

COOLMASTER *OFFROAD*

Dual External Transmission Oil Cooler Kit Suitable for:



**Toyota Land Cruiser 300 Series with
10 Speed Autoamatic Transmissions**

WITH F33A-FTV - 3.3L V6 TURBO DIESEL ENGINE

*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 9-17mm Stainless
Steel Hose Clamps



4m x Cooler Line Hose
with Conduit



2 x M8
SEMS Bolts



2 x M6 Nuts



5 x 300mm Cable Ties



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 2 clips holding loom beside horn to the upper radiator support*
- *Remove 5 bolts holding upper radiator support and 3 bolts holding front grill*
- *Remove lower bolt holding center grill support*
- *Pull upper radiator support and front grill forward to gain access*
- *Assemble cooler hoses. Cut longer hose in half.*
- *Feed hoses under the car and along the side of the radiator support panel*
- *Fit cooler in place. Lower mounts on existing studs using 2 x M6 Nuts*
- *Reposition top radiator mount and bolt in place finger tight*
- *Fit two M8 Bolts to the top mount of the cooler*
- *Re-assemble upper radiator support, grill and cover*
- *Route the rear cooler line to the passenger side of Radiator transmission cooler*
- *Route front cooler line to transmission return line*
- *Secure all hoses away from hot or moving parts with no kinks that may restrict flow.*
- *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.*

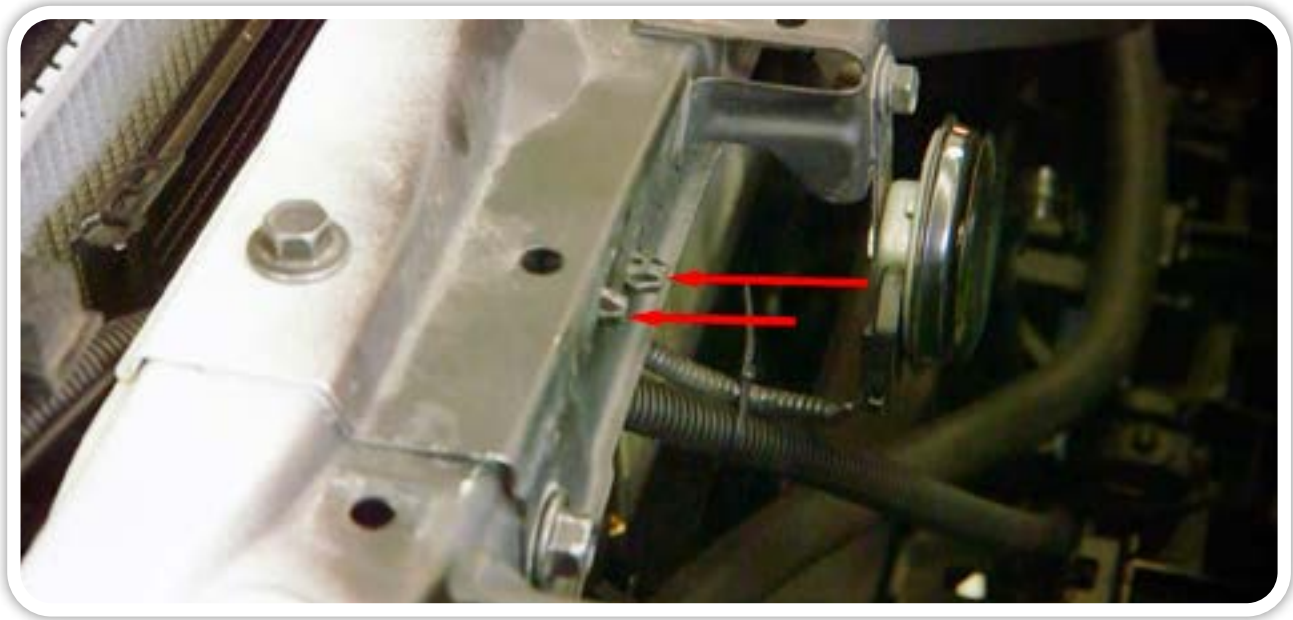
Detailed Installation Instructions

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 seven (7) plastic clips holding the radiator cover in place.



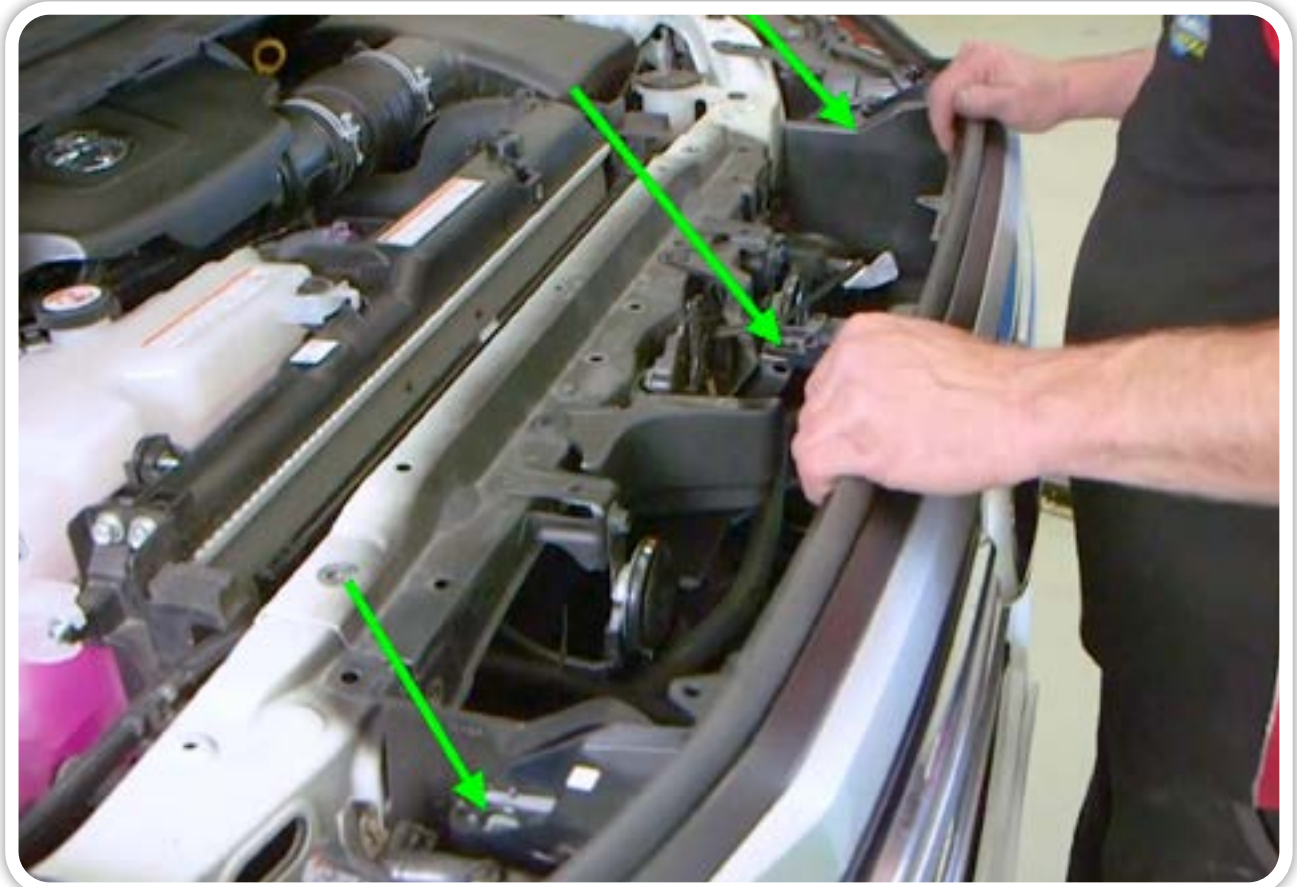
3. Remove the two clips holding the loom to the upper radiator support beside the horn.



4. Remove the 5 bolts indicated below that hold the upper radiator support in place.



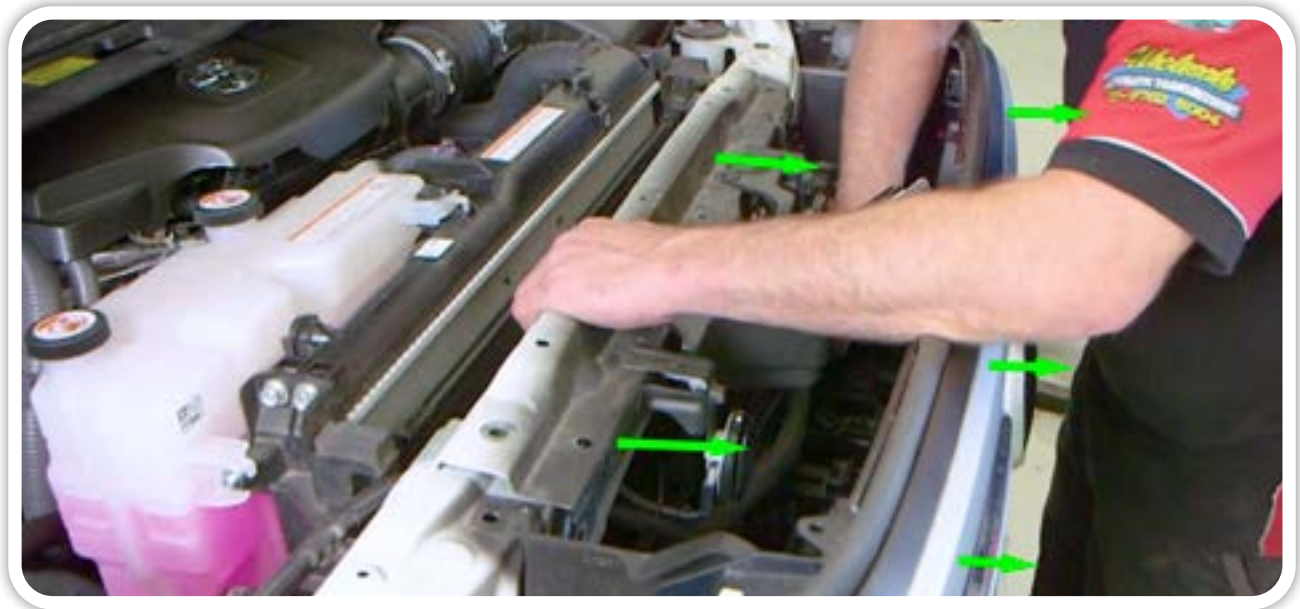
5. Remove the 3 bolts holding the front grill.



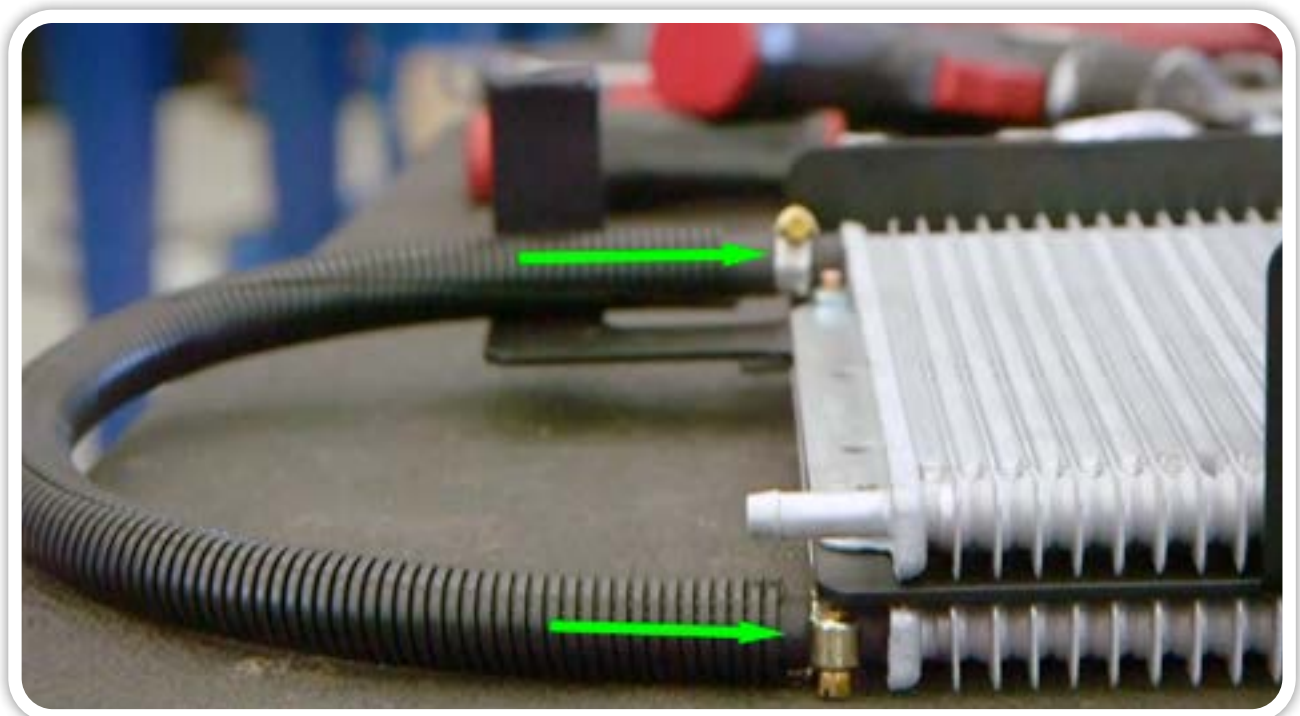
6. Remove the bolt holding the center grill support to the lower radiator support. Do not discard bolt.



7. Pull the upper radiator support and the grill forward to give access to the area in front of the radiator.



8. Connect the link hose between the two coolers. Fit between the bottom barbed fitting of the front cooler and the top barbed fitting of the rear cooler. Secure with two (2) hose clamps.



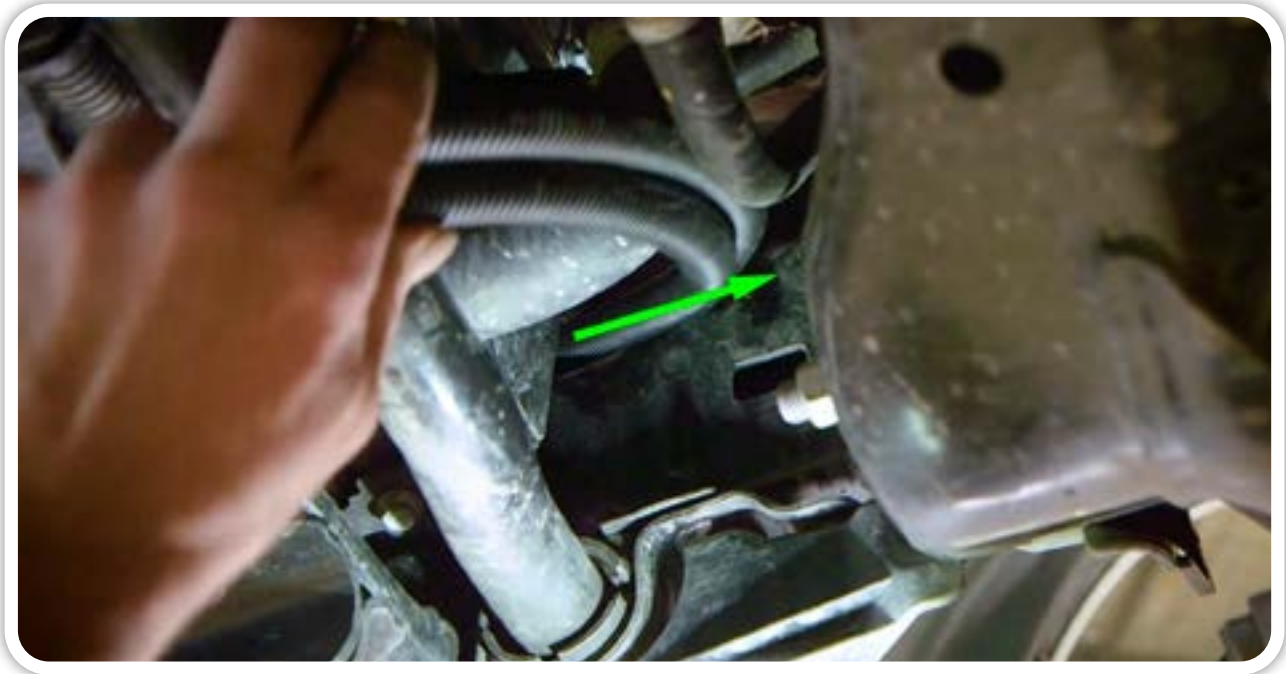
9. Fit the longer length of cooler line hose to the remaining two (2) fittings on the coolers. Find the mid point of the hose and cut in half. Secure with two (2) hose clamps.



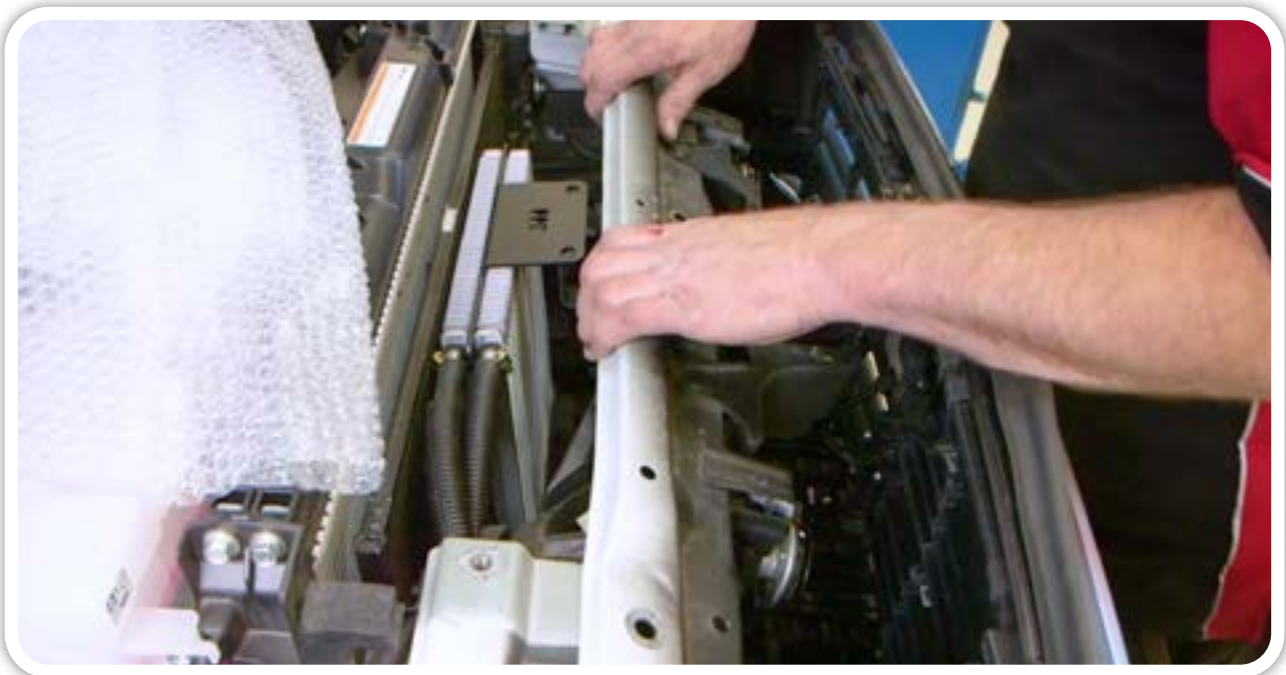
10. Feed the two halves of the hose in front of the AC condenser so you can access them from under the vehicle.



- 11.** Route the hoses along the top of the radiator side support panel as shown.



- 12.** Lower the cooler into place.



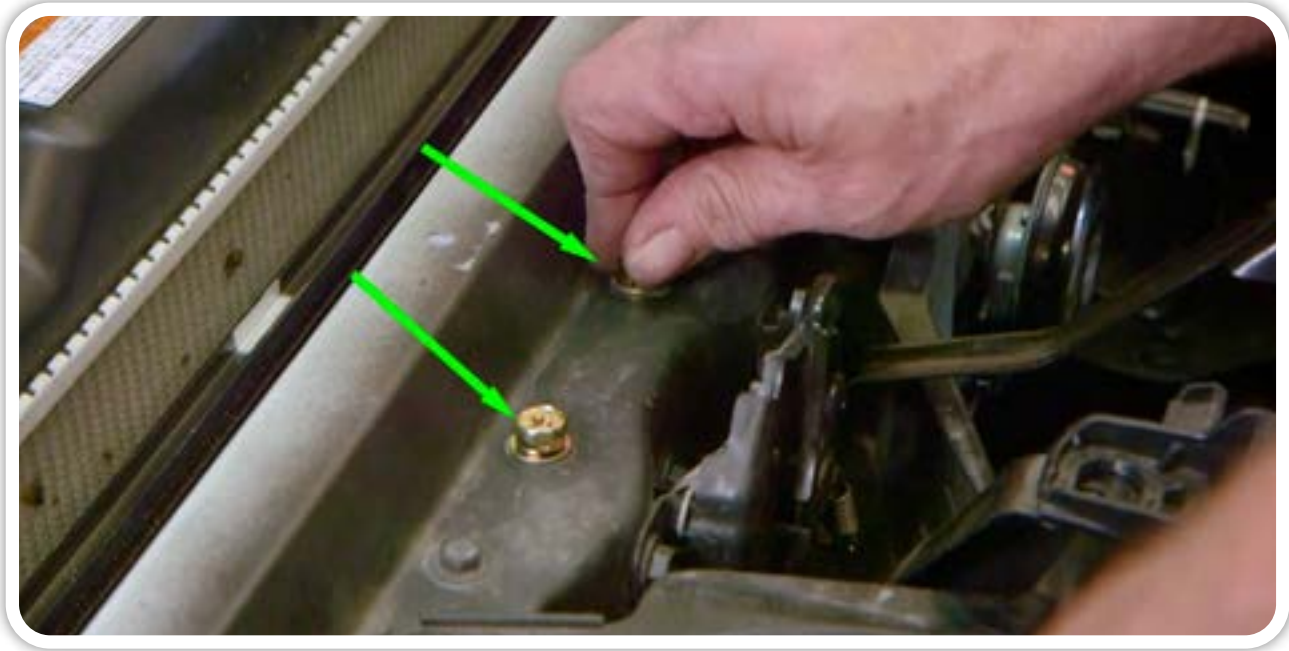
- 13.** Fit the lower cooler mounts onto the two existing bolts. Secure with the two M6 nuts provided.



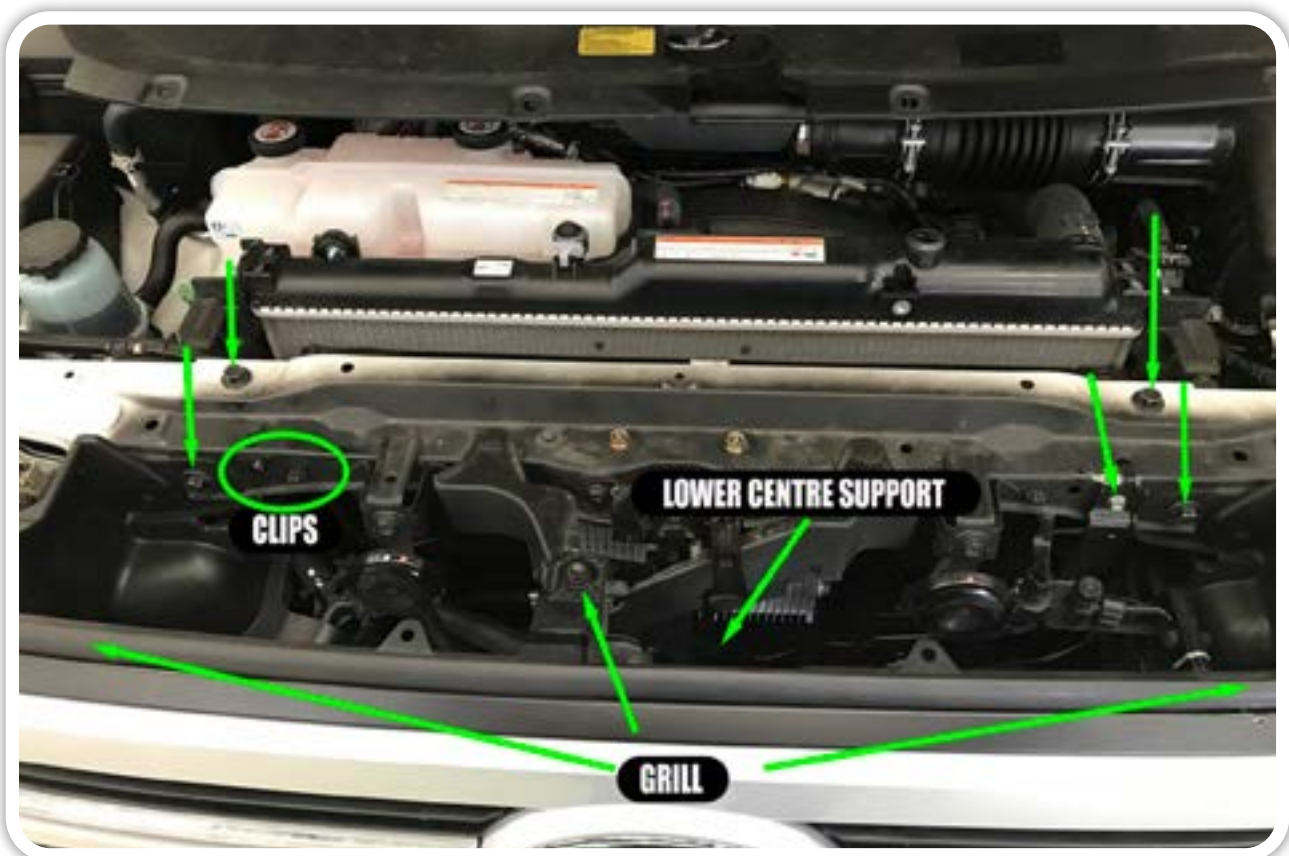
- 14.** Re-position the upper radiator support and bolt back into place. Only finger tighten at this stage.



- 15.** Using the two M8 bolts provided, Secure the top cooler mount to the upper radiator support.



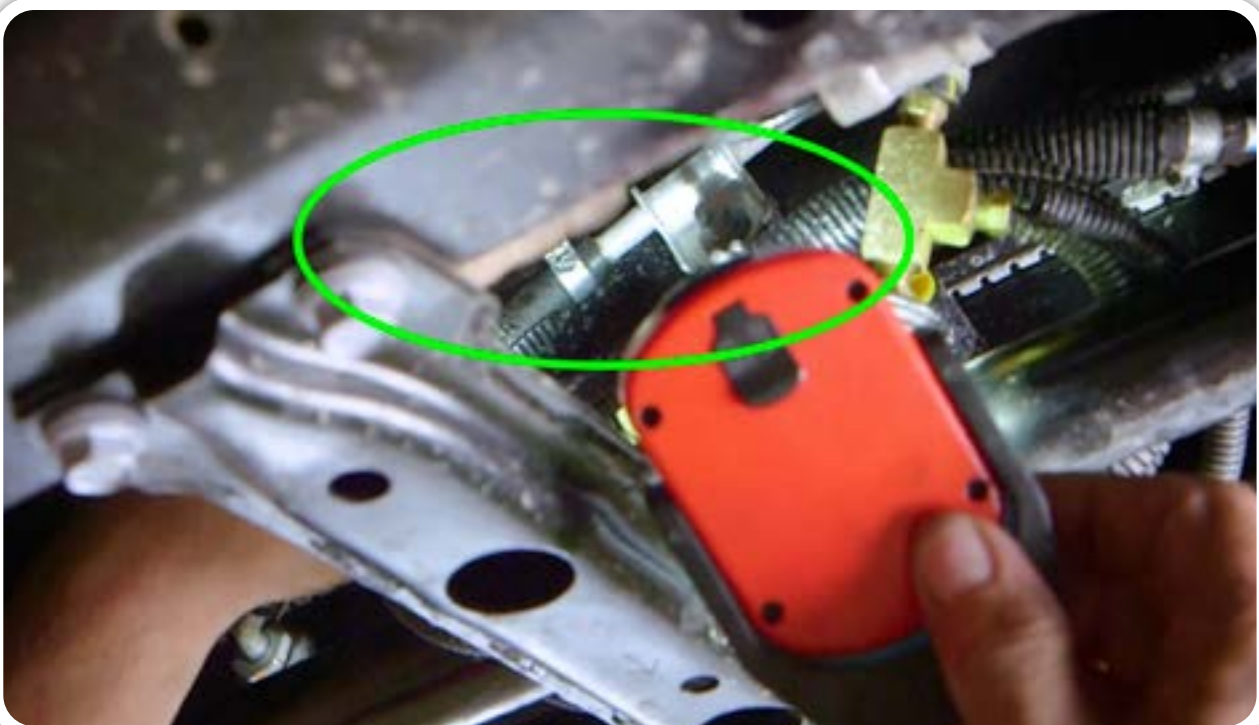
- 16.** Refit and tighten all bolts, clips and brackets removed. Refit the front grill and the cover.



- 17.** Route the rear cooler hose to the lower fitting on the passenger side of the radiator. Trim the hose to length ensuring the hose is not kinked and is free of moving parts. Secure using hose clamp supplied.



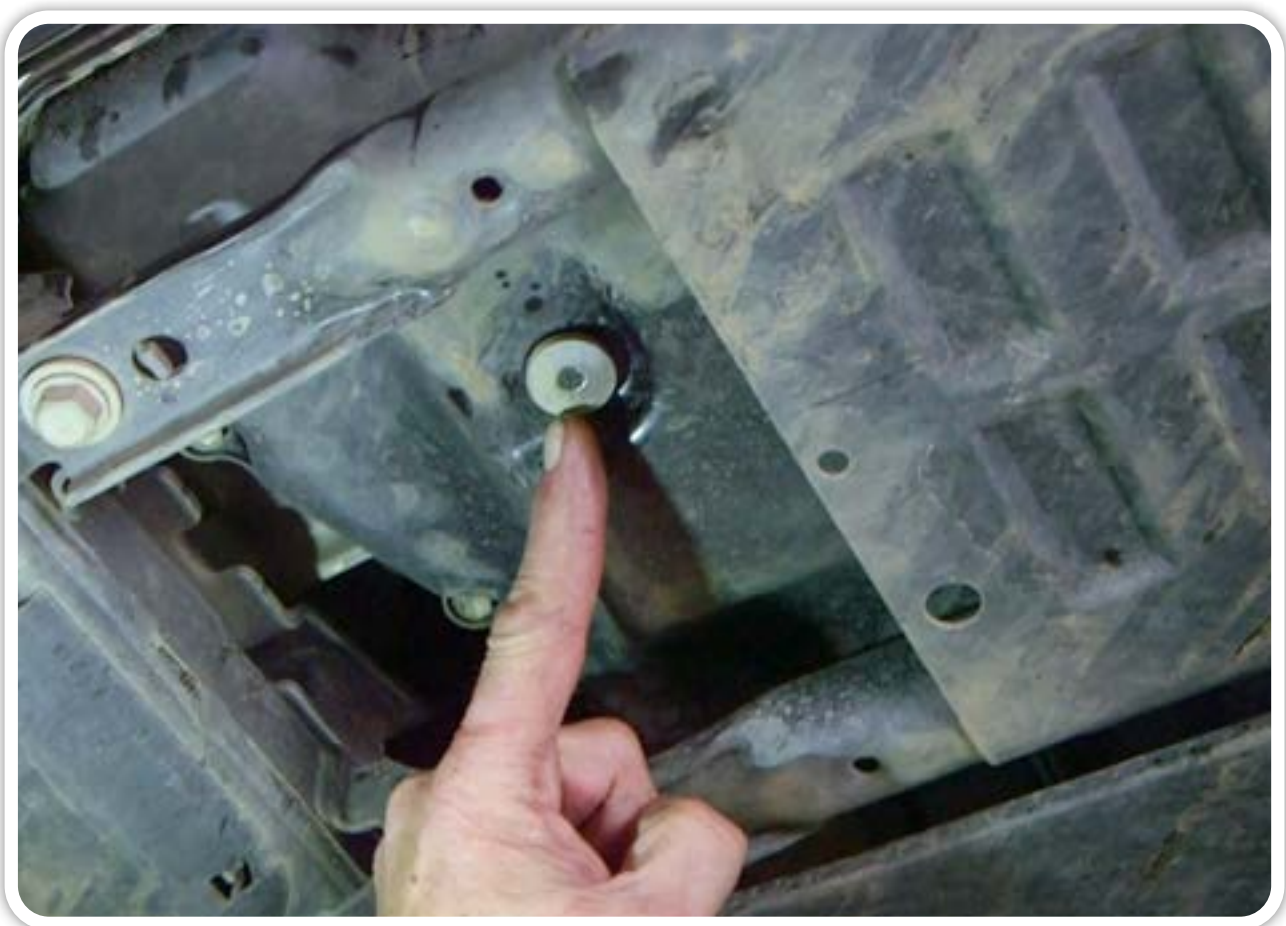
- 18.** Route the front cooler hose to the transmission return line. Trim the hose to length ensuring the hose is not kinked and is free of moving parts. Secure using hose clamp supplied.



19. Check that the cooler hoses are properly secured in place away from direct heat and moving parts. Secure using cable ties supplied.
20. We recommend not refitting bash plates yet in case you need to adjust or tighten hose clamps after test driving.

Checking Transmission Fluid Level

21. Start the car. Please ensure handbrake is on and vehicle is in Park.
22. Under the vehicle, locate and remove the 6mm Allen key check bolt located in the sump of the transmission.



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

- 23.** Locate and remove the 14mm fill plug on the drivers side of the transmission.



- 24.** Add transmission fluid (Approx 2L) until there is a steady stream from the check tube, 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.



- 25.** *Re-fit the 14mm fill plug and tighten.*
- 26.** *Road test the vehicle for at least 15 minutes. Try to shift through all gears and through up and down hill scenarios.*
- 27.** *With the engine still running, recheck fluid level by removing the check bolt and checking if fluid lightly streams out. If no fluid is present please repeat steps 22 to 27.*
- 28.** *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.*
- 29.** *Reinstall any Bash Plates under the vehicle.*

This completes the installation of the Dual
External Transmission Oil Cooler Kit
to suit:
Toyota Land Cruiser 300 Series with
10 Speed Automatic

Please remember ALL automatic transmissions have a service interval of
2 years or 40,000km to improve the longevity of the transmission.