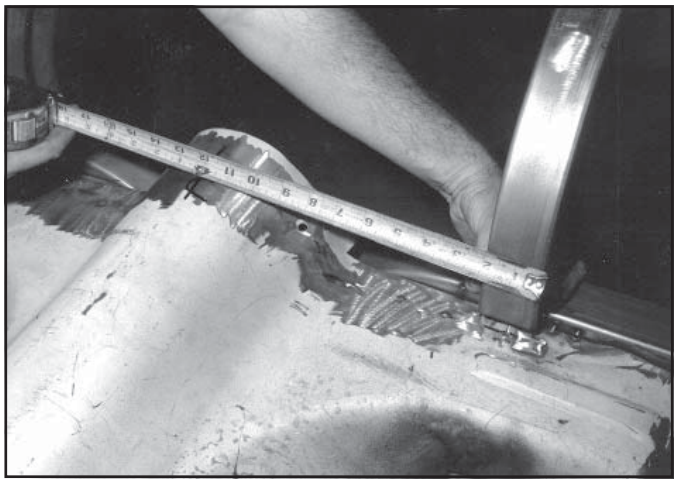
21. The rear frame rails seat against the backside of the B-pillar crossmember and are shortened at the rear to fit in the car. Measure from the back of the crossmember to the taillight panel to determine how much to cut off the rear of the frame.

22. There are multiple options for the rearmost frame crossmember.

    Simple 1-5/8" Tubular Crossmember
    In some rear frame kits, a piece of round tubing is included to create a crossmember between the frame rails. Cut length must be 4" shorter than the outside frame width.

    Stock Crossmember with Bumper Mounts
    You may attach the stock crossmember to the new subframe

    Outrigger Frame Kit (5909-OFR)
    A 2x2" perimeter tube with extension hoops to better support the trunk floor or mounting of fuel cell, batteries or other accessories.



23. Use a carpenters square off the chassis centerline string to mark the outside frame width at the rear panel.

24. Align and support the frame rails at the correct outside width, then tack weld to hold their position. *Machined slots must face toward the inside.*

25. Check the frame rails for squareness by measuring from the front of one rail diagonally to the rear of the other. These measurements should be within 1/16”.

26. Cut the upper crossmember assembly 4” shorter than the outside frame width. The crossmember has etched marks on it every 1/2” that are used to set the frame width. Cut equal amounts from each end of the crossmember.

27. Use the 1/8” diameter hole machined in each frame rail, to locate the upper link crossmember assembly. Position the crossmember so the front of the crossmember just covers the 1/8” hole and the upper flange is even with the top edge of the frame rail. Use a bar or pipe clamp to hold it in place.

28. Fit and tack weld whichever rear crossmember solution you have decided upon.

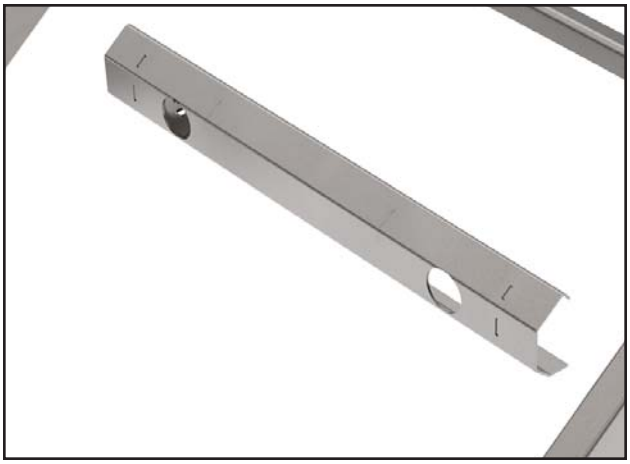
29. Insert the shock mounts into the machined slots on each frame rail and secure with clamps. Tack weld the mounts to each frame rail.

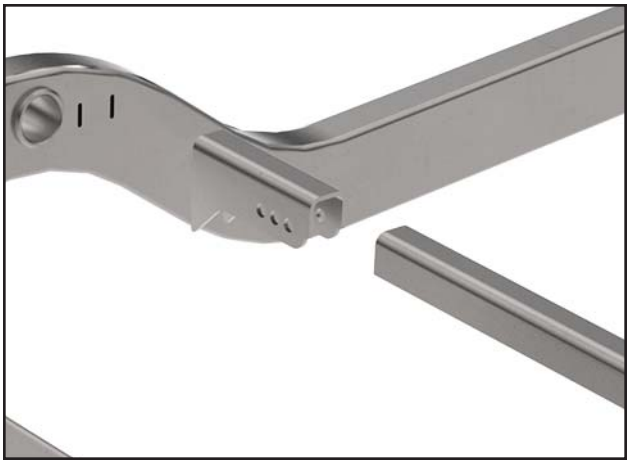
30. Verify that the outside frame width at the shock mounts is correct.

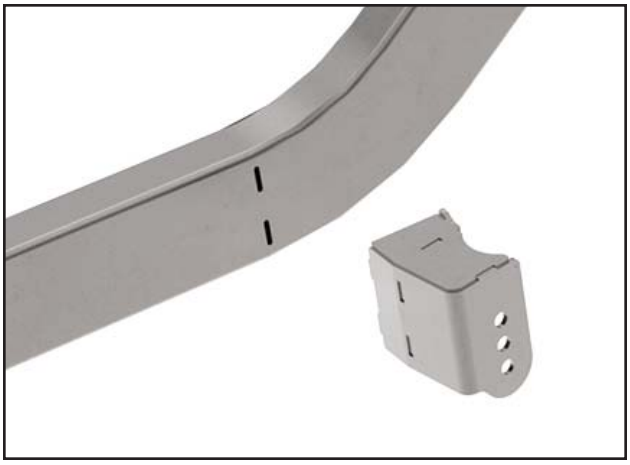
31. Measure the distance between the exposed end of the upper shock mounts, then cut the crossmember channel to fit. The completed shock crossmember assembly should be even with the top edge of the frame rails.

32. Fit the lower control arm mounts into the slots machined in the frame rails behind the 2x4 front crossmember. Insert the tabs into the slots and clamp the mounts to the rail before tack welding.

33. Check the frame again for squareness and complete the welds at each seam and joint.







Purchased As Factory-Welded Frame

If you purchased the frame clip as a welded assembly, the B-pillar crossmember and frame length are purposely left long. Cut them to length for your application. A rear frame crossmember is tacked between the rails for shipping purposes. Knock it out and reinstall at the correct position after the frame has been trimmed to necessary length.

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