



TS-WI-TS4-RELC: NHTSA Recall 25V-062

Guide ID #3730. PK9178-SP.

Written By: Spencer DePew

INTRODUCTION

Rivnut Gun Tool: <https://a.co/d/cklkNwi>

TOOLS:

- IM20710 - 17/32 Drill Bit (1)
- IM20712 - Rivnut Install Tool (1)
- Torque Wrench (1)
- Drill/Driver (1)
- 5/16" drill bit (1)
- 17mm Socket (1)
- 19mm Socket (1)
- 13mm Socket (1)
- PK9176-SP - Tool Kit (1)
- 10 mm Socket (1)
- 21mm Socket (1)
- 12mm Socket (1)
- 14 mm Socket (1)
- 14mm wrench (1)

PARTS:

- PK9178-SP (1)
- WA5448 - DS Braced Shear Plate (1)
- WA5449 - PS Braced Shear Plate (1)
- WA5450 - PS Tower Brace (1)
- WA5451 - DS Tower Brace (1)
- WA5454 - PS Trailing Arm Stiffener (1)
- WA5455 - DS Trailing Arm Stiffener (1)
- FP30510 - Shear Plate Shim (2)
- FT3055 - Rivnut M10x1.5mm (23)
- FT10966 - M10x1.5x25mm Hex Bolt CL10.9 (23)
- FT10897 - Washer M10 (23)
- FT1758 - M10 Split Lock Washer (23)
- FT10965 - M6x1.0x1.25 mm x25mm Hex Bolt CL10.9 (9)
- FT10967 - Washer M6 (9)
- FT10968 - Washer M6 (9)
- FT10969 - M8x1.25 Nyloc Nut (1)
- FT2213 - P Clamp 2" (1)
- EL5050 - MNT, FIR TREE, CABLE TIE (3)

Step 1 — TS-WI-TS4-RELC: Suspension Inspection



⚠ During the course of the inspection or repair, if visual cracks or separated suspension components are found **STOP** and contact VM tech support at 800-488-9082

- Please have the following information ready:
 - VIN
 - Mileage
 - Photos of area in question
 - Usage (Residential or Commercial)

Step 2

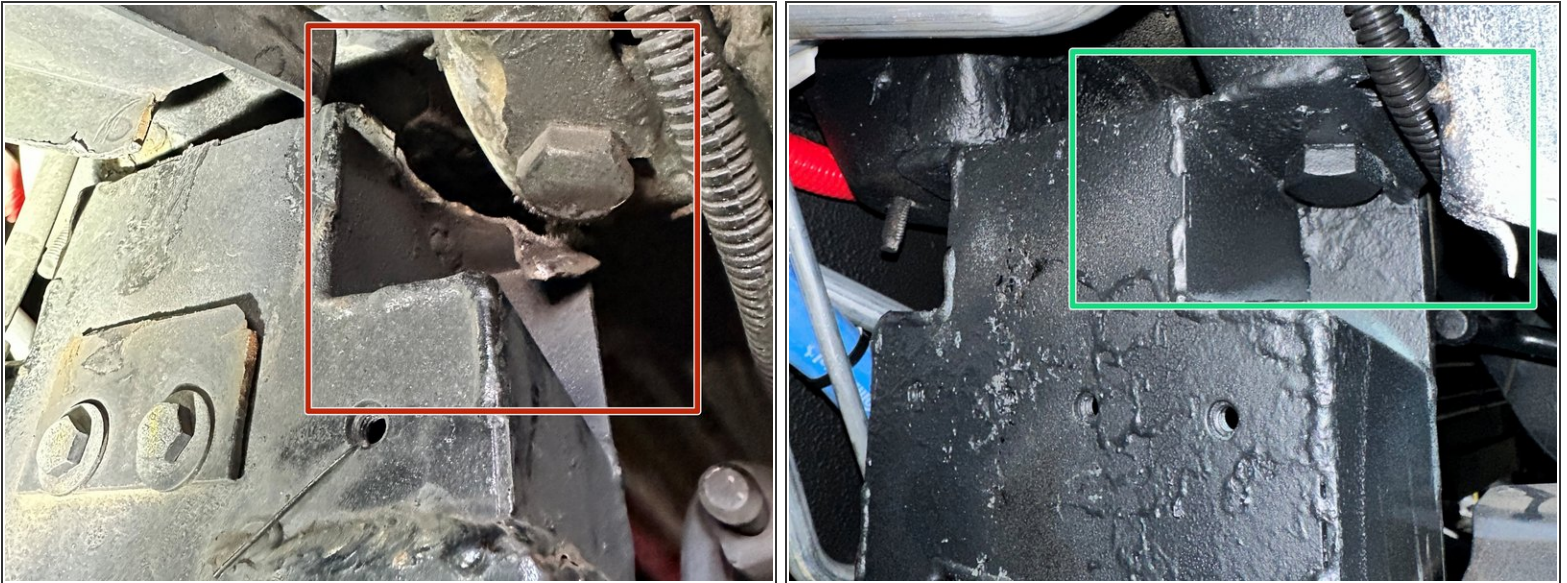


- Position and secure van on an approved lift, ensuring that all safety protocols are followed.
- Use a 21 mm socket to remove the rear tires.

Step 3

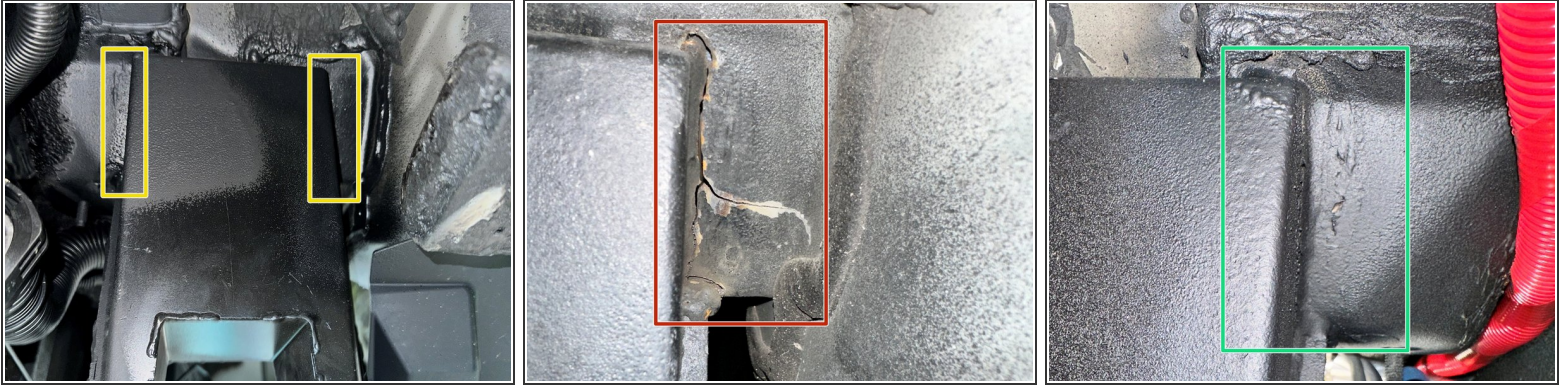


- Use a 10 mm wrench to remove the wheel well liner supports on both the driver's and passenger's sides of the van.
- Discard both OEM pieces and bolts.
- Using a 10 mm wrench and panel popper, remove the front lower wheel well liner hardware on both sides. Retain the hardware.

Step 4

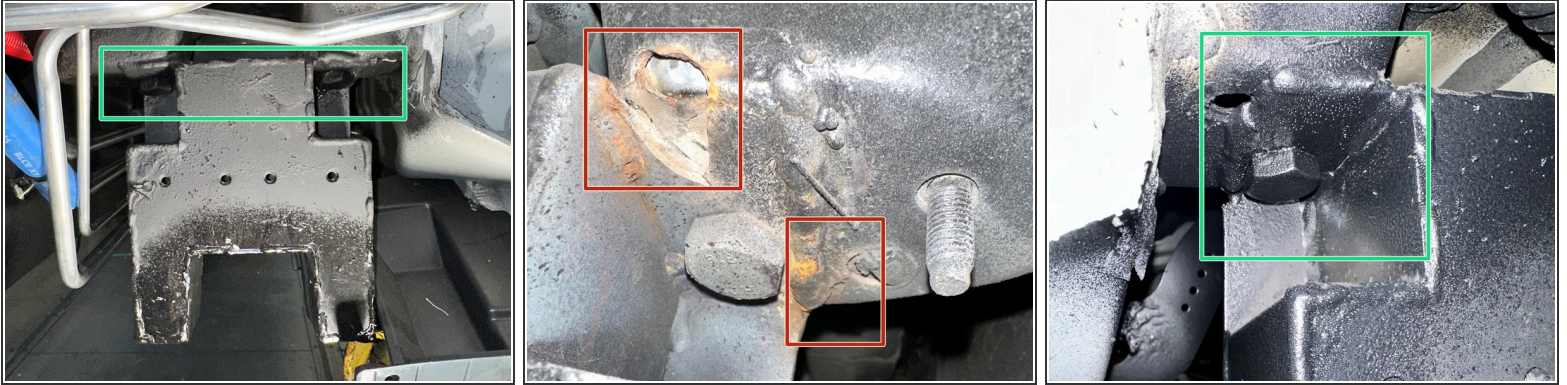
- Perform visual inspection of the trailing arm extensions to ensure there are no cracks or separated suspension components.
- This area illustrates a separated/failed condition.
- This area illustrates a non-separated/passing condition.
- ⚠ If there is a failure in this zone take thorough pictures of the area and contact Tech Support.
- If trailing arm extensions are not separated proceed to the next steps.

Step 5



- On the driver's and passenger's side. Inspect the trailing arm mounts in weld location 1.
 - ⓘ Welds should be intact, no visible cracks or breaks.
 - This zone illustrates an example of a **failed** condition.
 - This zone illustrates an example of an **acceptable** condition.
- ⚠ If there is a failure in this zone take thorough pictures of the area and contact Tech Support.
- If no failures here exist please move to the next step.

Step 6

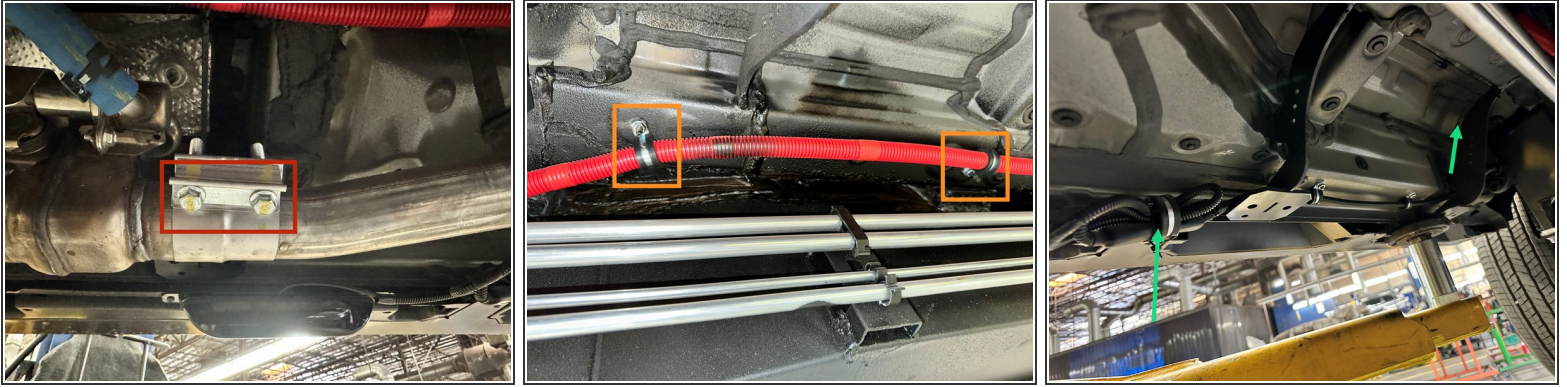


- On the driver's and passenger's side. Inspect the trailing arm mounts in weld location 2.
 - ⓘ Welds and parts should be intact, with no visible cracks or breaks.
 - This zone illustrates an example of a **failed** condition.
 - This zone illustrates an example of an **acceptable** condition.
- ⚠ If there is a failure in this zone take thorough pictures of the area and contact Tech Support.

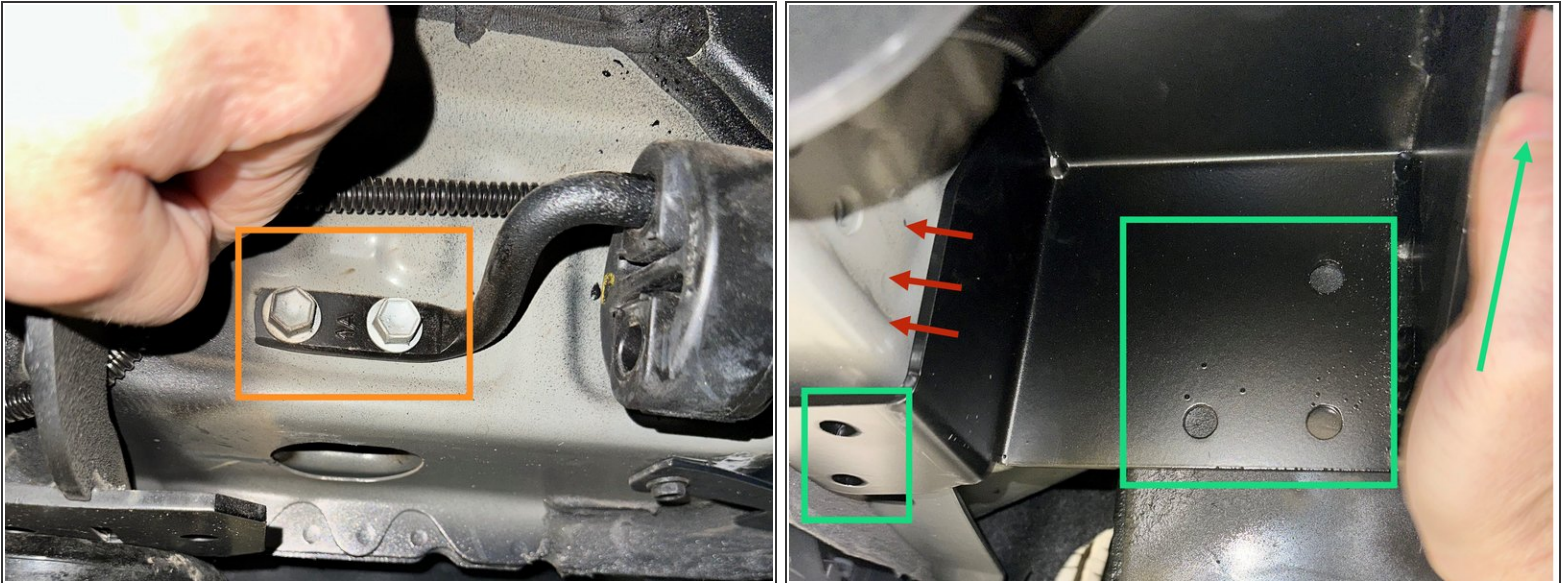
Step 7



- Once inspection is complete and no cracks or separated components are found proceed with recall parts installation.

Step 8 — TS-WI-TS4-RELC: Bolt on Bracket only (recall)

- On the passenger's side loosen the exhaust clamp and slide out the exhaust
- Set exhaust and clamp to the side for later re-install.
- Using a 10 mm wrench remove the 2 p-clamps holding on the 12v harness. Position the 12v harness out of the way.
- Cut the zip tie holding the excess wire for the side lighting. Slide enough slack, approx 6", to the back to clear the new bracket.

Step 9

- Using a 12 mm wrench remove the 2 bolts for the exhaust hanger. Retain part and hardware for re-use.
- Starting on the passenger's side set the brace, WA5454, in position to mark the holes.
- ⚠ Ensure that the bracket is fully seated against the inner side of the OE rocker panel.
- Using a paint pen begin marking the 7 holes to the OEM body and trailing arm extension.
- Remove the bracket.
- Repeat steps above for the driver's side using WA5455.

Step 10

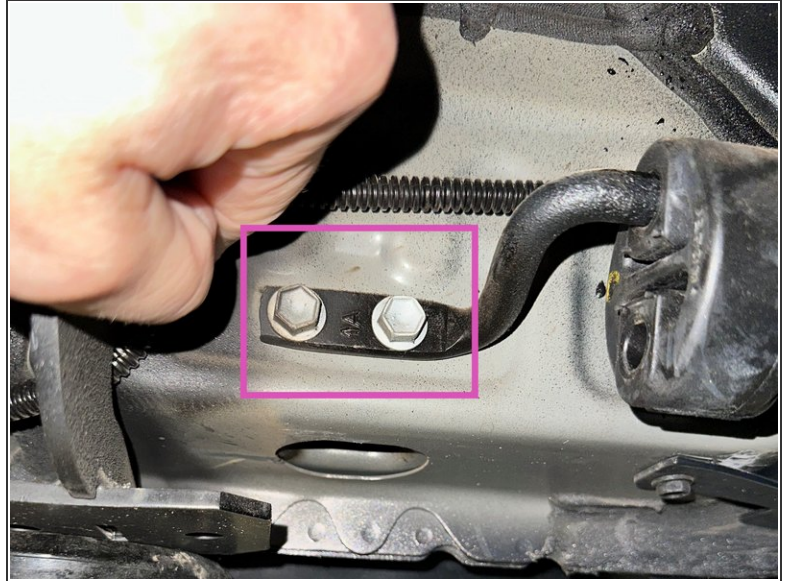
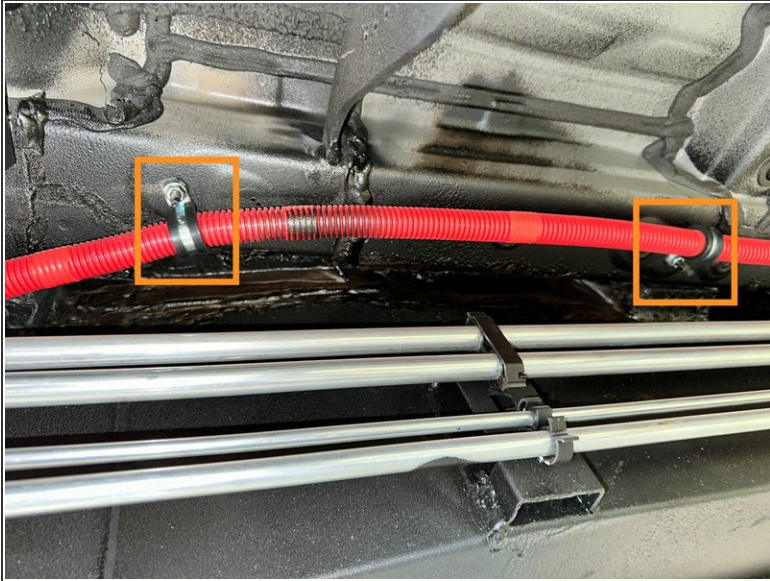


- Utilizing a center punch, mark in the center of all 7 of the marked holes.
- Using a 5/16" drill bit drill a pilot hole in each location.
- Using a 17/32 drill bit drill out the holes on the passenger's side,
 - ⓘ OEM sheet metal is hardened in this area. Take care to drill slowly and lubricate the drill bit frequently.
 - ⚠ CTQ: Drill these holes carefully, as the diameter is critical for proper rivnut engagement.
 - ⚠ CTQ: Deburr the holes and coat the bare metal with paint or primer.
- Repeat steps above on driver's side.

Step 11



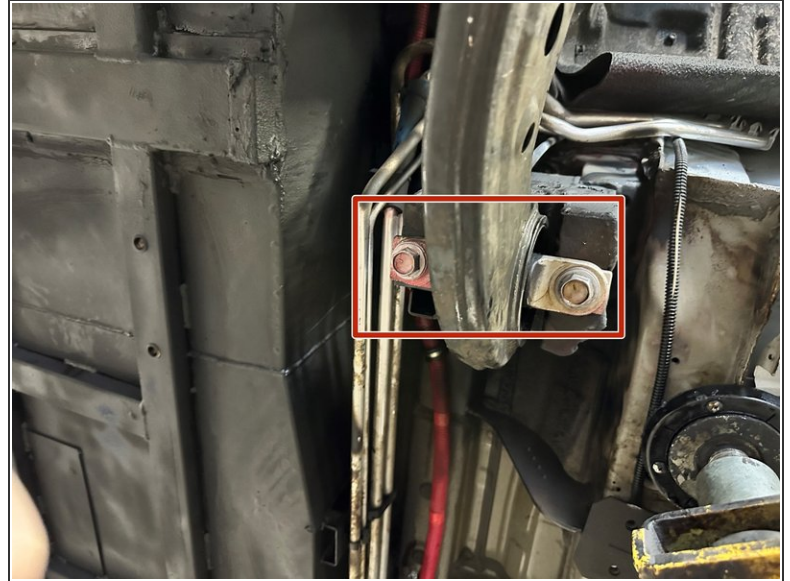
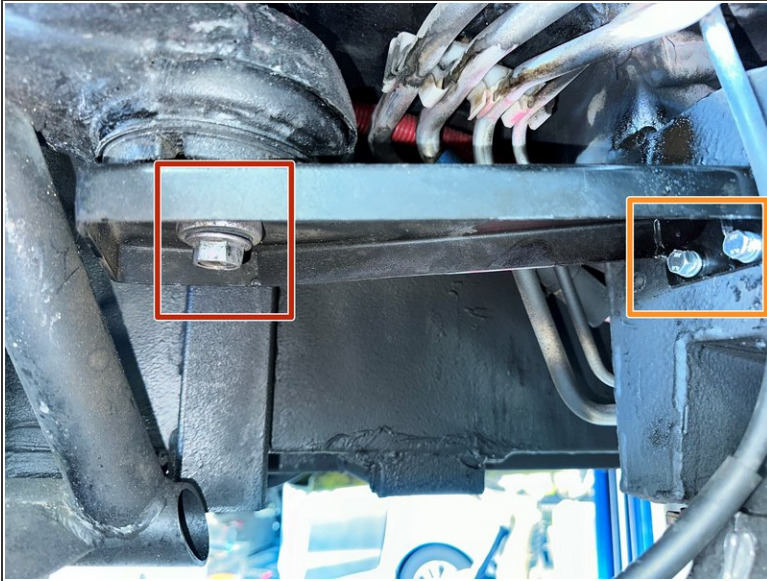
- Using the rivnut installation tool, IM20712, install and clamp into place the rivnuts FT3055 in all locations.
- Install the bracket WA5454 on the passenger's side using bolt FT10966 the following washers:
 - Flat washer FT10897, should be first
 - Lock washer, FT1758, should be installed second (between flat washer and bolt head).
- ⓘ Leave all hardware loose until all fasteners have been started by hand.
- ⚠ **Torque bolt FT10966 to 30 ft lbs.**
- Repeat steps above for driver's side using WA5455.

Step 12

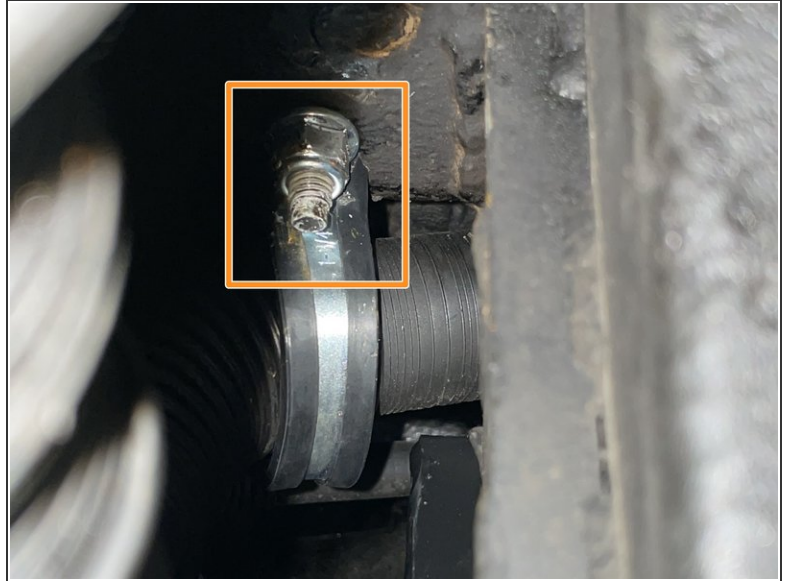
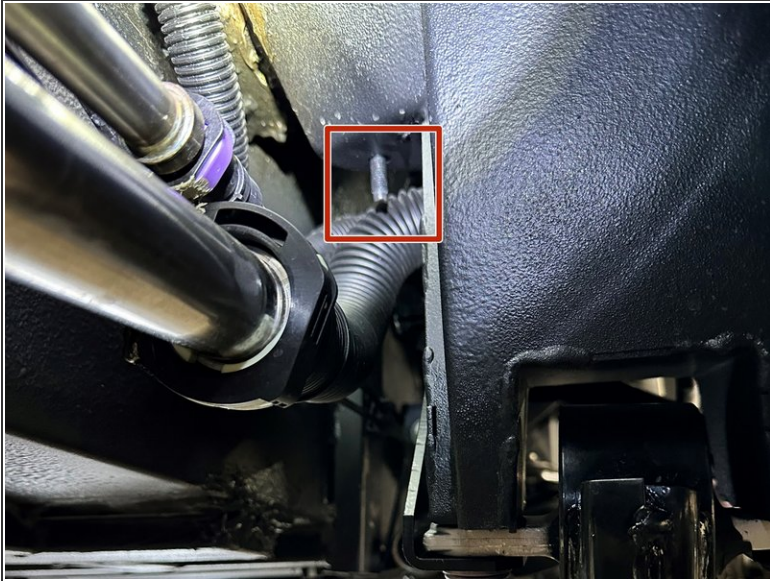
- Re-install the two 12v p clamp
- Re-install passenger's side exhaust hanger.

Step 13 — TS-WI-TS4-RELC: Suspension Enhancement.

- Fold up and secure the liner out of the way on both sides.

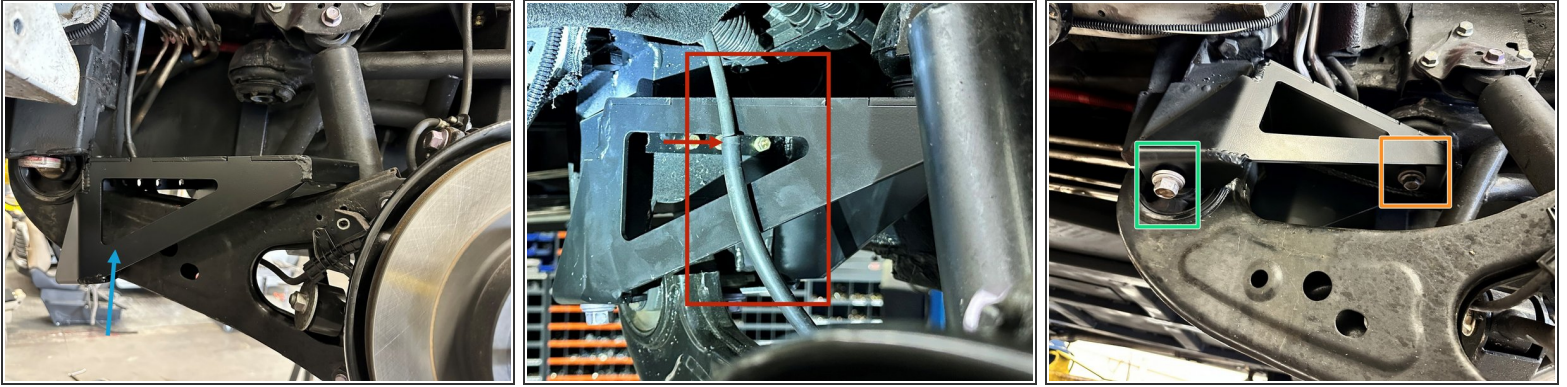
Step 14

- Use a 19 mm wrench to remove the driver's side front sub frame bolt and the 2 trailing arm bolts.
 - Retain OEM hardware for re-use.
 - Use a 10 mm wrench to remove the four bolts securing the driver's side shear plate to the trailing arm mount, then remove the shear plate.
 - Discard 2 shear plate bolts.
 - Discard the shear plate.
- ⚠ CTS: Follow WI by completing one side at a time. Failure to do so may result in injury or damage to the unit.

Step 15

- On the driver's side only, install P-clamp ,FT2213, over the filler neck.
- Secure the P-clamp to the nearby OEM stud using nut FT10969 and a 13 mm socket.

Step 16



- On the driver's side, insert the new braced shear plate (WA5448) into place.
- ⚠ **CTQ:** Ensure the parking brake wire is routed outside the bracket.
- Hand-start the suspension frame bolt through the new shear plate.
- Hand-start the outermost bolt for the trailing arm.
- Tighten both bolts using a 19 mm wrench until the new bracket is properly seated.
- ⓘ Once seated, slightly back off the bolts to allow for maneuverability and alignment of the parts.

Step 17

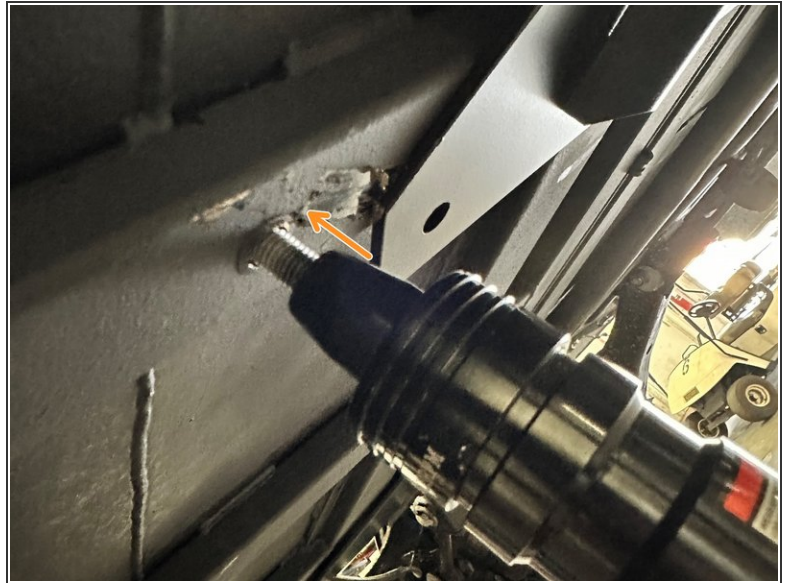


- Take the driver's side lateral brace (WA5451) and install it onto the innermost trailing arm bolt.
- Hand-start the bolt, then tighten it using a 19 mm until the brackets are snug against the trailing arm.
- Align the other three holes of WA5451 with the centers of the frame rails.

Step 18

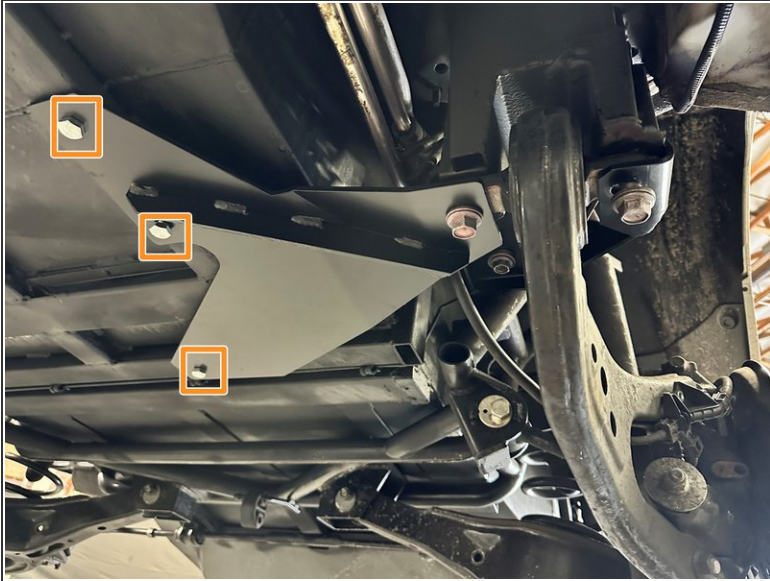


- Use a paint marker to mark in the center of the 3 holes. Remove the plate (WA5448).
 - Using a center punch mark the center of the 3 markings
 - Using an 5/16" drill bit, drill pilot holes in the frame tubes, aligning them with the punch marks.
 - Using a drill and a 17/32" drill bit (IM20710), enlarge the pilot holes.
- ⚠ CTQ: Drill these holes carefully, as the diameter is critical for proper rivnut engagement.
- ⚠ CTQ: Deburr the holes and coat the bare metal with paint or primer.

Step 19

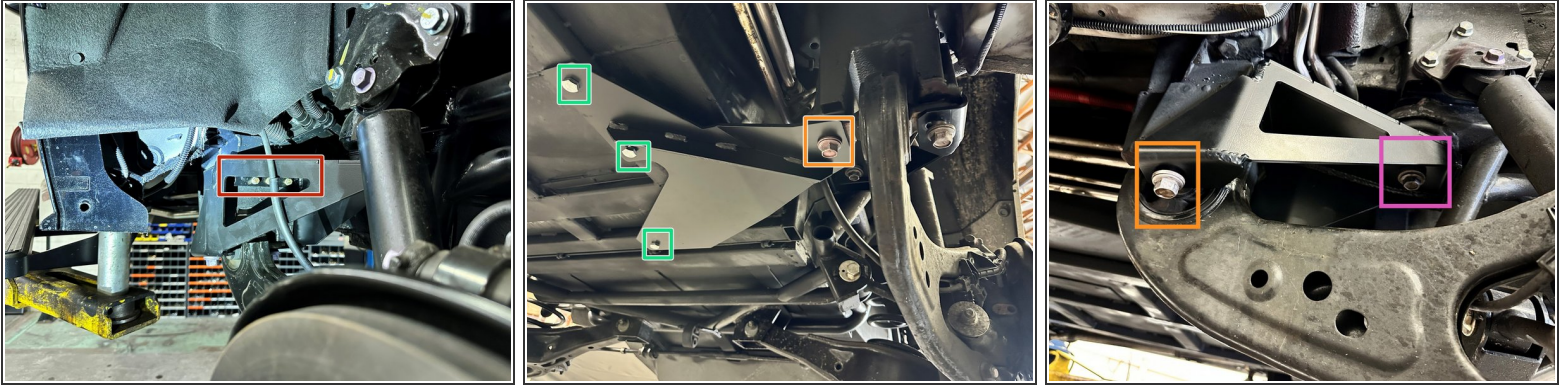
- Take the rivnut installation tool (IM20712) and rivnut (FT3055), then thread the rivnut onto the tool approximately 90% of the way.
- ⚠ CTQ: Do not thread the rivnut all the way down. If you do, the rivnut may not seat properly during installation.
- Insert the rivnut with the installation tool into the drilled hole and secure it in place.
- ⓘ Refer to the operation manual for specific instructions on using the rivnut tool.
- Repeat the process for the remaining two holes.

Step 20



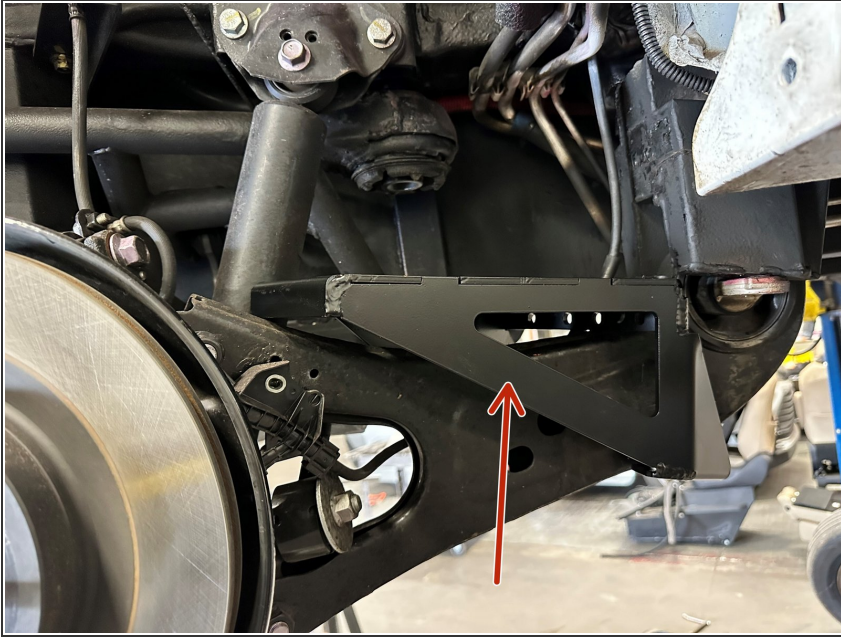
- Take the driver's side lateral brace (WA5451) and reinstall it onto the innermost trailing arm bolt.
- Take three M10 bolts, flat washers, and split washers. Hand-start them, then snug them up to secure the lateral support plate to the frame.
- Hand-start the bolt, then tighten it using a 19 mm wrench until the brackets are snug against the trailing arm.

Step 21



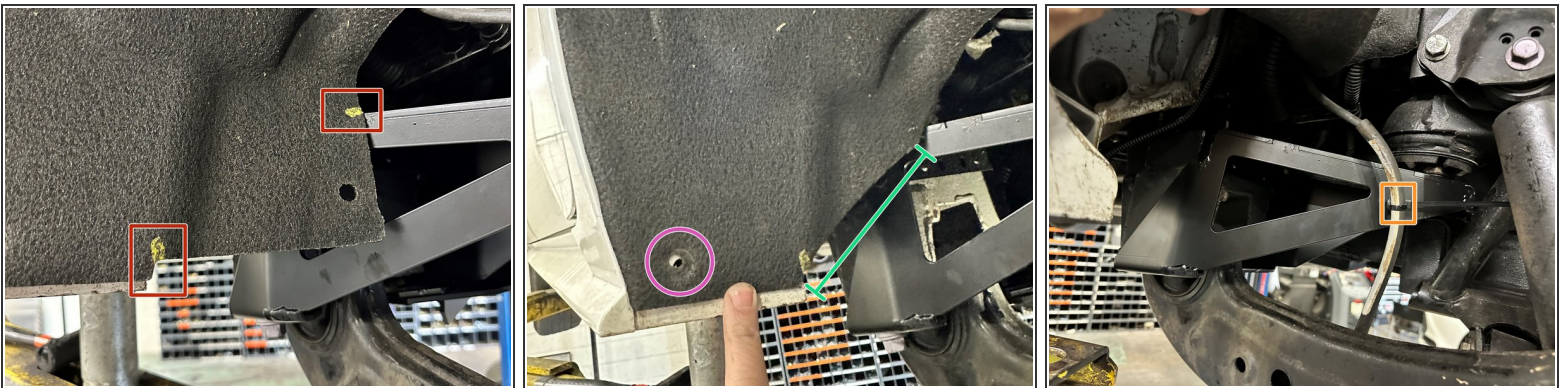
- Hand-install four M6 bolts, flat washers, and split washers to secure the driver's side shear plate to the middle of the trailing arm.
- ⓘ It may be necessary to tighten or loosen the suspension bolts to align the bolt holes with the threads.
- ⓘ If a gap exists between the shear plate and the trailing arm mount, use shim FP30510 to fill the gap.
- Once the bolts are started, secure them using a 10 mm wrench.
- Secure the three lateral support bolts in place using a 17mm wrench.
 - ⚠ These must be tightened prior to tightening the trailing arm mount bolts to avoid a gap between the bracket and the frame.
- Secure the 2 trailing arm suspension bolts in place using a 19 mm wrench.
- Secure the front frame bolt in place with a 19 mm wrench.

Step 22



- On the passenger's side, repeat steps 13-21 using WA5449, WA5450.
- ⓘ Filler neck clamp is not required for passenger's side.

Step 23



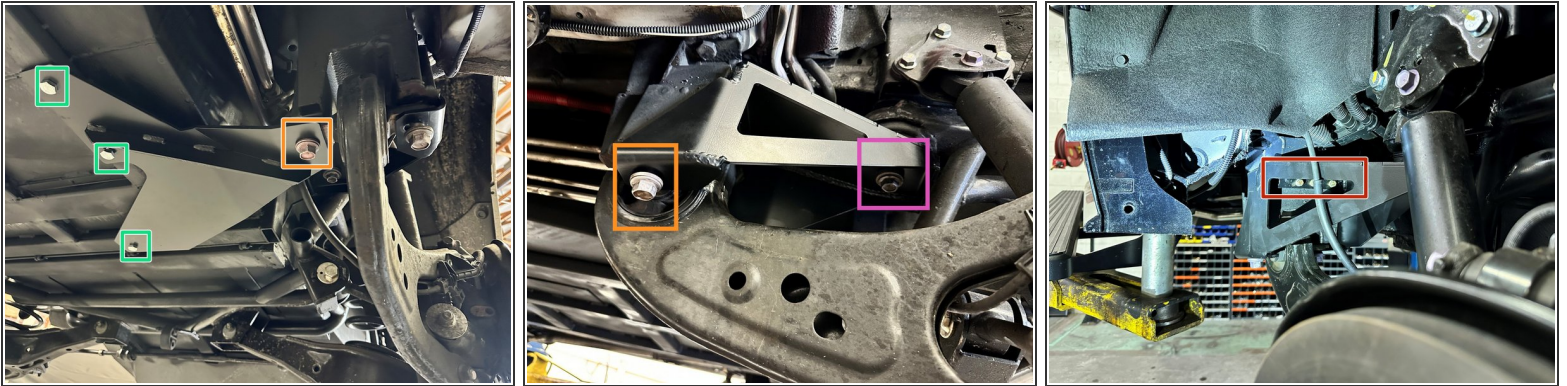
- On both the passenger's and driver's sides, mark the wheel well liner at the edge of the fender and the edge of the shear plate.
- Using scissor or knife cut the corner out of the wheel well liner felt.
- Secure the wheel well liner screw with a 10 mm wrench.
- Secure the parking brake cable using a push-in zip tie (EL5050) in the designated installation hole on both the driver's and passenger's sides.

Step 24



- Slide exhaust onto hangers and clamp. Torque clamp bolts to 40 ft lbs.
- Reinstall the rear tires using a 21 mm socket and torque the lug-nuts to 76 ft lbs.
- Ensure the rear alignment is checked and adjusted as needed.

Step 25



- Torque all hardware in this sequence.
 - Driver's and passenger's inner brace mounts. 30 ft lbs (6x)
 - Driver's and passenger's trailing arm bolts. 89 ft lbs (4x)
 - Driver's and passenger's sub frame bolts. 117 ft lbs (2x)
 - Driver's and passenger's shear plate mount bolts. 6 ft lbs (8x)