

COOLMASTER *OFFROAD*

External Transmission Oil Cooler Kit Suitable for:



**Toyota FJ Cruiser with
5 Speed Automatic Transmission
WITH 1GR-FE - 4.0L V6 PETROL 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:

Cross Flow Oil Cooler
& Bracket (with Air
Conditioning Bracket)



4 x 8-16mm Stainless
Steel Screw Clamps



2.5m x 10mm Cooler
Line Hose with Conduit



5 x Cable Ties



1 x Plastic Clip for Air
Conditioning Line



Expected Installation Time: ~ 2 Hours

Summary of Installation - For Experienced Fitters

- Ensure you have enough transmission oil as per manufacturers specification to top up your transmission.
- Remove the front grill by removing the (2) retaining clips and the (2) 10mm head bolts.
- Remove the horn located on the passenger side of the top radiator support panel. Retain the bolt for later usage.
- Unbolt and remove the bracket holding the air conditioning line. Retain the bolt for later usage.
- Remove the 10mm head bolt holding the radiator center support panel. Retain the bolt for later usage.
- Remove the (2) silicone covers on the unions on the bottom of the supplied cooler.
- Cut the supplied hose in half.
- Connect one hose to each of the unions on the bottom of the supplied cooler.
- Clamp the hose to the supplied cooler using the supplied hose clamps.
- To fit the supplied cooler to the vehicle, feed the (2) pieces of supplied hose down in front of the lower radiator support panel.
- Lower the supplied cooler bracket into place and loosely bolt (use factory bolt removed earlier) the cooler bracket to the vehicle using the left bolt hole on the bottom of the cooler bracket.
- Install the plastic clip in the square hole of the angle bracket supplied with your cooler bracket. Bolt (use factory bolt removed earlier) the angle bracket and cooler bracket together to the vehicle via the bottom right hand bolt hole in the cooler bracket. Clip on the air conditioning line.
- Slightly bend the horn bracket backward.
- Bolt the supplied cooler bracket's top bolt hole and the horn (flipped to face the reverse direction) to the original horn mounting hole.
- Tighten the bolts holding the supplied cooler bracket to the vehicle.
- Check all bolts /clamps you have tightened earlier are fully tight.
- Reinstall the grill by reversing the removal procedure.
- Remove the front lower splash cover. To complete this you will need to access the underneath of the vehicle. The supplied cooler hoses that were fed down earlier should be visible.
- Locate the top factory steel pipe running from the transmission and follow it toward the front until you get to the rubber hose.
- Remove the factory rubber hose from the factory steel pipe you followed from the transmission.
- Route the two supplied cooler hoses (attached to the bottom of the supplied cooler) to the two factory steel pipes exposed when you removed the factory rubber hose.
- Cut the supplied cooler hoses to length, attach them to the factory steel pipes (it does not matter which hose is attached to which pipe as the cooler is unidirectional) and clamp with the (2) supplied hose clamps.
- Secure the new hoses using the supplied (5) cable ties so that they are routed away from moving parts.
- Reinstall the lower splash tray by reversing the removal steps.
- Top up the transmission fluid as required.
- Test drive. Check for leaks. Tighten fittings as required. Check transmission fluid level and top up as required.
- This completes the installation.

Detailed Installation Instructions

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

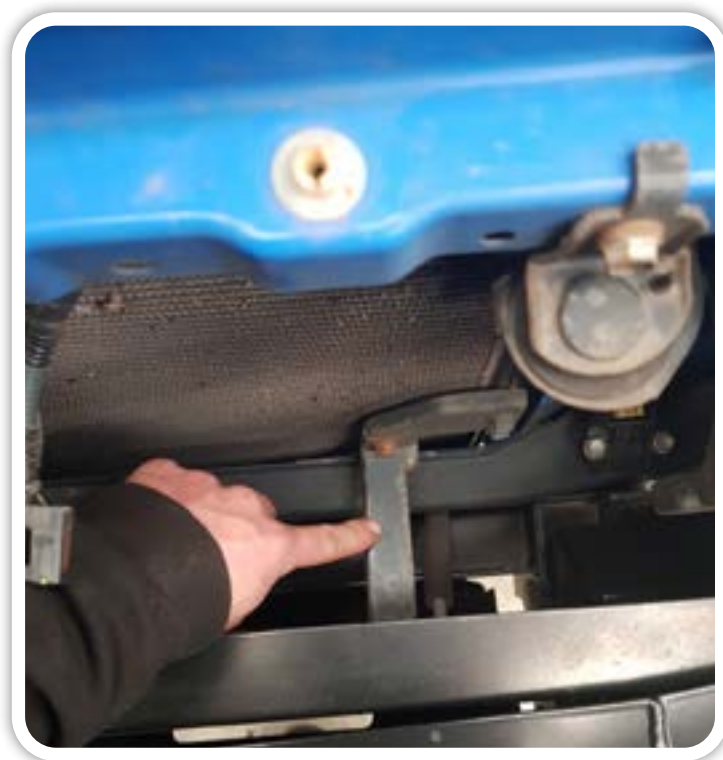
- 1.** *Ensure the car is fully switched off. It is recommended that the vehicle is cold prior to installation.*
- 2.** *Open bonnet.*
- 3.** *Remove the front grill by removing the (2) retaining clips and the (2) 10mm head bolts. Refer photos below.*



4. Remove the horn located on the passenger side of the top radiator support panel. Keep the bolt as you will use this in a later step.



5. Unbolt and remove the bracket holding the air conditioning line. Refer the photo below.



6. Remove the 10mm head bolt holding the radiator center support panel.

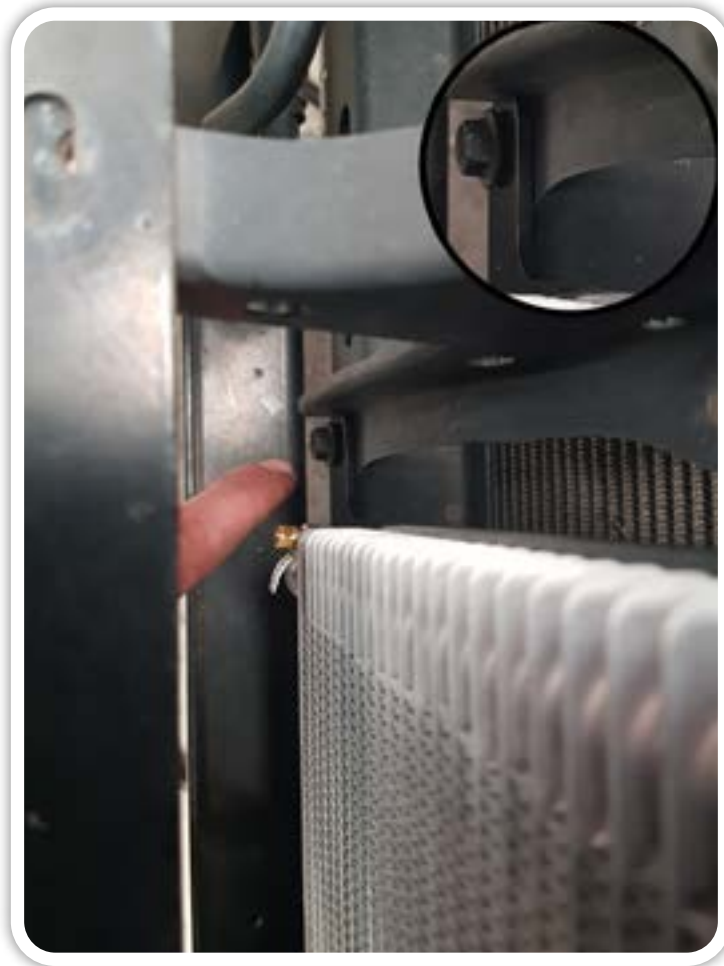


7. Remove the (2) silicone covers on the unions on the bottom of the supplied cooler.
8. Cut the supplied hose in half.
9. Connect one hose to each of the unions on the bottom of the supplied cooler.
10. Clamp the hose to the supplied cooler using the supplied hose clamps.

- 11.** To fit the supplied cooler to the vehicle, feed the (2) pieces of supplied hose down in front of the lower radiator support panel (refer photo below).



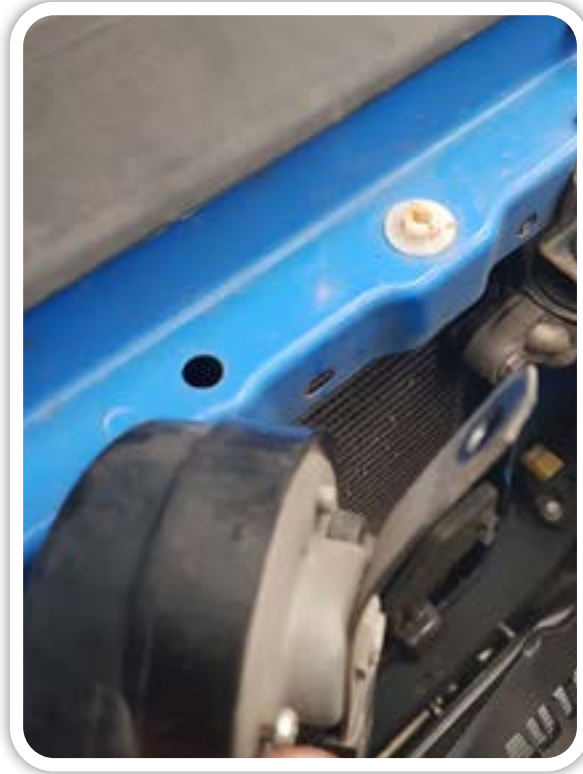
- 12.** Lower the supplied cooler bracket into place and bolt (use factory bolt removed earlier) the cooler bracket to the vehicle using the (2) bolt holes on the bottom of the cooler bracket. See photo below for positioning of bracket and the location of the bolt on the left side. Loosely bolt the bracket to the vehicle using the left bottom bolt hole.



- 13.** Install the plastic clip in the square hole of the angle bracket supplied with your cooler bracket. Bolt (use factory bolt removed earlier) the angle bracket and cooler bracket together to the vehicle via the bottom right hand bolt hole in the cooler bracket. Clip in air conditioning line. See photo below.



- 14.** Slightly bend the horn bracket as per the photo below.



- 15.** Bolt the supplied cooler bracket's top bolt hole and the horn (flipped to face the reverse direction) to the original horn mounting hole.



NOTE: IN THE ABOVE PHOTO THE HORN IS HIDDEN BEHIND THE SUPPLIED COOLER BRACKET.

16. Tighten the bolts holding the supplied cooler bracket to the vehicle.
17. Check all bolts /clamps you have tightened earlier are fully tight.
18. Reinstall the grill by reversing the removal procedure.



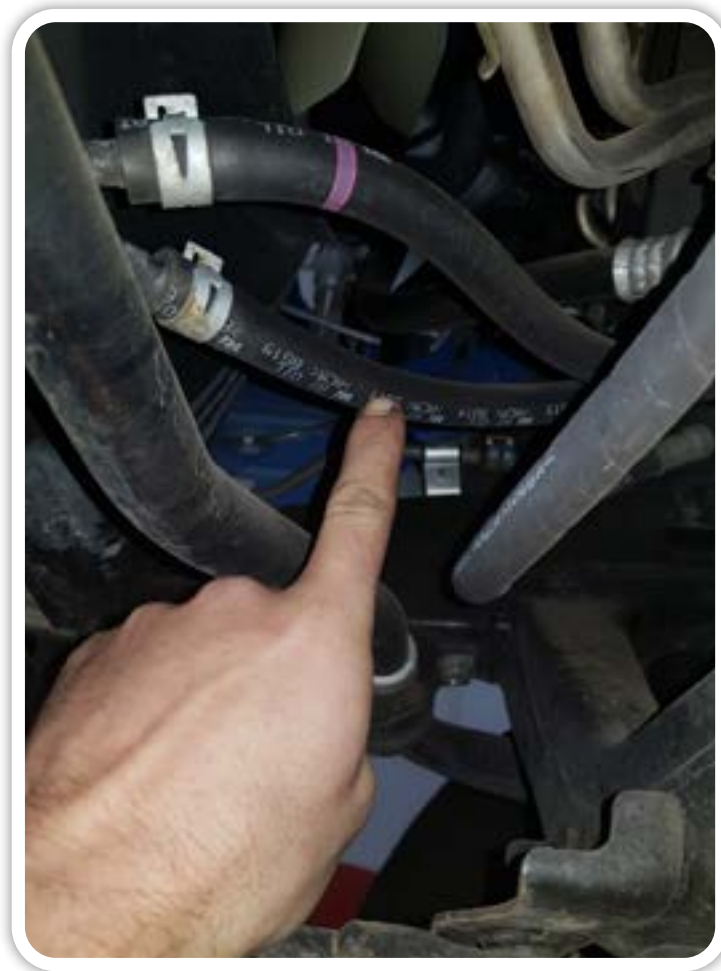
- 19.** Remove the front lower splash cover. To complete this you will need to access the underneath of the vehicle.



- 20.** The supplied cooler hoses that were fed down earlier should be visible.



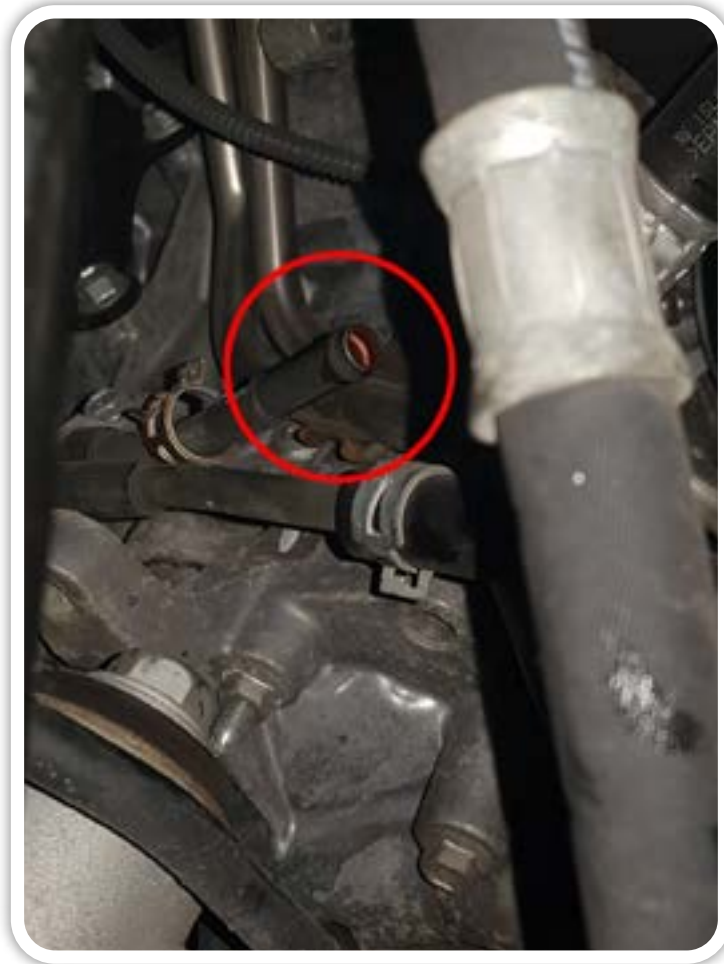
21. Locate the top factory steel pipe running from the transmission and follow it toward the front until you get to a rubber hose.



- 22.** Remove the factory rubber hose from the line you have followed from the transmission. Refer below photo.



- 23.** Route the two supplied cooler hoses (attached to the bottom of the supplied cooler) to the two factory steel pipes exposed when you removed the factory rubber hose.



Cut the supplied cooler hoses to length, attach them to the factory steel pipes (it does not matter which hose is attached to which pipe as the cooler is unidirectional) and clamp with the (2) supplied hose clamps.

Refer photos on the following page.



- 24.** *Secure the new hoses using the supplied (5) cable ties so that they are routed away from moving parts.*
- 25.** *Reinstall the lower splash tray by reversing the removal steps.*
- 26.** *Top up the transmission by removing the fill plug on the rear of the transmission (drivers side). Refer to photo below.*

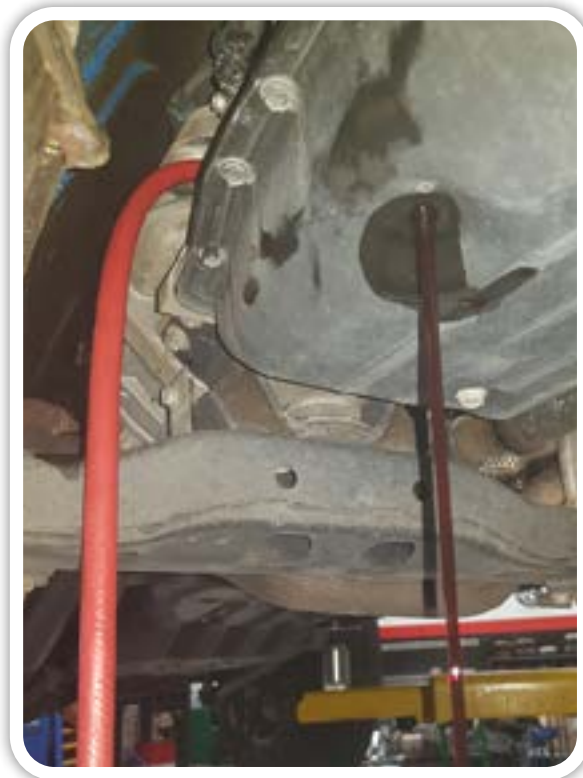


- 27.** *Start the car in park.*

- 28.** Remove the 5mm Allen key headed check bolt in the transmission pan (be sure not to lose the alloy sealing washer).



- 29.** Using a small hose through the fill plug hole, pump oil into the transmission until it begins to come out of the check hole.
- 30.** Once the oil stops flowing out of the hole the oil level is correct, with the engine still running reinstall the check plug.



- 31.** Reinstall the fill plug and switch the car off.
- 32.** Clean up all oil residue and take the car for a test drive.
- 33.** On completion of the test drive visually check for any leaks.
- 34.** With the engine still running, recheck transmission fluid is full. Top up levels as per previous instructions.

PLEASE NOTE: THE TRANSMISSION FLUID MAY BE QUITE HOT.

- 35.** Check again for any transmission fluid on the vehicle and clean off.
- 36.** Road test vehicle then re-inspect cooler and fittings for leaks. Tighten if necessary.

**This completes the installation of the
External Transmission Oil Cooler Kit to Suit
Toyota FJ Cruiser with 5 Speed Automatic Transmission**

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