

COOLMASTER *OFFROAD*

Dual External Transmission Oil Cooler Kit Suitable for:



**Toyota Land Cruiser 200 Series with
5 and 6 Speed Automatic Transmissions**

**WITH 2UZ-FE 4.7L V8 PETROL, 1UR-FE 4.6L V8 PETROL &
1VD-FTV 4.5L TWIN TURBO DIESEL ENGINES**

*Please read through all of the instructions carefully before proceeding.
If any of the information does not appear correct or the diagrams don't
match your vehicle, please contact your local ALLTRANZ branch.*

Safety First

**Hot engines and hot transmissions can cause serious injury.
Before removing the hoses and parts from the vehicle,
allow sufficient time for engine and auto to cool.**

Parts List:



1 x Dual Cooler Bracket
with Coolers Mounted



6 x 8-16mm Stainless
Steel Screw Clamps



3.5m x Cooler Line
Hose with Conduit



3 x M6x20mm
SEMS Bolts



2 x NON DPF Brackets
1 x DPF Bracket



5 x 300mm Cable Ties



1 x 45cm Dual Cooler
Link Hose with Conduit

Expected Installation Time: ~ 2 Hours

Summary of Installation - For Experienced Fitters

- Ensure you have enough transmission oil to top up your transmission at the end.
- Remove the plastic cover above the radiator by removing the plastic clips and screws.
- Remove the chrome headlight fascias (if fitted).
- Remove grill from the front of the vehicle.
- Install Dual Cooler Link Hose between the bottom barbed fitting of the front cooler and the top barbed fitting of the rear cooler. Secure with two (2) screw clamps.
- Fit the longer cooler line to the remaining barbed fittings on the coolers but do not cut yet. Leave it looped. FIT IT DRY - DO NOT use lubricant. Secure with two (2) screw clamps.
- Unbolt horn bracket on passenger side and lower bolt in centre grill support.
- Slide the cooler bracket and hoses down in front of the radiator.
- Mount the top of the cooler and the passenger side horn by attaching back to the original horn mounting bolt hole. Horn goes behind cooler.
- Bolt bottom of bracket to lower part of centre grill support using factory bolt.
- Locate the last remaining bolt hole on the passenger side of the cooler bracket. Insert only one of the 2 x DPF or 1 x NON-DPF bracket and tighten the bolt into the bolt hole.
- Tighten all cooler bracket bolts.
- Remove foam cube where power steering cooler feed and return lines are insulated.
- Remove lower bash plate on driver's side, below the front of the vehicle.
- Pass feed and return hose from new cooler through void created by removing foam.
- Connect hose from new cooler to the factory cooler steel line located below the drivers side battery. (Lower of the two steel lines)
- Connect hose from new cooler to return steel line under the vehicle.
- Secure all hoses away from hot or moving parts.
- Check transmission fluid level.
- Road test vehicle then re-check transmission fluid level. Also inspect cooler and fittings for leaks. Tighten if necessary.
- Refit any previously removed pieces.
- Clean up any transmission fluid from the vehicle.

Detailed Installation Instructions

Before commencing work, please ensure that you have sufficient transmission fluid to top up at the end of the job.

1. Open bonnet.
2. Remove upper radiator cowl by removing the five (5) plastic clips holding the radiator cowl in place.



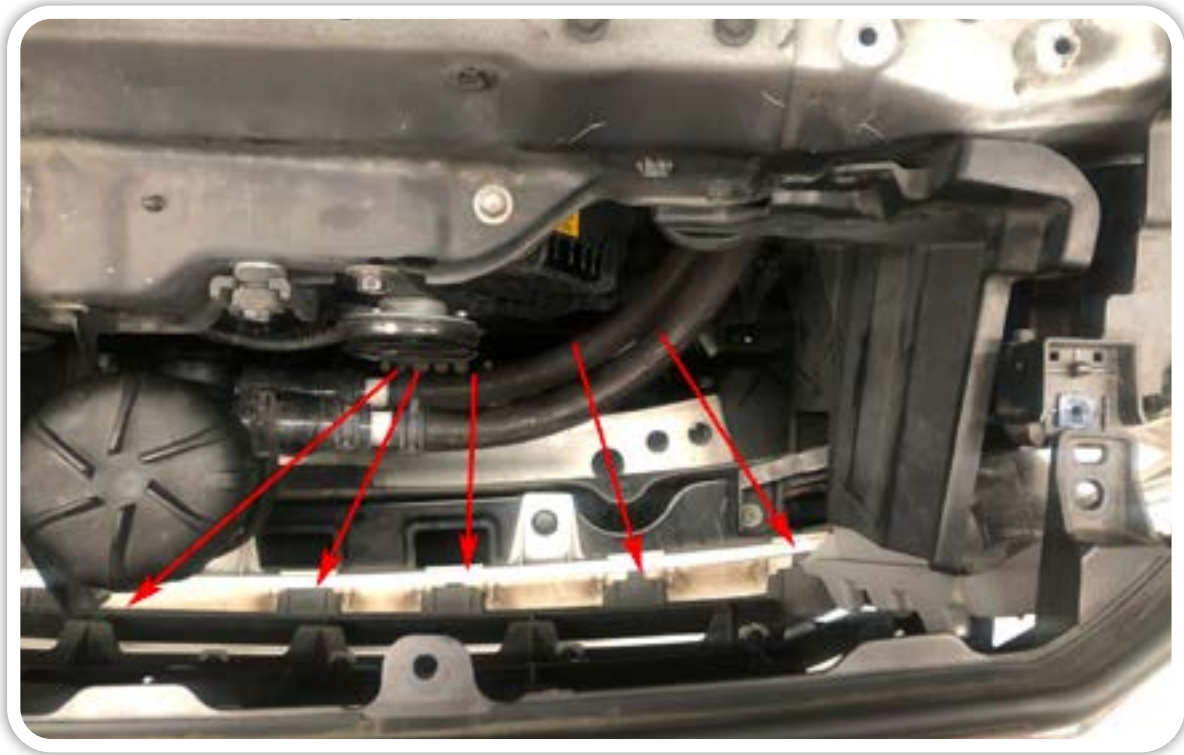
3. *If Applicable: Remove chrome headlight fascias by gently applying pressure behind chrome fascia, there are five (5) push rivets that hold the fascias in place. The fascias can be removed by hand but a pry tool can also be used. Be careful not to damage the paintwork while using the pry tool.*



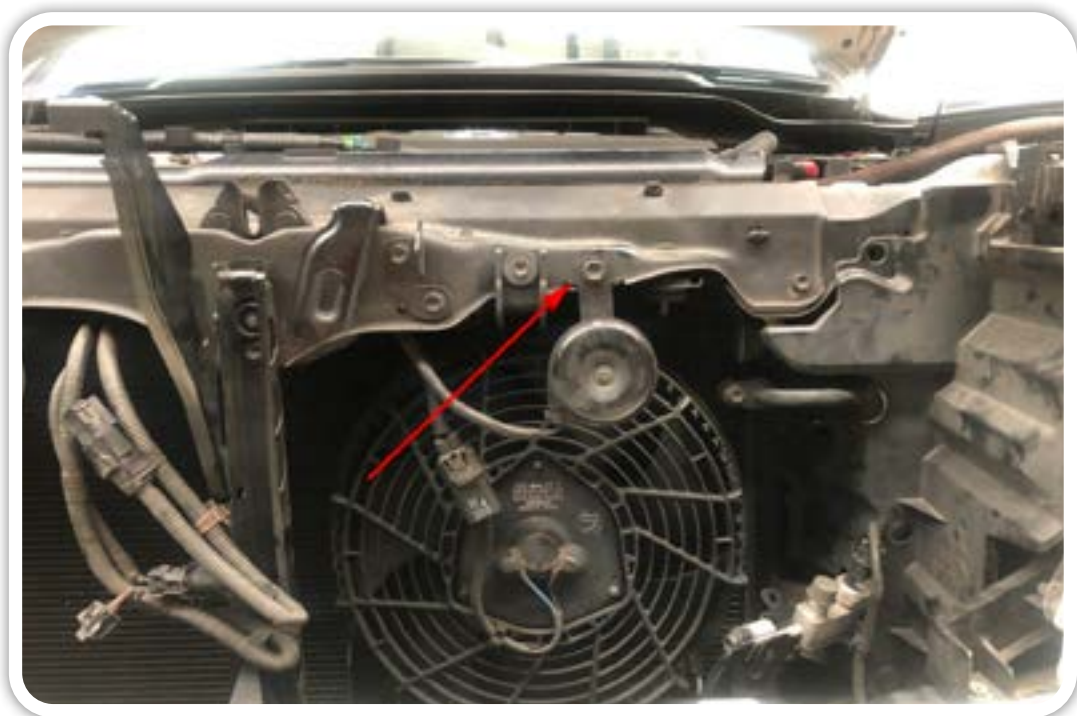
4. *Remove the shroud from the bonnet release catch by removing the bolt on the drivers side and releasing the clip on the passenger side. Do not discard.*



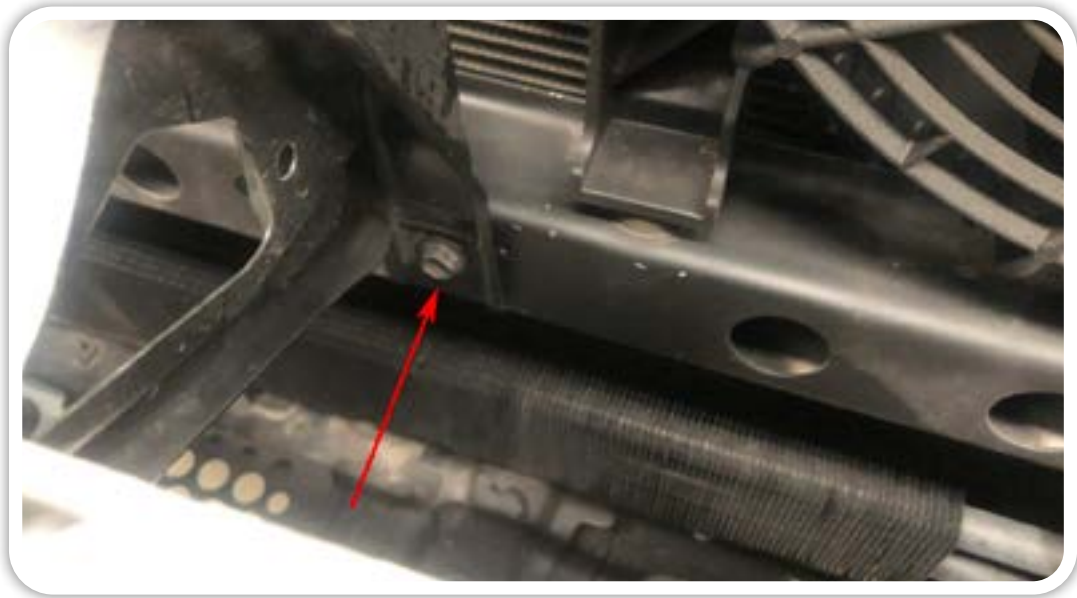
5. Remove grill by gently maneuvering the tabs forward, working from one side to the other.



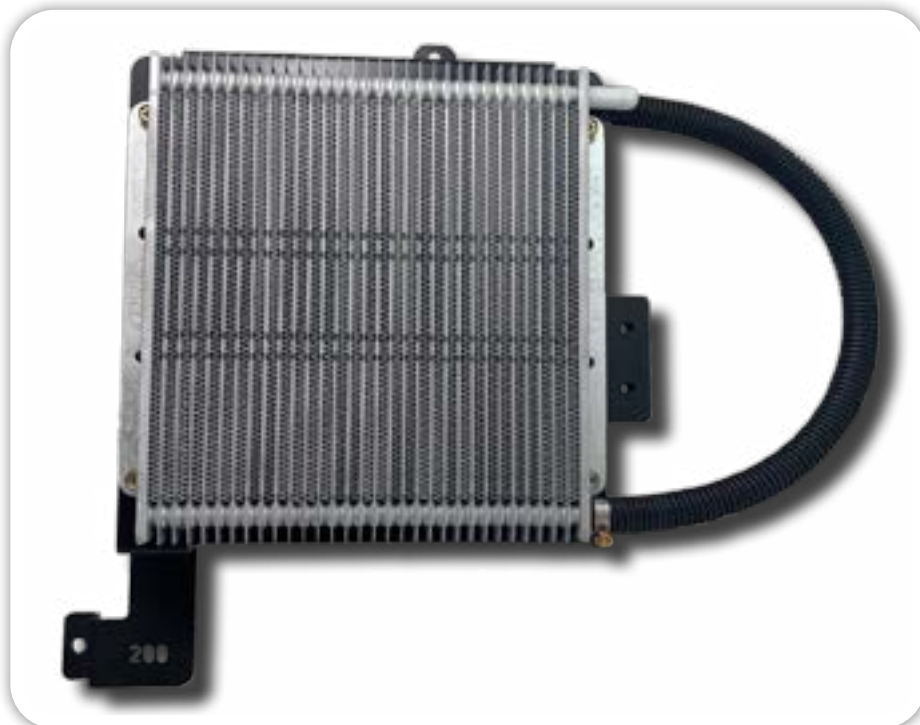
6. Remove horn bracket on passenger side fixed to upper radiator support. Do not discard bolt.



7. Remove the bolt holding the centre grill support to the lower radiator support. Do not discard bolt.



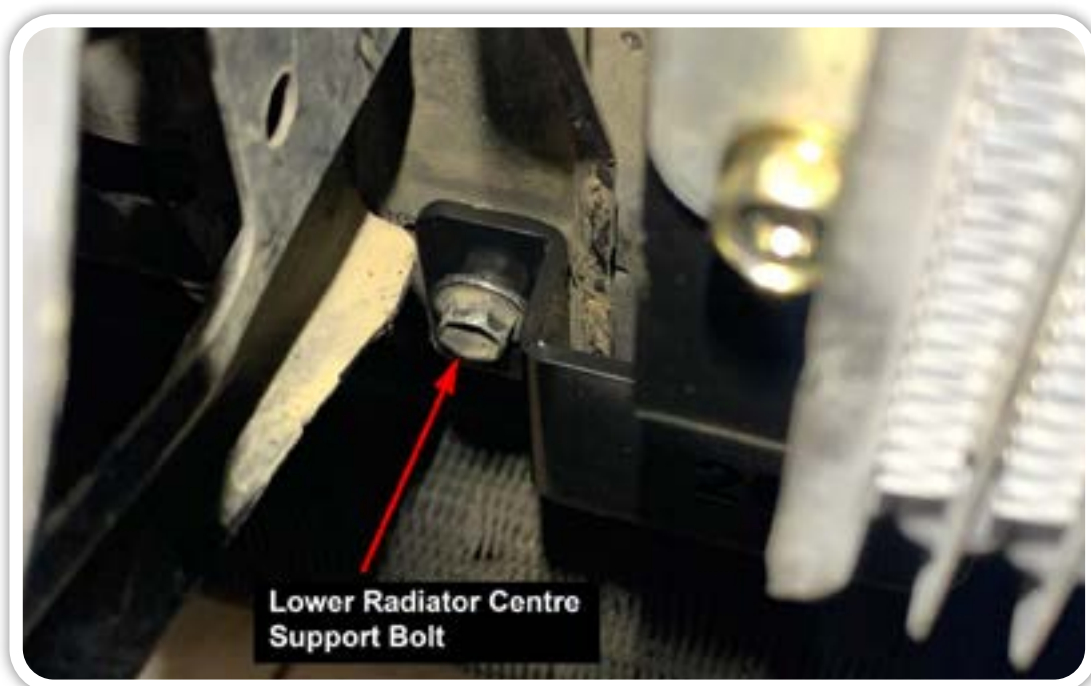
8. Cut the Dual Cooler Link Hose to be exactly 45cm long. Fit between the bottom barbed fitting of the front cooler and the top barbed fitting of the rear cooler. Secure with two (2) screw clamps. Fit the longer length of Cooler Line Hose to the remaining two (2) fittings on the coolers. Do not cut yet - leave looped. Secure with two (2) screw clamps.



9. Lower Cooler assembly into place. Insert factory horn bracket bolt through top cooler mounting hole and then through factory horn bracket. Fix into the original horn bracket thread and finger tighten.



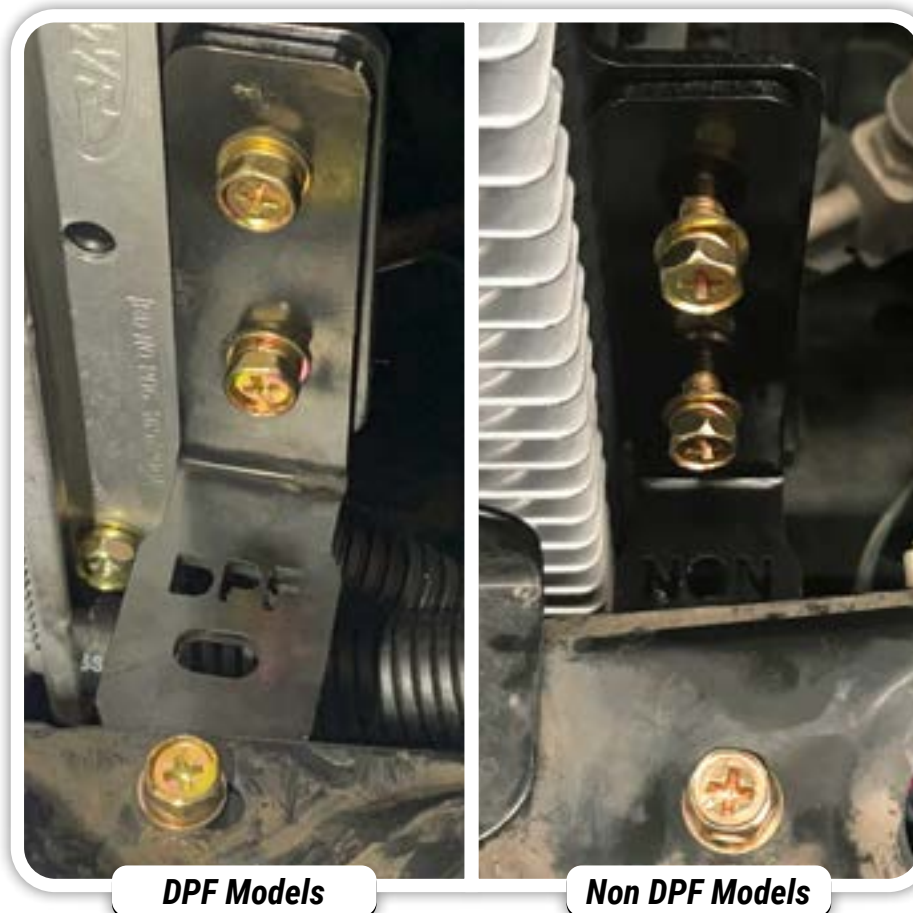
10. Insert factory Lower Radiator Centre Support bolt through lower mount in cooler bracket and into original thread in the lower support panel. Tighten this bolt and also the top bolt.



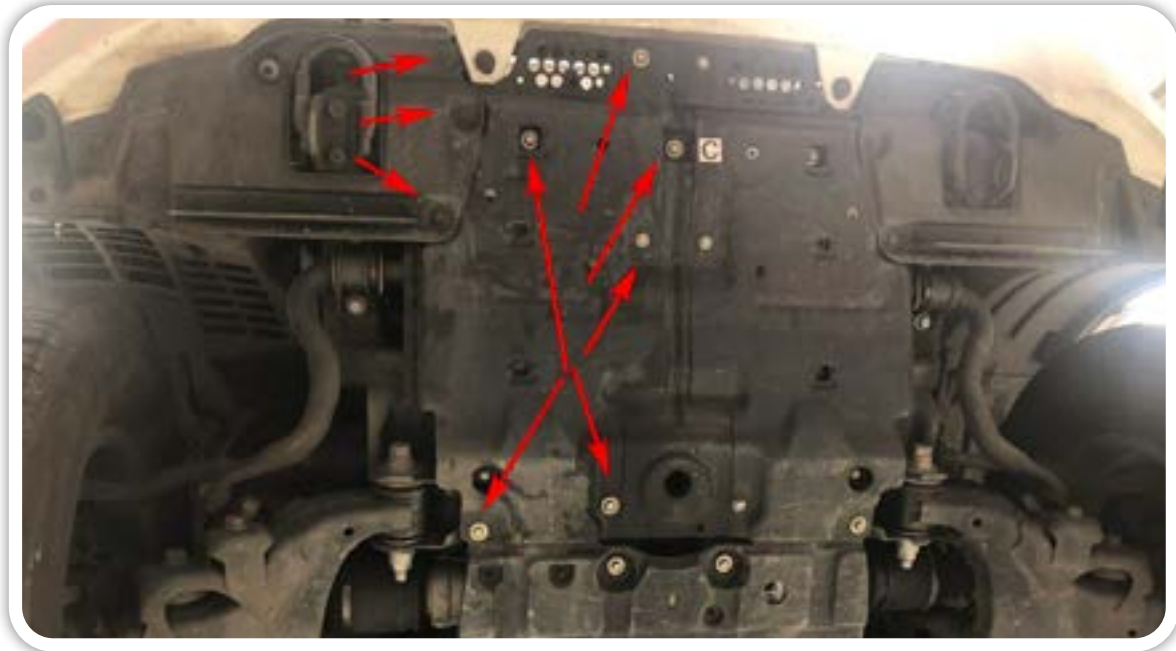
- 11.** Install only one (1) of the following mounting brackets after confirming if your vehicle model has a DPF (Diesel Particulate Filter) or not.



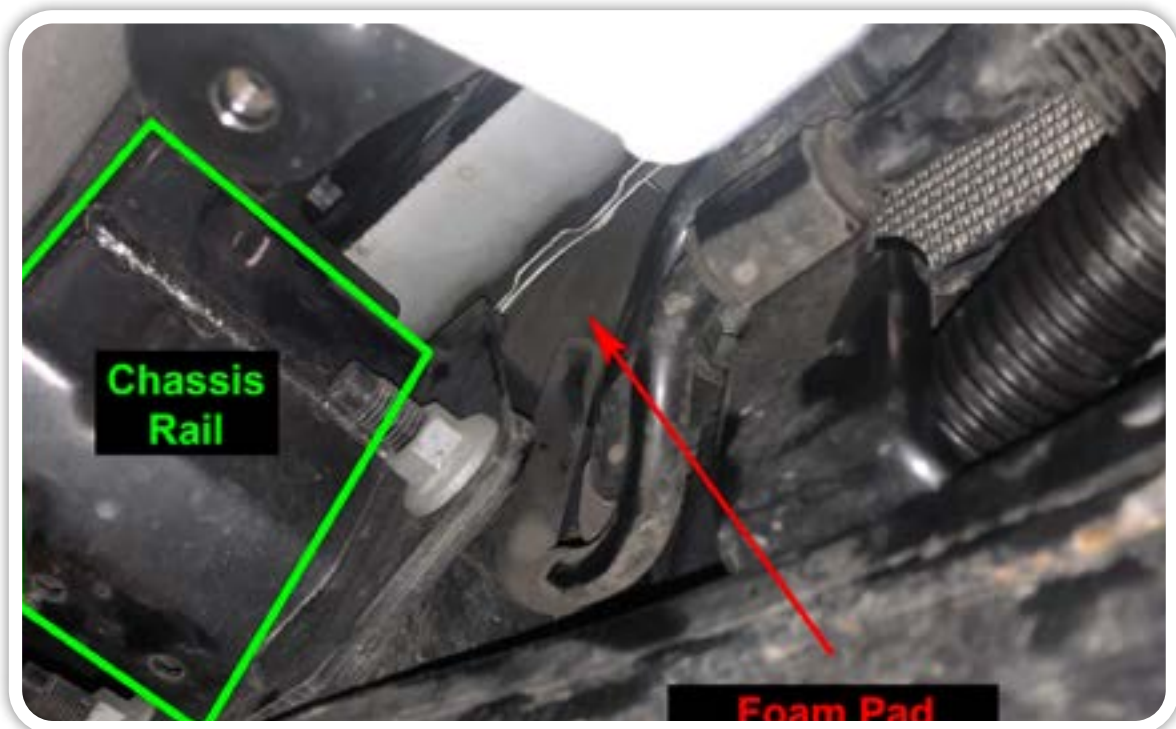
- 12.** Fix the correctly selected bracket to the grill support panel using one (1) of the supplied M6x20 SEMS bolts. The two threaded holes on the side of the cooler bracket will match up to the two holes on the brackets. Secure using two (2) M6x20 SEMS bolts.



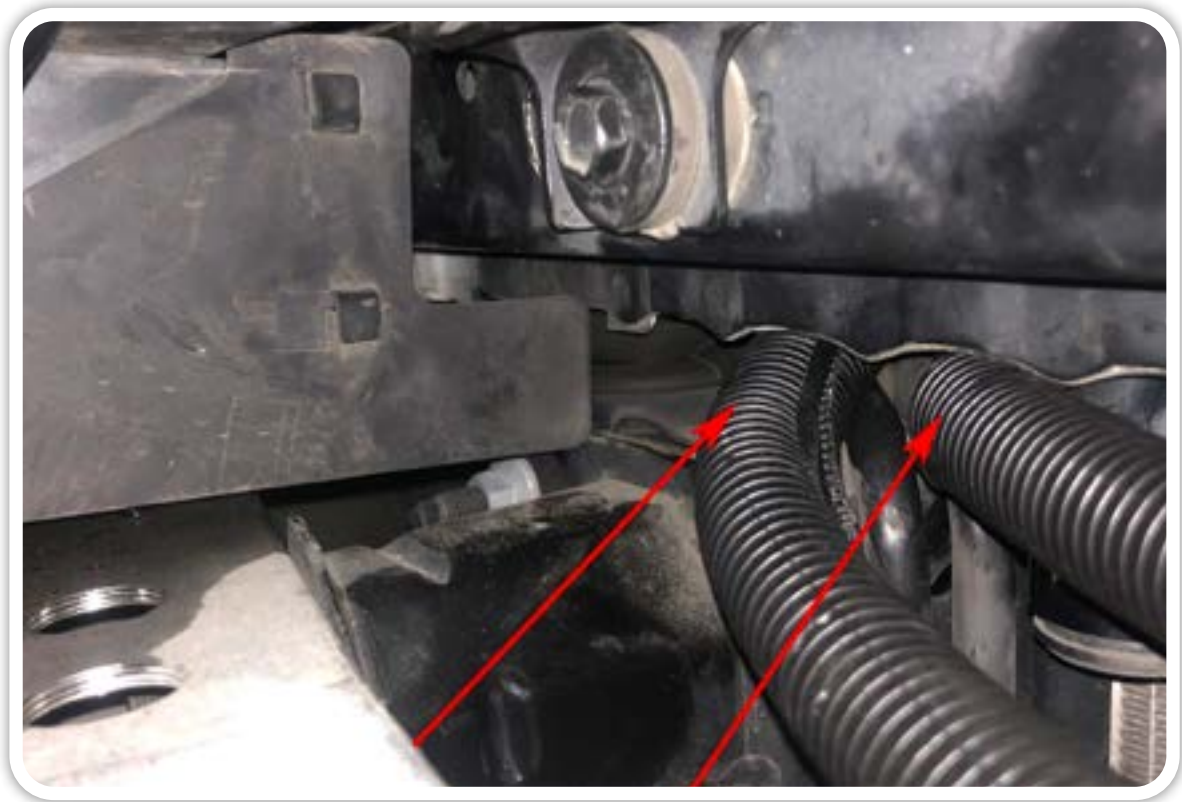
- 13.** Under the vehicle, remove three (3) 10mm plastic fasteners holding right (driver) side forward cover. Remove six (6) 12mm bolts and lower the metal bash guard.



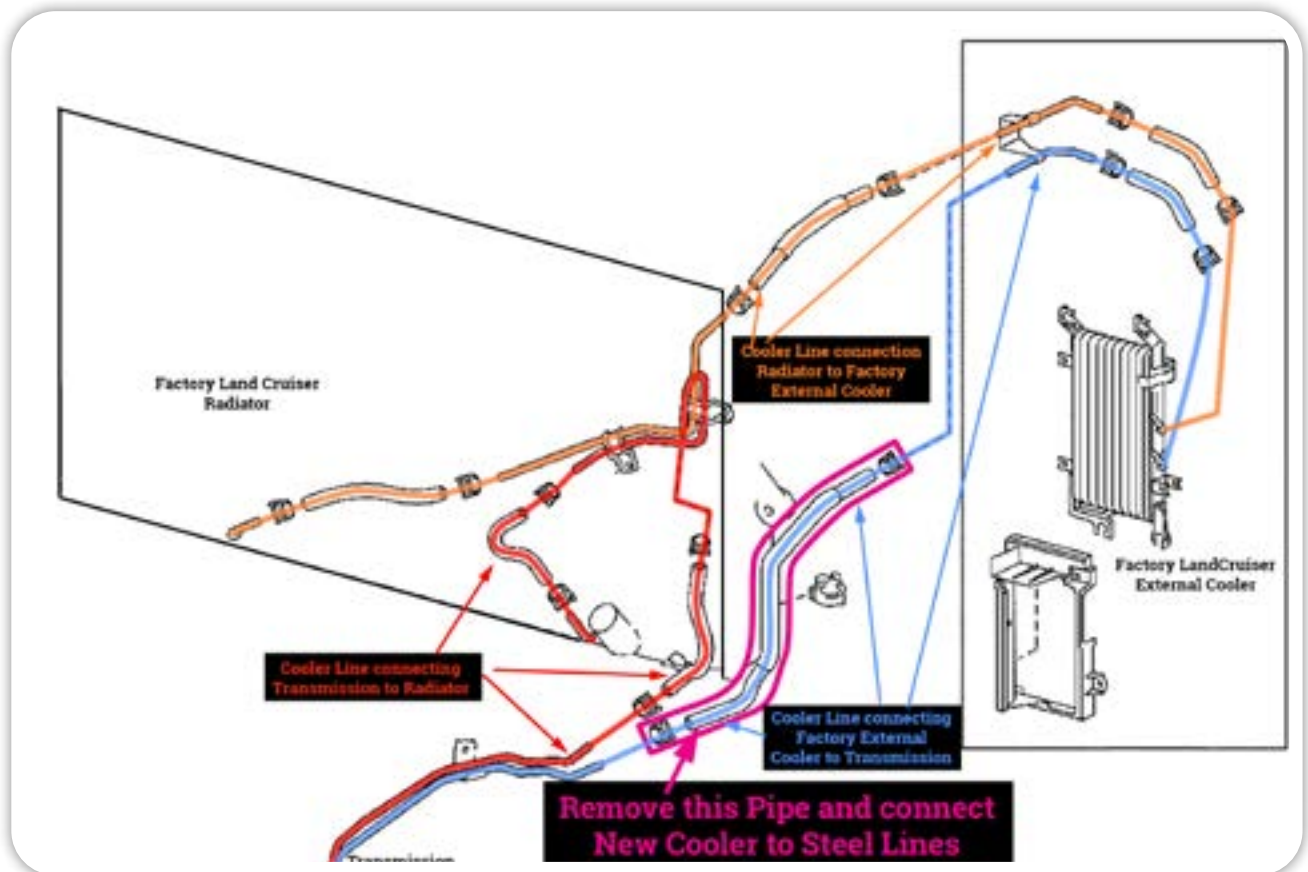
- 14.** Remove factory foam cube on the drivers side (RHD) of the radiator just above the chassis rail. This can be discarded as we will not need to refit.



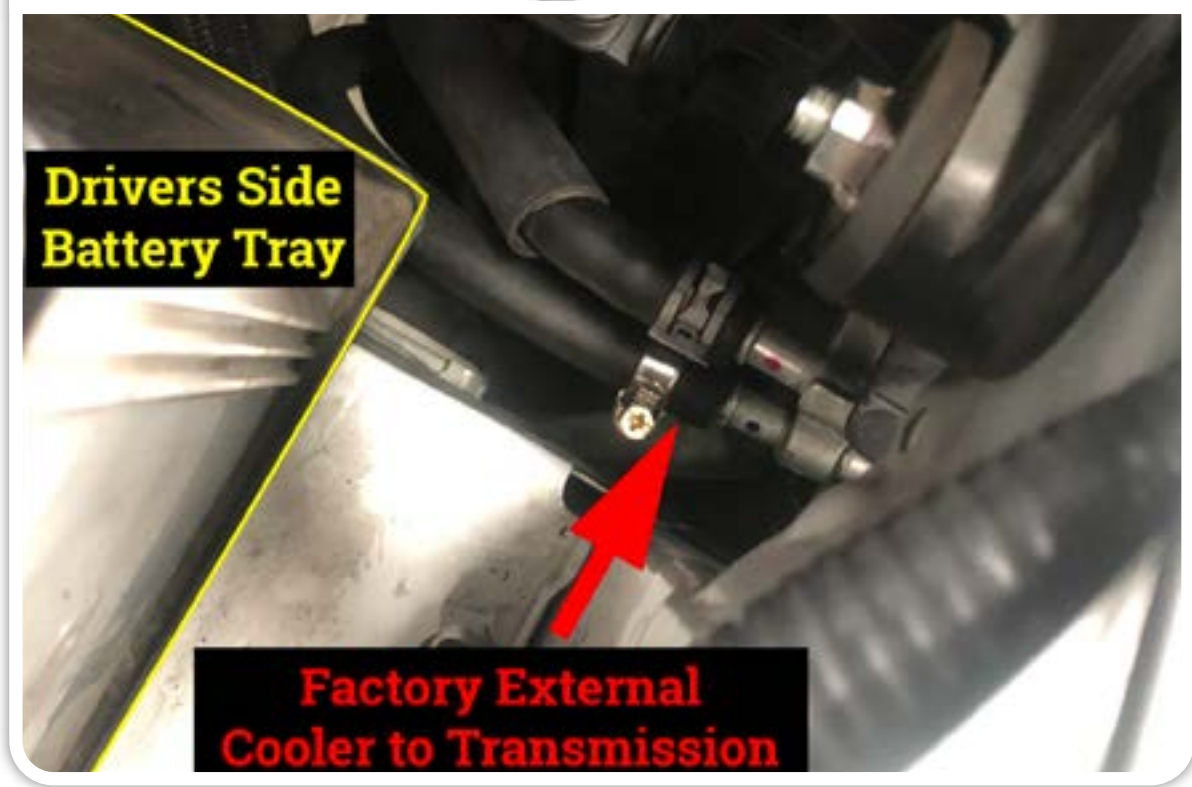
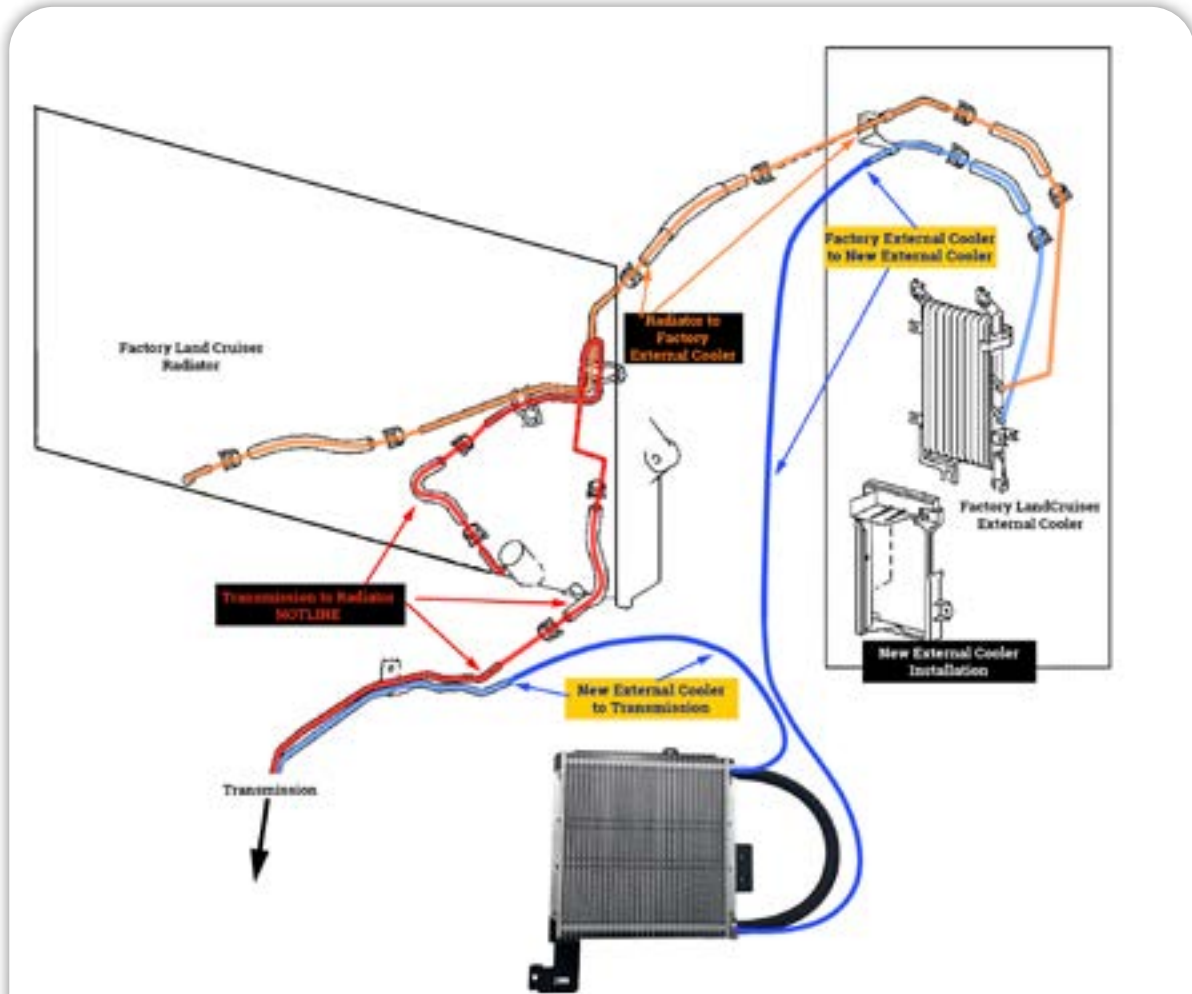
- 15.** Route cooler hoses along radiator support panel to the hole now made by removing the foam pad. Secure with cable ties as you go. Allow a gradual loop of the cooler lines near the coolers so they are not pulling on the fittings.



- 16.** Remove factory cooler hose (outlined in pink below) that joins the Toyota external cooler to the return line for the transmission. We will use these two connections for the new external cooler.



- 17.** The connection at the factory external cooler end is located just under the drivers side battery tray. If too difficult to access with battery in place, disconnect all batteries in the vehicle before removing the battery. The line you want to remove is the lower of two lines. Cut to length the first connection to the factory external cooler connection. Secure with one (1) supplied hose clamp.



- 18.** Route the other end of the cooler hose to the steel line under the vehicle that returns to the transmission.



- 19.** Cut cooler hose to correct length then install on steel line. Secure with one (1) supplied screw clamp. Cut conduit to length.



- 20.** Check that the cooler hoses are properly secured in place away from direct heat and moving parts.
- 21.** We recommend not refitting bash plates yet in case you need to adjust or tighten screw clamps after test driving.
- 22.** Refit Grill by gently working the tabs in to their designated seating.
- 23.** Using a 10mm socket, refit the three (3) upper fixings for the grill.



- 24.** If Applicable: Refit chrome headlight fascias by lining up the push rivets and applying pressure.

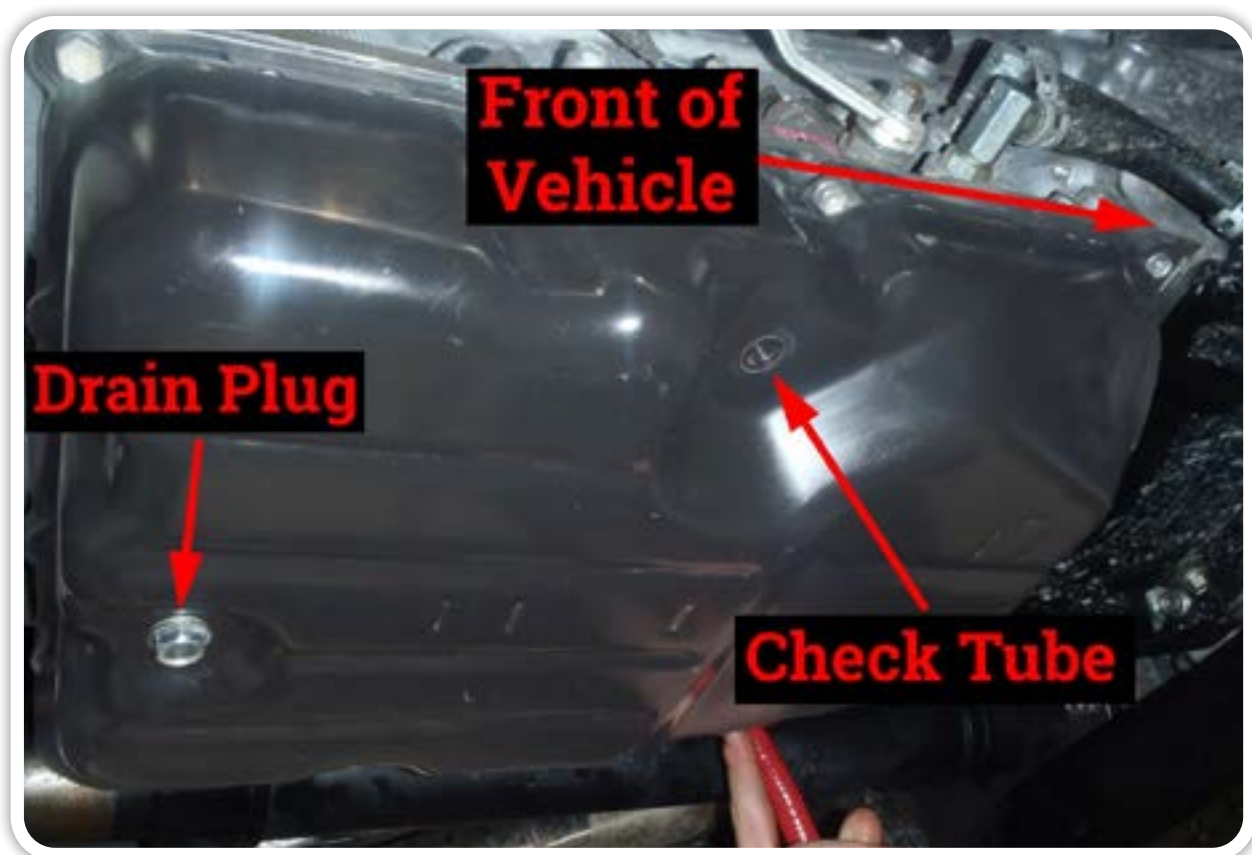
- 25.** Refit upper radiator cowl by resetting the five (5) push rivets by pulling the head up from the body of the fixing. Insert into place and push on head to seat in place.



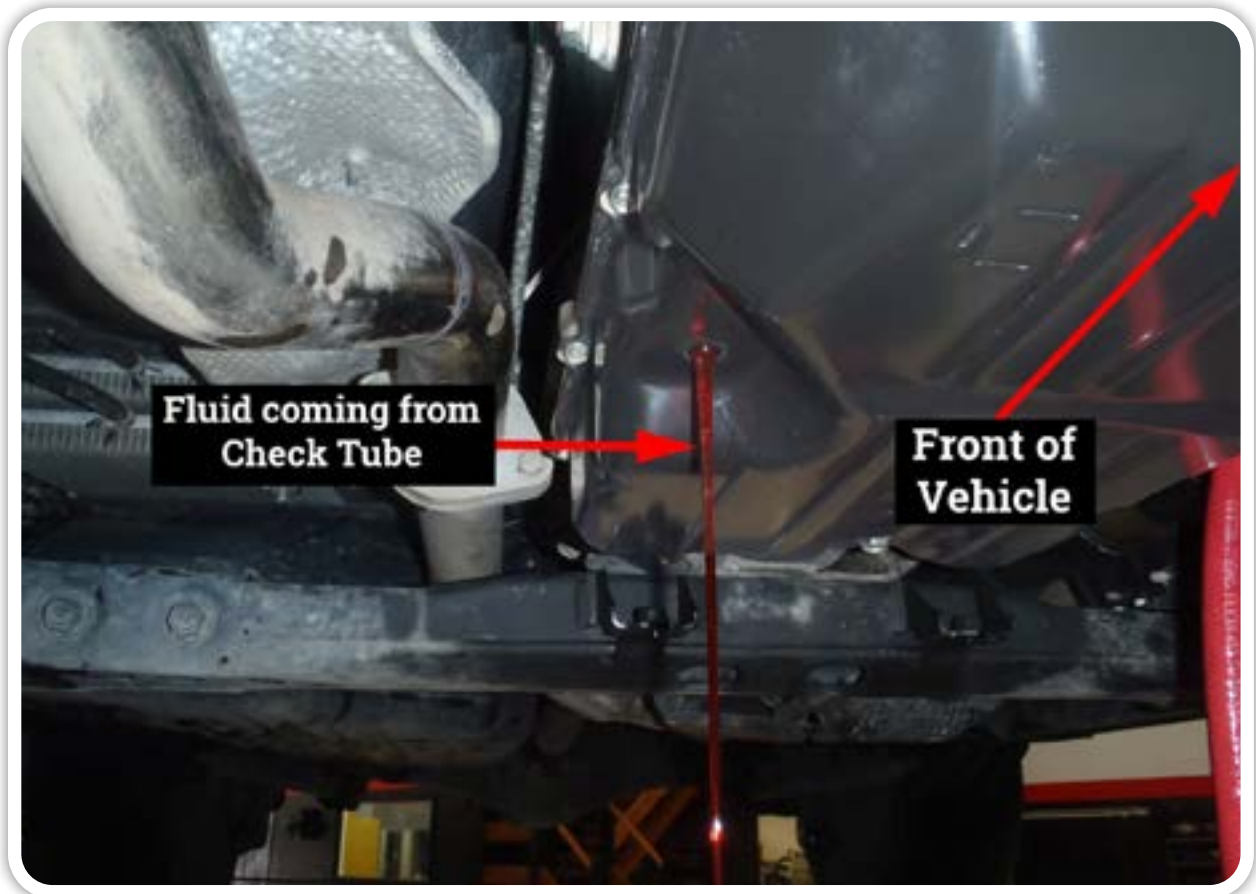
Checking Transmission Fluid Level

- 26.** Ideally with two people - Start the car. Please ensure handbrake is on and a foot is firmly on the brake.
- 27.** Under the vehicle the second person - Locate and remove the 5mm Allen key head labeled "Check" located in the sump of the transmission. DO NOT remove the 14mm bolt located nearby as this is the transmission drain plug.

PLEASE NOTE: THE TRANSMISSION FLUID MAY BE QUITE HOT. PLEASE TAKE CARE WHEN UNDOING CHECK TUBE BOLT.



- 28.** *If there is a lot of fluid streaming from the check tube, then the transmission is overfull, please allow the fluid to drain until it slows to a light stream - just before it slows to a dribble, then re-insert 'Check' bolt and tighten.*



- 29.** *If there is no fluid coming out of the check tube, locate and remove the 24mm fill plug on the passenger side of the transmission and add compatible transmission fluid until the fluid starts to stream out of the check tube.*
- 30.** *Once fluid slows to a light stream - just before it slows to a dribble, then reinsert 'Check' bolt and tighten.*
- 31.** *If removed, re-fit the 24mm fill plug and tighten.*
- 32.** *Road test the vehicle for at least 15 minutes. Try to shift through all gears and through up and down hill scenarios.*

- 33.** *With the engine still running, recheck fluid level by removing the check tube bolt and checking if fluid lightly streams out. If no fluid is present please repeat steps 26 to 33.*
- 34.** *Once fluid level is correct and test driving is complete, visually check for leaks and re-tighten any fittings as required. Check again for any transmission fluid on the vehicle and clean off.*
- 35.** *Reinstall Bash Plates under the vehicle.*

***This completes the installation of the
Dual External Transmission Oil Cooler Kit to Suit
Toyota Land Cruiser 200 Series with 5 and 6 Speed
Automatic Transmissions***

***PLEASE REMEMBER ALL AUTOMATIC TRANSMISSIONS HAVE A SERVICE INTERVAL OF
2 YEARS OR 40,000KM TO IMPROVE THE LONGEVITY OF THE TRANSMISSION.***