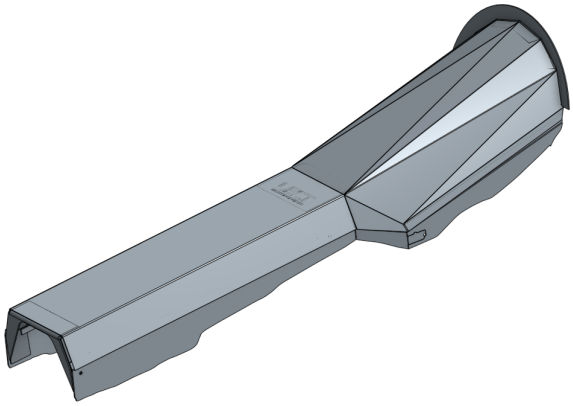
Transmission Tunnel Perimeter Frame Install Instructions



1. You MUST install a USCT Motorsports level 1 Chassis Stiffening kit before starting the install of the Perimeter Frame. The Level 1 Chassis Stiffening kit includes frame connectors and torque boxes. These add vital stiffening to the unibody and connect the OEM torsion bar cross member, floor pan, frame rails and rocker sill sections together.

2. The torsion bars MUST be removed from your car prior to installing the perimeter frame.

3. Remove the engine and transmission from the car. You will be test fitting the new engine / transmission into the car several times during the perimeter frame installation, so a K-frame stand or engine/transmission dolly will be helpful.

4. Assemble your perimeter frame as shown in Figure 1 using the six (6) temporary ¼-20 fasteners (3 per side). The firewall eyebrow brace, front tunnel cover and rear tunnel cover do not bolt on and will be used later, set them aside for the moment.

    a. Note that the middle bracket on E-Bodies and B-Bodies is made of 2 parts, a lower bracket in 3/16” thick steel and an upper bracket made in 12ga (just under 1/8”) steel. A Bodies use a one piece bracket and do not have the lower 3/16” bracket.

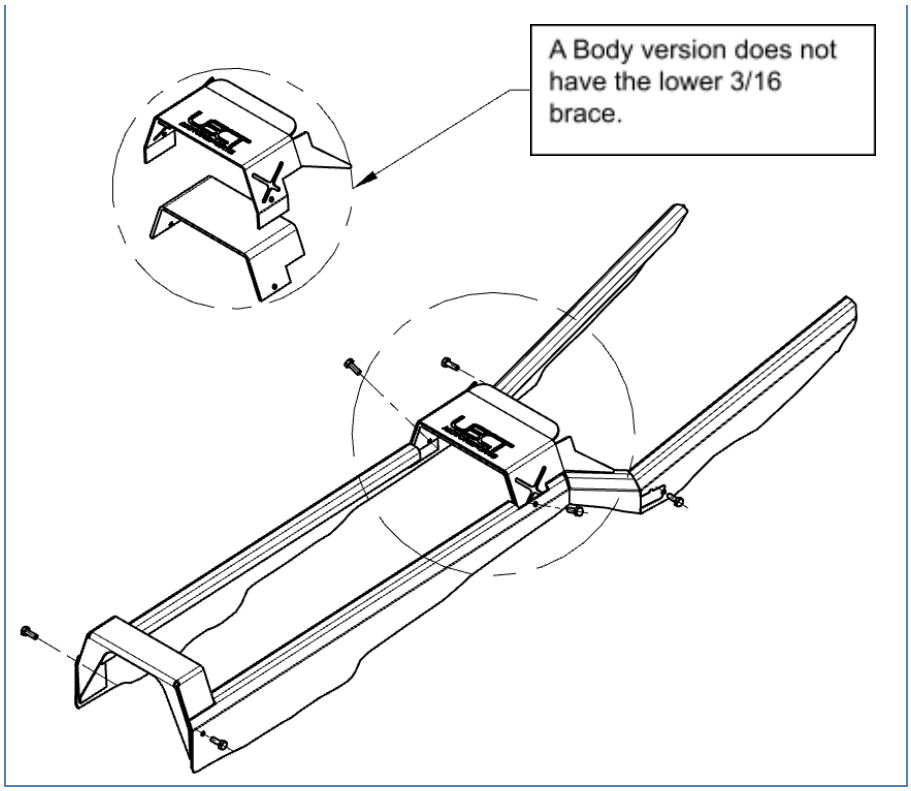



Figure 1 - Perimeter Transmission Tunnel Frame without covers or firewall eyebrow brace

5. Place the bolted together Perimeter frame onto the floor of your car, there are notches in the front that will line up with the floor to firewall seam to assist in proper locating front to back. The rear bracket will fit over the factory tunnel to assist in locating left to right.

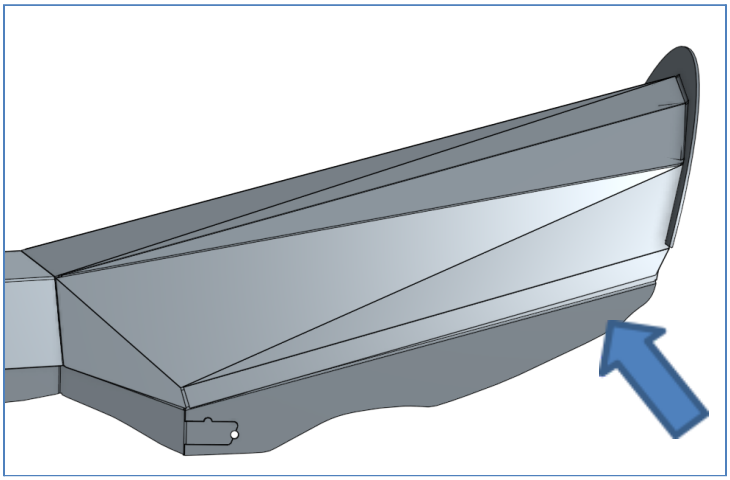


Figure 2 Notch to locate perimeter frame to firewall / floor seam.

a. Note: If your car is a factory manual floor shift car, you will need to remove the factory shift tunnel cover, the perimeter frame will not fit with the factory manual floor shift tunnel in place.

6. Confirm the fit of the Perimeter Frame to your car. You can loosen the six temporary ¼-20 fasteners to adjust the sides to follow the contour of your cars floor. Place the firewall eyebrow brace into position using the two eyebrow brackets and hold the front tunnel cover in place to confirm the fit.

7. With the fitment confirmed, you can tack weld the perimeter frame parts together along with the firewall eyebrow brace. Do not weld the frame parts to your car yet. Remove the temporary ¼-20 fasteners and confirm proper fitment of the front tunnel cover and the rear tunnel cover. Correct any miss-alignment or twist now, before you cut the floor or weld the perimeter frame to your car.

   a. Note: On B-Body cars, the perimeter frame inside flange will hold it off the floor until the OEM floor is removed. You can mark the spots that touch and remove those areas of the floor first until the perimeter frame touches at the floor at the outside perimeter.

8. Mark the floor where the perimeter frame and floor meet. Move the perimeter frame out of the way and mark inwards approx. ½" inside of the first marks. This is the line you will use to cut and remove the transmission tunnel floor.

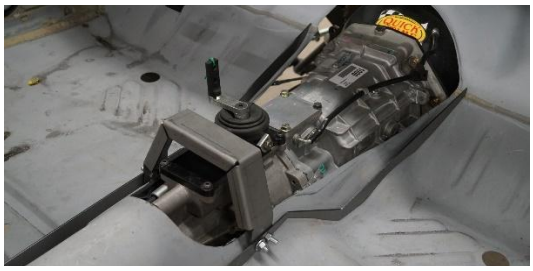
9. With the floor marked for your initial cut, use a cutoff wheel, body saw, jig saw or sawzall to remove the transmission tunnel sheet metal. Use caution near the torsion bar cross member as the sheet metal is double thickness and the cross member itself is very thick metal.

10. Mark cut lines on the lower cross member brace, cut the OEM factory torsion bar cross member and remove the center section. A sawzall with a long blade works well for cutting through the cross member. Avoid using a plasma cutter or a torch as they leave a very rough cut.

    a. Note: Some smaller transmissions may not require the center of the factory torsion bar cross member to be cut and removed. Most do. If you are not sure, do a trial fit of the transmission in your car. It is easier to remove more material than to have to weld some back in.

11. Trial fit the transmission, cut and remove the center section from the Torsion Bar Crossmember as necessary and confirm fitment and clearance around the transmission. Place the perimeter frame, front firewall eyebrow bracket and covers in place and make sure you have sufficient room for shifters, rod, cables and lines. When you are certain of fitment, you are ready to weld in the perimeter frame and torsion bar cross member block-off plates.

    a. Note: It is a best practice to wait to cut the transmission tunnel covers for shifter access openings etc. until AFTER the perimeter frame is welded into the car. This ensures the perimeter frame and cover are in the exact correct location before you cut the shifter hole. If you choose not to wait, we do sell replacement tunnel covers!



12. Checklist prior to welding:
    a. Perimeter frame is touching the floor completely around the perimeter.
    b. The front firewall eyebrow bracket contacts the firewall and lays flat against it.
    c. The front transmission cover aligns correctly with the front firewall eyebrow bracket and the perimeter frame.
    d. The rear transmission cover aligns correctly with the perimeter frame.
    e. The rear bracket aligns with the transmission tunnel contour and touches completely.
    f. Transmission fits correctly, has good clearance and is not touching or rubbing.
    g. Torsion bar cross member block off plates fit correctly with no gaps and touches the middle perimeter frame bracket.

13. Tack weld the perimeter frame to the floor of the car, tack weld the front firewall eyebrow bracket in place on the firewall.

14. Tack weld the torsion bar cross member block-off plates in position. These plates cap the OEM torsion bar cross member sides where you had cut out the center. The plates are made of 3/16 thick steel and designed to be welded to the remaining OEM torsion bar cross member sides and also to the middle perimeter frame bracket. This creates a very strong structure that replaces the structure you removed when you cut out the torsion bar cross member center. Be sure the plates contact the middle perimeter frame bracket so they can be fully welded later.

15. After tack welding, do a final check of the cover alignment. Also confirm the transmission fitment (easier to fix an issue now, before the entire perimeter frame, brackets and braces are fully welded to your car).

16. Weld the perimeter frame fully to the factory floor, along the outside edge. Weld the firewall eyebrow brace and rear tunnel brace fully to the floor. Weld the middle brace fully to the perimeter frame. Weld the cross member caps fully to the OEM torsion bar cross member and to the perimeter frame and the middle perimeter frame bracket.

17. Now trim excess floor material along the inside edge of the perimeter frame. Weld the inside of the perimeter floor to the factory floor. Grind the inside opening smooth. Yes, this is a lot of weld and you are adding a lot of structure to your car to keep in stiff and strong. Be sure the inside is smooth and free of any areas that can collect dirt or moisture. The bottom of your car is exposed to all road conditions, so be sure it is tight and secure.

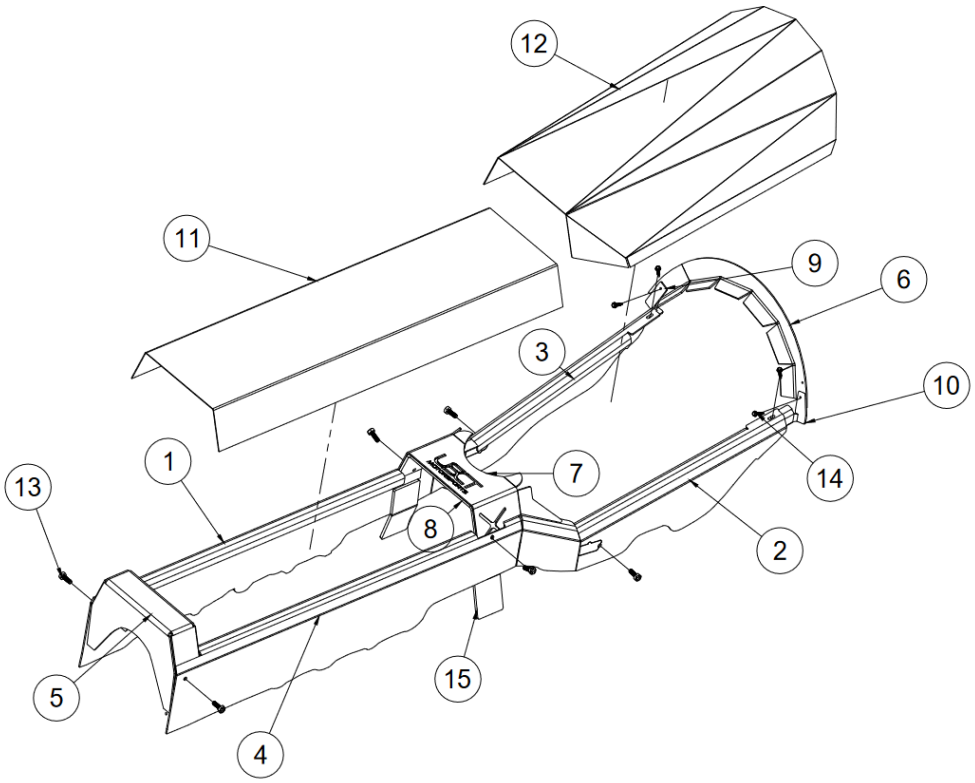
18. Your perimeter frame is now fully installed into your car, securely welded. Use seam sealer on all the seams to ensure the seams are weather tight.

19. Install your engine and transmission. Mark and cut access holes in the tunnel covers for your shifter and any other accessories that need access. It is best to start by drilling a hole and enlarge the hole until your shifter fits with adequate clearance as you move the shifter through all the gears, forward and reverse. Cable type shifters will need only a small hole for the cable to pass through. An accessory shift boot (not included) should be used to seal the hole and allow the shift lever to come through.

20. When the tunnel overs are ready to install, you can either weld them in place like your original factory floor or use a removable fastener for access to the transmission / driveshaft from above. Whichever method you decide to use, please make sure to seal the cover to the perimeter frame so no road debris, bad weather or exhaust fumes are able to get into the passenger compartment.

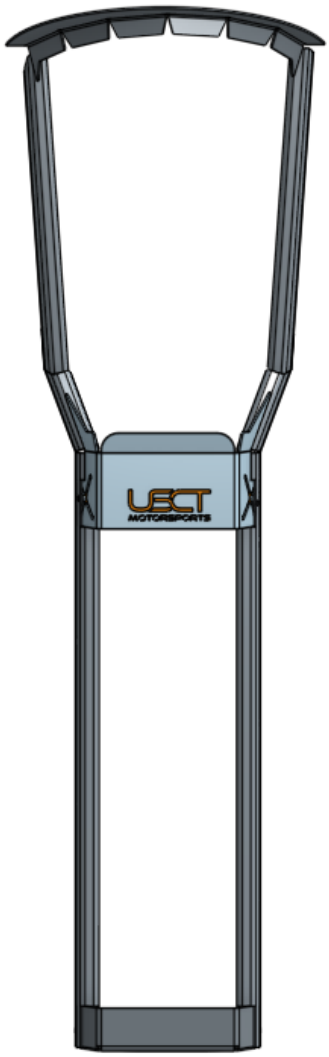
# Sample Exploded View

# Specific Body styles and Years may vary




1. Left side Back
2. Right Side Front
3. Left Side Front
4. Right side Back
5. Rear Tunnel Bracket
6. Front Firewall Eyebrow
7. Middle Tunnel Bracket
8. Middle Tunnel Bracket Top
9. Left side Eyebrow Connector
10. Right side Eyebrow Connector
11. Rear Cover
12. Front Cover
13. ¼-20 assembly screw (multiple)
14. Self Taping screw (multiple)
15. Crossmember Cap

# 70-74 E Body Perimeter Frame Dimensions

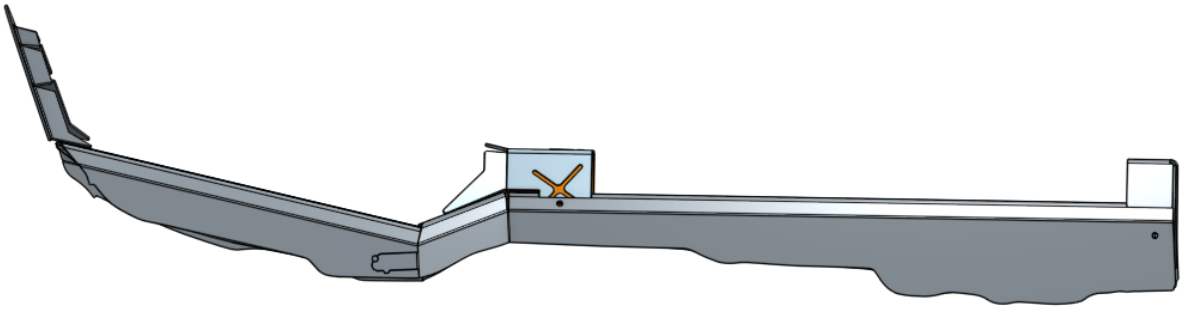


14” wide at front frame (Bell housing eyebrow is wider)

12” wide after 1st step

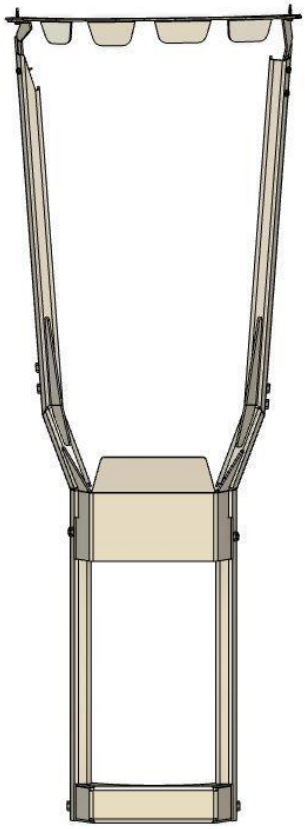
26.25 bell housing to start of trans cross member

9” wide at rear



50.875” long

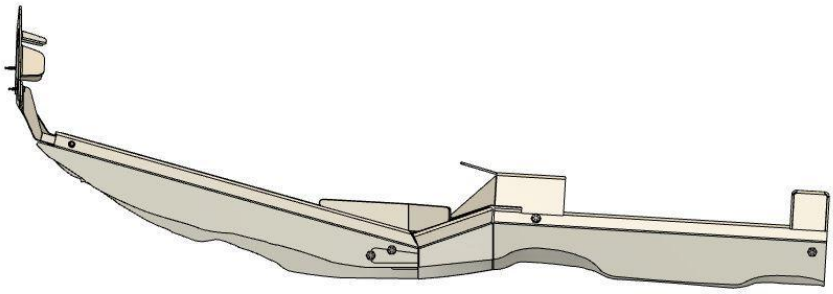
# 67-74 A Body Perimeter Frame Dimensions



15” wide at front frame (Bell housing eyebrow is wider)

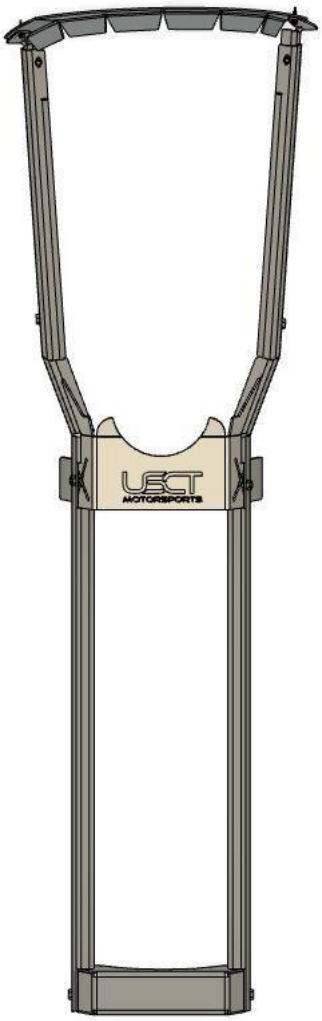
12” wide after 1st step

9” wide at rear



44.5” long

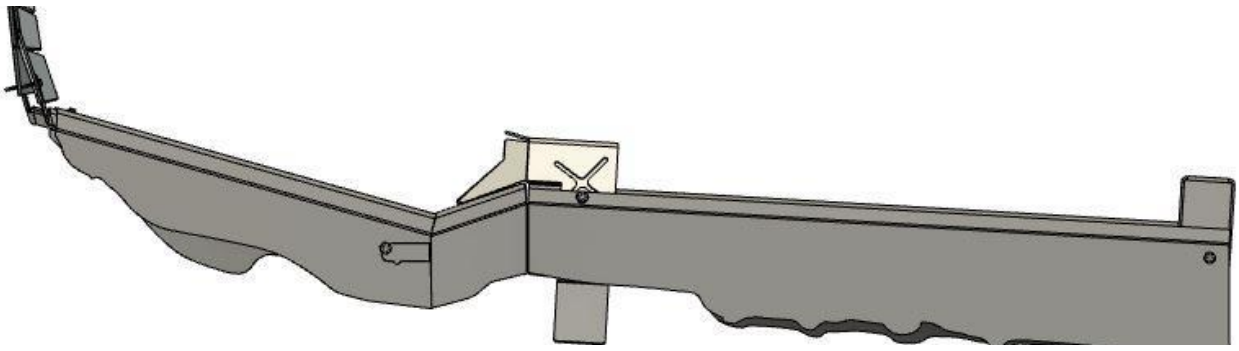
# 66-70 B Body Perimeter Frame Dimensions



14.187” wide at front frame (Bell housing eyebrow is wider)

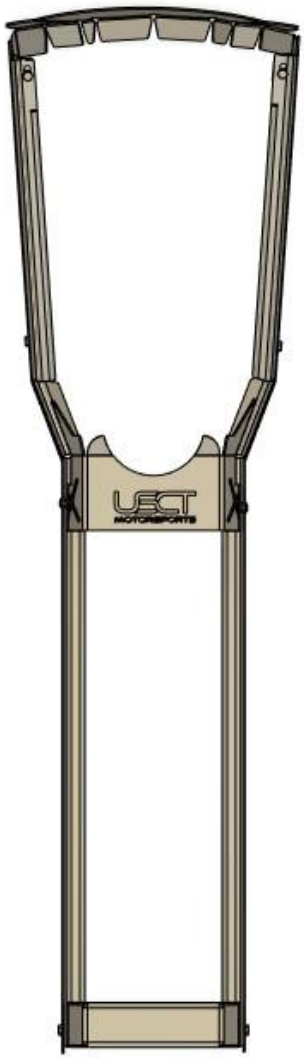
12” wide after 1st step

9” wide at rear



51.375” long

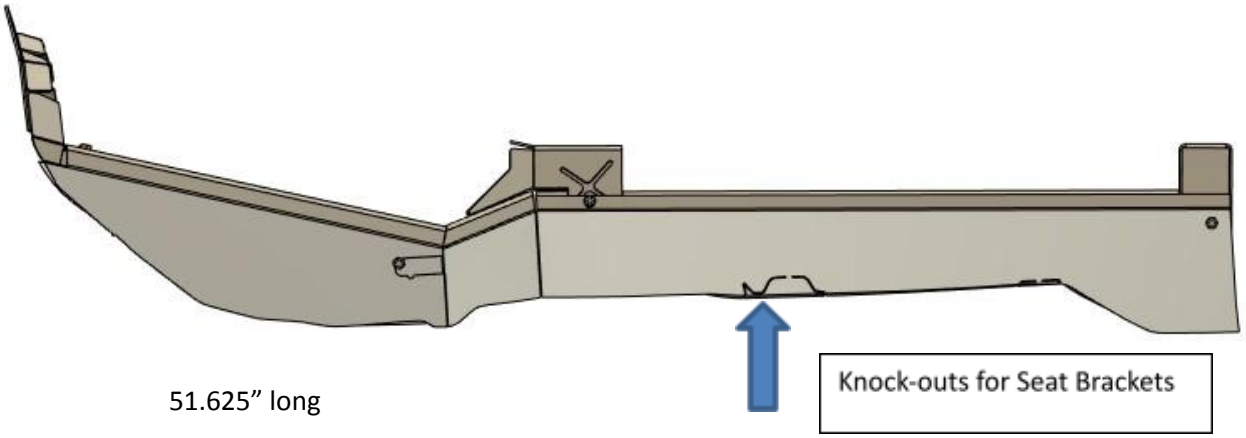
# 62-65 B Body Perimeter Frame Dimensions



14.3” wide at front Perimeter Frame

12” wide after 1st step

9” wide at rear




51.625” long