Wholesale
AUTOMATIC TRANSMISSIONS
03-9762 8004

External Transmission Oil Cooler Kit

Suitable for:

Toyota Prado 150 Series
5 Speed A750 and 6 Speed AC60 Automatic Transmissions

WITH THE FOLLOWING ENGINES:
1GD-FTV 2.8L Diesel, 1KD-FTV 3.0L Diesel,
1GR-FE 4.0L Petrol, 1KD-FTV 3.0L Diesel

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

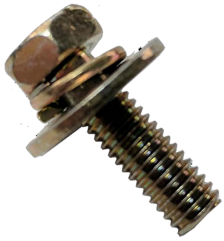
Hot engines and hot transmissions can cause serious injury. Before removing parts from the vehicle, allow sufficient time for engine and transmission to cool.

Parts List

Cross Flow Oil Cooler Pre-Mounted to Bracket Plus Retainer Bracket

4 x 8-16mm Stainless Steel Cooler Line Screw Clamps

2.5m x 10mm High Temp Cooler Line Hose with Conduit



1 x M6x20mm SEMS Bolt For Mounting Bracket

5 x 300mm Cable Ties

Expected Installation Time: 2 Hours

Summary of Installation - For Experienced Fitters

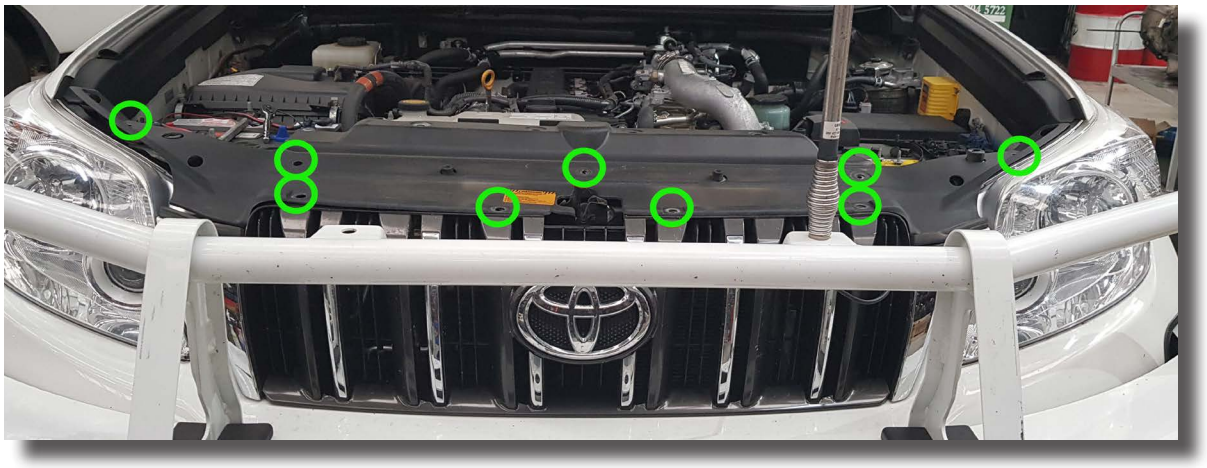
- Ensure you have enough transmission oil to top up your transmission.
- Remove the plastic cover above the radiator by removing the plastic clips.
- Remove the lower bash plates / covers (if fitted) below the front of the vehicle.
- Disconnect the rubber hose that brings transmission fluid into the top right of the radiator. Follow the hose back to where it connects to a metal pipe running from the transmission then disconnect the hose from this metal pipe.
- Remove protective rubber socks from your new transmission cooler fittings.
- Cut the provided cooler line in half. 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 screw clamps.
- Slide the cooler bracket and hoses down in front of the radiator.
- Unbolt the following from the vehicle: two horns, the lower bolt that holds the center radiator support
- Mount the cooler and remount the two horns by attaching them to the original horn mounting bolt holes. The horns must be mounted facing the reverse direction (toward the back of the vehicle). Do not fully tighten the bolts at this point.
- Locate the bolt hole at the bottom left of the cooler. Bolt the cooler to your vehicle using this hole. Do not fully tighten the bolts at this point.
- Locate the last remaining bolt hole on the bottom of the cooler bracket. Insert the bolt into the cooler bracket and tighten the bolt into the bolt hole.
- Tighten all cooler bracket bolts.
- Cut a hole in the foam below the radiator to allow the cooler hoses to pass through into the engine bay. Route the hoses through this hole.
- The two hoses running from the bottom of the cooler can now be connected. One should be routed to the top right of the radiator where the original OEM transmission line was attached. The other should be routed to the metal pipe coming from the transmission where the other end of the OEM line was attached.
- Trim hoses to required lengths and attach using the supplied stainless steel hose clamps.
- Use supplied cable ties to secure hoses as required.
- Road test vehicle then re-inspect cooler and fittings for leaks. Tighten if necessary.

1. Detailed Installation Instructions

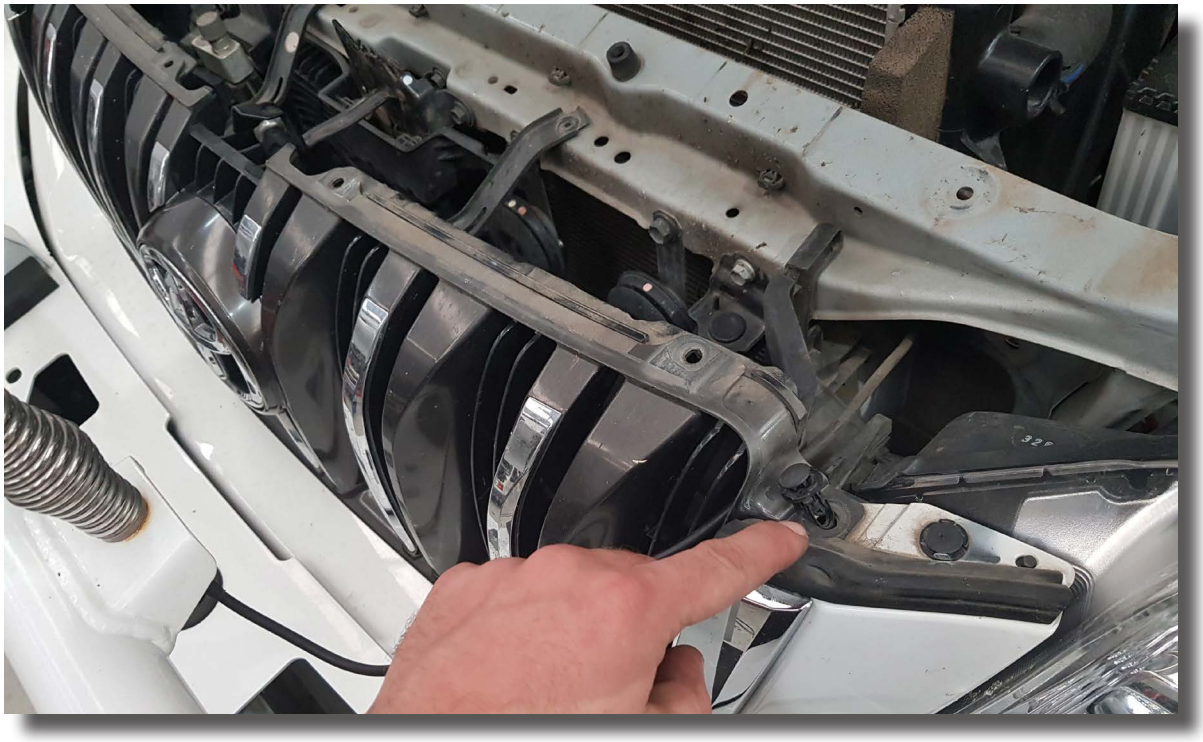
Before commencing work, please ensure that you have sufficient transmission fluid to top up the transmission at the end of the job.

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

1.2. Open bonnet and remove the plastic cover above of the radiator. This can be completed by removing the clips as pictured below.

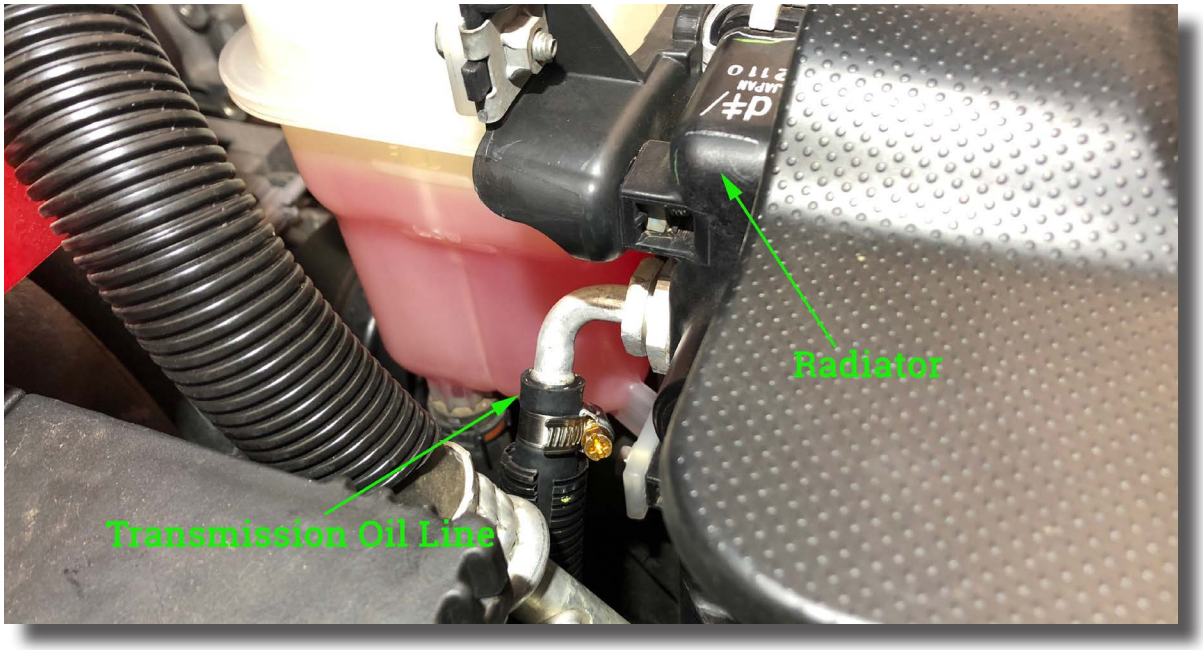


1.3. Remove the front grill and remove any lower bash plates / covers (if fitted) below the front of the vehicle.



1.4. Locate the rubber hose on the top connection of the radiator. Follow this hose to underneath the alternator where it connects to the top steel line that runs to the transmission. Disconnect this hose and discard.

Top Radiator Connection



Lower Steel Line Connection

1.5. Remove rubber protectors from the cooler fittings and discard.

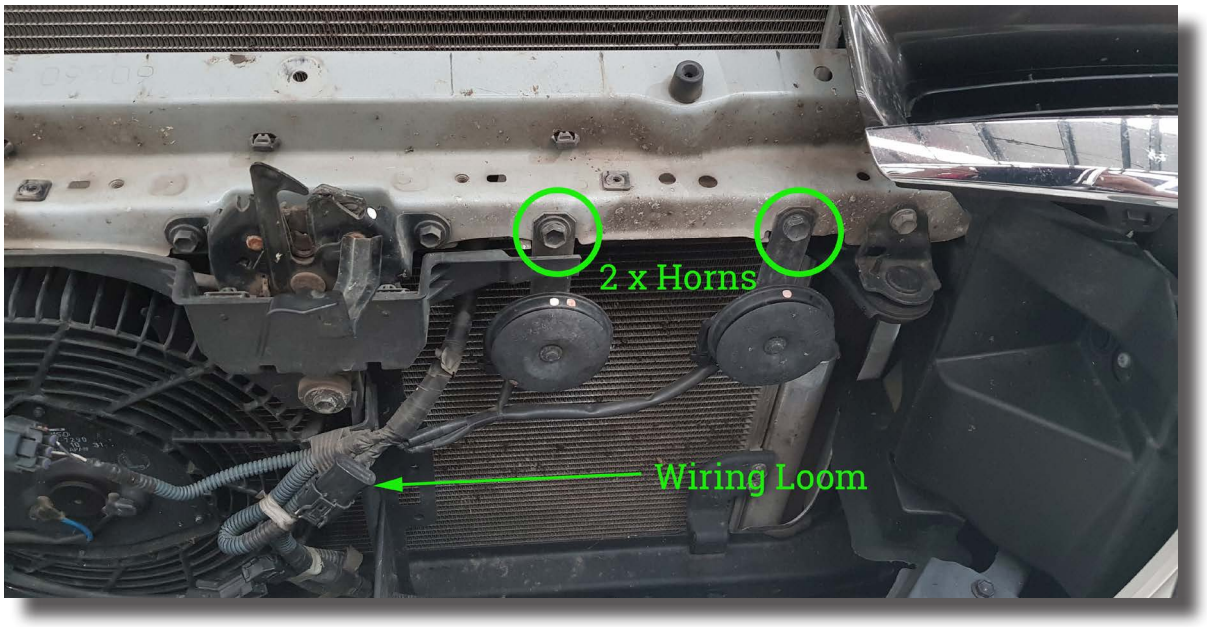
1.6. Undo the hose clamps enough to loosely fit over the supplied cooler line.

1.7. Slide the cooler line ends onto each of the barbed fittings on the cooler.

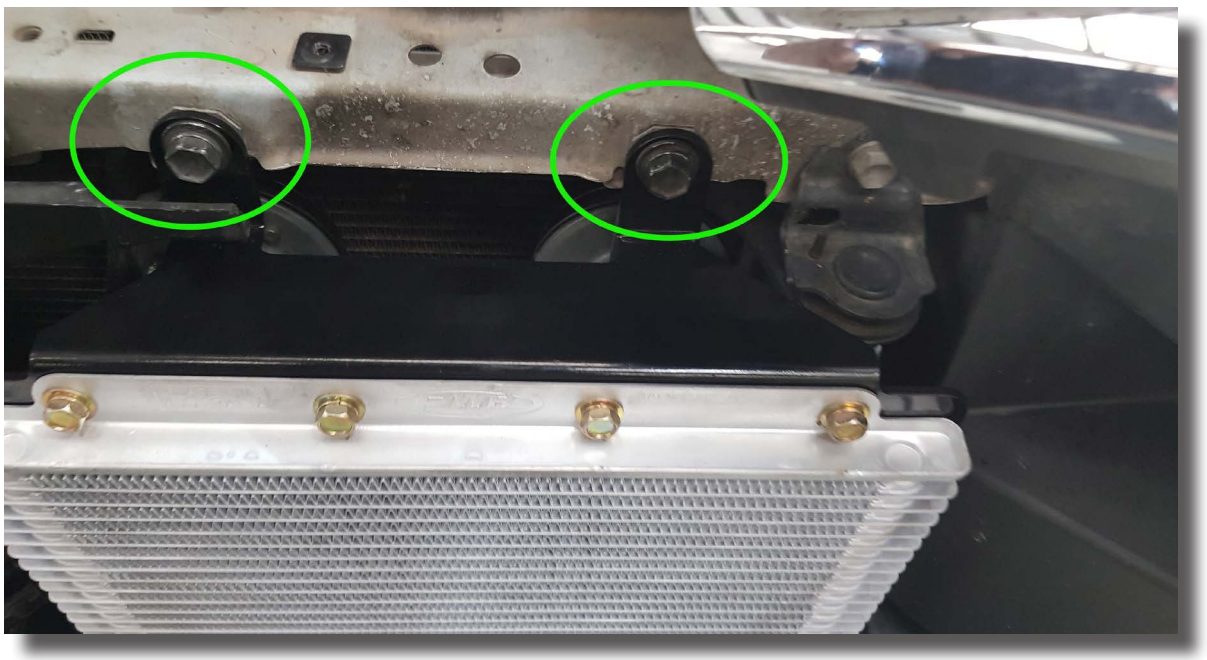
THIS MUST BE DONE DRY. DO NOT USE LUBRICANTS.

1.8. Tighten the hose clamp to ensure a nice snug fit. Do NOT cut the hose yet.

1.9. Unbolt both of the horns and retain the bolts. Also remove the bolt from the lower radiator support and retain. We also recommend loosening the wiring loom for the horns and the Ambient Temp sensor to allow for easier fitting of the cooler bracket.



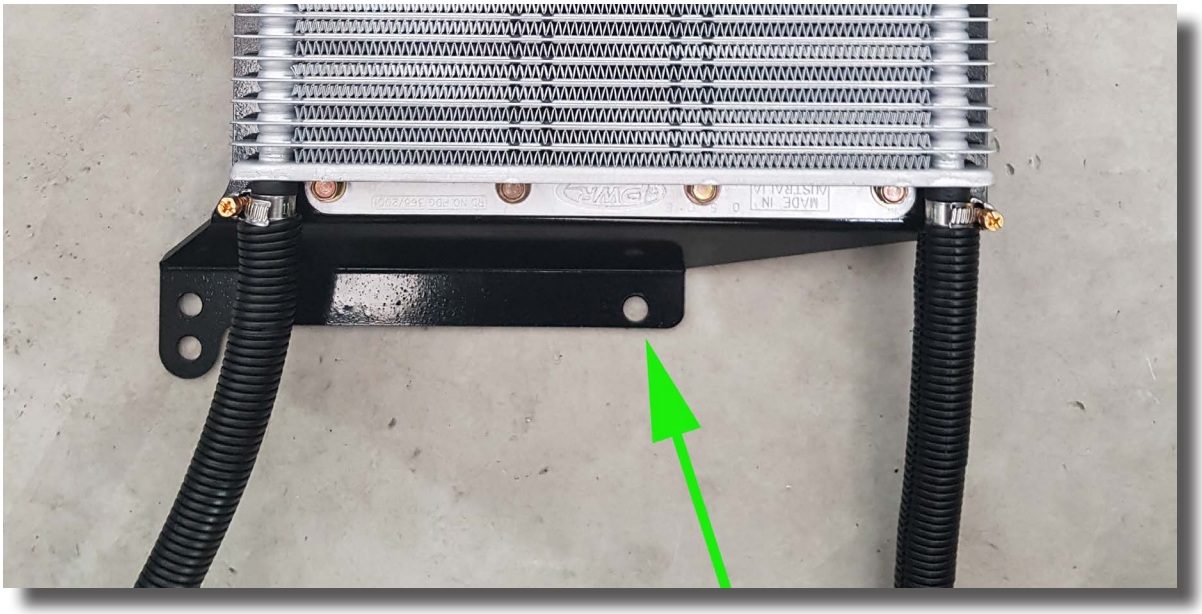
1.10. The cooler can now be mounted to the radiator support. Take the two bolts that mounted the horns and fit them to the two holes on the top of the cooler bracket. The two horns then slide onto each bolt - Facing backwards. Then bolt the cooler bracket and horns to the vehicle using the factory horn mounting holes. Leave the bolts finger tight for now.



1.11. Locate the top bolt hole of the two located at the bottom left of the cooler (as you face the radiator) as indicated below.

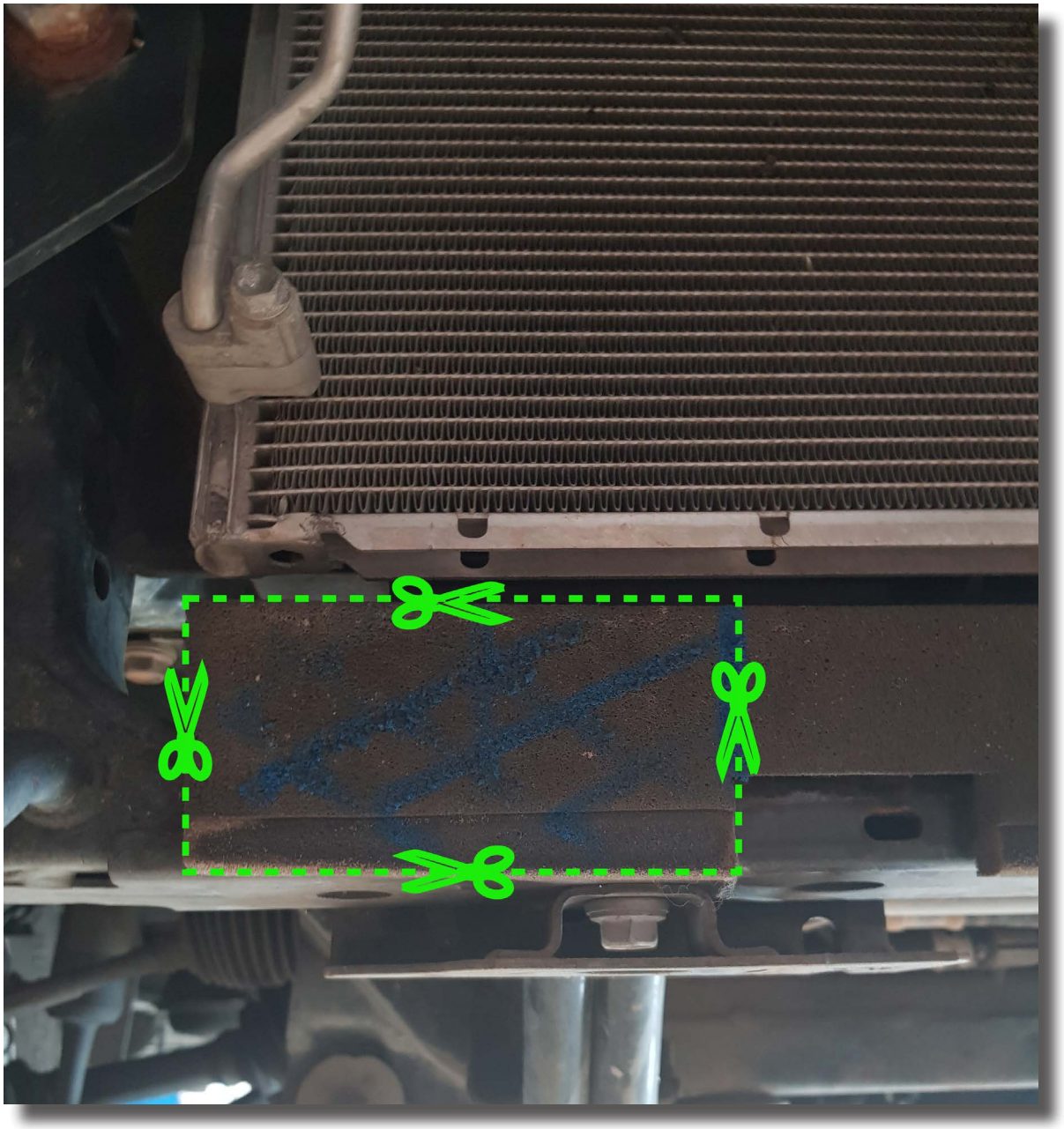
1.12. Feed the factory bolt through the cooler bracket using the top hole as indicated above and bolt the center Radiator support back into place.

1.13. Attach the final cooler bracket bolt, using the supplied M6 bolt through the cooler bracket hole indicated below.

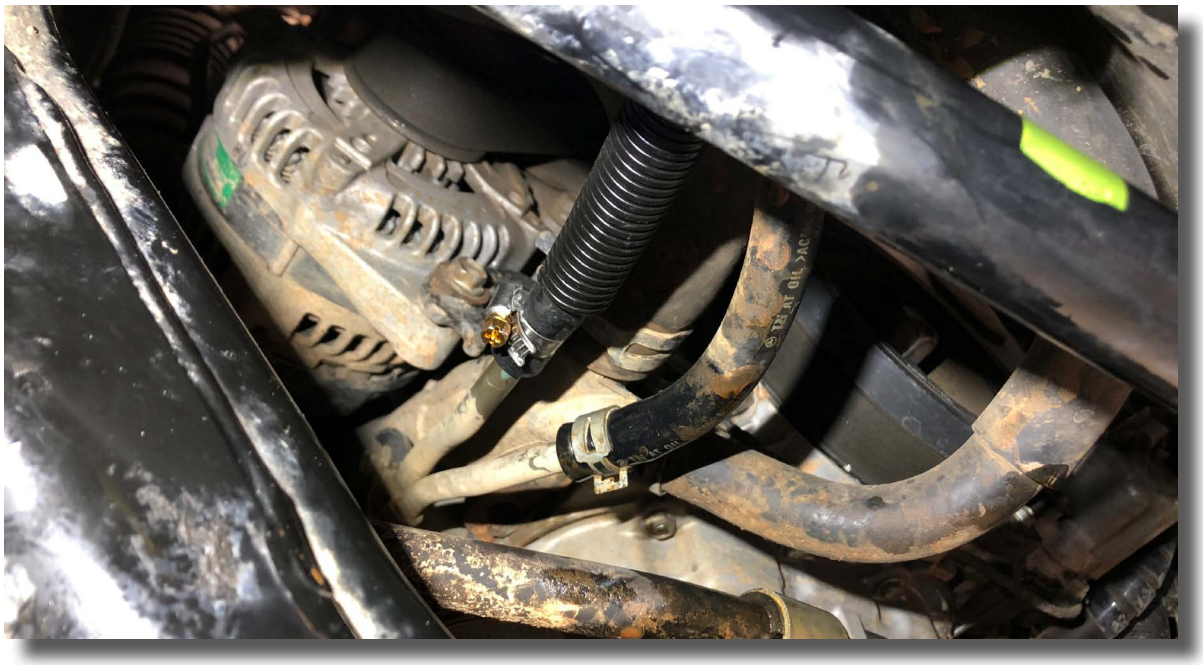


1.14. Now that all bolts are in place, fully tighten all of the mounting bolts.

1.15. Moving to below the radiator. Cut out a section of the foam below the radiator as indicated in the below picture. The cooler hose can be routed through the hole created and routed to the factory connections exposed previously. Be sure to cable tie the hoses to prevent moving while driving and be certain that there is no horizontal pressure on the cooler hose fittings that could eventually cause a leak.



1.16. The new cooler hoses can now be connected to the factory connections. It does not matter which one is connected to which as the cooler is bi-directional. Cut hoses to length, fit screw clamps and fit to both factory connections and tighten screw clamps.



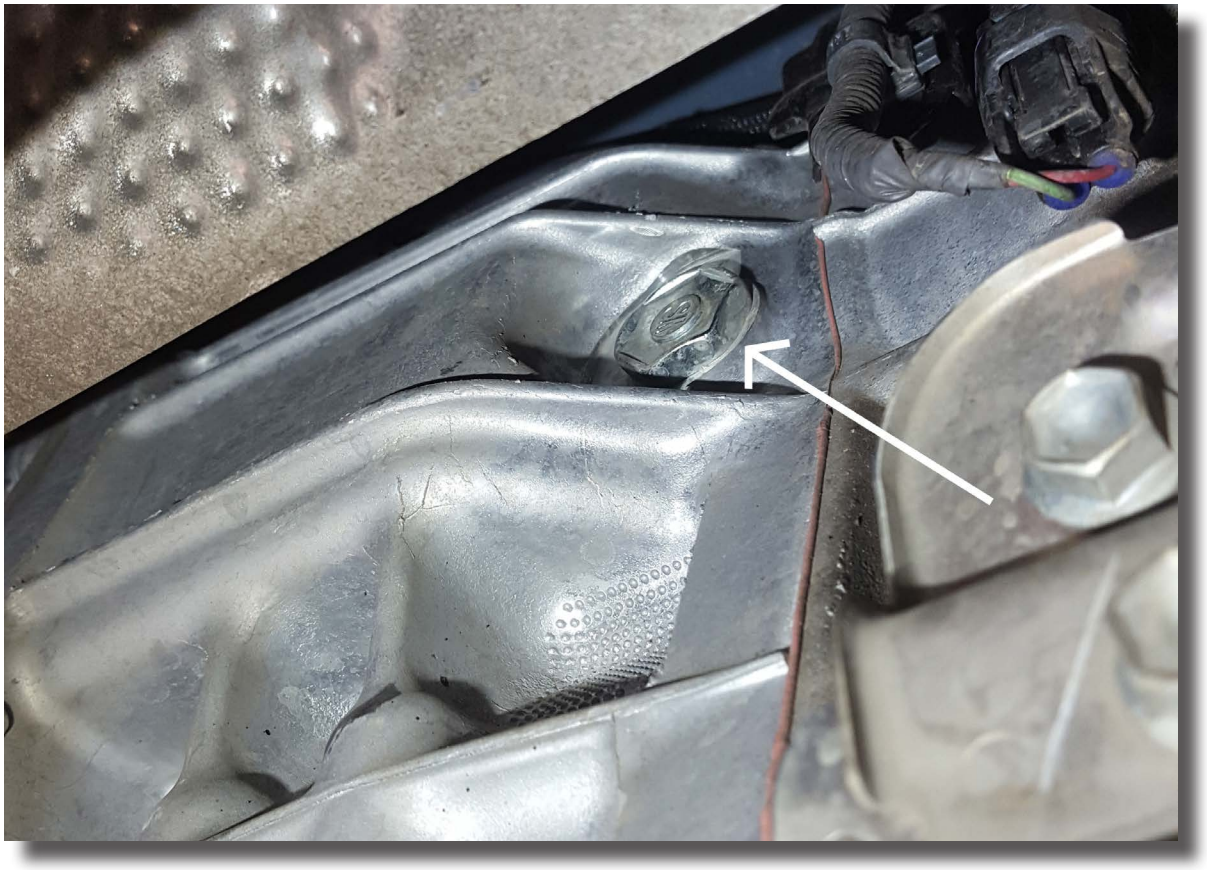
2. Fluid Top Up Instructions for A750 5 Speed Auto and AC60 6 Speed Auto

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.

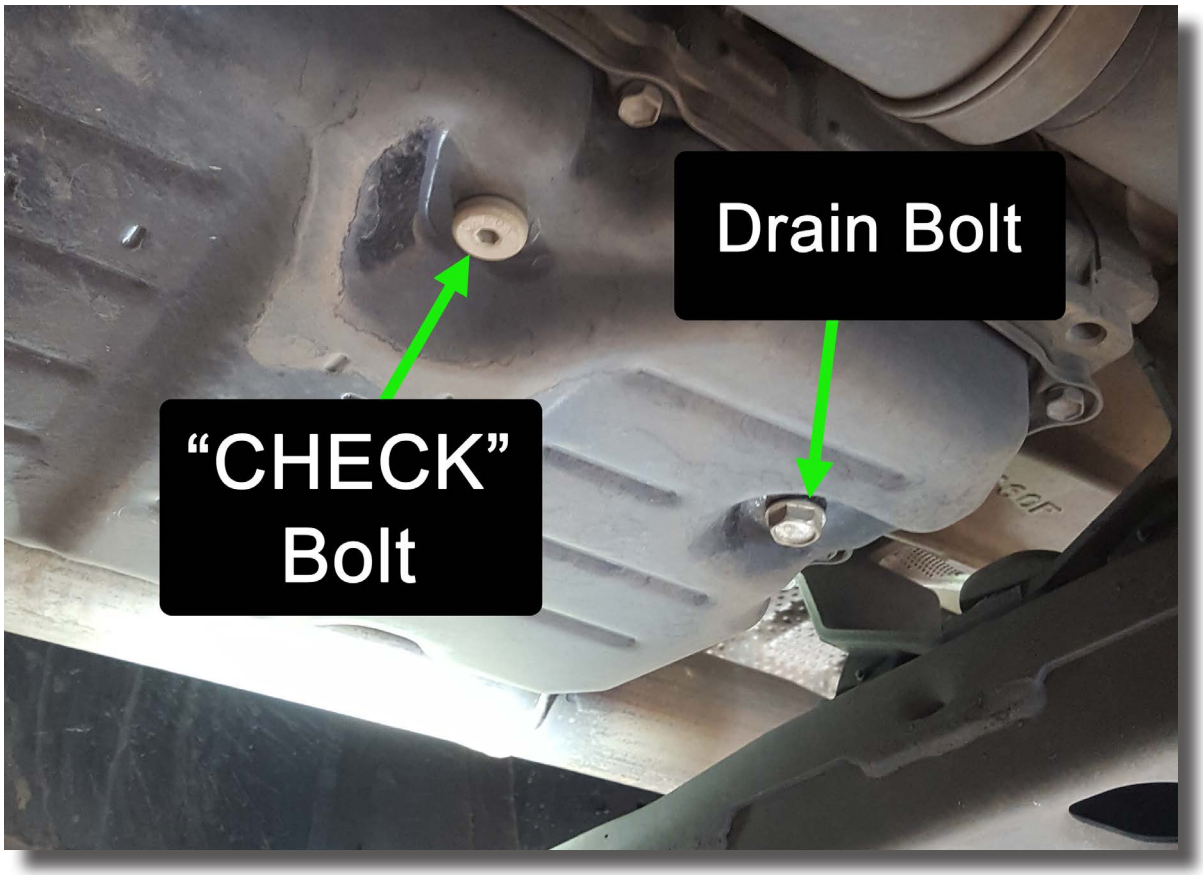
2.2. The A750 5 Speed Auto and the AC60 6 Speed Auto transmissions have transitioned to a non-dipstick configuration. Quite often these ‘dipstick-less’ transmissions were called ‘Sealed for Life’ transmissions. This is a misnomer and in fact they are not sealed. The transmission fluid in these transmission 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 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 Road Test and Final Steps Chapter

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

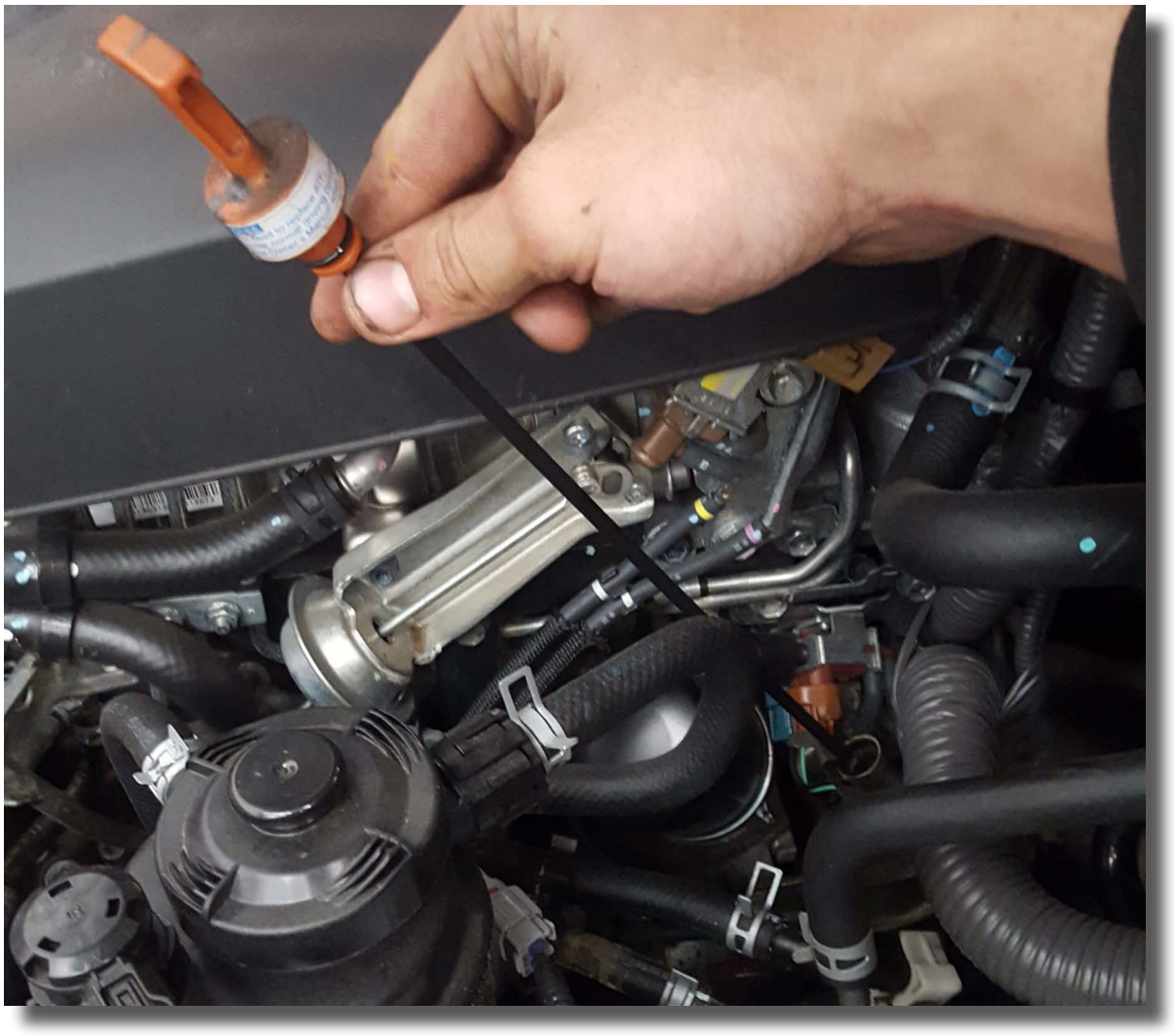
3.1. Before checking the transmission fluid, the vehicle needs to be on a flat level surface otherwise the fluid level indication will not show the correct level.

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

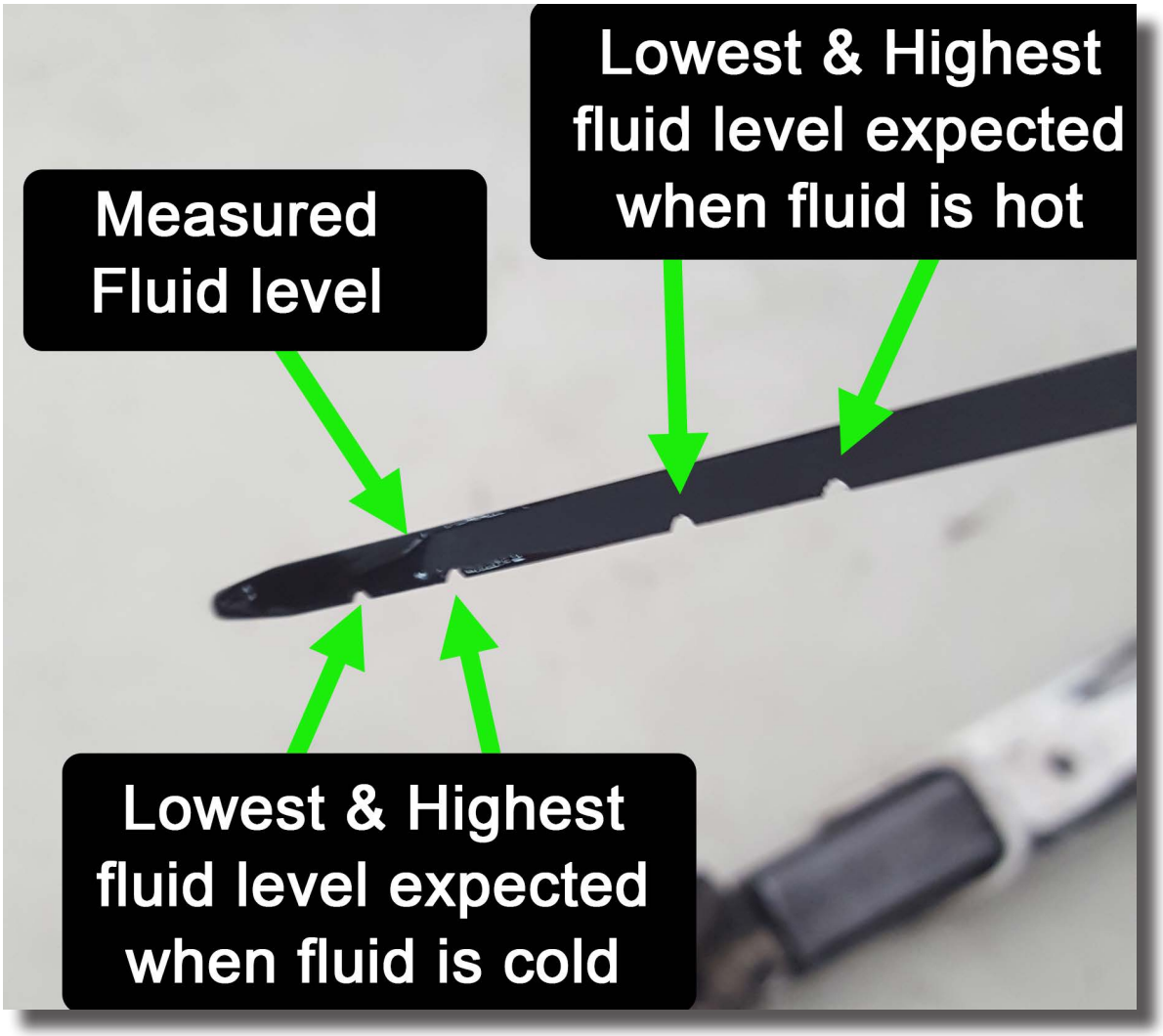
3.5. Remove the dipstick and check fluid level on the dipstick.



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° Celsius 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 Prado 150 Series

5 Speed A750 and 6 Speed AC60

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

If you have a minute to provide us with some feedback about your experience with Wholesale Automatic Transmissions and our products, that would be greatly appreciated.

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