



Dual External Transmission Oil Cooler Kit Suitable for:



Next-Gen Ford Ranger Super Duty

WITH THE FOLLOWING ENGINES:
3.0L V6 Turbo Diesel with 10 Speed Auto

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

			
2 x 3/8" Oil Coolers Preinstalled on Bracket	5m x 3/8" High Temp Cooler Hose	0.50m x 3/8" Cooler Joining Hose	1 x 'L' Pipe
			
2 x 6R80/10R80 Cooler Unions with O-rings	1 x Union Clamping Bracket	1 x Plate With Nutsert	6 x 14-16mm
			
4 x M6 x 25 SEMS Bolts	2 x M10 Washer for spacer	6 x 300mm Cable Ties	1 x 20mm P Clamp 1x 35mm P Clamp
			
Bracket	Flange Nut		

Expected Installation Time: 3 Hours

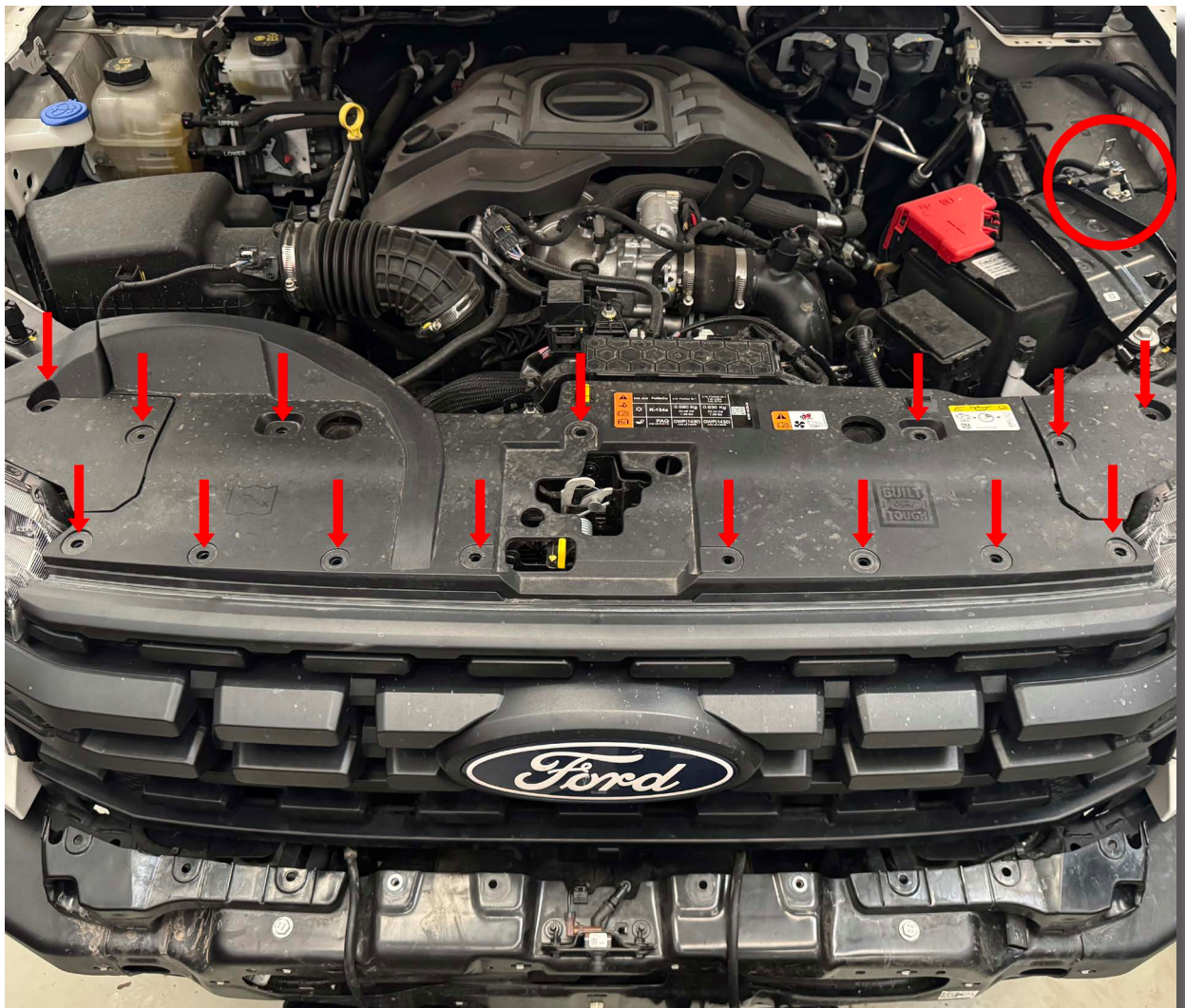
Summary of Installation - For Experienced Fitters

- SAFETY FIRST: Allow engine, auto and fluid to cool prior to starting work to prevent serious injury.
- Turn ignition off and leave off until completion of work. (Vehicle must be completely off)
- Disconnect battery. (Negative terminal is adequate)
- Remove the top cover from over the radiator.
- Remove bumper cover and disconnect radar plug
- Disconnect the radar.
- Remove grill, there are 5 bolts holding it in place.
- Remove bash plate
- Position cooler in the vehicle with cooler hoses pointing towards the passenger side. Secure passenger side of bracket to the center support using bolts provided
- Use plate with Nutsert and bolt provided to secure drivers side of bracket
- Route hoses under air conditioning condenser and along to transmission
- Remove heat exchanger from side of transmission
- Use 'L' pipe to bypass heat exchanger. Secure to OEM hoses with supplied P clamp and 1x M6x25mm SEMS bolt and the M6 flange nut.
- Remove heat exchanger bracket which has 3 bolts and a nut.
- Use two (2) M10 washers as spacers under Gear Shift cable bracket
- Insert unions and secure with clamping bracket provided
- Cut hoses to length and secure with hose clamps provided.
- Check clearance of hoses and fittings to any other moving/hot parts. If needed top up engine coolant and/or transmission fluid with the recommended fluid
- Refit Grill, plug in radar, and bumper cover.
- Reconnect battery.
- Test drive vehicle for 15mins and then check all hoses and fittings for leaks and also check mounts and bolts are tight. Clean any oil or coolant residue off vehicle. Road test. Check for leaks. Re-tighten if necessary. Re-check fluid levels.
- Refit any bash plates, aftermarket accessories removed.

1. Detailed Installation Instructions

Before commencing work, please ensure that you have at least 2L of transmission fluid to top up the transmission, and sufficient coolant to either fully fill or top up at the end of the job. Please read through all of the instructions to familiarize yourself with the process first.

- 1.1. Open bonnet.
- 1.2. Remove the top cover above the radiator. There are 15 clips that need to be removed as shown below. Unscrew the center screw from the clip body and remove both parts. This is also a good time to disconnect the battery, the negative terminal is adequate.



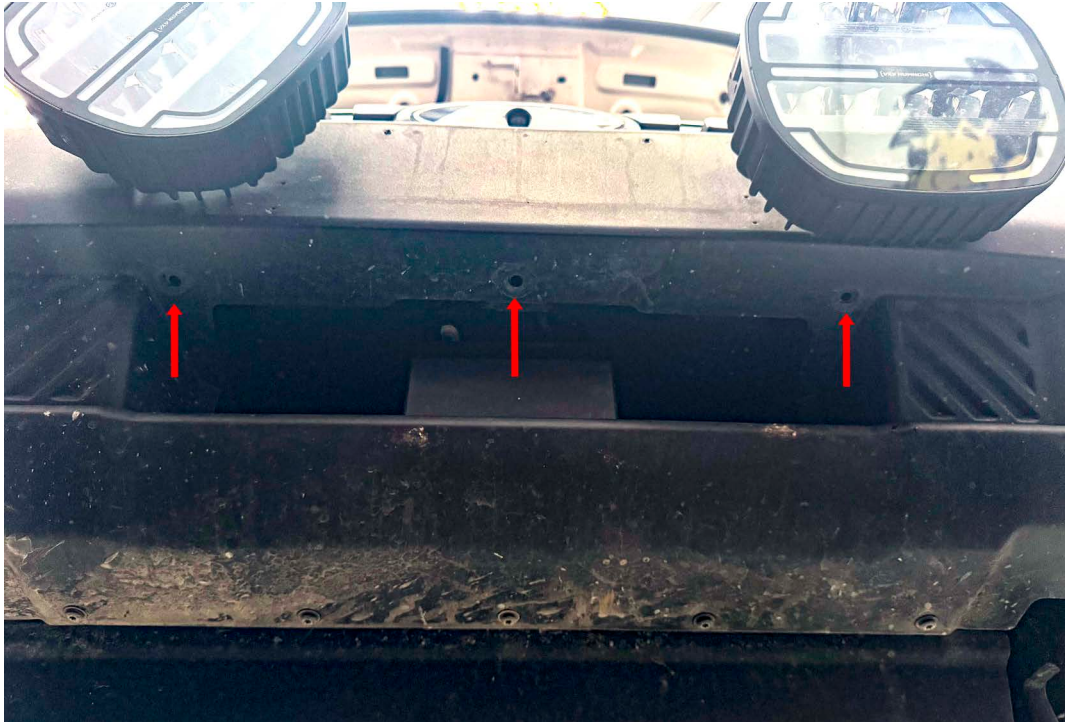
- 1.3. To remove clips use a larger Phillips screwdriver to remove center screw. Once the center screw is removed the outer clip body can be removed.



- 1.4. To remove the grill you will need to remove the bumper cover. Which 8 clips on the top



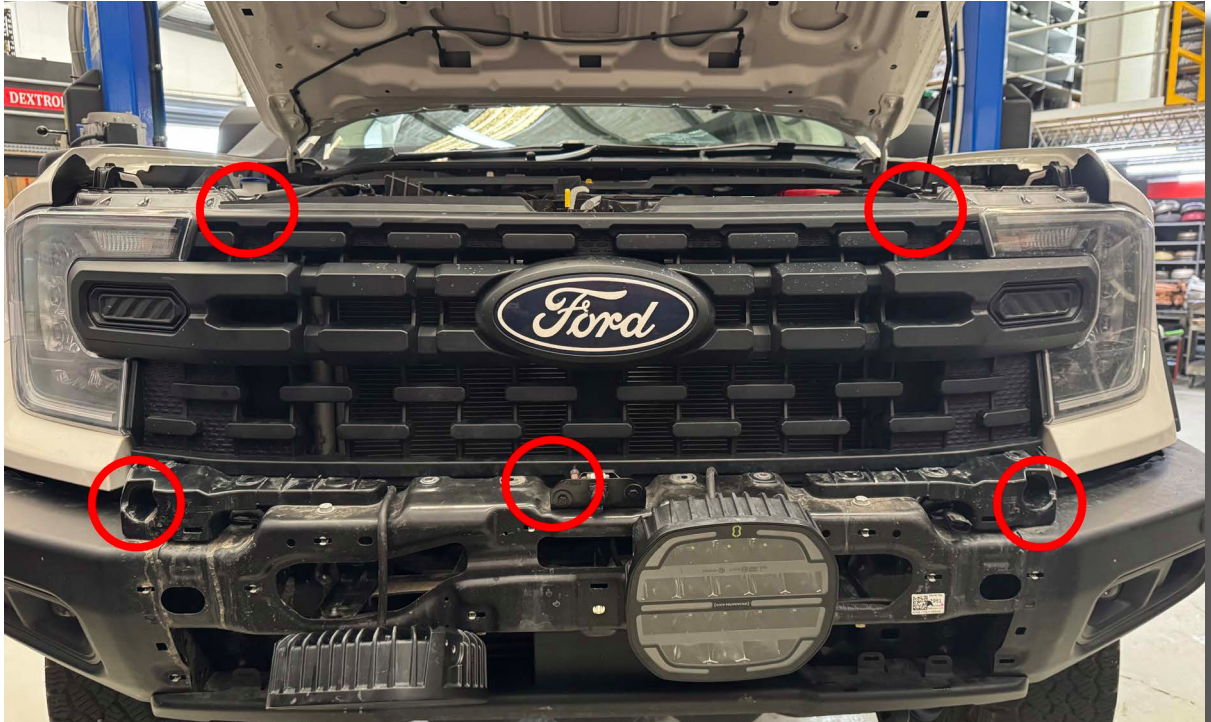
- 1.5. There are 3 more clips that need to be removed on the bumper cover



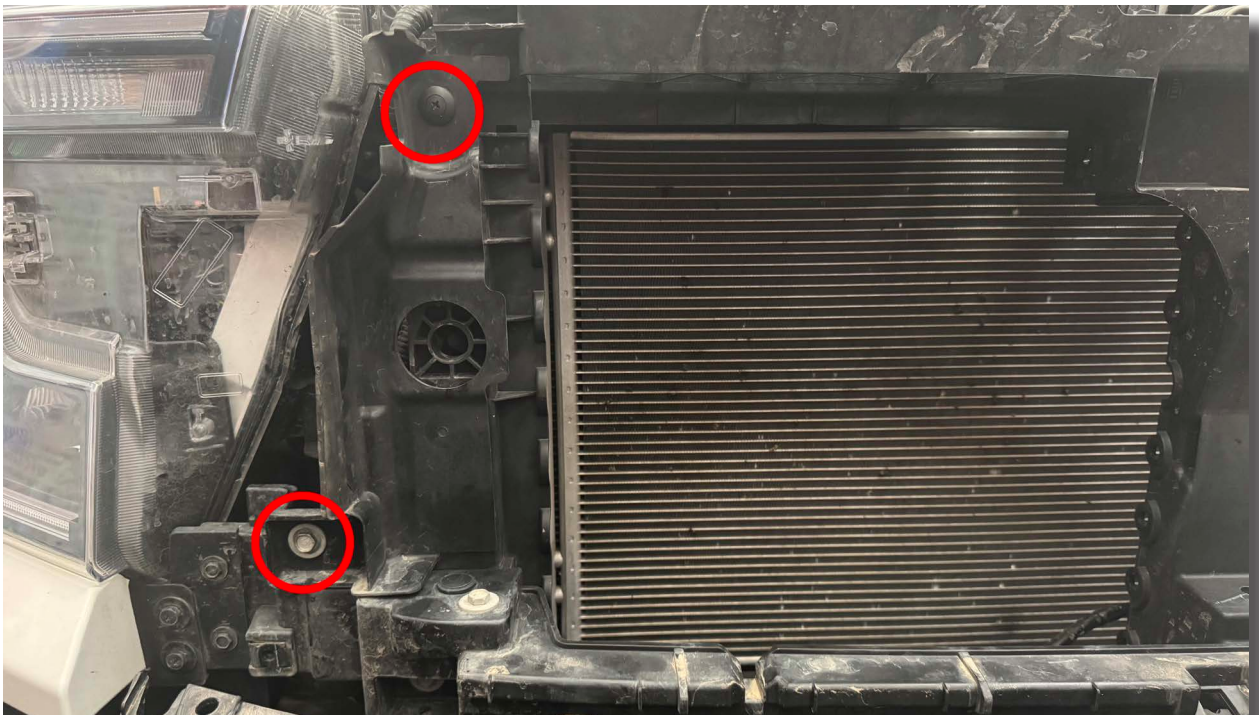
- 1.6. Disconnect the radar plug.



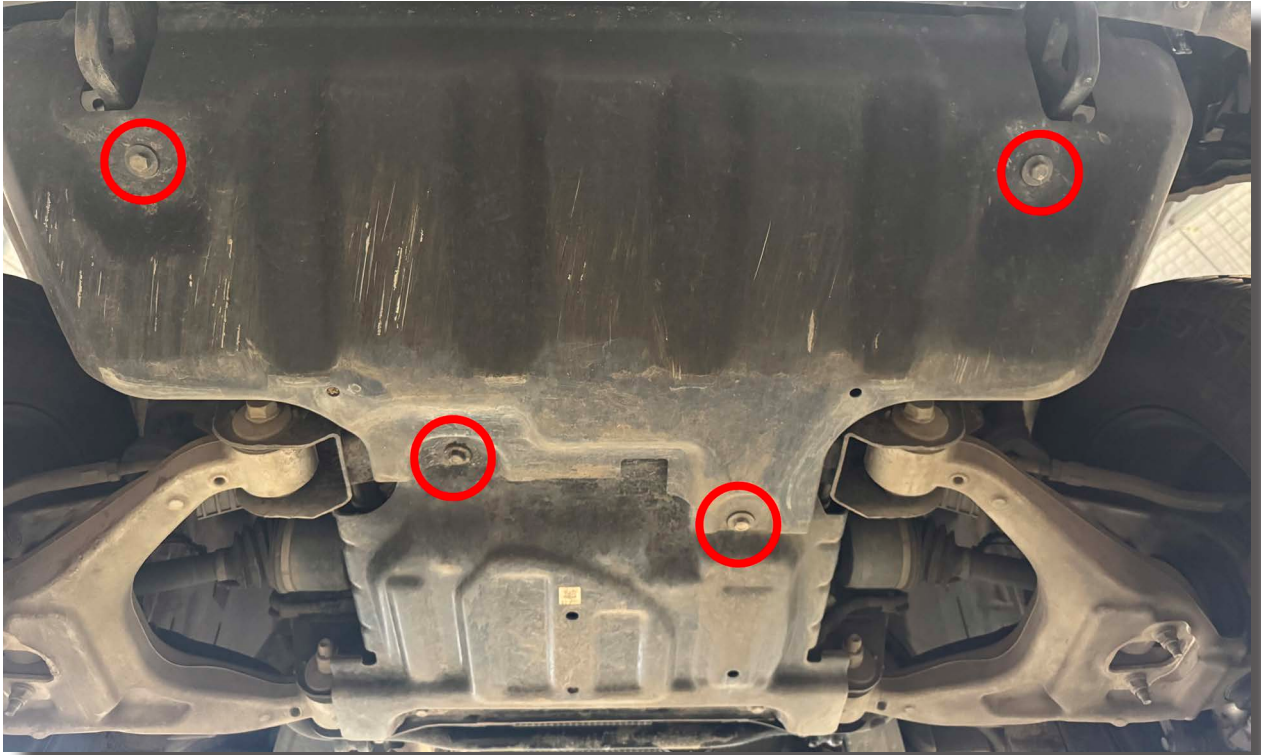
- 1.7. To remove the grill, there are 5 x 8mm socket head bolts holding it in place, locations are as follows



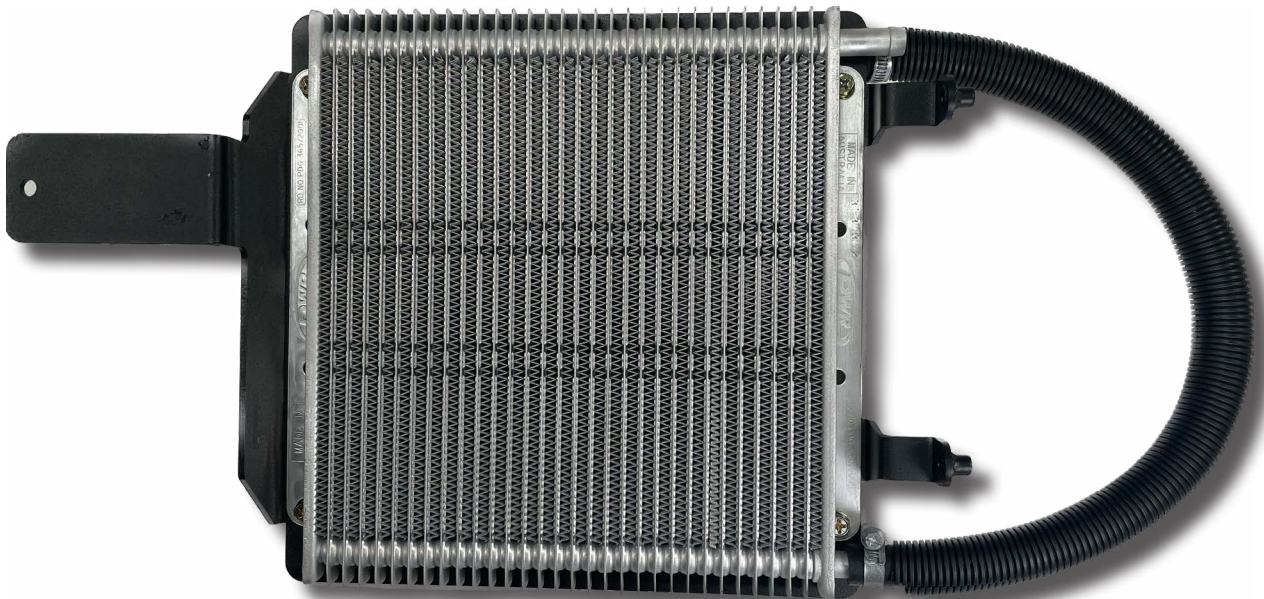
- 1.8. Remove 1 clip and 1 bolt holding the plastic cover on the drivers side of the vehicle. Remove the cover and place out of the way for now.



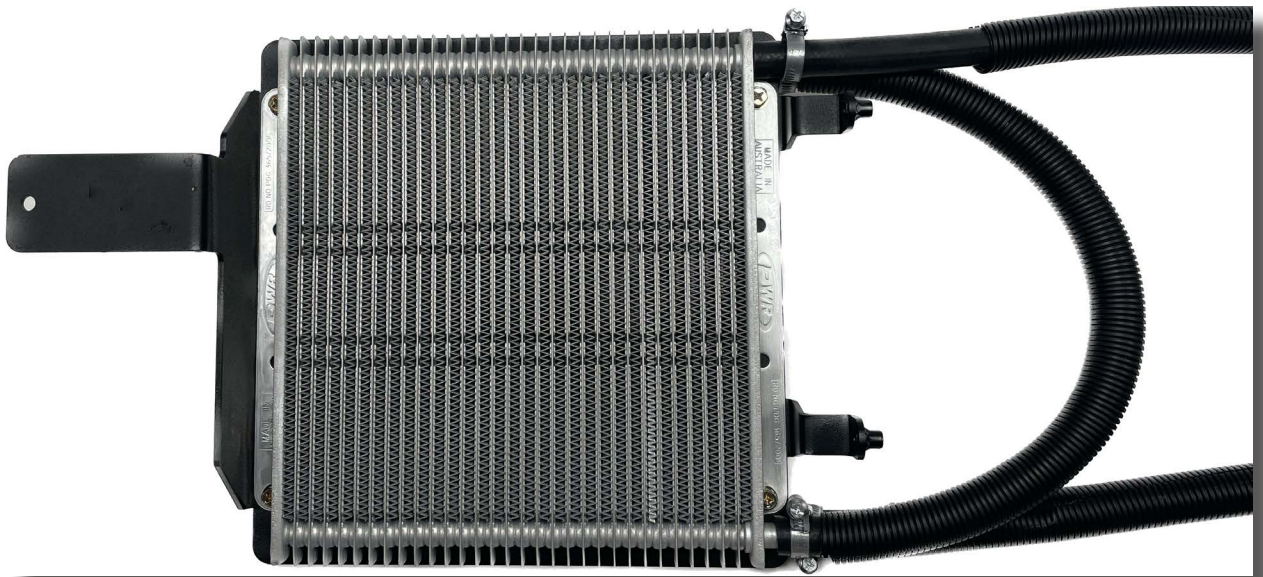
- 1.9. Remove the 4 bolts holding the bash plate under the front of the vehicle and place safely out of the way.



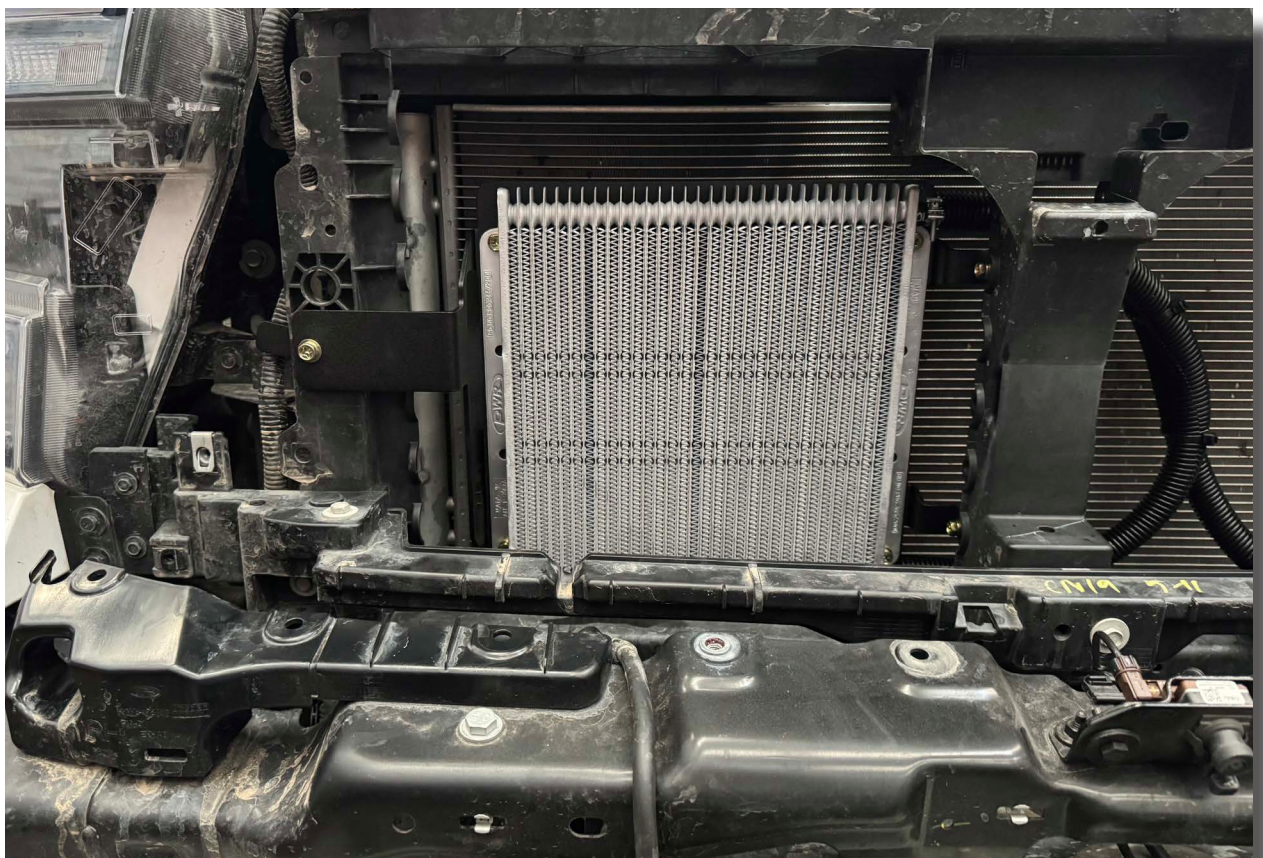
- 1.10. Remove the cooler from the packaging and place on a flat bench. Connect the 500mm joining hose to any barb of the front cooler and the other to any barb of the rear cooler. Secure with hose clamps supplied.



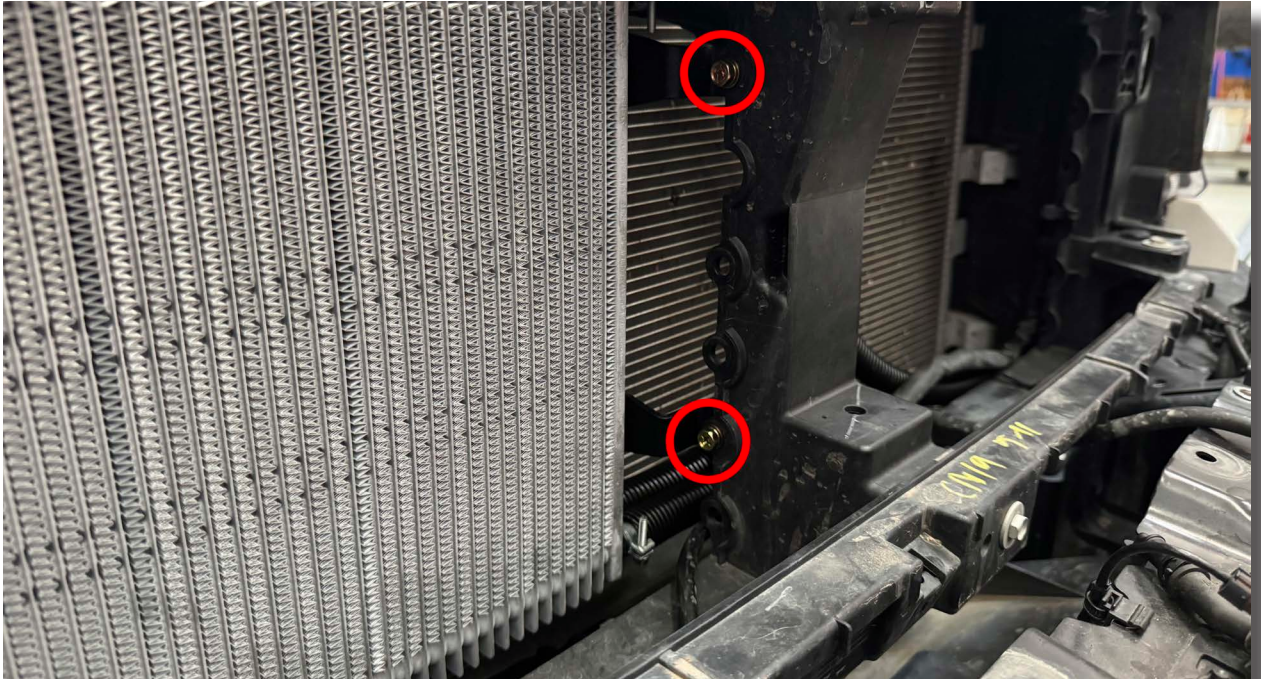
- 1.11. Connect the 4m hose to the remaining barbs and secure with the hose clamps provided.



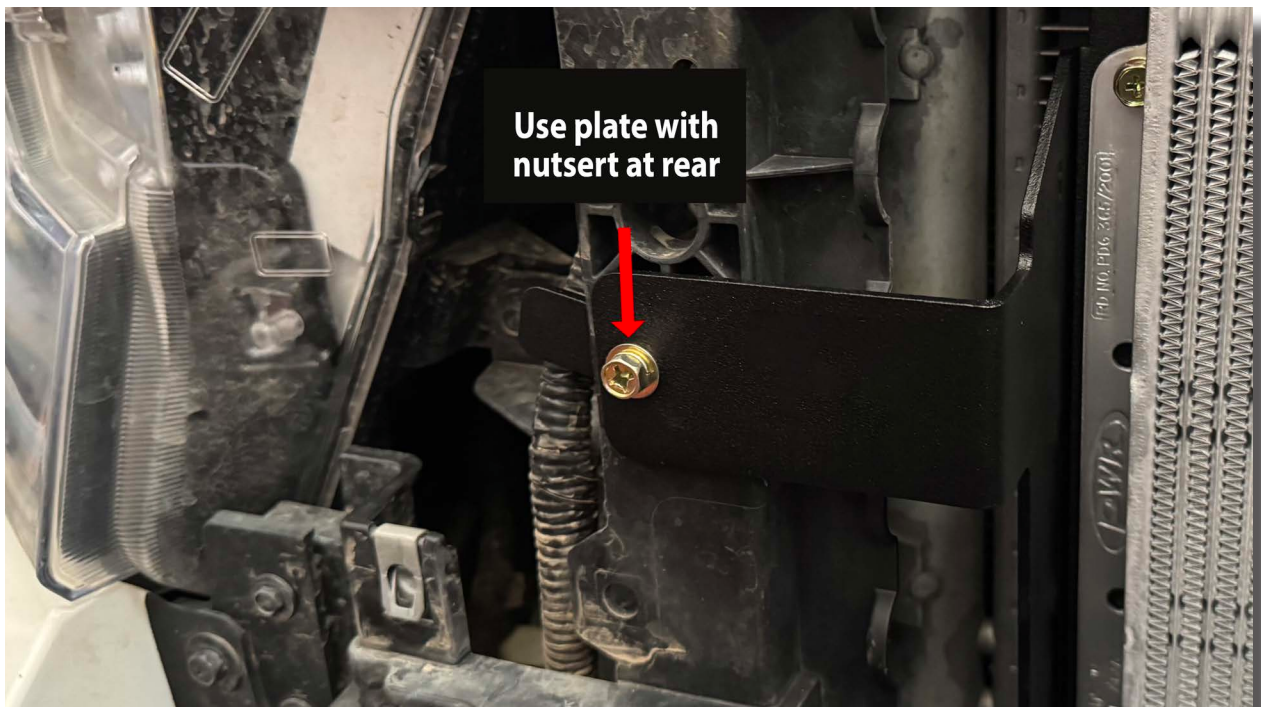
- 1.12. Position the cooler in the vehicle with the hoses running behind the center support towards the passenger side.



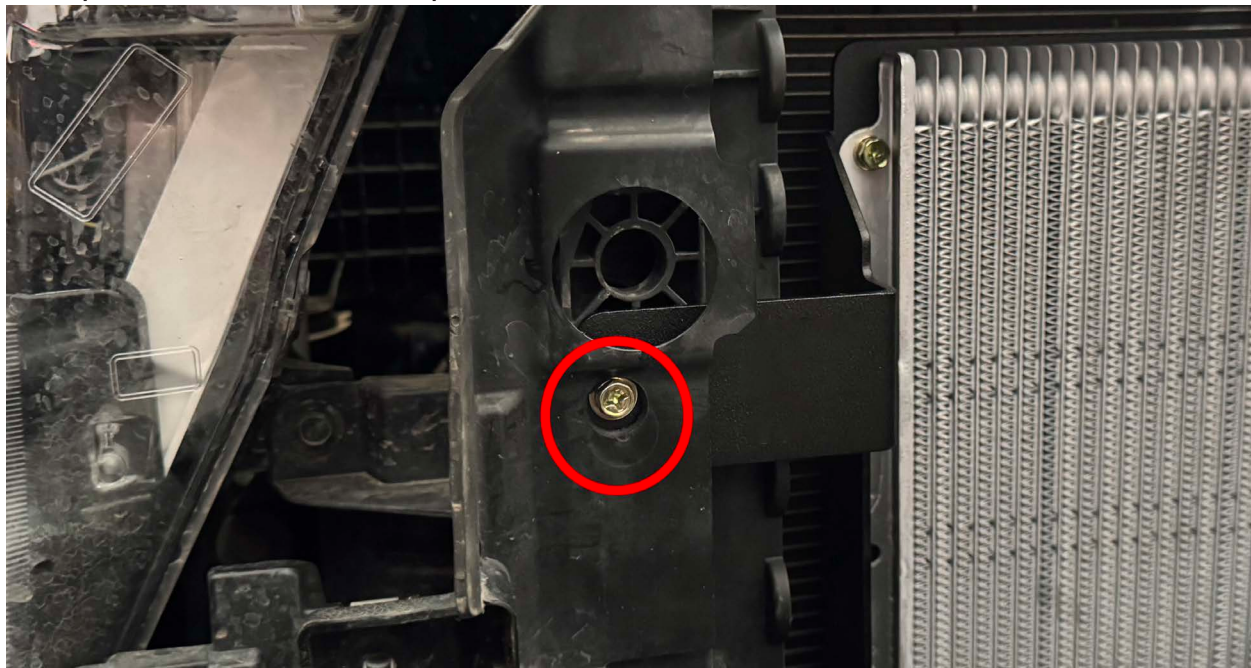
- 1.13. Using the M6 X 25 SEMS bolts supplied, mount the passenger side cooler bracket as shown below:



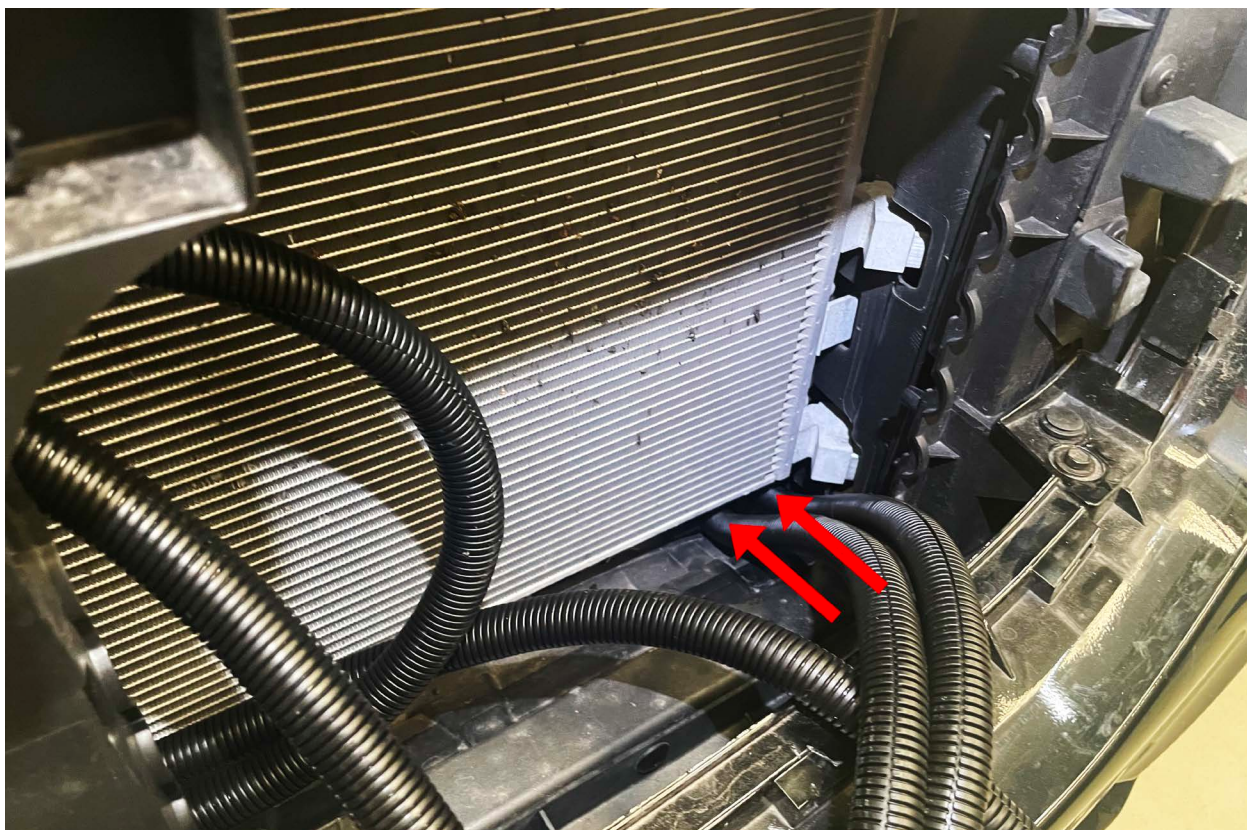
- 1.14. Use remaining M6 bolt and the plate with the nutsert to secure the drivers side mount to the vehicle. Bracket should sit between the plastic guard and the support beam.



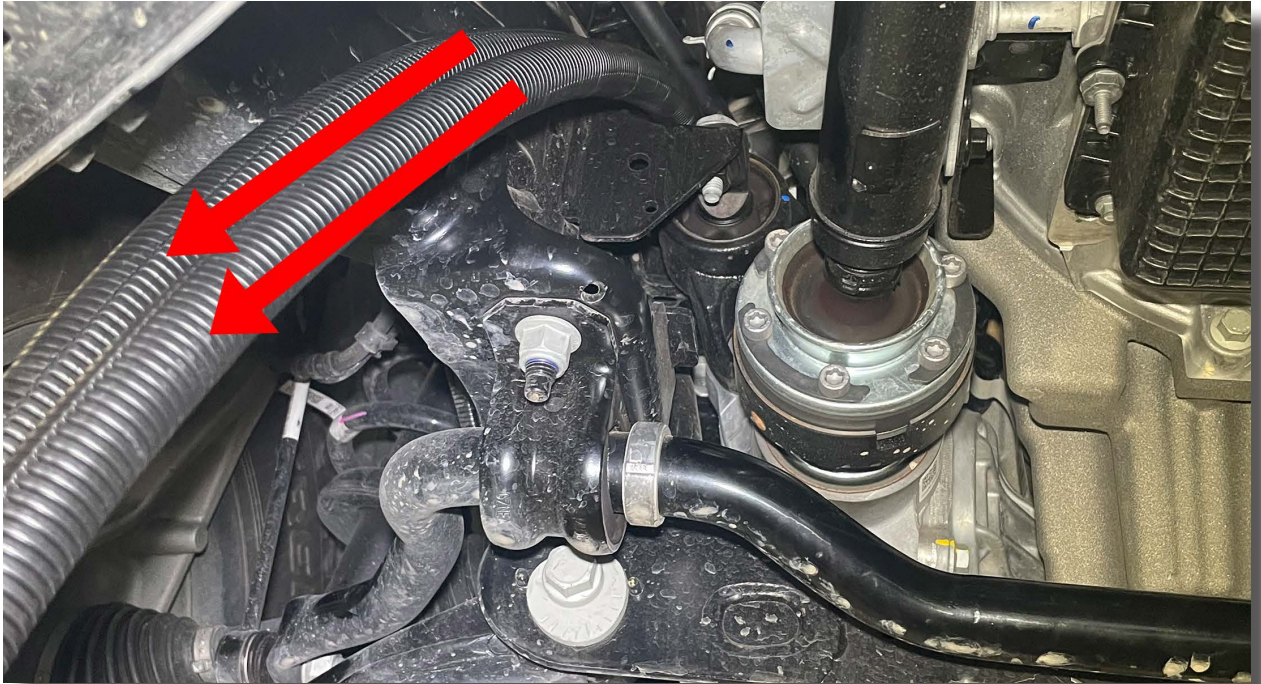
- 1.15. Drill hole on plastic cover for head of bolt. You can use the cooler bracket to mark the plastic cover. Refit the plastic cover



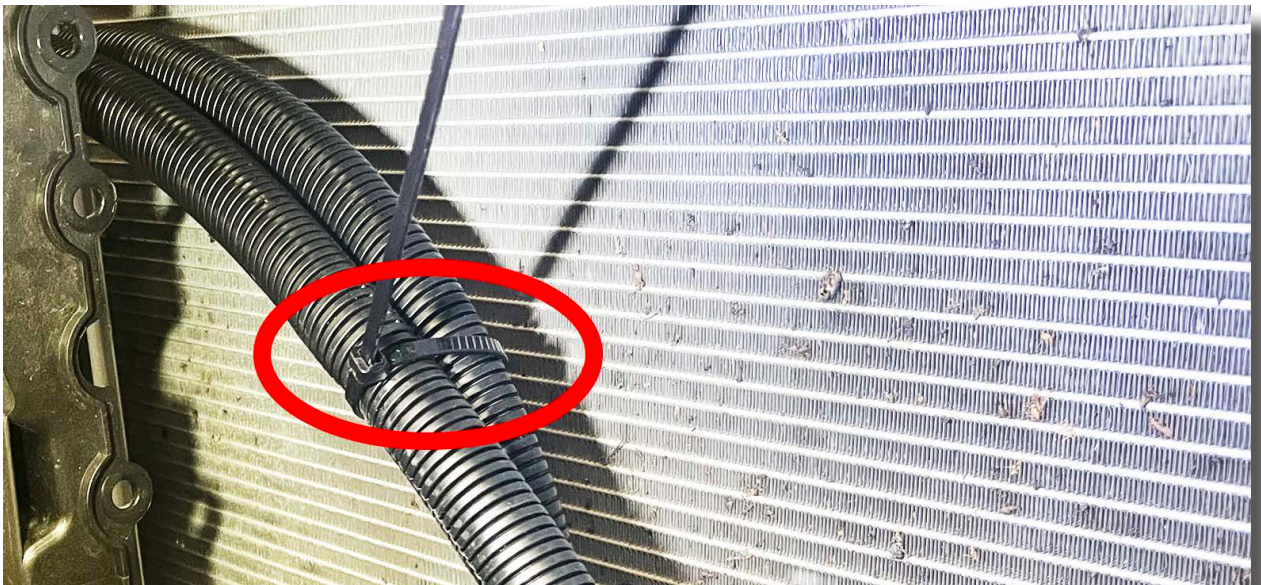
- 1.16. Feed the two cooler hoses under the air conditioning condenser.



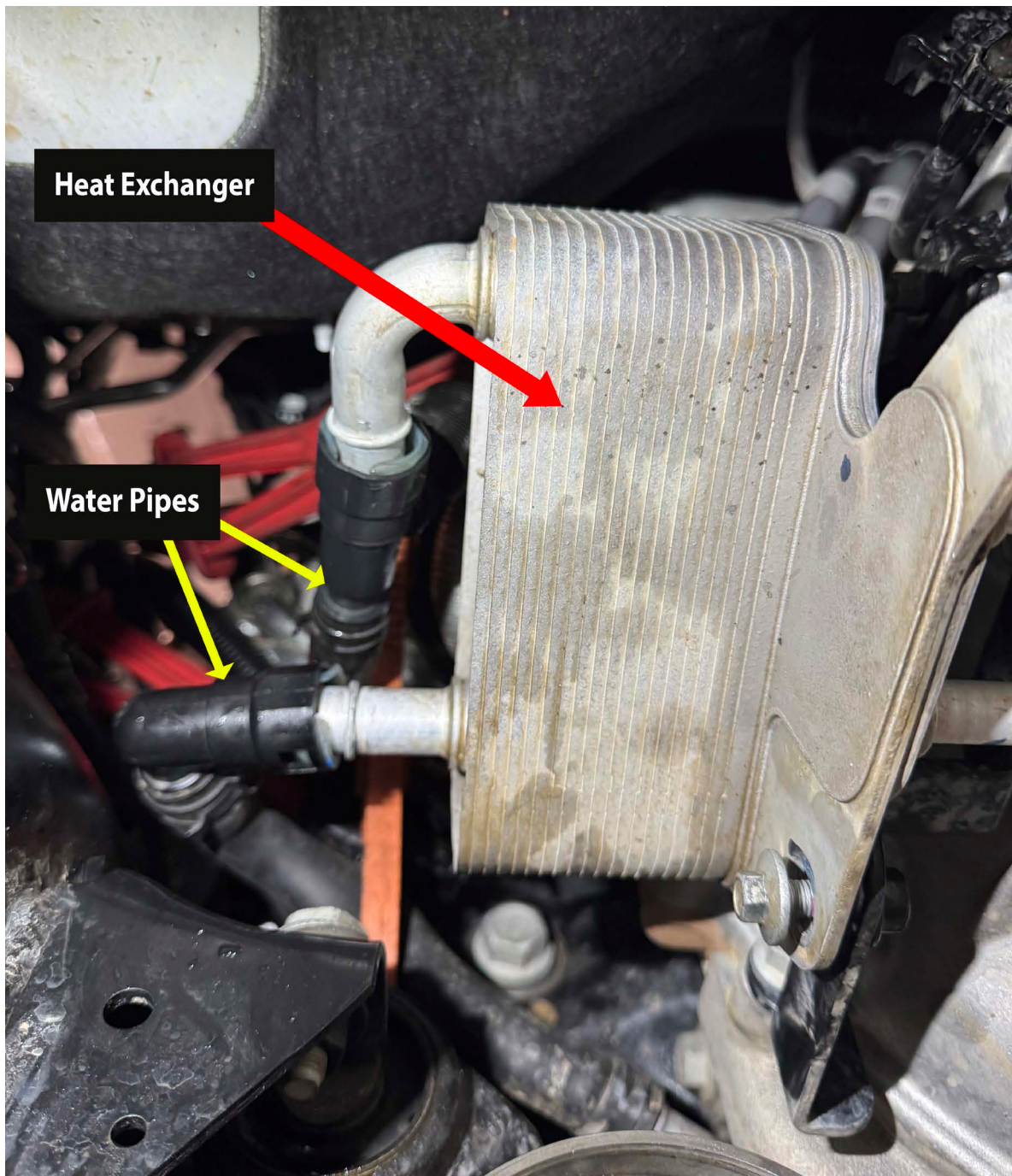
- 1.17. From under the car, run the hoses along the chassis rail and through to the transmission.



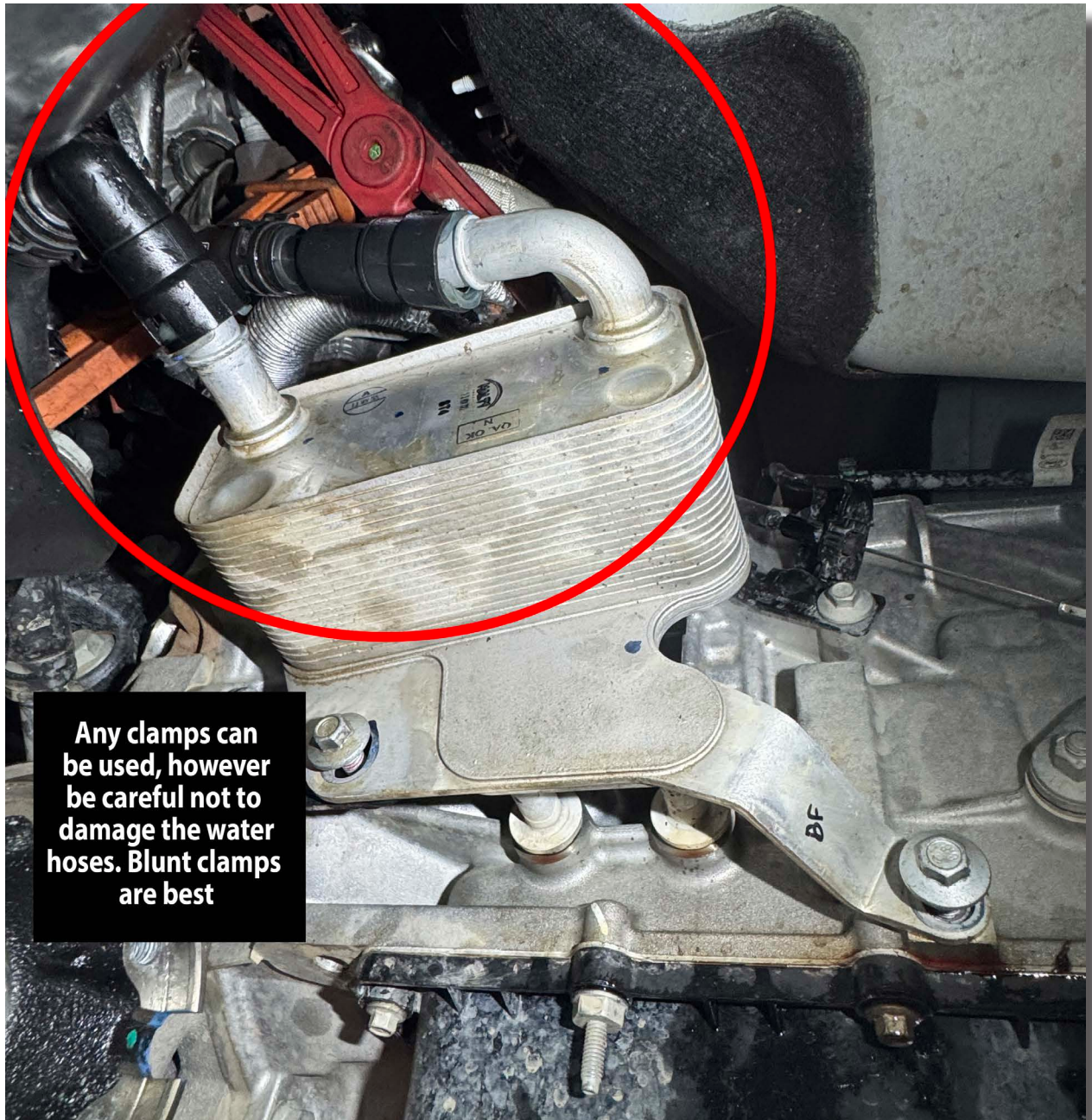
- 1.18. Check to ensure you have not put excess strain on the cooler and the hoses are free of kinks that may restrict flow. Hoses can be cable tied to each other to prevent movement.



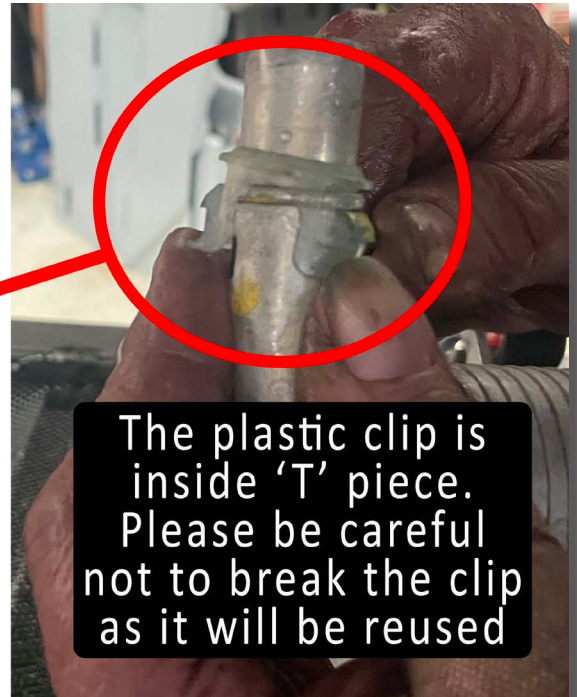
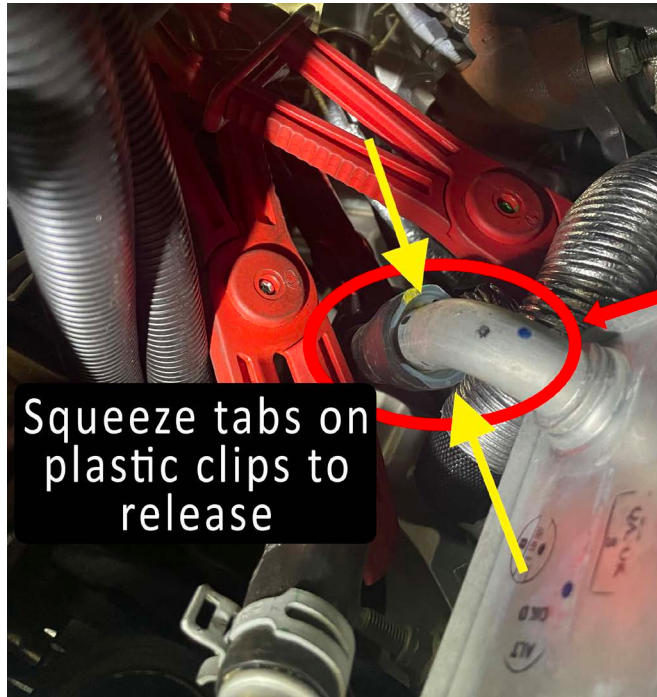
- 1.19. Locate the Heat Exchanger on the side of the transmission. The Heat Exchanger is redundant and will be removed, however you must first clamp the hoses to reduce fluid loss.



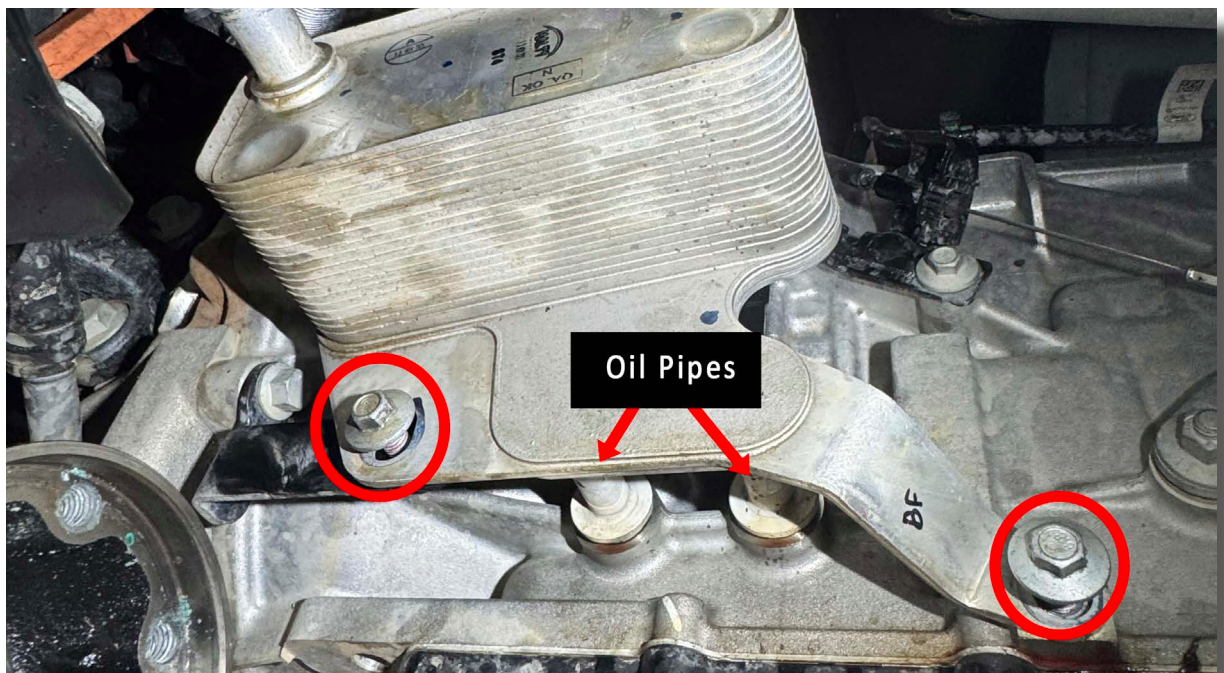
- 1.20. Use hose crimp clamps to restrict the flow of coolant through the 2 hoses to be disconnected from the heat exchanger. Note: you may need to crimp the hoses in multiple places beyond the 'T' piece. We had 3 clamps in place past the 'T' piece before disconnecting the water pipes. **If you don't have hose crimp clamps, the cooling system must now be drained; refill and bleed the cooling system after completing the install. Ensure you have sufficient coolant to re-fill the coolant system.**



- 1.21. Carefully remove the water pipes by squeezing the plastic clips. Be careful to not damage the plastic clip in the 'T' piece, which will be reused to connect this hose to the 'L' pipe supplied. You may need to unbolt the heat exchanger to disconnect the 'T' piece.



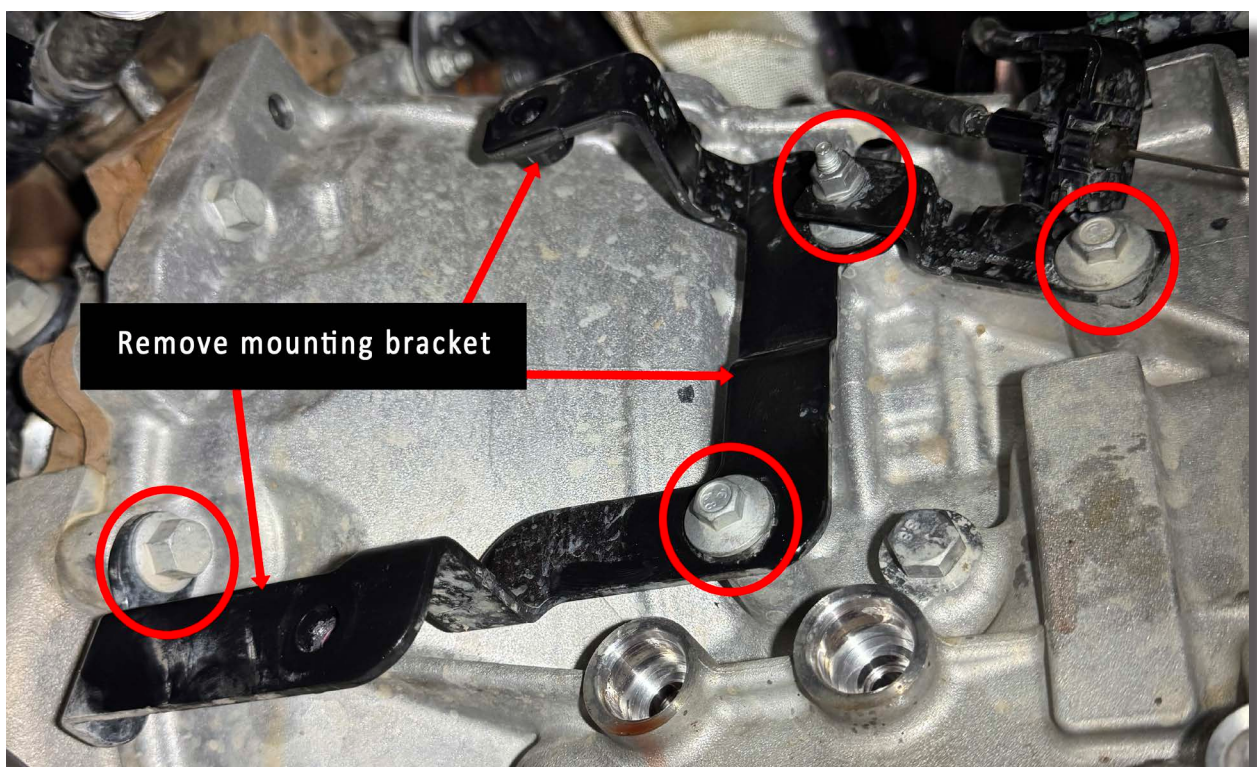
- 1.22. Unbolt the heat exchanger and remove from the transmission by pulling the oil pipes out of the transmission housing. Note that there will be some transmission fluid loss. There are 3 bolts holding it in place, including beneath the gear shift cable bracket. See photo on next page for 3rd bolt.



The third bolt is located at
the top of the heat exchanger



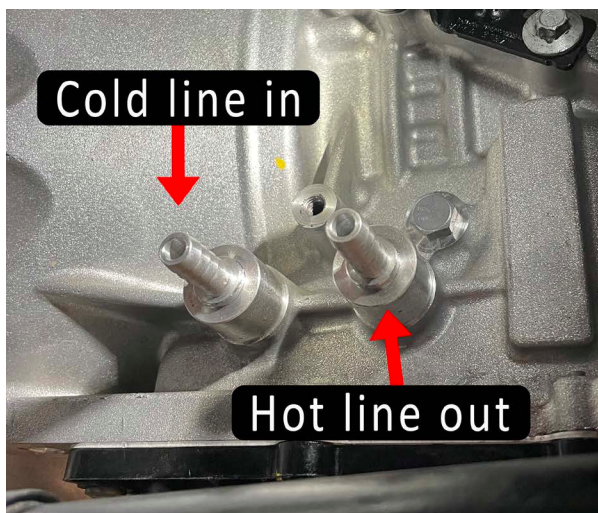
- 1.23. The heat exchanger bracket can also be removed and discarded, however, retain and replace the bolts. There are total of 3 bolts and 1 nut.



- 1.24. Reconnect the gear shift cable bracket using the two (2) M10 washers as spacers where the heat exchange bracket was removed.



- 1.25. Install the supplied custom cooler unions. Check that each union has two (2) o-rings fitted prior to installation, and apply a small amount of transmission fluid to both o-rings on both unions to provide lubrication. Install the unions by carefully inserting them into the empty fittings in the side of the transmission left behind by the removal of the heat exchanger. Secure the new unions with the supplied bracket, using one of the bolts previously removed from the heat exchanger.
- *Note*: if installing with a temperature gauge the union to use for the temperature sensor is the rear union. This is the hot fluid output from the transmission.*



- 1.26. Install the 'L' pipe in the hoses previously removed from the factory heat exchanger to bypass it. Make sure both hose ends has a plastic clip installed before refitting.

Secure the assembled heat exchanger bypass to the supplied bracket to prevent it from falling down and being damaged. Install the 20mm rubber lined P clamp around the 'L' pipe. Secure the P clamp together with the bracket using a supplied M6x25mm SEMS bolt and the supplied M6 Flange Nut. Ensure the hoses are not twisted or kinked so that the coolant flow is not restricted.

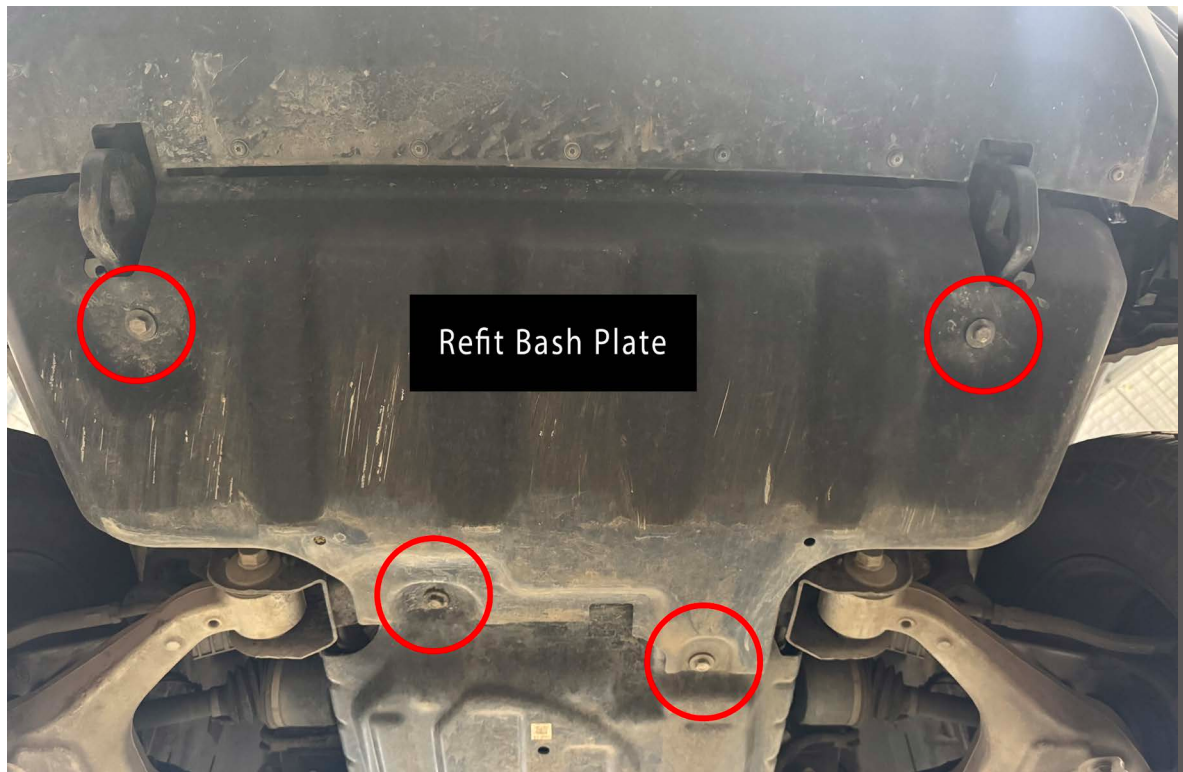
Remove all hose block off clamps



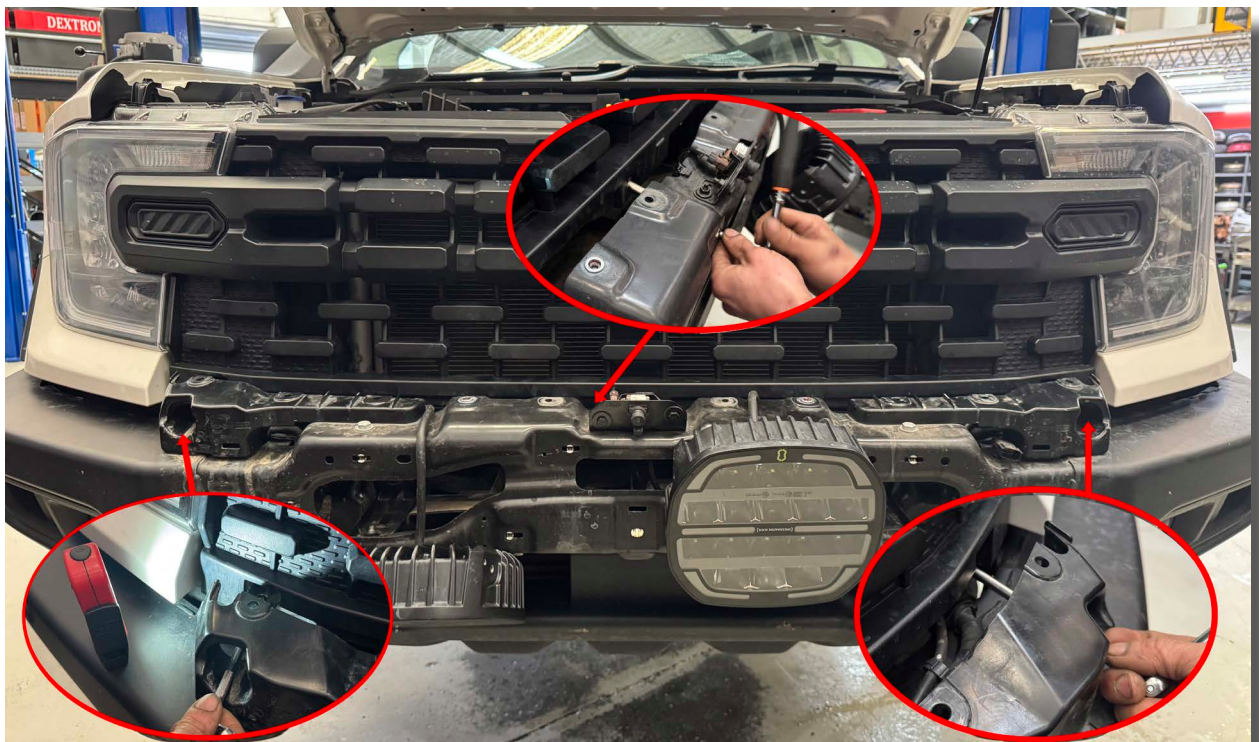
- 1.27. Route cooler lines to the unions and trim to the correct length. Secure using the hose clamps provided. Hoses can now be connect to either fitting. Ensure that hoses are secure away from moving parts with no kinks that may impede flow.



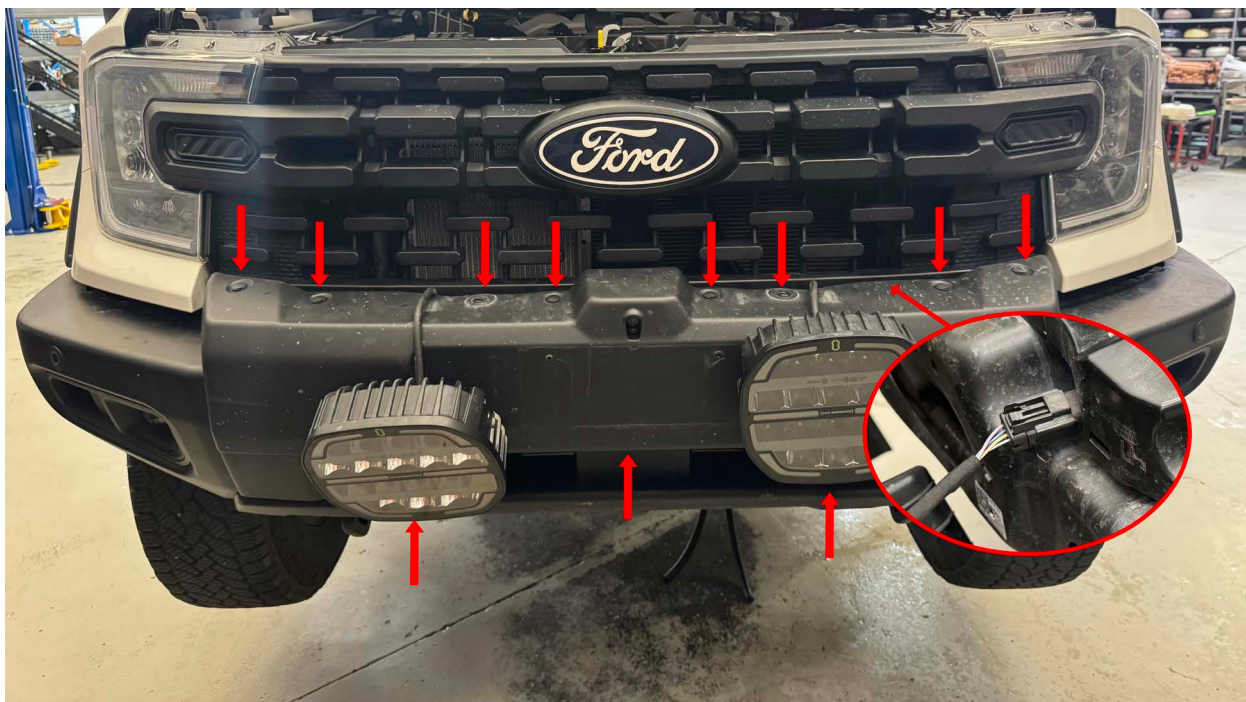
1.28. Secure hoses using cable ties provided, refit bash plate.



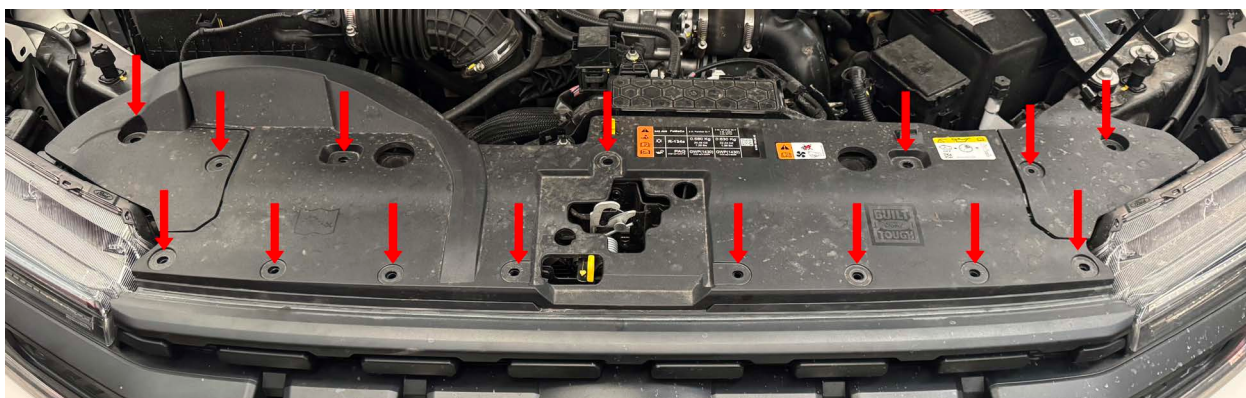
1.29. Refit the front grill and bolt in place.



- 1.30. Lift the bumper cover closer to the bumper bar to reconnect the plug for the radar. Reinstall using 8 clips on top and 3 below.

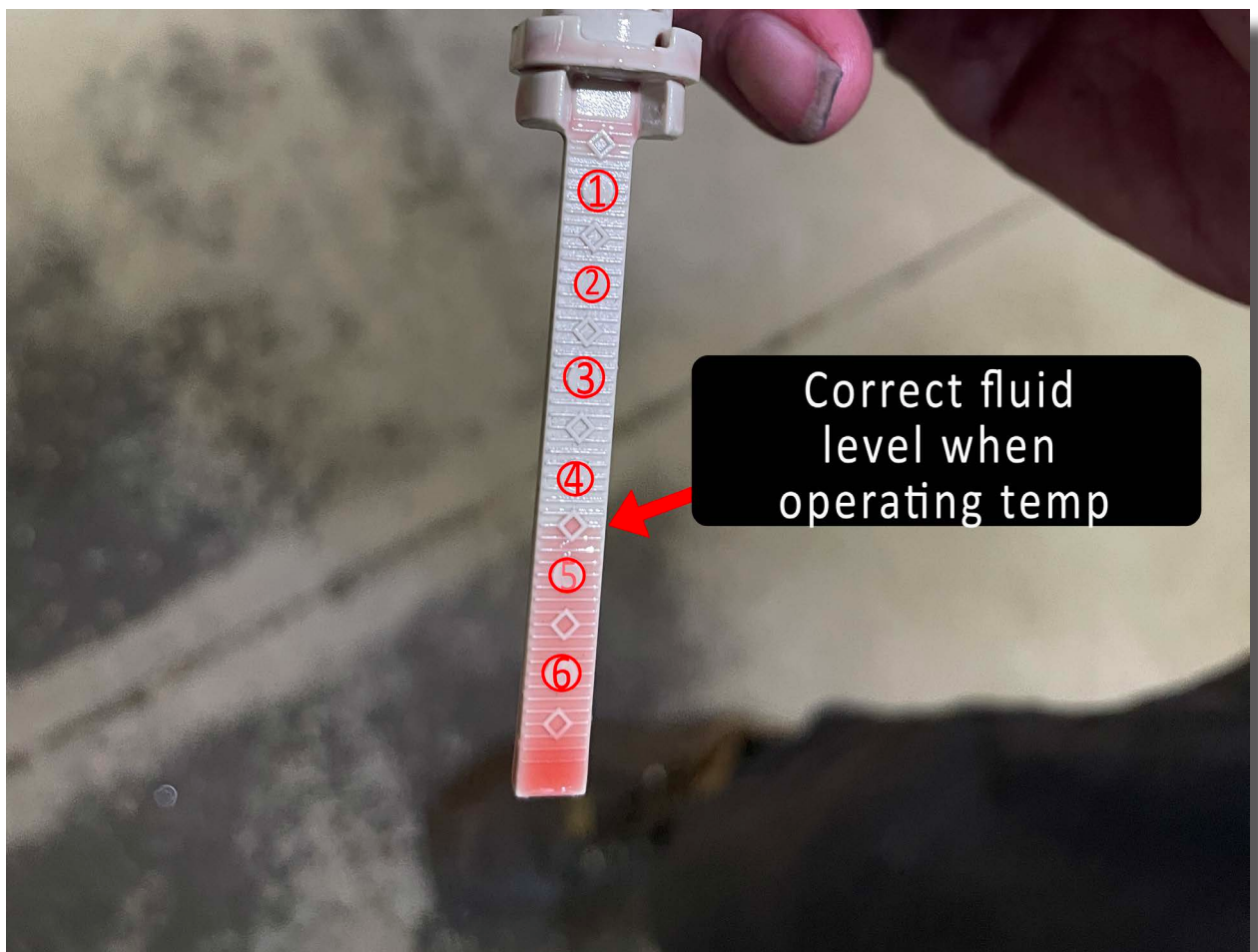


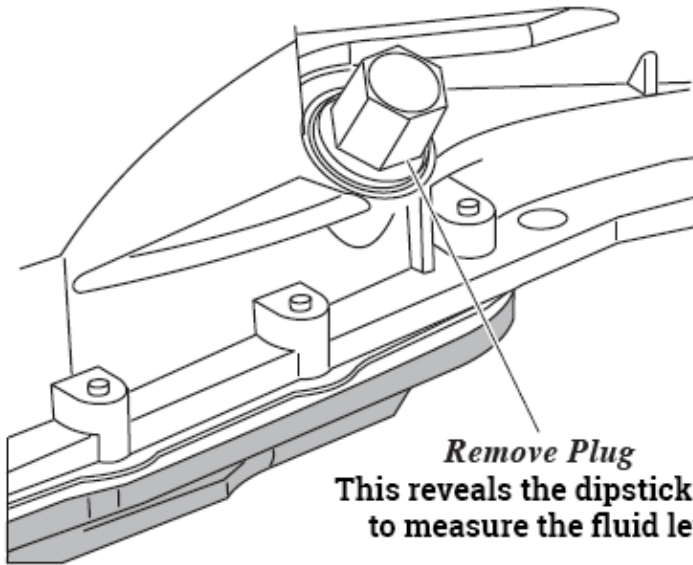
- 1.31. Reinstall the top cover using the 15 clips previously removed. Reconnect Battery.



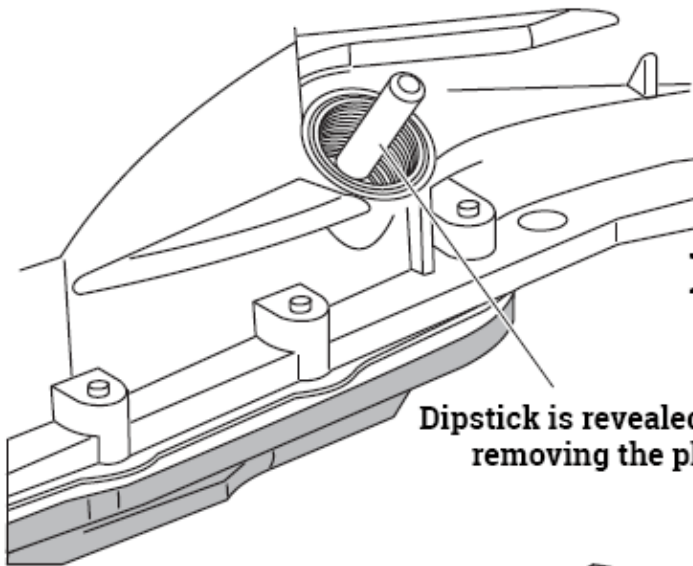
- 1.32. Close Bonnet

- 1.33. Check the coolant level. If the engine cooling system was drained while removing the heat exchanger now is the time to re-fill the cooling system with coolant that meets or exceeds the genuine coolant specification. If you were able to clamp the lines the cooling system should only require a small top up.
- 1.34. Before test driving the vehicle ensure you check the transmission fluid level and if necessary, top up with Genuine Transmission Fluid or any full synthetic transmission fluid that meets or exceeds the genuine oil specification.
- 1.35. Road test vehicle for a minimum of 15 minutes. Try to find a couple of hills that will get the transmission to work hard.
- 1.36. Check the transmission coolers, fittings, hoses, unions, mountings and clamps for any leaking or loose fittings. Tighten if necessary.
- 1.37. Check engine coolant level and transmission fluid level again. See the following pages for the correct fluid level.



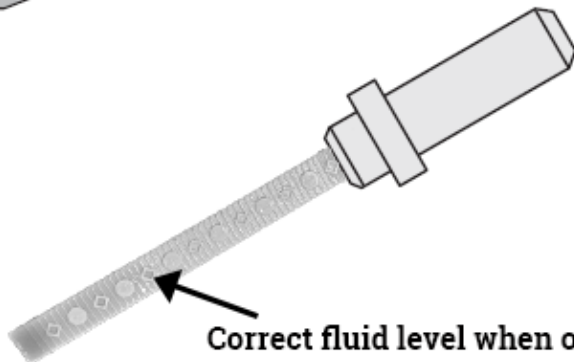
FLUID FILL PLUG

Remove Plug
This reveals the dipstick used
to measure the fluid level

FLUID LEVEL INDICATOR

Dipstick is revealed after
removing the plug

**The recommended
transmission fluid for
Ford 10R80 10 Speed
meets or exceeds the
Mercon ULV© standard.**



Correct fluid level when operating temp

Check fluid level hot idle in park

This completes the installation of the Dual Transmission Oil Cooler Kit to suit: Ford Ranger Super Duty

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

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.

