



Lingenfelter GEN VI Camaro Intercooler Coolant Reservoir Tank



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6th Gen Camaro Intercooler Reservoir Tank



Parts List:

Lingenfelter GEN VI Camaro Intercooler Coolant Reservoir Tank – L300227415

#	Description	Part Number
1	Coolant Tank	XX02330-0001
1	Pressure Cap	L300250020
1	90° npt fitting	53525K18
1	Straight npt fitting	5346K55
2	5/8 spring clamp	7329K15
1	90° 3/4 hose	28479
2	17mm oetiker clamps for drain hose	52545K55
1	3/8 ball valve	1PZB4
32"	5/8 heater hose	H-153
26"	3/8 heater hose	H-150
2	Bolts for lower reservoir mount	AV12351
3	Bolts for top reservoir mounts, and drain bracket	KP82448
1	clamp for drain bracket	AV9386
1	3/4 spring clamp	7329K16
1	nut for drain bracket	MP50
1	aveco m6x1.0 16mm long bolt	11588712
1	drain bracket	XX02330-0002

3/4" wide x 1.25" long x .125 thick 304 stainless plate – for drain bracket

Tools and Materials Required

- T-15 torx
- 7mm socket
- 10mm socket
- 22mm socket
- Fork pry tool
- 3/16 drill bit
- 1 1/8 Hole Saw
- 3 3/4 Hole Saw used to bore hole in metal fascia support
- 1/4 Drill Bit

Applications:

- 2017-2019 Chevrolet Camaro ZL1

Description:

Made from 5052 aluminum, this coolant tank provides extra 2.5 gallons of capacity as well as eliminating the hassle of bleeding the system for air pockets.

Notes:

- Read all of the instructions before beginning the installation process in order to make sure you have all of the tools and equipment needed and that you feel comfortable performing the installation.
- Be sure to save all of the parts you remove from the vehicle.
- Be careful not to damage any components while removing them from the vehicle. Some parts cannot be purchased by themselves from GM and must be purchased as part as an entire assembly.
- Estimated installation time is 3 Hours

*****If you have been using the vehicle, allow the vehicle to cool down before beginning this installation*****

Step 1: - Disconnect Negative Battery Terminal

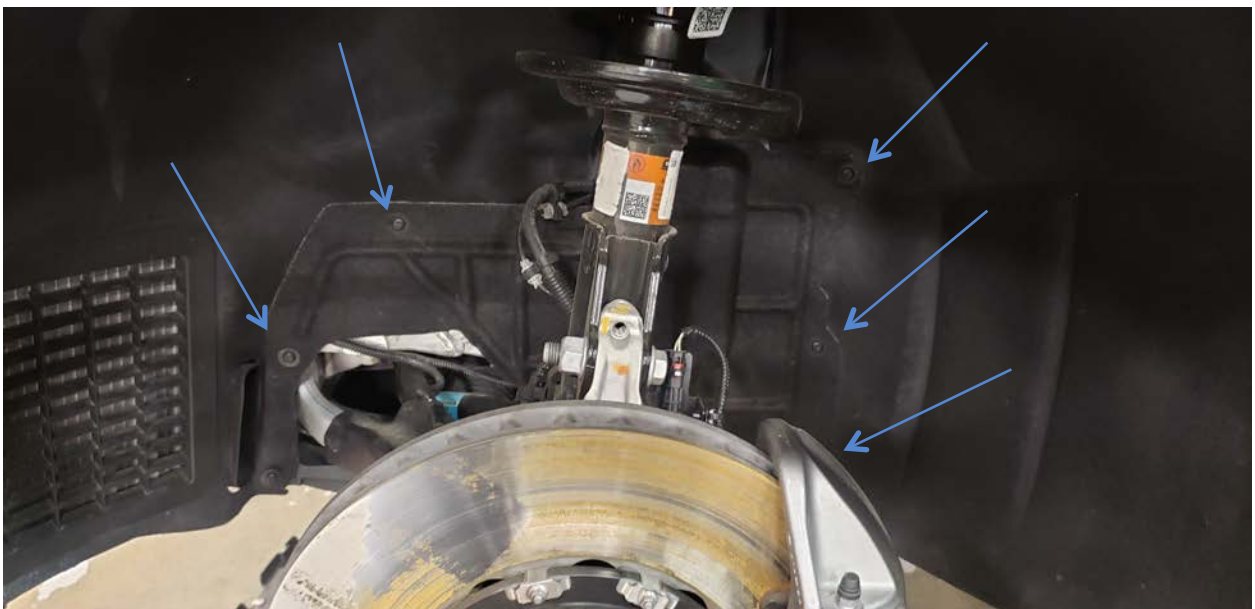
- Raise hood

- Lift vehicle (Use proper lifting procedures)*

Step 2: Remove front wheels. (22mm socket)



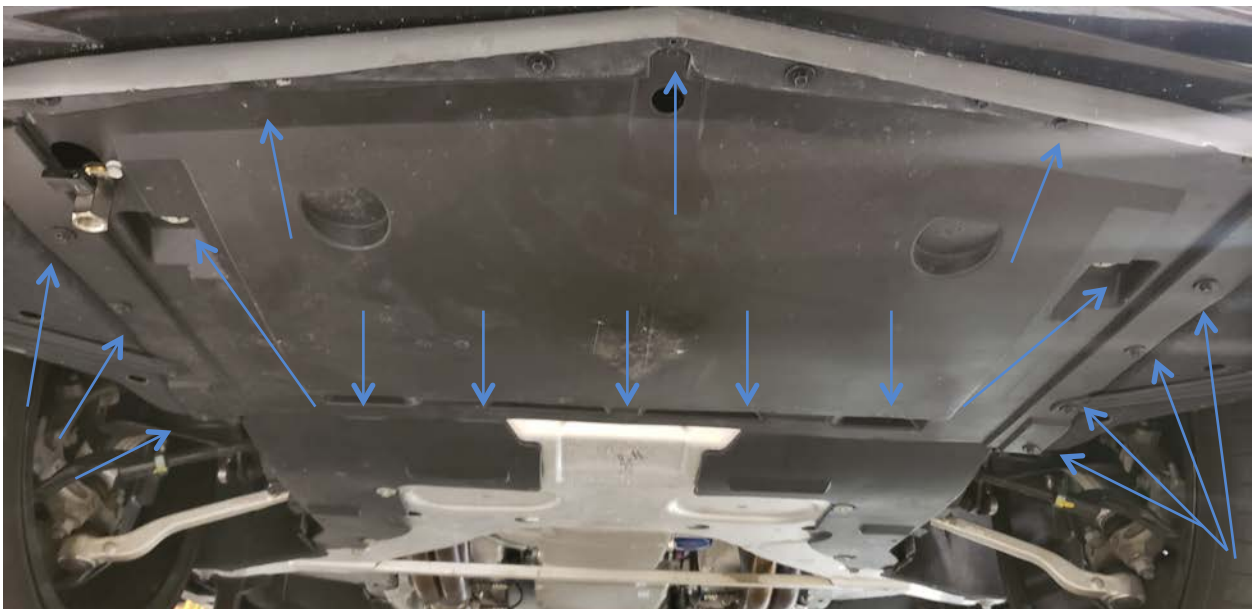
Step 3: Remove small inner wheel liner panels. 5 Screws and 1 push fastener per side. Repeat for both sides. (T-15 torx and fork pry tool)



(This image shows the smaller inner panel removed) 1 Push fastener behind the rotar.



Step 4: Remove under body plastic belly tray. (10mm, 7mm sockets and pry tool)



- (6) 10 mm headed bolts
- (1) Push fastener
- (13) 7mm headed screws

Step 5: Follow the next steps in order to remove wheel well liners. Repeat all steps for both sides. (T-15 torx, 7mm socket and fork pry tool)

5.1 Removing the deflector on the wheel liner. (3) 7mm headed screws per side.



5.2 Removing deflector on wheel liner. (4) 7mm headed screws per side.



5.3 Shows removing fender to liner screws. (3) 7mm headed screws per side.



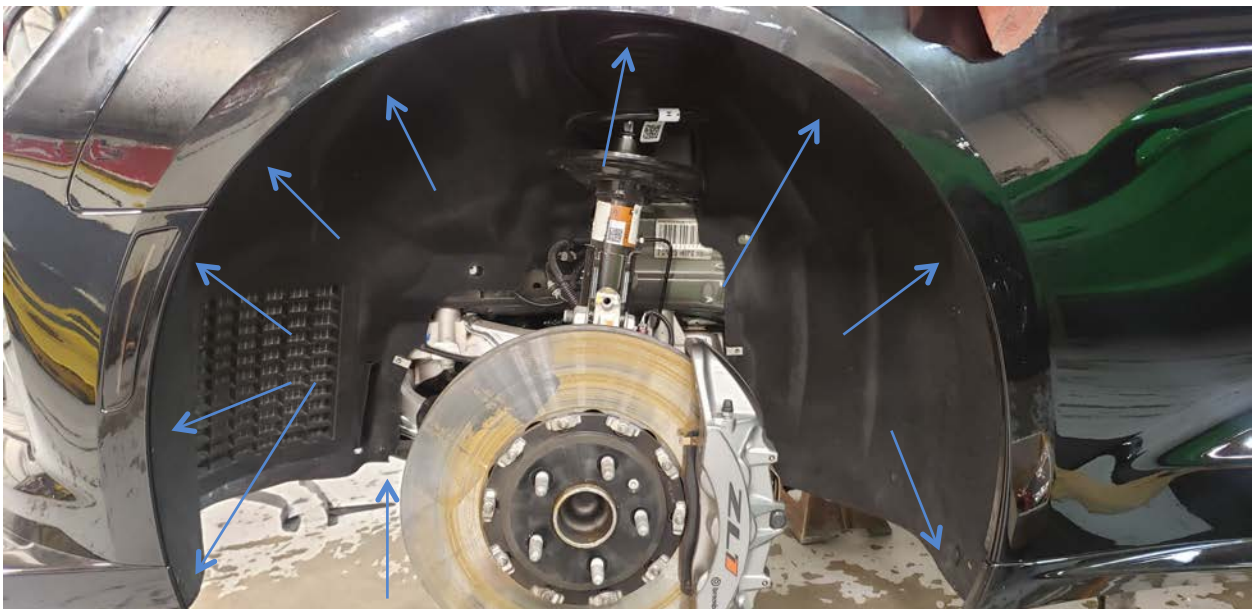
5.4 Shows removing fender to wheel liner screws. (1) 7mm headed screw per side.



5.5 All Fasteners removed.



5.6 Liner Removed.



- Remove (3) Push fasteners per side
- Remove (7) T-15 screws per side

Now you can pull the liners out.

Step 6: Remove the (3) push fasteners and (6) T-15 torx screws from the top of the front bumper.



Step 7: Disconnect the front bumper harness connector and remove harness attachment clip



Step 7: Continued -



Step 8: Remove 2, (1 per side) 7mm headed bolts from fender to bumper mount bracket.



Step 9: Loosen 4, (2 per side) 7mm headed bolts from fender to bumper mount.



Step 10: Remove (8, 4 per side) 7mm headed bolts that attach bumper to fender.



Step 11: Apply body shop masking tape to fenders to protect paint when removing and installing bumper.



Step 12: Lift up to release top bumper from alignment mounts – 1 per side.



Step 13: Pull bumper outward to release bumper to fender attachment, after it pops loose, pull forward on top of bumper to pull bumper about 3/8 to 1/2 inch from fenders. Repeat for the other side.



Step 14: Hold onto the top of the bumper near headlight area and pull the bumper off of the vehicle. If you have a helper, with a person on each side of the bumper pull it forward and off the vehicle.

Step 15: Remove the (4) 10mm headed bolts from the top fascia support. Set support panel.



Step 16: Remove the (4) 10mm headed bolts from the diagonal braces in front of the condenser/radiator. Remove braces. Note: the bolts and braces will not be reused.



Braces Removed – See below.



Step 17: Using a small drip pan, and a 3/8 square drive (end of an extension works well) drain the I/C system. Use the drain fitting that is located on the heat exchanger at the drivers side bottom corner.

Step 18: Measure out the lower mounting holes that will attach the reservoir to the bumper as shown.

Mark the pass side 4" from the center hole on the brace mounting tab, then 1.25"-1.375" from the inside edge of the bumper

Mark the drivers side 4.5" from the center hole on the brace mounting tab, then 1.25"-1.375" from the inside edge of the bumper







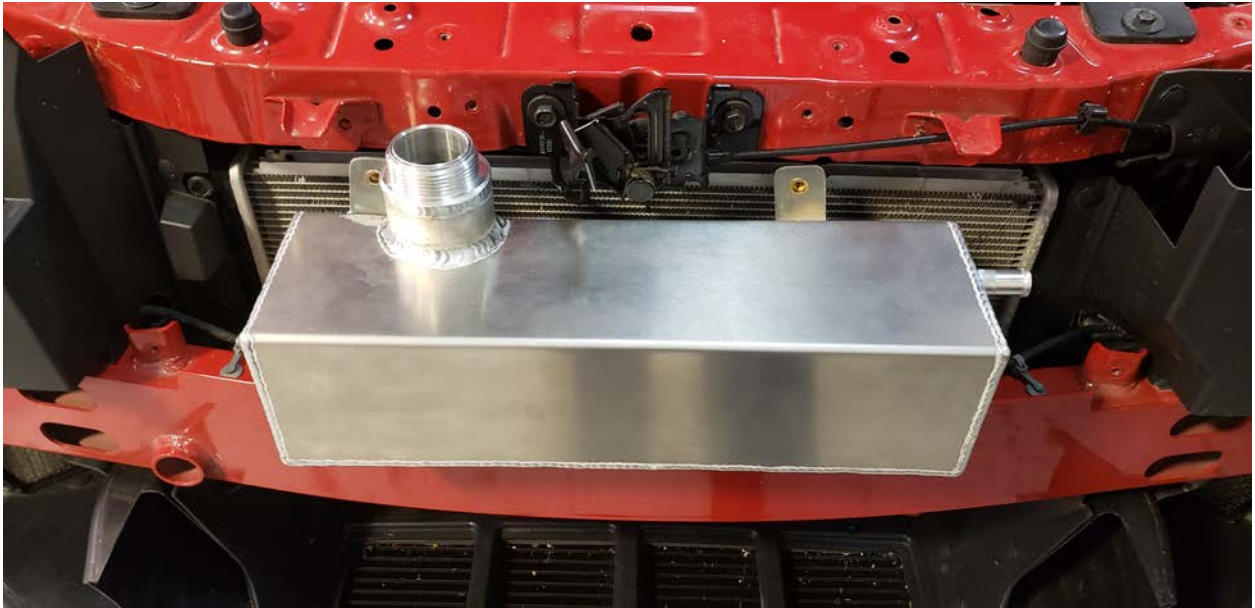
Step 19: Center punch the marks you made and drill with a 3/16 drill bit. Debur hole and vacuum shavings from bumper bar/ nearby heat exchangers.



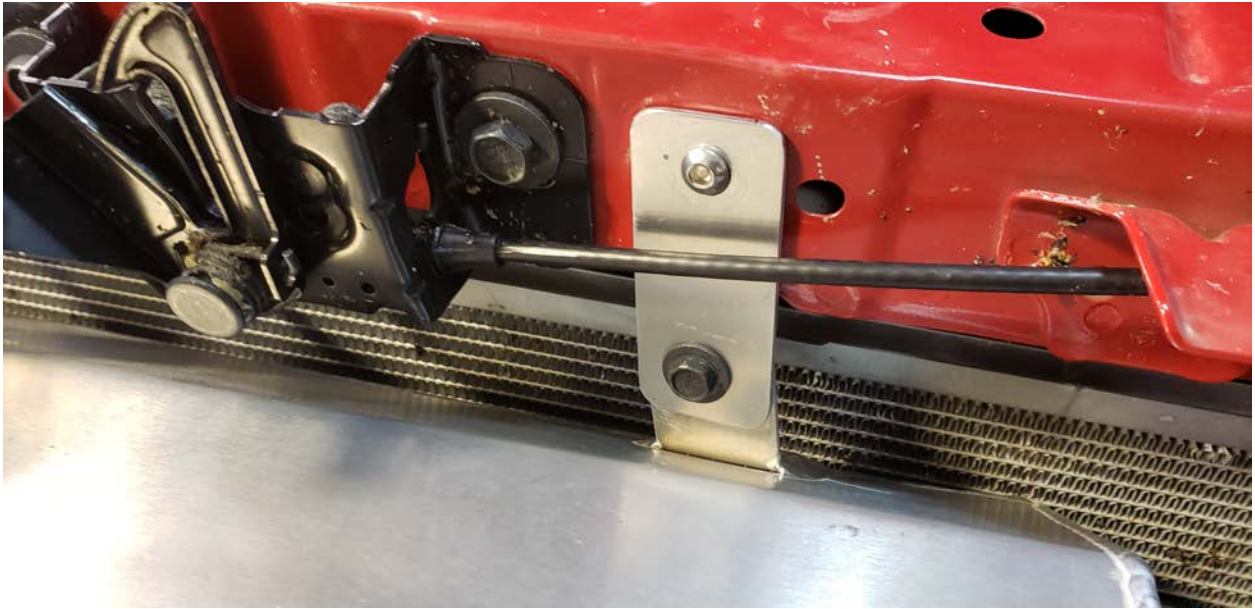
Step 20: Apply Teflon paste to the provided 90° fitting, install it into the reservoir and tighten it, clock the fitting so it points straight down.



Step 21: Place the reservoir into position, then install the provided 10mm headed screws into the bottom holes you drilled.



Step 22: Finish mounting the reservoir by mounting the 2 provided tabs. The shorter tab will be used on the drivers side, the longer tab will be used on the pass side. Use the provided M6 button head screws on the upper mounting holes and reuse 2 of the 10mm headed bolts from the front diagonal braces you removed earlier.



Step 23: Drill a $\frac{3}{4}$ " hole in the plastic panel as shown. The drain hose will be routed through the hole later on. Be careful not to drill into a heat exchanger or the cooler lines that are nearby. Remove panel if needed to drill safely.



Step 24: Remove air box and inlet tube to gain easier access to intercooler hoses.

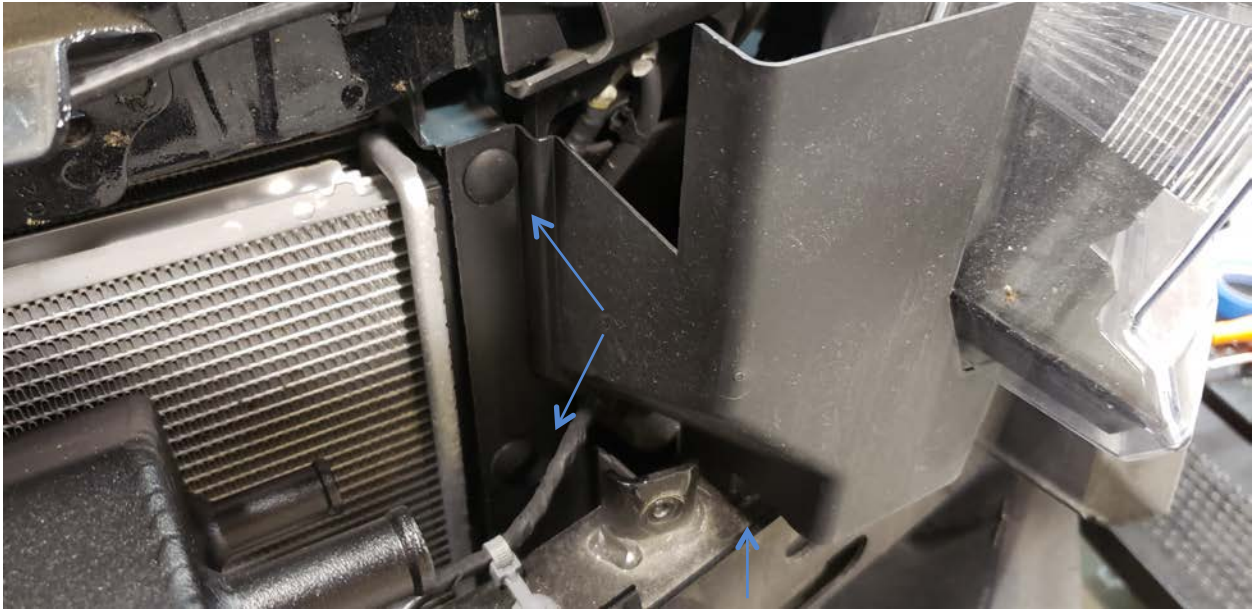
Step 25: Remove spring clip from intercooler quick connect at rear port on supercharger. Place a small cup under connector to catch any coolant from spilling. Pull connector away from supercharger.



Sep 26: Using spring clamp pliers, compress spring clamp and remove connector assembly from hose. After the connector is free, reinstall the spring clip into the connector and set aside until a later step. Save the spring clamp for a later step.



Step 27: Using a fork pry tool, remove 3 push in fasteners and then remove plastic panel near drivers side headlight.



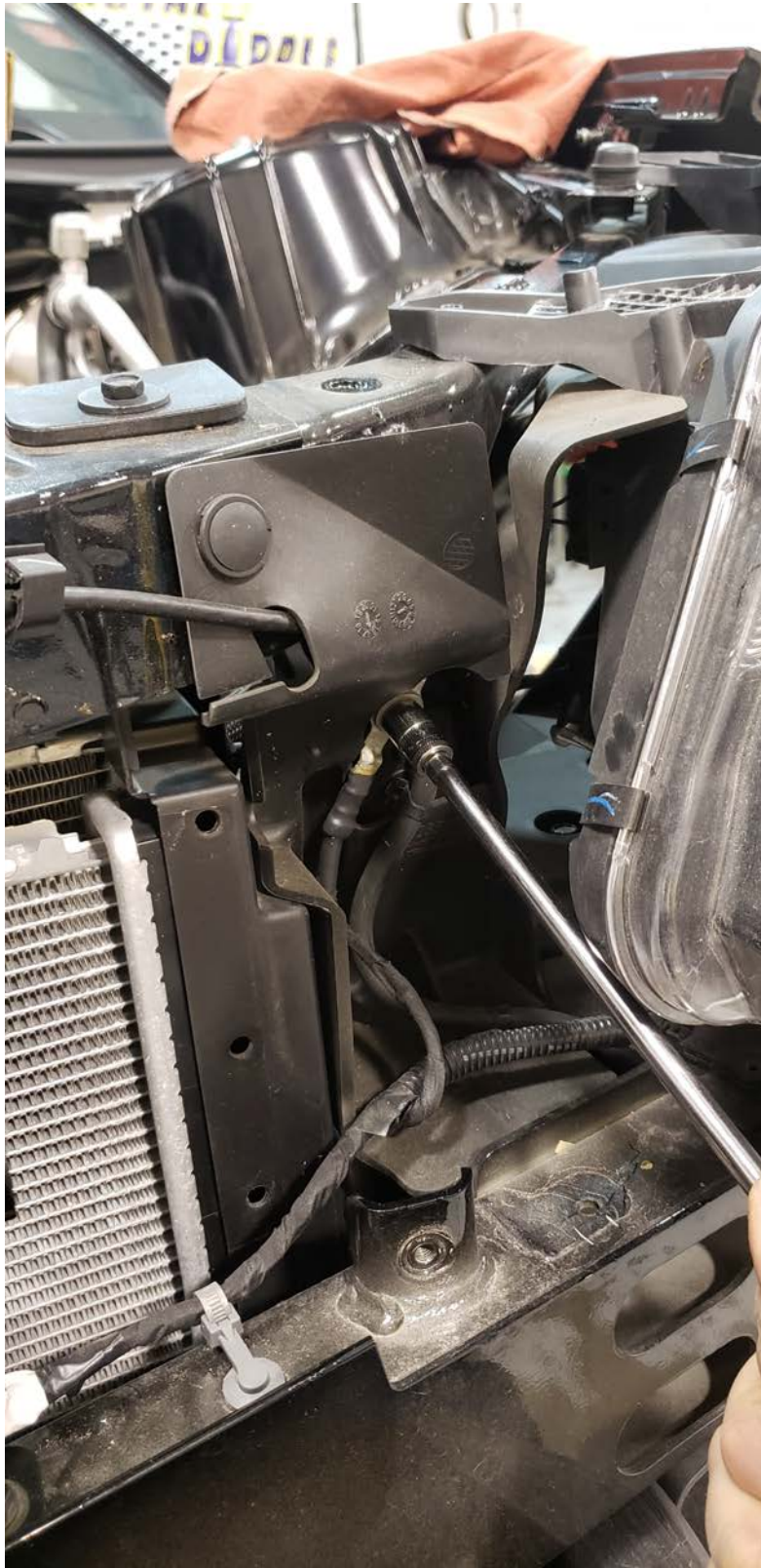
Picture shows fork pry tool removing a push in fastener.



Picture shows removing the panel.



Step 28: Using a 10mm socket remove the ground cable near the headlight.



Step 29: There will be 2 rubber hoses routed through the rubber trim panel, mark the rubber trim panel as shown to prepare it for trimming. Some pics show the panel removed for clarity.

(Picture shows the hole already, try and mimic the size and location)



Step 30: Using a fork pry tool remove the push fasteners and then remove the rubber trim piece.









Step 31: Trim rubber trim panel as shown, 2 hoses will be routed through it later, ensure the opening is large enough. Reinstall the rubber trim panel after it is modified.



Step 32: Install ground cable; bend it slightly to keep it out of the way from the hole you just made.



Step 33: Mark the plastic panel you removed earlier as shown, and drill with a 2" hole saw.



Step 34: Make a slot in the panel into the lower hole to aid with panel installation later.



Step 35: Deburr holes and slot with cartridge roll and deburr tool to mimic the picture ect.

Step 36: Using hose clamp pliers, remove hose from inlet of pump. Being careful not to get coolant on belts or pulleys.



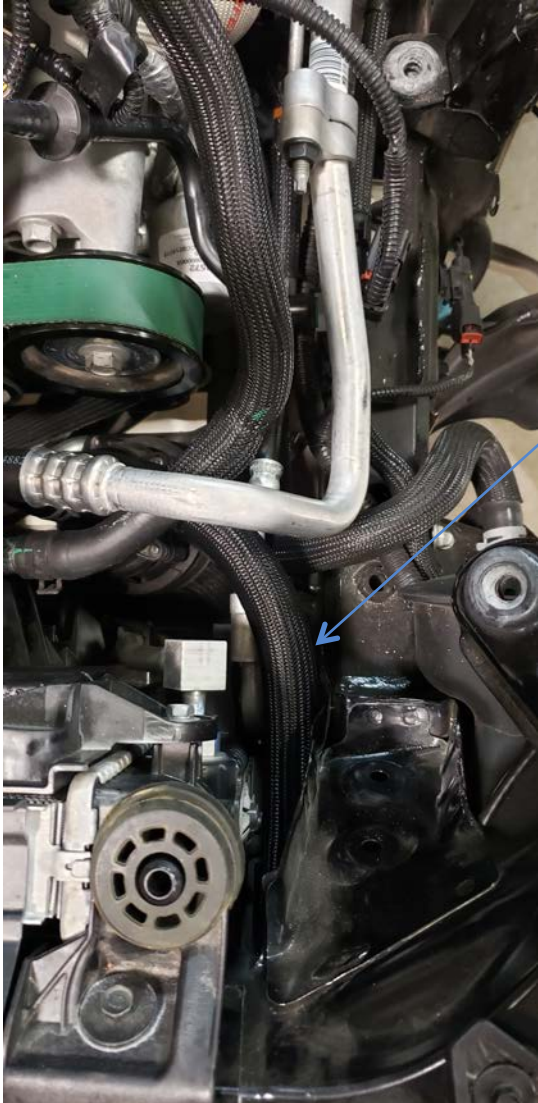
Step 37: Trim off 1-5/8" from the 90* bent end of the provided 90* hose.



Step 38: Slide on provided 3/4" spring clamp onto the 90* side of the hose you just trimmed. Remove mesh sleeve from old hose you removed earlier and install it near the center of the new hose.



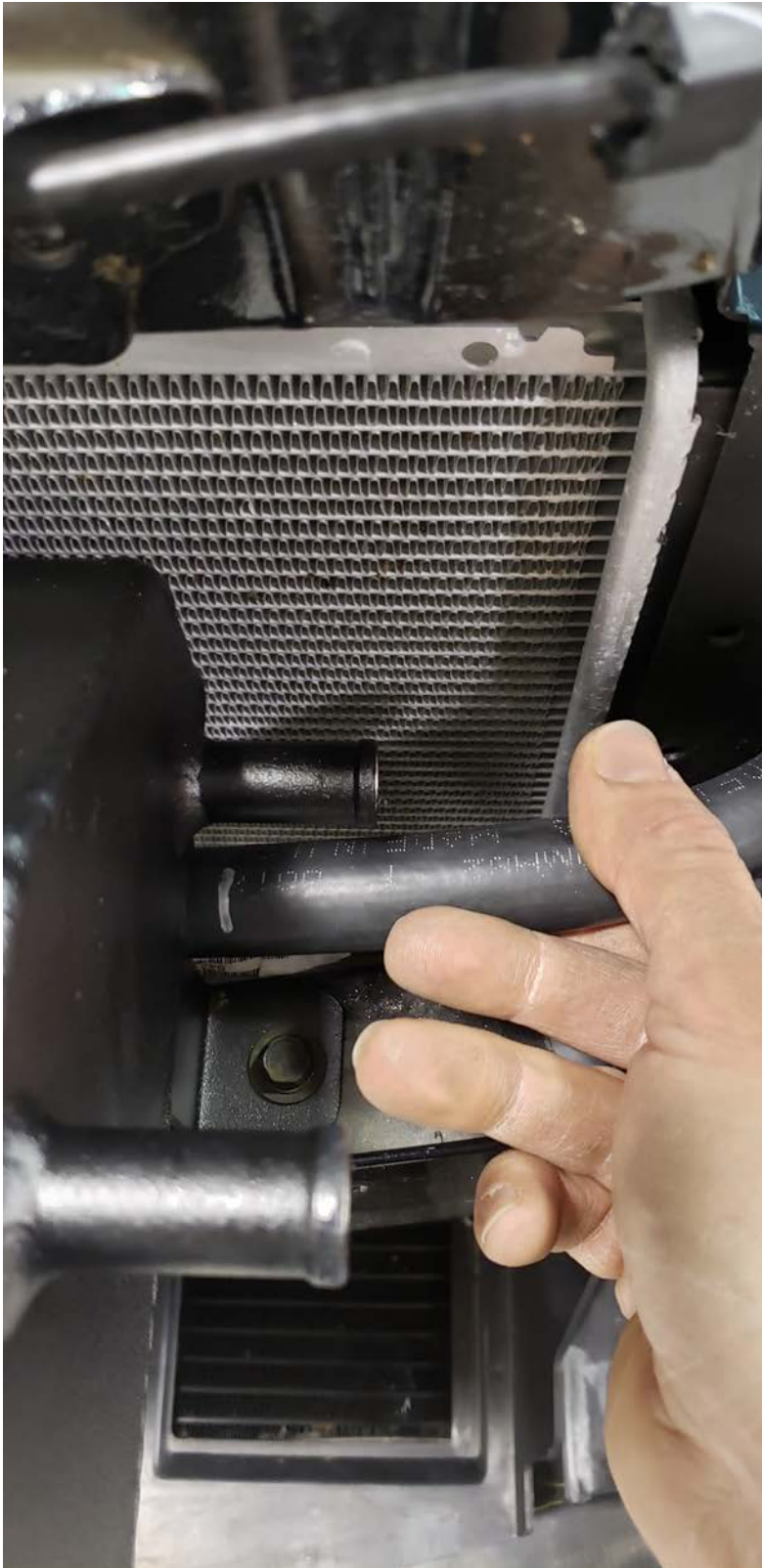
Step 39: Push the 90° end of the hose through the hole you made in the rubber trim panel. Route the 90° bend towards the I/C pump inlet.



Step 40: Using spring clamp pliers, push new hose on to pump inlet, making sure the hose is all the way on to the barb, locate the clamp where you would like it and release pliers.



Step 41: Route hose to the lower reservoir barb as shown, make sure the hose isn't kinked, and that the mesh is protecting hose from abrasion with AC line and core support. Mark hose length as shown.



Step 42: Using a hose cutter, cut hose to length. Using spring clamp pliers, install provided spring clamp on to hose and slide hose on to bottom reservoir barb.



Step 43: Slide a provided 5/8 spring clamp over one end of the provided straight H-153 hose, route hose through the rubber trim panel, and over top of the hose you just finished as shown.



Step 44: Install the plastic panel that was modified earlier into place, slip lower section into place 1st. Aligning the holes you cut with the lower reservoir hose.



Step 45: Once lower section of panel is into place, finish the top portion. Ensure all 3 push fasteners are secured correctly.



Step 46: Using spring clamp pliers, install provided spring clamp on to hose end and slide hose on to top reservoir barb.





Step 47: Reconnect hose quick connect fitting back on to the supercharger, route hose from top of reservoir to fitting. Lay hose over the top of the lower hose from earlier, along other supercharger hose and ensure the hose is away from belts and any sharp items. Mark hose length and using a hose cutter, cut the hose to length.



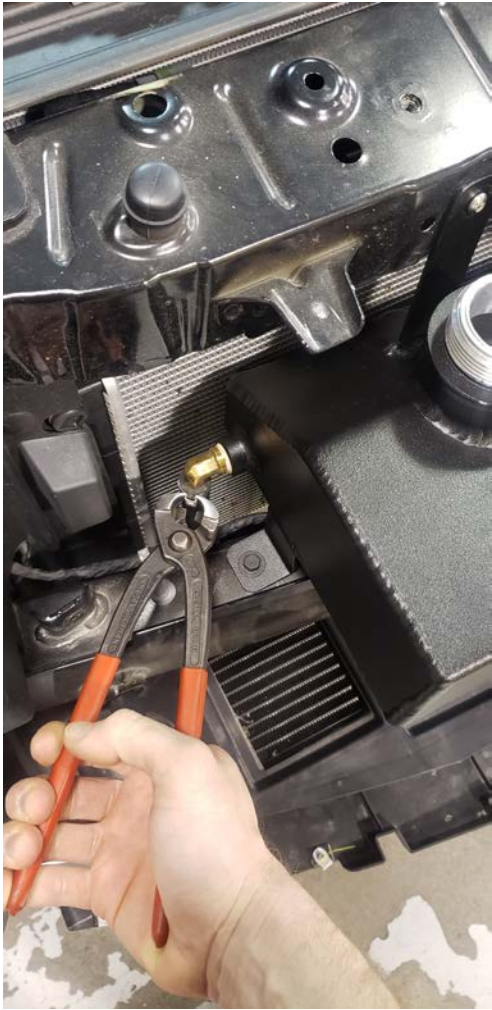


Step 48: Using spring clamp pliers and the spring clamp you saved earlier, install the hose from the top of the reservoir to the quick connect fitting.

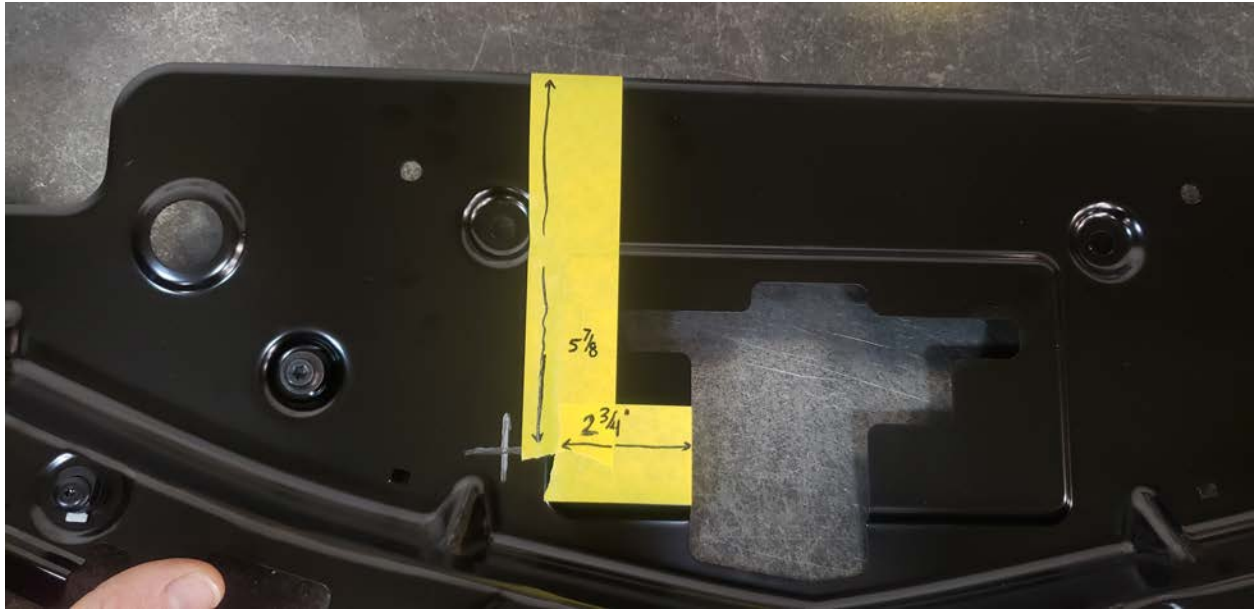
Step 49: Reinstall the airbox/inlet tube. Make sure no hoses get pinched or pushed towards a pulley.

Step 50: Route the provided 3/8 hose up through the 3/4" hole you made earlier, install the provided oetiker clamp over the end of hose and slide the hose onto the barb fitting on the reservoir. Secure clamp with proper pliers.





Step 51: Mark the upper fascia panel as shown, reinstall the upper panel into place temporarily, snugging the mounting bolts.



Step 52: Using a pen or marker, ensure the mark you made earlier is lined up with the center of the fill port of the reservoir.





Step 53: Once you are sure the mark is lined up, drill a 3/16 pilot hole through the panel.



Step 54: Use some masking tape to protect the panel from being scratched in the next step.



Step 55: Flip the panel upside down onto a drill press table, level the panel with wood blocks or other means and bore a hole using a 3-3/4 hole saw. Bore down until you get close to the top flange portion of the panel.



Step 56: Finish cutting the hole with a cut off wheel. Deburr the edges with a paper roll, debur tool, ect. Use a black paint marker to touch up the bare metal edges of the hole you just made.





Step 57: Install the upper fascia panel, and tighten the 4 10mm headed bolts that secure it to the vehicle.

Step 58: Install 1 push fastener through the upper fascia panel and passenger's side headlight panel.



Step 59: Install front bumper assembly back on to vehicle.



Step 60: Reconnect the front bumper harness connector and harness attachment clip.



Step 61: Install 8 (4 per side) of the 7mm headed upper bumper to fender bolts. Align fender to bumper edge while tightening bolts.



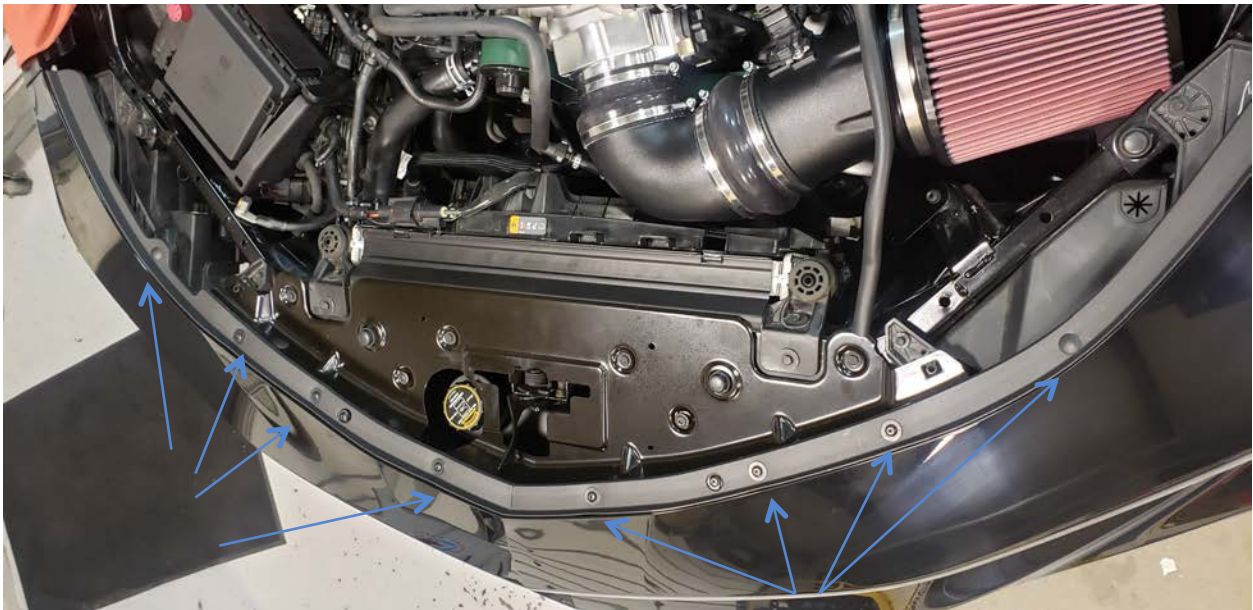
Step 62: Install 2 (1 per side) of the 7mm headed outer bumper to fender bolts. Align fender to bumper edge while tightening bolts.



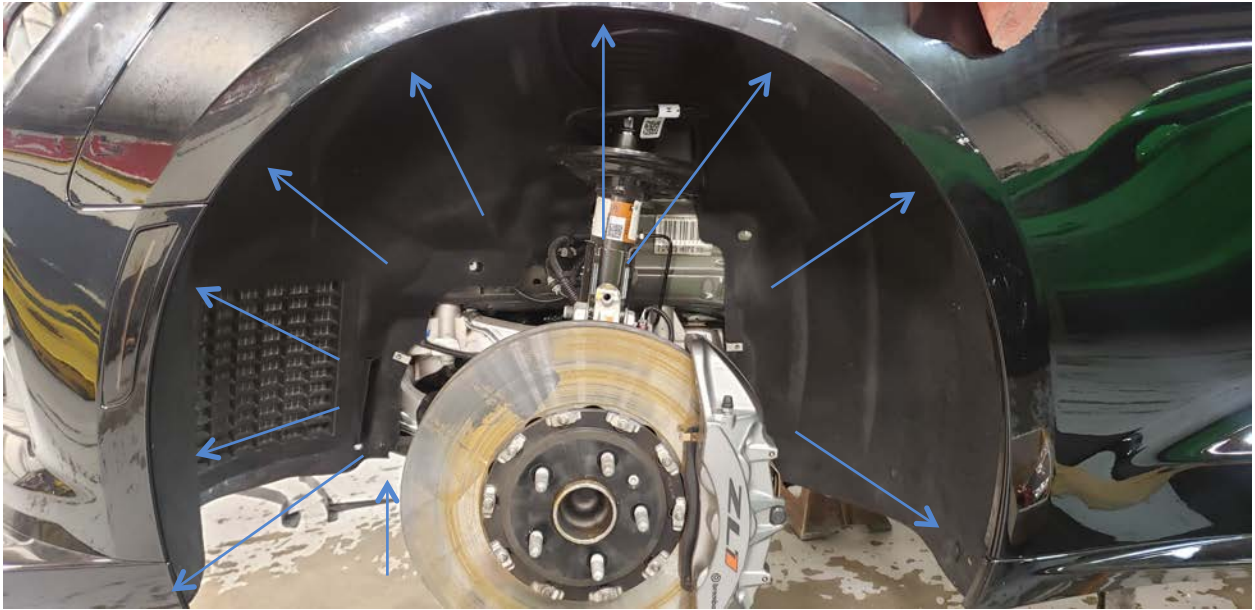
Step 63 Tighten 4 (2 per side) of the 7mm headed outer bumper to fender bolts that you loosened in step 11.



Step 64: Install (6) T-15 torx screws and 2 push fasteners into top of bumper.



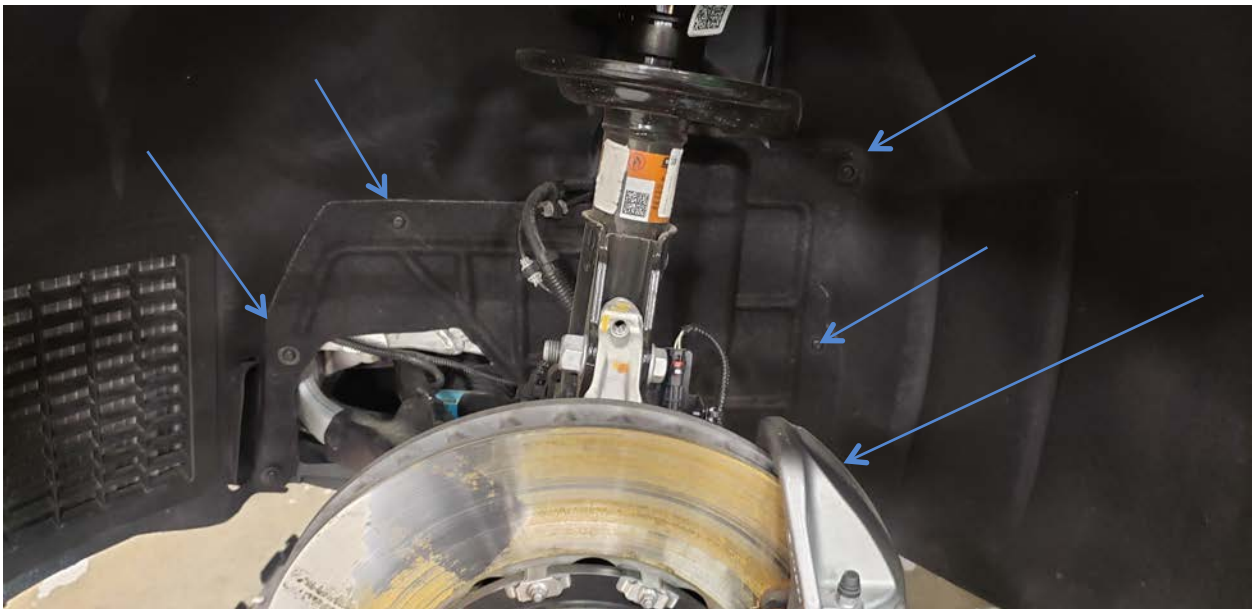
Step 65: To install the wheel liner install the 3 push fasteners, (7) T-15 screws, and (1) 7mm headed screw to hold the liner in place.



Step 66: Repeat for other side wheel liner.

Step 67: Install the bottom trim pieces to wheel liners (10) 7mm headed screws per side.

Step 68: Install smaller side wheel liner covers (1) push fastener and (5) T-15 torx screws per side. 1 push fastener behind rotor.



Step 69: Apply Teflon paste to the ball valve threads and tighten provided 3/8 NPT to 3/8 barb fitting onto valve assembly.

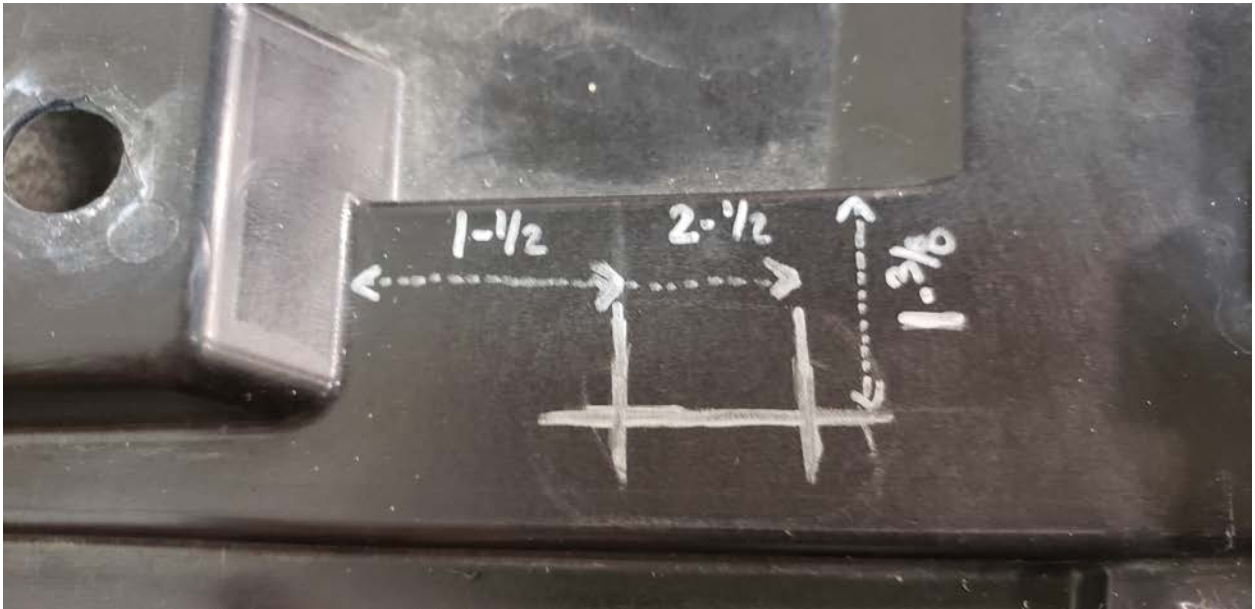


Step 70: Install provided clamp around barb fitting as shown, next install drain on to provided bracket as shown. Clock bracket and drain as shown.





Step 71: On passenger front topside of belly pan, measure out as shown to prepare for drain hole.



Step 72: Drill 2 intersection points with a 1-1/8 hole saw or step drill.



Step 73: Cut out opening to duplicate picture, deburr hole when finished.



Step 74: Temporarily install drain assembly as shown, then mark the mounting hole with a silver sharpie or pick.



Step 75: Remove drain and drill the mark you just made using a 1/4" drill bit.



Step 76: Slide oetiker clamp on to drain hose, install drain assembly and secure clamp with proper pliers.



Step 77: Slip drain assembly through lower belly pan, install provided 10mm headed bolt, orient drain as shown and tighten bolt.



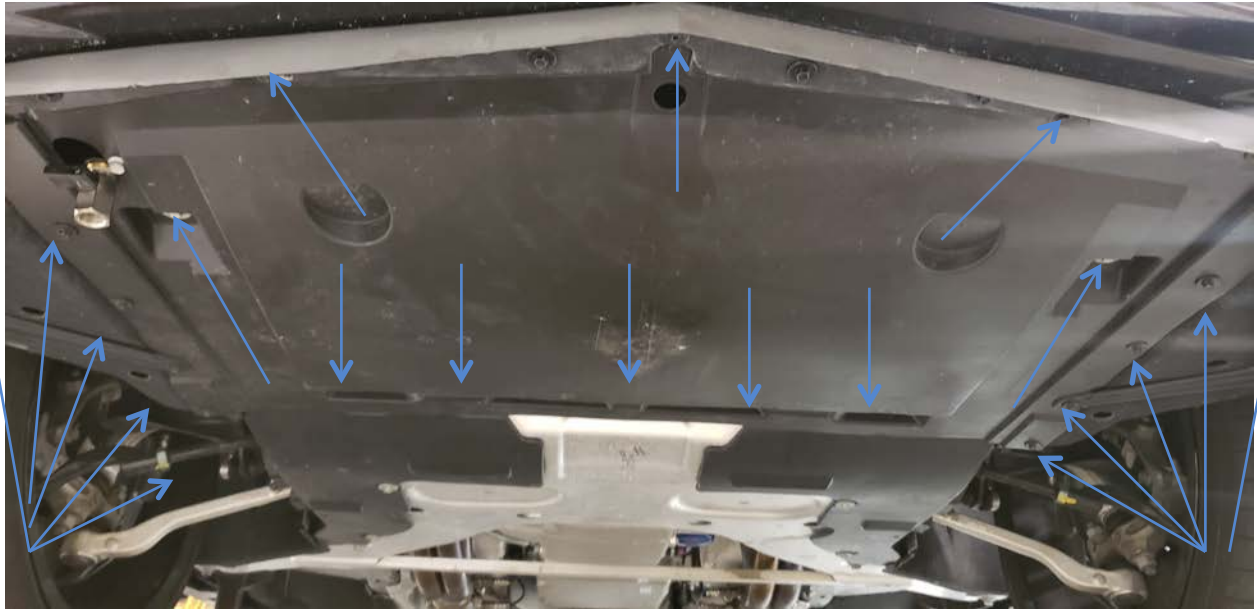
Top view of how drain attaches to belly pan.



Step 78: Install belly pan onto vehicle, ensuring drain hose is routed as shown.



Step 79: Tighten (1) push fastener, (6) 10mm headed bolts, and (13) 7mm headed bolts to finish installing belly pan.



- (6) 10 mm headed bolts
- (1) push fastener
- (13) 7 mm headed screws
-

Step 80: Install front wheels and torque to 140 lb-ft using a 22mm socket.



Step 81: Reconnect negative battery terminal.

Step 82: Ensure the drain valve is closed, then fill the LPE I/C reservoir with coolant, fill ¼" shy of bottom of neck on reservoir. Check for leaks before proceeding.

Step 83: Using appropriate scan tool, turn on I/C pump to bleed air from system. Keep reservoir full, once you are sure all the air is out of the system, turn the pump off. Make sure the reservoir is full as described earlier.



Step 84: Double check for any leaks.

Step 85: Lower vehicle.