Wholesale
AUTOMATIC TRANSMISSIONS
03-9762 8004

External Transmission Oil Cooler Kit

Suitable for:

Toyota Hilux 7th Generation 4 and 5 Speed Automatic Transmissions

WITH THE FOLLOWING ENGINES:
3.0L - 1KD-FTV Turbo Diesel (2005 to 2015)
4.0L - 1GR-FE V6 Petrol Engine (2005 to 2015)

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

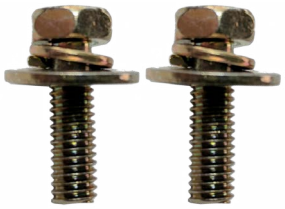
Hot engines and hot transmissions can cause serious injury. Before removing the hoses and parts from the vehicle, allow sufficient time for engine and auto to cool.

Parts List

Cross Flow Oil Cooler
Pre-mounted to Bracket

4 x Stainless Steel Screw
Clamps

2.5m x High Temp
Cooler Line Hose



2 x M6 x 20mm SEMS
Bolt

1 x M8 x 20mm SEMS
Bolt

Expected Installation Time: 2 Hours

Summary of Installation - For Experienced Fitters

- Ensure you have enough transmission oil to top up your transmission prior to commencing the installation.
- Remove front grill. Remove 12mm bolt attaching the horn. Remove the 10mm bolt fixing the bottom of the center brace to the radiator support and discard.
- Fit the cooler hose to the cooler with stainless steel screw clamps before lowering into position unless you have go-go gadget fingers. Do NOT cut the hose
- Remove horn bracket, turn horn bracket around the opposite way and bolt the top of the cooler bracket and horn mounting together to the radiator top support using the 12mm bolt. Or use supplied M8 bolt.
- Bolt the bottom of the cooler bracket to the vehicle using the two M6 bolts provided.
- Refit grill.
- Remove existing cooler oil lines and their hose clamps.
- Route new cooler lines through the sponge between the bottom of the radiator and the radiator support. Route new cooler lines to the fittings coming from the transmission that were formerly used by the old cooler lines.
- Cut both new cooler lines to size and fit. Secure with provided stainless steel clamps.
- Check all hoses and fittings for sufficient clearance to avoid rubbing or cutting of any part and secure using cable ties.
- Reassemble vehicle.
- Check transmission oil levels while vehicle is running and top up using specified oil to the required level.
- Clean any oil residue off vehicle. Road test. Recheck oil level, Check for leaks. Re-tighten if necessary.

1. Detailed Installation Instructions

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

1.1. Ensure the car is fully switched off. It is recommended that the vehicle is cold prior to installation. Open bonnet.

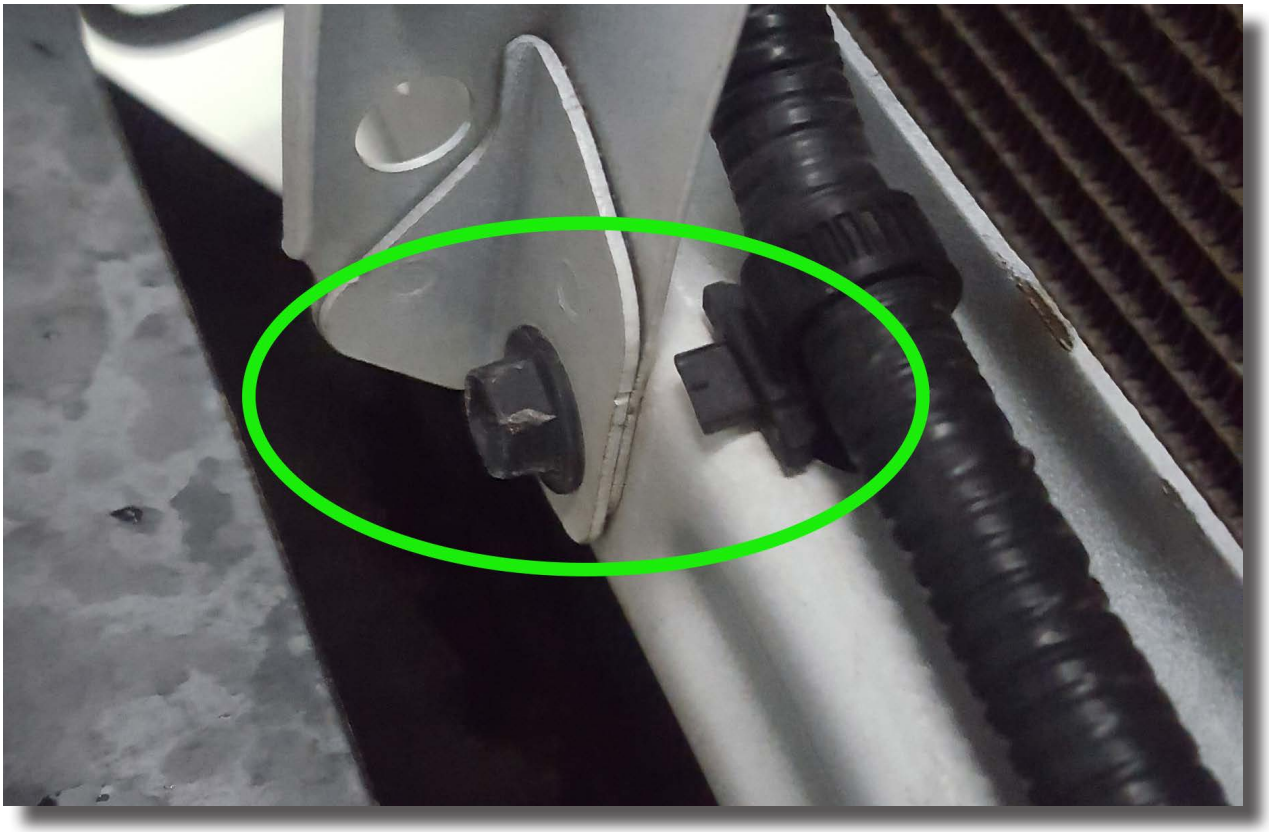
1.2. Remove two plastic screws towards outer sides of the grill and two plastic push clips towards the center of the grill.

1.3. Pull the grill forwards to create space to install cooler.

1.4. Remove the 12mm bolt holding the horn. (*Some models may not have a horn in place. If this bolt and horn is not present in your vehicle, please use the M8 bolt included with this kit to secure oil cooler bracket)

1.5. Place horn out of the way gently to avoid damage.

1.6. Remove 10mm bolt from the bottom of the center brace. Discard bolt.



1.7. Remove underside bash plates as shown until there is a clear view to where the cooler sits and there is access to cooler lines.

1.8. Remove the oil cooler rubber protectors from the fittings and discard.

1.9. Loosely fit the hose clamps onto the supplied cooler hose.

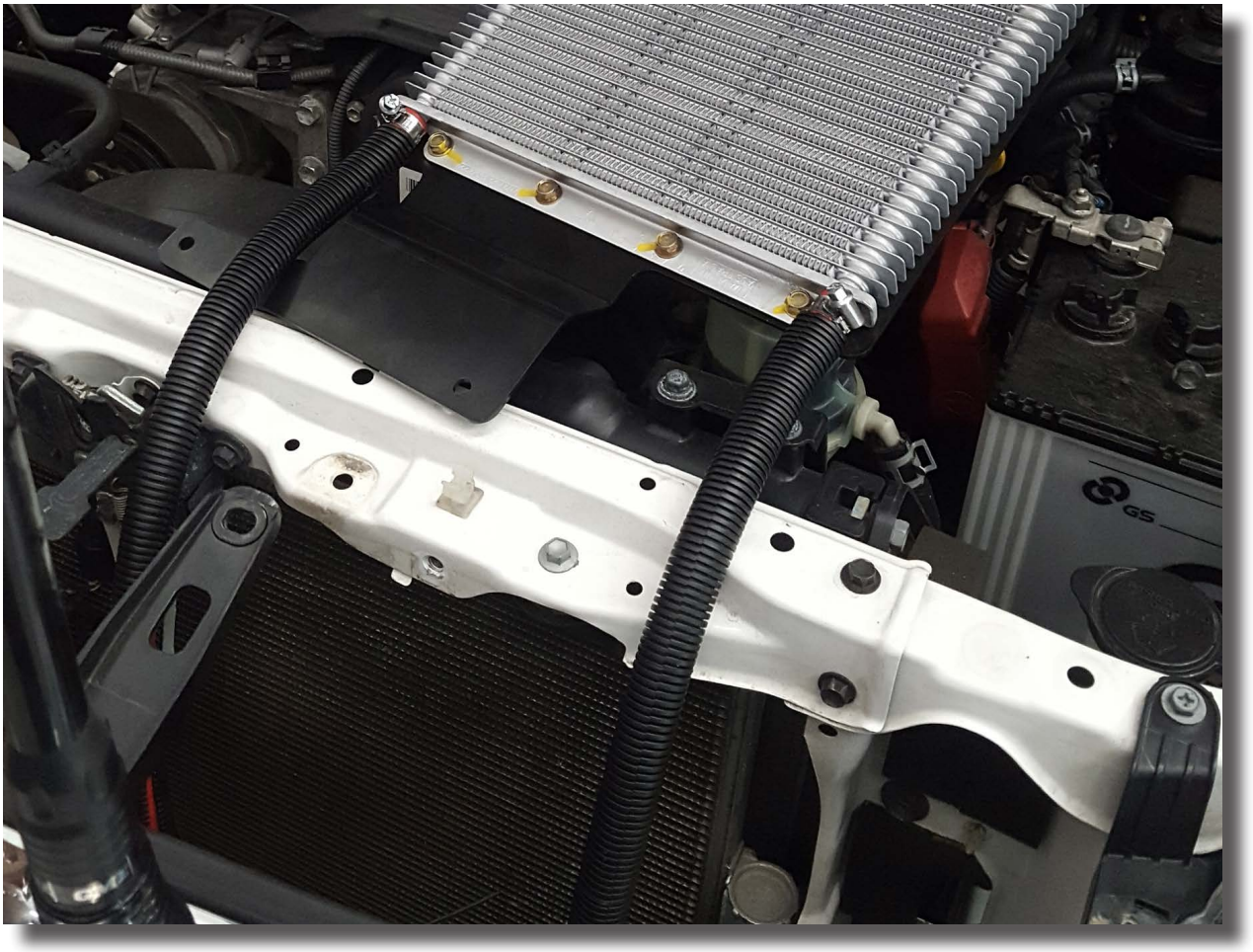
1.10. Slide the one end of the cooler hose onto either fitting on the cooler and tighten.

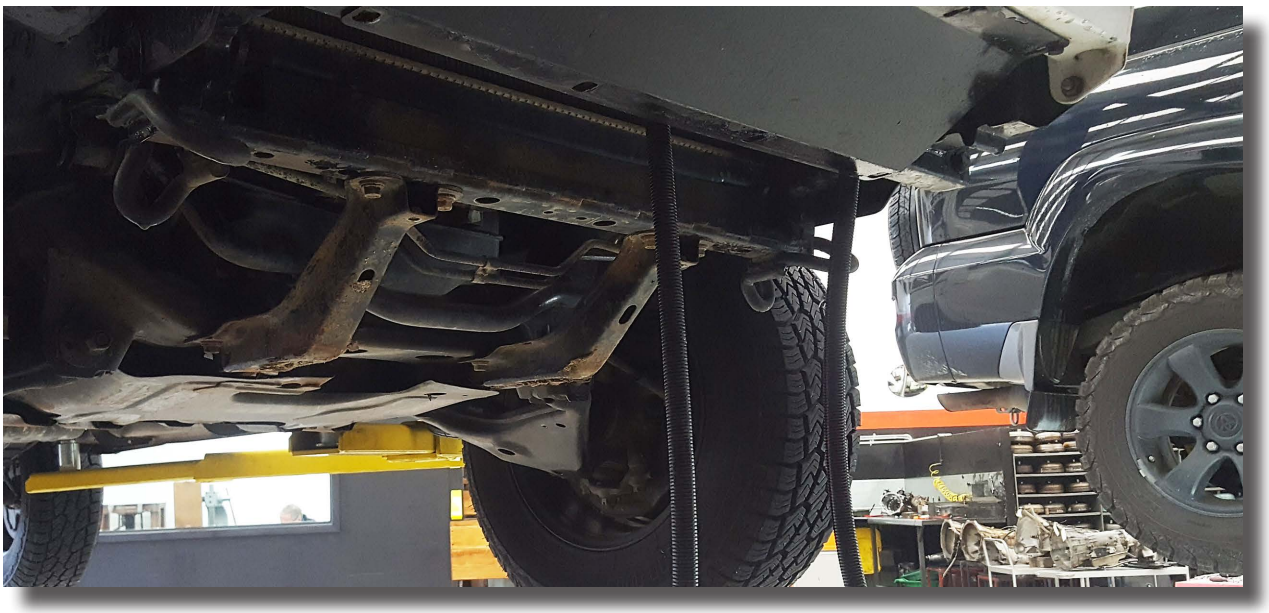
THIS MUST BE DONE DRY. DO NOT USE LUBRICANTS.

1.11. Slide the other end of the hose to the cooler fitting and tighten both hose clamps.

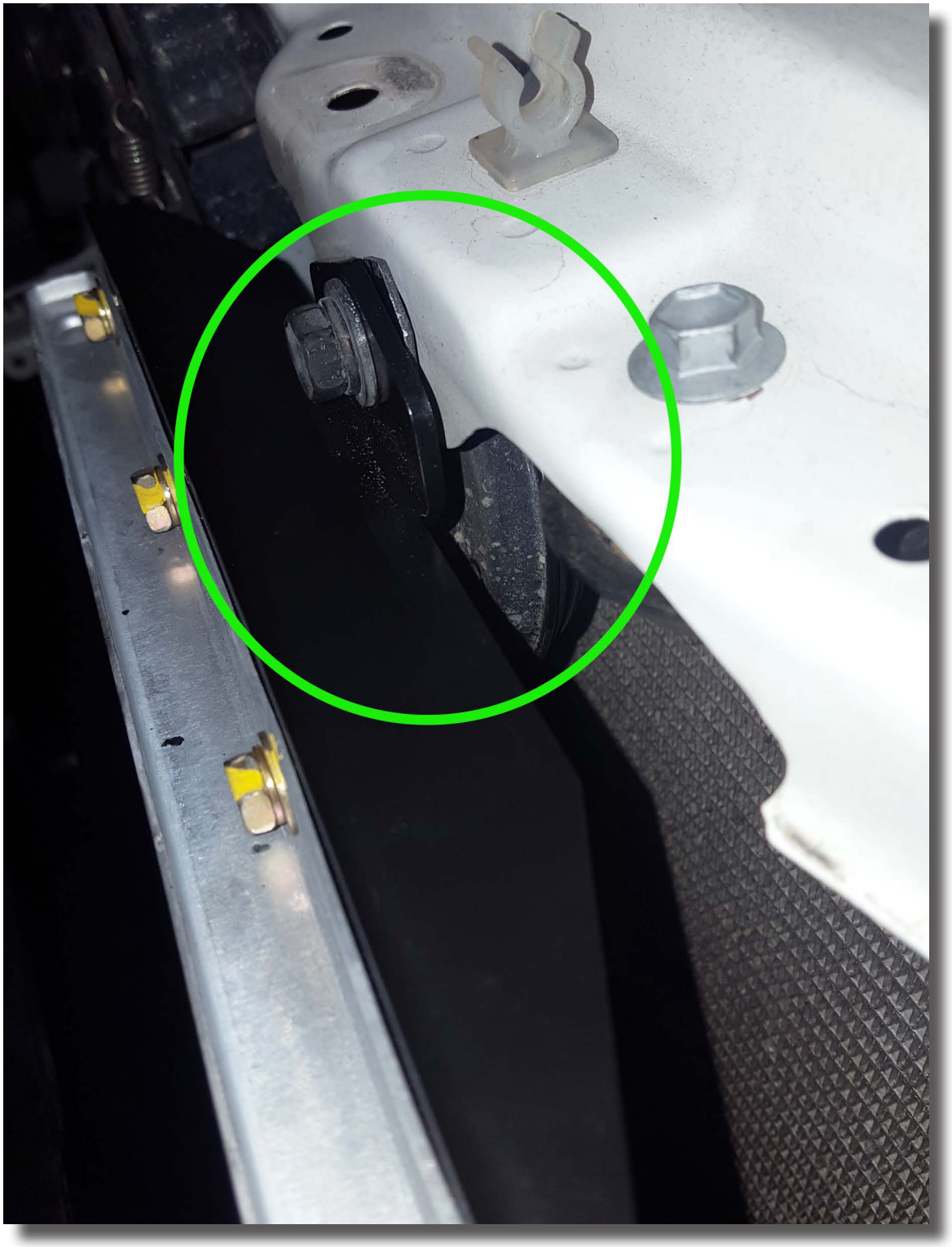
DO NOT CUT THE HOSE at this stage.

1.12. Carefully sit the cooler on top of the engine and guide the cooler hose loop through the bay as shown.

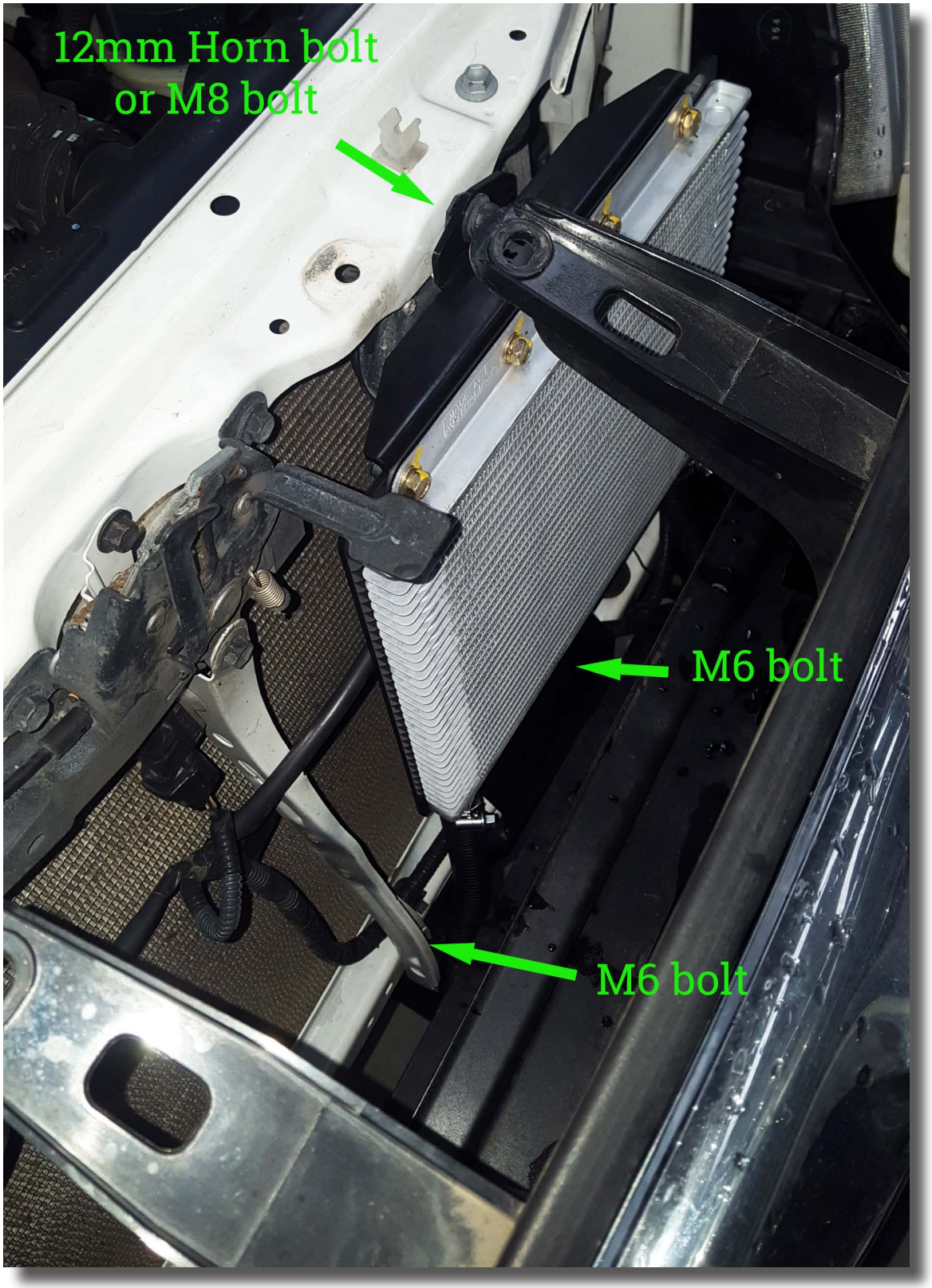




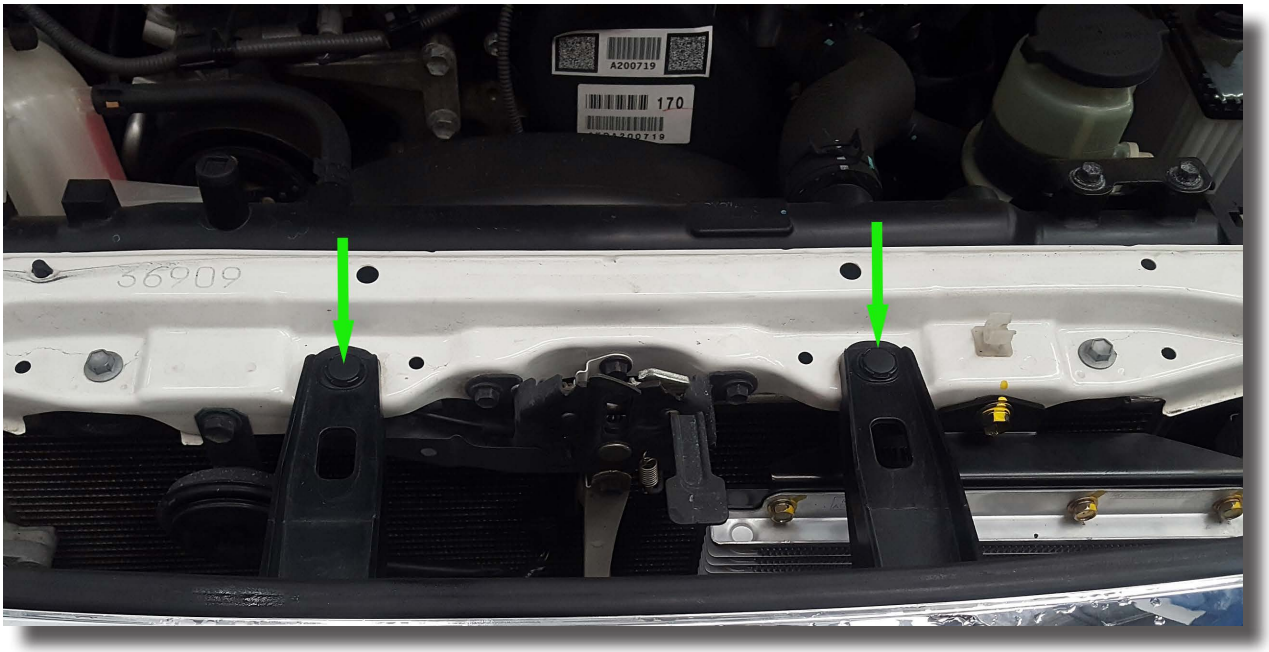
1.13. Lower cooler into position as shown below. Turn the horn around and loosely refit the 12mm bolt (or supplied M8 bolt) through the top of the cooler bracket and horn mount into the radiator support as shown.

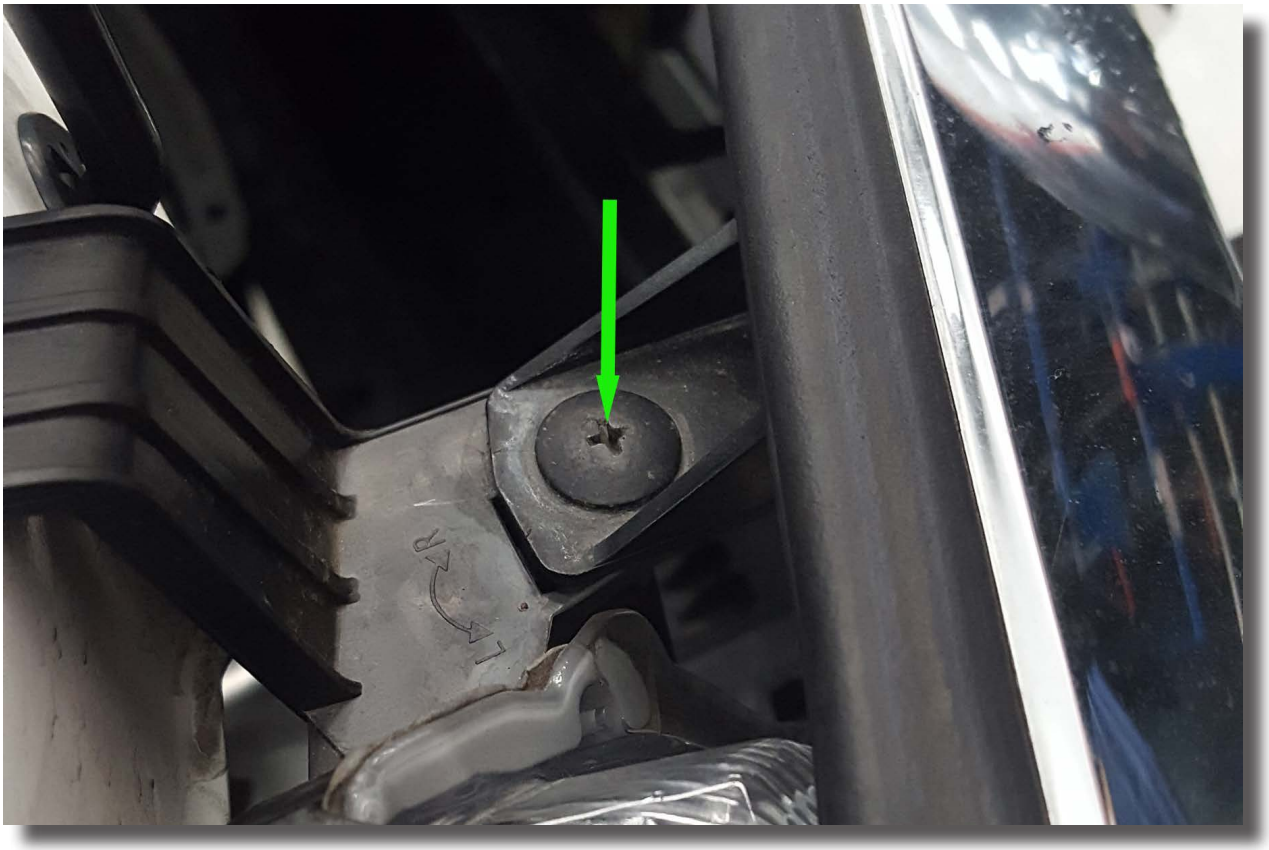


1.14. Using the two supplied M6 bolts, secure the bracket to the bottom of the center brace and the vehicle as indicated below. Tighten all three bolts.



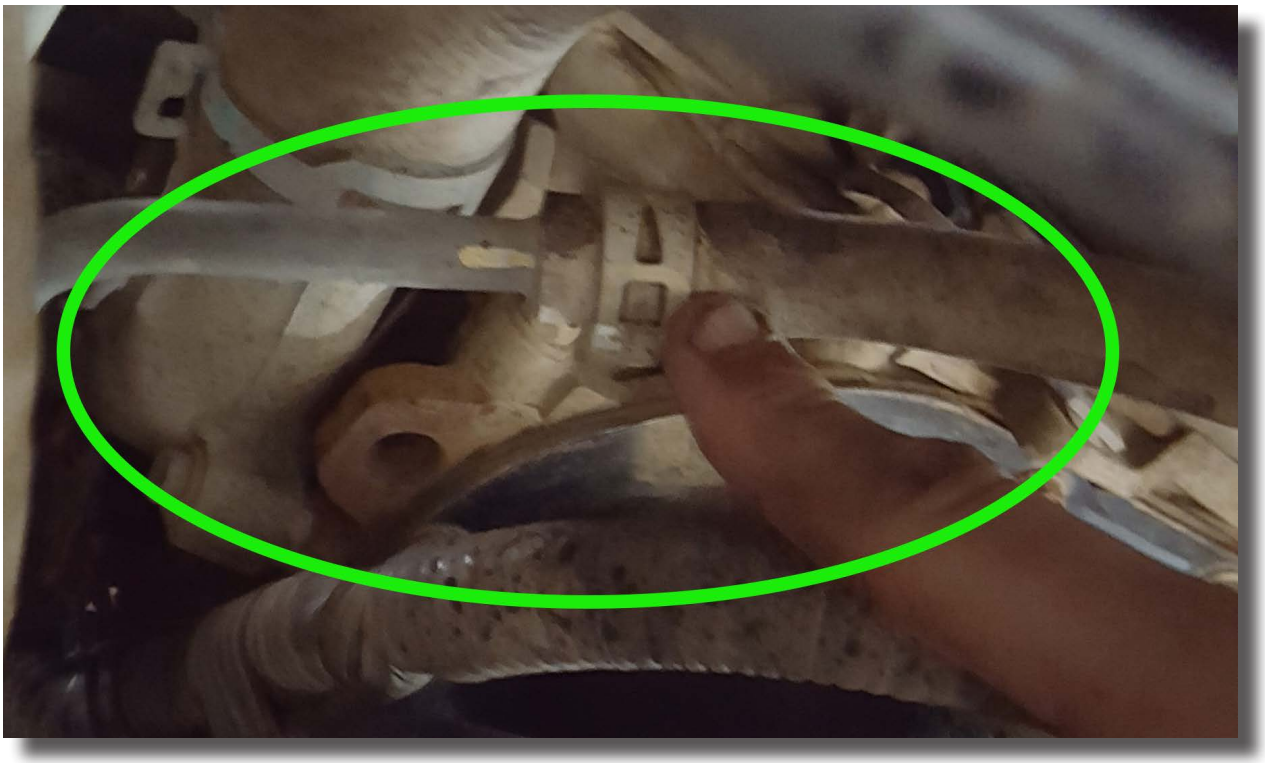
1.15. Refit the front grill and secure in place with two center clips and two plastic outer screws.





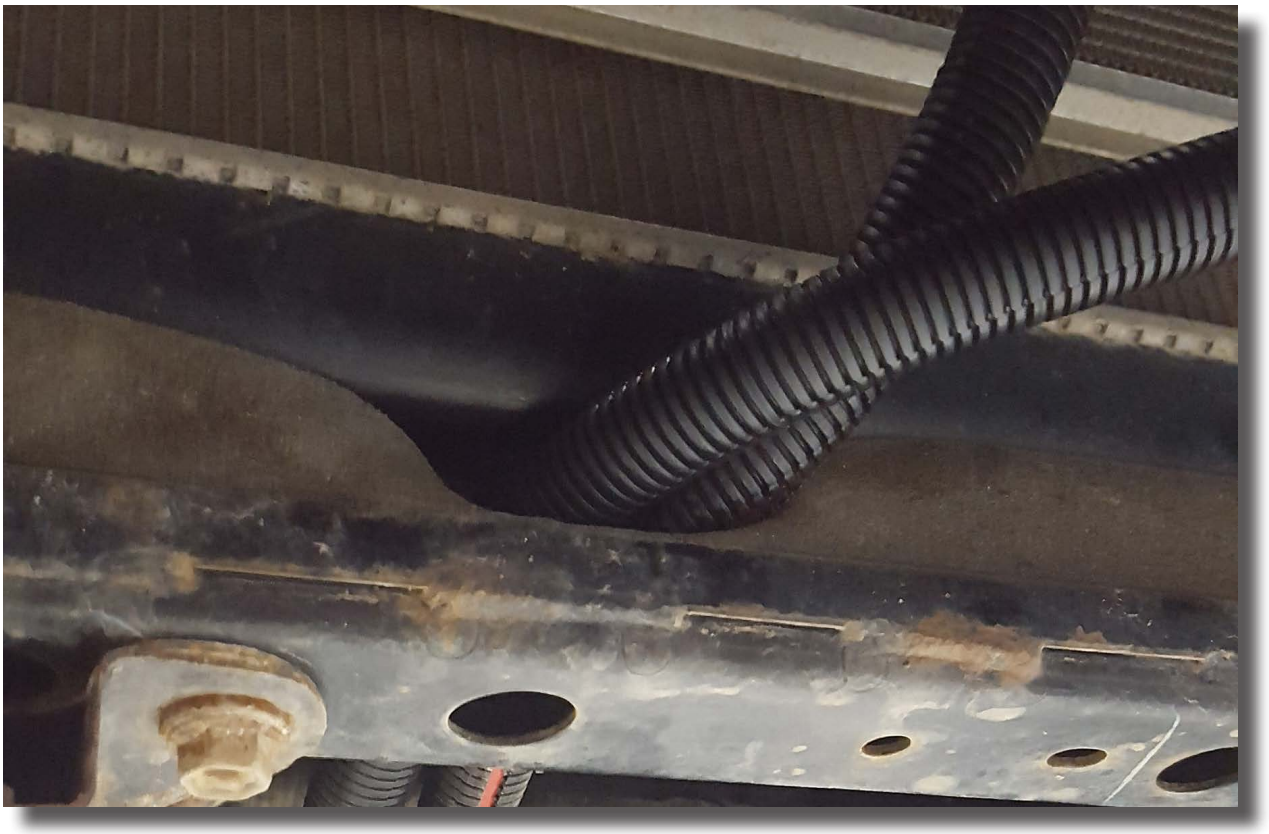
1.16. Remove the hose clamp on the cooler line located at the bottom of the radiator on the passenger side of the car.

1.17. Follow the line and remove the hose clamp from the transmission oil line.



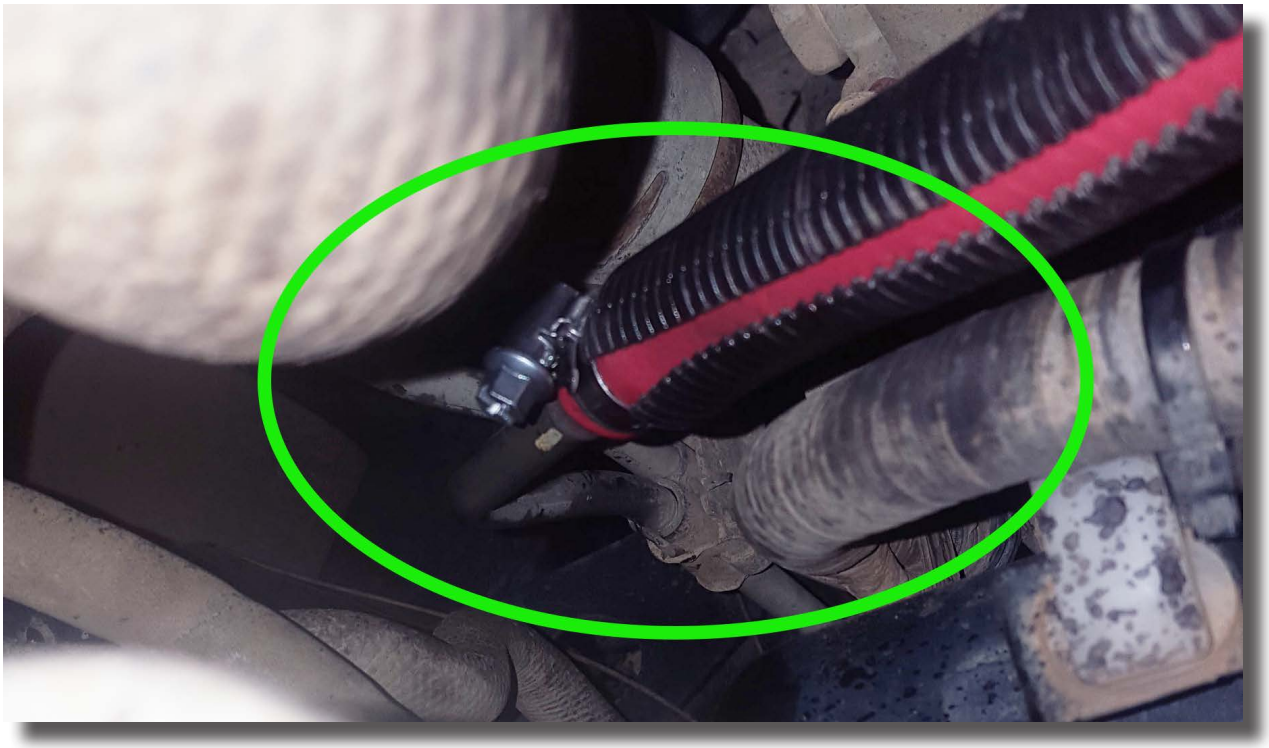
1.18. Remove the factory cooler line. Note: The line will contain a small amount of transmission oil. This line and both hose clamps should be discarded.

1.19. Feed the oil cooler hose through the foam under the radiator as show.



1.20. Route the oil cooler hose to the fitting on the bottom of the radiator and cut to size. Secure using the hose clamps provided.

1.21. Route the remaining hose to the transmission oil line fitting, trim to size and secure using the hose clamp provided.



1.22. Ensure that both cooler hoses are free of moving parts and secure using cable ties.

1.23. Clean up all spilt fluid on the vehicle and around the transmission. Also visually check the cooler line fittings for any leaks.

1.24. Refit the bash plates to the vehicle

2. Fluid Top Up Instructions for A750 5 Speed Auto

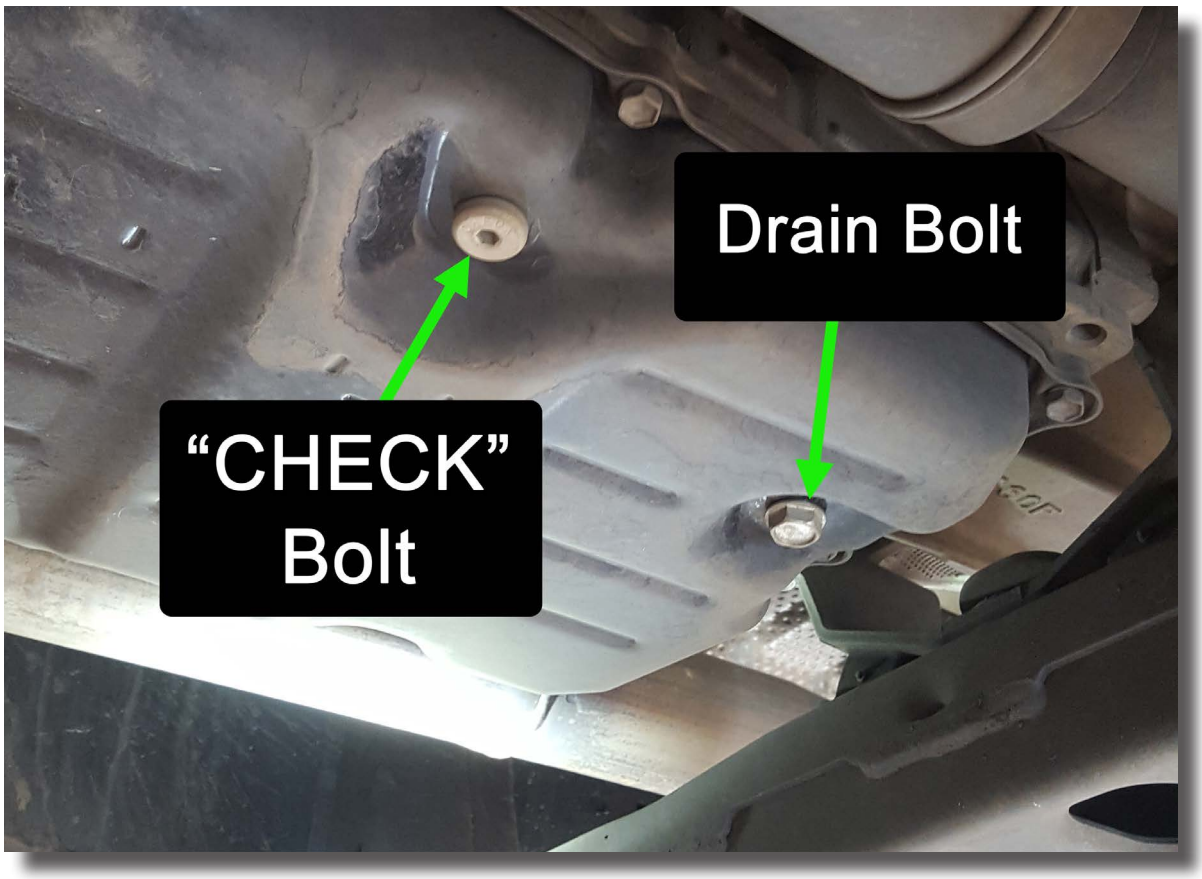
2.1. Before checking the transmission fluid, the vehicle needs to be on a flat level surface, otherwise the fluid level indication will not show the correct level.

2.2. The A750 5 Speed Auto is one of the first transmissions that transitioned to a non-dipstick configuration. Quite often these ‘dipstick-less’ transmissions were called ‘Sealed for Life’ transmissions. This is a misnomer and in fact they are not sealed. The transmission fluid in these transmission can be checked just like any other transmission, they just go about it in a different way.

2.3. If your A750 5 Speed Auto is one that has a dip-stick, then please refer to the next chapter covering the A340 4 Speed and A750 5 Speed Dipstick transmissions.

2.4. Start the engine. While the car is running locate and remove the 24mm fill plug on the driver side of the transmission, located in the extension housing at the rear of the transmission. It will be stamped with WS which stands for World Standard. This is the fluid specification used for Aisin Transmissions.

2.5. After the engine has been running for at least 30 seconds, locate and remove the 5mm Allen key bolt stamped “CHECK”. This bolt is located in the sump of the transmission.
*** NOTE: DO NOT remove the 14mm bolt located nearby as this is the transmission drain plug.



2.6. If no fluid comes out of the CHECK tube, then this indicates the transmission fluid is low and needs to be topped up. While the amount of fluid used by the new cooler assembly can be measured, there is also the possibility the transmission fluid was low prior to fitting the cooler. Therefore we recommend using this guide to make sure your transmission fluid level is correct.

2.7. Carefully top up the transmission fluid through the fill plug on the side of the transmission until the fluid starts to dribble/flow out of the CHECK tube.

2.8. Refit the CHECK bolt before the fluid has completely stopped.

2.9. Re-install the Fluid Fill bolt stamped WS into the port on the side of the transmission.

2.10. Clean up all spilt fluid on the vehicle and around the transmission. Also visually check the cooler line fittings for any leaks.

2.11. Skip to Test Drive Chapter

3. Fluid Top Up Instructions for A340 4 Speed Auto and A750 5 Speed Auto with Dipstick

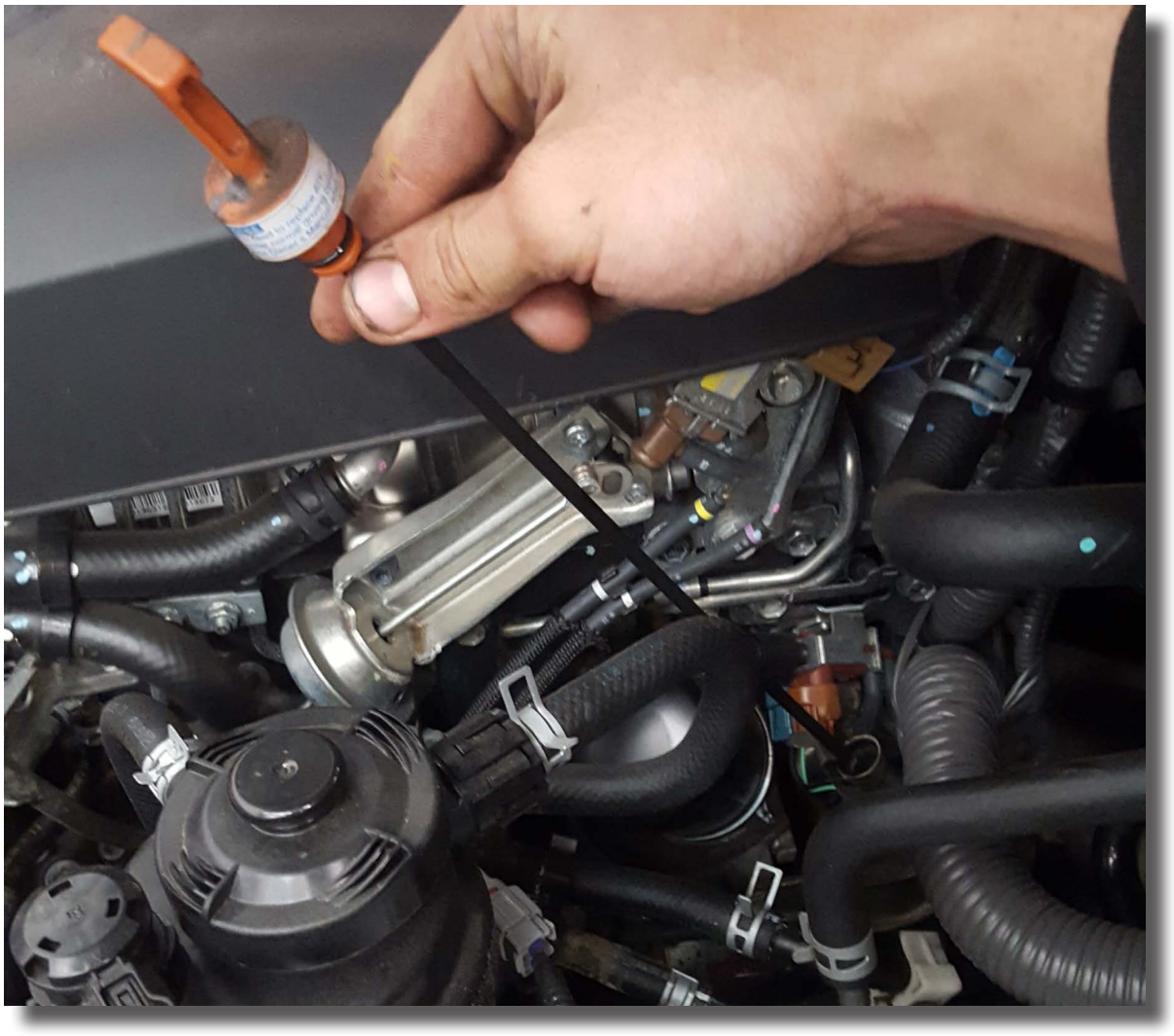
3.1. Before checking the transmission fluid, the vehicle needs to be on a flat level surface otherwise the fluid level indication will not show the correct level.

3.2. Start the engine. While the car is running grab a clean rag suitable for wiping the dipstick off when ready.

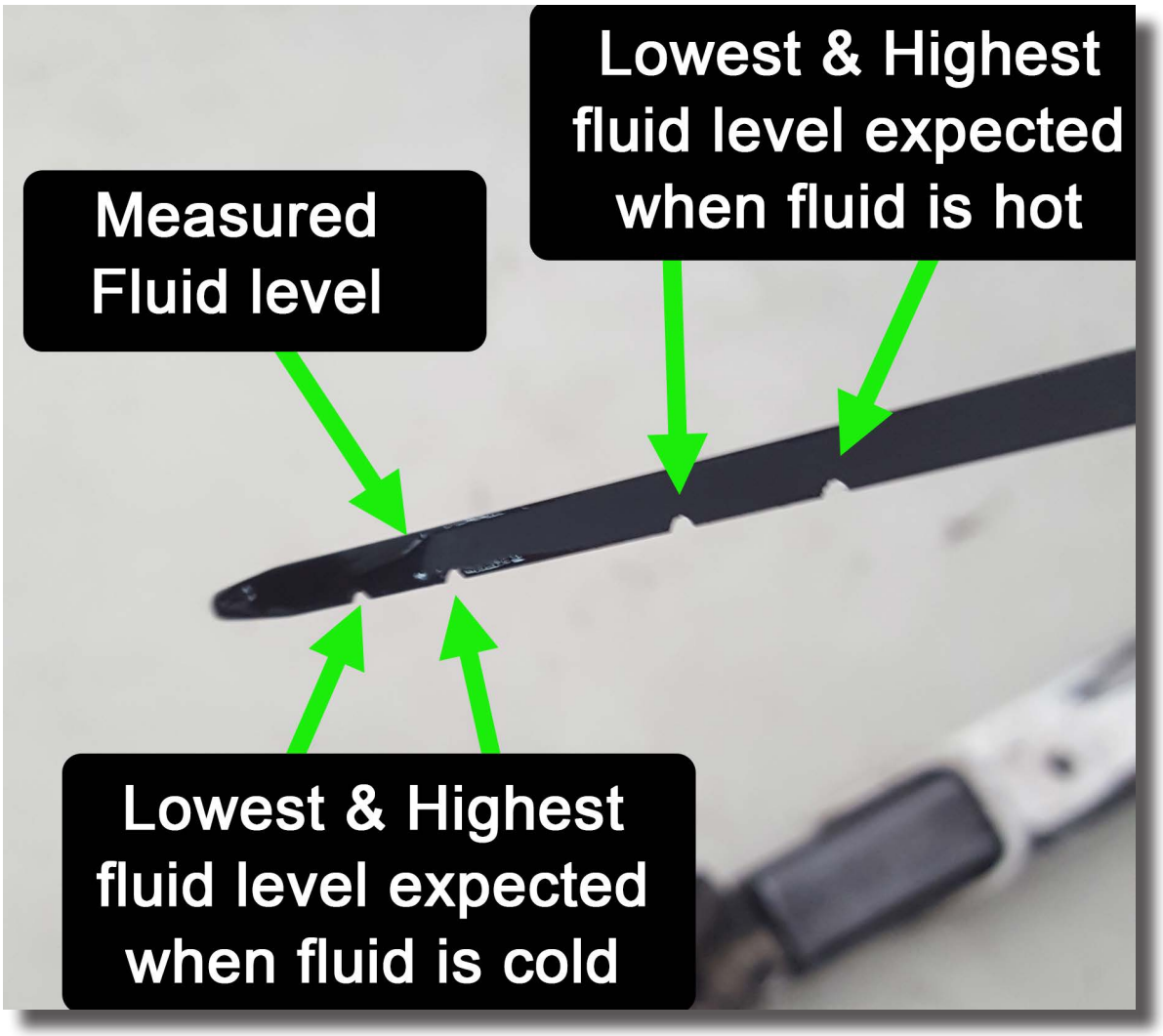
3.3. After the engine has been running for at least 30 seconds, locate the filler tube and dipstick in the engine bay and remove the dipstick.

3.4. Wipe any fluid off the dipstick and then re-insert into the filler tube for 10 seconds.

3.5. Remove the dipstick and check fluid level on the dipstick.



3.6. Check the dipstick level by comparing the measured fluid level on the dipstick with the notches on the edge of the dipstick. You will note that our measured fluid is correct if the fluid is cold. If the fluid is hot (50° and above) then our fluid level would be considered low and we would need to add more fluid.



3.7. If you determine your fluid level is low, top up the transmission fluid via the filler tube where the dip stick was removed.

3.8. We recommend adding 1/2 liter of transmission fluid, then let the vehicle run for 60 seconds before inserting dipstick to allow the fluid to drain down into the pan.

3.9. Clean the fluid off the dipstick and then insert the dipstick into the filler tube again for 10 seconds. Repeat until the fluid level reaches the required level indicator.

3.10. Return the dipstick to the filler tube and lock into place if applicable.

3.11. Clean any spilt transmission fluid on the vehicle or the ground, and visually check the cooler line connections for leaks.

4. Road Test and Final Steps:

4.1. When taking the vehicle for road test, try to drive in all types of conditions such coasting, heavy acceleration, engine braking.

4.2. While test driving, it is best to monitor the transmission fluid for any anomalies such as higher than expect fluid temperatures. This could indicate a blockage or a restriction in the cooler lines.

4.3. After road test, visually check for leaks at the cooler connections. Re-tighten any fittings as required.

4.4. 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.

4.5. If fluid level needs to be topped up, repeat road test and check fluid level again.

4.6. Check again for any spilt transmission fluid on the vehicle and clean.

4.7. If bash plates were removed reinstall them in reverse order.

This completes the installation of the External Transmission Oil Cooler Kit to suit:

Toyota Hilux 4 and 5 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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Using your smart phone or device's camera app, point at the QR code below to take you straight to our feedback page for you to choose the most appropriate feedback method.

Protect your Transmission

Analogue Transmission Temperature Guage

Don't wait until it's too late! A real-time readout Transmission Temperature Gauge, picking up the temperature of the oil at it's hottest point is the cheapest form of insurance you have against total transmission failure. If something was to go wrong with your transmission, most likely the temperature will be your first warning sign.

Full Synthetic Transmission Fluid

Orto-Fluid Full Synthetic Automatic Transmission Fluid is a multipurpose replacement developed to cover a wide range of ATF specifications. Orto-Fluid is the perfect choice for the customer that wants high reliability and smooth gear changes while extending their service intervals to 2 years or 50,000kms.

Deep Cast Transmission Pan

The cast aluminum transmission pan provides extra oil capacity for the transmission. The more oil the better the cooling – which lowers your risk of heat related damage to the transmission. This cast pan has the extra oil capacity to provide improved cooling and the more oil you have in circulation the longer your transmission oil will last before deterioration starts to occur, adding an extra 25% longevity to the oil.

Available now from Wholesale Automatic Transmissions