



## Direction-Plus Transchill Arctic Black Transmission Cooler Kit for Toyota Land Cruiser Prado 150 Series 2009-2022 Installation Guide

This document is to be used as a guide for the installation of the **Direction-Plus Transchill Transmission Cooler Kit to a 2009-2022 Toyota Land Cruiser Prado 150 Series with automatic transmission**.

It is recommended that the installation of the product be carried out by a competent qualified mechanic.

### Included in the kit:



<i>Loose</i>	<i>Bagged</i>	<i>Cooler Mounting Hardware</i>
1 x 32mm Transmission Cooler (TCC14DP)	4 x 15-17mm Clamps (FMC10)	8 x M6x16 Bolts (SSSS304M616)
1 x Upper Mounting Bracket (TC620-BR)	8 x Cable Ties (802078)	16 x M6 Flat Washers (FMW6)
1 x Lower Mounting Bracket	2 x M6x16 Bolt (SSSS304M616)	8 x M6 Nyloc Nuts (FMN6)
1x 3m of 3/8" Hose (27061)	2 x M6 Flat Washer (FMW6)	1 x 17mm Insulated (P Clip PCL20)
	2 x M6 Spring Washer (FMSW6)	
	2 x -6 to M16x1.5 Adaptors (DP816-6-M1615)	
	2 x M16 Alloy Washers (PLFW16)	
	1 x -6 to 3/8" Straight Tail (DPP0001-06)	
	1 x -6 to 3/8" 90° Tail (SPP0090-06)	

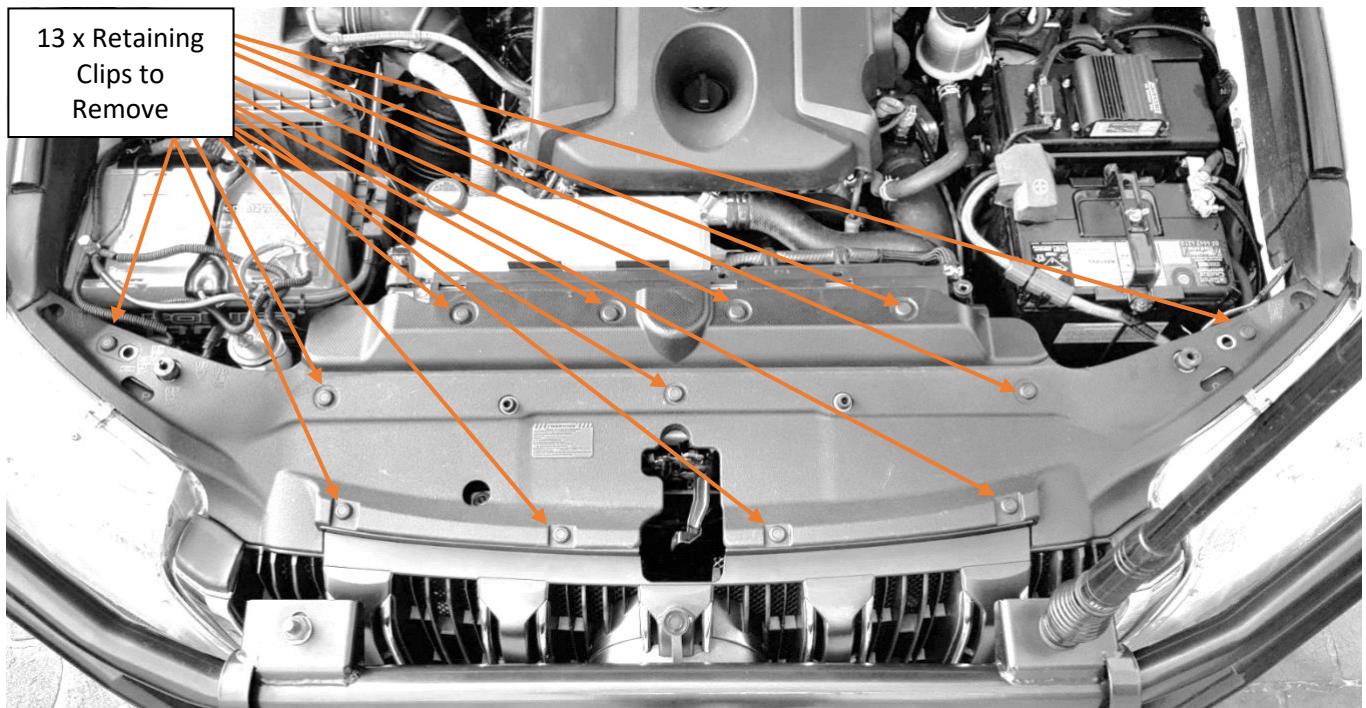


**Basic Tools Required:**

- 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.

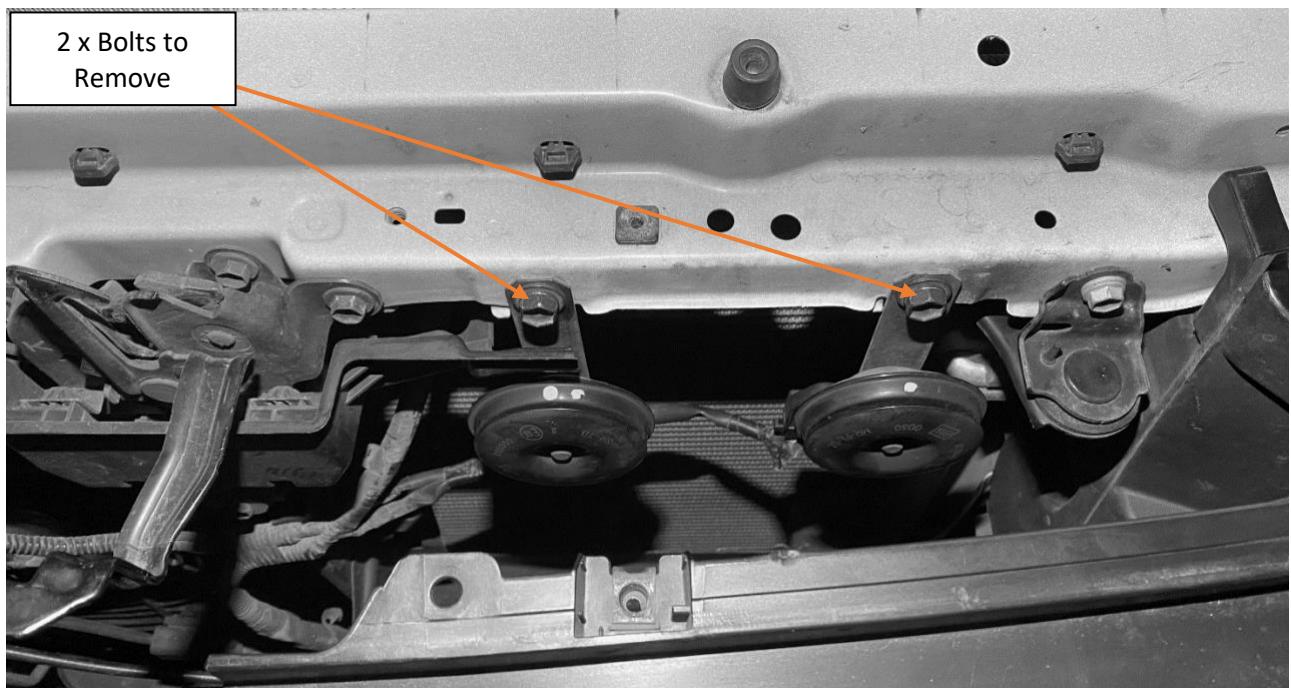
## Installation Guide

1. Begin by removing the top trim panel between the radiator support and grill. It is held in place at the top by seven clips. Once the clips are removed it can be lifted and removed.

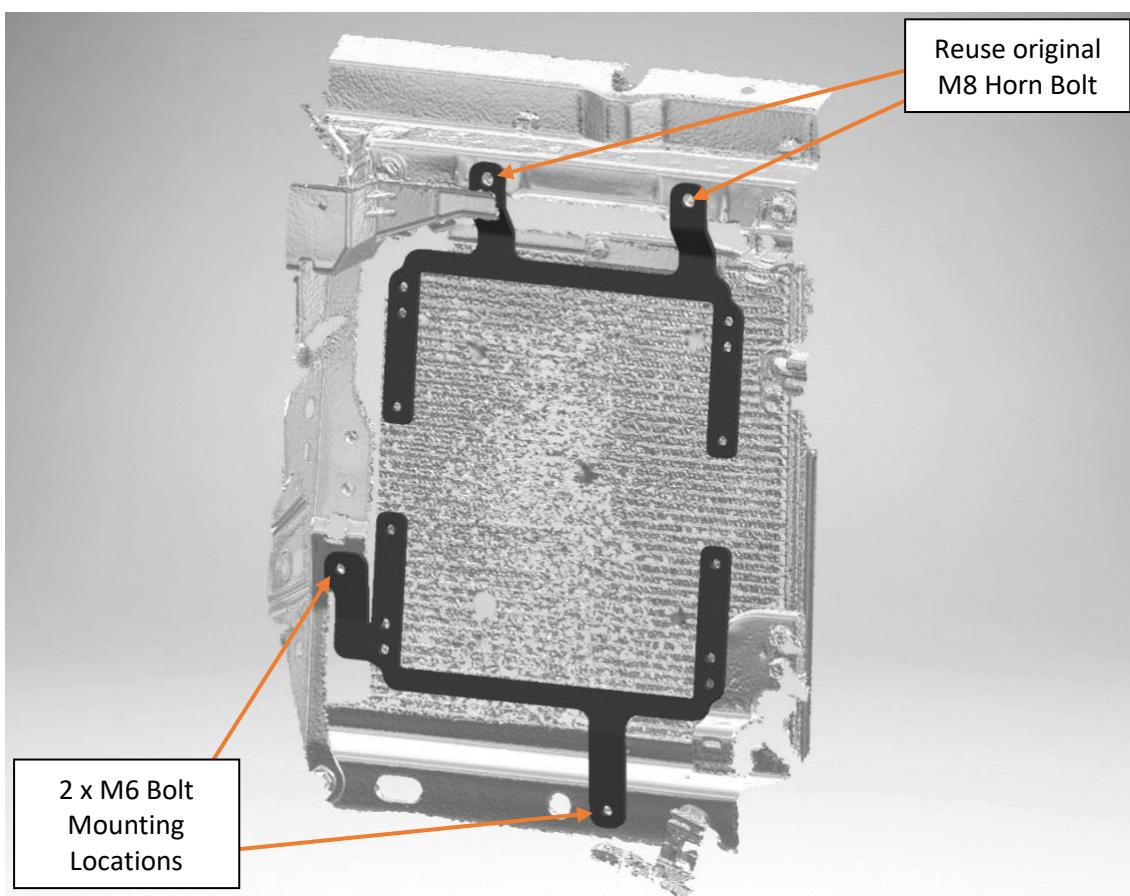


Land Cruiser Prado 150 Series Front of Engine Bay

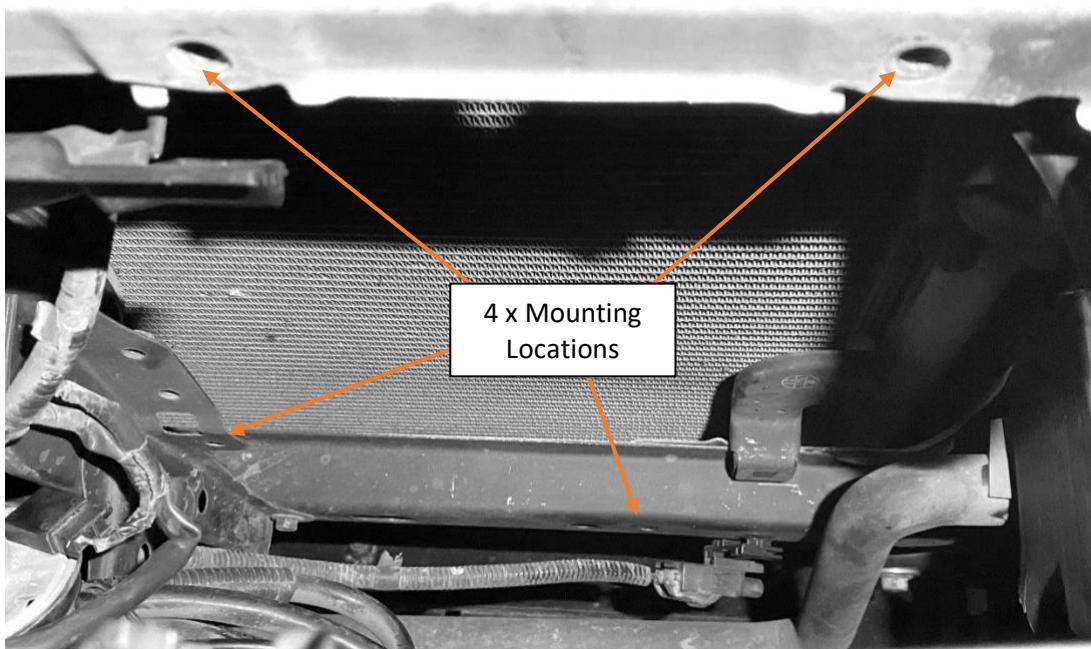
2. Remove the Grille as this will make access much easier, depending on year of vehicle, this varies but there will be bolts down next to the headlights along the grille edge and clips that secure the grille to the bumper. If equipped with radar cruiser control this will also need to be unplugged.
3. Remove the top two bolts that mount the horns. Swing the horns and the harness out of the way.



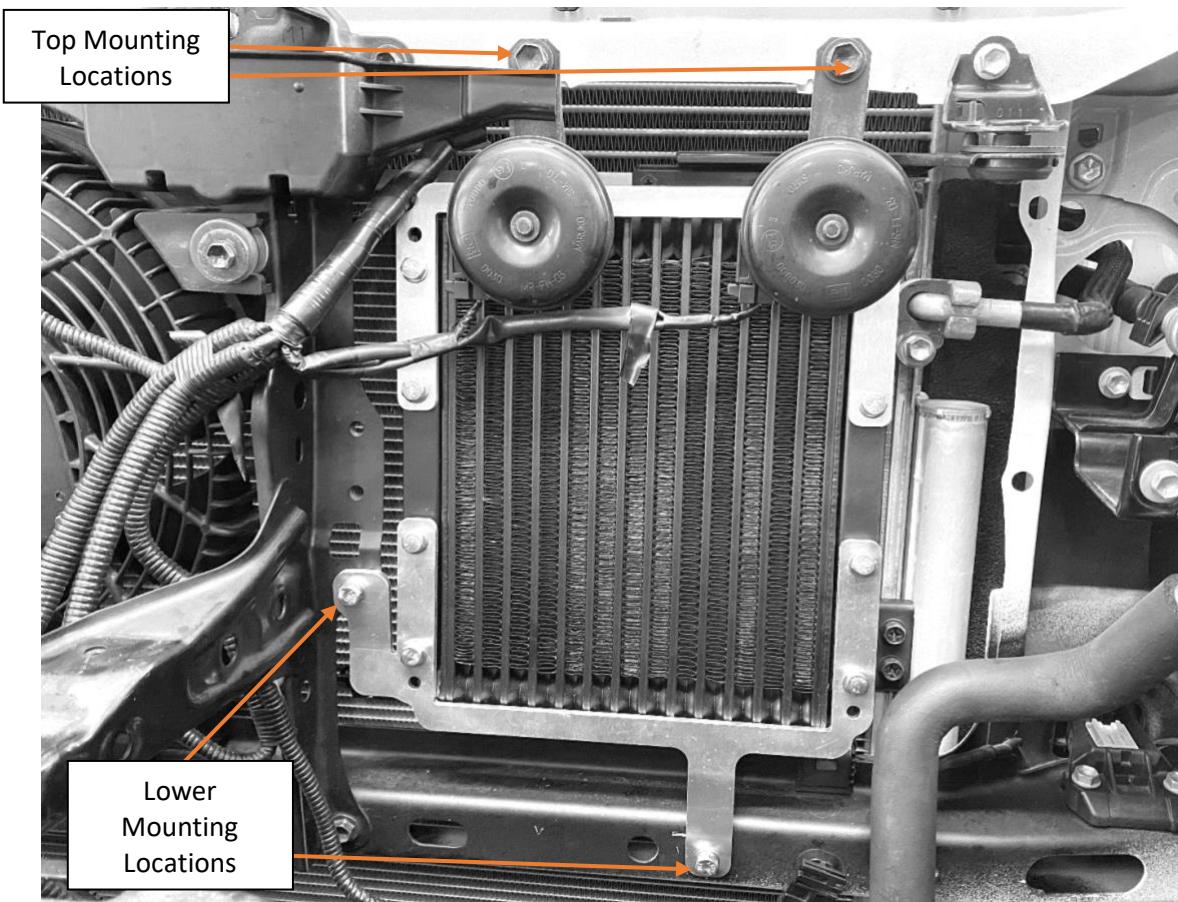
4. Assemble the transmission cooler to the brackets in the kit. The assembly will use 8xM6 bolts, 16xM6 flat washers and 8xM6 nyloc nuts. Bolts go through bracket first with the nuts hidden on the rear face. The Transmission Cooler mounts to the rear face of the brackets. NOTE: the transmission cooler ports face the center of the vehicle.
5. Using Loctite 567 or similar, secure the M16x1.5 fittings into the cooler, making sure to use an alloy washer on each.
6. Use the 90° fitting on the lower port and the straight fitting on the top port, again using Loctite 567 or similar to secure in place. The 90° fitting should be facing up towards the top fitting.
7. Cut the supplied 3/8" hose in half pushing one end of each onto the fittings.



*Location of brackets installed on vehicle*

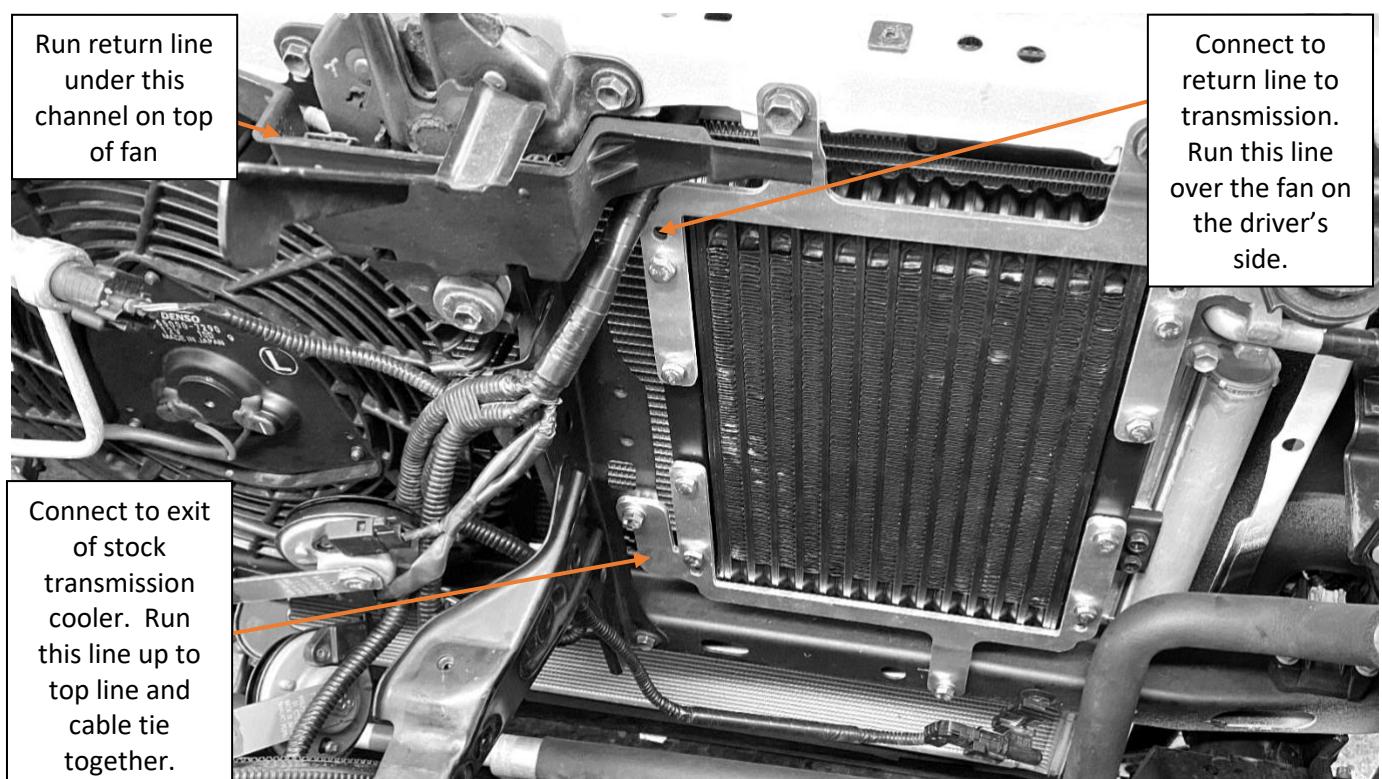


8. Bolt the new transmission cooler and bracket assembly into the vehicle locating the top off the two M8 threaded bosses the horn uses as a mounting location in the radiator support. Sandwich between the horn and mounting face. Use the original bolts here.



Transmission Cooler Assembly Bolted in Place.

9. Use the two remaining M6x16 bolt, M6 spring washer and M6 flat washer to secure the bottom mounting tab to the spare M6 threaded hole in the lower radiator support panel and the spare M6 threaded hole in the center support.
10. Run the lower hose up the center of the vehicle and along the underside of the radiator support panel. Measure and cut the hose to length and connect the other end to the outlet port on the stock transmission cooler. It is either:
  - For vehicles with radiator tanks on the top and bottom, located in the bottom radiator tank on the passenger's side
  - For vehicles with radiator end tanks on the sides it's the top port on the driver's side, secure in place with a clamp.



*Finished Cooler Assembly in Place*

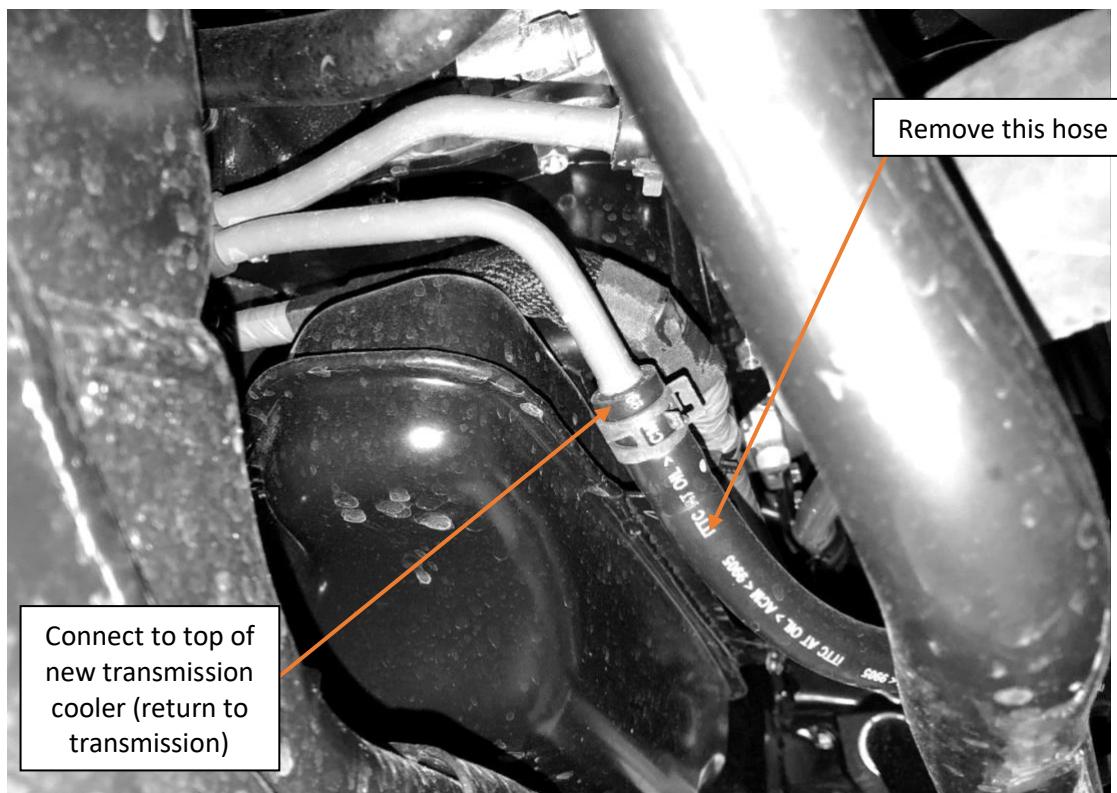


Version 1 Stock transmission cooler lines in lower radiator tank.

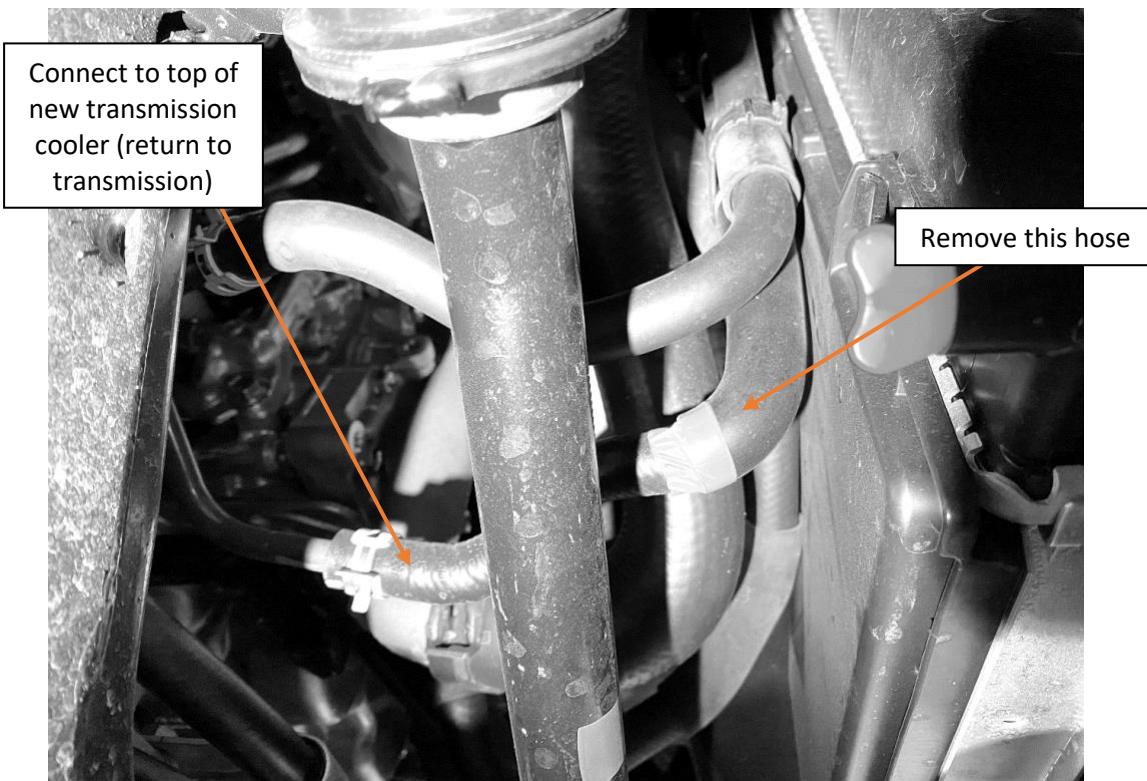


Version 2 Stock transmission cooler lines in drivers side radiator end tank

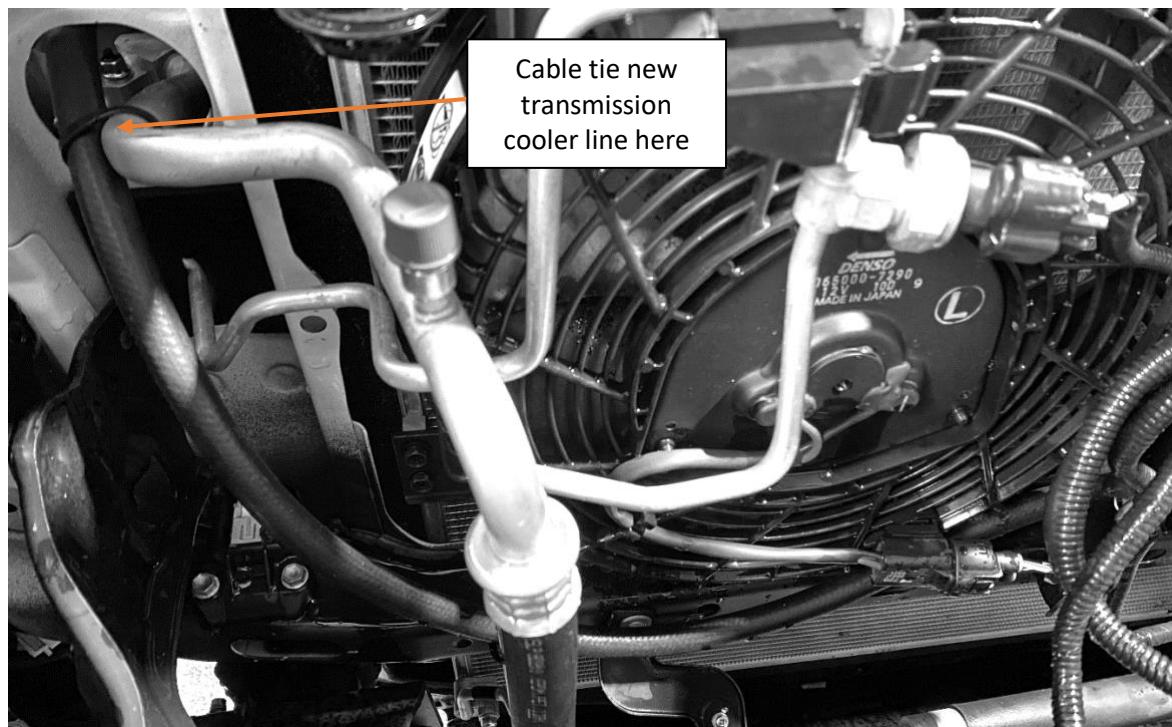
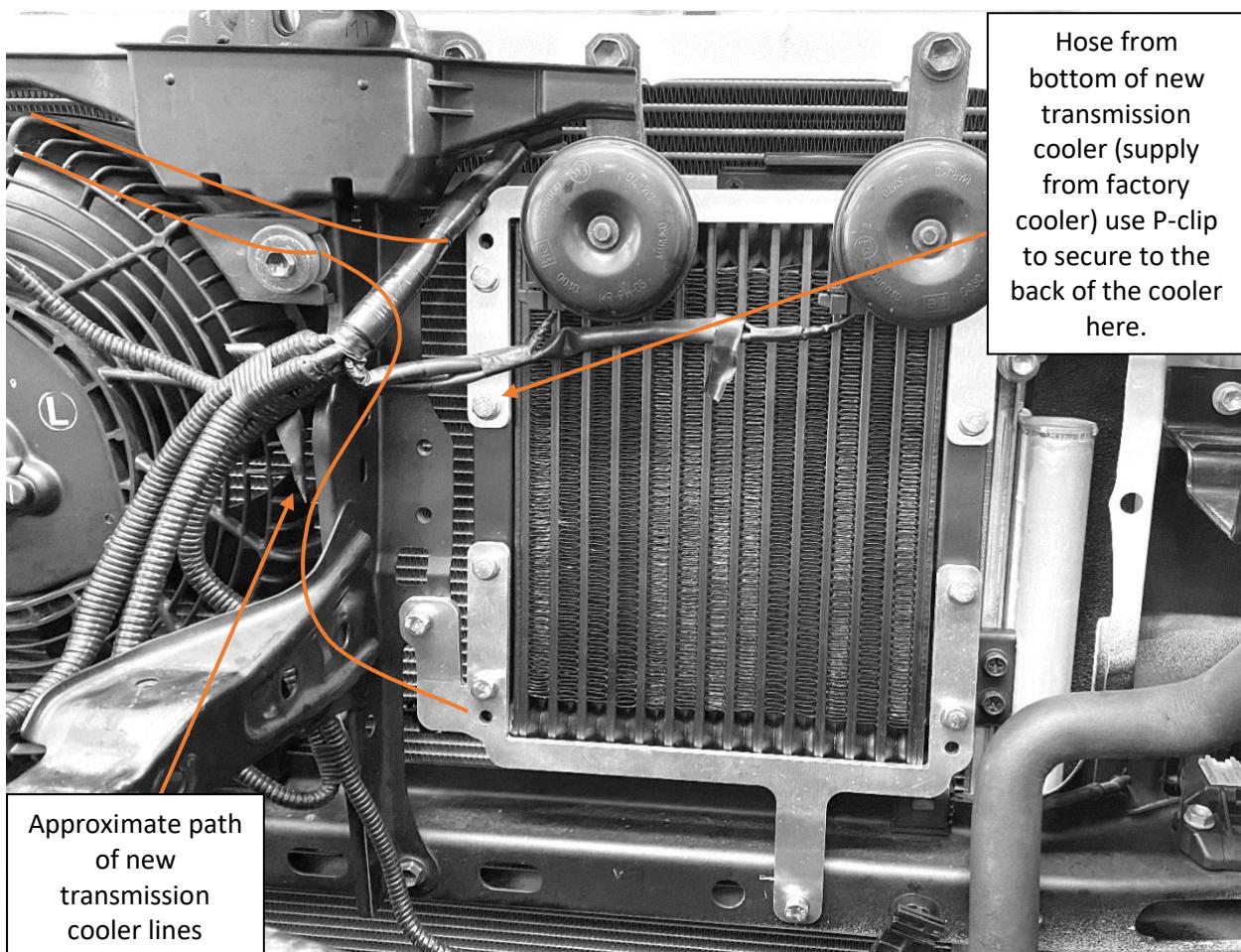
11. Run the top hose from the straight hose tail along the underside of the radiator support panel. Measure and cut the hose to length and connect the other end to the of this hose to the hard steel return line to the transmission that used to connect to the stock transmission cooler, secure in place with a clamp.

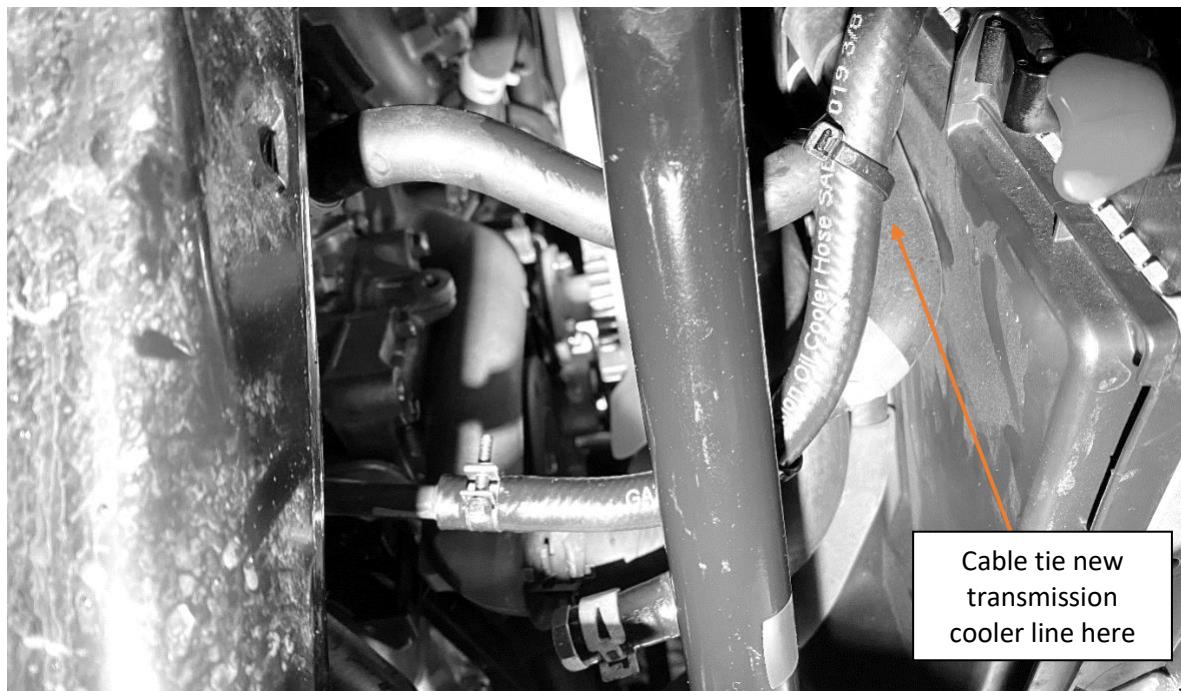


Version 1 Stock transmission cooler lines return to transmission for vehicles with cooler in bottom radiator end tank.



Version 2 Stock transmission cooler lines return to transmission for vehicles with cooler in drivers side radiator end tank





12. Use cable ties to secure any loose cooler line to prevent rubbing.
13. The cooler itself holds 150mL of fluid, plus 70mL per 1m of hose, calculate the total amount and top up the transmission using the correct factory specified transmission fluid.
14. Reinstall the trim panel in reverse as how it was removed in step 1.

**End of Installation Guide**