



HIGHMARK FENDER FLARES

FOR 2019+ RAM HD
FRONT FLARES

AEV30406AA

Last Updated: 06/04/20

INSTALLATION GUIDE



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 preventative
Silicone

NOTE: Installation of the Front Highmark Fender Flares requires the use of Mopar bedside support rods. Check to see if your vehicle is equipped with these rods before starting installation. Many trucks do have these from the factory but if your vehicle does not, you will need to purchase Mopar part numbers: 68196934AA & 68196935AA from your local dealership.



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).

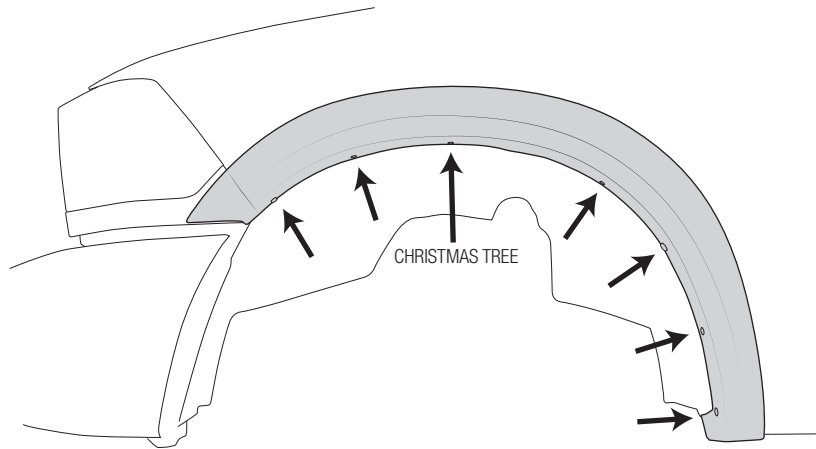


Figure 1

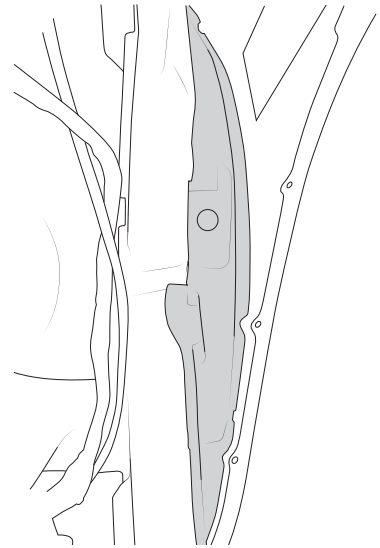


Figure 2

3. Remove headlamp brackets and SAVE factory hardware (fig. 3).

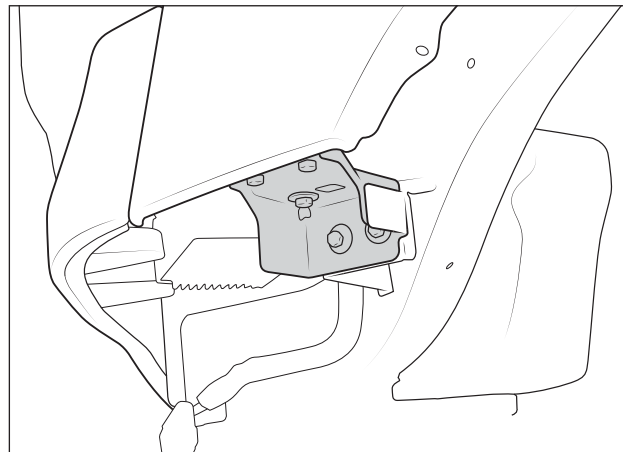


Figure 3

4. 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. Carefully remove wire harness connectors from factory positions (fig. 4) and unclip the harness from the pinch weld to allow slack.



Figure 4 Passenger side (left) Driver side (right)

- B. Install AEV harness retention brackets onto the body mounts on both sides of the vehicle using M6 x 1.0 hex bolts, washers, and flange nuts (fig.5).

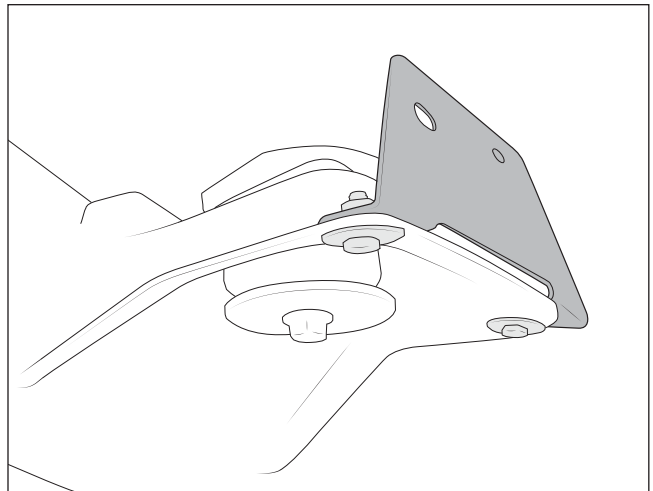
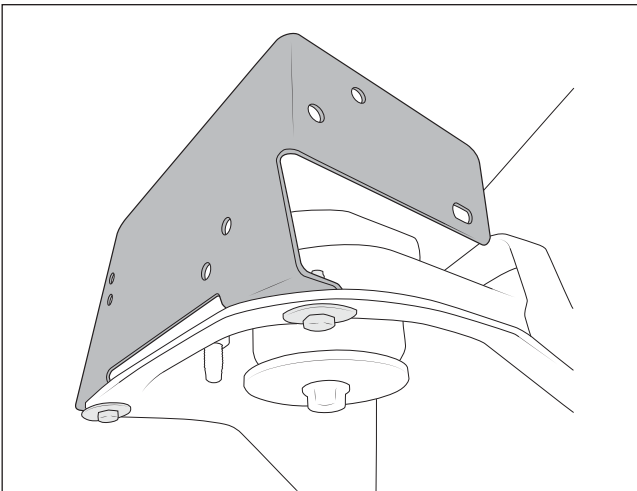


Figure 5: Passenger-side (left) Driver-side (right)



- C. Reposition and secure the factory wire harness connectors onto the AEV brackets (fig. 6).



Figure 6

- D. Route and secure the factor harness inboard of the pinch weld on both driver and passenger sides (fig 7).



Figure 7

3. Remove bolts from fender.

- A. Remove two bolts at the bottom of the fender and one in the door jamb (fig. 8).

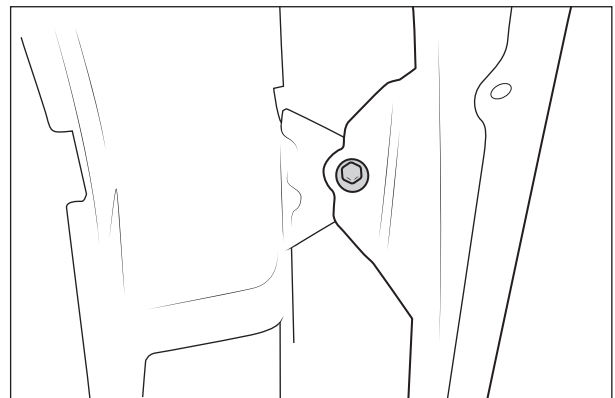
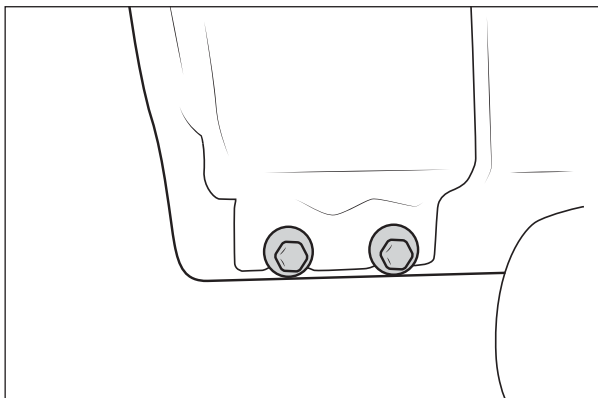


Figure 8: Driver-side shown



- B. Pull fender away from body and place a foam block or rag between the fender and door to hold the fender away from the body (fig. 9).

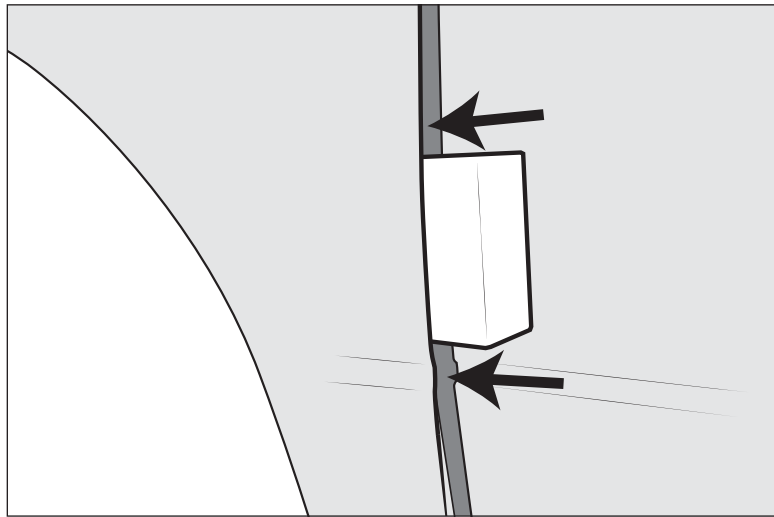


Figure 9: Driver-side shown

4. Cut the fenders.

- A. Cut the fenders at the body line using a cut off wheel or air saw (fig. 10).

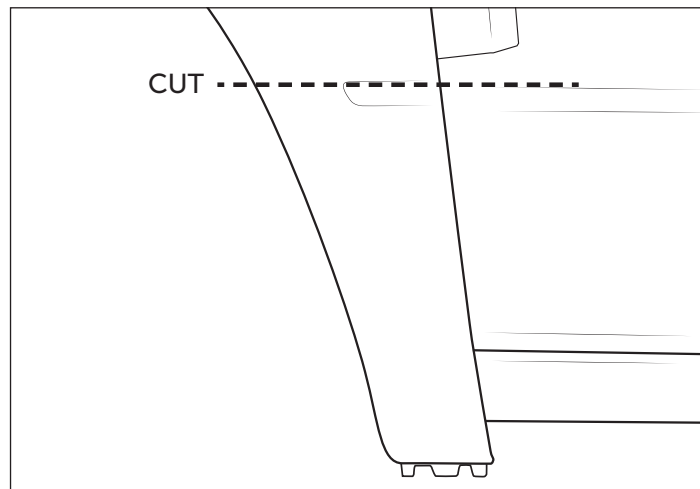


Figure 10: Driver-side shown

- 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 11).
 - 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.

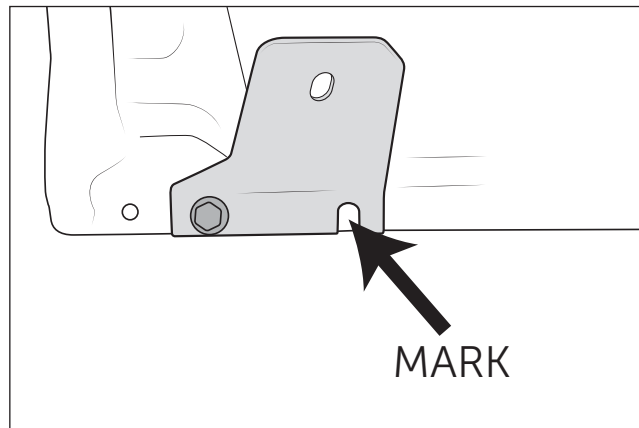


Figure 11: Driver-side shown

- 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. 12).

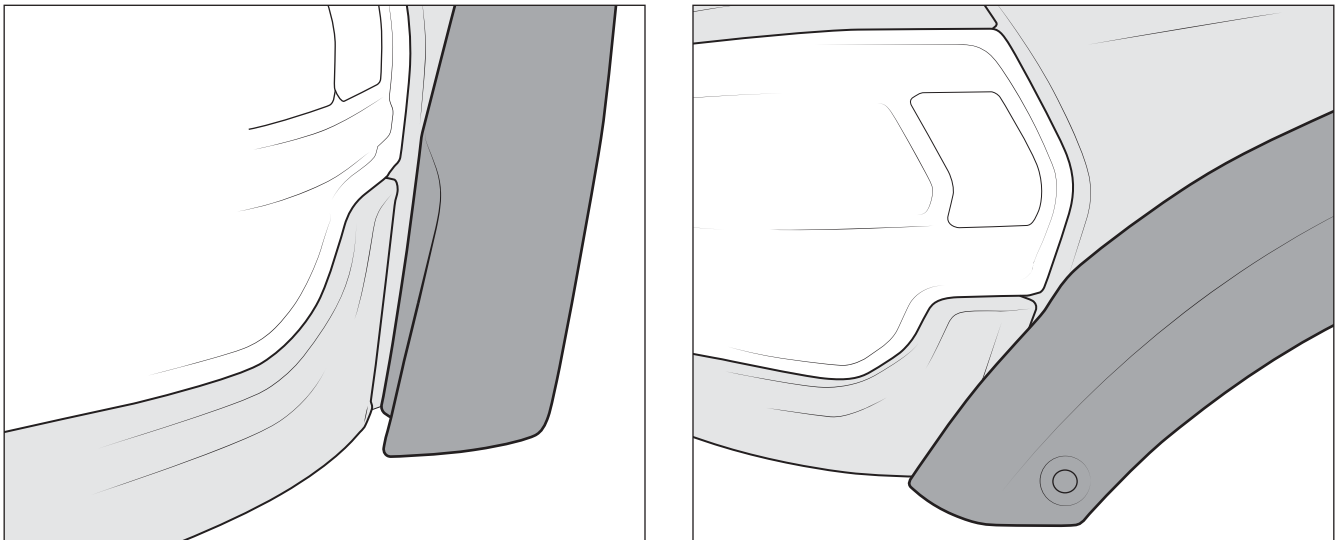


Figure 12

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



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. **NOTE: Be sure to move all electrical harnesses away from the work area.**
 - 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. 13).



Figure 13 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 as 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. 14).



Figure 14



- D. Make several relief cuts in the pinch weld on the fire wall as shown (fig. 15). 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. 16).



Figure 15



Figure 16

- 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 (fig. 17).

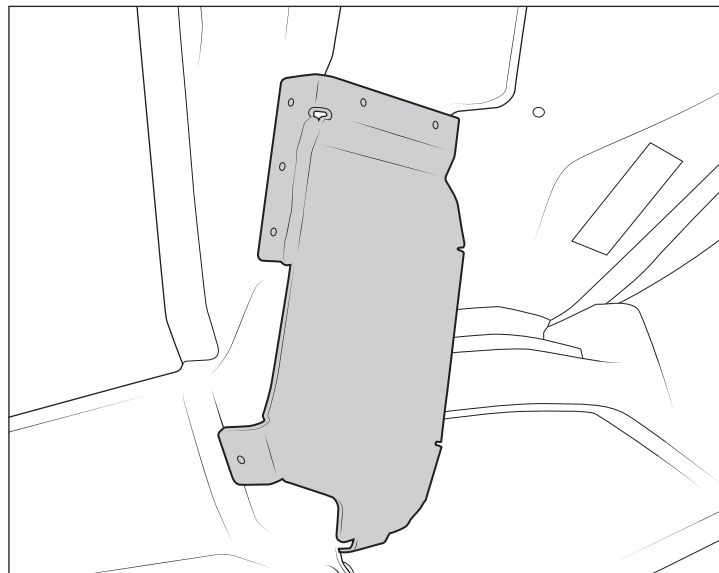


Figure 17



- 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 (fig. 18).

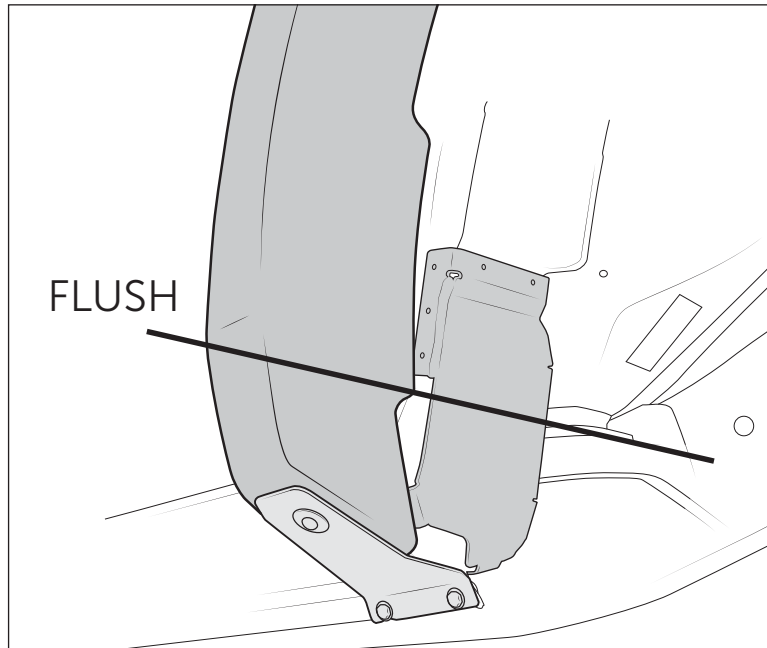


Figure 18

- 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 3/16" diameter 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. Loosely install AEV bracket on factory mount using saved factory hardware.
2. Mark cut line and additional hole location on the factory mount. Remove AEV bracket and trim factory mount using an air saw or cut-off wheel. Drill additional hole location out to 3/8". Prep bare metal with a rust inhibitor (fig. 19).

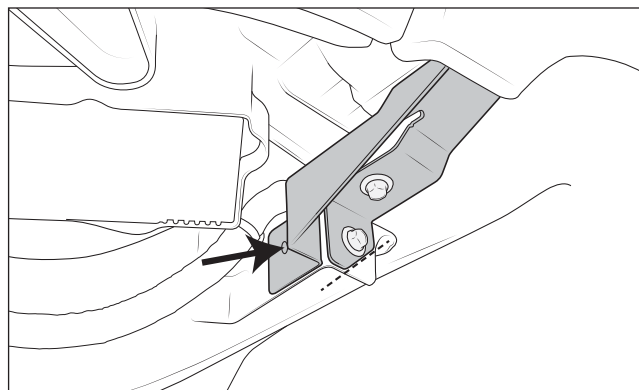


Figure 19



VI. INSTALL FLARES

1. Mark hole locations for AEV flares.
 - A. Place drill templates on mounting surface of flares over hole locations (fig. 20).

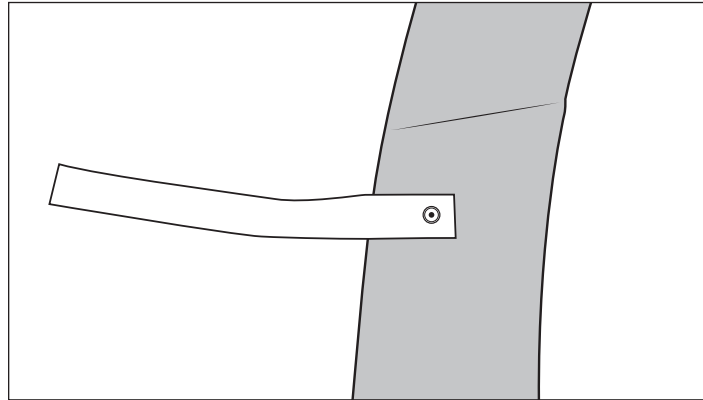


Figure 20

- B. Fold pull tab over so that when the flare is pressed up against the body it can still be removed (fig. 21).

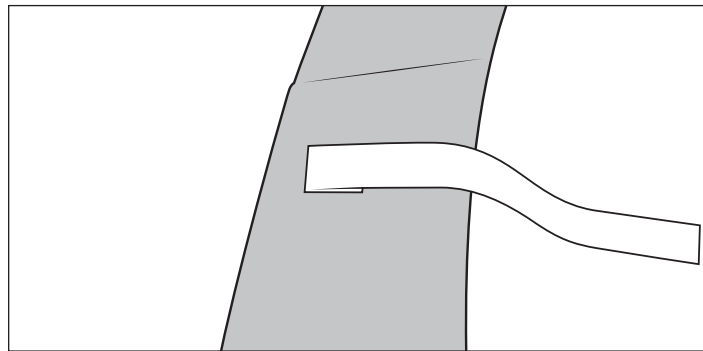


Figure 21

- C. Reinstall the lower bracket and loosely install one M6 bolt into the bottom of the flare to help line the flare up into position.
 - D. Make sure all gaps are uniform and pull the tape back from the flare and attach to the fender with additional tape strips.



- E. Carefully remove the flare to make sure templates stick on the fender (fig. 22)

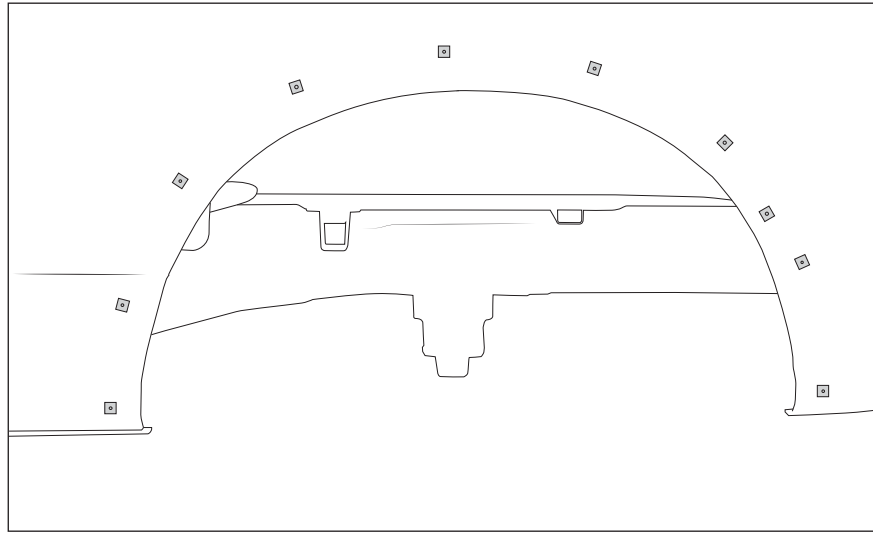


Figure 22

- F. Mark holes and remove tape. Center punch then drill holes to 1/2". Use a rust preventative on all bare metal.
- G. Reinstall AEV Bracket (fig. 23).

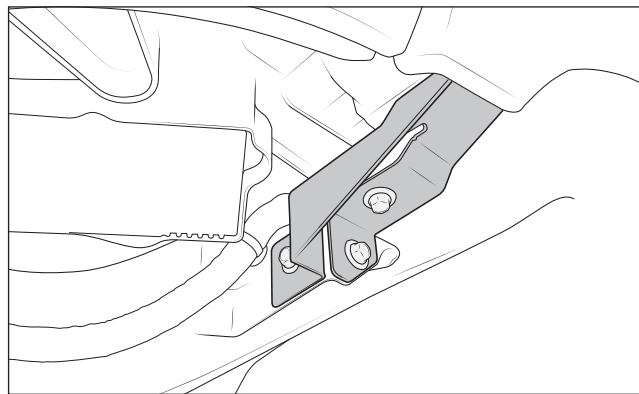


Figure 23

- H. Loosely install M6 bolts and washers from the backside of the fender into flare.
- 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.

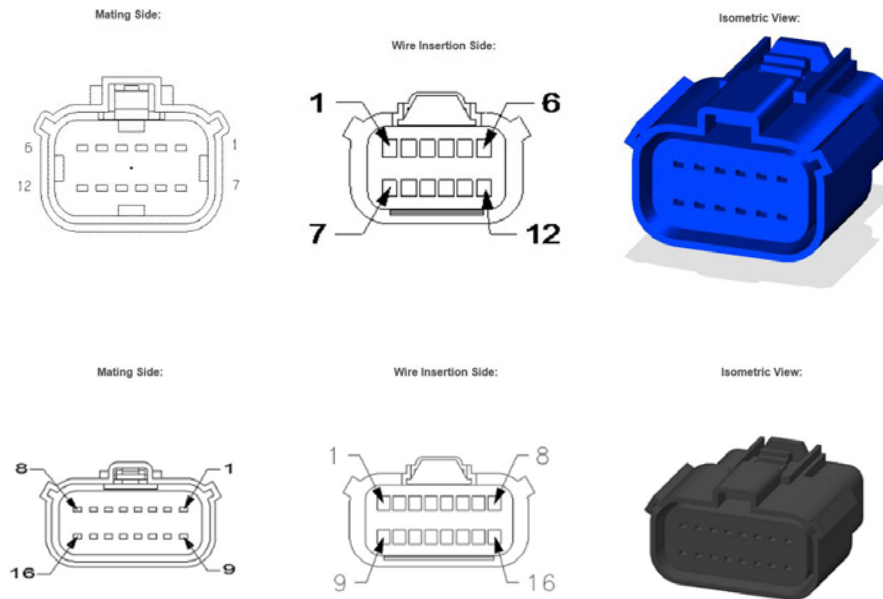


Figure 24

- B. The white lead from the new marker light will be soldered to the ground circuit coming from pin location 2 (this wire should be black on both base and premium model trucks).
- C. The black lead from the marker light will be soldered to the power circuit coming from pin location 9 (base model trucks) or 8 (premium model trucks).
- D. Connect bullet connectors and zip tie wires to the existing head lamp harness.



VII. INSTALL WHEEL LINERS

1. Wheel Liner Capture Bracket.

- A. Remove and modify the factory bedside support rod shown below. This support rod is located in the front side of the rear wheel well. If your vehicle does not have this part, please order Mopar Part Numbers: 68196934AA & 68196935AA.
- B. Start by cutting the support rod on the line shown below (fig. 25). The flat area should be retained in order to remount the support rod in the factory location in the rear wheel well.

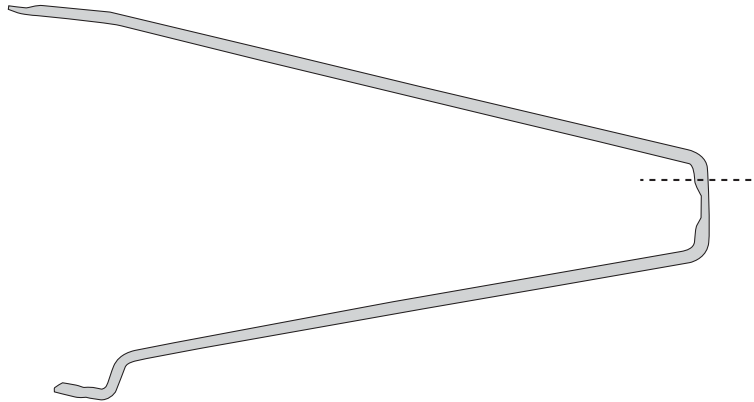


Figure 25

- C. Bend the rod as shown (fig. 26). Keep in mind that the flat side of the tab will be bolted to the hole location drilled in figure 17.

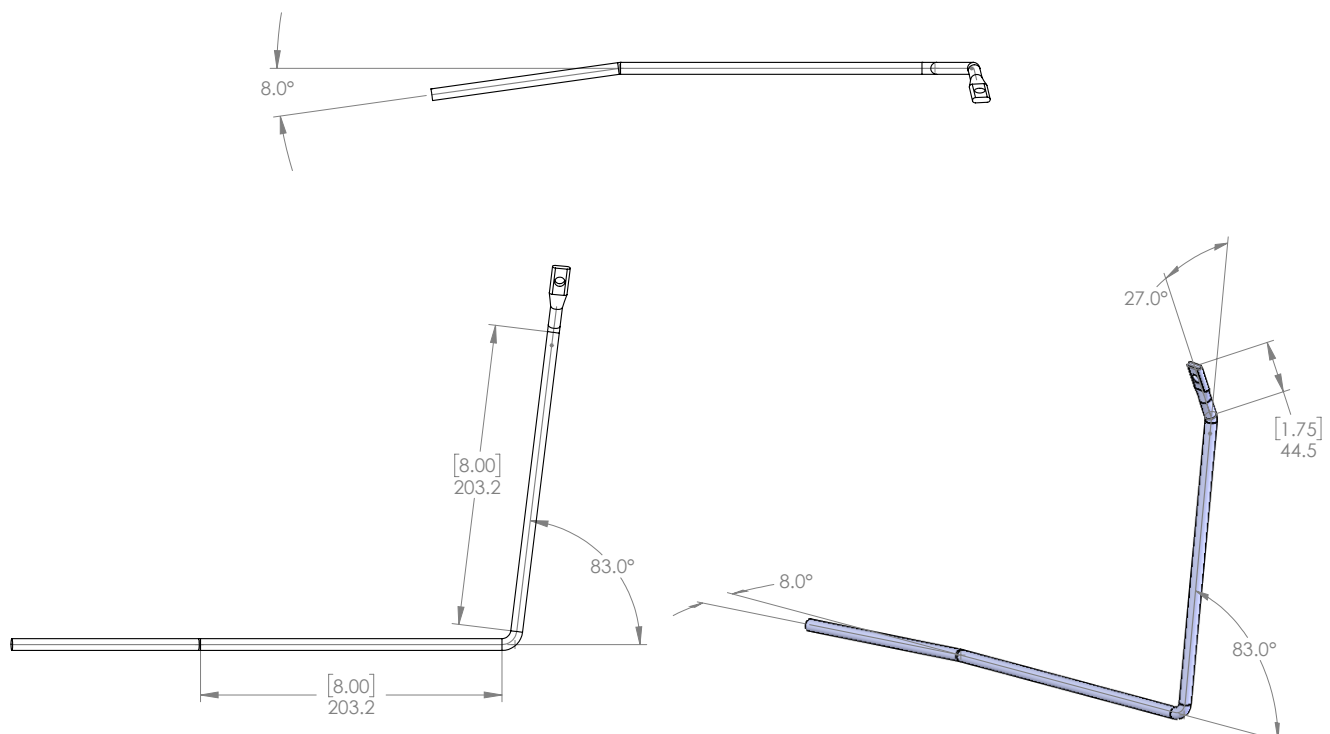


Figure 26



- D. Paint rods to cover any bare spots where paint may have flaked off.
- E. Slide rubber isolator over the end of rods (fig. 27)



Figure 27

- F. Install the end of the bracket with the rubber isolator into the hole in the frame rail just behind the front body mounts (fig. 28-29)

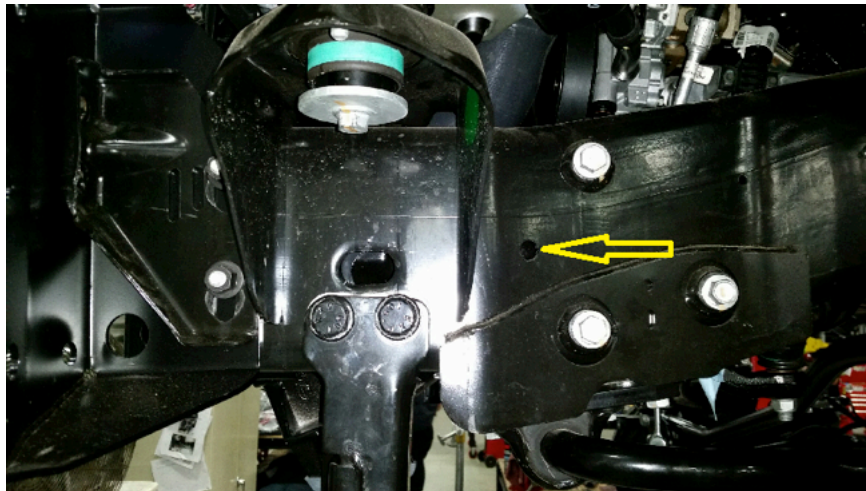


Figure 28: Driver-Side

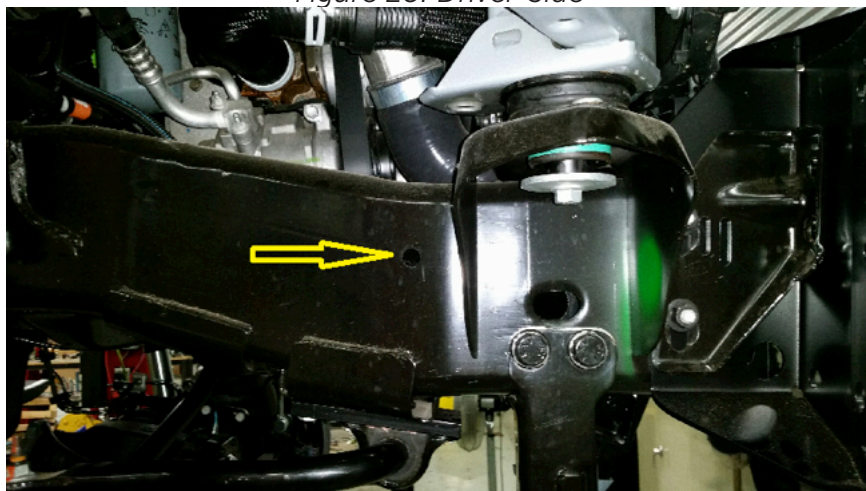


Figure 29: Passenger-Side



- G. Rotate rod into position and use an M6 bolt, nut, and washer to fasten (fig. 30).



Figure 30: Driver Side

- H. Liner will later 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. 31-32).

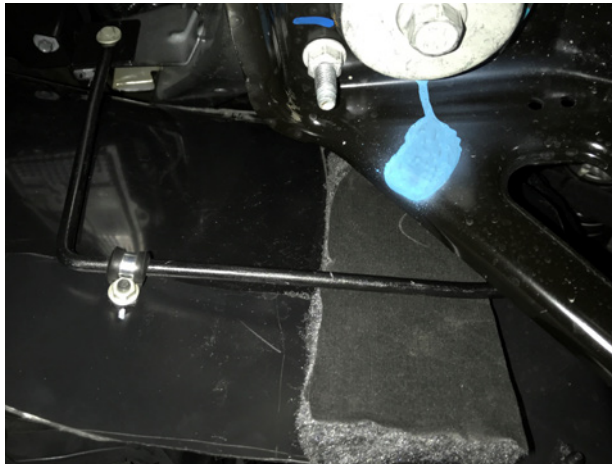


Figure 31



Figure 32

2. Cut factory wheel liners.
 - A. Mark the cut line and cut the factory wheel liners with an air saw or utility knife (fig. 33).
 - B. Install modified wheel liners using factory hardware.

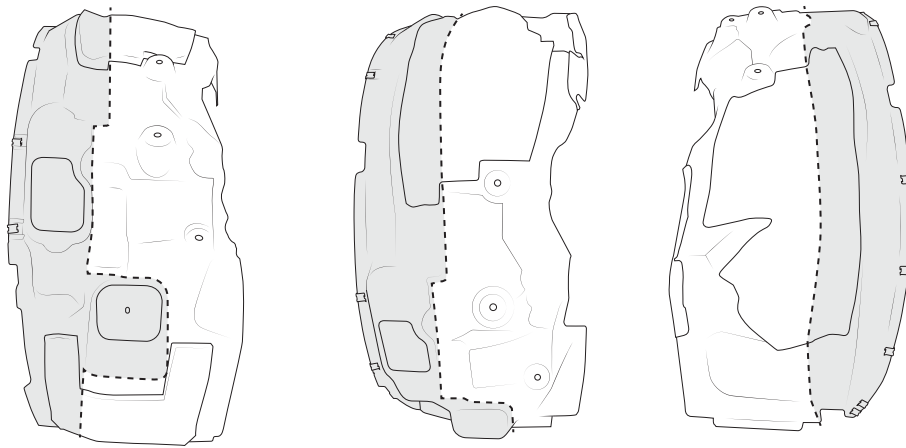


Figure 33-A: Passenger-side

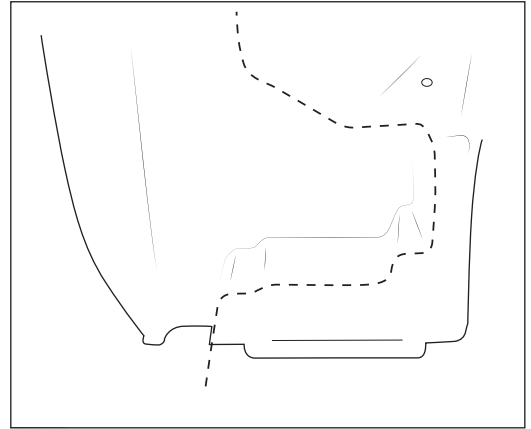
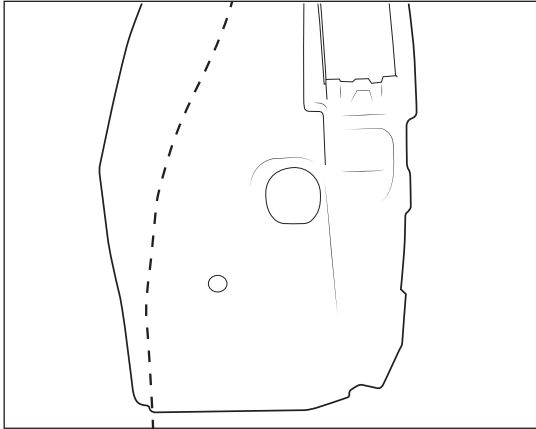


Figure 33-B: Driver-side front view (left) rear view (right)

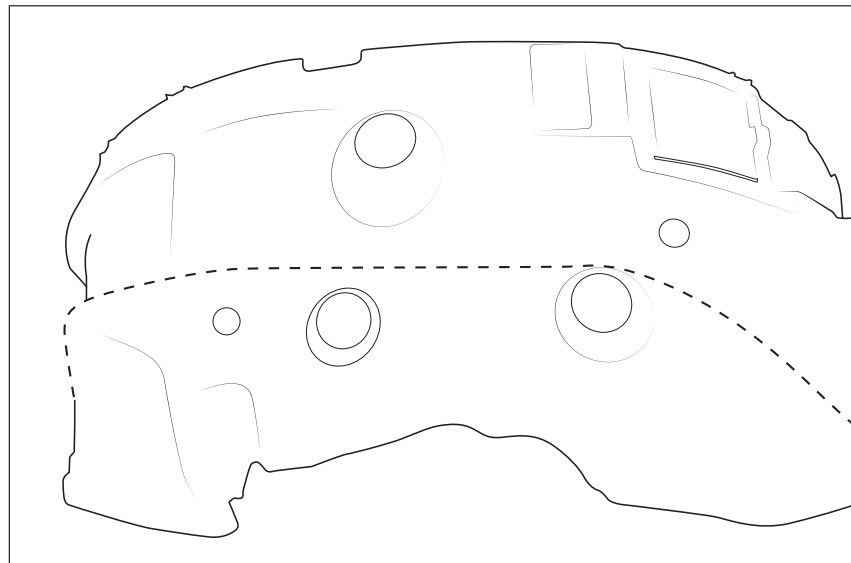


Figure 33-C: Driver-side top view



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. 34).

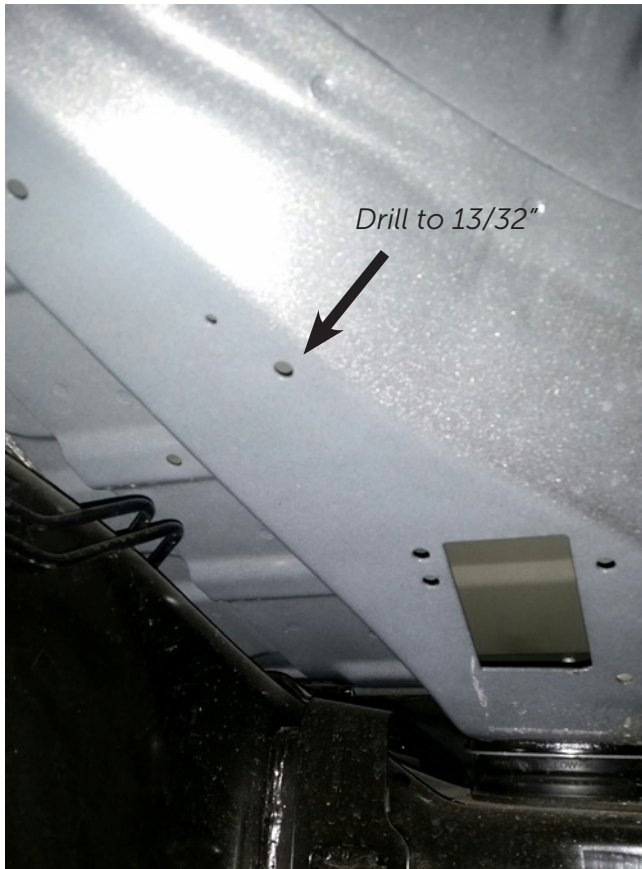


Figure 34: Driver-side (left) Passenger-side right)

- B. With a helper, position modified factory wheel 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. 35). It will thread into the nutsert previously installed.

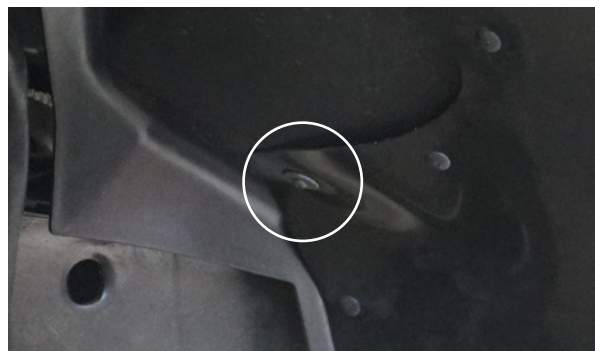


Figure 35 Driver-side shown



- 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 (fig. 36).

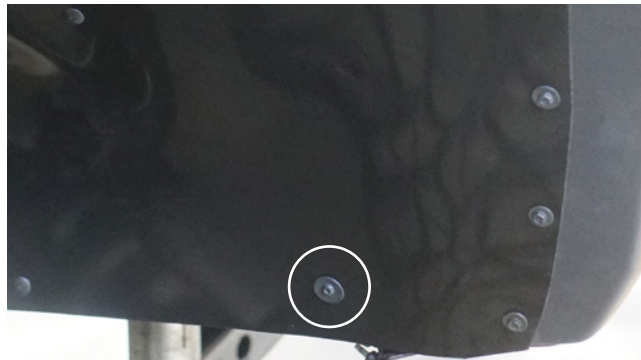


Figure 36 Driver-side shown

- E. Hold liner in place with mating surface of factory liner.
- F. Mark and drill 1/4" holes into factory liner.
- G. Reinstall foam inserts into the door jambs.
- H. Install AEV wheel liners using the supplied 1/4" plastic rivets along the inboard edge. Use provided #10 screws and washers in locations shown (fig. 37).

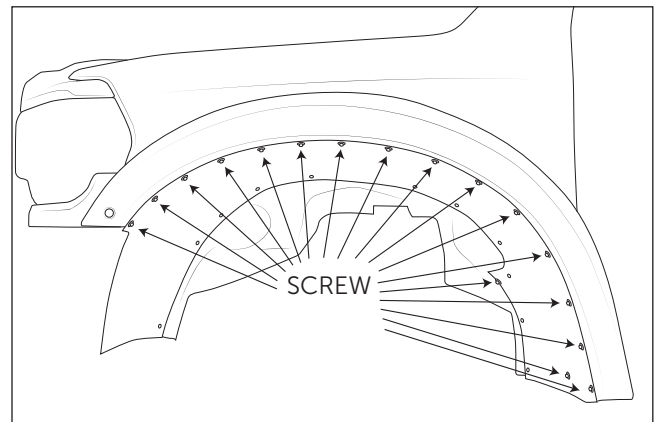
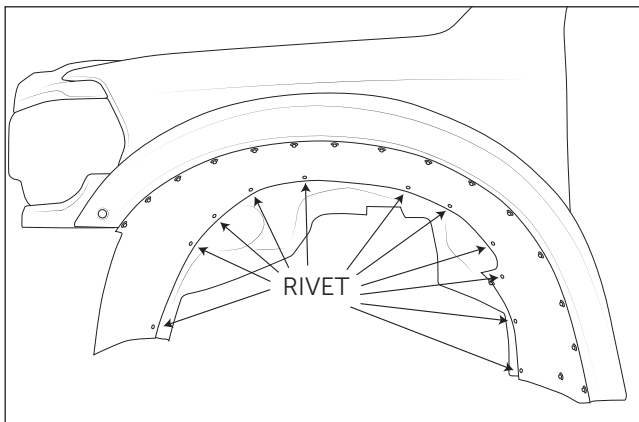


Figure 37

- I. Trim front edge of factory liners so that they are flush with the new liners.
- J. Use M6 button head bolts along with large black fender washers into the nutserts.
- K. Install wheel liner capture plates onto the corners of the bumper with 3/8" push fasteners.



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. 38).

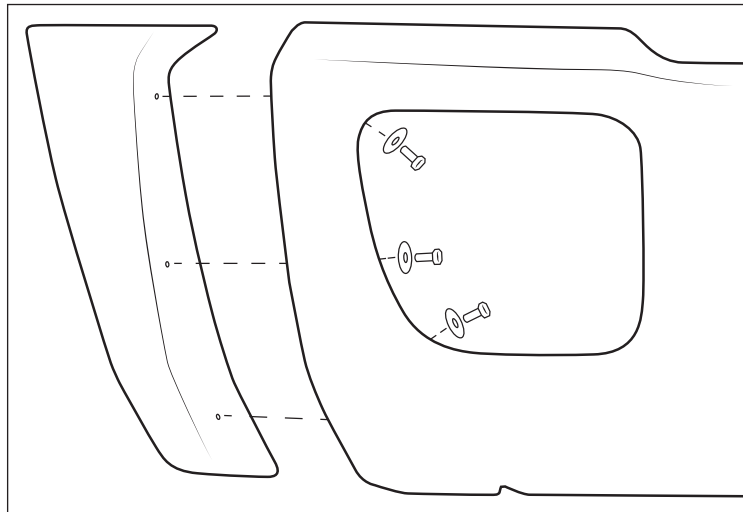


Figure 38

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. 39).

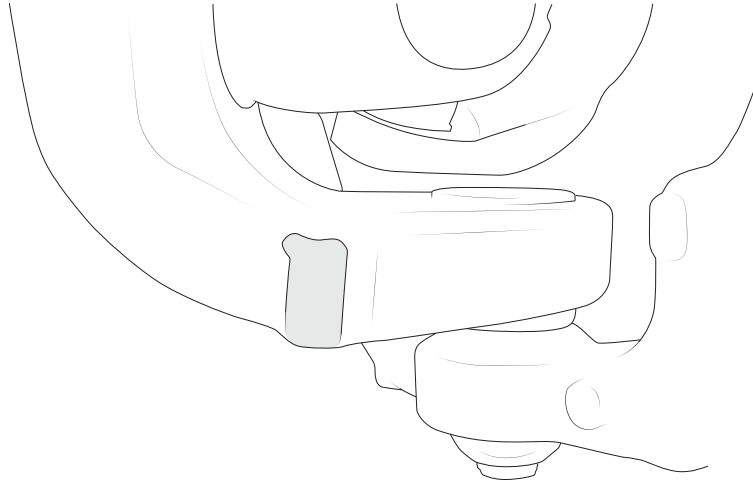


Figure 39

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. 40).

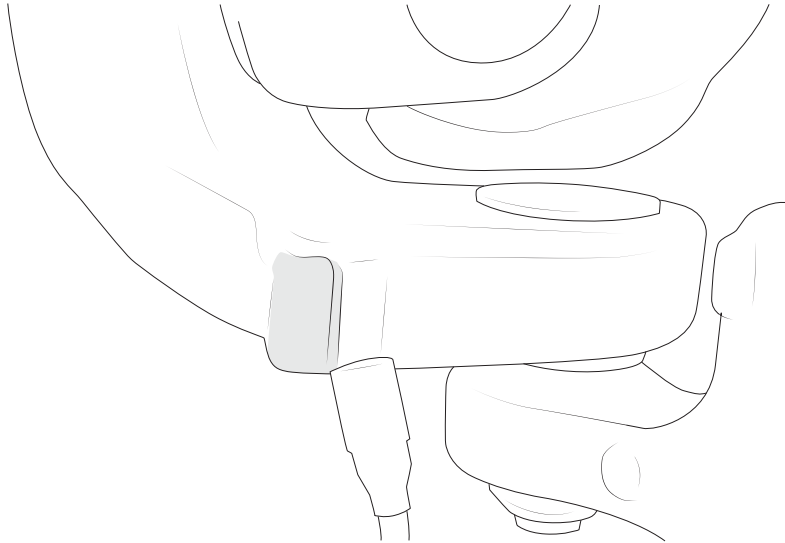


Figure 40

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