Wholesale
AUTOMATIC TRANSMISSIONS
03-9762 8004

Dual External Transmission Oil Cooler Kit

Suitable for:

LATE Toyota Land Cruiser 300 Series with 10 Speed Automatic Transmission

WITH THE FOLLOWING ENGINE:
F33A-FTV - 3.3L V6 Turbo 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.

Parts List

2x 3/8” Oil Coolers Preinstalled on Bracket

3m x 3/8” Cooler Line Hose with Conduit

0.5m x 3/8” Cooler Link Hose with Conduit

6 x 14-16mm Stainless Steel Hose Clamps

5 x 300mm Cable Ties

1 x M8 x 25mm SEMS Bolt

1 x M6 x 25mm SEMS Bolt

2 x M6 Nut

Expected Installation Time: 2 Hours

Summary of Installation - For Experienced Fitters

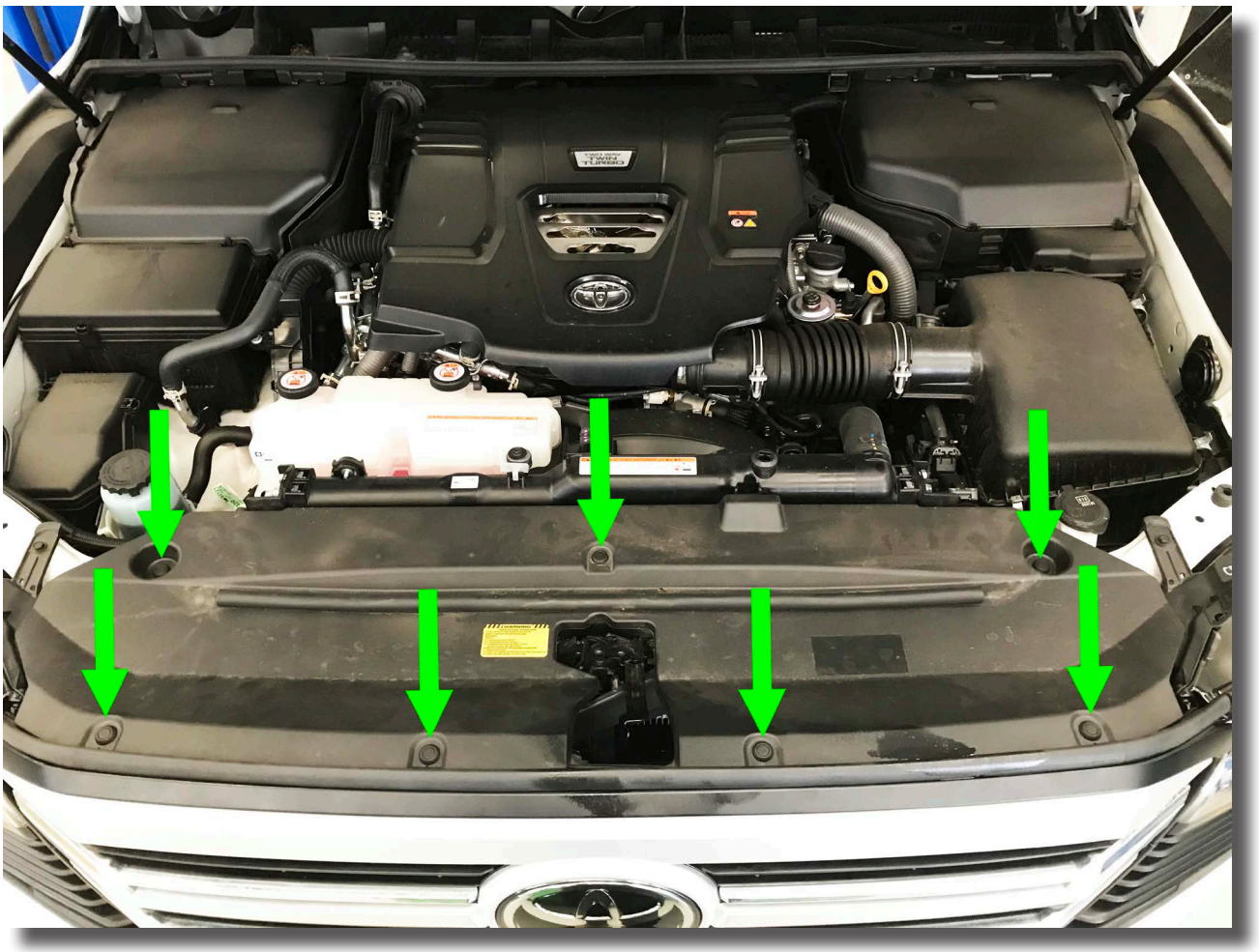
- Ensure you have enough transmission oil to top up your transmission at the end.
- Remove the plastic cover above the radiator by removing the plastic clips and screws.
- Remove the bolts holding in the grill and upper radiator support.
- Tilt grill and upper radiator support forwards to gain access. Be careful not to damage the air conditioning hoses on the right side.
- Install the 0.5m Cooler Link Hose between the front cooler's right barb and the rear coolers left barb. Secure with 2x of the supplied hose clamps.
- Install the 3m Cooler Line Hose to the remaining ports on coolers. Secure with 2x of the supplied hose clamps. Cut the Cooler Line Hose to the correct length.
- Feed the two halves of the Cooler Line Hose and the Dual Cooler Assembly down the gap between the air conditioning condenser and the loosened upper radiator support. Be careful not to damage the air conditioning condenser.
- Secure the upper mounting arm of the Dual Cooler Assembly to the upper radiator support using the supplied M8 bolt. Don't tighten this bolt yet.
- Secure mid mounting arm of the Dual Cooler Assembly to the exposed thread of the factory bolt using the supplied M6 nut.
- Secure the lower mounting arm of the Dual Cooler Assembly to the lower radiator support the supplied M6 bolt and M6 nut (if required). Don't tighten this bolt yet.
- Reinstall the upper radiator support and secure it and the grill with the factory bolts.
- Tighten all the bolts securing the Dual Cooler Assembly.
- Feed the Cooler Line Hose around the radiator on the drivers side.
- Remove the factory hose on the passenger side of the radiator trans fluid heat exchanger.
- Route one of the cooler lines to the passenger side fitting of the radiator heat exchanger. Secure with one of the supplied hose clamps.
- Route the other cooler line to the transmission fluid return line. Secure with hose clamp.
- Secure all hoses away from any hot or moving parts. Ensure they are not kinked or routed in a way to not restrict cooler flow.
- Check transmission fluid level.
- Road test vehicle, then re-check transmission fluid level. Inspect cooler fittings for leaks and tighten if necessary.
- Refit any previously removed pieces.
- Clean up any transmission fluid from the vehicle.

Detailed Installation Instructions

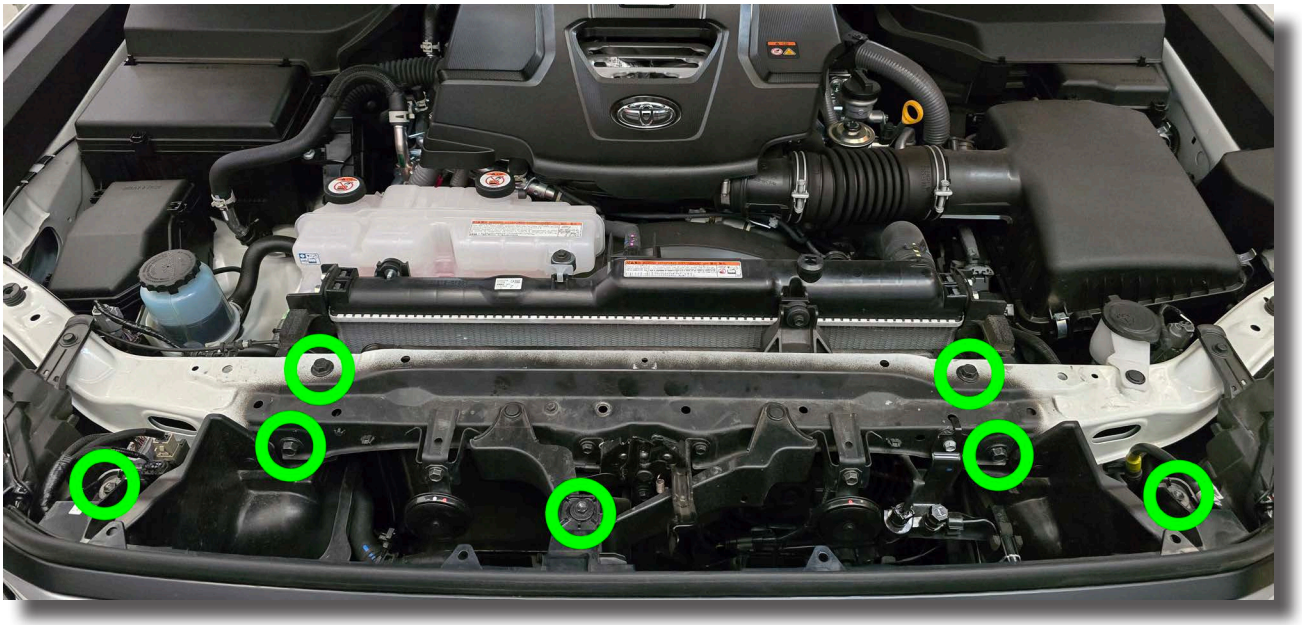
Before commencing work, please ensure that you have at least 2L of Toyota WS-compatible transmission fluid to top up at the end of the job.

1. Open bonnet.

2. Remove upper radiator cowl by removing the seven (7) plastic clips holding the radiator cover in place.



3. Remove the 7 bolts indicated below - these hold the upper radiator support and front grill in place.

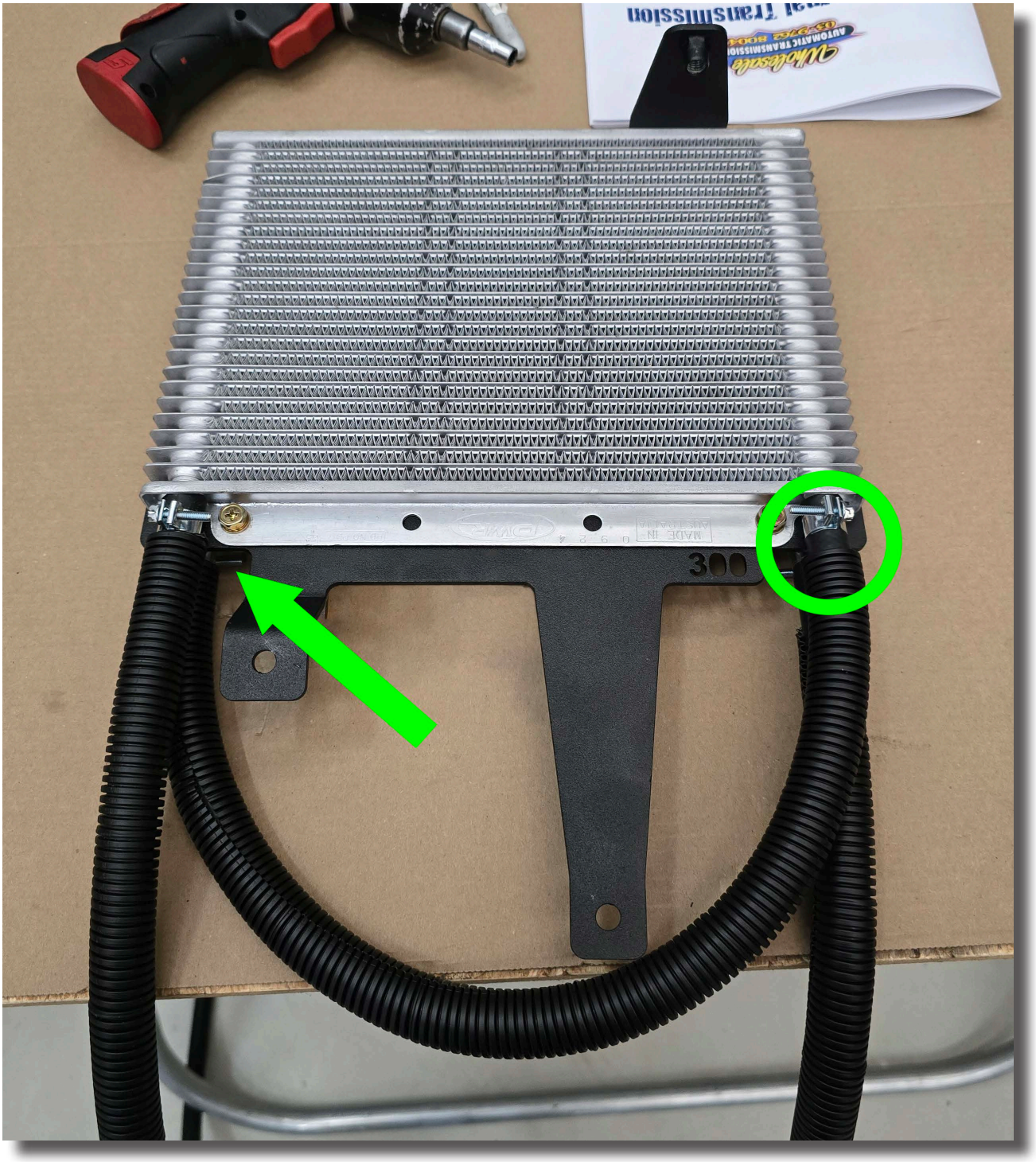


4. Gently lift the upper radiator support to clear the lip on the back side of the upper radiator support. Tilt the upper radiator support and grill forwards to make space for installing the Dual Cooler Assembly.

   Be mindful of the air conditioning lines on the passenger side - the upper radiator support only needs to come forwards a little bit to allow you to install the Dual Cooler Assembly.

5. Install the 0.5m Cooler Link Hose between the front cooler's right barb and the rear coolers left barb. Secure with 2x of the supplied hose clamps.

6. Install the 3m Cooler Line Hose to the remaining ports on the coolers. Secure with 2x of the supplied hose clamps. Cut the Cooler Line Hose to length. Make sure the hose clamps are secured tightly as per the below image.

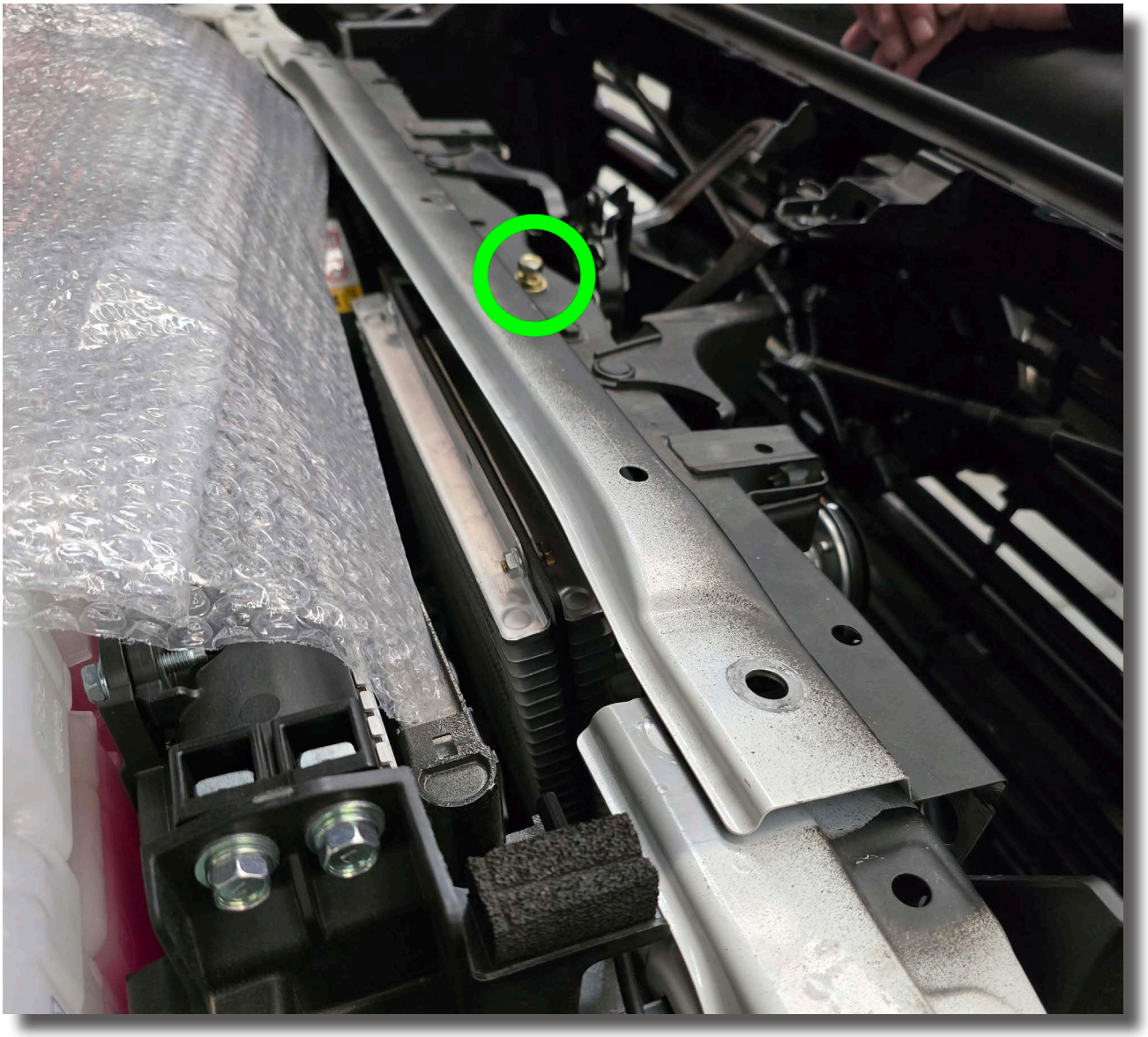


7. Lay the cooler assembly down on top of the engine - use some of the bubble wrap that was in the box to protect the fins. Feed the cooler hoses down the gap between the upper radiator support and the air conditioning condenser.

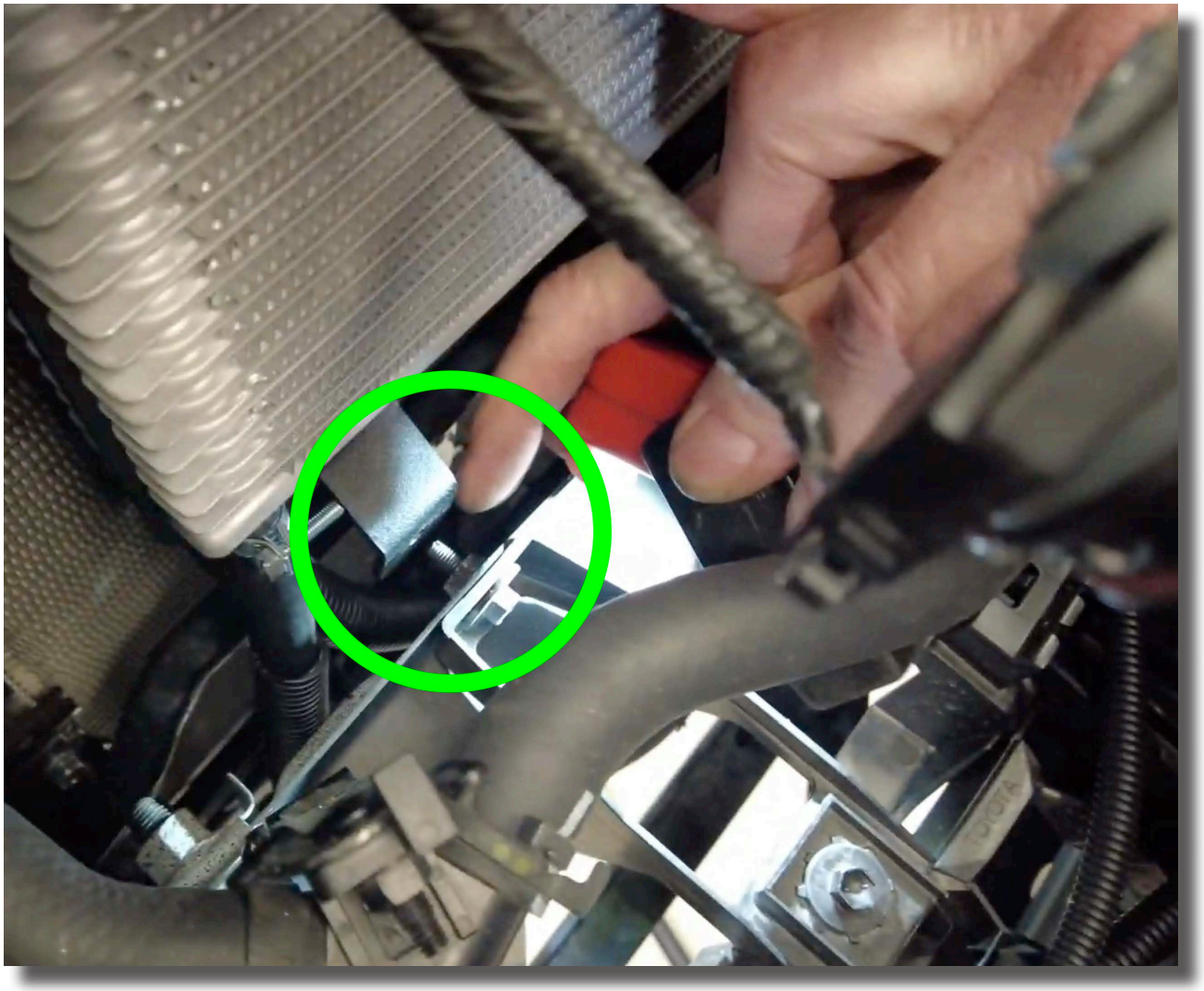
   Be careful not to damage the air conditioning condenser when feeding the hoses down.

8. Feed the Dual Cooler Assembly into the gap between the air conditioning condenser and the upper radiator support.

   Secure the Dual Cooler Assembly using the supplied M8x25 SEMS bolt, threading it through the factory mounting hole behind the bonnet catch and into the threaded rivnut on the upper mounting arm of the Dual Cooler Assembly. Don't fully tighten this bolt yet to make it easier to line everything up.



9. Secure the middle arm of the Dual Cooler Assembly to the exposed thread of the factory bolt that it lines up with using the supplied M6 nut, but don't fully tighten this bolt yet.



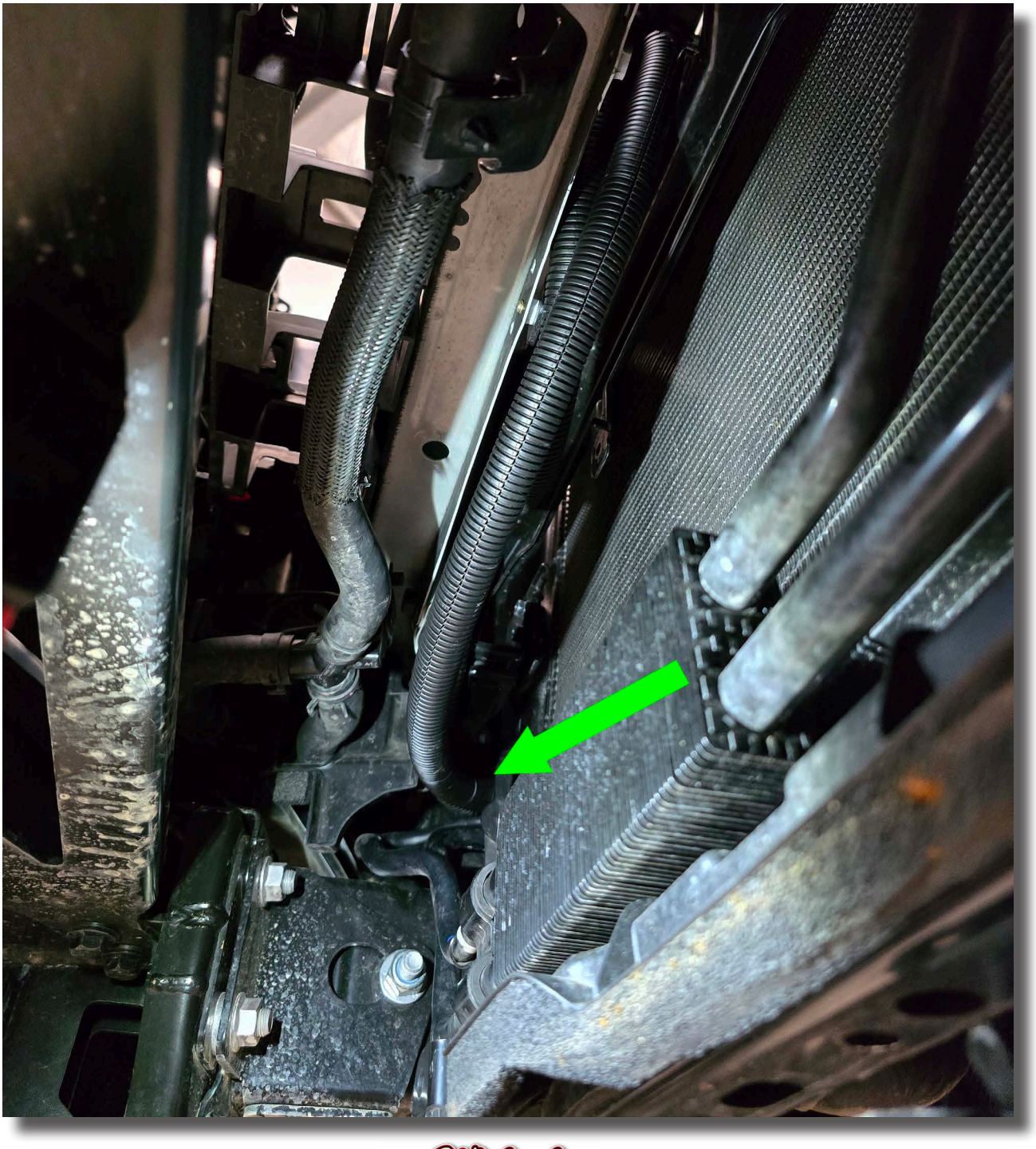
10. Secure the lower Dual Cooler Assembly mounting arm with the provided M6x25 SEMS bolt, threading this through the lower mounting bracket and into the unused threaded nut welded to the lower radiator support.

    If your vehicle doesn't have this threaded nut installed, secure the M6 bolt with the supplied M6 nut. Don't fully tighten this bolt yet.

11. Refit the upper radiator support. Reinstall the 7x factory bolts holding in the front grill and the upper radiator support and tighten.

    Once the grill and radiator bolts have been tightened you can then tighten the three bolts holding in the Dual Cooler Assembly.

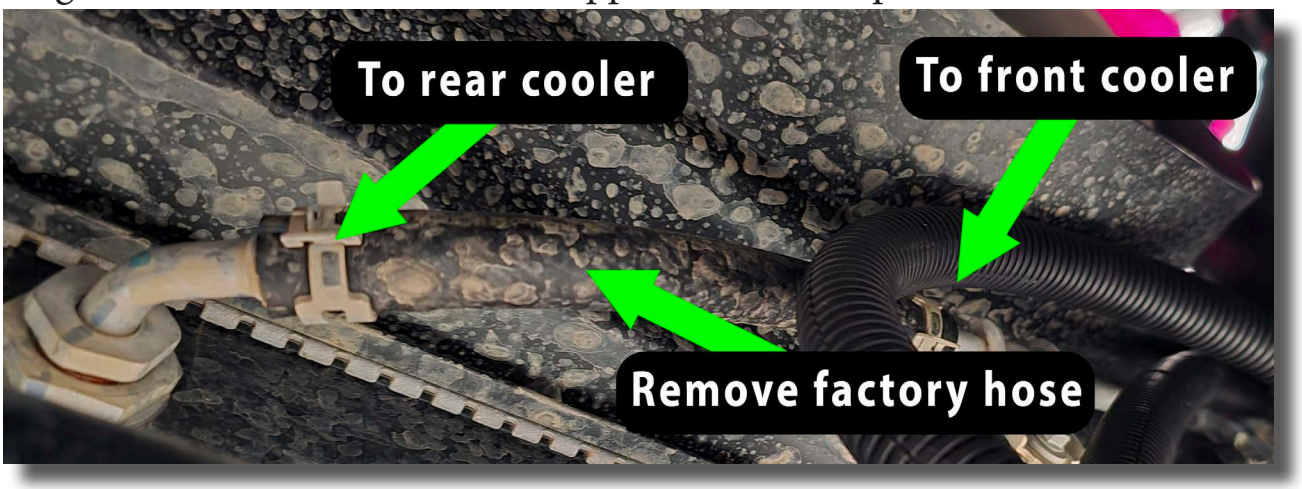
12. Feed the cooler hoses around the drivers side of the radiator to get them into the engine compartment.



13. Identify the factory hose for the cooled transmission fluid return from the heat exchanger in the lower radiator tank - this is the straighter of the two hoses going to the fitting on the passenger side of the vehicle. Remove this hose from both fittings and discard. Be aware transmission fluid might leak out when this hose is removed.

14. Route one of the Dual Cooler Assembly hoses to the factory steel return line, ensuring no kinks or restrictions to flow and avoiding any moving or hot parts in the engine bay. Cut the hose to length and secure with one of the supplied hose clamps.

15. Route the other Dual Cooler Assembly hose to the fitting on the heat exchanger in the lower radiator tank, ensuring no kinks or restrictions to flow and avoiding any moving or hot parts in the engine bay. Cut the hose to length and secure with the final supplied hose clamp.

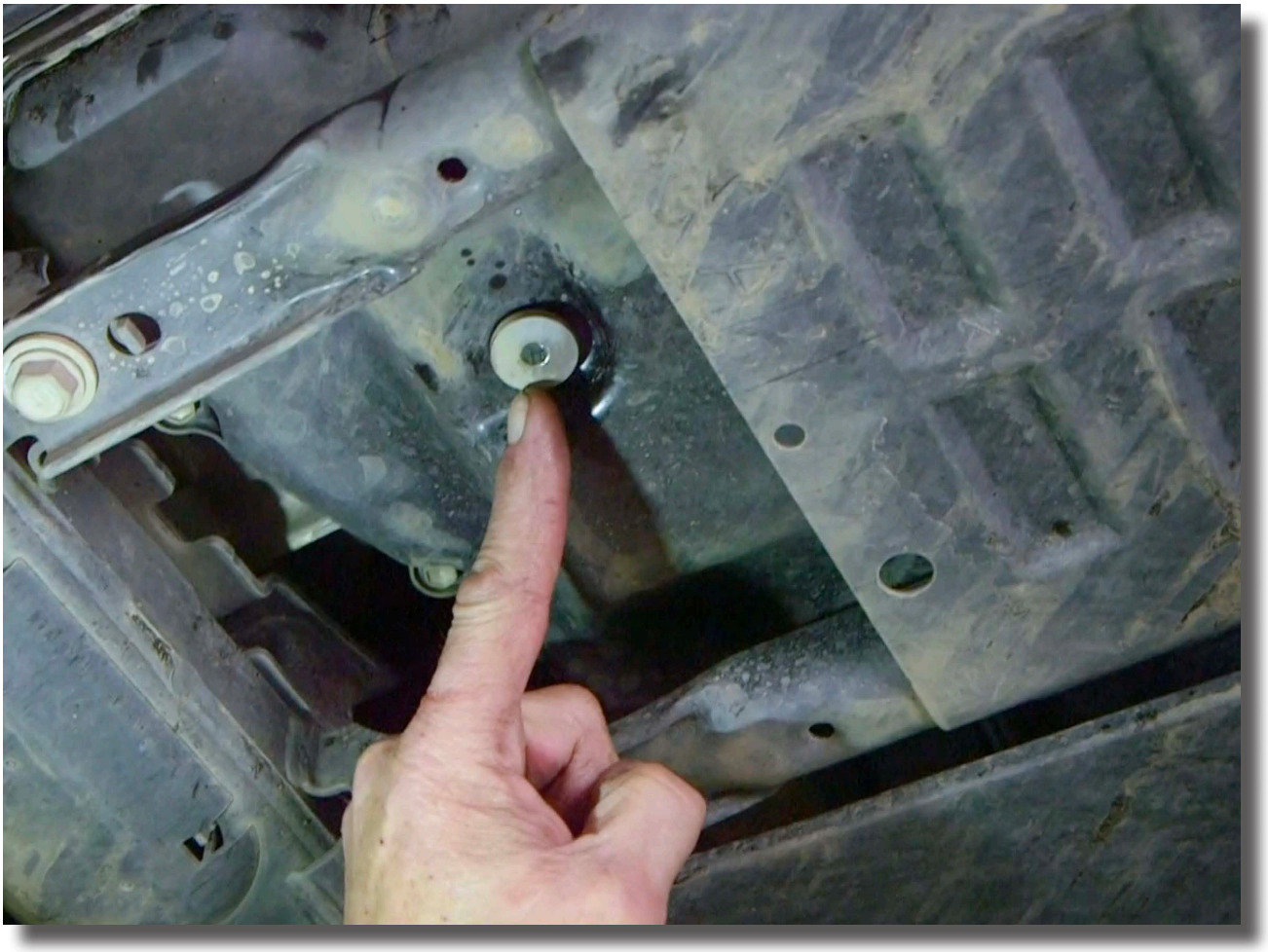


16. Secure the hoses in place using the supplied cable ties. We recommend not refitting bash plates yet in case you need to tighten the hose clamps after test driving.

Checking Transmission Fluid Level

17. Start the engine. Ensure the handbrake is on and the vehicle is in Park.

18. Locate and remove the 6mm Allen key check bolt located in the sump of the transmission.



Please note: The transmission fluid might be quite hot. Please take care when undoing the check bolt.

19. Locate and remove the 14mm fill plug on the drivers side of the transmission.

20. Add enough transmission fluid through the fill plug until there is a steady stream from the check tube - you may not need to use the full 2L. Allow the fluid to drain until it slows to a light stream - just before it slows to a dribble - then reinstall the 'Check' bolt and tighten.

21. Reinstall the 14mm fill plug and tighten.

22. Road test the vehicle for at least 15 minutes. Try to shift through all gears and through up and down hill scenarios.

23. 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.

24. Once fluid level is correct and test driving is complete, visually check for leaks and re-tighten any fittings as required.

25. Check again for any transmission fluid on the vehicle and clean off.

26. Reinstall any bash plates under the vehicle and any other removed panels

This completes the installation of the Dual External Transmission Oil Cooler Kit to suit: Toyota LandCruiser 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.

Please Provide us with Feedback

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