



External Transmission Oil Cooler Kit

Suitable for:



**Toyota Fortuner and Hilux 8th
Generation
6 Speed AC60 Auto**

**WITH THE FOLLOWING ENGINES:
1GD-FTV 2.8L TURBO DIESEL - 06/2012 TO PRESENT**

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 Wholesale Automatic Transmissions on +61 3 9762 8004.

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

3/8" Oil Cooler
Preinstalled on Bracket



4 x 14-16mm Stainless
Steel Hose Clamps



2.5m x 3/8" High Temp
Cooler Line Hose with
Conduit



1 x M8x25mm SEMS
Bolt



Expected Installation Time: 2 Hours

Summary of Installation - For Experienced Fitters

- Ensure you have enough transmission oil to top up your transmission.
- Remove plastic grill cover above the front grill. Remove the 2 braces holding the front grill by removing the 2x 10mm bolts on each brace.
- Remove the 12mm bolt that attaches the horn bracket. Hang the horn aside.
- Remove the 10mm bolt attaching the bottom of the center brace to the radiator support. Remove the ambient temperature sensor and allow it to hang.
- Remove the first bash plate located under the front bar. Remove the second bash plate located below the first bash plate.
- Remove the existing transmission cooler line. Have a drain tray ready.
- Remove protective rubber socks from your new transmission cooler fittings.
- Cut the provided cooler line in half. Trim the protective sheathe back about 1 inch on each end of the cooler line to allow for clamping. Fit one half of the line to each side of the cooler - FIT IT DRY - DO NOT use lubricant.
- Clamp the cooler lines to the cooler unit fittings using the provided stainless screw clamps.
- Fit the cooler bracket and hoses in front of the radiator. Use the original 10mm center brace bolt to attach the bottom of the cooler. Attach the ambient temperature sensor into the notch in the cooler bracket.
- Insert the provided M8x25 SEMS bolt through the BACK of the radiator support into the nutsert located in the cooler bracket.
- Feed cooler lines through the foam below the A/C condenser. Run the new cooler line closest to the driver side to the fitting on the bottom of the radiator used by the old transmission cooler line. Run the other new cooler line to the steel fitting from the radiator formerly used by the old transmission cooler line. Clamp both new lines using provided stainless steel screw clamps. Use cable ties to ensure all cooler lines are secure.
- Refit bash plates. Turn horn bracket the opposite way and attach along with the top of the cooler bracket to the radiator support using original bolt. Refit grill braces, grill and plastic cover for grill.
- While car is running: remove 24mm drain plug on driver side of transmission and 5mm Alan key check plug on bottom of transmission. Fill until fluid flows out of check plug hole. When flow flickers return 5mm and 24mm plugs and tighten.
- Check all connections, fittings and bolts are tight. Road test. Inspect for leaks and re-tighten as is necessary.

Detailed Installation Instructions

Before commencing work, please ensure that you have at least 1L of 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. Using a seal pick tool or very fine flat blade screwdriver, carefully lift the center of the clips holding down the plastic trim above the grill as shown below.



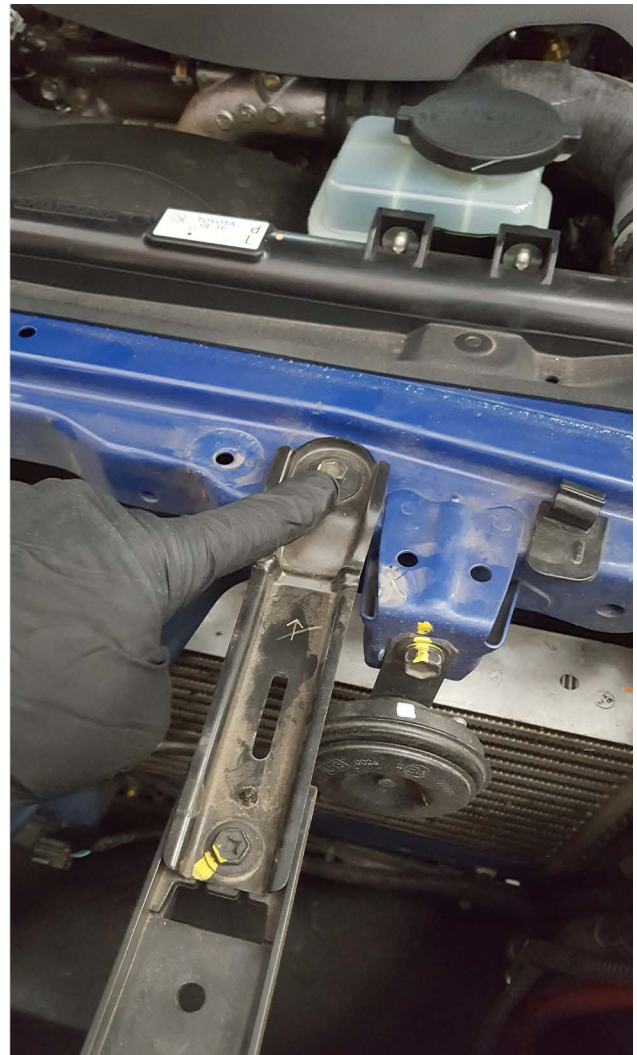
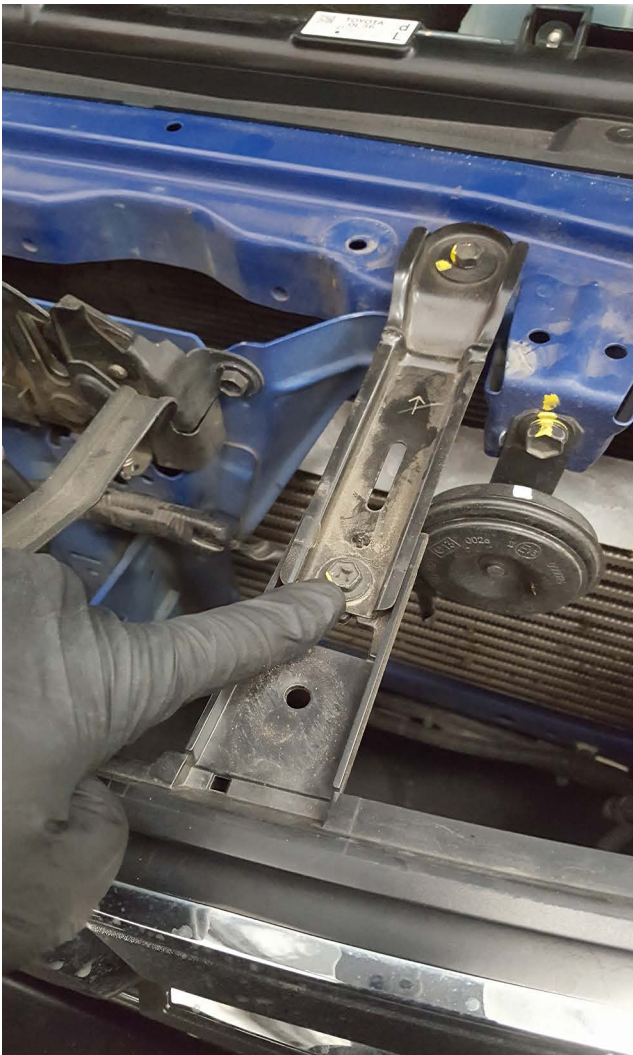
4. Once the centers are lifted, carefully grasp the clip with your hand and wiggle the clip out.



5. Remove the 2 screws located at the top on either side of the grill.
6. Once the 8 clips and 2 screws have been removed, carefully lift off the plastic grill cover.



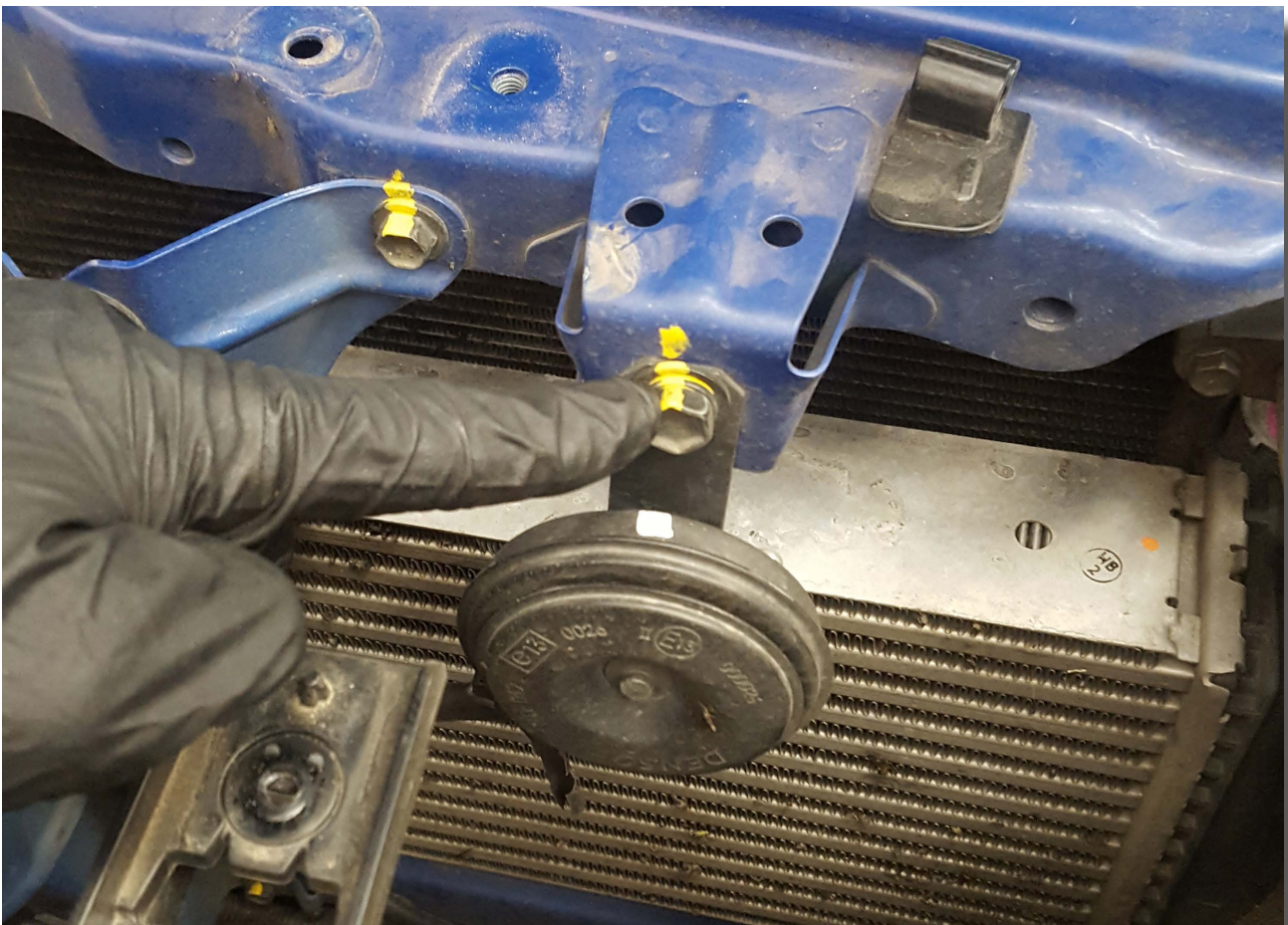
7. Remove the 2x bolts that attach each of the grill support braces to the radiator support and remove the braces.



8. Carefully lift the ends and gently pull back on the grill to create a more comfortable work space.



9. Remove the bolt holding the horn on the passenger side of the car and gently hang the horn out of the way.



10. Remove the bolt located at the bottom of the center brace of the radiator support. Also remove the ambient temperature sensor from where it is attached near the bottom of the center brace and allow it to hang down.



11. Remove the first bash plate located under the front bar. Start by using a seal pick or flat blade screwdriver to remove the clip located in the center of the bottom of the bash plate.



12. Remove the 2x bolts located at either side of the bottom of the bash plate.

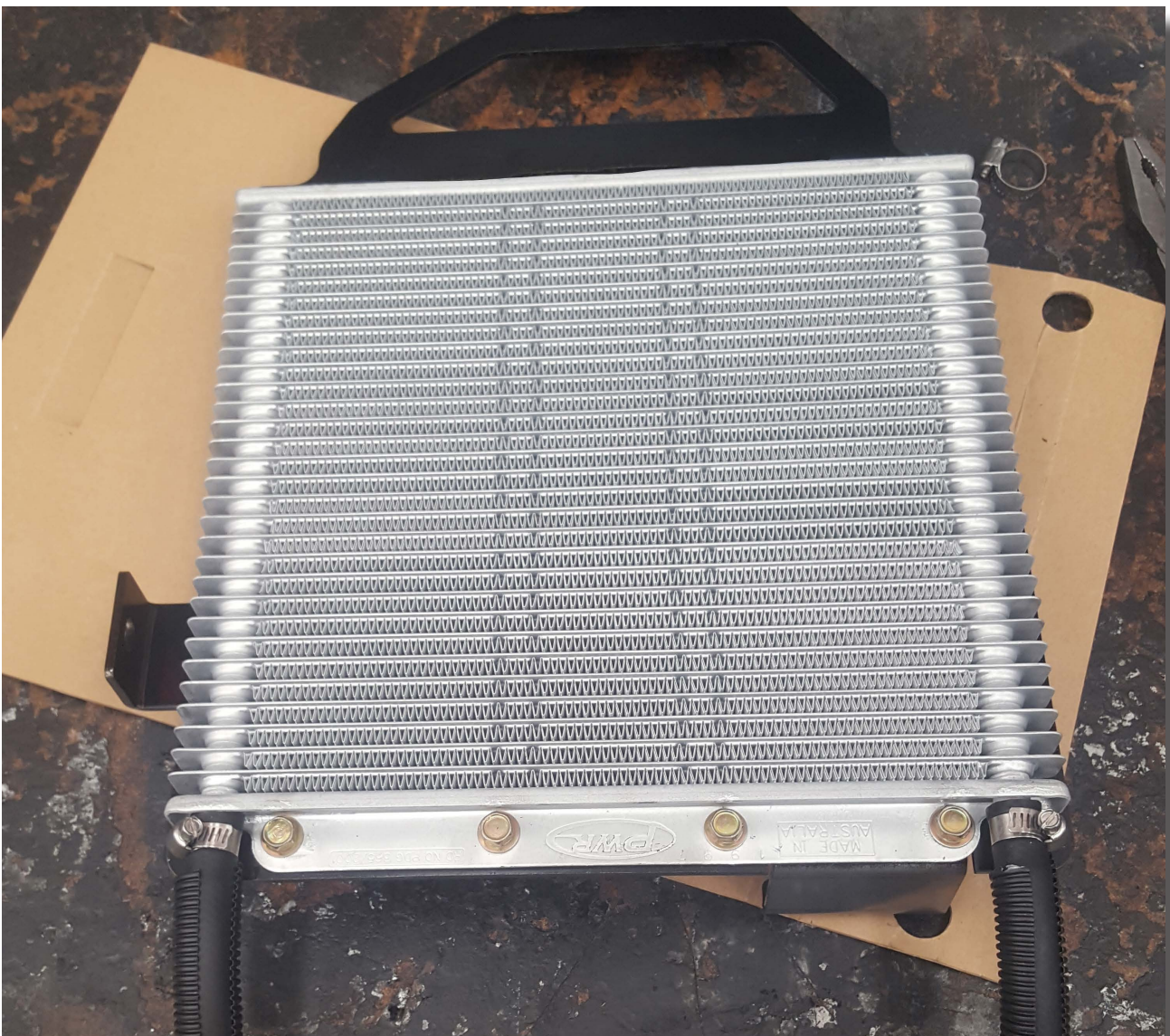
13. Remove the 4x bolts located at either end of the top of the bash plate and carefully remove the bash plate from the car.



14. Remove the 4x bolts holding the second bash plate and carefully remove the second bash plate from the car.
15. Remove the transmission rubber line located alongside the lower radiator hose by removing the hose clamps at either end of the line and pulling the hose off the fittings. Have a drain pan ready as the oil in the line will drain out once it has been removed.

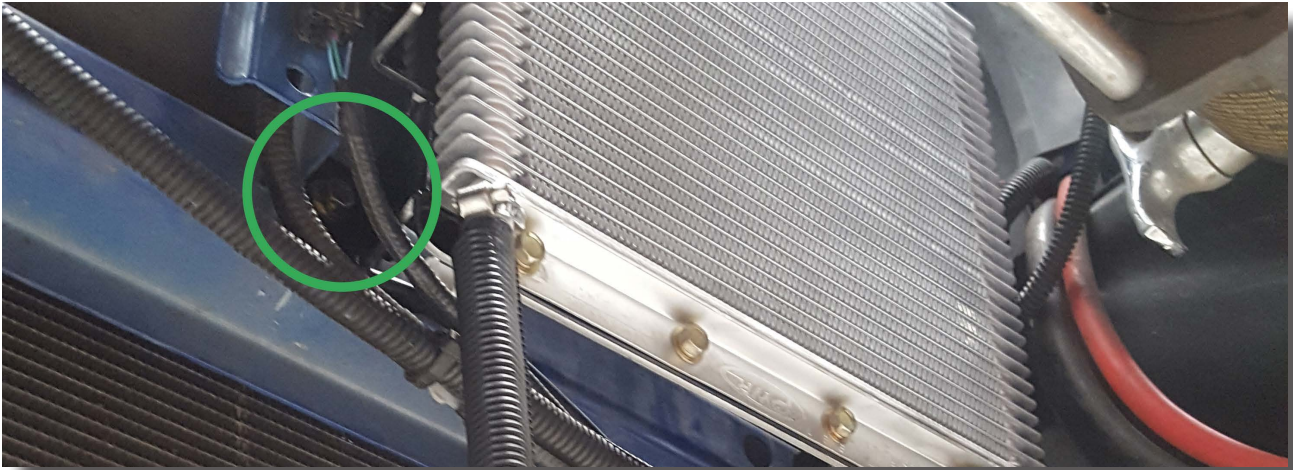


16. Take your new transmission cooler from the box and remove the 2 protective rubber caps from the fittings.
17. Cut the supplied cooler hose in half.
18. Pull back the ribbed plastic sheath on the cooler hose to fit one of the supplied hose clamps. Slide the cooler hose onto the fitting DRY - do not use lubricant. Ensure that the hose touches the base of the cooler. Repeat this process for the other half of the supplied hose.

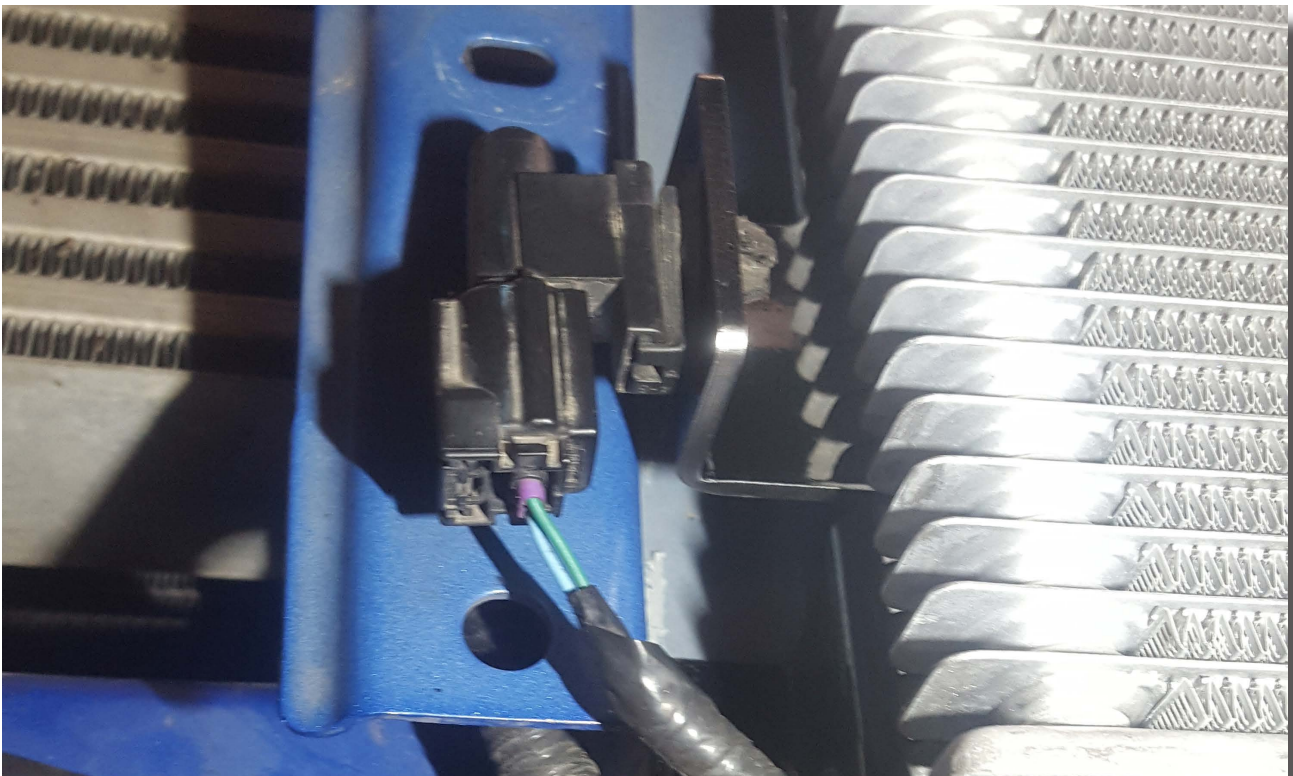


19. Carefully fit the cooler bracket, cooler and hoses as one from underneath of car into position and let the hoses hang.

20. Once the cooler is set in position, refit the original bolt through the cooler bracket and into the center brace and lower radiator support. Some vehicles may have a wiring harness on the centre support that prevents the cooler from sitting flush. If your vehicle does have this you will need to remove the cable restraint and mount the cable with a couple of the supplied cable ties out of the way of the cooler. You may need to trim the inside of the bumper to clear the hoses.



21. Relocate the ambient temperature sensor into the notch in the cooler bracket.



22. Fit the bolt and spring washer through the back of the bottom of the radiator support and thread into the nutsert located on the cooler bracket.



23. Carefully feed the cooler lines between the foam and bottom of the A/C condenser.



24. Route the cooler line on the driver side to the transmission cooler fitting on the bottom of the radiator and cut the hose to suit. Pull back the sheath, fit the hose clamp and install the cooler hose onto the fitting on the bottom of the radiator where the original transmission cooler hose was attached.



25. Route the hose away from the exhaust and any moving parts and secure it with cable ties.

26. Route the other hose coming off the new transmission cooler to the steel line that the original transmission cooler hose was attached to. Cut the hose to length, pull back the protective sheath and use a provided hose clamp to secure it to the fitting.

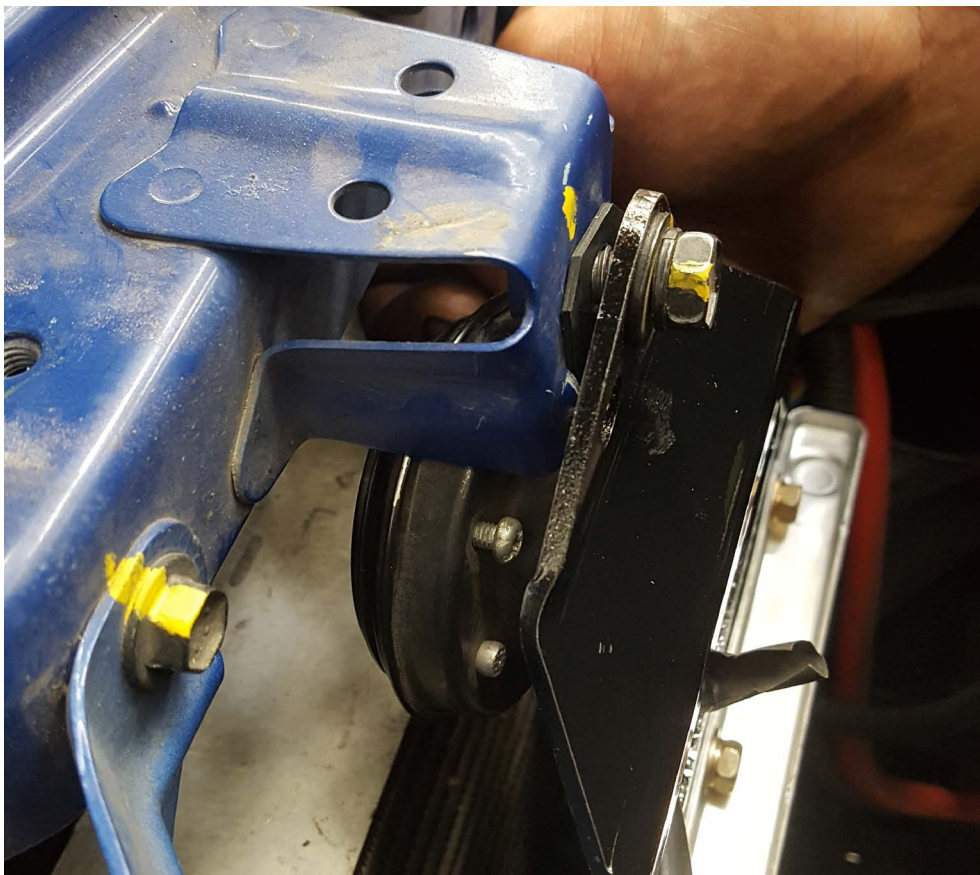


27. Route the hose away from the exhaust and any moving parts and secure it with cable ties.

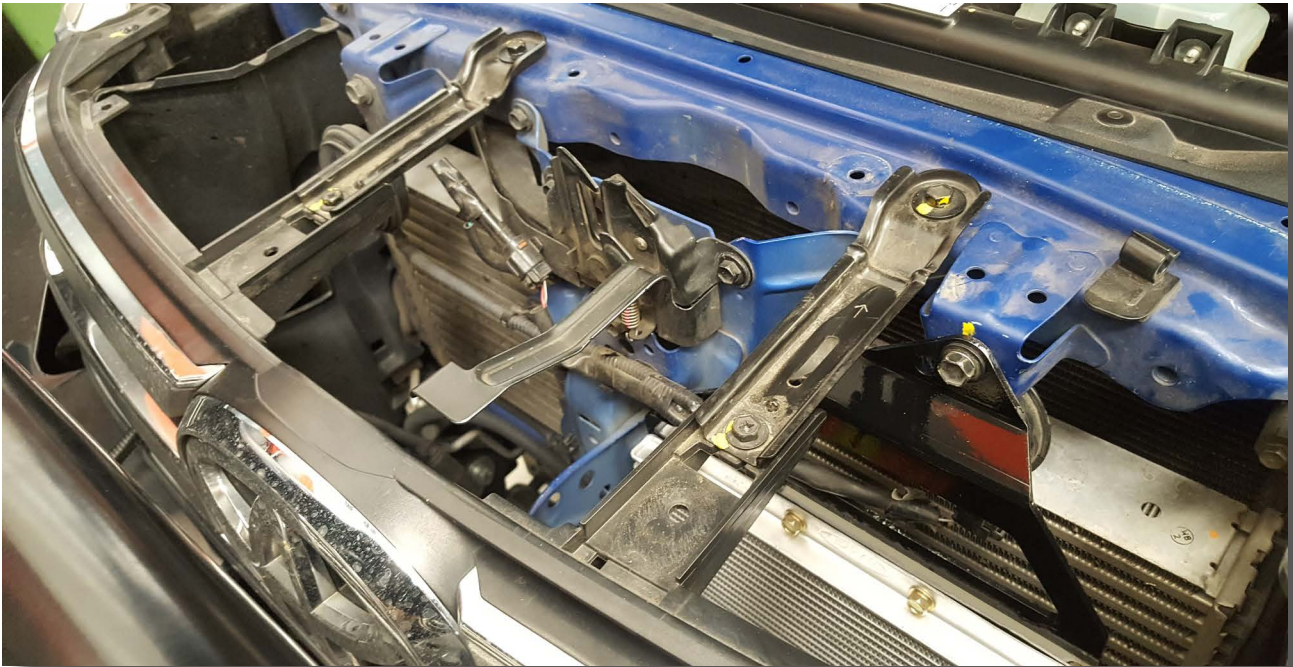
28. Refit both bash plates.



29. Carefully feed the horn through the front of the cooler bracket and face it backwards. Fit the original bolt through the cooler bracket and horn mount and tighten the bolt into the top radiator support.



30. Reinstall the front grill, being careful not to damage any of the plastic mounting clips. Reinstall the grill mounting screws and the two grill braces.



31. Carefully place the plastic grill cover back in position. Refit the 8 plastic clips into the grill cover. Once all the clips are sitting in the grill cover, gently push the centers down until they are flush. **DOT NOT PUSH THEM BELOW FLUSH.** If the clips are pushed too far and they go below flush then carefully lift the clip centers out and try again.



32. Now it is time to check the transmission fluid level and top up as necessary.

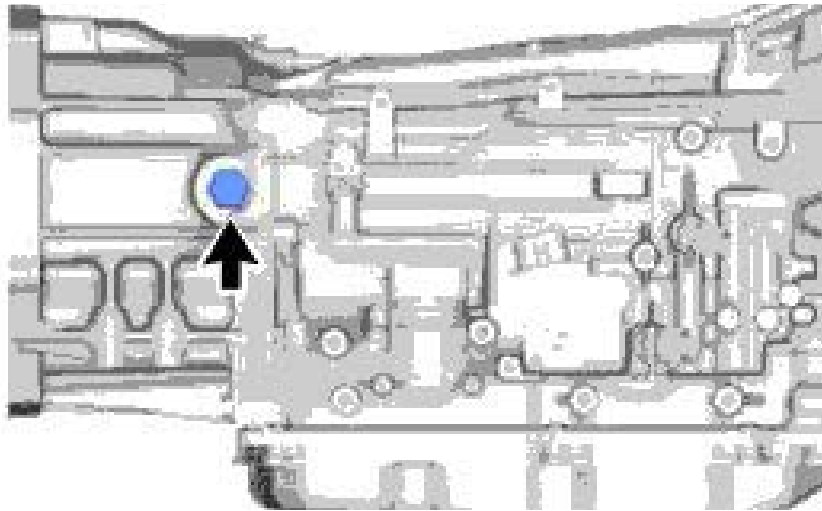
33. The engine must be running to correctly check the transmission fluid level. Before checking the fluid level you must allow the engine to run for at least one minute. This pumps the fluid that has drained into the pan back into the torque converter, cooler lines, and valve body.
34. In the transmission sump or pan, locate the check valve bolt - the bolt will have "Check" engraved into it.



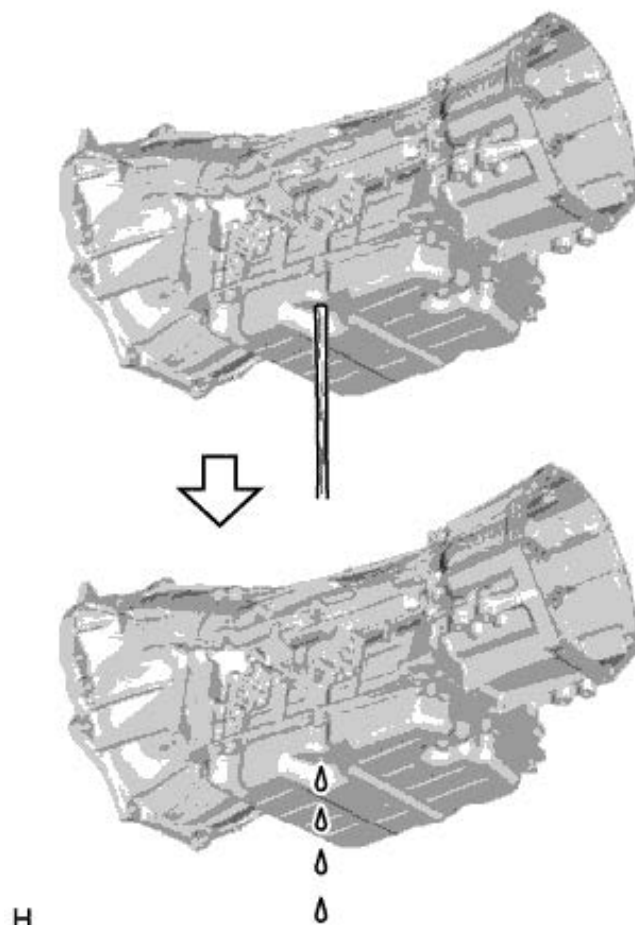
35. With the engine running, remove the check bolt using a 5mm Allen key. DO NOT remove the 14mm bolt located at the rear of the transmission pan as this is the drain plug.



36. If there is no oil dribbling out of the check plug, locate and remove the 24mm fill plug on the drivers side of the transmission.



37. Carefully top up the transmission fluid through the fill plug until the fluid is flowing out of the check plug hole. Once the flow reduces to a dribble quickly put the check plug back in and tighten. Re-install the 24mm fill plug.



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38. Clean all areas of the engine/underneath where transmission fluid may have spilled.
39. Road test the vehicle. You are looking for anomalies such as high transmission fluid temperatures indicating fluid level is still too low / high or possibly an air lock or cooler line blockage. If transmission operates as expected then return to the workshop.
40. With the engine still running, visually check for leaks and re-tighten any fittings as required.
41. Continuing with the engine running, recheck the transmission fluid level.

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

42. If the fluid is at the correct level, clean any transmission fluid off the vehicle.

This completes the installation of the External Transmission Oil Cooler kit to suit the Toyota Fortuner and Hilux 6 Speed Auto.

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

Please Provide us with Feedback

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Transmissions and our products, that would be greatly appreciated.

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feedback page for you to choose the most appropriate feedback method.

