

## Transchill Arctic Black Transmission Cooler Kit Installation Guide for Ford Ranger PX 2018-2022

This document is to be used as a guide for the installation of the Direction Plus Arctic Black Transmission Cooler Kit (TCB663DPK) to a 2018-2022 Ford Ranger and Everest 2.0L Bi-Turbo 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 Transmission Cooler (TCC14DP)	4 x 15-17mm Clamps (FMC10)	10 x M6x16 Bolts (SSSS304M616)
1 x Mounting Bracket (TCB621-BR)	18 x Cable Ties (802078)	19 x M6 Flat Washers (FMW6)
1x 4m of 3/8" Hose (7212-381BK)	2 x Transmission Adaptors (TC621ADP)	9 x M6 Nyloc Nuts (FMN6)
1 x 10R Retention Bracket (TRB671-BR)	3 x Dash 6 Straight Hose Tails (DPP0001-06)	1 x 20mm Insulated P Clip (PCL20)
1 x Coolant "J" Pipe (TC663-PIPE)	1 x Dash 5 90° Hose Tail (DPP0090-06)	1 x M6 Spring Washer (FMSW6)
	2 x M16x1.5 to Dash 6 Adaptors (DP816-6-M1615)	1 x M8 x 16 Bolt (SSSS304M816)
	2 x M16 Washers (PLFW16)	1 x M8 Flat Washer (FMW8)
	1 x 6mL Loctite 567 (567-6ML-LOC)	1 x M8 Nyloc Nut (FMN8)

## MOUNTING LOCATION

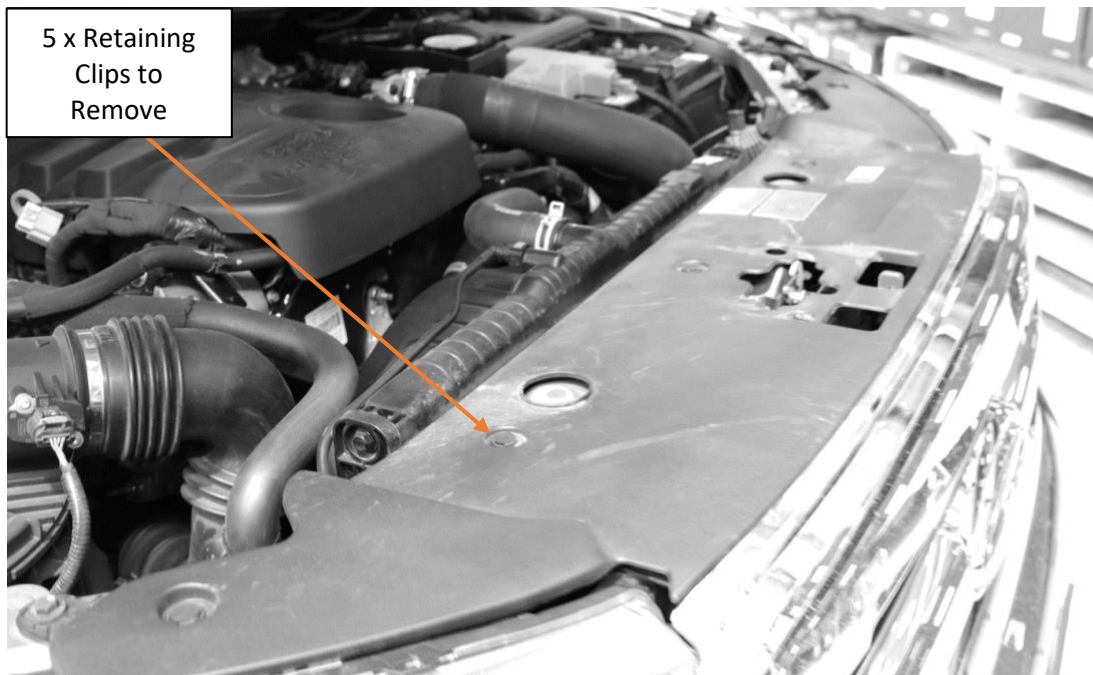


### Tools Needed:

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

## Installation Guide

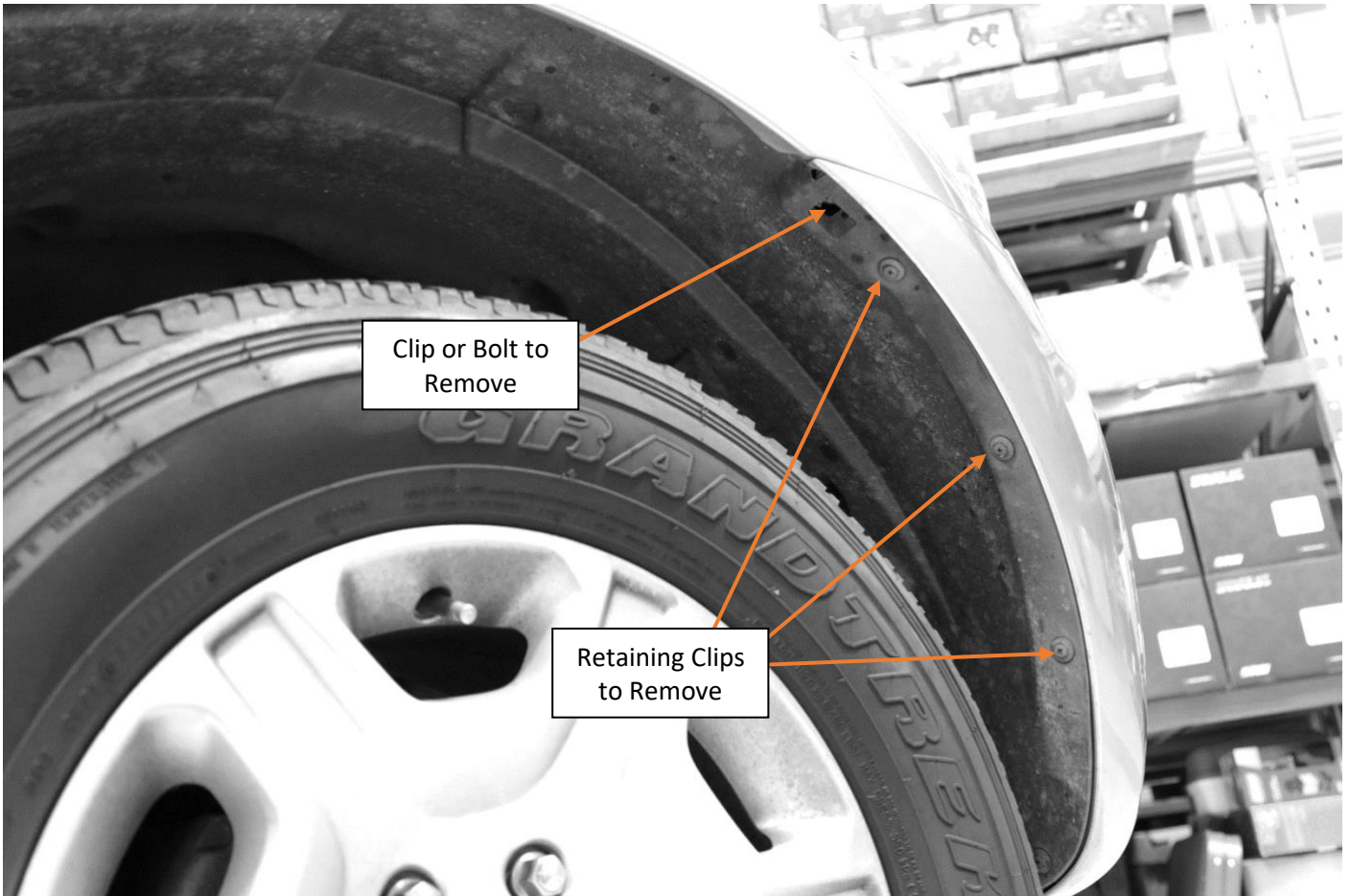
1. Begin by removing the radiator trim cover. It is held in place by 5 clips. Once the clips are removed it can be removed, TAKE CARE! As there are some tabs along the front edge hidden that can break if too aggressive.

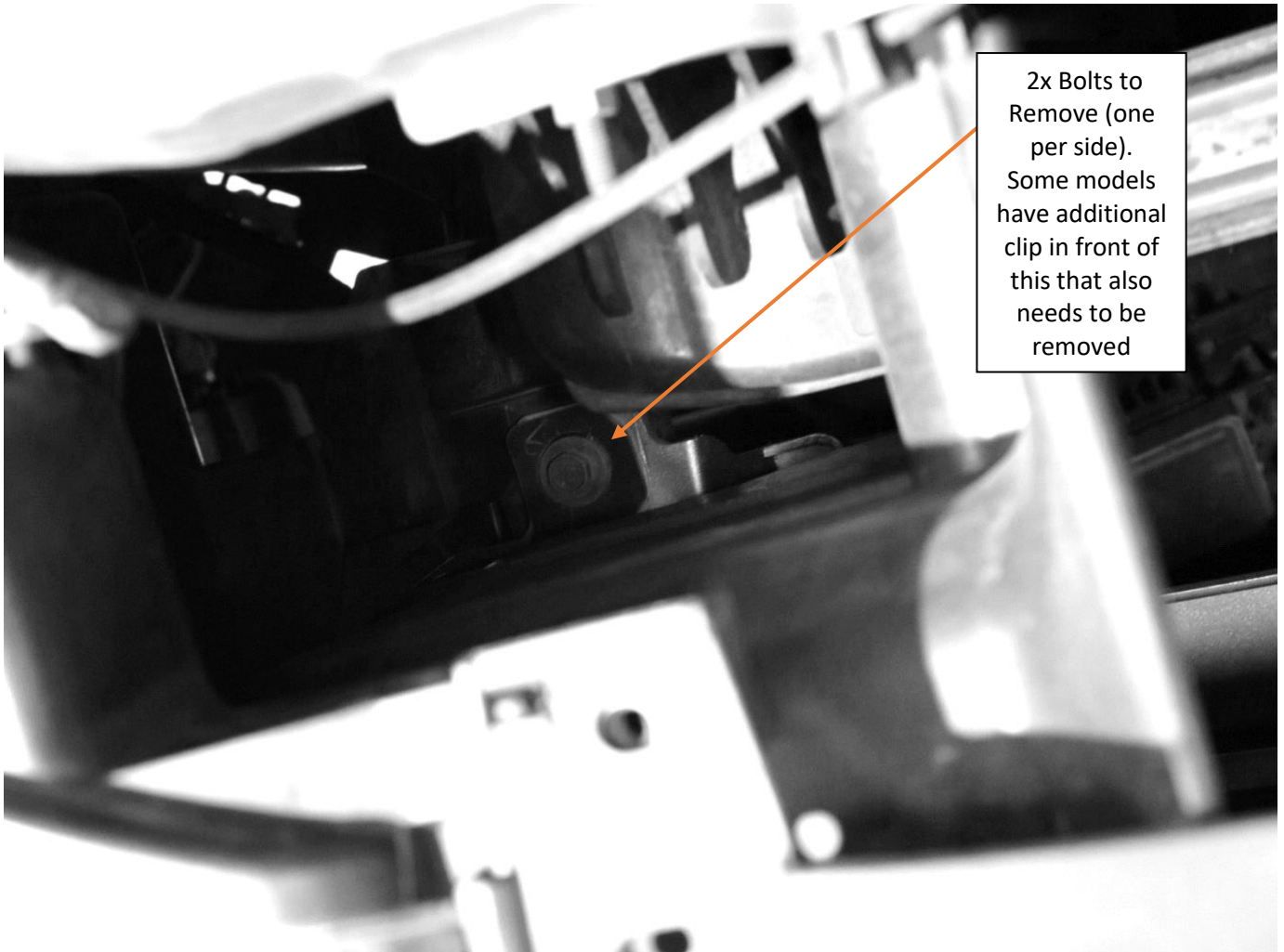


*PX2 Ranger Front of Engine Bay*

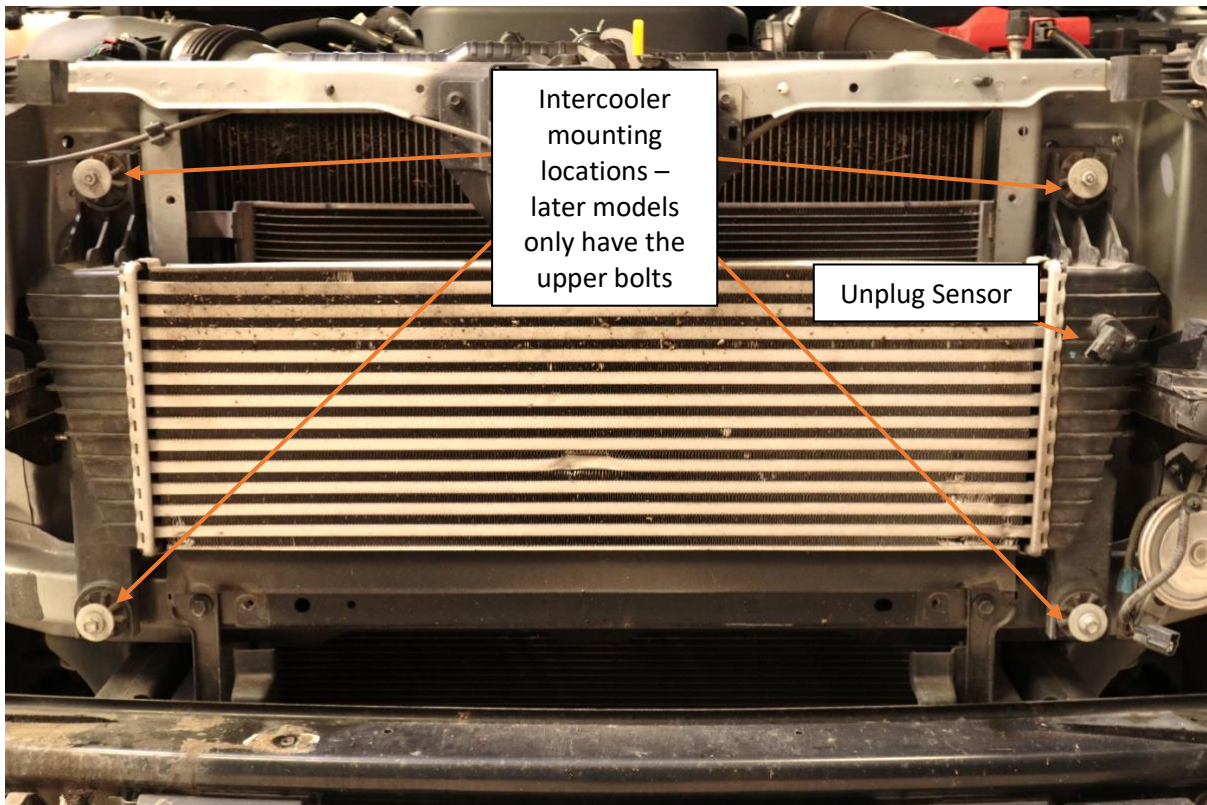
2. Once the radiator trim cover has been removed, the rest of the grille and front bumper assembly can be removed. There are two bolts on the top of the grille, bolts or clips through the wheel well (depending on the year model) and under the front of the vehicle and hidden bolts down behind the grille. You will also need to unplug fog lights, and parking sensors depending on trim level. NOTE for Aftermarket Bullbars: some vehicles do not need to have the whole bulbar removed to install the transmission cooler, this will have to be assessed at the time on a need be basis.



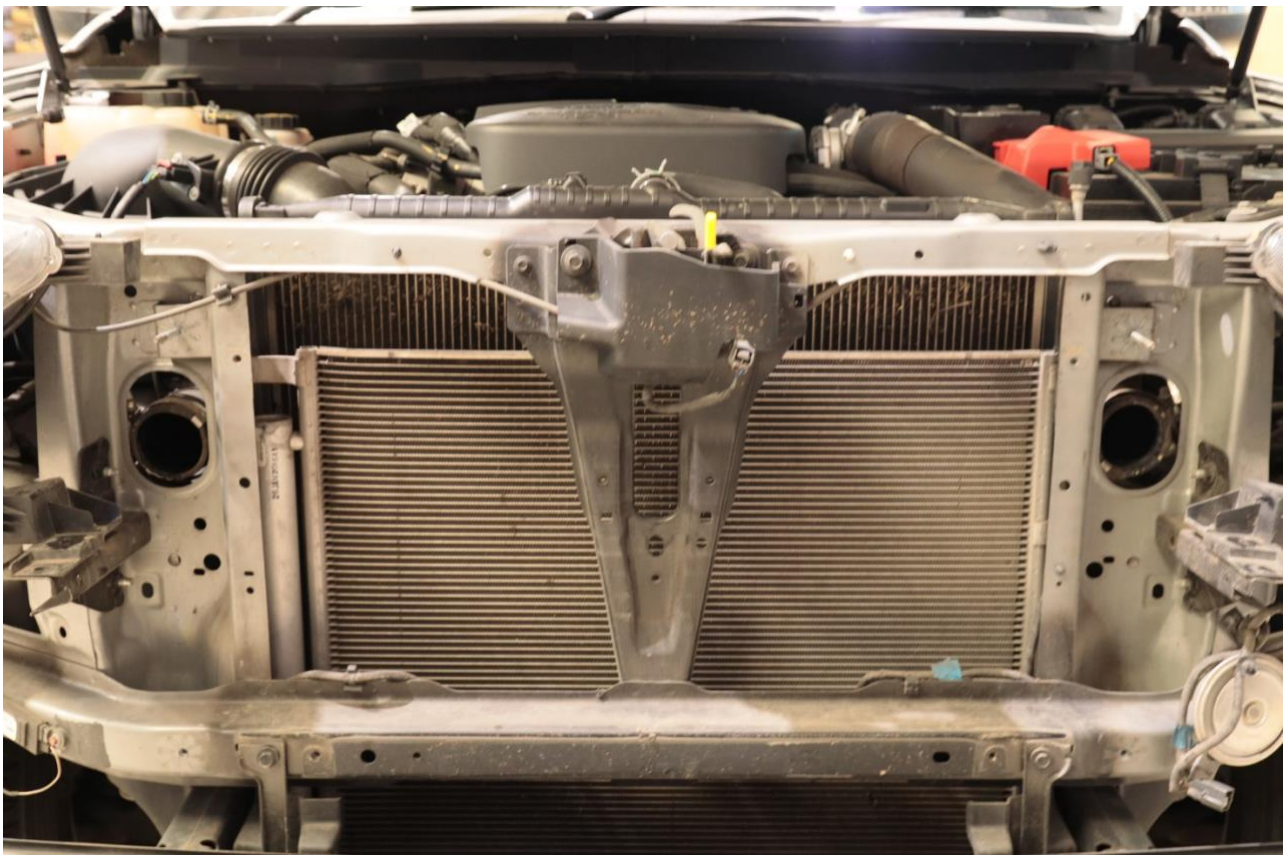




3. Once the front bumper is removed, also remove the black plastic trim pieces at either end of the intercooler, to allow access to remove the intercooler.
4. Loosen the hose clamps or retaining clips that secure the hoses to the intercooler (on the engine bay side)

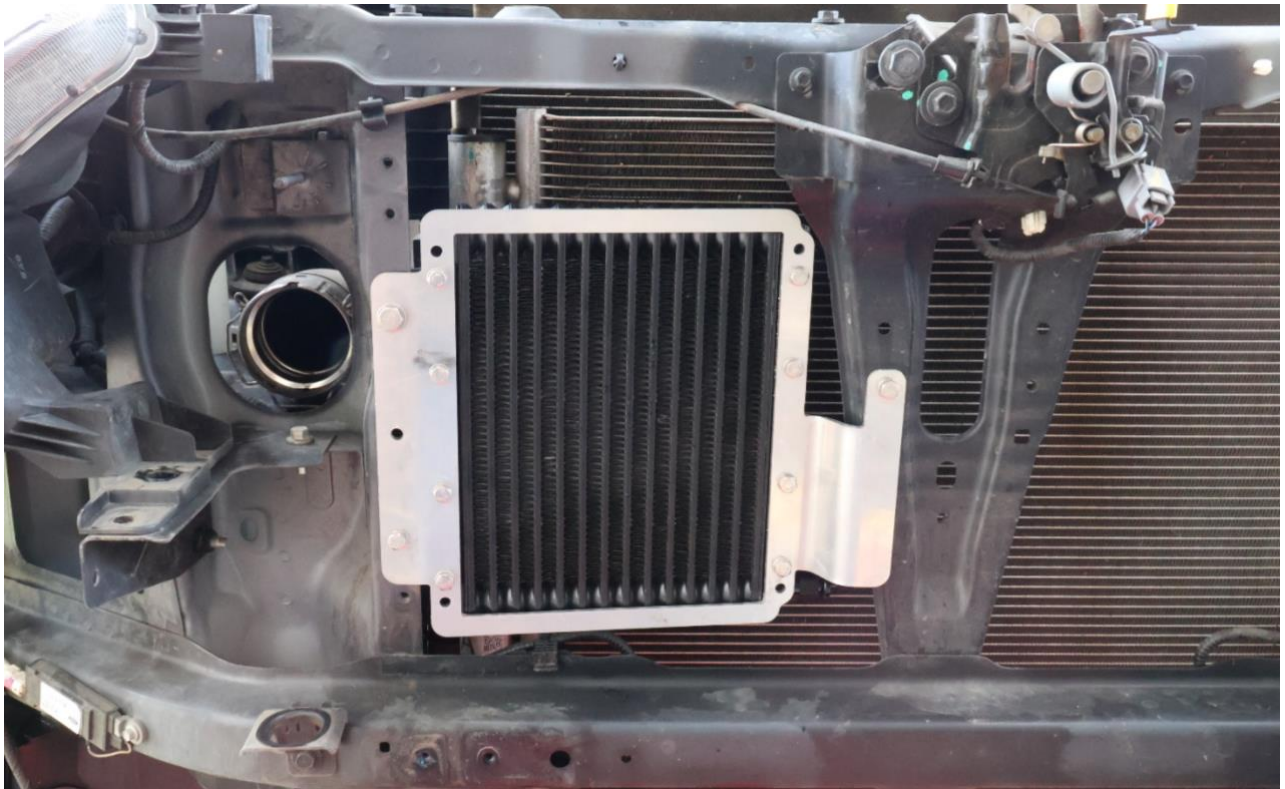


Front grille and bumper along with plastic trim pieces at ends. Showing the four mounting locations of the intercooler that need to be removed. Note to unplug sensor on the right first.

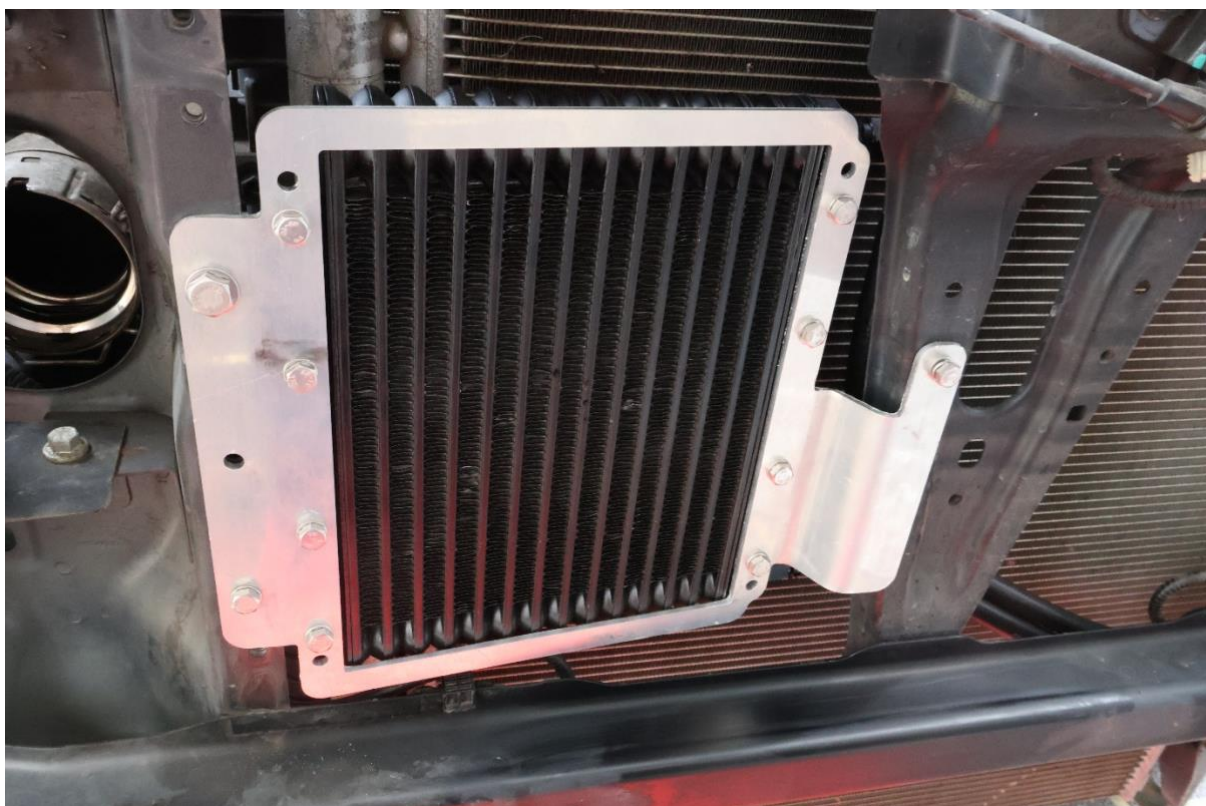


Intercooler and trim pieces all removed. Ready for installation of transmission cooler.

5. Assemble the transmission cooler to the brackets in the kit. The assembly will use all 8xM6 bolts, 16xM6 flat washers and 8xM6 nyloc nuts. The cooler mounts to the driver's side of the vehicle with the fittings to the center behind the vertical support.

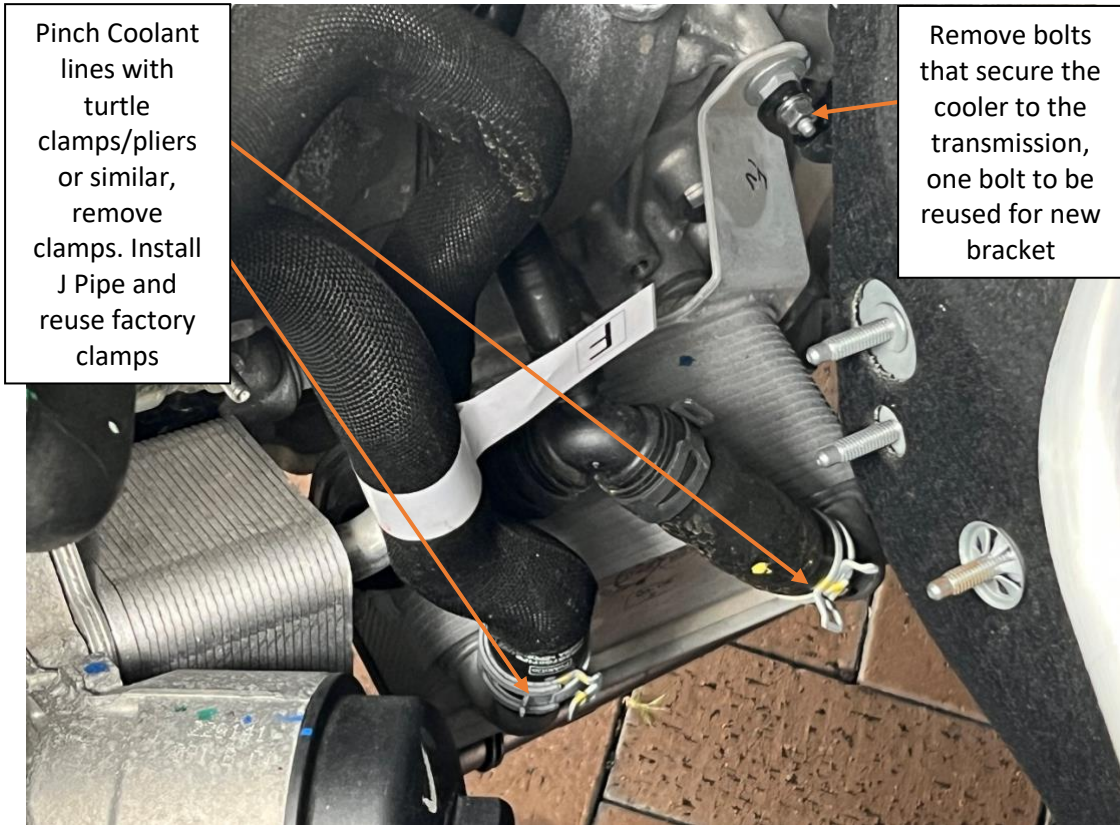


*Transmission Cooler Assembly Bolted in Place. Note: Cooler sits on back face of the bracket, with nuts towards the rear, bolts to the front. The inlet and outlet ports should be facing the center support of the vehicle.*

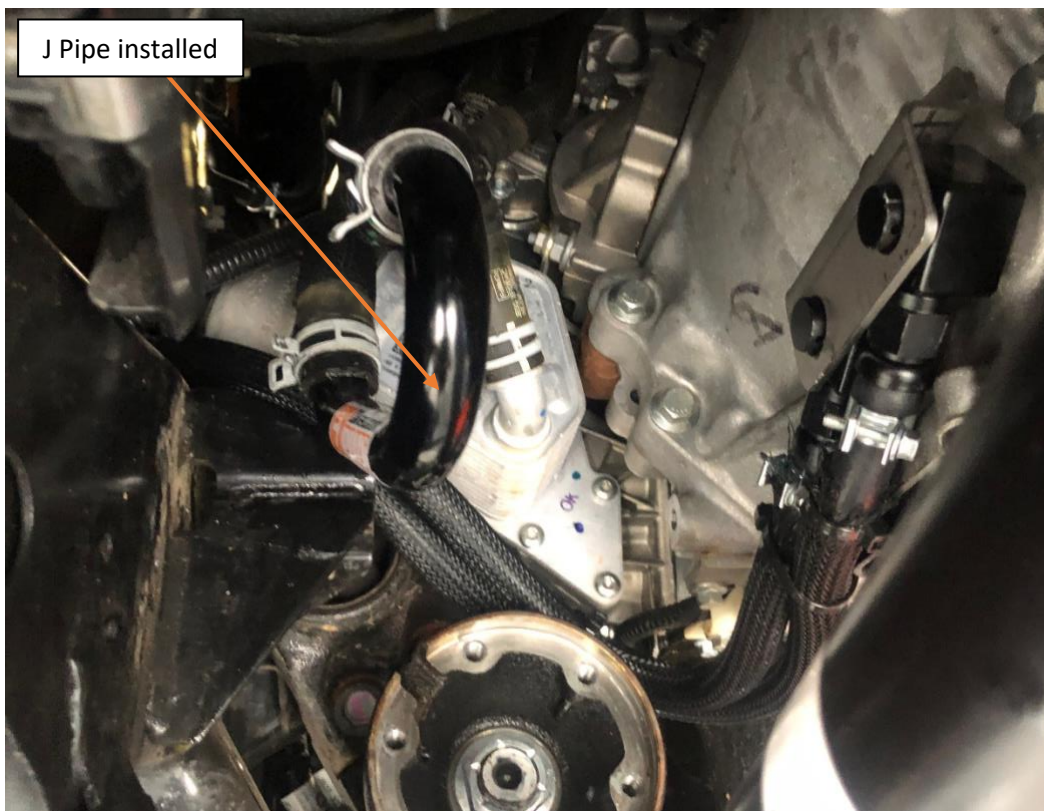


*Transmission cooler installed – closeup.*

6. Bolt the new transmission cooler and bracket assembly into the vehicle locating off the empty threaded hole in the center support and the two empty holes in the side supports. The M8x16 bolt and washers and nut for outside top hole, M6x16 bolt and washers for center support and outside lower hole.

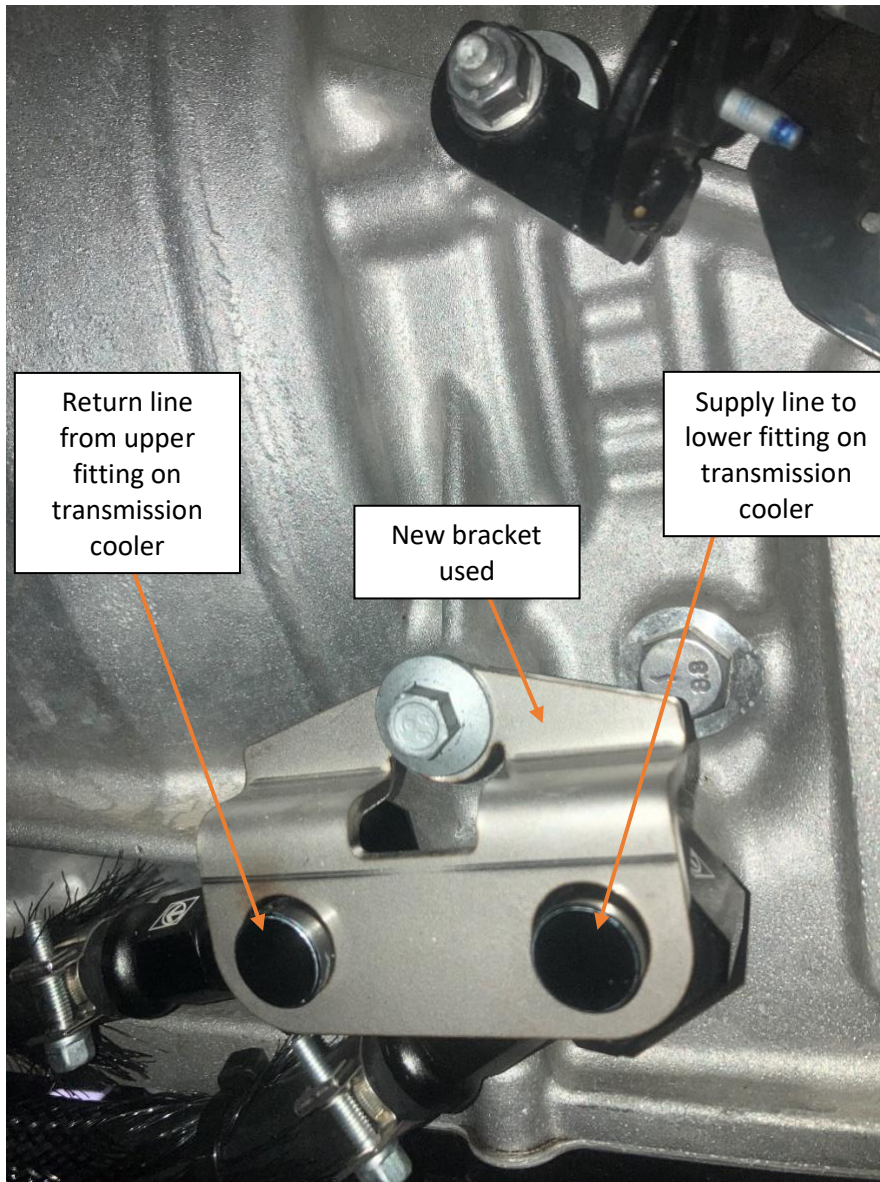


*Factory Transmission Cooler to remove*



*Installation of coolant "J" pipe and new transmission bocks and bracket, NOTE: it may be necessary to remove the front drive shaft to make this easier!*





*New transmission adaptor fittings installed and retained with new bracket, held in place with factory bolt*

7. Connect the supplied hose to the lower port on the transmission cooler, secure in place with a clamp.
8. Connect the other end of the hose to the rear port on the new transmission cooler block, secure in place with a clamp. You will need to measure and cut it to length.



9. Connect the remaining hose to the top port on the transmission cooler, secure in place with a clamp.
10. Connect the other end of the remaining hose to the front port on the new transmission cooler block, secure in place with a clamp. You will need to measure and cut it to length.
11. Use cable ties to secure any loose cooler line to prevent rubbing.
12. 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.



*Intercooler and trim pieces reassembled.*

13. Reinstall the intercooler, trim pieces, bumper and grille in reverse as how it was removed. Some trim pieces will need to be trimmed to be able to fit.
14. Once everything is installed and secured, you will need to check and top up the engine coolant as needed.
15. Start the engine allowing the cooling system to bleed and to check for leaks.



## End of Installation Guide