AEV HighMark Fender Flare Kit

2023+ GMC Canyon AT4X

INSTALLATIONGUIDE

NEW PRODUCT

Please visit www.aev-conversions.com to view the most current installation guide for this product.

This is a new product and we want to make sure that you receive the latest and most accurate information based on customer feedback, product revisions, and/or model year updates. We value customer feedback, so we encourage you to contact our Technical Support department if you have any suggestions on how to make the installation of this product easier or if you have any questions regarding the installation of this product. AEV's Technical Support can be reached by email at tech@aev-conversions.com or by giving us a call at (248)-926-0256.

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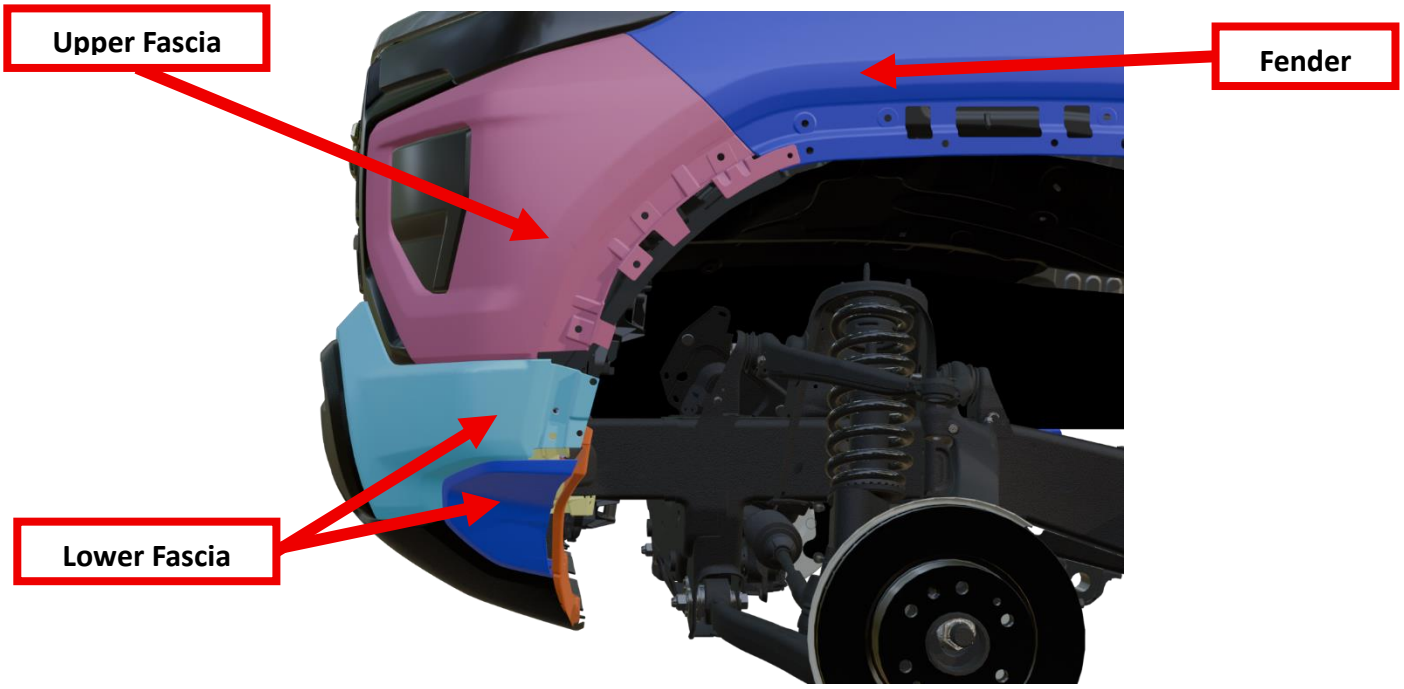
Last Updated: 8/26/2025

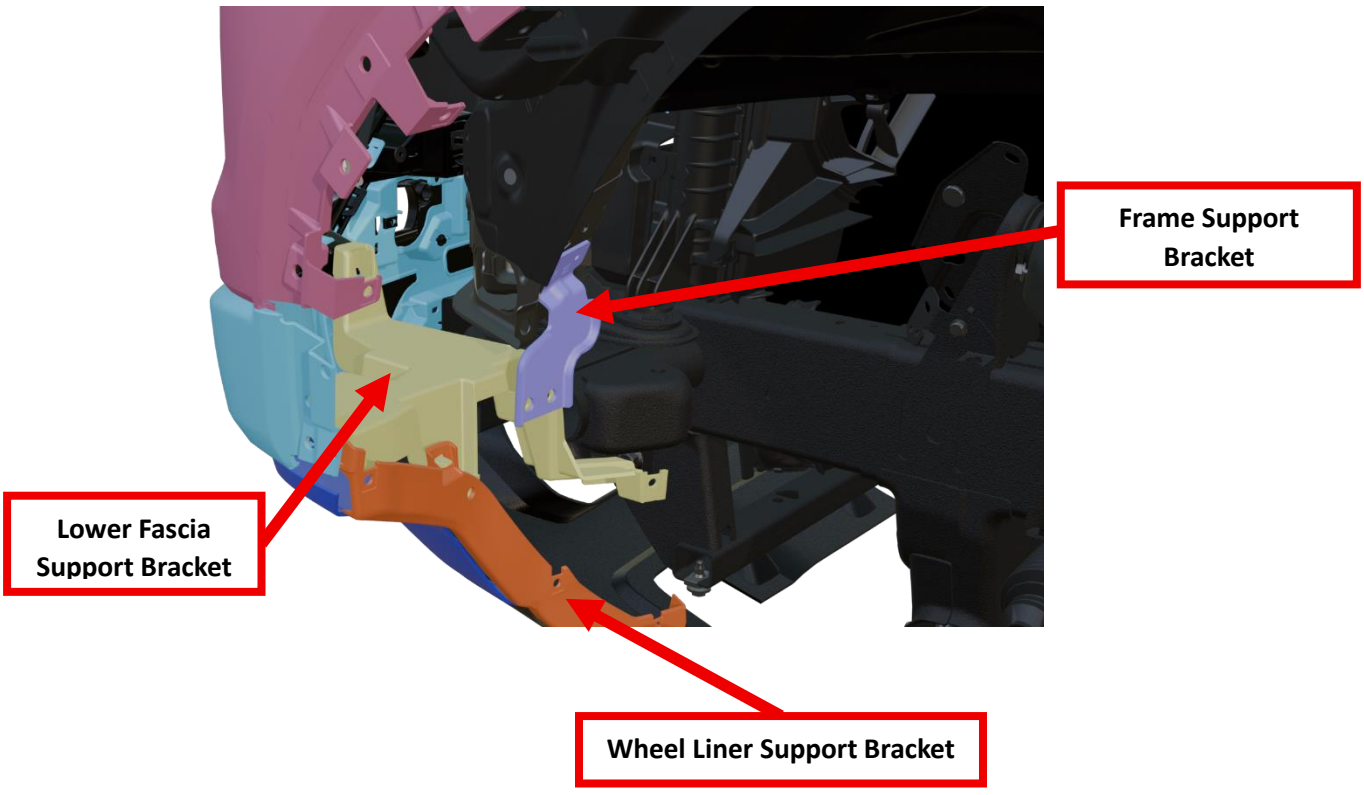
PLEASE READ BEFORE YOU START

To guarantee 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	QTY
Front Flare Kit	1
Rear Flare Kit	1
Closeout Kit	1
Spacer Lift Kit	1

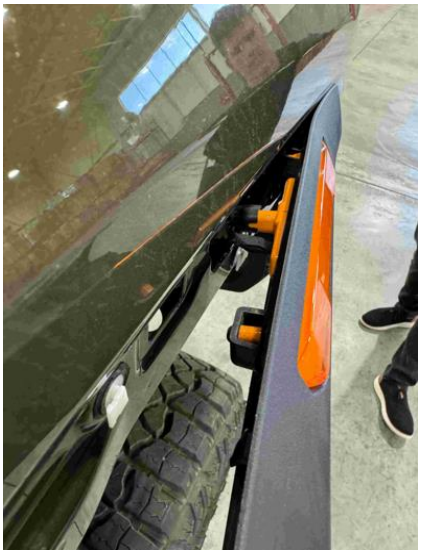
REQUIRED TOOLS
Rivet Gun
Common Hand Tools
11/32” Drill Bit
3/8” Drill Bit
Air Saw
Dremel
Rust Preventative


Upper Fascia
Fender
Lower Fascia


Frame Support Bracket
Lower Fascia Support Bracket
Wheel Liner Support Bracket

Important: This installation involves permanent modifications to the vehicle's fender and fascia. Review the instructions thoroughly before beginning. The trim and drill templates will be used for both the Driver and Passenger side of the vehicle, do not discard after completion of Driver side installation. Replacement templates can be found on our website.

1. Front Driver's Side Fender Flare Installation
    A. Lift the front of the vehicle and support with Jack Stands. Remove the front driver's side wheel.
    B. Remove the wheel liner from the driver side wheel well. This is secured to the vehicle with M4 screws and plastic push pins. Once all screws and push pins are removed, pull the wheel liner out and set aside the wheel liner and screws/push pins for later reinstallation.
    C. Remove the stock flare from the fender.
        i. Remove all push pins and M4 screws holding the stock flare to the vehicle. Set these aside for later use. Starting from the rear end of the flare, begin pulling the flare off the fender. To ease this removal, you can squeeze the retaining clips on the back side of the flare to disengage the clip and then pull from fender. Note: A 7mm socket can be used to press down on the backside of the retaining clips while pulling the flare from the fender to help disengage the clips. Do not worry if the stock flare clips or flare is damaged during this removal, they will not be re-used for this kit.
    D. Disconnect the side marker light wire harness from the stock flare and finish completely removing the flare from the vehicle (Fig. 1).



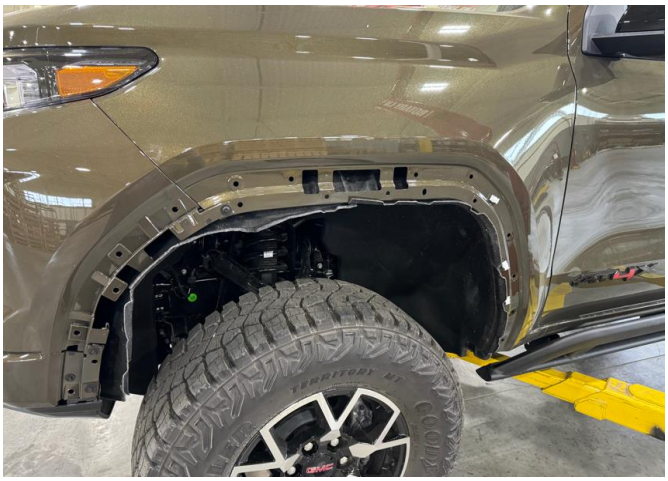
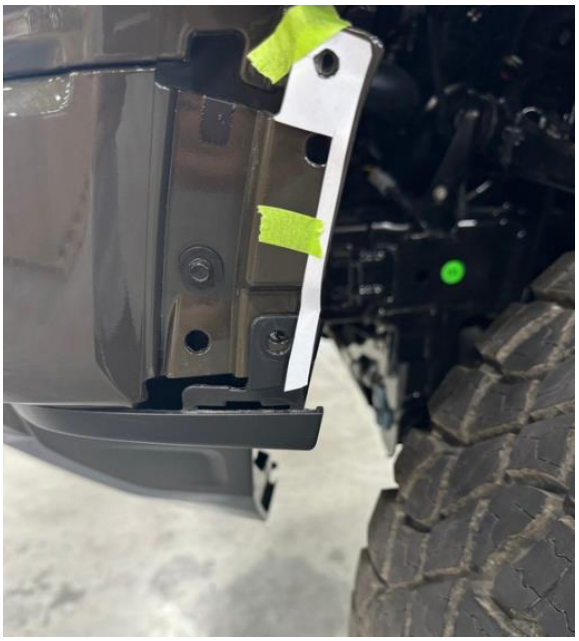


Figure 1

E. Once the flare is removed from the vehicle, we will begin trimming the fender and fascia.

F. Locate the trim templates that come with AEV Flare Kit. Cut out each template from the sheet, noting where each template goes on the vehicle based on the diagram on the template.

G. Align and tape each template to the correct locations on the fender/fascia by using the diagrams provided on the template (Fig. 2).



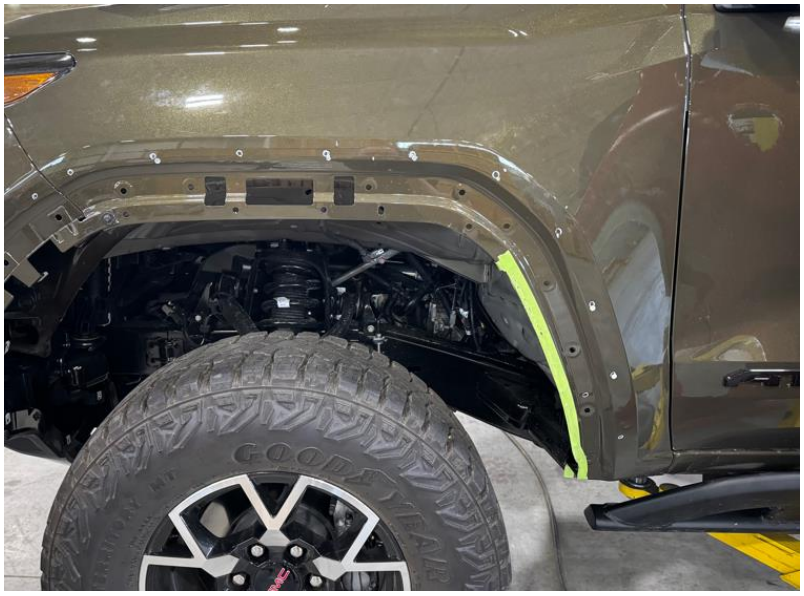


Figure 2

H. At the bottom of the lower fascia, remove the screw holding the black lower trim piece to the fascia and use a knife to carefully cut off the black attachment tab (Fig. 3).

Figure 3

I. Trace the trim lines onto the vehicle and remove paper templates once complete. Save the templates for use on the passenger side of the vehicle. Tape off the trim lines to protect the fender and fascia while performing trim.

J. Remove the plastic wheel liner support bracket from the lower fascia (Fig. 4). Once removed, place aside for later reinstallation.

Figure 4

K. Trim the fascia and fender using an air saw. Use a grinder or sandpaper to clean up any sharp edges and apply rust treatment to the fender metal that was trimmed.

L. Once everything is trimmed and templates are removed, a small section of the upper fascia will need further trimming. See figure 5 below, trim along the dotted line in the image below to make clearance for the Flare to sit flush to the fascia when installed.

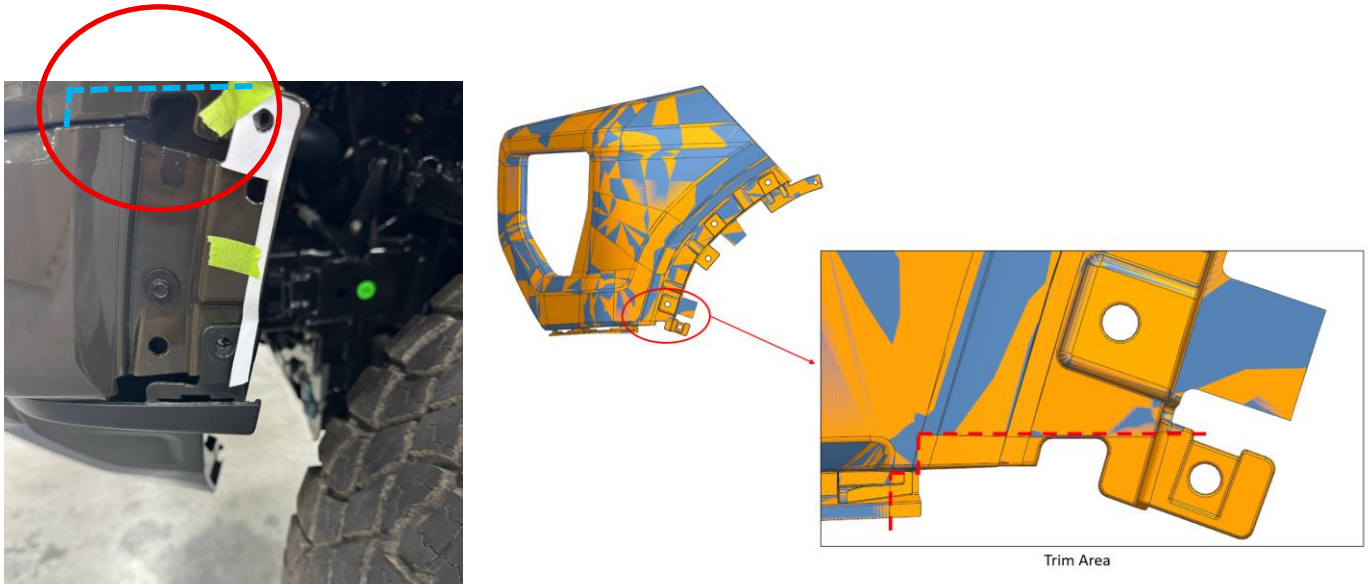


Figure 5

M. On the backside of the lower fascia, there is a section of the lower fascia support bracket that also needs to be trimmed as shown in figure 6. Using an air saw, trim this plastic bracket along the marker line shown.

Figure 6

2. Front Coil Spacer Lift Installation

A. Before installing the new AEV Flare, the front coil spring spacer lift will be installed while the wheel liner is still removed from the vehicle.

B. Begin by removing the tie rod nut and separate the tie rod from the steering knuckle (Fig. 7).

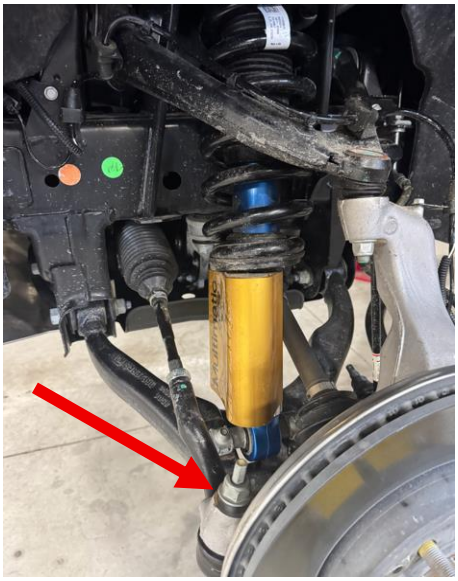


Figure 7

C. Remove the two front shock lower bolts (Fig. 8).

Figure 8

D. Remove the three nuts at the top of the shock on the upper mount (Fig. 9). Disengage the harness retention clip at the end of the bolt if needed to gain access to the nut for removal. Remove the strut from the vehicle.

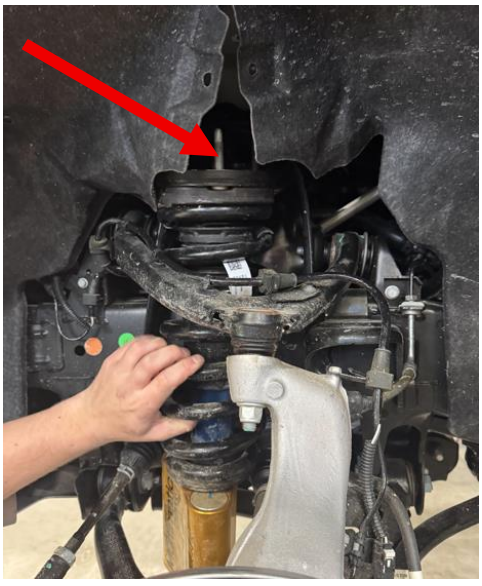


Figure 9

E. Place the front coil spring spacer included in the AEV kit onto the three bolts on the top of the strut (Fig. 10).

Figure 10

F. Once the spacer is in place on the strut, reinstall this back onto the vehicle. Use the provided M10 nuts and washers to secure the three studs on the strut to the upper mount. Torque the nuts to 43 ft-lb.

G. Position the shock into the lower shock mount and reinstall the bolts that were previously removed (Fig. 11). Torque these bolts to 37 ft-lb.

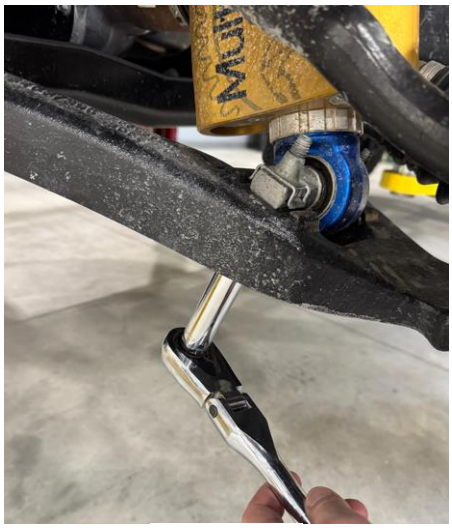


Figure 11

H. Reinstall the outer tie rod to the steering knuckle and secure with nut previously removed (Fig. 12). Torque first pass to 26 ft-lb and final pass (90 degrees).

Figure 12

3. Flare Reinforcement Bracket Installation

A. Locate the flare reinforcement bracket from the AEV kit. There are two of these, one for each side of the vehicle, they are common brackets between both sides. Using the drill template labeled (FRONT FENDER REAR LOWER DRILL TEMPLATE), place the template on the lower surface of the fender (Fig. 13). Locate the template to the sheet metal using the existing holes in the fender.

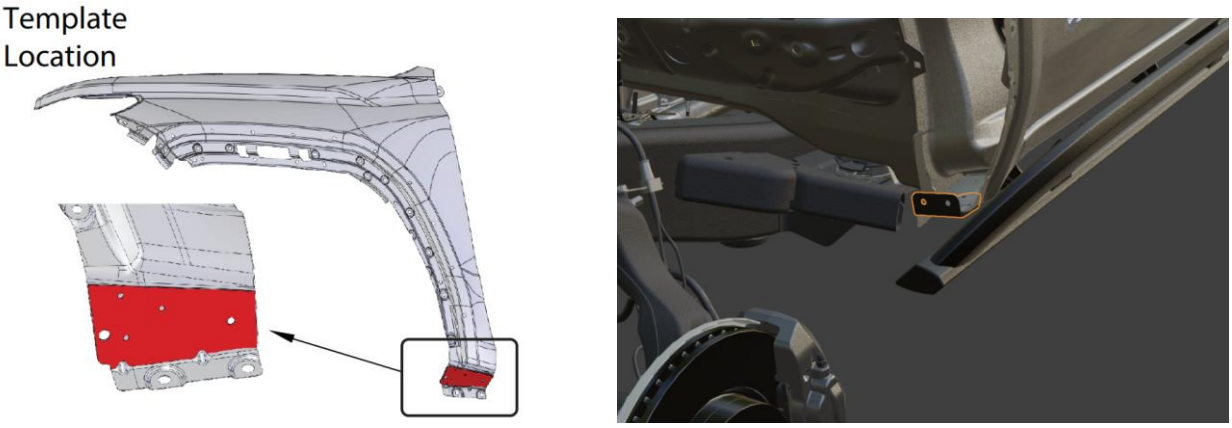


Figure 13

B. Mark the drill hole locations and remove the template. Drill the holes using a 3/16” drill bit. Deburr and treat with rust preventative.

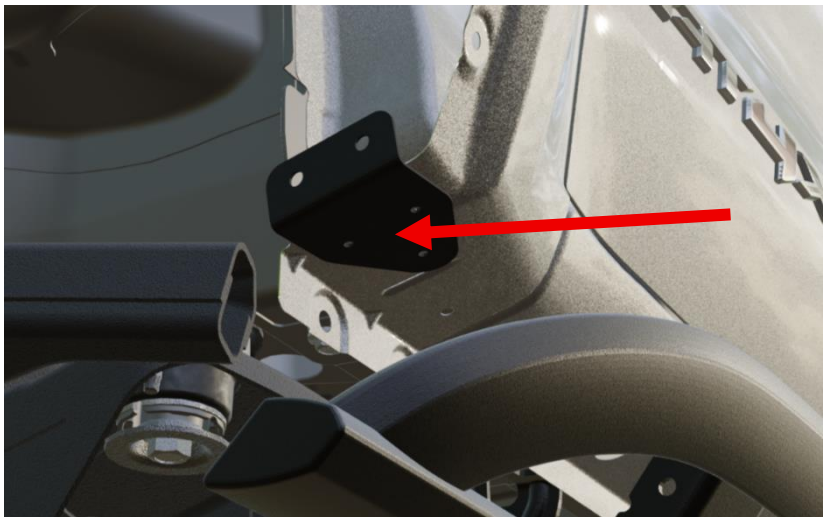


Figure 14

C. Install a provided U-nut on the inboard hole of the fender reinforcement bracket (Fig. 15). Using the provided rivets, place the fender bracket under the fender surface and align the drilled holes to the holes in the bracket. Secure the bracket to the body of the vehicle with three rivets using a rivet gun. The bracket will sit underneath the sheet metal of the fender.

Figure 15

4. Flare Installation

   A. Reinstall the wheel well liner that was previously removed. Do not install the wheel liner fasteners closest to the bumper yet, these will be installed after the flare and closeout piece are installed.

   B. Locate the provided AEV front driver's side flare.

   C. Carefully remove the fender flare clips from the backside of the AEV flare clip towers. These clips will slide out of the clip towers in a specific direction. Set these aside for later reinstallation.

   D. Using the foam tape drill templates, remove the small piece of square paper from the face of the template and stick the template onto the clip towers highlighted (Fig. 16). Align the hole in the template to the center of the slotted clip hole as best as you can and lightly stick the template to the clip tower with the 'tail' of the template facing the inner edge of the flare (Fig. 17). Once in place, you will carefully fold the tail of the template towards the top edge of the flare without pulling the tail of the template completely off the sticky foam (Fig. 18).

Figure 16

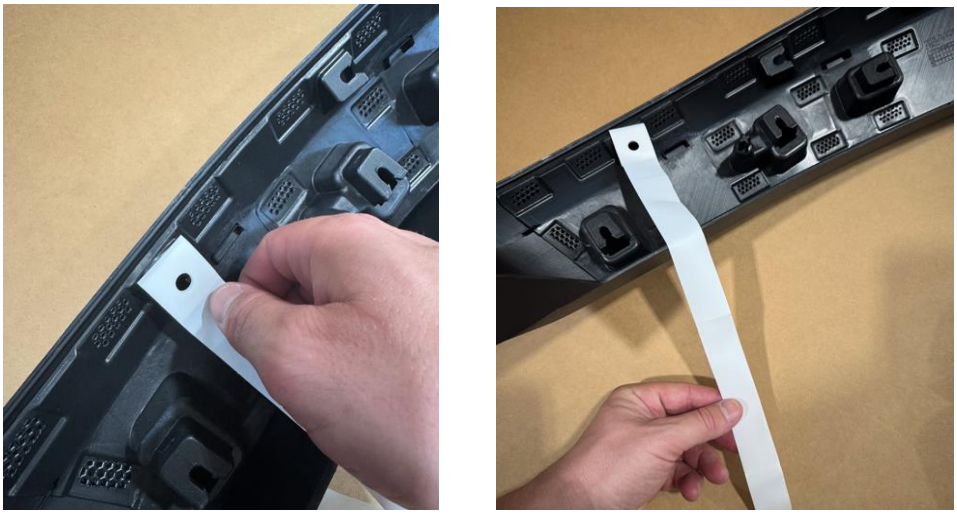


Figure 17

Figure 18

E. Once each template is in place and folded over the top edge of the flare, place the flare on the fender of the vehicle. Using the locating pins on the flare, align these to the existing drilled holes on the fender and gently place the flare so that it sits flush to the fender and seated in position (Fig. 19).

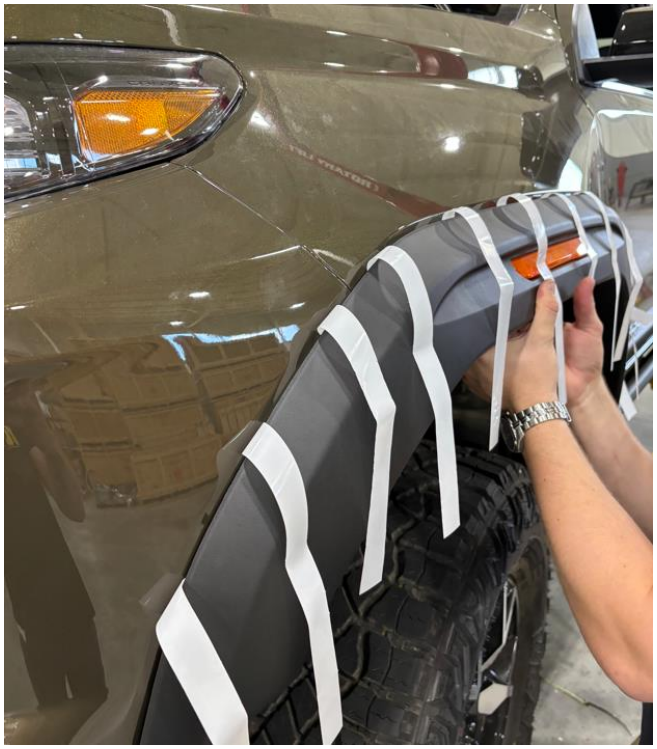


Figure 19

F. Once the flare is seated properly, begin pulling the tails of the templates upwards starting from the bottom rear of the flare. Pulling the tails will allow the sticky foam pad to adhere to the fender sheet metal when removed. As you pull the tails of the templates, push the flare against the fender in each location to make sure the foam pad is contacting the fender and will stick to it when the flare is removed. Do this for each template on the flare.

G. Once all the template tails are removed, gently pull the flare from the vehicle. If one of the foam pads did not adhere properly to the vehicle, place a new template on that specific location of the flare and repeat process until the template sticks to the vehicle. Figure 20 shows what the drill templates should look like after you remove the flare from the vehicle.

Figure 20

H. Mark the location of each hole on the fender and fascia. Once all holes are marked, remove the foam templates from the vehicle.

I. Drill a pilot hole in each location, then proceed to drill the holes using an 11/32” drill bit.

J. Deburr the drilled holes and treat the holes drilled in the fender with rust preventative. It is important to deburr the backside of the holes in the fender as best as you can to ensure proper flare clip engagement.

K. Reinstall the fender flare clips previously removed from the AEV flares. Note that the first 5 clips starting from the front of the flare will be the longer length plastic fascia clips, the rest will be the shorter fender clips that have a black washer on them.

Figure 21

L. Once the clips are installed back onto the flare, place the flare up to the fender of the vehicle. Attach the side marker light harness to the AEV flare and align the flare clips to the new drill holes. Ensure the flare locating pins and clips are aligned properly to the holes and begin firmly snapping the flare onto the fender starting from the rear and moving forward. Make sure each clip is engaged as you work your way to the front.

M. The fender flare should sit flush to the vehicle surface after the clips are fully engaged. Install an M4 screw into the rearward end of the flare that attaches to the fender bracket that was installed in an earlier step (Fig. 22).

Figure 22

5. Installing the Fender Flare Extension

   A. Locate the driver side plastic fender flare extension included in the AEV kit. Place a fascia clip provided in the AEV kit into the lower clip tower as shown in figure 23. Using the same method as was done for the fender flare, place foam drill templates onto the remaining two clip towers and fold over the tail (Fig. 23). Note: To aid the next step, you can trim the retention clip to remove the locking feature. This clip will locate the flare extension to the lower fascia, but you will be removing the extension piece once the templates are in place to drill new holes. By trimming off the clip retention, it will be much easier to remove the extension piece prior to drilling.

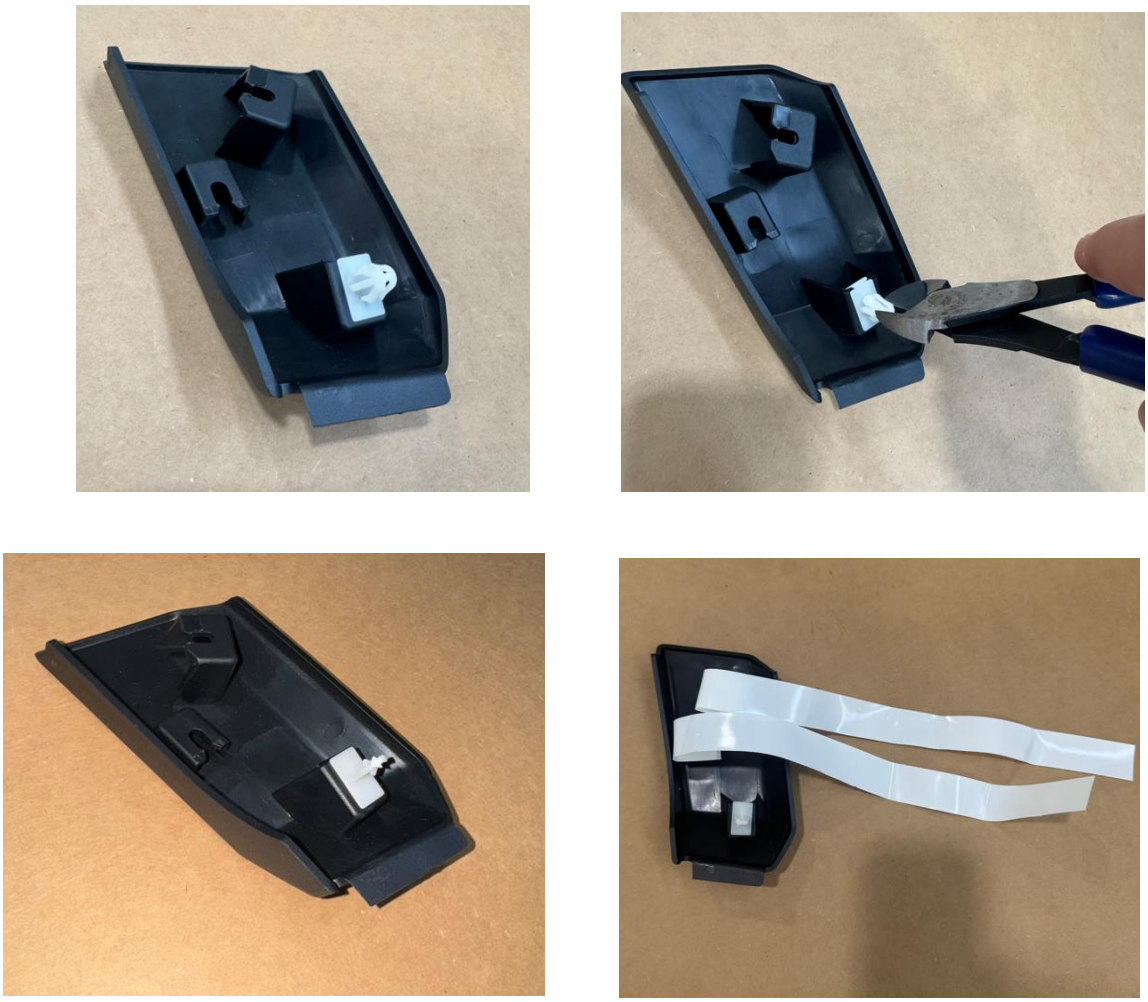


Figure 23

B. Place the flare extension piece (with the foam templates attached) below the end of the fender flare and align the fascia clip to the lower forward hole that is in the lower fascia plastic. Ensure the lower flange lip of the flare extension is tucked behind the black lower fascia closeout and push the flare extension until flush to the fascia.

C. Remove the tails of the foam drill templates and press firmly to the fascia.

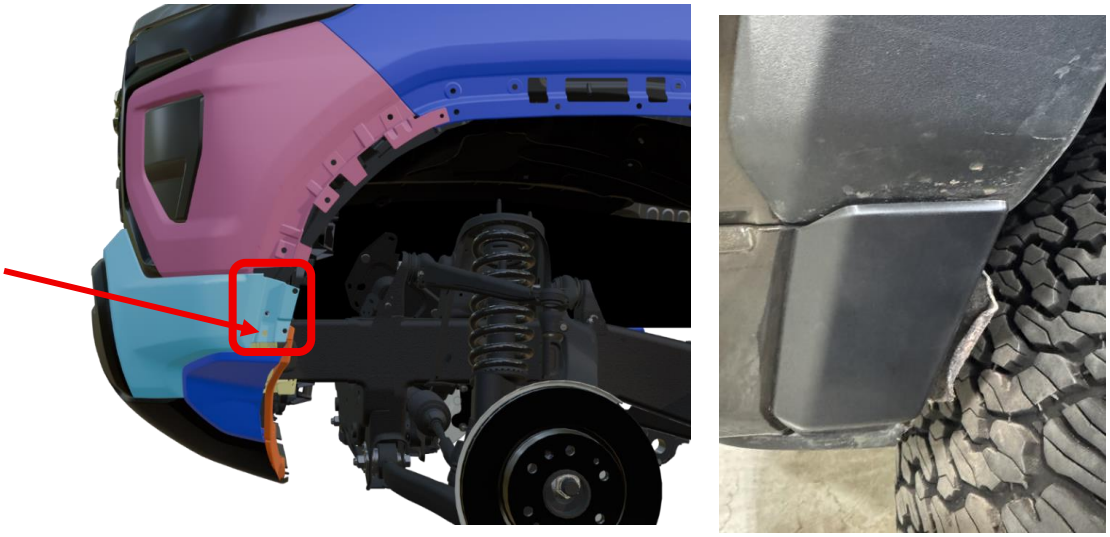


Figure 24

D. Proceed to gently remove the flare extension from the fascia, ensuring the foam drill templates stick to the vehicle (Fig. 25).

Figure 25

E. Mark the template holes and remove foam templates from fascia. Drill the holes using an 11/32” drill bit.

F. Place fascia retaining clips on each clip tower of the flare extension and install onto the vehicle (Fig. 26).

Figure 26

G. Locate the plastic wheel liner bracket that was removed previously from the lower fascia.

Figure 27

H. Perform the trim operations shown below. The plastic support ribs will need to be trimmed or ground down as flush to the bracket as possible (Fig. 28).

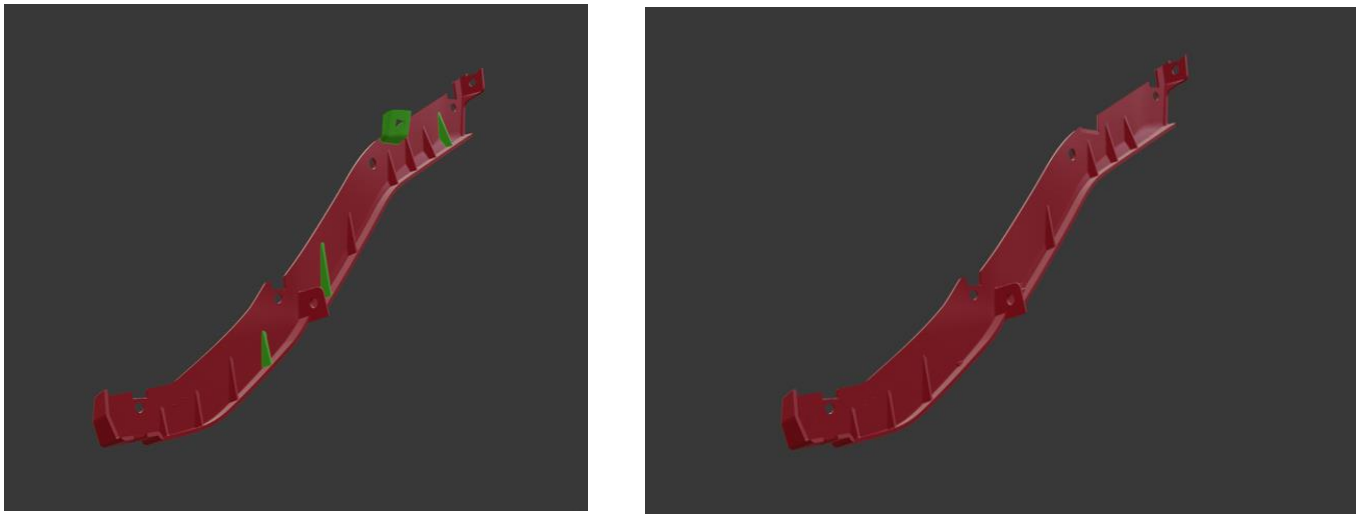


Figure 28

I. Once trimmed, place U-nuts on 3 of the provided L-brackets (Fig. 29). Using figure 30 below showing the approximate drill hole locations, place the L-brackets onto the plastic bracket close to the locations shown in the image so that one side is sitting flat on the bottom edge of the bracket. Mark the hole location to attach the L-brackets to the plastic support bracket using provided M4 screws.

Figure 29

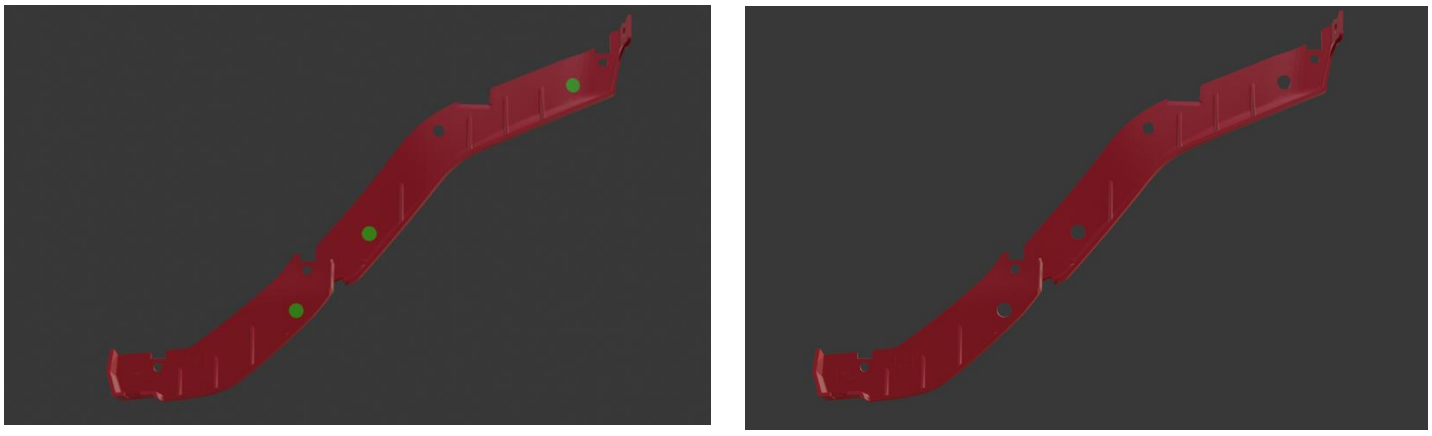


Figure 30

J. Add U-nuts onto any of the existing holes of the plastic support bracket that do not have them. There should be 4 U-nuts total along the top edge of the bracket (Fig. 31). Ensure the location circled below has a U-nut attached to it.

Figure 31

K. Place the bracket back into its original location behind the lower fascia on the vehicle. It should sit flush to the surface of the fascia. Position the bracket as far forward as it will go into the fascia so that it does not overhang the fascia edge that was trimmed. Once in place, mark the locations of the L-bracket U-nuts on the bottom surface of the lower fascia. Once you confirm the hole locations align with the U-nut on the L-brackets attached to the plastic support piece, remove the wheel liner support bracket out from behind the fascia and drill the marked holes using a 3/8” drill bit (Fig. 32).

Figure 32

L. Once holes are drilled, attach the wheel liner support bracket to the lower fascia using the provided M4 screws. It is recommended to loose install each screw and then ensure the bracket is pushed as far into the lower fascia forward as possible before tightening. The goal is to have the bracket not overhang the trim edge of the fascia.

M. When the support bracket is tightened in position, align the wheel liner to the bracket. Mark the four hole locations where the wheel liner meets the holes that have U-nuts in the plastic support bracket to attach the liner to the bracket (Fig. 33). Drill 3/8” holes in the marked locations on the liner and secure with the provided M4 screws.

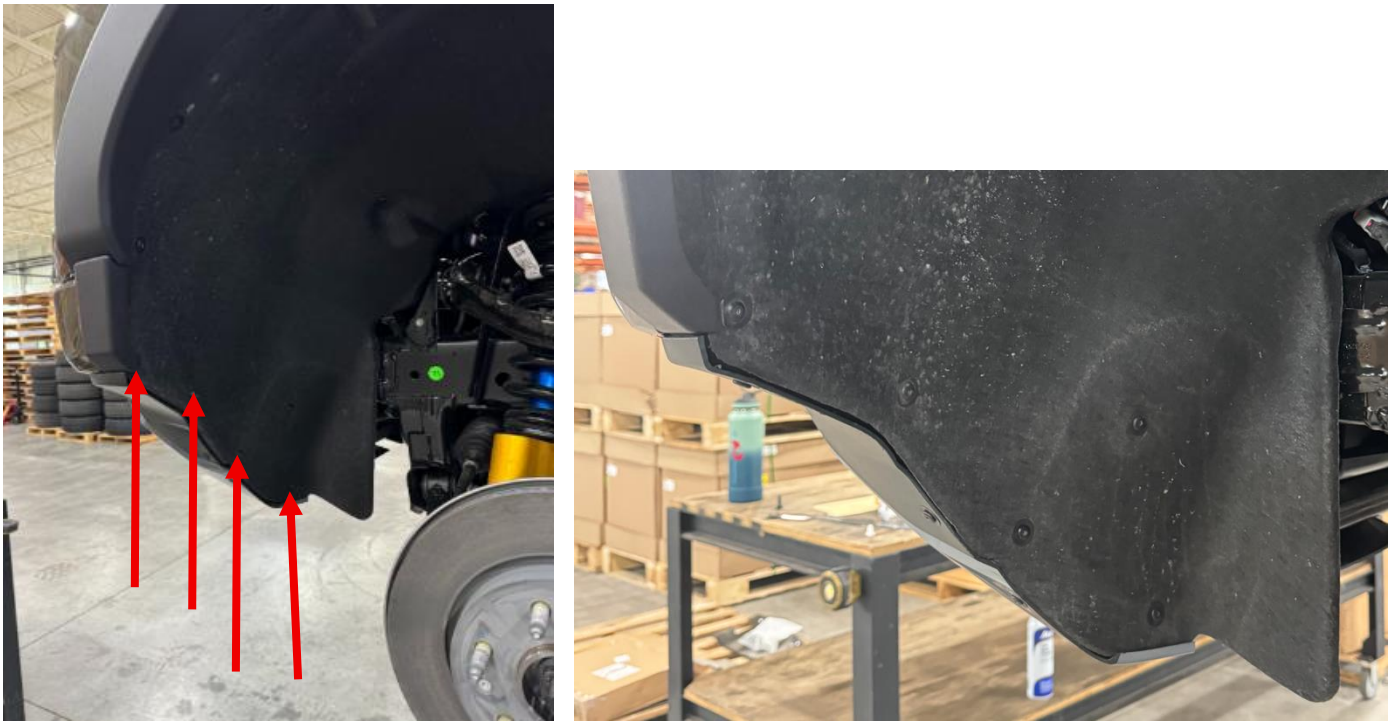


Figure 33

N. Finish reinstalling the rest of the wheel liner fasteners if any are missing and tighten.

O. The section of wheel liner that tucks into the Flare Extension at the outer corner may need trimming to properly tuck into the rearward side of the flare extension. It is recommended to make small trims to the liner with a knife until you reach the desired fit (Fig. 34).

Figure 34

6. Repeat same steps for the passenger side front flare and spacer lift installation.

7. Rear Driver Side Flare Installation

   A. Lift the rear driver's side of the vehicle up and remove the wheel.

   B. Remove the stock flare from the vehicle as was done for the front flare. There is less access to the rear flare retaining clips than the front flare, but if you end up breaking any clips during removal it is not an issue as they will not be used for installation of the AEV flare.

C. As you begin removing the flare, there will be a harness that runs down to the rear of the wheel well that will need to be disconnected. Follow the harness from the flare side marker light until you reach the harness connector (Fig. 35). Disconnect the harness and continue removing the flare from the vehicle.

Figure 35

D. The rear flares do not require any fender trimming. Like the front flare installation, remove the plastic retaining clips from the AEV rear flare clip towers and set aside for later use.

E. Using the foam tape templates, place the templates on the clip tower locations highlighted below (Fig. 36). This will be done the same way that the front flares were installed.

Figure 36

F. Proceed with the same steps as the front flare, with the foam templates in place, place the flare up to the fender using the locator pins on the flare and the existing holes in the fender (Fig. 37). Remove the tails of the templates once in place.

Figure 37

G. When the templates are on the fender, mark each hole location and remove the templates from the fender. Drill a pilot hole in each location and proceed to drill holes using 11/32” drill bit; deburr and treat with rust preventative. It is important to deburr the backside of the holes in the fender as best as you can to ensure proper flare clip engagement.

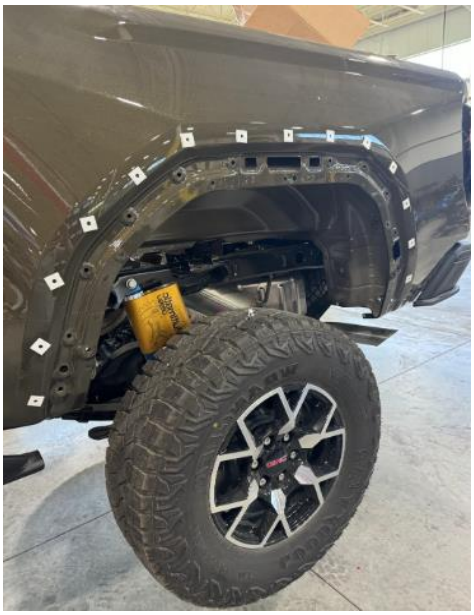


Figure 38

H. Place the flare retaining clips back onto the clip towers of the AEV flare. As you place the AEV flare up to the fender, re-connect the side marker light wire harness and proceed snapping the AEV flare into place starting from the rearward end of the flare.

I. Ensure all clips are snapped into place by firmly pressing on each section of the flare. Re-attach the push pin clips that were removed from the bottom of the flare. Rear flare installation is complete once this is done (Fig. 39).

Figure 39

J. Before continuing onto the passenger side of the vehicle, we will need to install the rear ½" spacer lift block.

K. Place a second jack under the rear axle of the vehicle to support the axle to relieve tension on the leaf springs.

L. Remove the lower shock mount bolt and move the shock end out of the mount (Fig. 40).

Figure 40

M. Remove the U-Bolt nuts and washers (Fig. 41).

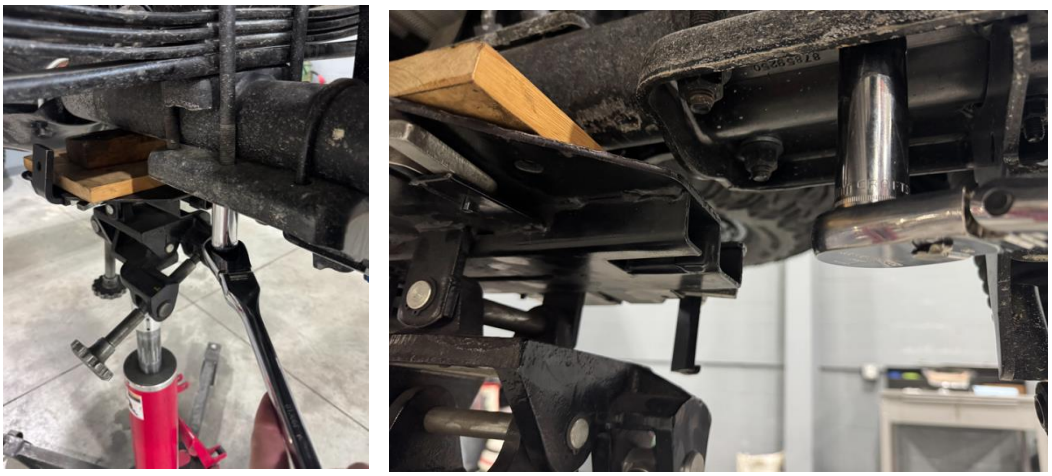


Figure 41

N. Once U-bolts are removed, slowly lower the axle until there is sufficient space to add the AEV provided lift block under the leaf springs (Fig. 42).

Figure 42

O. Install the spacer lift block on the axle beneath the leaf springs (Fig. 43). Ensure the block is seated properly to the axle and raise the axle back up until it touches the leaf spring and applies light compression to the spring. Install the provided U-bolts and secure them with nuts and washers that were previously removed. Do not torque the U-bolts down to spec yet.

Figure 43

P. Re-attach the shock to the lower shock mount using the bolt that was previously removed and torque to 118 ft-lbs. Next, finish torquing the U-bolt nuts using the sequence order shown in the figure below (Fig. 44). Torque first pass to 59 ft-lb; loosen 180 degrees on second pass; Torque to 59 ft-lb on third pass; torque 120-140 degrees on final pass.

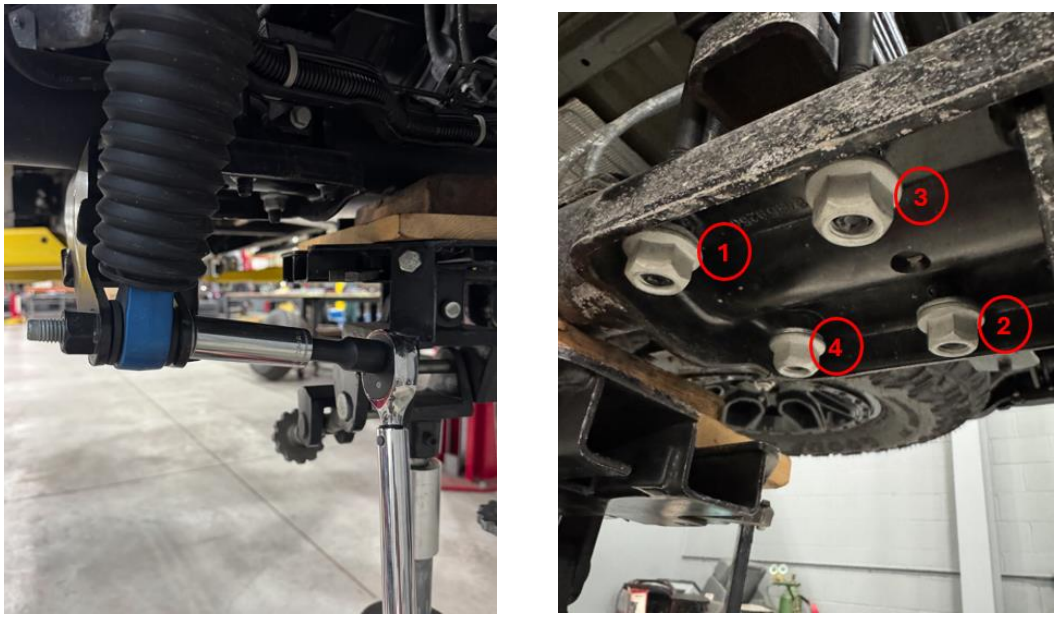


Figure 44

Q. Once complete, lower the axle and move on to the passenger side of the vehicle and repeat the same steps for the flare and lift block installation.

8. Once complete, confirm everything is torqued to spec and the flare clips are sitting flush to the fender with all the clips engaged. Take vehicle straight to an alignment shop. After 500 miles of driving, check the torque on the U-bolts and re-torque as necessary.

9. Installation Complete