

Transchill Arctic Black Transmission Cooler Kit Installation Guide for Next Gen Ford Ranger/Everest 3.0L V6

This document is to be used as a guide for the installation of the **Direction-Plus™ Transmission Cooler Kit to a 2022+ Ford Ranger and Everest V6 Diesel with 10 speed automatic transmission**. It is recommended that the installation of the product be carried out by a competent qualified mechanic.

Included in the kit



1 x 32mm Transmission Cooler (TCC14DP)	4 x 15-17mm Clamps (FMC10)	8 x M6x16 Bolts (SSSS304M616)
1 x Upper Mounting Bracket (TCB671-BR)	18 x Cable Ties (802078)	16 x M6 Flat Washers (FMW6)
1 x Lower Mounting Bracket	3 x M6 x 30 Bolt (SSSS304M630)	8 x M6 Nyloc Nuts (FMN8)
1 x 4m of 3/8" Hose (7212-381BK)	6 x M6 Mud Washer (FMW625)	
2 x Transmission Adaptors (TC621ADP)	3 x M6 Spring Washer (FMSW6)	2 x M16 Alloy Washers (PLFW16)
1 x Coolant Pipe Adaptor (TC671-CBA)	3 x M6 Nut (FMN6)	2 x M16x1.5 to -6 AN Adaptors (DP816-6-M1615)
1 x Coolant Hose (TC671-CBH)	1 x 6mL Loctite (567-6ML-LOC)	4 x -6 90° Hose Tail (DPP0090-06)
1 x Transmission Adaptor Retaining Bracket (TRB671V2-BR)	3 x M8 Flat Washers (FMW8)	

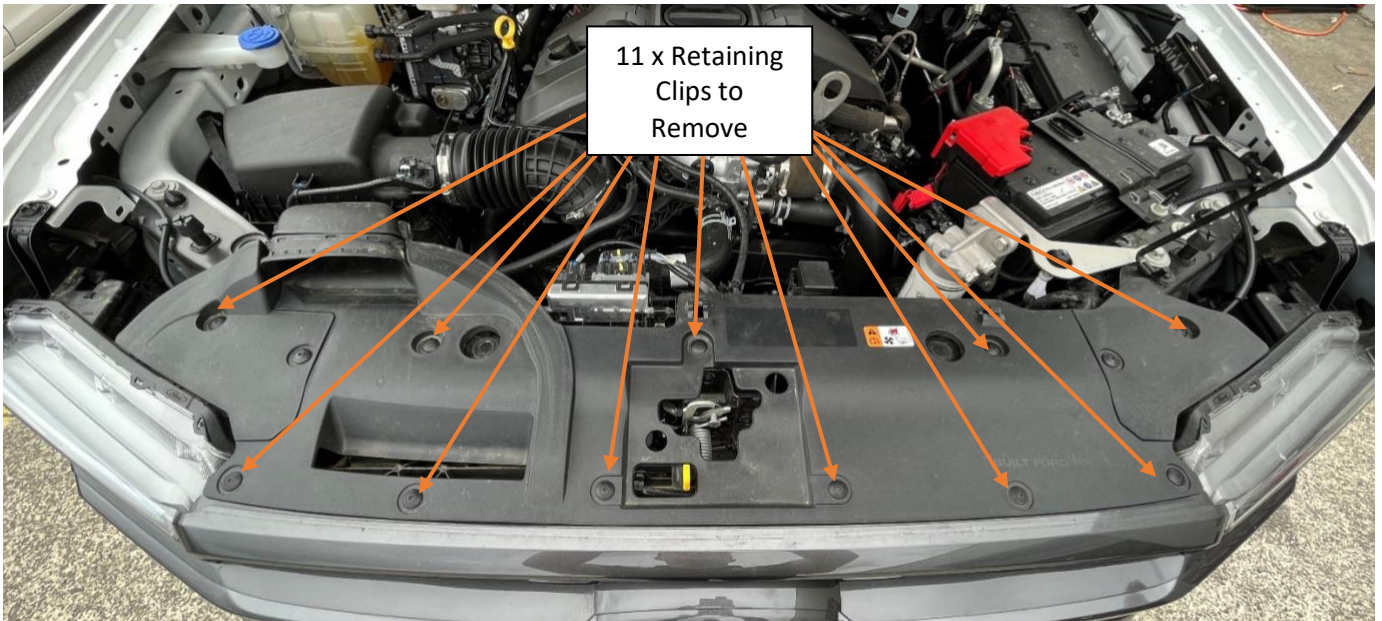


Tools Needed:

- Spanners
- Sockets
- Screw Drivers
- Pliers
- Snips/Cutter
- Rags
- Small container for catching oil drips.

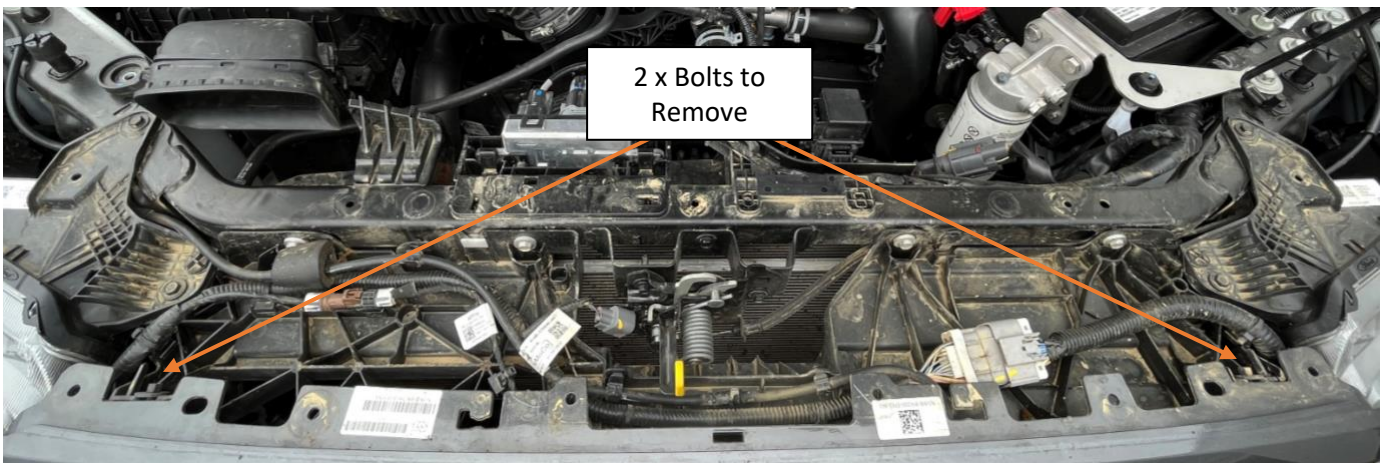
Installation Guide

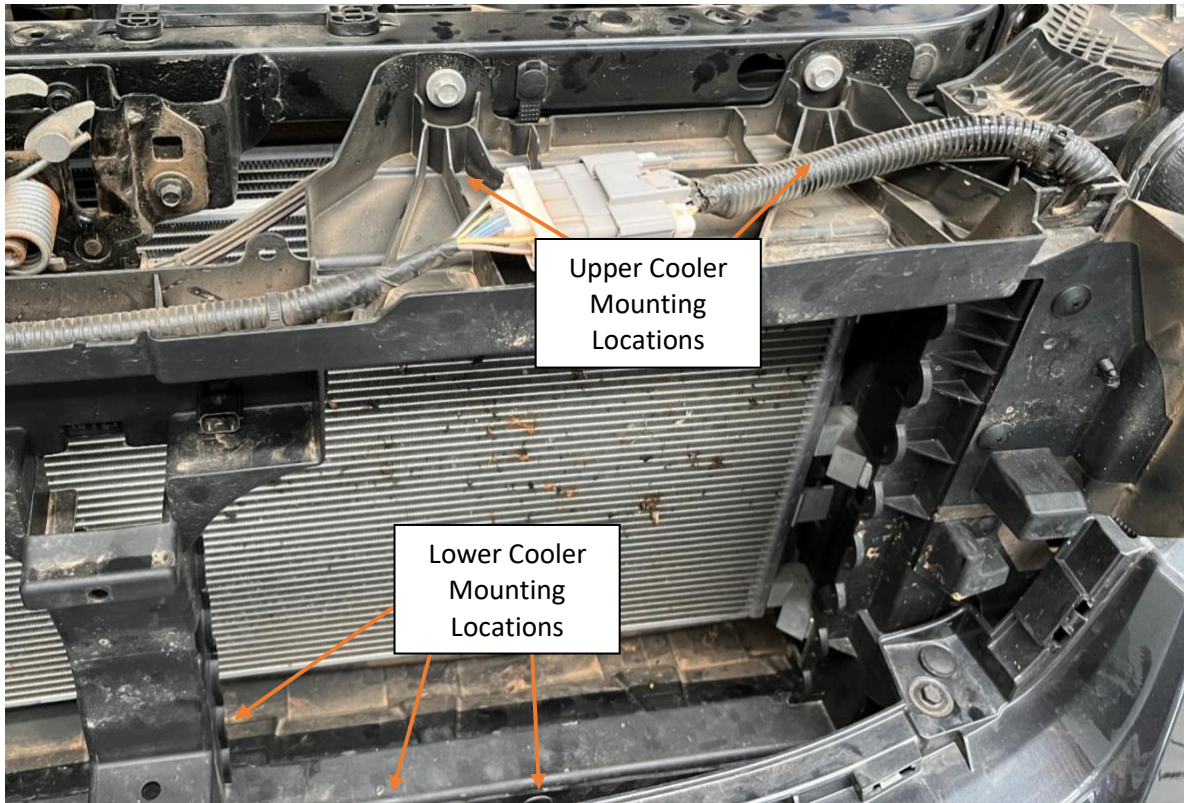
1. Begin by removing the radiator trim cover. It is held in place by eleven clips. Once the clips are removed it can be removed, TAKE CARE! The bolt retaining the air intake may need to be removed to allow the trim to slide out.



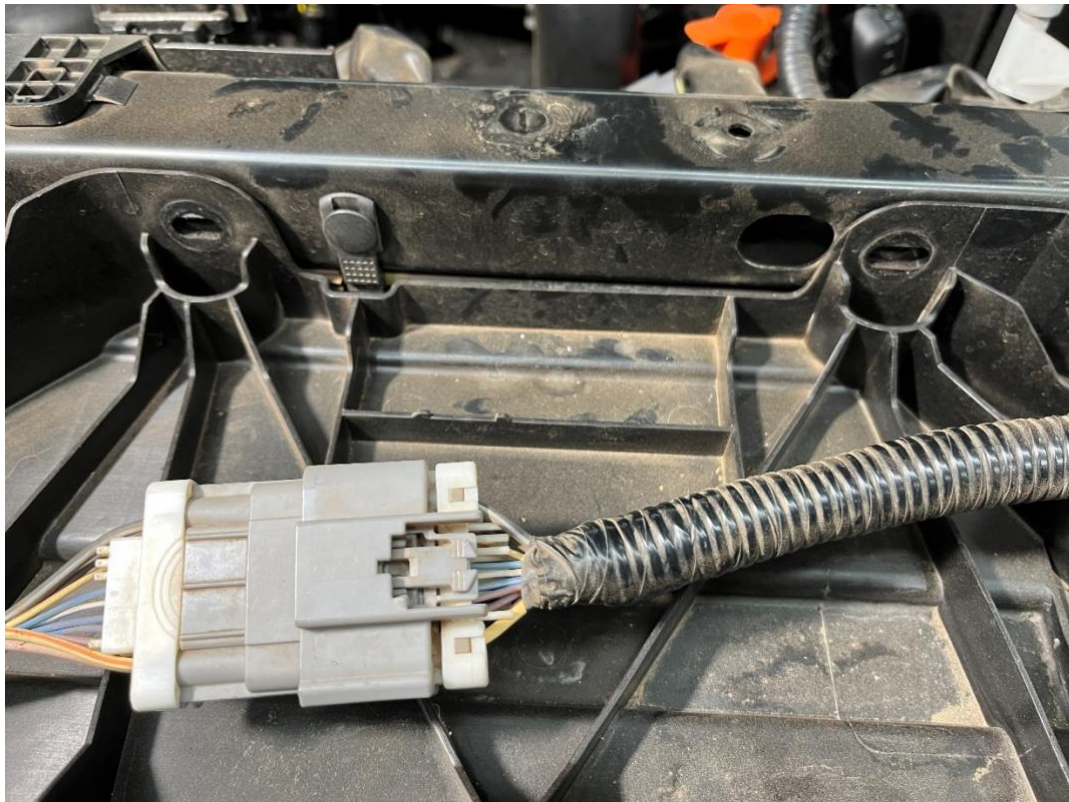
P703 Ranger Front of Engine Bay

2. Once the radiator trim cover has been removed, the grille can be removed. There are two bolts on the top of the grille, you will also need to unplug the radar (located behind the Ford badge) if it is fitted to the vehicle. There is a clip behind the grill in the C cutout of the headlights, the grill just carefully is pulled forward to release the tab from the clip.





P703 Ranger passenger side front with grill and radiator trim panel removed.

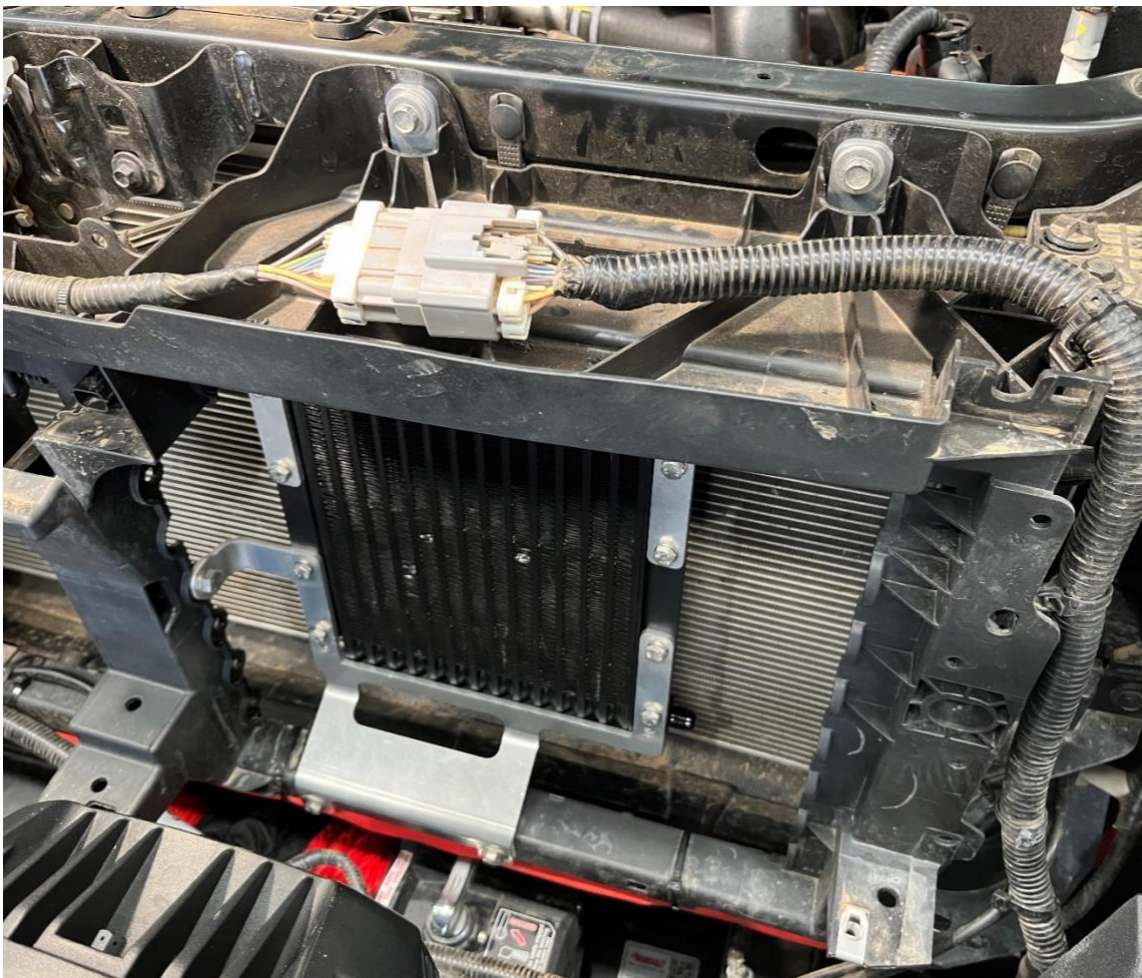


Upper Cooler Mounting Bolts removed for cowl trimming

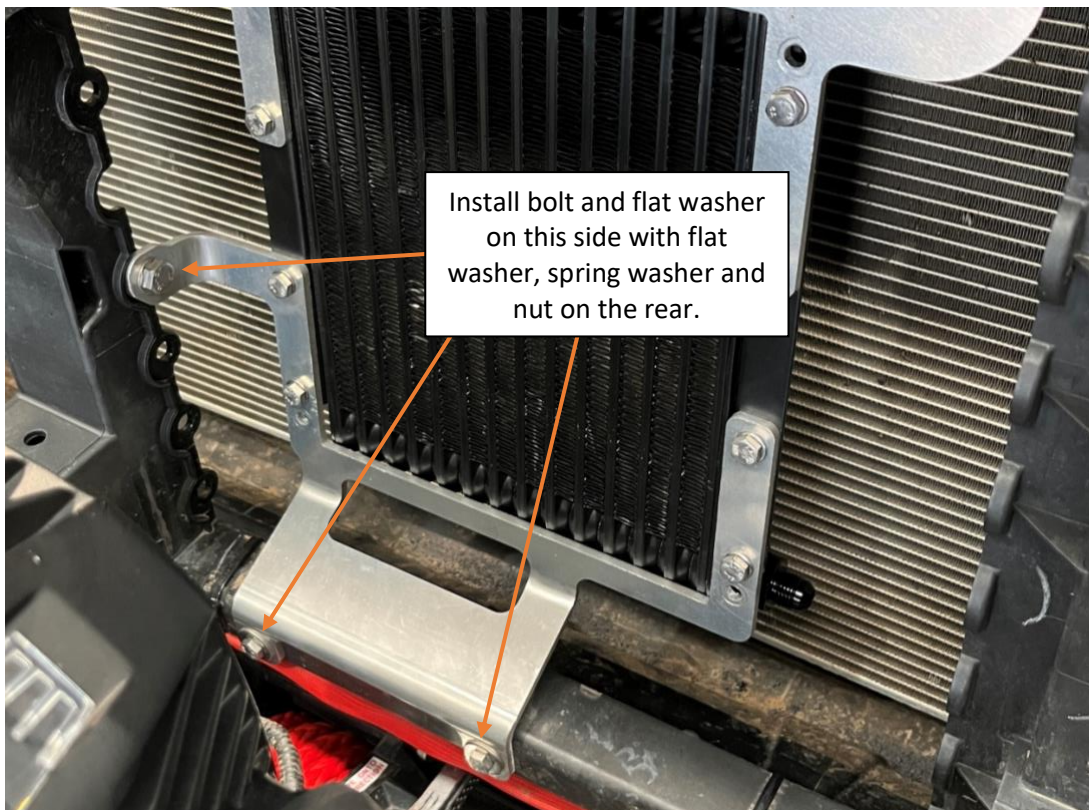


The semicircular pieces of plastic need to be trimmed and removed, a drill bit and file works well here, be careful not to hit the air conditioning condenser underneath.

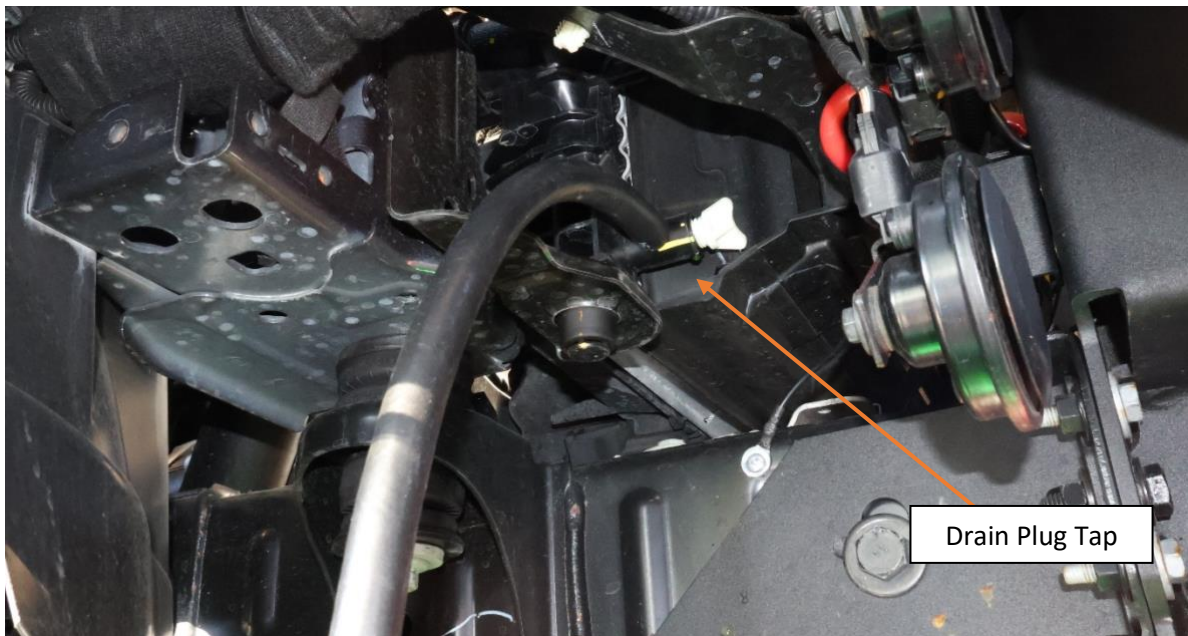
3. Assemble the transmission cooler to the brackets in the kit. The assembly will use all 8xM6 bolts, 16xM6 flat washers and 8xM6 nyloc nuts. Install the M16x1.5 to -6 AN adaptors using an M16 washer under each and using Loctite 567 or similar on the threads. Note, the cooler sits on the rear face of the bracket, with the fittings facing the passenger side of the vehicle. Both -6 AN fitting gets a 90° elbow hose tail facing down to the ground, again use Loctite 567 or similar on the threads.
4. Bolt the new transmission cooler and bracket assembly into the vehicle locating off the top bolts now.



32mm Transmission cooler bolted in place

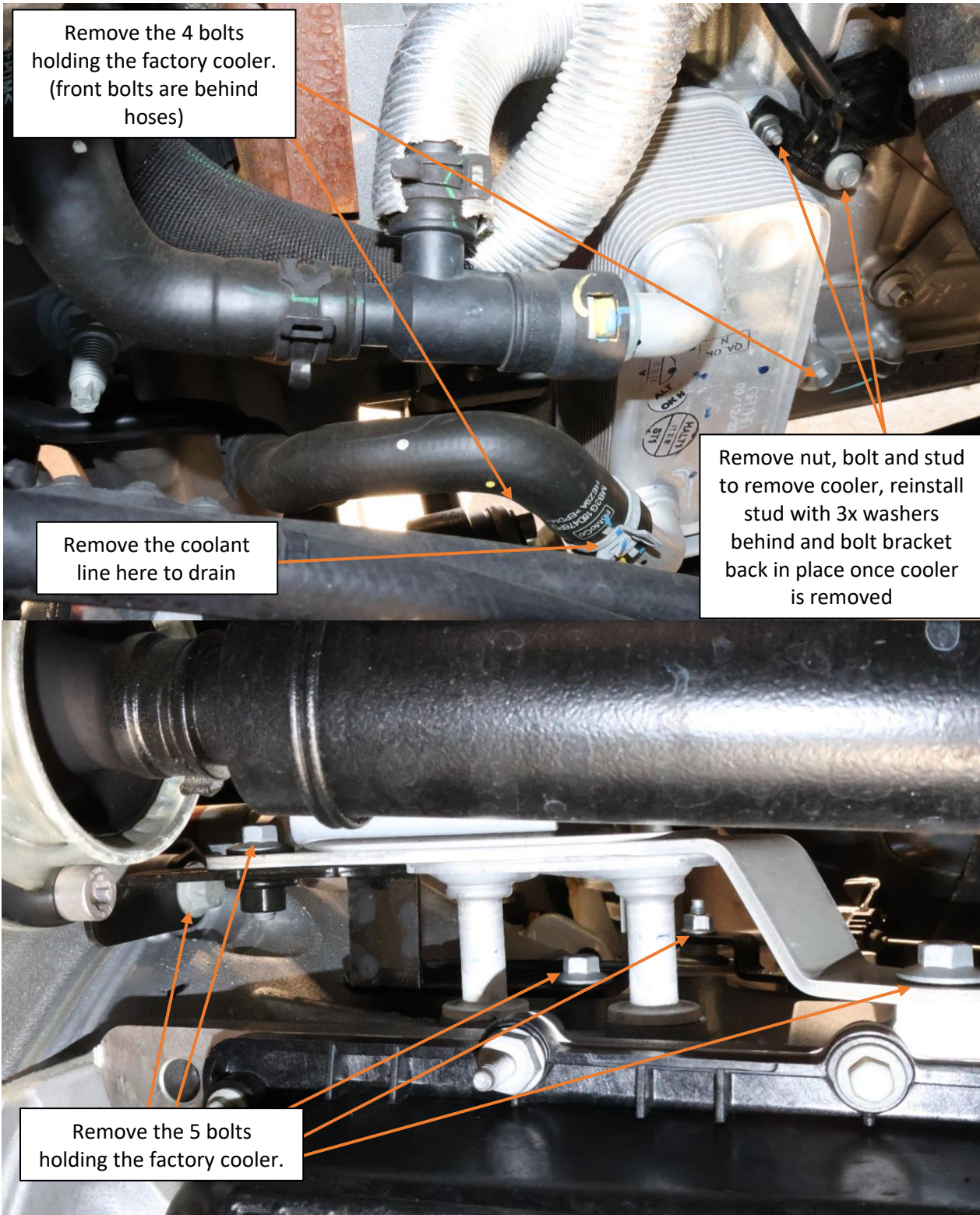


5. Drain coolant from the system. Use the drain plug in bottom of radiator on the driver's side to remove most of the coolant cleanly. A short length of hose to the fitting will help reduce mess. Once no more coolant is coming out, remove the hose and tighten the drain plug tap.

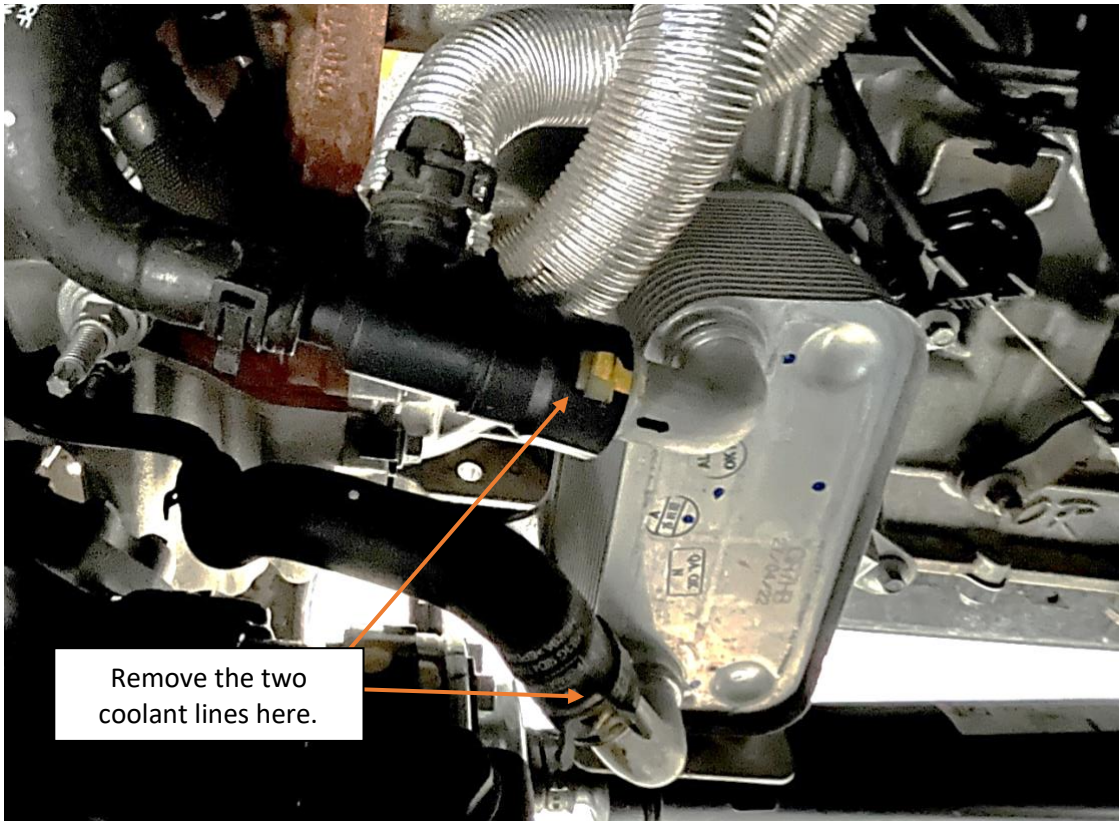


6. Remove the wheel and inner wheel liner on the passenger side, this will give far more access to the factory transmission cooler.
7. Disconnect the lower hose from the cooler and catch any remaining coolant in the system. If you keep it clean it can be reused.

8. Remove the bolts securing the factory transmission cooler to the side of the transmission. Make sure to reinstall the bolt that goes into the bellhousing.



9. Disconnect the upper coolant pipe running to the stock cooler, the clips can be “wedged” from behind with a small flat blade screwdriver or mini pick and popped over the retaining ridge. Once hose is off the cooler the cooler can be removed. It can fit through the bottom between the chassis rail and the front drive shaft.

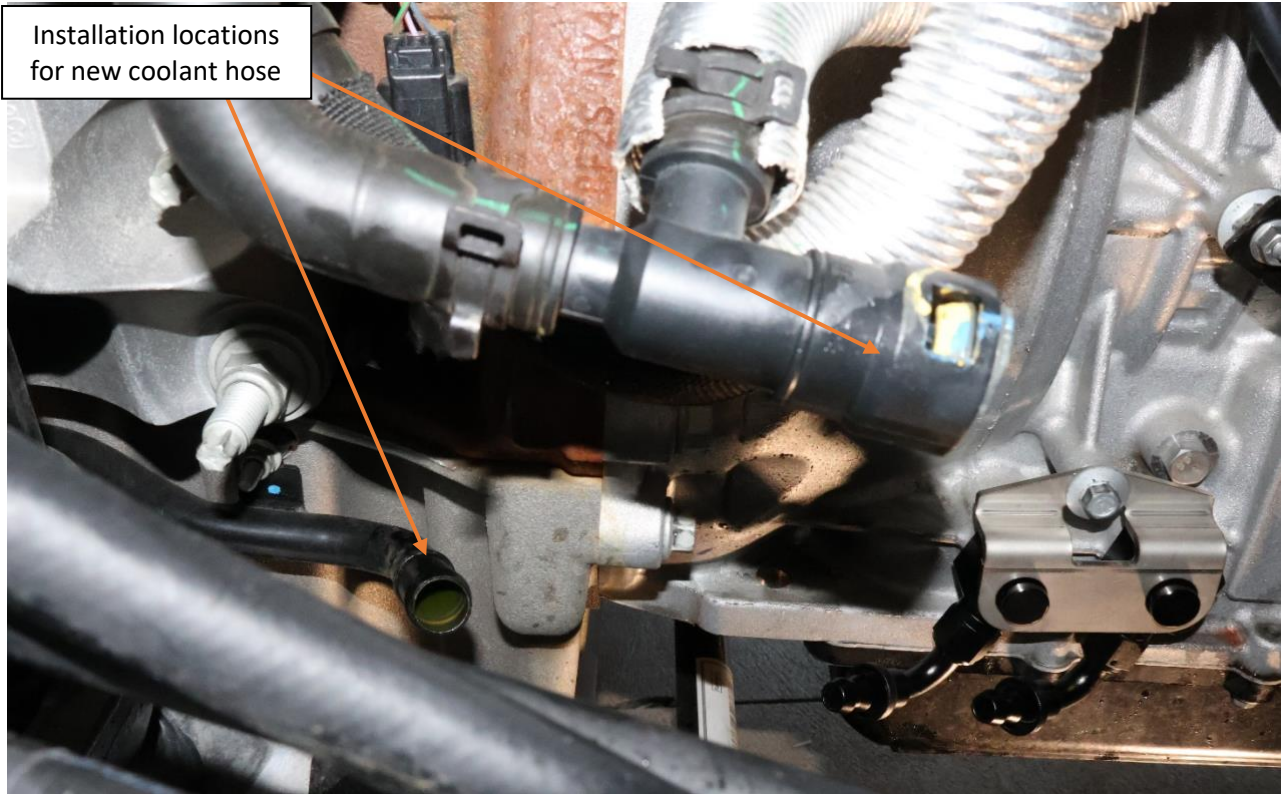


V6 10 speed transmission cooler (looking from passenger wheel well)

10. Install the supplied coolant hose and coolant adaptor together and reuse the clamp from the transmission cooler lower port to secure them together.

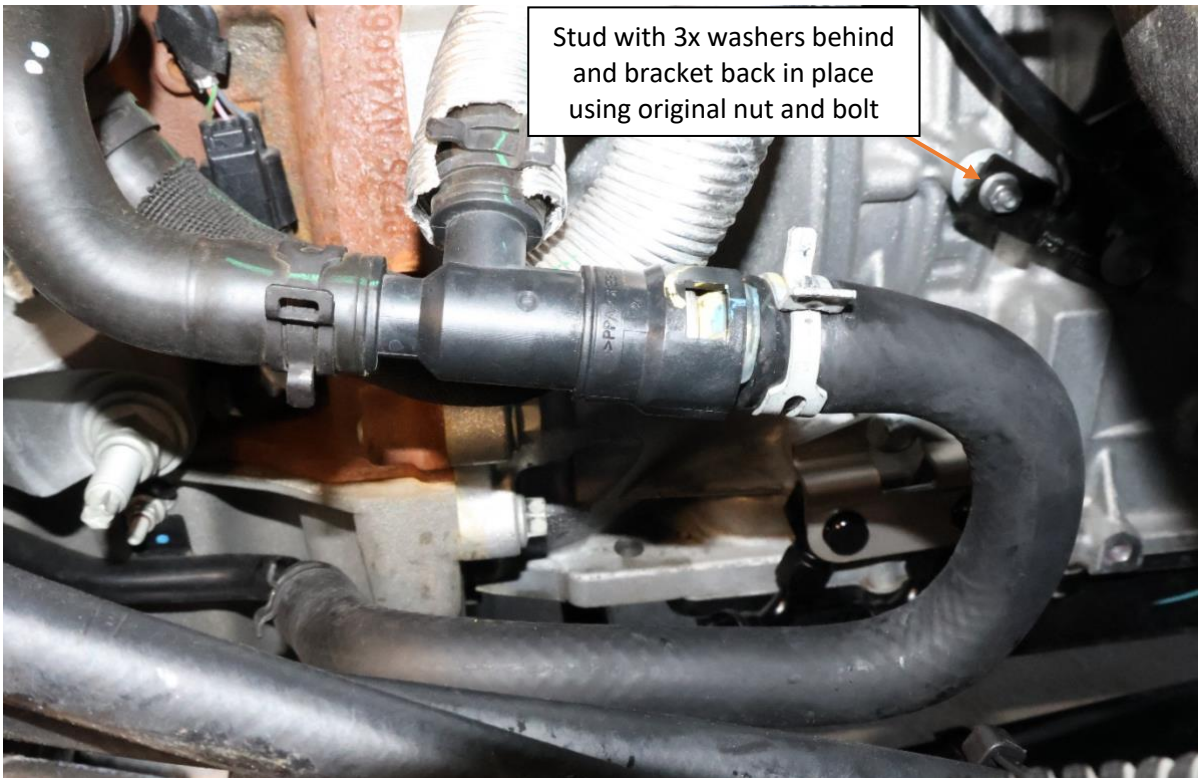


New coolant hose prepared with original clamps and new coolant adaptor fitting.

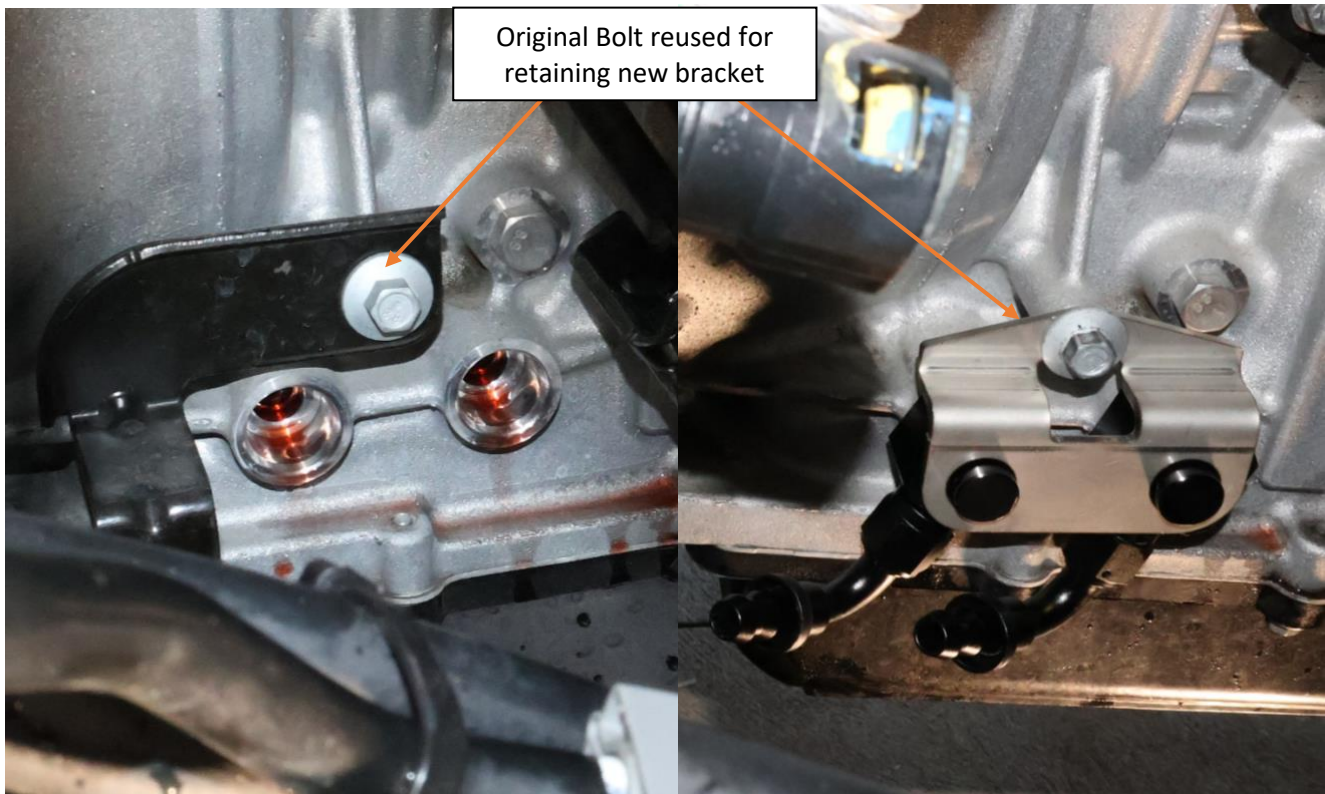


Ready for new coolant hose installation.

11. Install the hose on the lower point first, once rotated to correct orientation, push into plastic connector and make sure sealing ring clicks into the top hose. Install the clamp to final location on the lower hose.

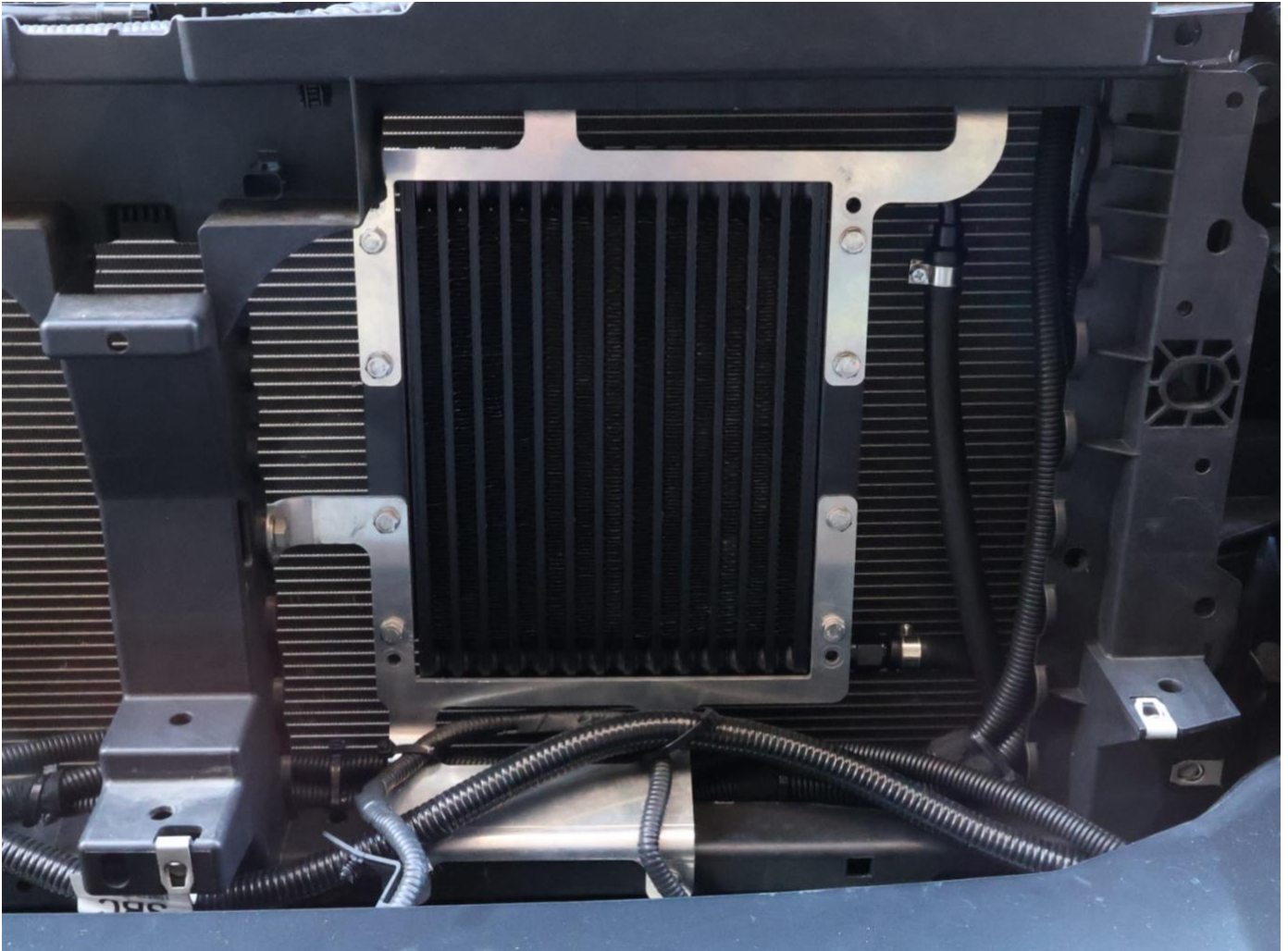


New coolant hose installed



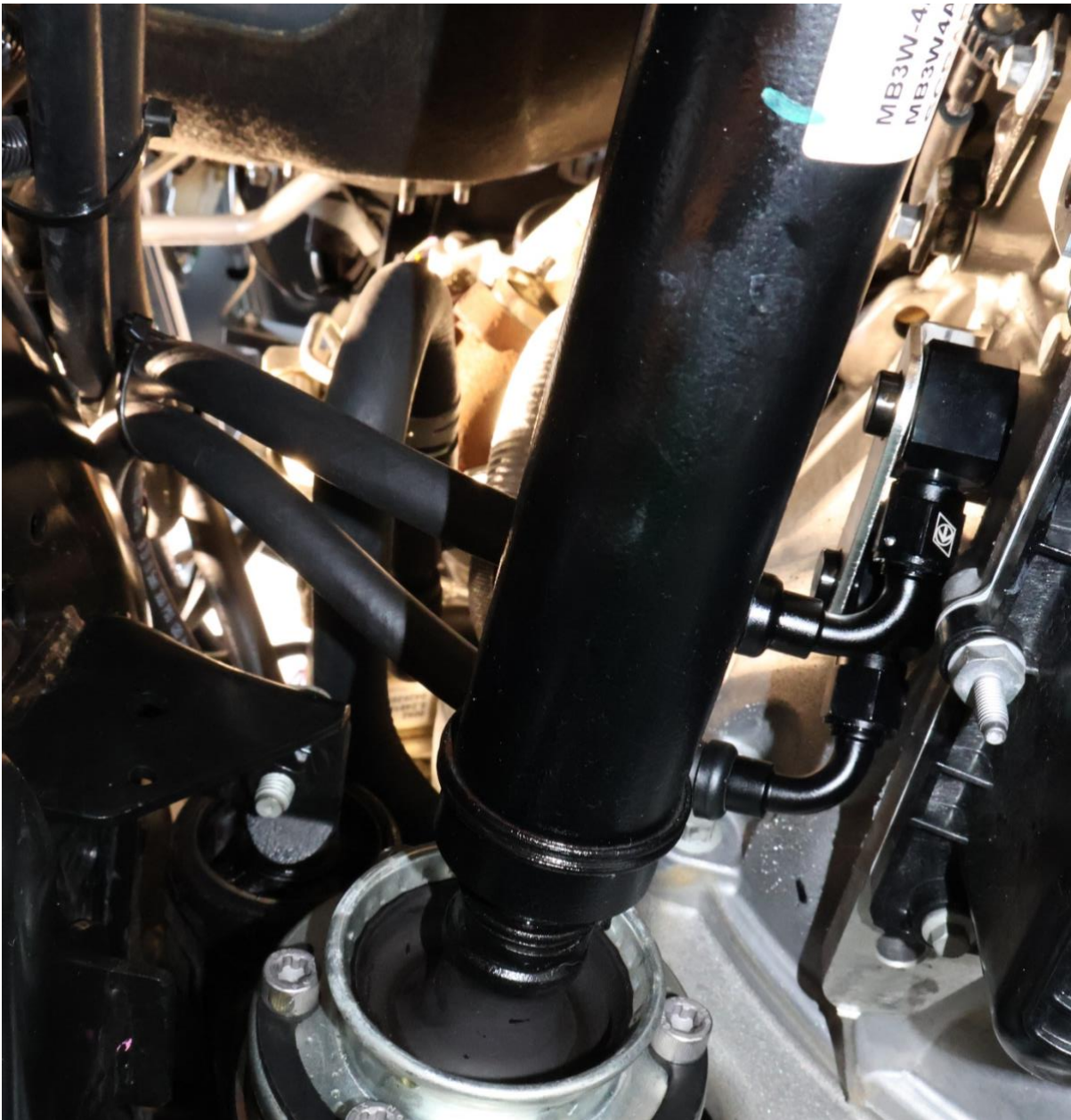
Transmission adaptors, fittings and bracket installed into vacant ports left from removal of stock cooler.

12. Install the -6 hose tails to the new transmission adaptor using Loctite 567 or similar on the threads. Install the new transmission adapter assembly using the new retaining plate and one of the original bolts. Orientate the fittings toward the passenger side suspension and tighten.
13. Connect the supplied hose to the lower port on the transmission cooler, secure in place with a clamp.
14. Connect the other end of the hose to the **rear** (outlet) port on the new transmission cooler block, secure in place with a clamp. You will need to measure and cut it to length.
15. Connect one end of the remaining supplied hose to the top port on the transmission cooler, secure in place with a clamp.
16. Connect the other end of the remaining hose to the **front** (inlet) port on the new transmission cooler block, secure in place with a clamp. You will need to measure and cut it to length.



Finished cooler install on front of vehicle, Note: production kits have 90° lower fitting (straight fitting shown)

17. Use cable ties to secure any loose cooler line to prevent rubbing.
18. The cooler itself holds 500mL of fluid plus 70mL per 1m of hose, calculate the total amount and top up the transmission using the correct factory specified transmission fluid. Note the factory cooler when removed will hold about 250mL of fluid, this can be reused.



Transmission cooler lines in place to new transmission adaptor block, Note: hoses clear top of drive shaft by about 50mm

19. Once everything is installed and secured, you will need to top up the engine coolant and check as needed.
20. Start the engine allowing the cooling system to bleed and to check for leaks.
21. Reinstall the passenger wheel and inner wheel liner.
22. Reinstall the grill and radiator trim panel in the reverse order they were removed.

End of Installation Guide