



HIGHMARK FENDER FLARES RAM HD FRONT



PLEASE READ BEFORE YOU START

TO GUARANTEE A QUALITY INSTALLATION, WE RECOMMEND READING THESE INSTRUCTIONS THOROUGHLY BEFORE BEGINNING ANY WORK. THESE INSTRUCTIONS ASSUME A CERTAIN AMOUNT OF MECHANICAL ABILITY AND ARE NOT WRITTEN NOR INTENDED FOR SOMEONE NOT FAMILIAR WITH AUTO REPAIR.

INCLUDED PARTS

Flare RH
Flare LH
Bumper Extension RH
Bumper Extension LH
Wheel Liner RH
Wheel Liner LH
Fastener Pack
LED Lamp Kit
Mounting Bracket Kit
Rocker Panel Trim Templates
Dill Templates

REQUIRED TOOLS

Basic hand tools
Hammer
Drill
Drill bits - 1/4, 7/16, 1/2, 13/32, 3/4
Rivet gun
Plastic rivet gun
Wire strippers
Air saw
Cut off wheel
Grinder
Vise
Wax & grease remover
Rust preventer
Silicone



FRONT FLARE INSTALLATION

I. REMOVE FACTORY COMPONENTS

1. Remove the factory wheel flares (if equipped) and wheel liners (fig. 1).
2. Remove foam inserts (fig. 2).

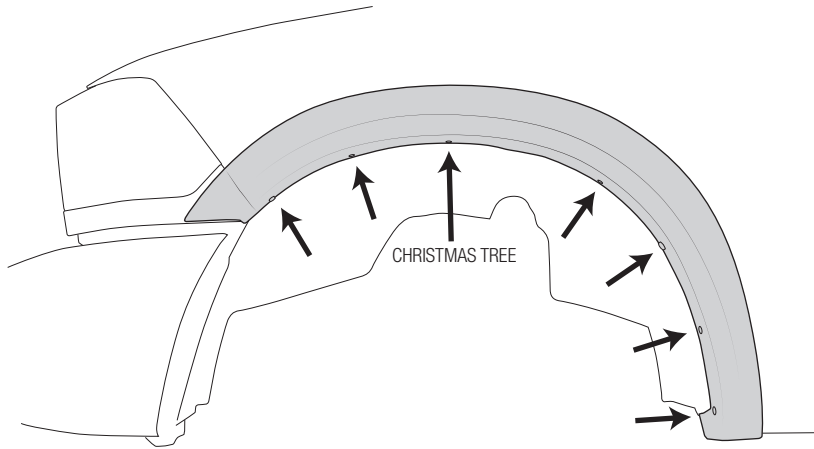


Figure 1

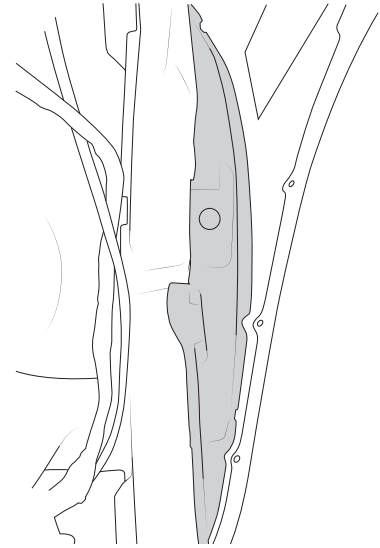


Figure 2

3. Remove Grill.
4. Remove headlights and attaching brackets. **SAVE** all hardware (fig. 3).

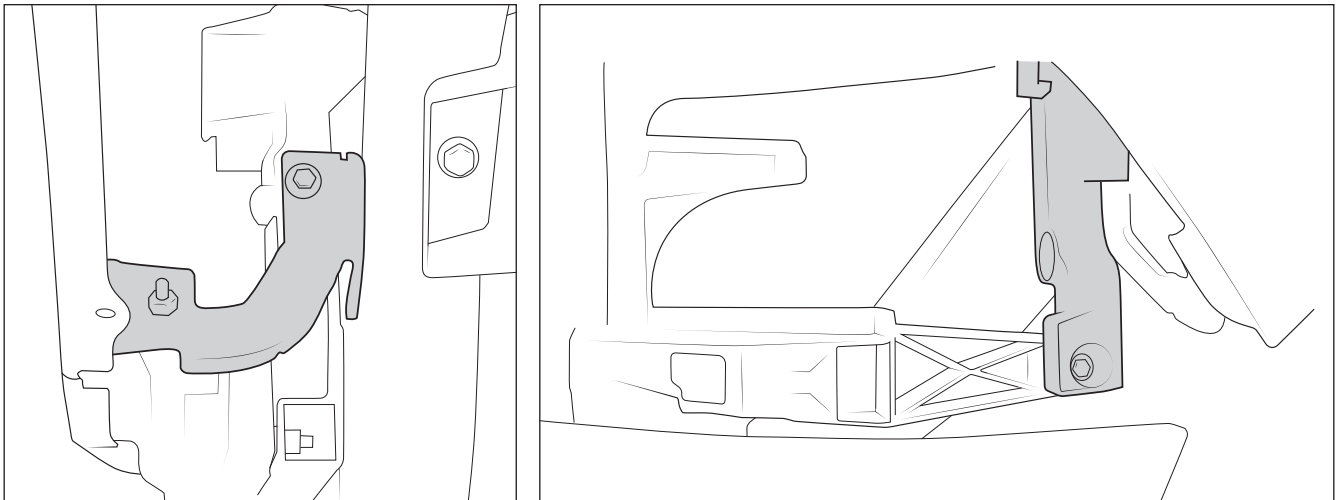


Figure 3

5. Remove any badges on fender.



II. PREPARE FOR CUTTING

1. Protect fenders, doors, hood, and windshield using crash wrap or welding blankets. Sparks from cutting can damage paint and glass.
2. Reposition wire harnesses on driver and passenger sides.
 - A. Remove all body mount bolts along the driver side (fig. 4).
 - B. Wire harnesses will be repositioned on the interior side of the driver-side frame rail (fig. 5).



Figure 4



Figure 5

- C. Lift cab off of frame just enough to slip wire harnesses to the other side of the body mount. Lift cab at boxed structure behind the second cab mount (fig. 6).



Figure 6

- D. Reinstall body mount bolts and torque to 90 ft-lbs.
 - E. Mark and drill 1/4" holes in the frame rail to use existing push pins on the wire harness plugs.
 - F. On the passenger side, remove the harness from the pinch weld and remove the clips (fig. 7).
 - G. Drill 1/4" hole and slot as shown (fig. 8).



Figure 7

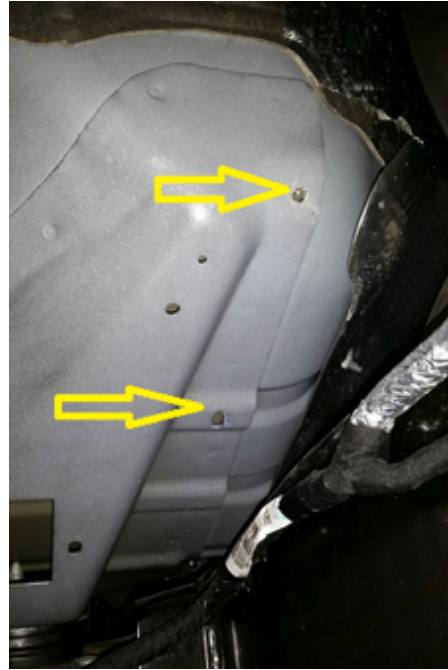


Figure 8

H. Reinstall passenger-side wire harness in new location (fig. 9).



Figure 9



3. Remove bolts from fender.

- A. Remove two bolts at the bottom of the fender and one in the door jamb (fig. 10).



Figure 10: Driver-side shown

- B. Pull fender away from body and place something between the fender and door to hold the fender away from the body (fig. 11).

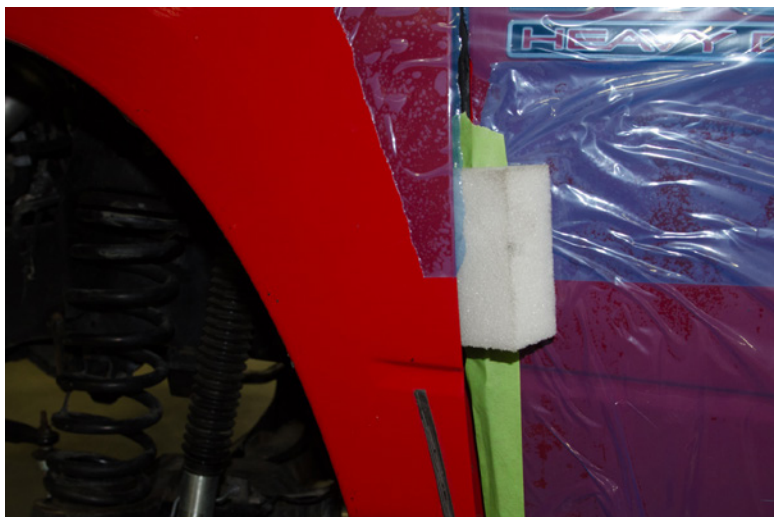


Figure 11

4. Cut the fenders.

- A. Cut the fenders at the body line using a cut off wheel or air saw (fig. 12).

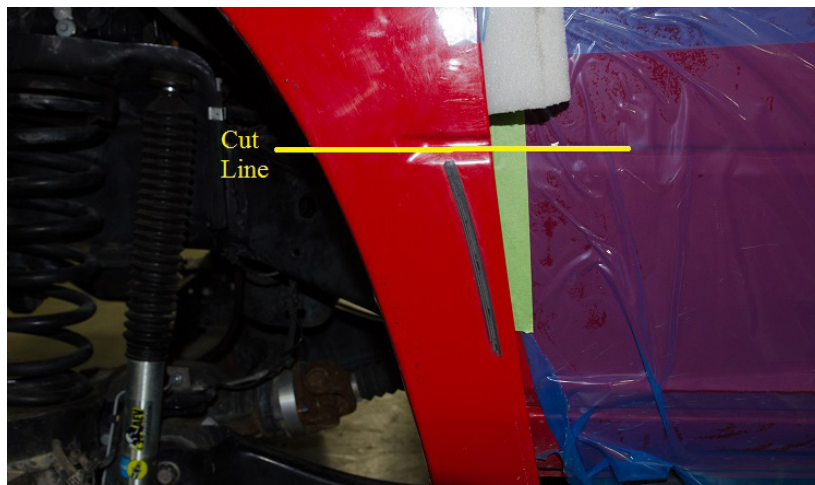


Figure 12



- B. Remove section of fender and reinstall the bolt in the door jamb.

III. MARK NEW WHEEL OPENING

1. Loosely install the bottom flare bracket.
 - A. Loosely install the bracket in the rear-most bolt location of the factory fender using the factory M6 bolts (fig 13).
 - B. Mark the location for the second hole in the bracket and drill out to 1/4". Use rust inhibitor or paint on bare metal. Fasten using the factory 6 mm bolt and lock nut (fig. 14).

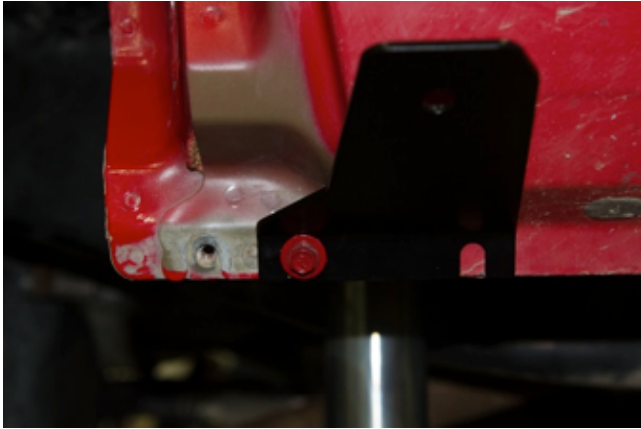


Figure 13



Figure 14

- C. With a helper, position the flare and install one black M6 button head bolt and large black fender washer through the bracket and into the bottom threaded insert in the flare. When positioning, the gap between the flare and the door should be uniform.
- D. Align the front of the flare with the headlight opening (fig. 15).



Figure 15

- E. Trace the new wheel opening then remove the flare and flare bracket.



2. Trim headlight surround.

- A. After the new line has been traced onto the headlight surround, remove it and save the hardware.
- B. Offset the traced line by 1/4".
- C. Cut the headlight surround making sure to remove the tab on the back side (fig. 16).

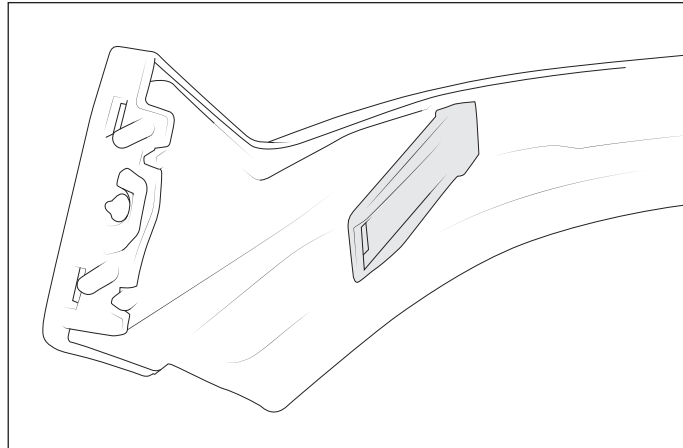


Figure 16

- D. Smooth all trimmed edges.

IV. CUT NEW WHEEL OPENING

1. Cutting wheel opening.

- A. Offset your traced line by 1/4" making the opening larger.
- B. Cut the new wheel opening using an air saw, cut off wheel, or air sheers. For added protection you can layer painter's tape around the wheel opening so tools will not contact the paint. GO SLOW and take your time as to not generate too much heat that can damage the paint.
- C. Smooth all edges and treat with a rust inhibitor or paint.

2. Cab closeout panel.

- A. Use the provided cutting template to mark where to cut the rocker panel. Templates are to be installed in the factory fender locations. There is an inside and outside template for both driver and passenger sides of the vehicle. Install and mark cutting lines with a permanent marker (fig. 17).

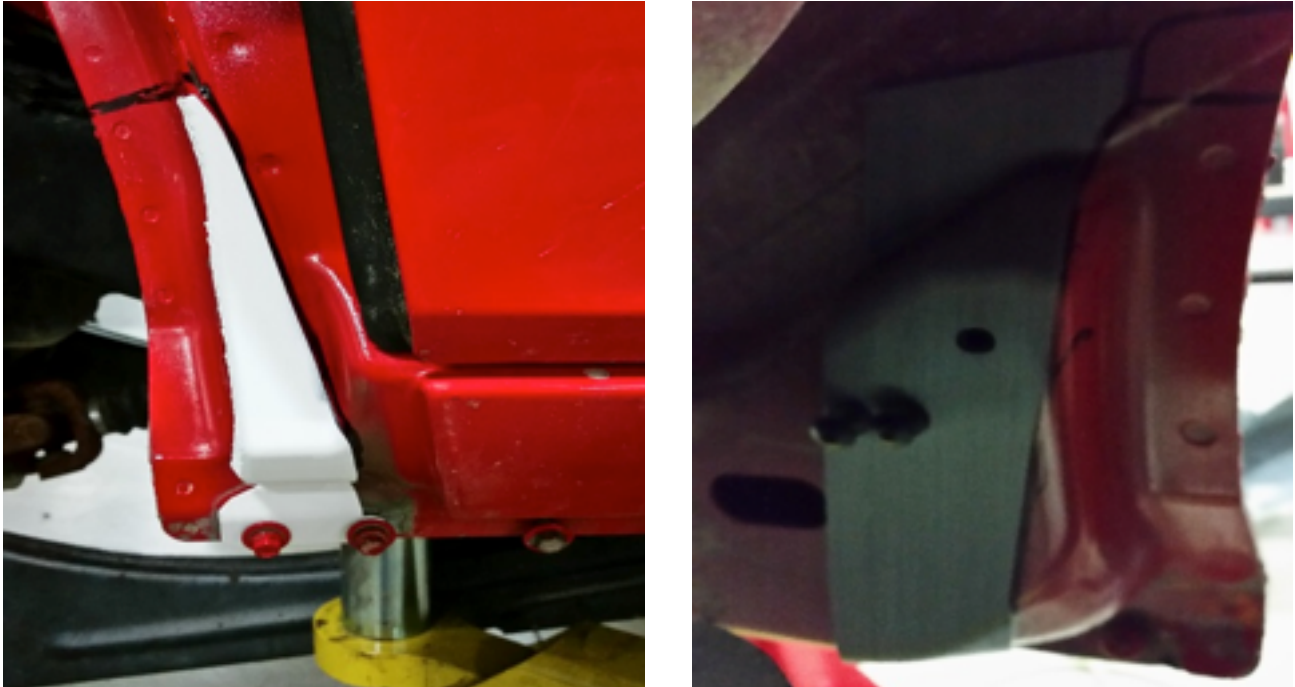


Figure 17 Left: Outside driver side Right: Inside driver side.

- B. Remove templates and use lines as a guide. It is good practice to not cut right on the traced lines. You should cut away from the line and grind to it to make sure that the patch panel fits uniformly all the way around opening. Begin cutting rocker panel. Use a combination of both air saw and cut off wheel. **NOTE: There is insulating foam in between the panels you will be cutting and it is flammable. Use cut off wheel a little as possible to not catch the foam on fire**
- C. The pinch weld at the bottom of the rocker should be flush with the face of the patch panel (Fig. 18).



Figure 18

- D. Make several relief cuts in the pinch weld on the fire wall as shown (fig. 19). BE SURE TO LEAVE THE SPOT WELDS INTACT.
- E. Using a hammer or air hammer, bend the pinch weld over. You can seal the cuts with seam sealer or silicone (fig. 20).



Figure 19



Figure 20

- F. When closeout panel fits cut opening uniformly all the way around mark rivet hole locations. Drill one or two holes for both the interior and exterior flanges. Place rivets in the locations to loosely install the closeout panel. Do not completely install just yet.
- G. To make sure there has been enough material removed loosely install flare with several fasteners. The closeout panel should be flush with face of flare within reason.



Figure 21

- H. Remove flare and drill remaining holes for rivets. Run a bead of seam sealer along the edge of the closeout panel that will contact the edge of the opening.
- I. Install rivets
- J. Run another bead of seam sealer all the way around the closeout panel.
- K. Paint over seam sealer and flattened pinch weld. Gain access to the inside of the rocker by any of the holes located in the bottom of the rocker. Spray any kind of rust inhibitor into the cavity.



V. TRIM FACTORY COMPONENTS

1. Headlight brackets.

- A. Trim both the vertical and horizontal plastic brackets of the headlight framing, removing the shaded portions as shown (fig. 22).

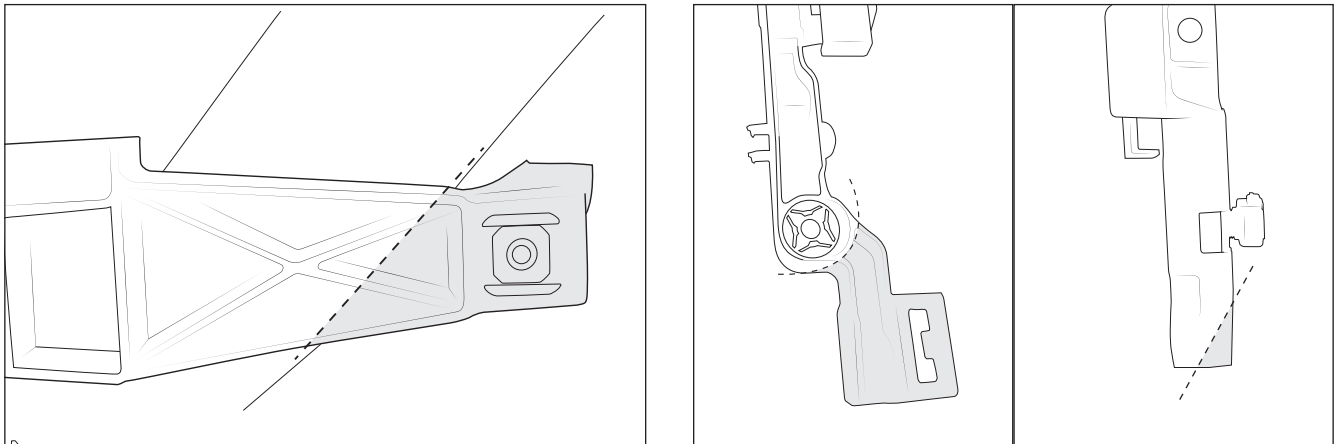


Figure 22 Left: Horizontal Bracket Right: Vertical Bracket (driver side shown)

- B. Position new headlight bracket and mark material on the back side of the fender to remove (fig. 23).



Figure 23



- C. Using an angle grinder, remove material from the back side of the fender so there is nothing between the headlight bracket and the mounting surface of the fender.
- D. Install new headlight bracket using the factory hardware.
- E. Align bracket with the factory locating hole.
- F. Mark the second hole for nutsert on metal framing and a third hole on the lower headlight plastic framing (fig. 24).

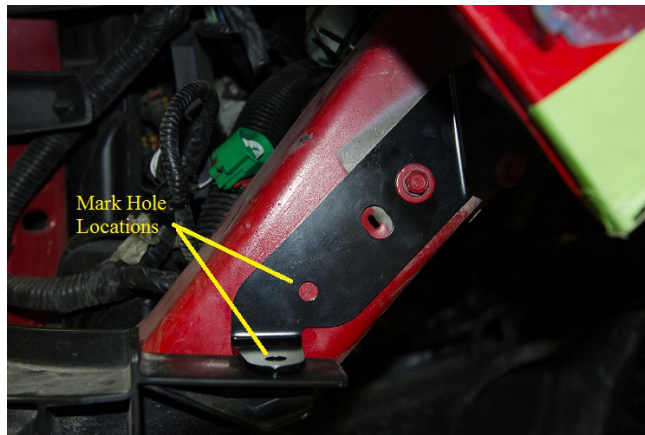


Figure 24

- G. Remove bracket and drill hole in metal framing to 13/32". Treat bare metal with rust inhibitor or paint.
- H. Install nutsert using a nutsert tool.
- I. Drill the hole in the plastic framing to 1/4".
- J. Loosely install bracket using factory bolt in the factory location. Use an M6 bolt, washer, and nut through the plastic framing.
- K. Reinstall the modified vertical headlight bracket using factory hardware (fig. 25).
- L. When installing the headlight—if adjustment is necessary, pull the tab on the bracket and lock into place (fig. 26).



Figure 25

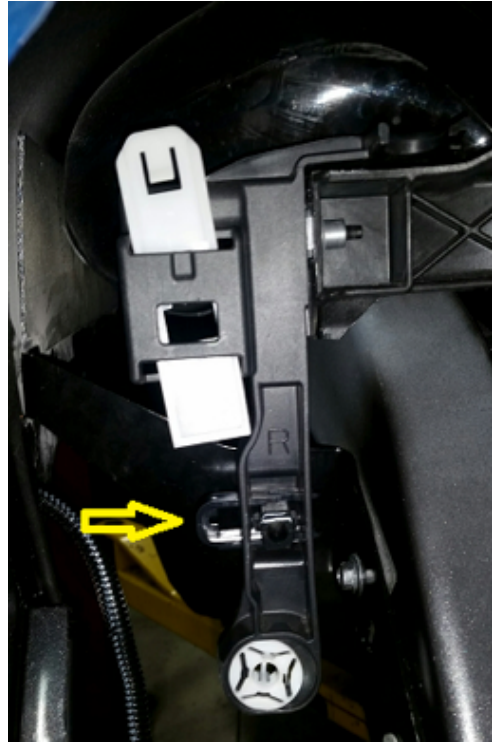


Figure 26

VI. INSTALL FLARES

1. Mark hole locations for AEV flares.

A. Place drill templates on mounting surface of flares over hole locations (fig. 27).



Figure 27



- B. Reinstall the headlight surround.
- C. Fold pull tab over so that when the flare is pressed up against the body it can still be removed (fig. 28).



Figure 28

- D. Reinstall the lower bracket and loosely install one M6 bolt into the bottom of the flare to help line the flare up into position.
- E. Make sure all gaps are uniform and pull the tape back from the flare and attach to the fender with additional tape strips.
- F. Carefully remove the flare to make sure templates stick on the fender (fig. 29)

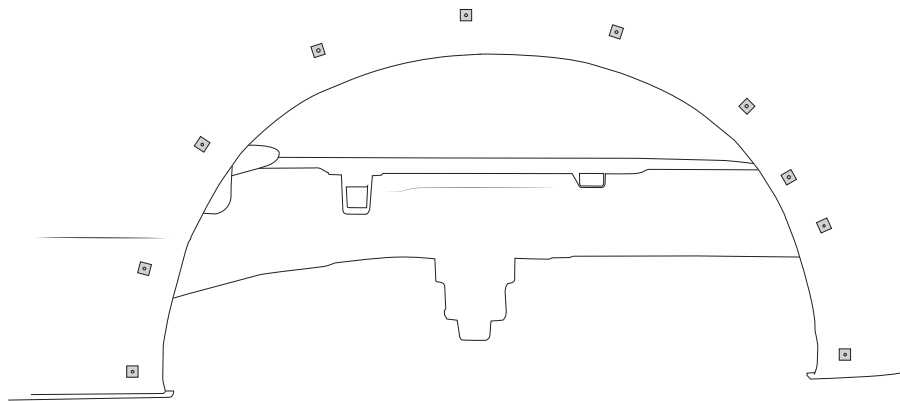


Figure 29

- G. Mark holes and remove tape. Center punch then drill holes to 1/2".
- H. Loosely install all hardware.
- I. Make sure all gaps and body lines are acceptable then tighten all hardware include the lower flare bracket.



2. Install marker lights.
 - A. Drill out hole in the flare for marker light using a 3/4" hole saw.
 - B. Install grommet into flare. Pass wires through the grommet, flare, and out the larger hole on the mounting surface of the flare.
3. Solder connector to marker light and tail light wiring.
 - A. Tap into the factory parking lamp circuit.
 - B. Determine if you have base head lamps or premium head lamps by examining the plug for the parking lamp (fig. 30).

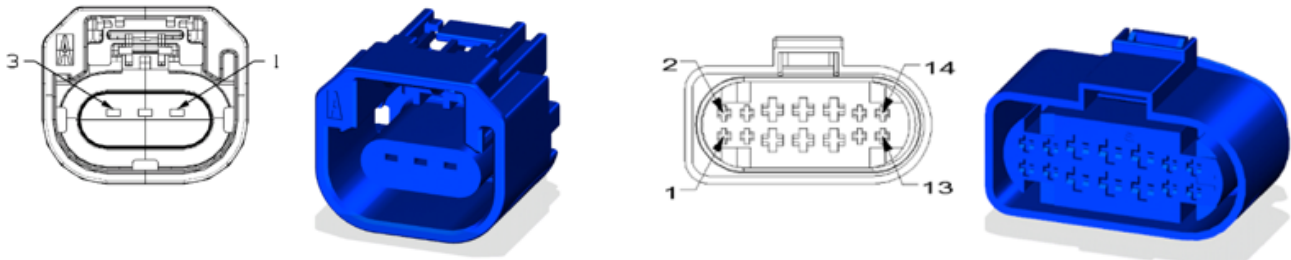


Figure 30 Left: Base headlamp Right: Premium headlamp

- C. The white lead for the new marker light will be soldered to the ground circuit coming from pin location 1 (base models) or 13 (premium models). The wire should be black in color.
- D. Black lead for the marker light will be soldered to the power circuit coming from pin location 2 (base and premium models).
- E. Connect bullet connectors and zip tie wires to the existing head lamp harness.

VII. INSTALL WHEEL LINERS

1. Wheel Liner Capture Bracket.
 - A. Make the remaining part of the bedside support rod as straight as possible.
 - B. Drill an 11/32" hole for a nutsert centered 1 inch outboard of the large hole in the bottom of structure (fig. 31).



Figure 31



- C. Bend the rod as shown (fig. 32–34). Keep in mind that the flat side of the tab will be bolted to the structure.

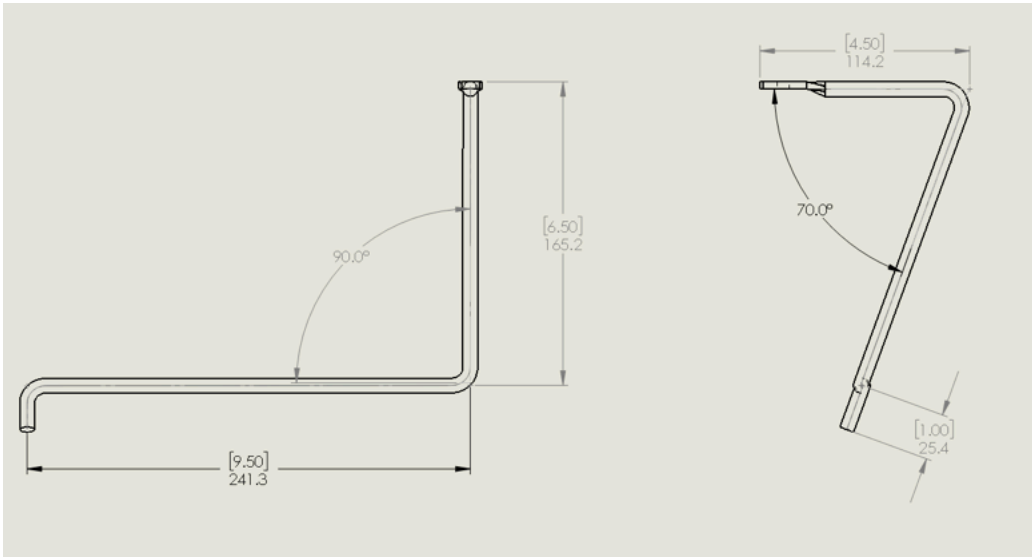


Figure 32: Driver Side

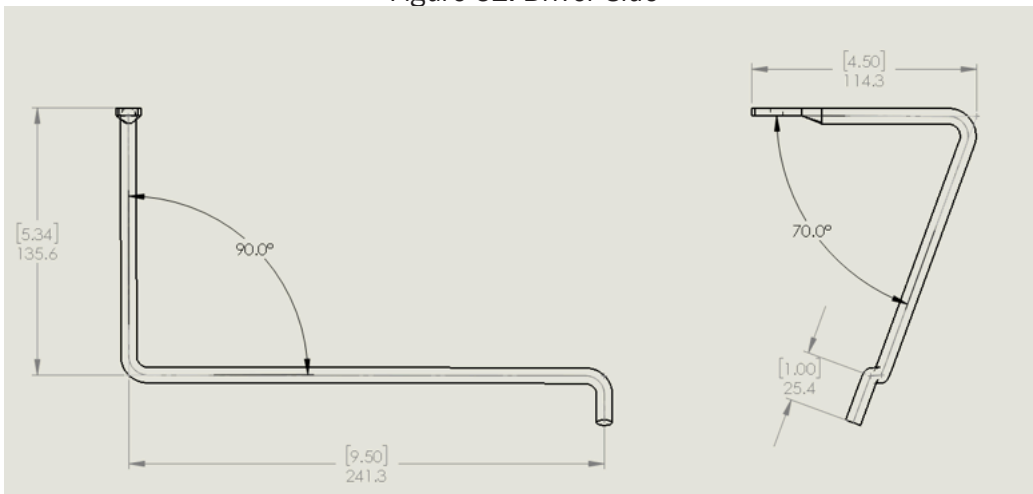


Figure 33: Passenger side



Figure 34 Left: Driver Side Right: Passenger Side



- D. Install nutsert
- E. Paint rods to cover any bare spots where paint may have flaked off.
- F. Slide rubber isolator over the end of rods (fig. 35)



Figure 35

- G. Install the one inch long 90° bend with the rubber isolator into the hole in the frame rail just behind the front body mounts (fig. 36-37)

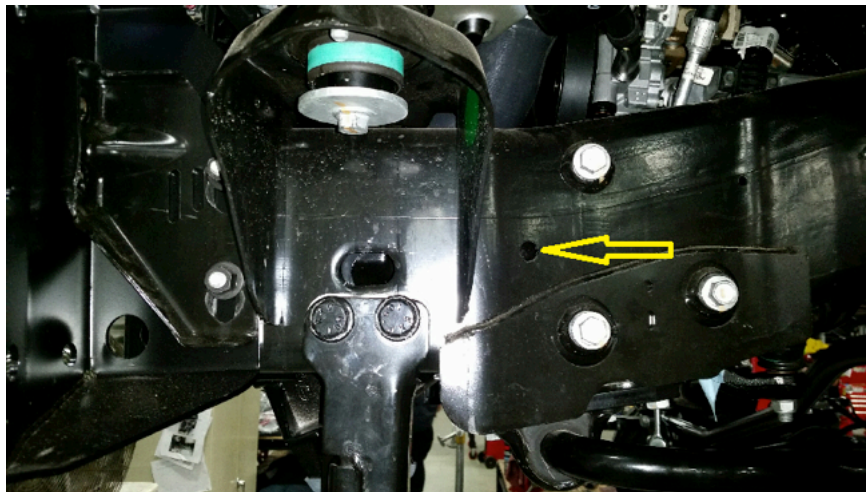


Figure 36: Driver Side

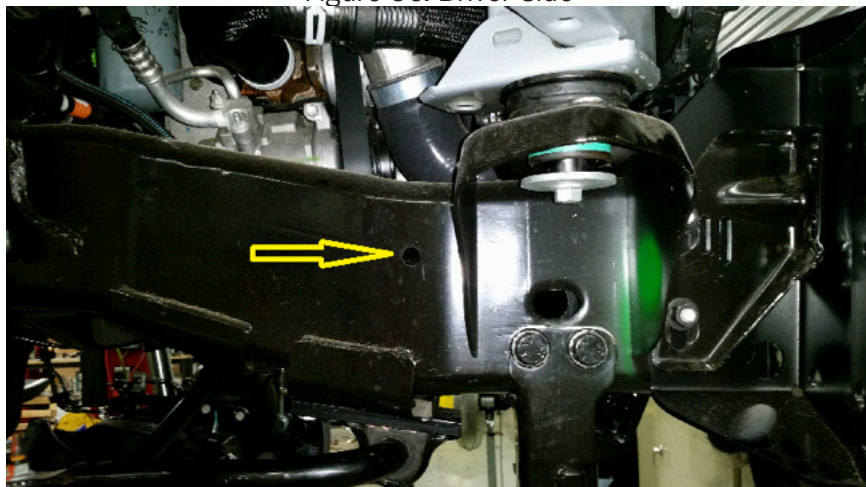


Figure 37: Passenger Side



- H. Rotate rod into position and use an M6 bolt and washer to fasten (fig. 38–39). Make sure the driver side rod does not contact the washer solvent reservoir.



Figure 38: Driver Side



Figure 39: Passenger Side

- I. Liner will be attached to the rod at the last hole on the leading edge with a p-clip, M6 button head bolt, washer, and locking nut (fig. 40).



Figure 40



- J. A second p-clip will be installed roughly one inch up from the 90° bend. Mark location and drill a 1/4" hole.
- K. Fasten liner to rod with second p-clip, M6 button head bolt, M6 nut, washer, and locking nut (fig. 41).

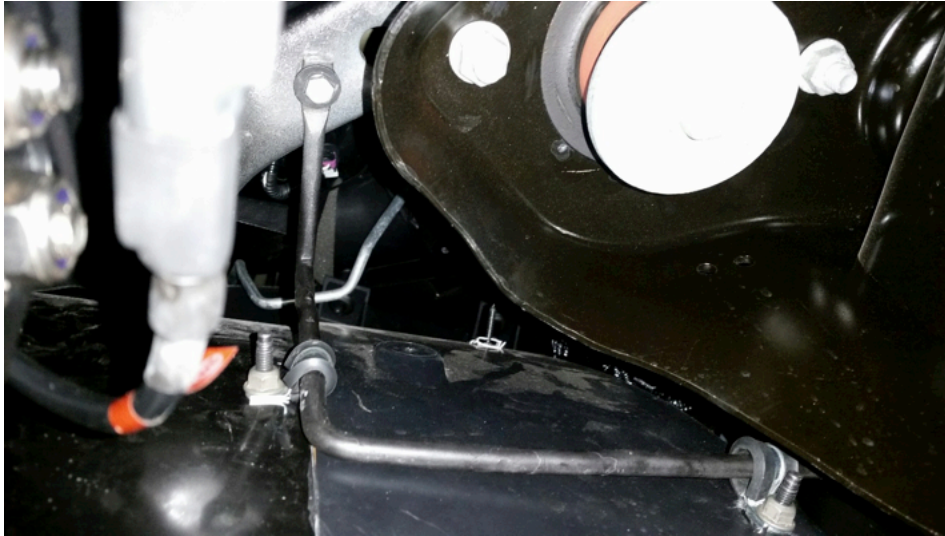


Figure 41

- 2. Cut factory wheel liners.
 - A. Mark the cut line and cut the factory wheel liners with an air saw or utility knife (fig. 42).
 - B. Install modified wheel liners using factory hardware.

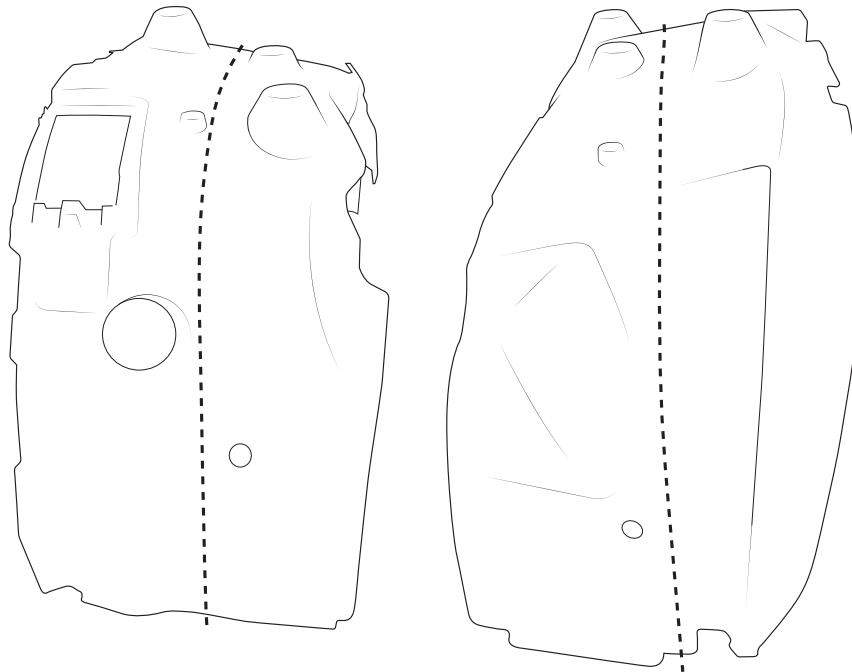
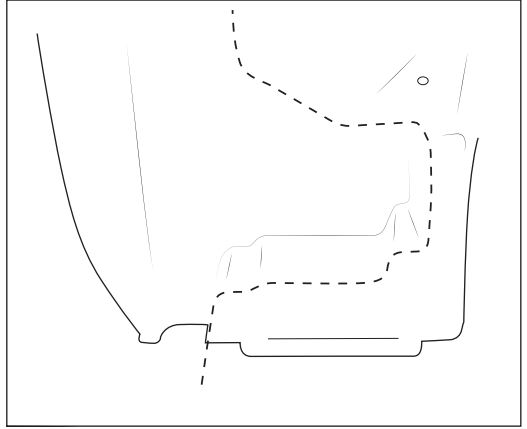
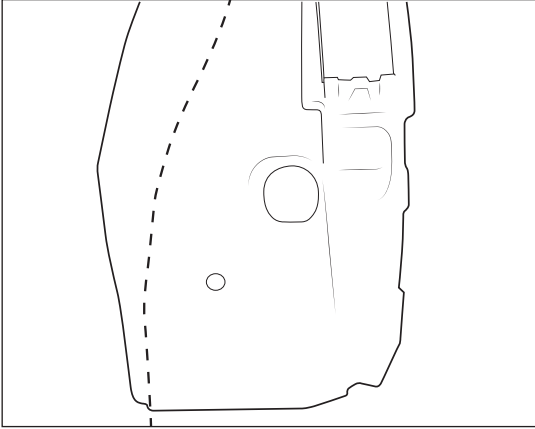
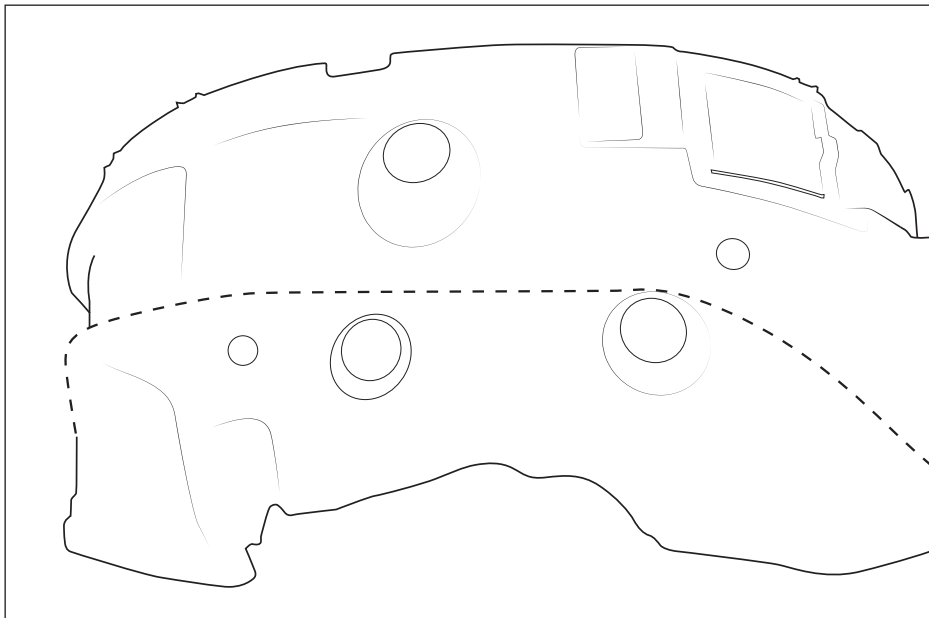


Figure 42: Passenger side front view (left) rear view (right)



Driver side front view (left) rear view (right)



Driver side top view



3. Install new wheel liners

- A. Drill existing holes in the fire wall, one on each side, to 13/32" and install nutsert using nutsert tool (fig. 43).



Figure 43 Left: Driver side Right: Passenger side

- B. With a helper, position new liner into place. Use two circular cut outs in liner to help locate. NOTE: You can help hold the liner in position by temporarily inserting two factory wheel liner bolts into the hole locations between the circular cut outs. They will thread into the plastic with little pressure.
- C. On the driver side liner there is a hole that will help align, along with the circular cutouts. Insert a button head bolt through the hole (fig. 44). It will thread into the nutsert previously installed.



Figure 44 Driver side shown

- D. Make sure the liner fits uniformly around the entire length of the flare. Transfer hole locations to cab closeout plate then drill to 13/32" and install nutserts.
- E. Mark hole locations on flare and drill to 1/4".



Driver side



Passenger side

- F. Hold liner in place with mating surface of factory liner.
- G. Mark and drill 1/4" holes into factory liner.
- H. Remove liner and install factory u-nuts into factory liner over 1/4" holes just drilled (fig. 45).

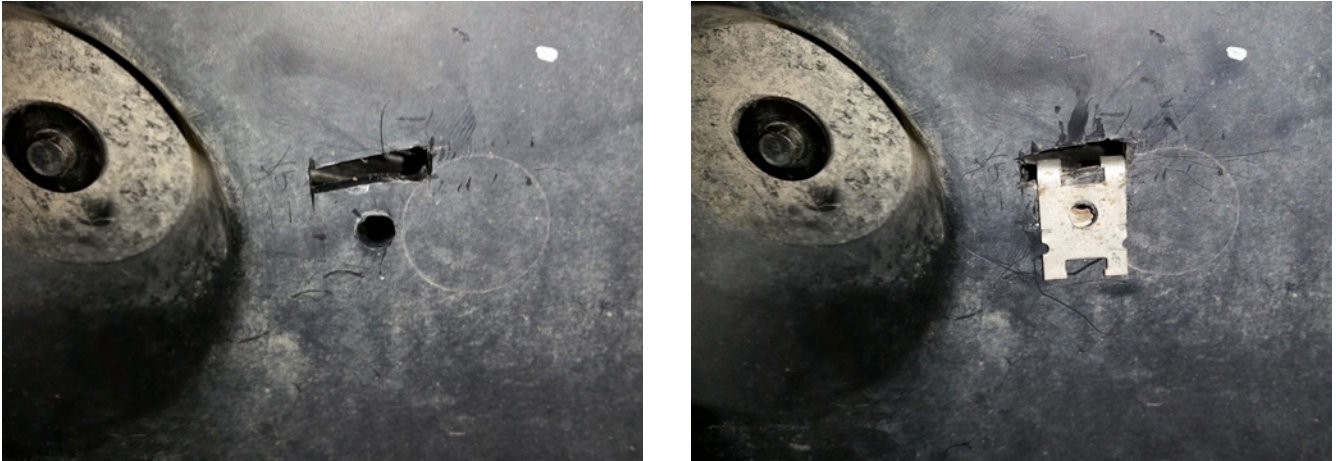


Figure 45

- I. Install headlight. Be sure to lock the locking tab.
- J. Reinstall foam inserts into the door jambs.
- K. Install new wheel liners using plastic rivets and factory hardware. Three of the factory liner screws will need to be trimmed down to 3/4" and use in locations shown (fig. 46).

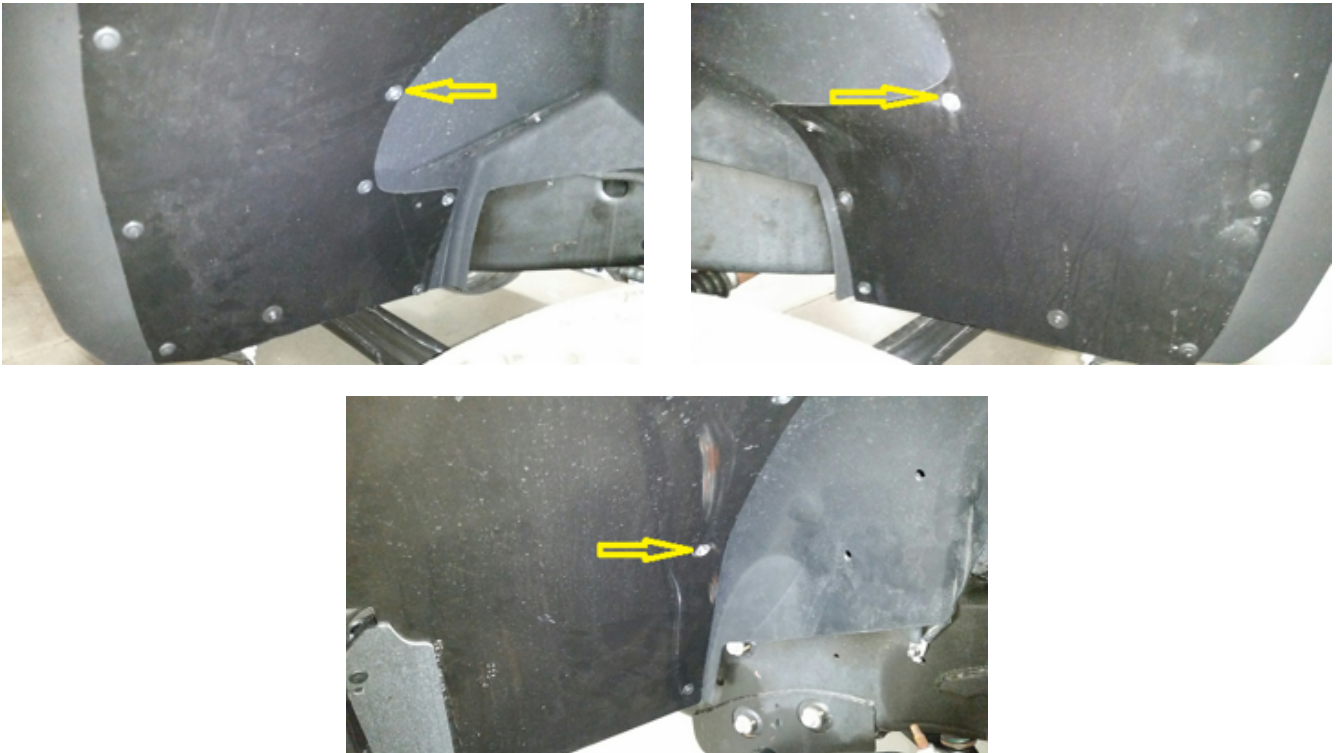


Figure 46 Left: Passenger side, Right: Driver side, Bottom: Driver side

- L. Trim front edge of factory liners so that they are flush with the new liners.
 - M. Button head bolts along with large black fender washers thread into the nutserts.
 - N. Install wheel liner capture plates onto the corners of the bumper with 1/4" push fasteners.
4. Reinstall grill and other factory components.



VIII. INSTALL BUMPER EXTENSIONS

Attach the Flare Extensions to each bumper corner with the provided M6 bolts and large fender washers. DO NOT overtighten (fig. 47).

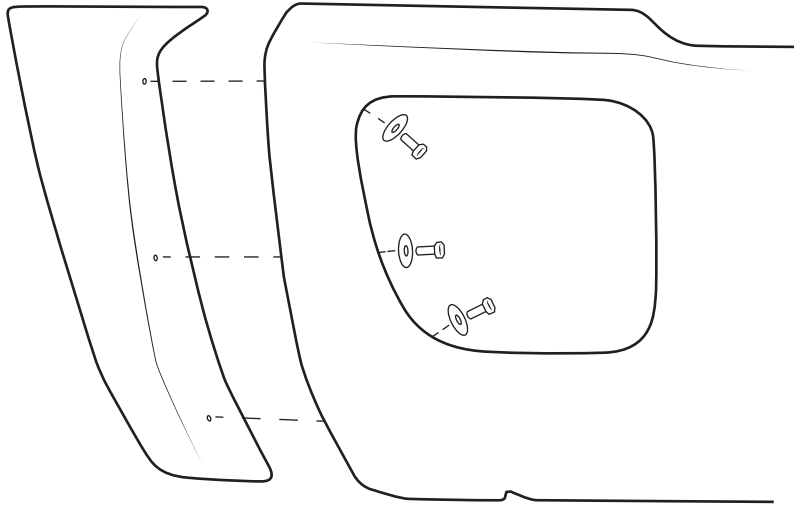


Figure 47

IX. INSTALL STEERING STOPS

1. Grind the axle where the factory steering stop makes contact with the knuckle. Remove paint to a bright shiny metal for welding (fig. 48).

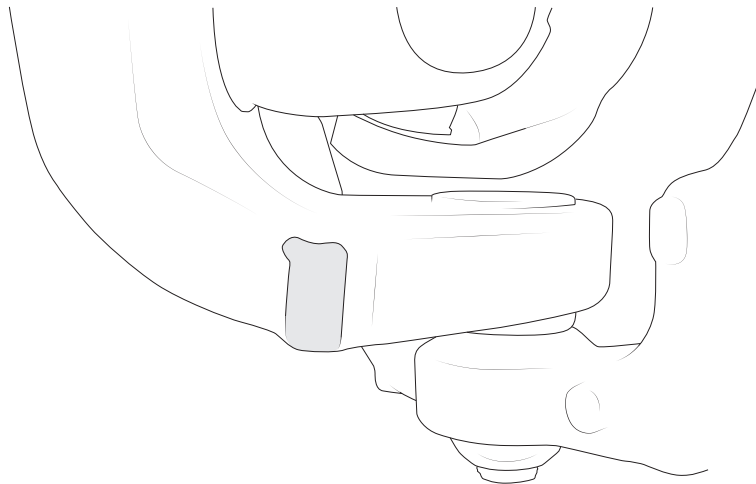


Figure 48

2. Source a 1/8" thick piece of steel and trim to 1 inch by 1/2 inch wide.



3. Weld the new steering stop onto the axle. You can hold this in place easily with a magnet during welding (fig. 49).

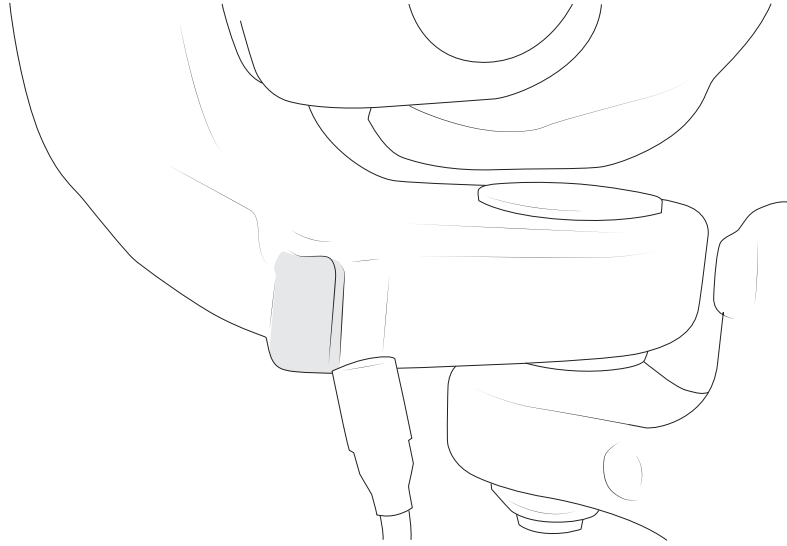


Figure 49

4. Grind welds smooth.
5. Paint bare metal to prevent corrosion.