

## Transchill Arctic Black Transmission Cooler Kit Installation Guide for Isuzu D-MAX / Mazda BT-50 2020-on

This document is to be used as a guide for the installation of the **Direction Plus Transchill Arctic Black Transmission Cooler Kit** to a 2020 onwards Isuzu D-Max and Mazda BT-50 3.0L 4J3 diesel 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)	2 x 15-17mm Clamps (FMC10)	8 x M6x16 Bolts (SSSS304M616)
1 x Upper Mounting Bracket (TCB645-BR)	8 x Cable Ties (802078)	16 x M6 Flat Washers (FMW6)
1 x Lower Mounting Bracket	1 x M8x20 Bolt (SSSS304M816)	8 x M6 Nyloc Nuts (FMN6)
5m of 3/8" Hose (27061)	2 x M8 Flat Washers (FMW8)	1 x P Clip (PCL20)
2 x 1m lengths of 3/8" heat sleeve (HS35DP)	1 x M8 Nyloc Nut (FMN8)	
	2 x M16x1.5 to -6 Male Adaptors (DP816-6-M1615)	
	2 x M16 Alloy Washers (PLFW16)	
	2 x 3/8" Tail to -6 90° Adaptors (DPP0001-06)	



## MOUNTING LOCATION TRANSCHILL TRANSMISSION OIL COOLER KIT TCB645DPK

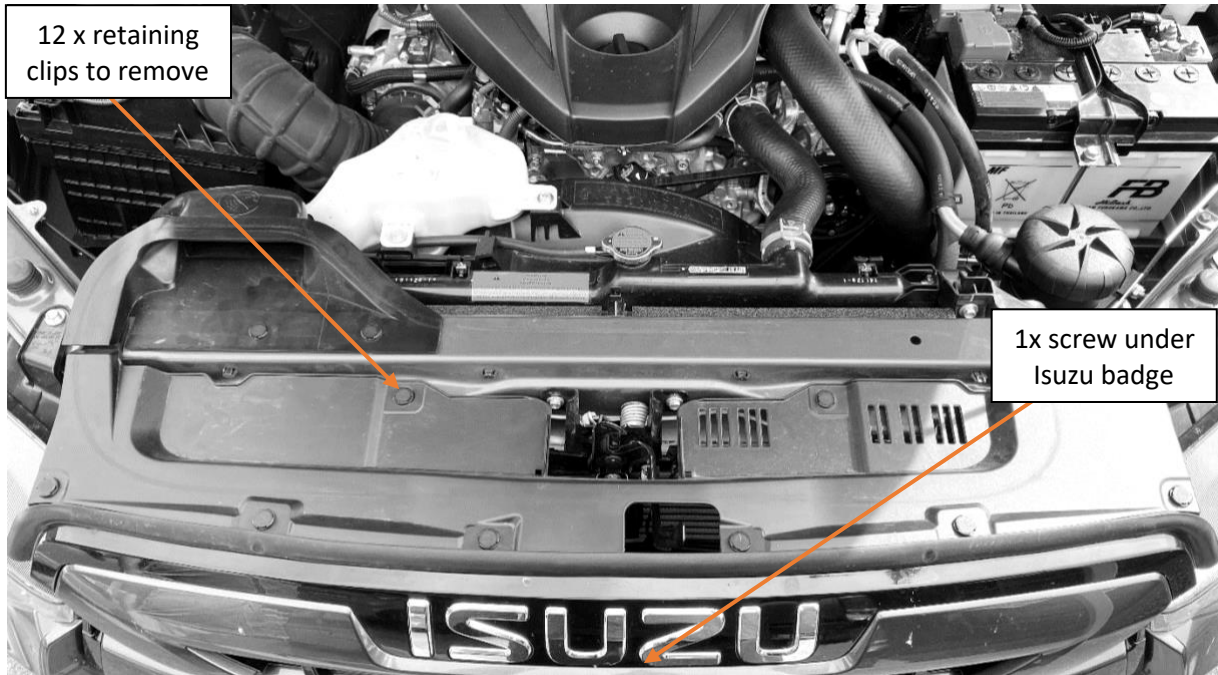


### Tools Needed:

- 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.

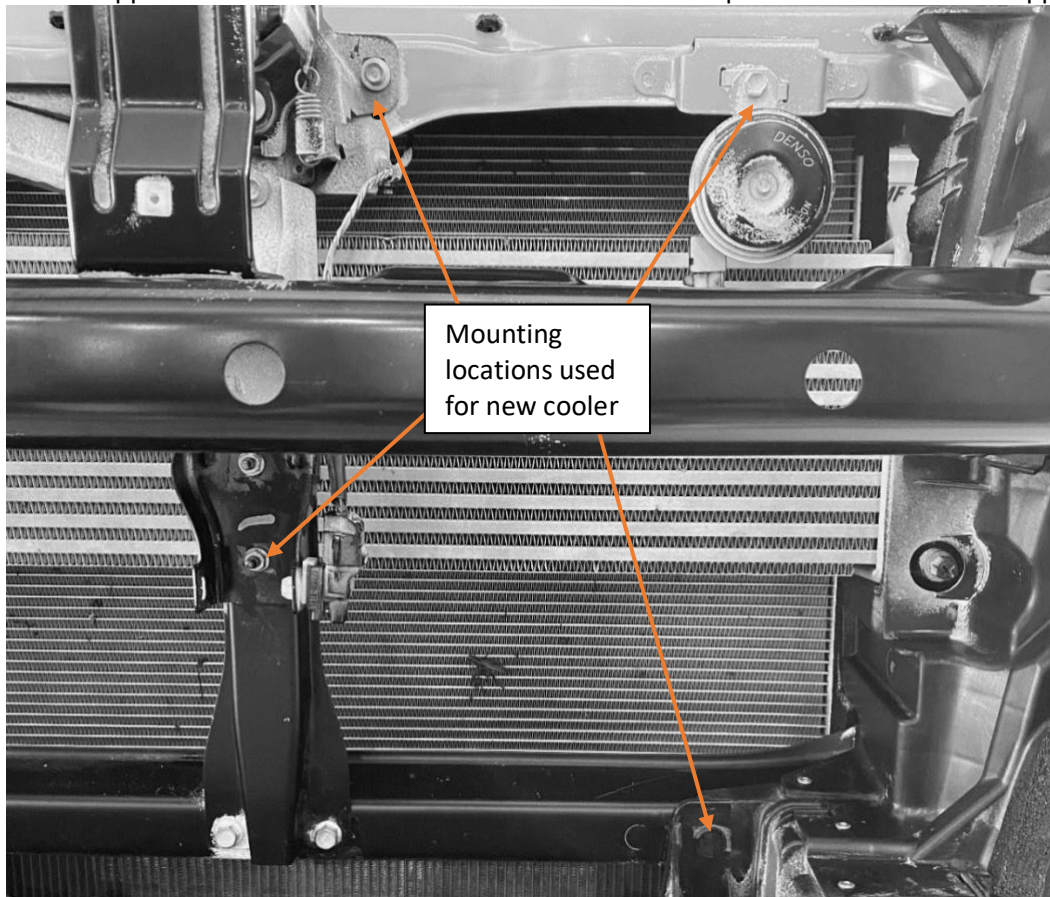
### Installation Guide

1. Begin by removing the front grille top cover plate. It is held in place by 10 clips with an additional 2 securing the air intake duct which need to be removed to allow access to the clip underneath. Once the clips are removed it pulls upward to unclip from the tabs on the far outer edges near the lights, TAKE CARE!



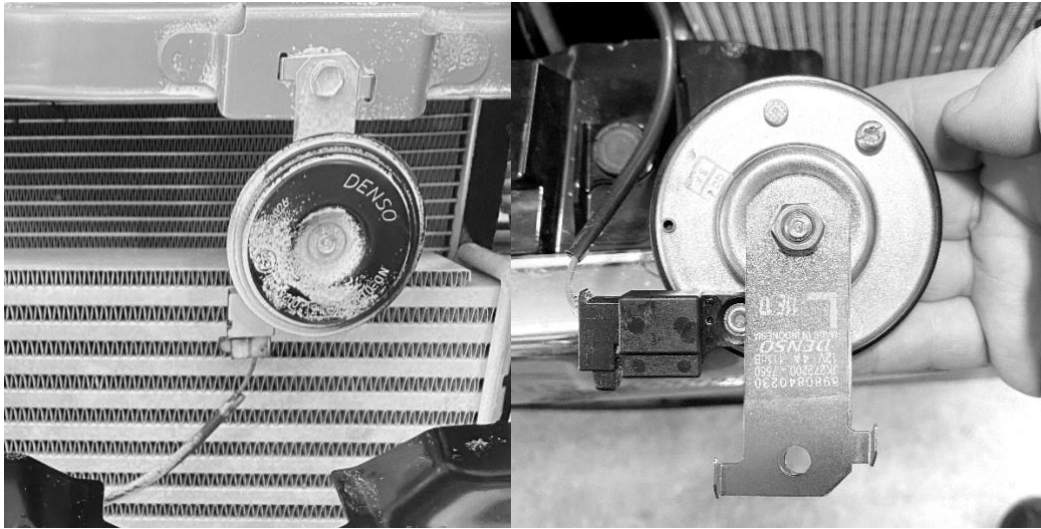
*Isuzu D-Max Front of Engine Bay/ Grille*

2. Remove the two M6 bolts on the passenger side of the vehicle as shown in the next image. These are the new transmission cooler upper bracket mounting locations. There is also an M6 nut in the middle of the bonnet latch support that also needs to be removed as well as a clip in the lower radiator support.



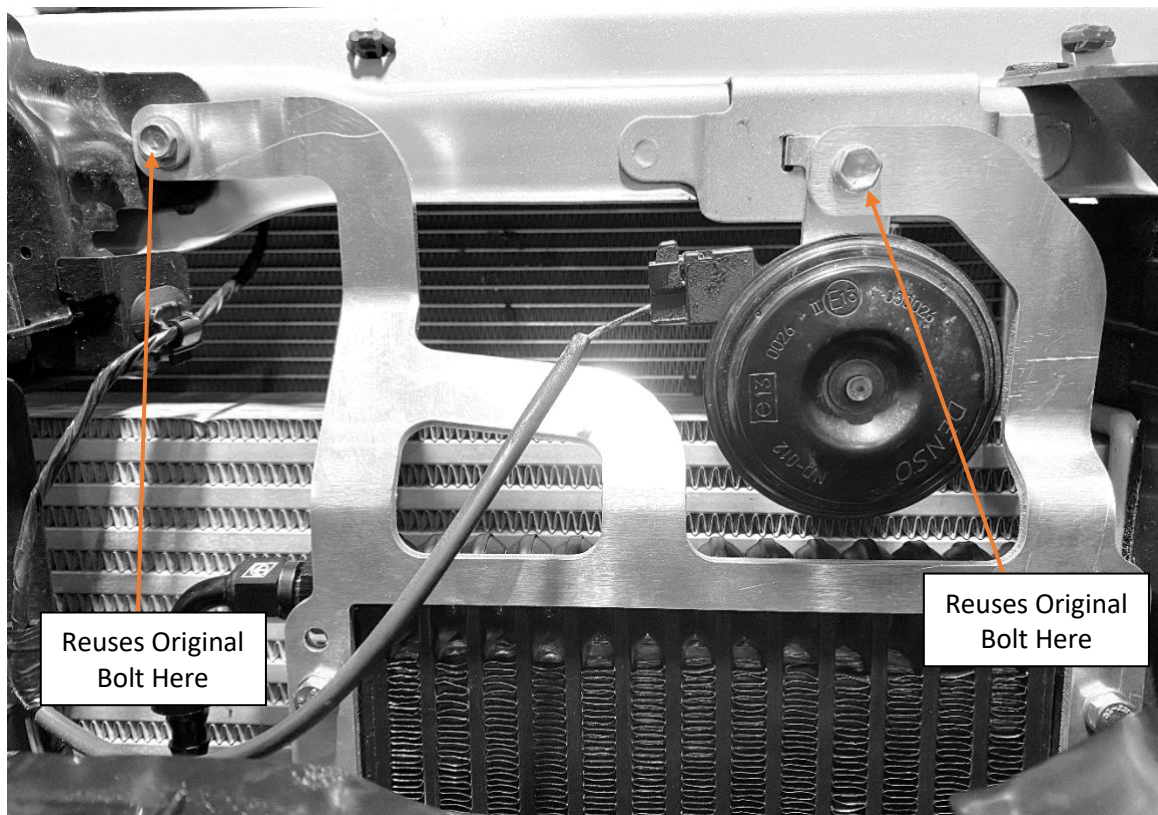
Front bumper removed, showing the four mounting locations for the new transmission cooler. Note: The bumper doesn't need to be removed to fit the kit!

- Remove the horn from the vehicle, loosen the rear nut and rotate the horn 90° to move the connector from facing down to facing towards the center of the vehicle.

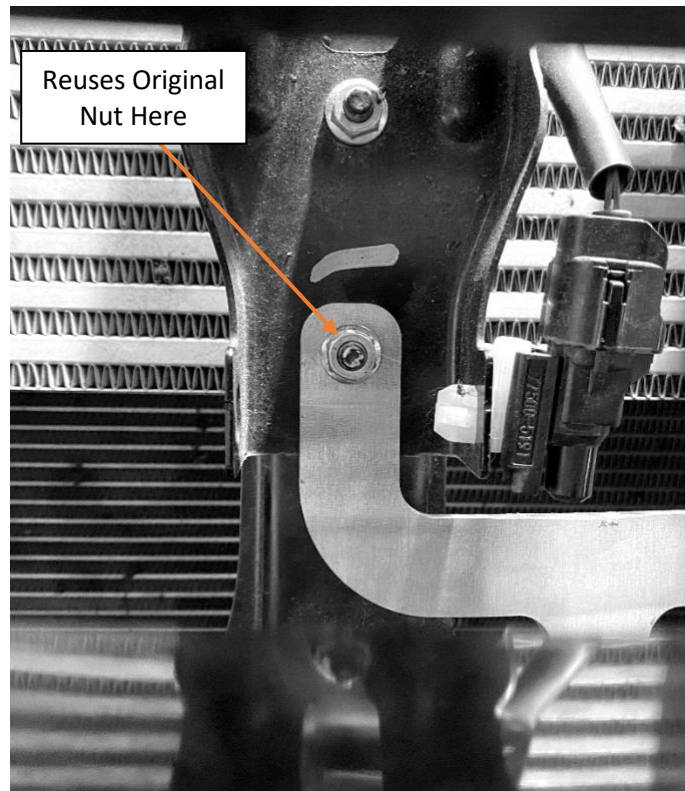


*Horn orientation changed*

- Secure the M16x1.5 threaded adaptors to the ports of the transmission cooler, making sure to use an aluminium 16mm washer under each and use Loctite 567 or similar to secure them in place.
- Assemble the transmission cooler to the brackets in the kit. The assembly will use all 8xM6 bolts, 16xM6 flat washers and 8xM6 nyloc nuts.



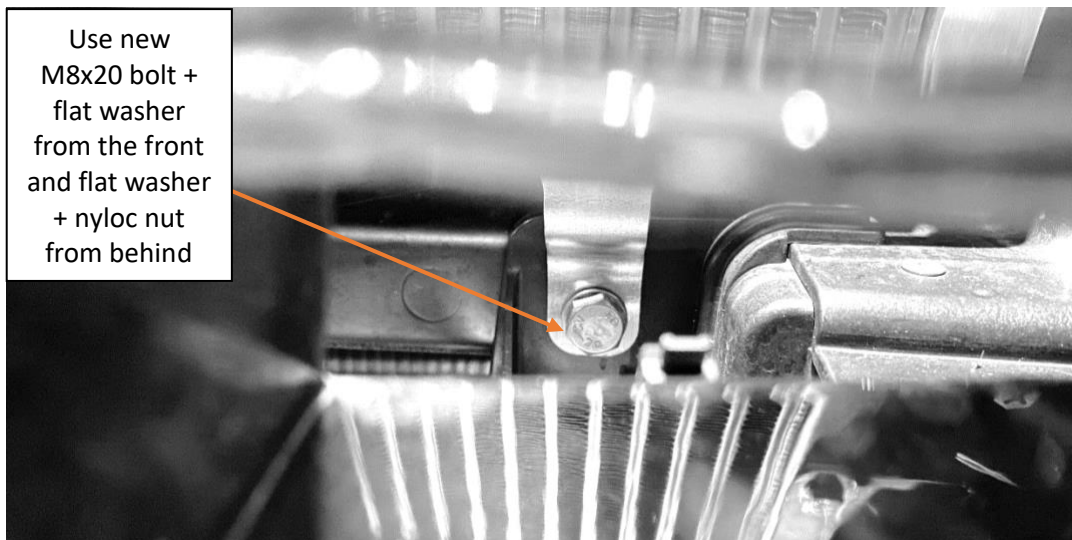
*Transmission Cooler Assembly Bolted in Place. Note: Cooler sits on rear face of brackets, with nuts towards the rear, bolts to the front. Horn showing correctly modified orientation in image.*



Reuses Original  
Nut Here

*Lower Center Transmission Cooler Mount*

6. Bolt the new transmission cooler and bracket assembly into the vehicle locating the top off the bolt locations that were removed in step 2.



Use new  
M8x20 bolt +  
flat washer  
from the front  
and flat washer  
+ nyloc nut  
from behind

*Lower Outside Transmission Cooler Mounts*

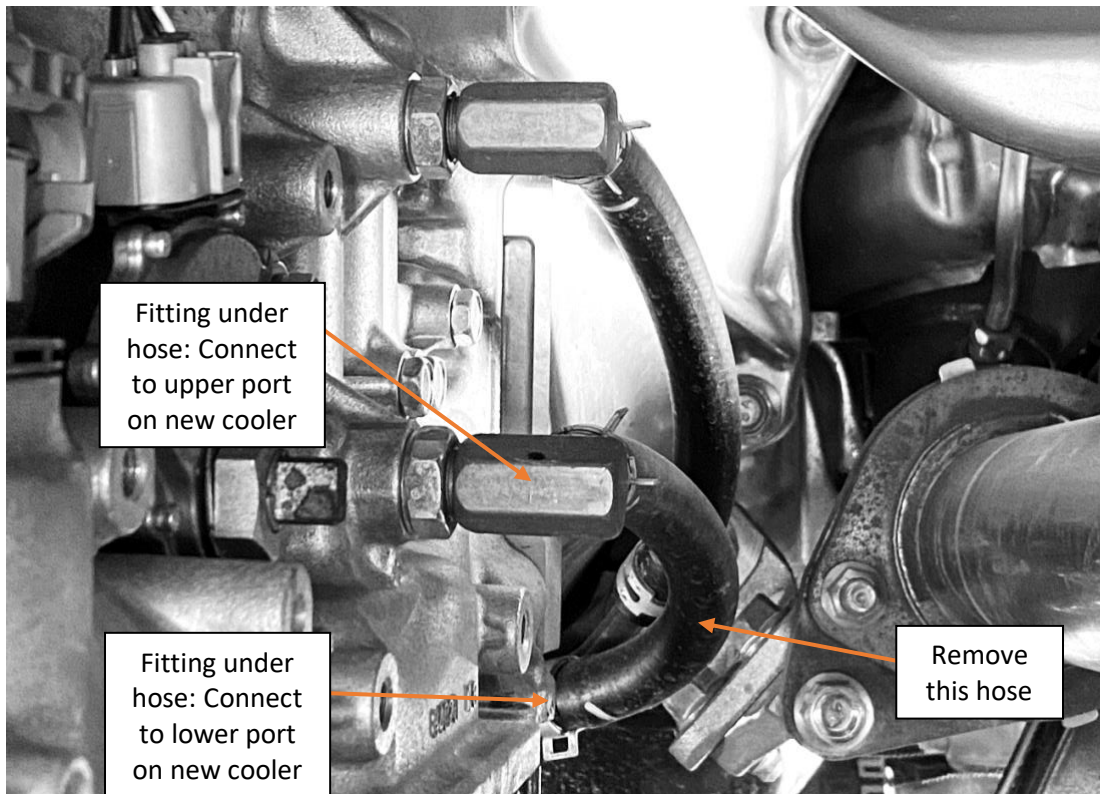
## Hose Routing Options

**Option 1: Install New Cooler after factory transmission cooler**

**Option 2: Install New Cooler in place of factory transmission cooler (eliminates factory cooler)**

### Hose Option 1: New cooler after factory transmission cooler

1. Connect the one end of the 3/8" hose to -6 90° fitting and secure the lower port on the transmission cooler, using Loctite 567 or similar on the -6 threads to ensure sealing.
2. Connect the other end of the hose to the hard line that used to be connected to the lower port on the side of the transmission. Cut the hose to length, slide over the heat sleeve and secure in place with a clamp.

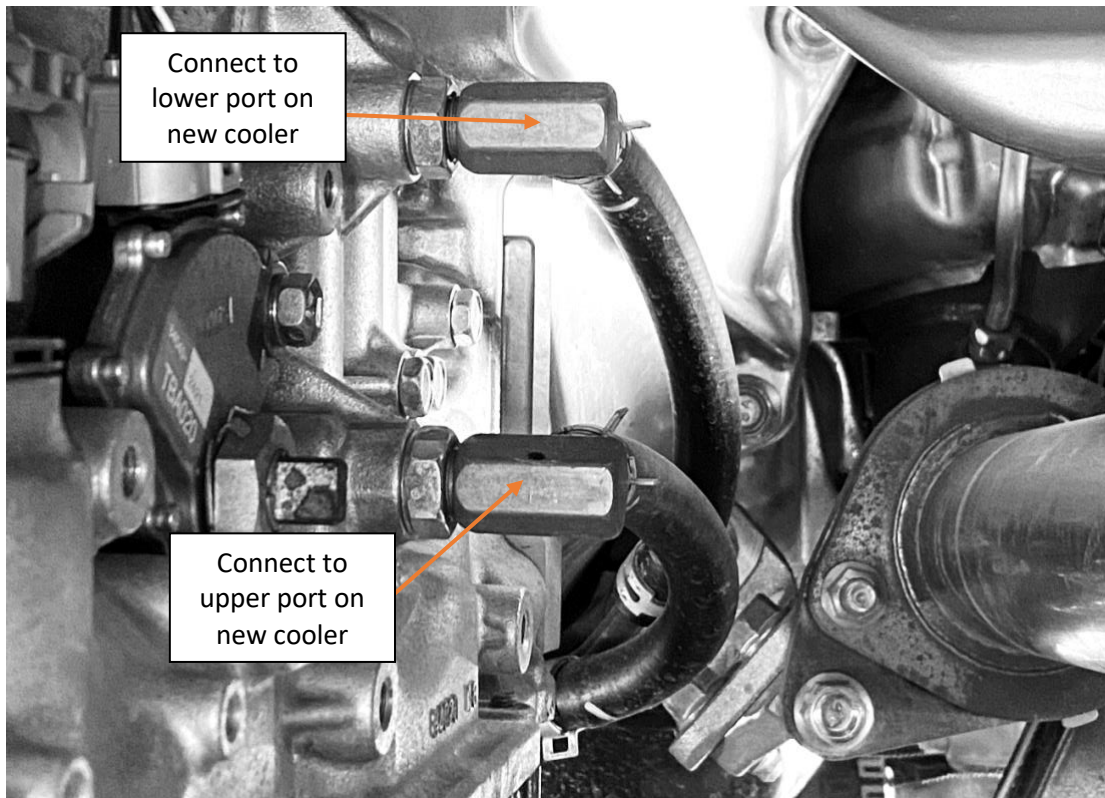


*Stock Transmission Cooler is located under the vehicle on the passenger side. The hoses enter and exit the transmission on the driver's side shown in image. Remove hose on the bottom, it is the return hose from the stock cooler to the transmission.*

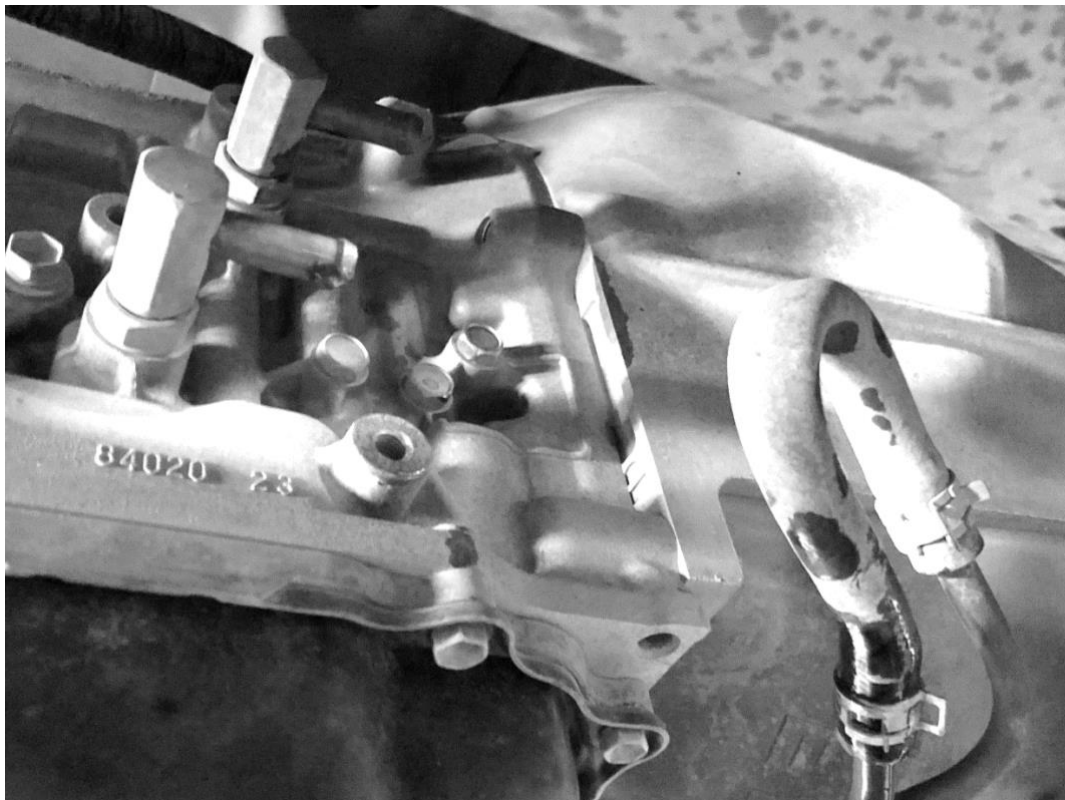
3. Connect the one end of the remaining hose to the second 3/8" hose to -6 90° fitting and secure to the top port on the transmission cooler, using Loctite 567 or similar on the -6 threads to ensure sealing.
4. Connect the other end of the hose to the return port in the side of the transmission, cut hose to length, slide over the heat sleeve and secure in place with a clamp.

### Hose Option 2: New cooler in place of factory transmission cooler

1. Connect the one end of the 3/8" hose to -6 90° fitting and secure the lower port on the transmission cooler, using Loctite 567 or similar on the -6 threads to ensure sealing.
2. Connect the other end of the hose to the top port on the driver's side of the transmission. Cut the hose to length, slide over the heat sleeve and secure in place with a clamp.



Stock Transmission Cooler is located under the vehicle on the passenger side. The hoses enter and exit the transmission on the driver's side shown in image. Remove both hoses from transmission and use one to loop the two hard lines.

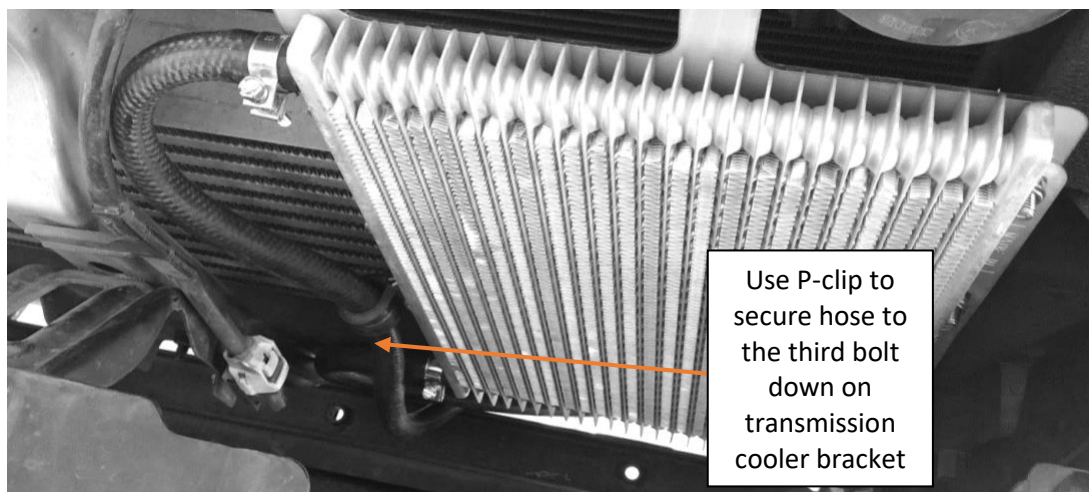
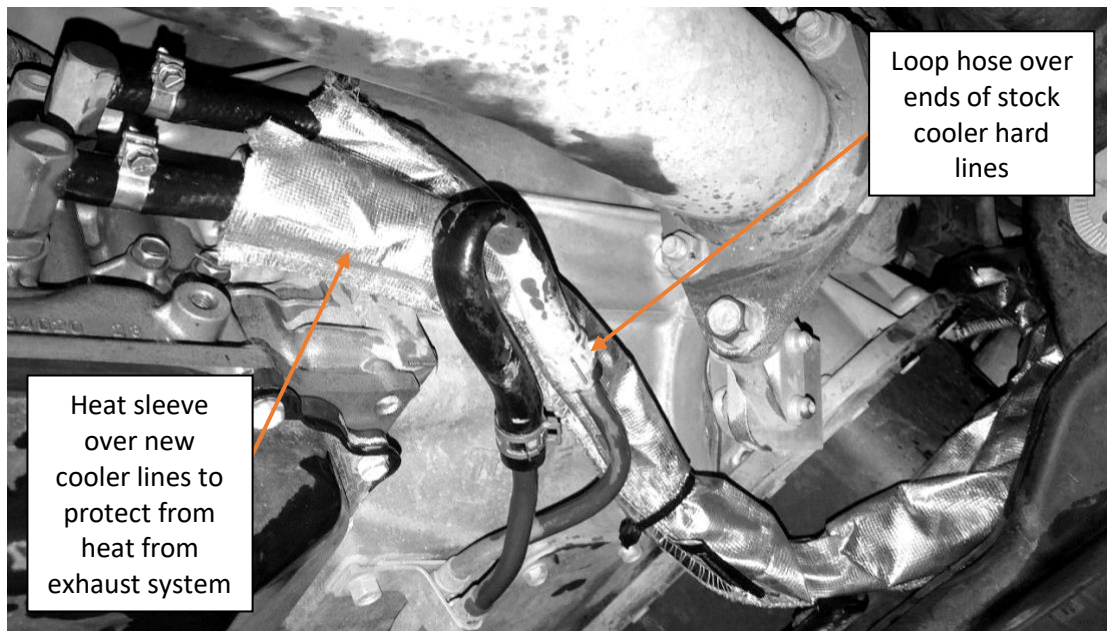


Both lines removed from transmission and hose looped over hard lines.

3. Connect the one end of the remaining hose to the second 3/8" hose to -6 90° fitting and secure to the top port on the transmission cooler, using Loctite 567 or similar on the -6 threads to ensure sealing.



4. Connect the other end of the hose to the return port in the side of the transmission, cut hose to length, slide over the heat sleeve and secure in place with a clamp.



*Make sure hose does not rub on center support*

7. Use the insulated P Clip to secure the line from the top port of the new transmission cooler, it uses the third M6 bolt down on the side closest to the center of the vehicle.
8. Use cable ties to secure any loose cooler line to prevent rubbing.
9. The cooler itself holds 500mL of fluid, plus 70mL per meter of hose, measure the total amount required and add that amount of factory specified ATF Transmission Fluid to the transmission.
10. Reinstall the grille in reverse as how it was removed in step 1.

### End of Installation Guide