



## Transchill Arctic Black Transmission Cooler kit

### Installation Guide (TCB648DPK)

This document is to be used as a guide for the installation of the Direction Plus Transchill Arctic Black Transmission Cooler Kit (TCB648DPK) to a **Toyota Land Cruiser 70 Series (2024 -on) with 2.8L diesel 4cyl and 6 speed automatic transmission**. It is recommended that the installation of the product be carried out by a competent qualified mechanic.

#### Included in the kit



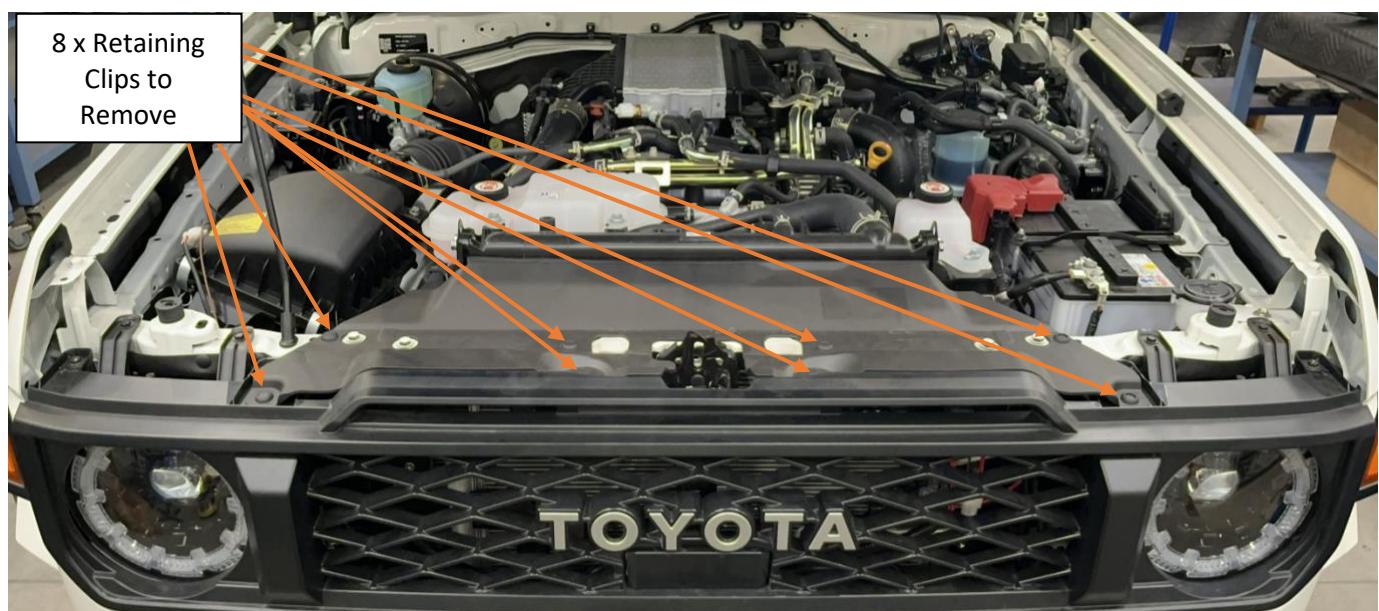
| Loose                                  | Bagged                                     | Cooler Mounting Hardware       |
|--|--|--------------------------------|
| 1 x 32mm Transmission Cooler (TCC14DP) | 2 x 15-17mm Clamps (FMC10)                 | 10 x M6x16 Bolts (SSSS304M616) |
| 1 x Upper Mounting Bracket (TCB648-BR) | 8 x Cable Ties (802078)                    | 20 x M6 Flat Washers (FMW6)    |
| 1 x Lower Mounting Bracket             | 2 x -6 to M16x1.5 Adaptors (DP816-6-M1615) | 10 x M6 Nyloc Nuts (FMN6)      |
| 2.5m of 3/8" Hose (7212-381BK)         | 2 x M16 Alloy Washers (PLFW16)             | 2 x M8x16 Bolts (SSSS304M816)  |
|  | 2 x -6 to 3/8" 90° Tail (DPP0090-06)       | 4 x M8 Flat Washers (FMW8)     |
|  | 1 x 6mL Loctite 567 (567-6ML-LOC)          | 2 x M8 Nyloc Nuts (FMN8)       |

## 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.

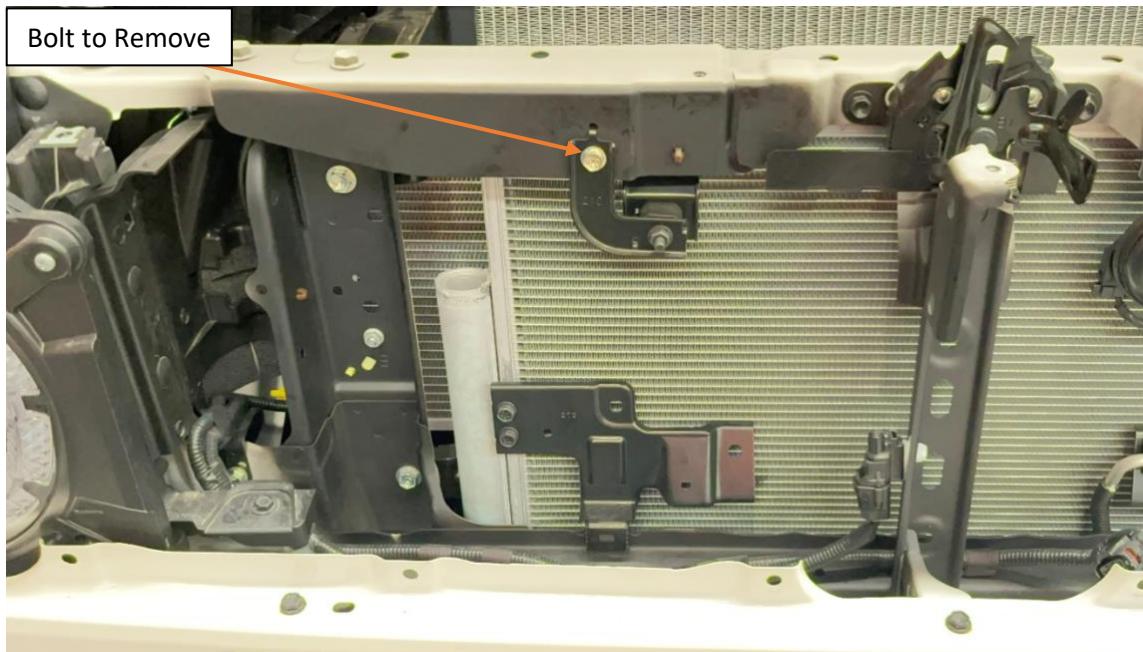
## Installation Guide

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

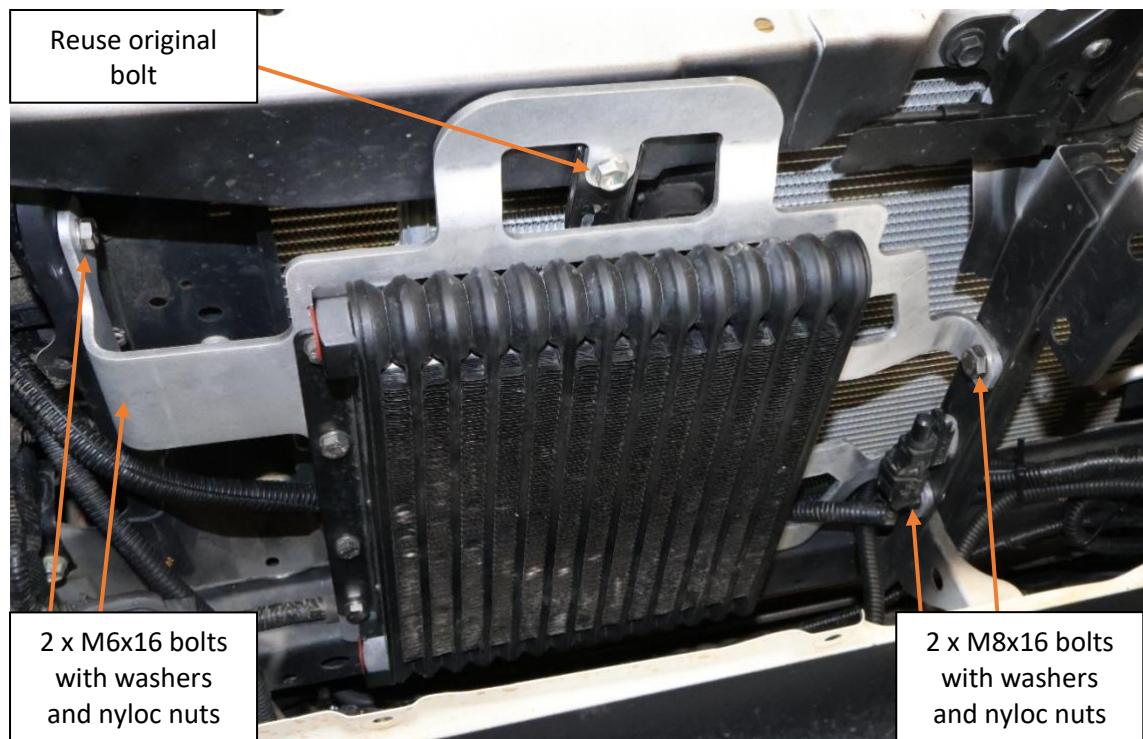


Land Cruiser 70 Series Front of Engine Bay

2. Remove the top five bolts that help support the top of the grille. Depending on trim spec there may be electrical connectors to disconnect from the center of the grille. The grill can now be removed taking extreme care. Lift the top bolt tabs over the locking bosses, it then unclips by pulling forward. There are clips halfway up the headlights on the outsides and along the bottom edge of the grill. It is possible to use a clip removal tool down from where the top trim panel was removed in step 1. Remove the M8 bolt that retains the horn on the driver's side and lift the horn up of the way.

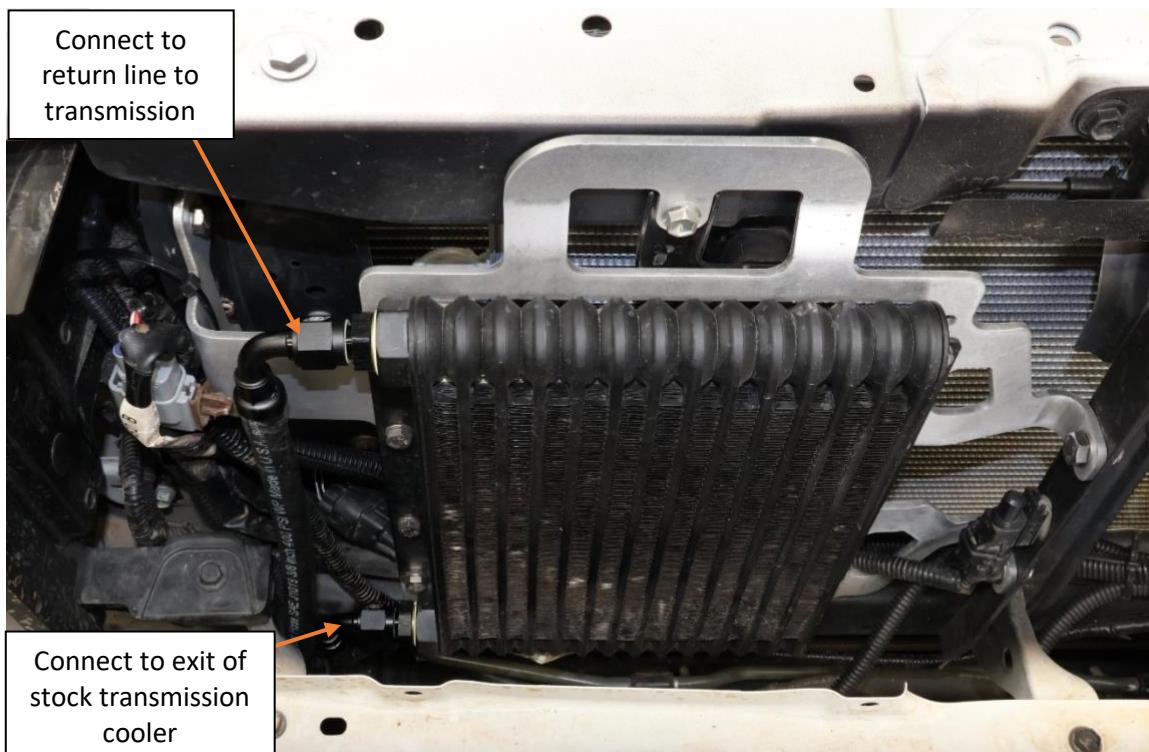


3. Assemble the transmission cooler to the brackets in the kit. The assembly will use 8xM6 bolts, 16xM6 flat washers and 8xM6 nyloc nuts. The cooler mounts to the front face of the brackets.
4. Secure the M16x1.5 threaded adaptors to the ports of the transmission cooler, making sure to use a 16mm sealing washer under each and Loctite 567 (or similar) to secure them in place.



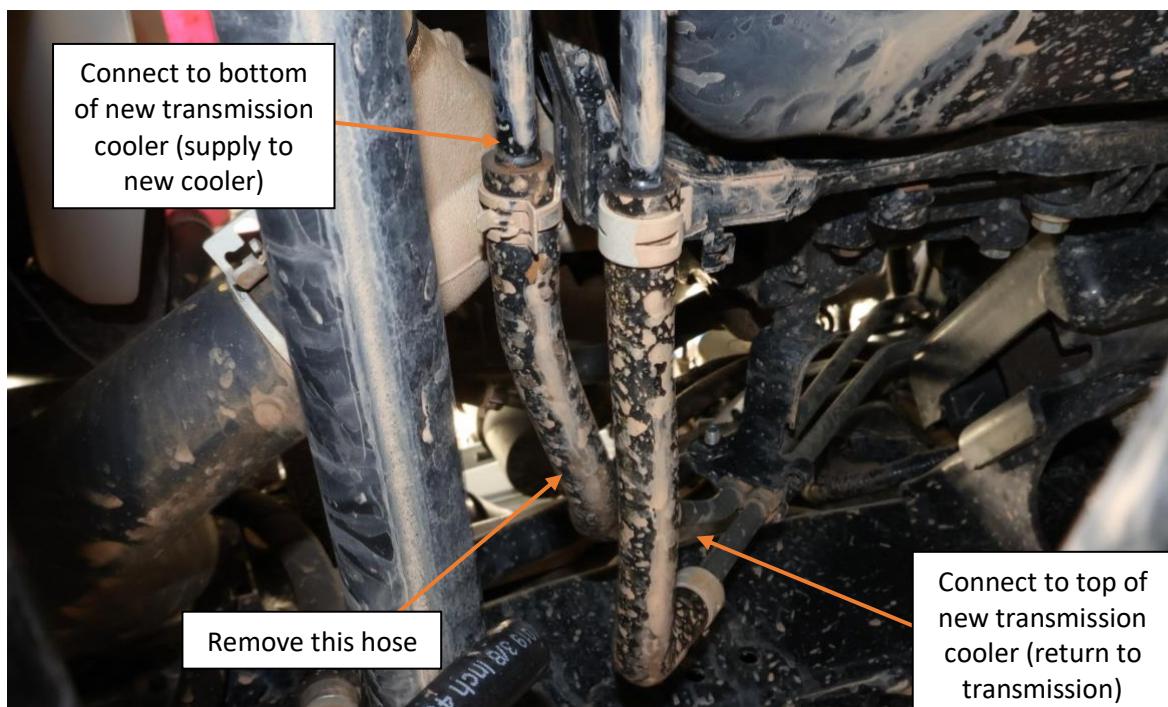
Drivers side behind grille: transmission cooler mounted in place

5. Loosely bolt the new transmission cooler and bracket assembly into the vehicle locating the top off the bolt removed in step 2. Sandwich the original bracket between the horn and new cooler bracket. Line the bracket up with the mounting holes and fit all bolts loosely, once you're happy with the position with the cooler the bolts can be secured into place.



Drivers side behind grille: transmission cooler mounted in place and plumbed up

6. Cut the 3/8" hose in half and push one end of each onto the two -6 fittings.
7. Use the 90° fittings on each of the ports, again using Loctite 567 (or similar) to secure in place. The 90° fittings should be aiming straight down.
8. From the lower port fitting, run the hose down the side of the a/c condenser / radiator. Measure and cut the hose to length and connect the other end to the outlet port on the stock transmission cooler hard pipe, secure in place with a clamp.



Stock transmission cooler lines under front of engine on driver's side.



9. From the top port fitting, run the hose down the side of the a/c condenser / radiator. Measure and cut the hose to length and connect the other end to the hard steel return line to the transmission that used to connect to the stock transmission cooler, secure in place with a clamp.
10. Tighten down the -6 fittings now the hoses are connected and use cable ties to secure any loose cooler line to prevent rubbing.
11. 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.
12. Reinstall the grille and top trim panel in reverse as it was removed in step 1 & 2.

### End of Installation Guide