

## Transchill Arctic Black Transmission Cooler for Ford Ranger / Everest (2L 4cyl) 2022-on Installation Guide

This document is to be used as a guide for the installation of the **Direction-Plus™ Transchill Arctic Black Transmission Cooler Kit to a 2022+ Ford Ranger and Everest Ford (2L 4cyl) 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 20 Bolt (SSSS304M630)	8 x M6 Nyloc Nuts (FMN6)
1 x 4m of 3/8" Hose (27061)	6 x M6 Mud Washer (FMW625)	1 x Insulated P Clip (PCL14)
2 x Transmission Adaptors (TC621ADP)	3 x M6 Spring Washer (FMSW6)	
3 x -6 Hose Tails (DPP0001-06)	3 x M6 Nut (FMN6)	2 x M16 Alloy Washers (PLFW16)
1 x Coolant "J" Pipe (TC663-PIPE)	1 x 6mL Loctite (567-6ML-LOC)	2 x M16x1.5 to -6 AN Adaptors (DP816-6-M1615)
1 x Transmission Adaptor Retaining Bracket (TRB671-BR)		1 x -6 90° Hose Tail (DPP0090-06)

## Mounting Location

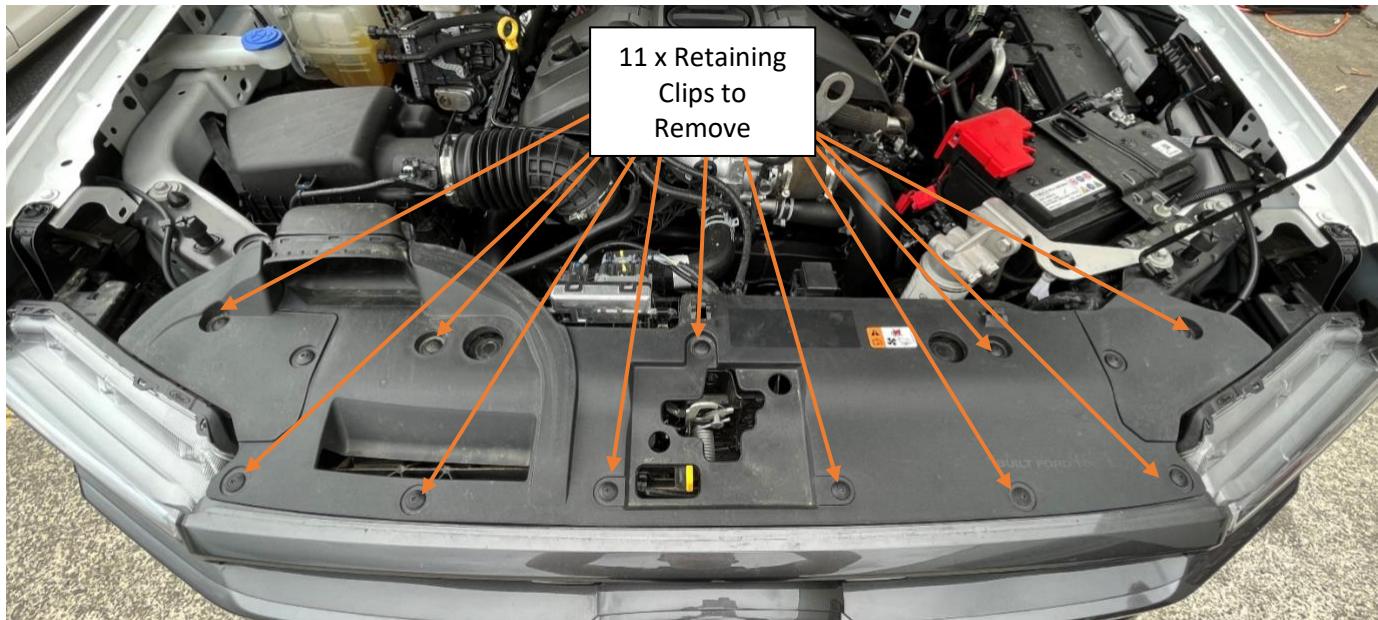


### Tools Needed:

- Spanners
- Sockets
- Screw Drivers
- Pliers
- Snips/Cutter
- Rags
- Small container for catching oil drips
- We suggest using a thread sealant like Loctite 567 or equivalent.

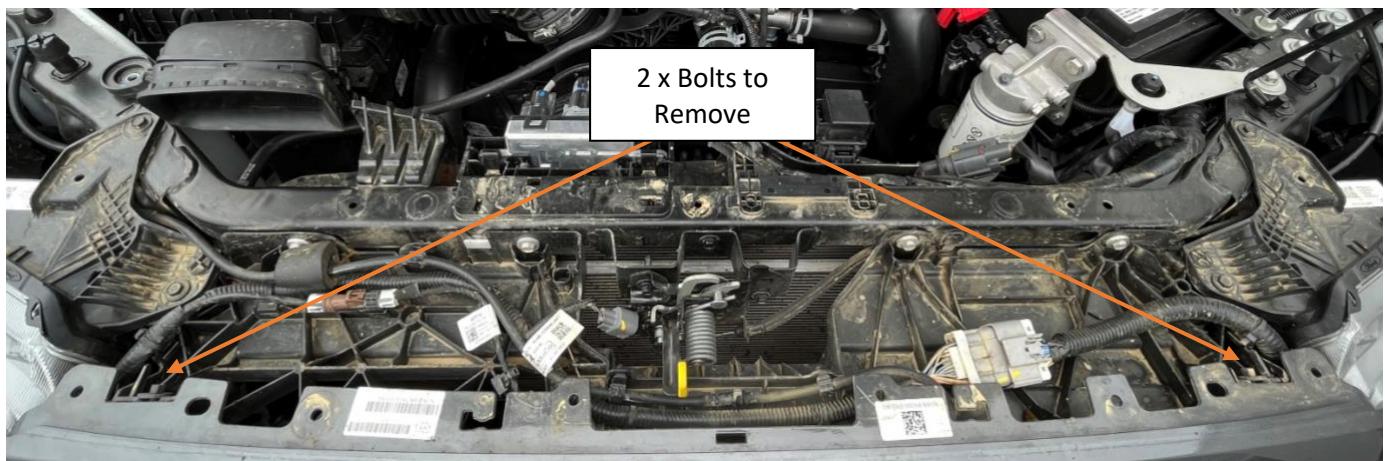
## Installation Guide

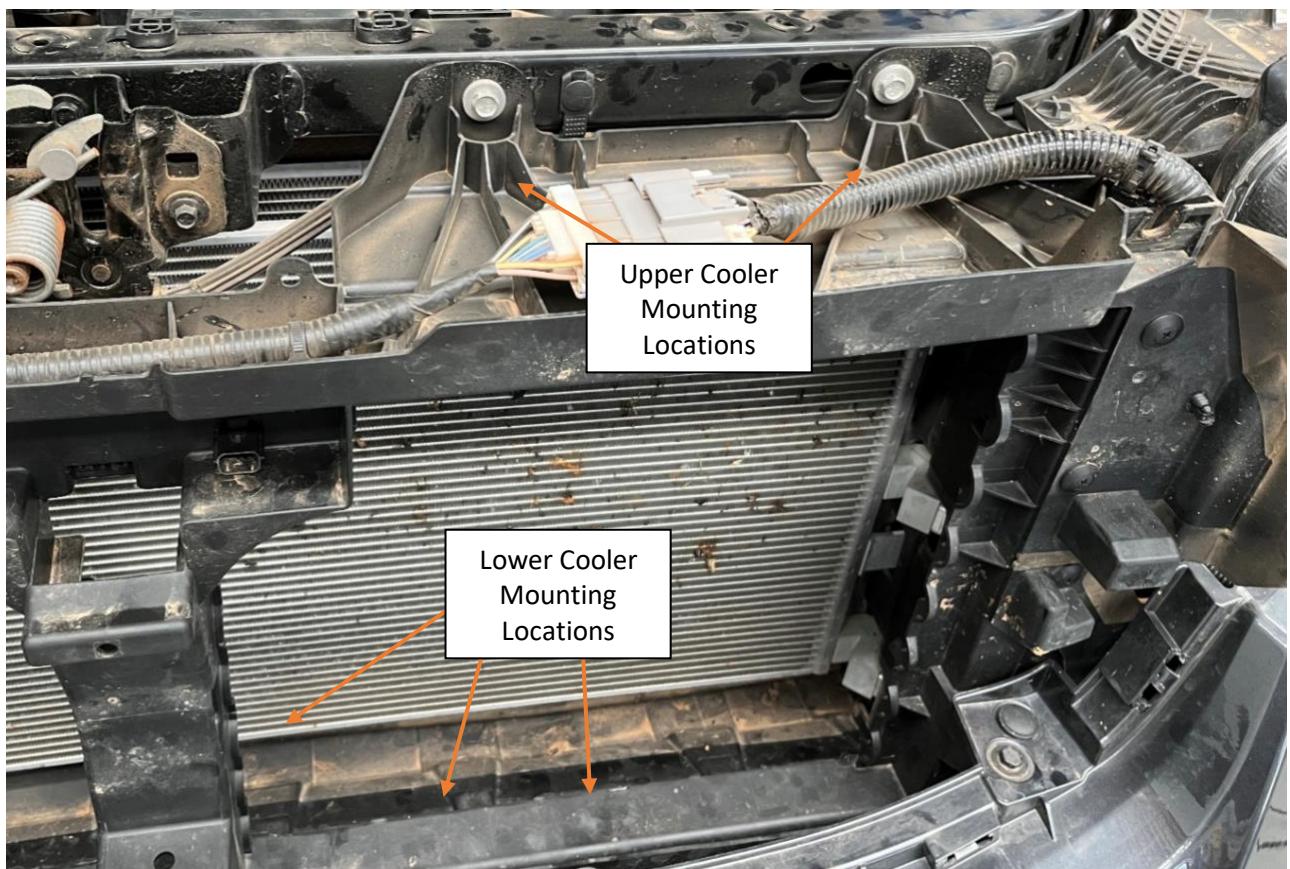
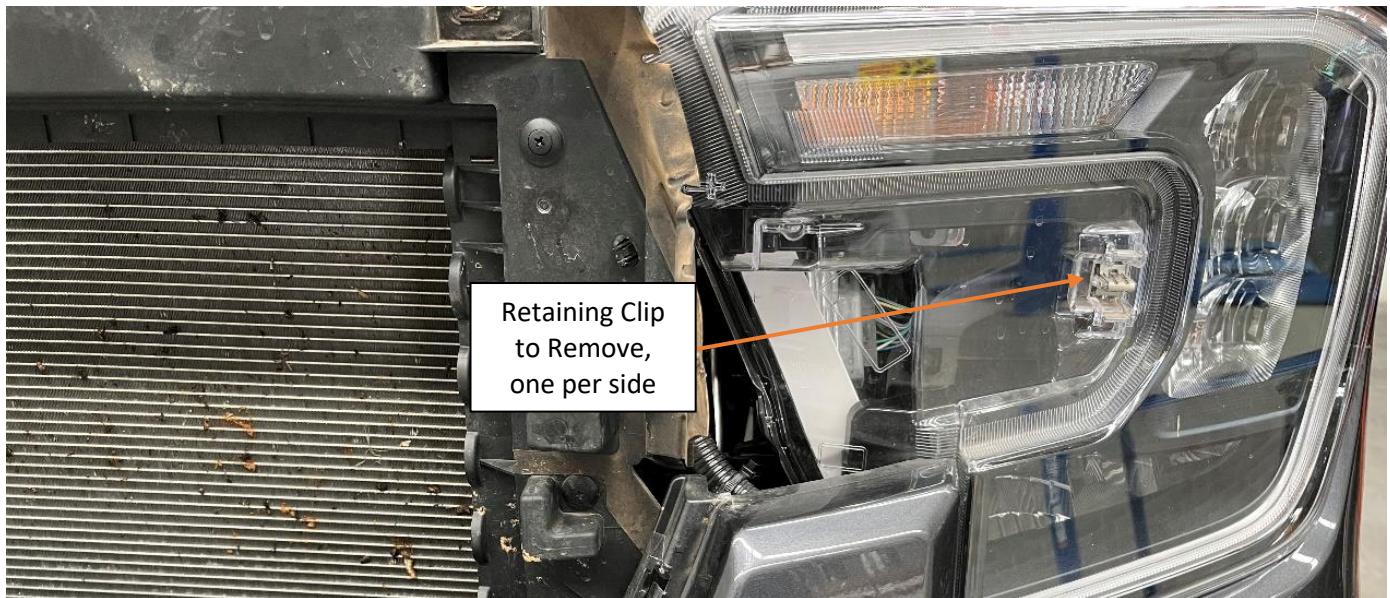
1. Begin by removing the radiator trim cover. It is held in place by eleven clips. Once the clips are removed it can be removed, TAKE CARE! The bolt retaining the air intake may need to be removed to allow the trim to slide out.



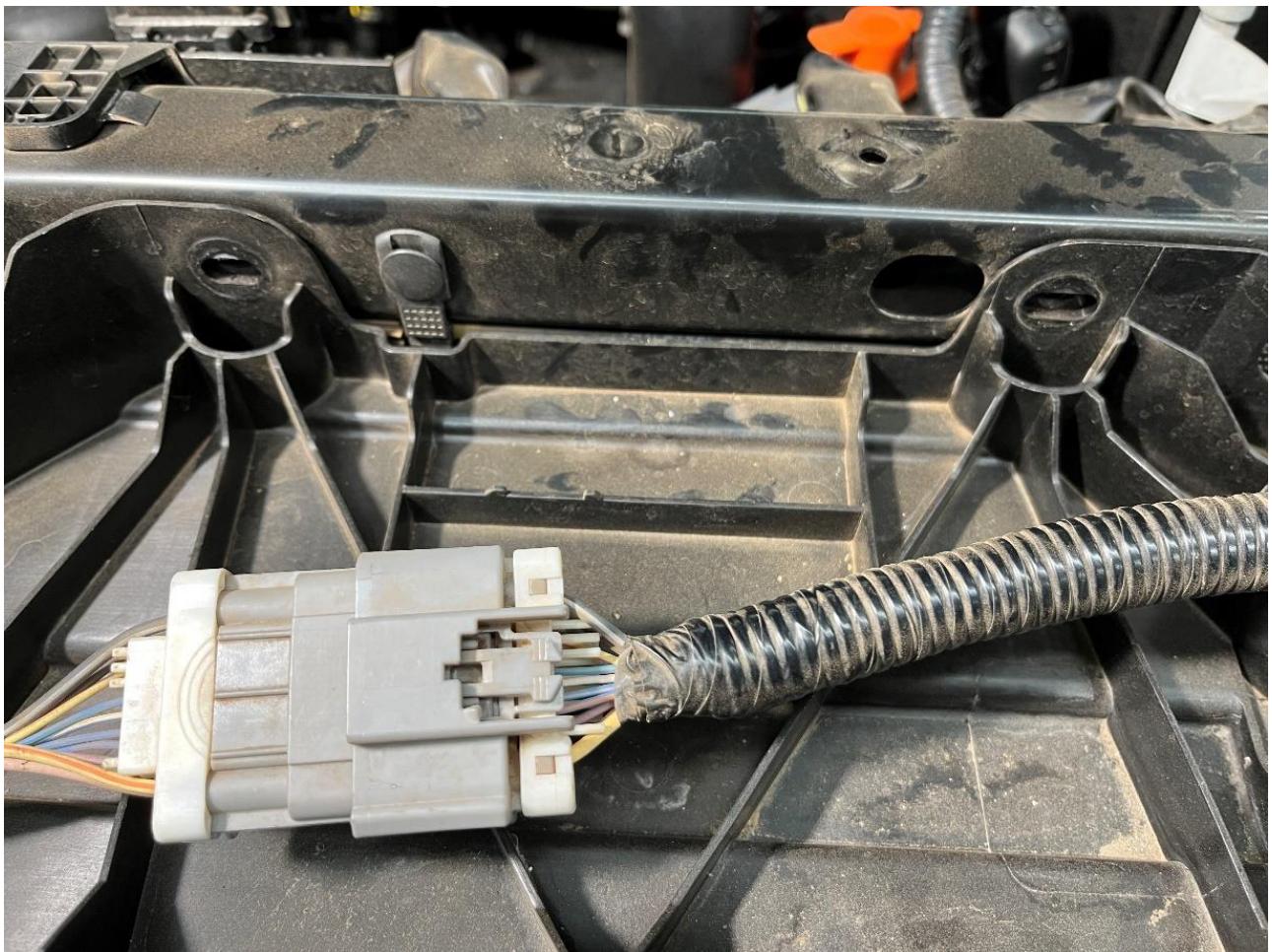
P703 Ranger Front of Engine Bay

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.

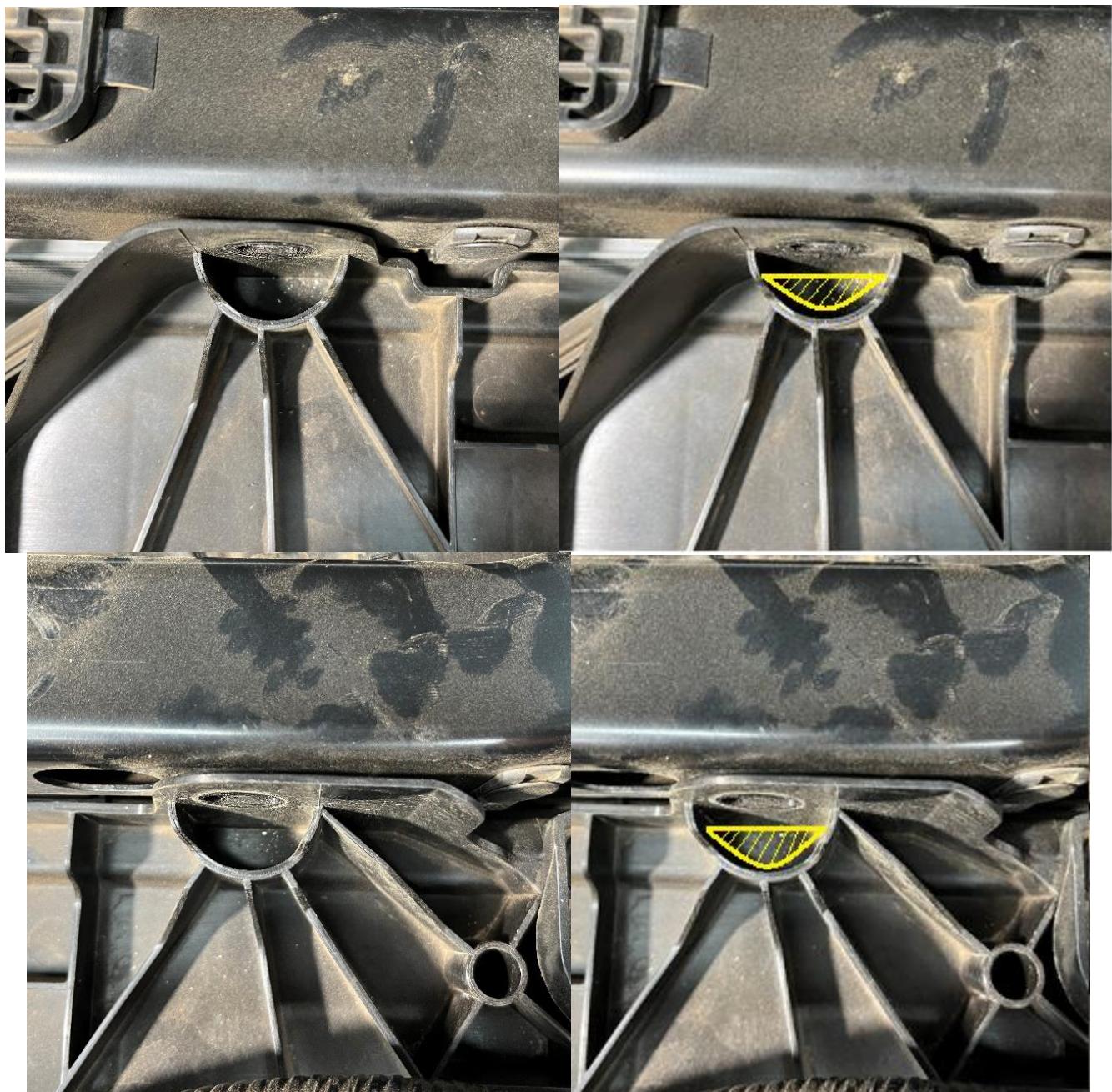




P703 Ranger passenger side front with grill and radiator trim panel removed.



Upper Cooler Mounting Bolts removed for cowl trimming



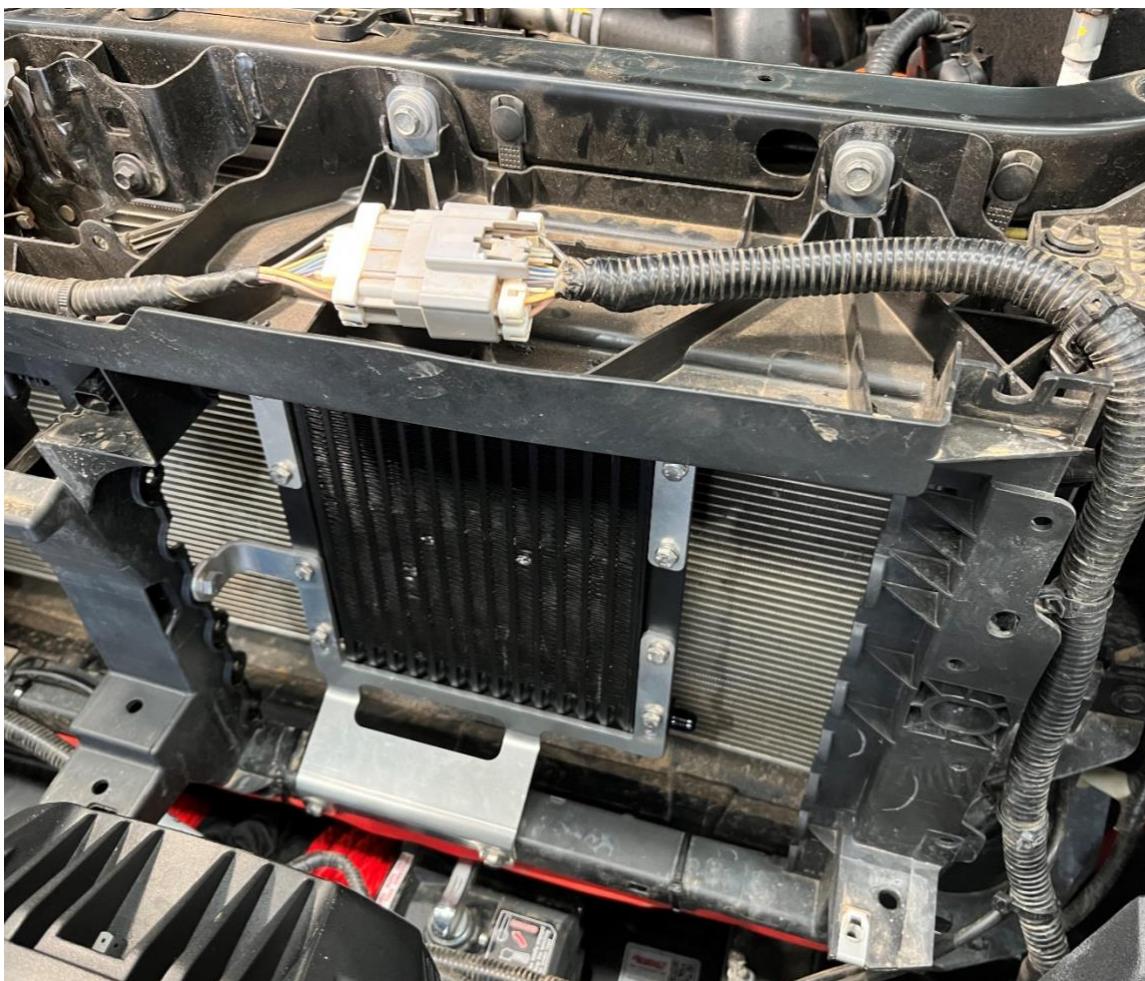
*The semicircular pieces of plastic need to be trimmed and removed, a drill bit and file works well here, be careful not to hit the air conditioning condenser underneath.*

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. The upper -6 AN fitting gets a 90° elbow hose tail facing down to the ground and the lower -6 AN fitting gets a straight hose tail, again use Loctite 567 or similar on the threads.

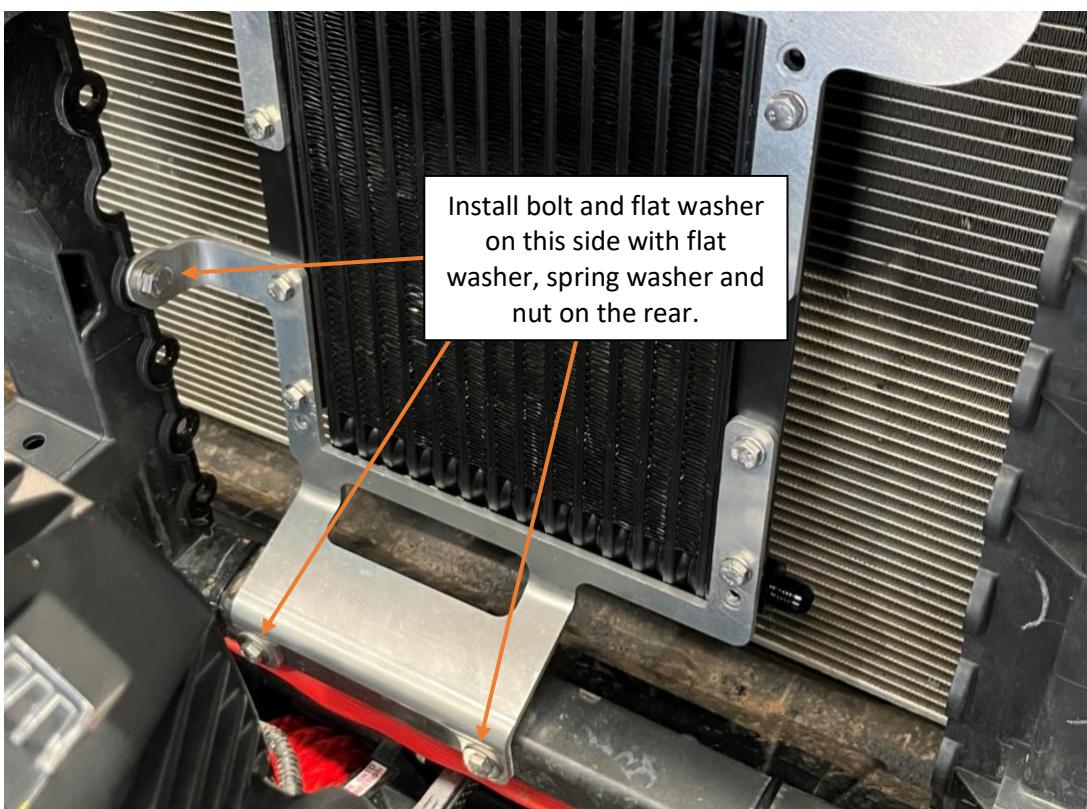


*Transmission Cooler Assembly Prior to Fitting to Vehicle*

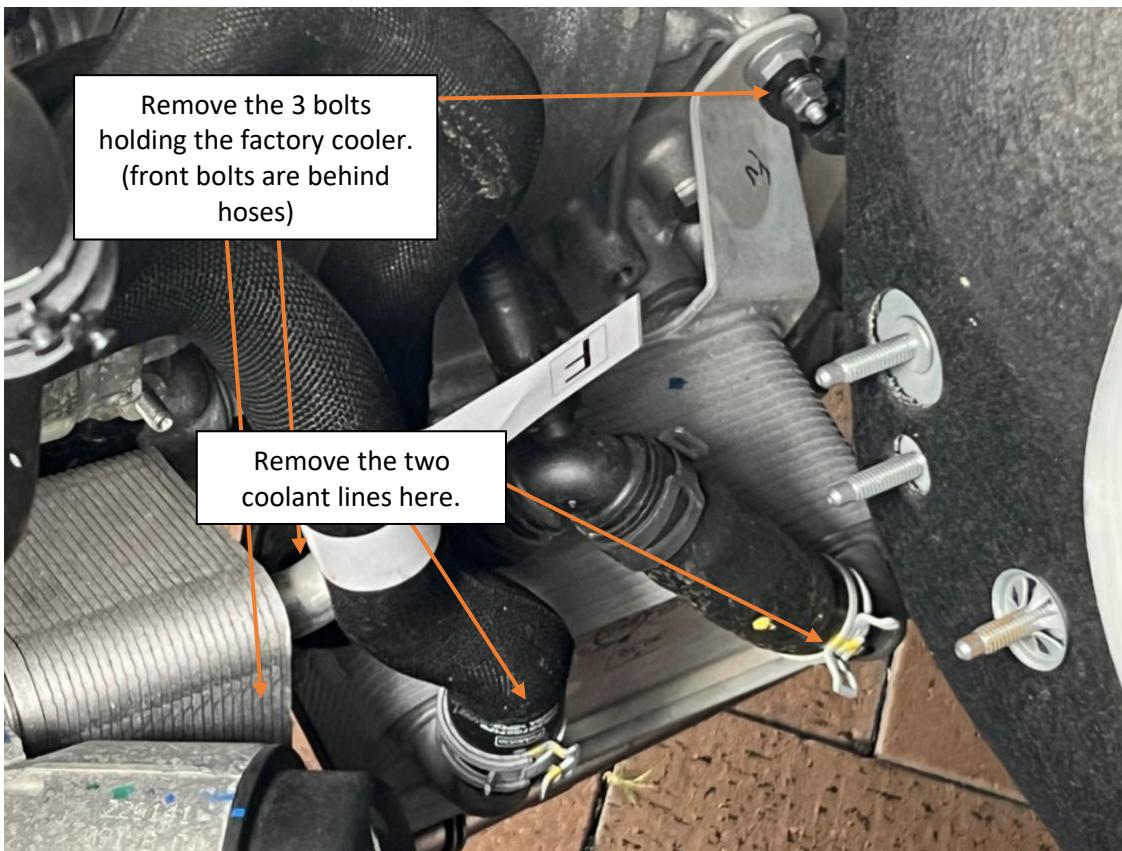
4. Bolt the new transmission cooler and bracket assembly into the vehicle locating off the top bolts now.



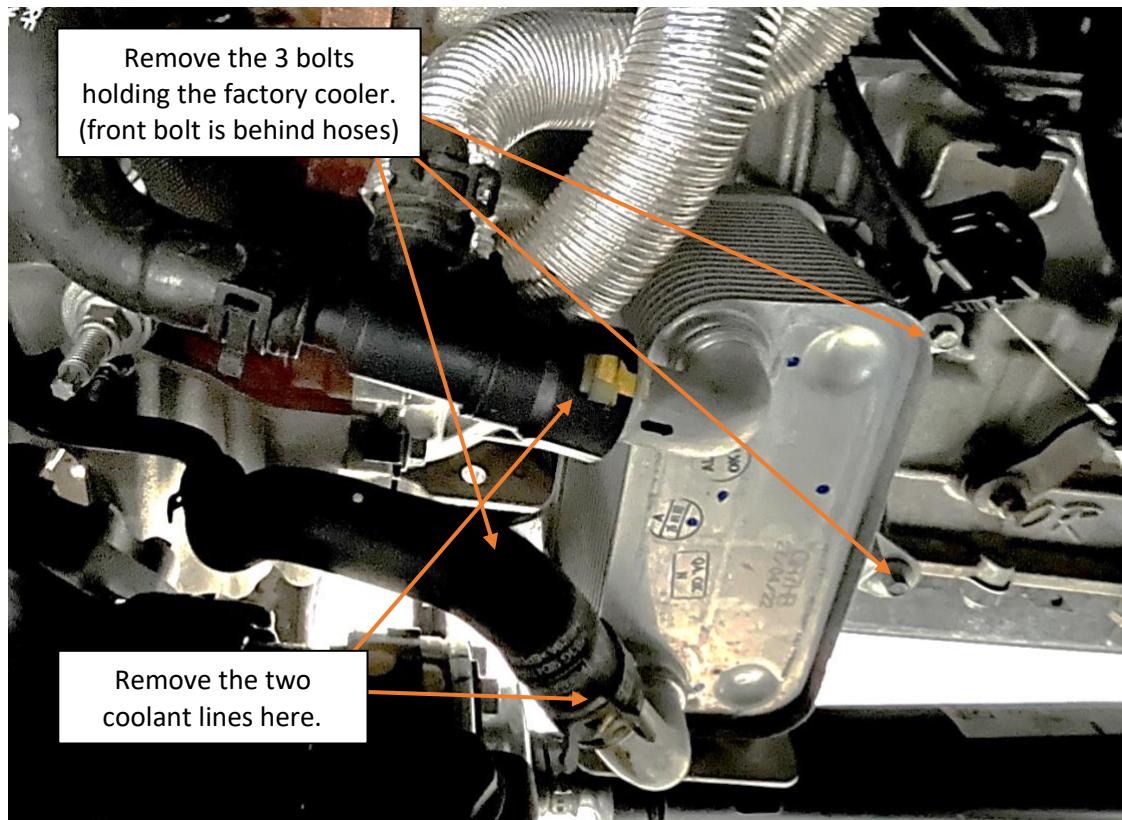
32mm Transmission cooler bolted in place



5. There are two different coolers used on the transmission. The horizontal style, typically seen on the 2L bi-turbo diesel. The vertical style, typically seen on the 3L V6 diesel. Clamp the coolant hoses before removing coolant lines.

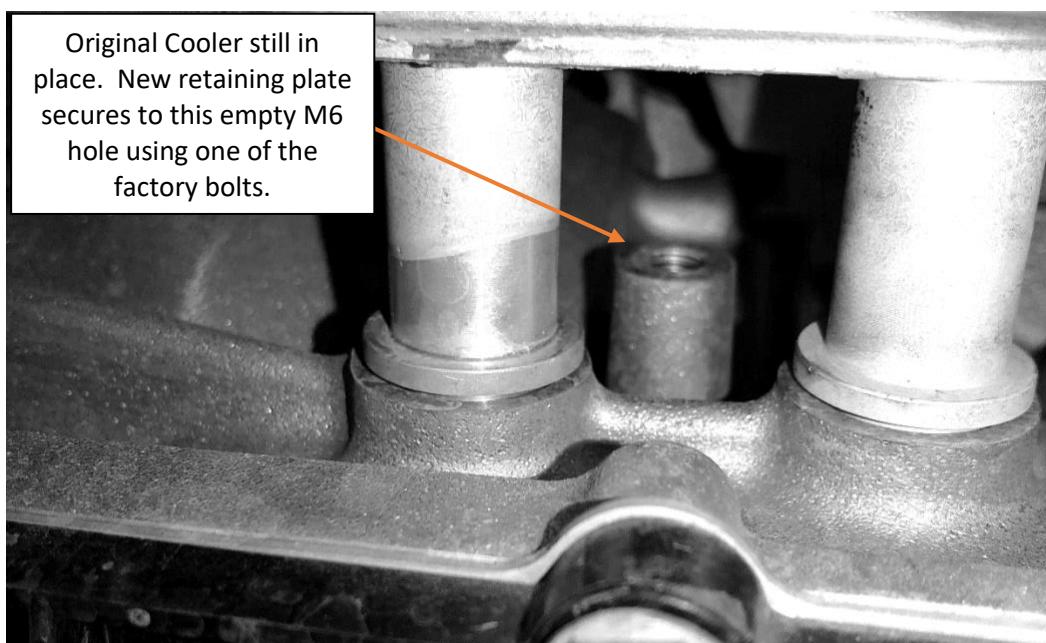


Horizontal style transmission cooler (looking down from passenger side of engine bay)

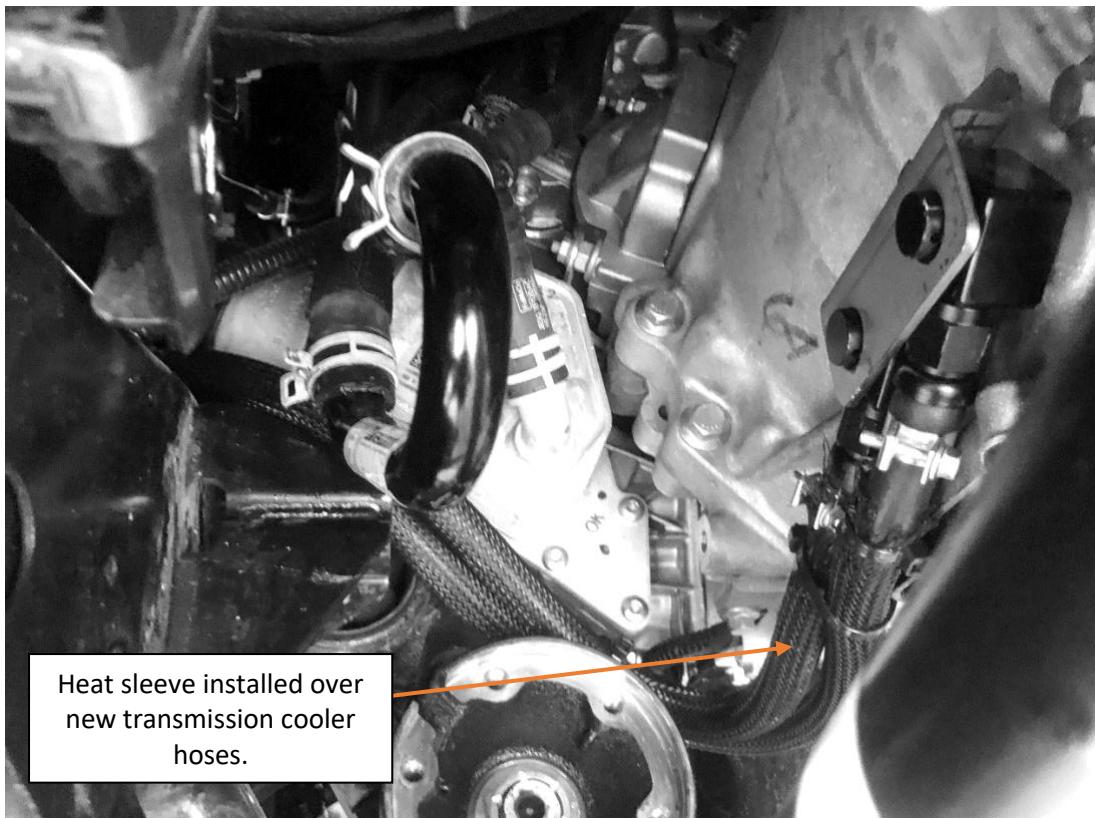


Vertical style transmission cooler (looking from passenger wheel well)

6. Install the supplied "J" pipe in place of the original cooler, reusing the original clamps. Note for the top hose on the vertical cooler you will need to install the white/clear clip over the pipe barb before installing, making sure the pipe clips home and seals.



7. Remove the 3 bolts holding the transmission cooler in place, **be sure to have a container handy as some transmission fluid will leak from the cooler when removed.**
8. Install the -6 hose tails to the new transmission adaptor and then install the new transmission adapter assembly using the new retaining plate and one of the original bolts. Note: We recommend the use of thread sealer between the hose tails and transmission adaptor (Loctite 567 or 577 or similar)
9. Connect the supplied hose to the lower port on the transmission cooler, secure in place with a clamp.
10. 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. Slide heat sleeve over the hose before securing in place.
11. Connect one end of the remaining supplied hose to the top port on the transmission cooler, secure in place with a clamp.
12. 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. Slide heat sleeve over the hose before securing in place.
13. Use the insulated P Clip to secure the line from the top port of the new transmission cooler, using the third bolt down on the transmission cooler bracket. Make sure the hose is not kinked or rubbing on anything.
14. Use cable ties to secure any loose cooler line to prevent rubbing.
15. The cooler itself holds 500mL of fluid (per cooler for dual kits), 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 drive shaft removed for clearer photos*

16. Once everything is installed and secured, you will need to check and top up the engine coolant as needed.
17. Start the engine allowing the cooling system to bleed and to check for leaks.
18. Reinstall the grill and radiator trim panel in the reverse order they were removed.

#### **End of Installation Guide**