

**COOLMASTER** *OFFROAD*

# External Transmission Oil Cooler Kit Suitable for:



**Mitsubishi Triton MN, MR with V4A51,  
V5A51 & V6AWH (AC60) Transmissions**

**WITH 4D56 - 2.5L & 4N15 - 2.4L ENGINES**

*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 your local ALLTRANZ branch.*

## 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 8-16mm Stainless  
Steel Screw Clamps



1.5m x 10mm Cooler  
Line Hose with Conduit



2 x M8 20mm SEMS Bolt



1 x M6 20mm  
SEMS Bolt



3 x M10 Flat Washers



5 x 300mm  
Cable Ties



**Expected Installation Time: ~ 2 Hours**

## **Summary of Installation - For Experienced Fitters**

- *Ensure you have enough transmission oil as per manufacturers specification to top up your transmission. You will also need a pump to get the fluid into the transmission.*
- *Remove top grill cover and lower front bash plate.*
- *Cooler assembly fits to passenger side of the centre support*
- *MN Only - Remove top Intercooler pipe for ease of access. Loosen (don't remove) two bolts on passenger side of lower radiator support holding OEM cooler and OEM intercooler.*
- *MR Only - Fit two (2) M8 Bolt to the drivers side lower rad support threaded holes*
- *Slide assembly into place with the slotted holes fitting over the M8 Bolts*
- *Fit the M6 Bolt through the top of the bracket and into threaded hole in upper support panel*
- *If spacer required between bracket and upper support panel, use supplied 3 x M10 flat washers*
- *MN Only - Remove OEM cooler hose from passenger side of OEM cooler.*
- *MN Only - Fit a small length of cooler hose between upper connection of OEM cooler and lower nconnection of new cooler assembly.*
- *MN Only - Fit a length of cooler hose between upper connection on new cooler assembly and steel line.*
- *MR Only - Remove OEM cooler hose from drivers side of OEM cooler. Use a #3 Phillips screwdriver, manipulate the steel line towards drivers side for clearance*
- *MR Only - Route the upper cooler line hose over the top of the OEM cooler and onto the steel cooler line*
- *MR Only - Route the lower cooler line hose along the lower support panel and up to the OEM Cooler*
- *Cable tie lines to secure*
- *Triton MN Only*
  - *Locate dipstick and a clean rag, then remove dipstick and remove any fluid from dipstick with rag*
  - *Insert dipstick for 30 seconds then remove and check fluid level on stick.*
  - *If low, add fluid to the filler tube while reguarly re-checking fluid level with dipstick*
  - *When fluid level is correct, re-install dipstick into filler tube.*
- *Triton MR Only*
  - *Start engine and check transmission fluid by removing the Check valve bolt in the pan*
  - *Top up fluid if necessary using refill hole on side of transmission until fluid comes out of check valve*
  - *When check valve fluid slows to a dribble, refit check valve*
- *Run vehicle on a test drive to get the transmission fluid up to temperature. On completion of the test drive visually check for any leaks.*
- *With the engine still running, recheck transmission fluid level is correct.*
- *If low, top up levels as per previous instructions.*
- *Check again for any transmission fluid on the vehicle and clean off.*
- *Refit bash plates and top grill cover*

## Detailed Installation Instructions

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

**For Triton MR models with the 6 Speed Auto, you will need either a pump or some way to push fluid up into the transmission. There is no gravity feed option with this transmission.**

- 1.** Before commencing, ensure the car is fully switched off. It is recommended that the vehicle is cold prior to installation.
- 2.** While this Cooler Assembly fits both the MN 4 & 5 Speed Triton as well as the MR 6 Speed Triton, there are some differences in the way they are installed. We have separated the two models with a note at the top of each page as to which model that page applies to.

*If for some reason, your vehicle does not match these instructions, please contact where you purchased the kit from for further information.*

*Please note, this cooler assembly does NOT fit the Mitsubishi MQ Triton (the model in between the MN and MR)*

## THIS PAGE APPLIES TO TRITON MN 4 & 5 SPEED MODELS

3. Open bonnet and remove the four (4) retaining clips from the grill cover. Then remove the grill cover from the vehicle.



4. Remove the top intercooler hose from the top right of the intercooler and move out of the way for ease of access.



## THIS PAGE APPLIES TO TRITON MN 4 & 5 SPEED MODELS

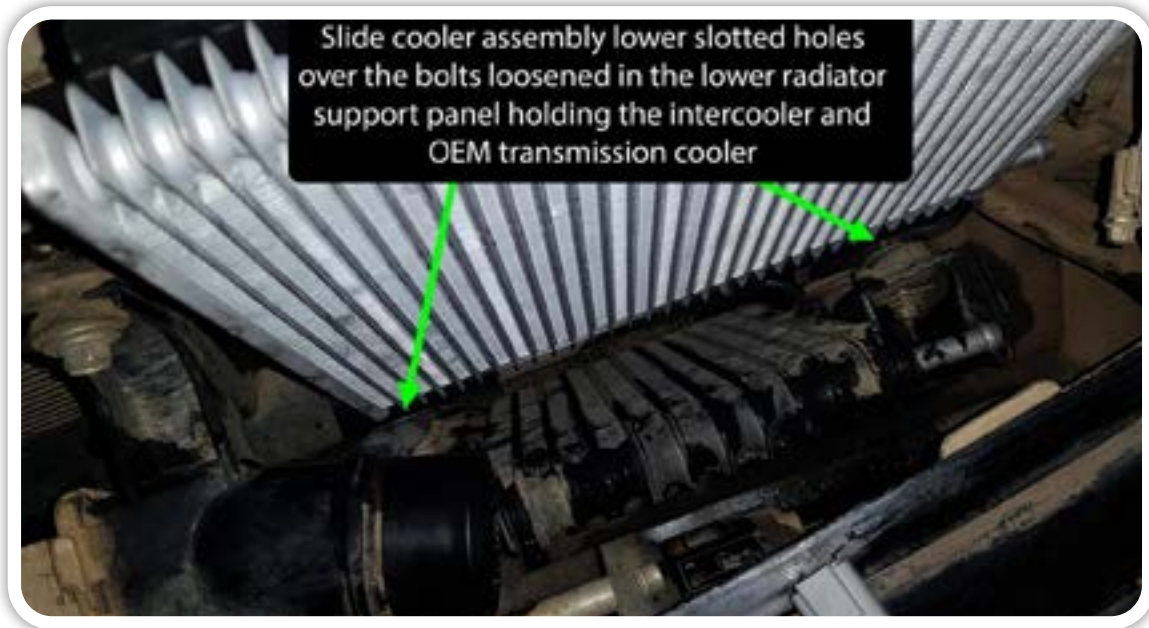


5. Loosen (do not remove) the bolts indicated in the photo below. One bolt attaches the intercooler to the lower radiator support panel. The second bolt attaches the OEM oil cooler to the lower radiator support panel.



## THIS PAGE APPLIES TO TRITON MN 4 & 5 SPEED MODELS

6. Lower the cooler assembly into place so that the two bottom slotted holes in the bracket slide in between the lower radiator support panel and the brackets holding the intercooler and OEM oil cooler that you loosened in the previous step. Do not tighten bolts yet.



7. Insert one (1) M6 SEMS bolt through the top mounting hole and into the upper radiator support panel and tighten to secure the top of the cooler assembly. Also now you can tighten the two bolts holding the bottom of the cooler assembly to the lower radiator support panel.



## THIS PAGE APPLIES TO TRITON MN 4 & 5 SPEED MODELS

8. Push one of the screw clamps onto one end of the cooler line hose and push onto the lower connection of the cooler assembly. Don't tighten screw clamp yet.
9. The other end of the cooler line hose will connect to the top fitting of the OEM oil cooler. Cut the cooler line hose to length and push one screw clamp into place prior to pushing onto the OEM oil cooler fitting.
10. Adjust the cooler hose to ensure it is not restricting flow, then tighten screw clamps to secure hose in place.



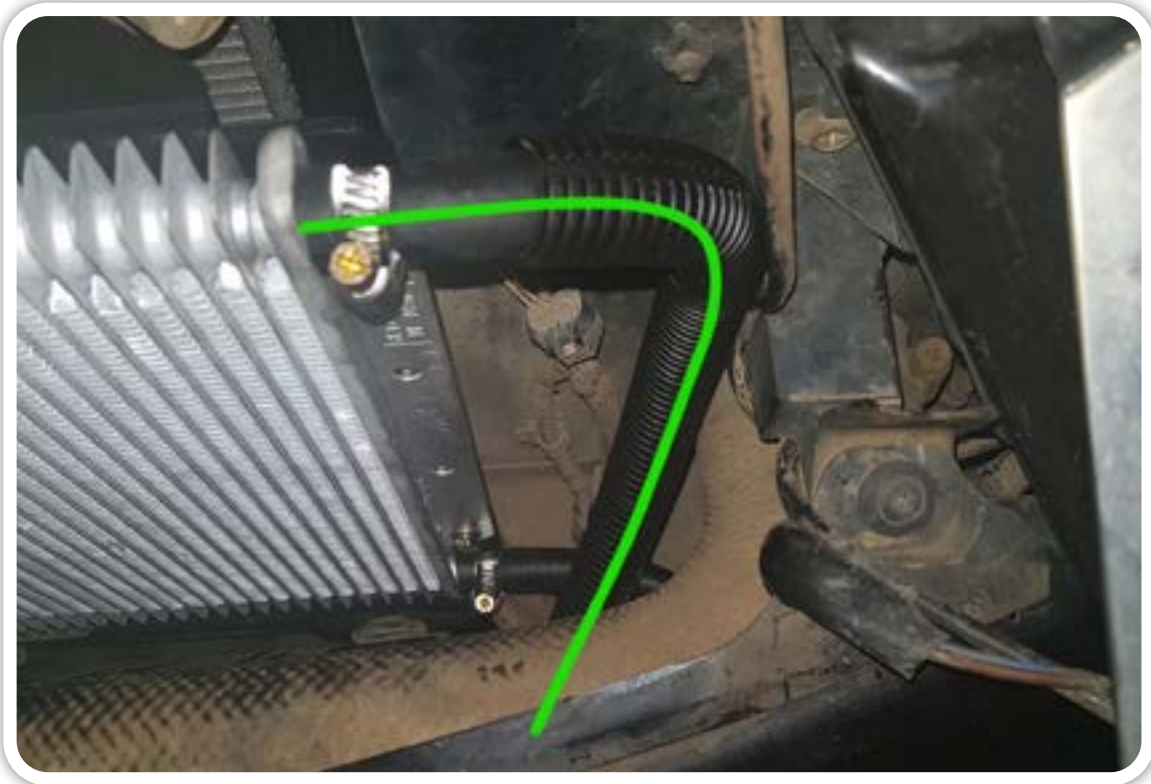
11. Push one of the screw clamps onto one end of the cooler line hose and push onto the upper connection of the cooler assembly. Don't tighten screw clamp yet.
12. The other end of the cooler line hose will connect to the steel line below the OEM oil cooler. Cut the cooler line hose to length and push one screw clamp into place prior to pushing onto the steel line.



## THIS PAGE APPLIES TO TRITON MN 4 & 5 SPEED MODELS

13. Adjust cooler hose to ensure it is not restricting flow, then tighten screw clamps to secure hose in place.

Top view:



Lower view:



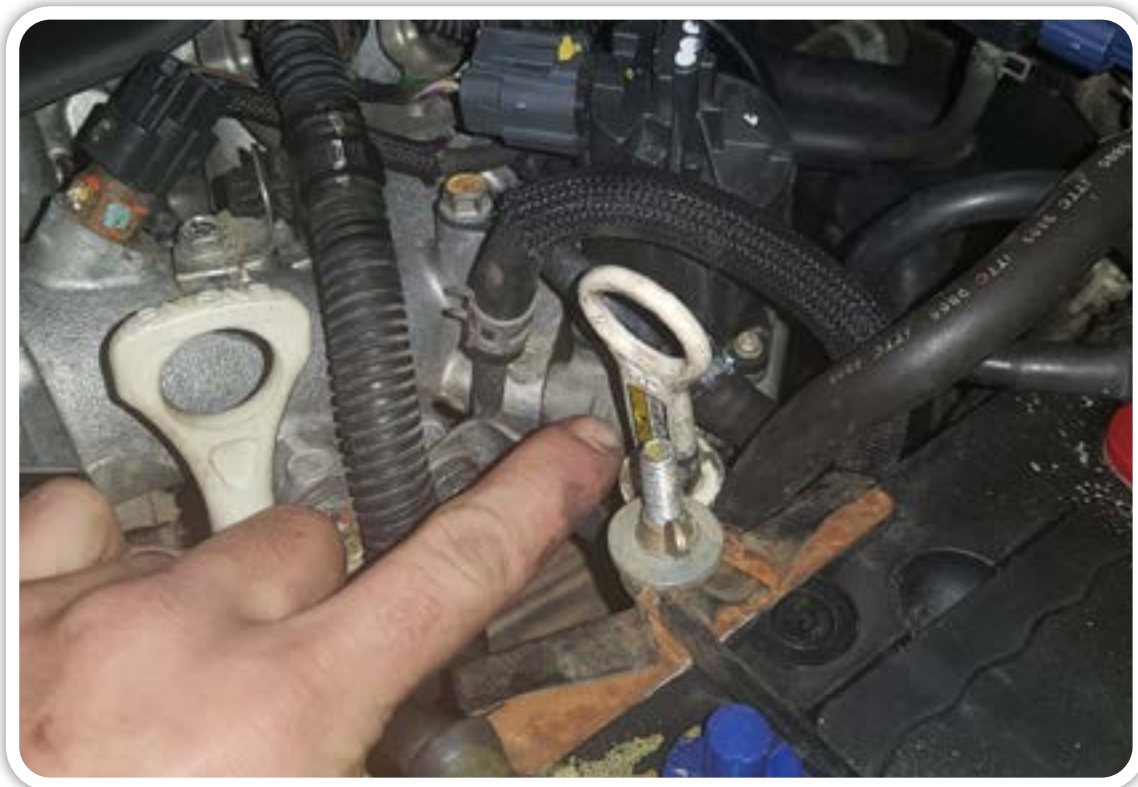
## **THIS PAGE APPLIES TO TRITON MN 4 & 5 SPEED MODELS**

- 14.** *With installation of the cooler assembly complete, we now need to check the transmission fluid level is correct.*

*You may have lost some fluid during the installation, plus there is the extra capacity of the new cooler system. There is also the possibility the transmission fluid was not at the correct level to begin with.*

*Whatever the situation is, it is vital now that you check the transmission fluid is at the correct level to ensure correct operation of the transmission.*

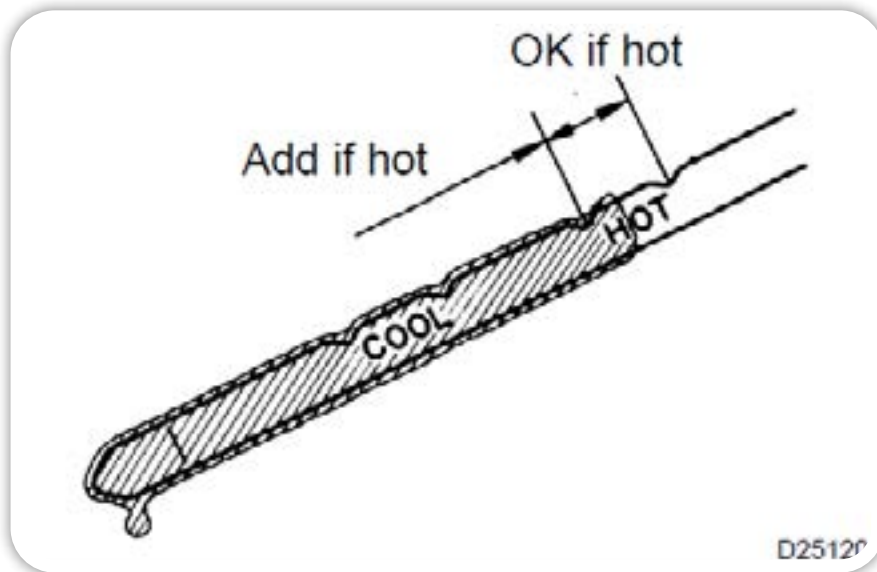
- 15.** *Firstly, whenever you check the transmission fluid on ANY automatic transmission, the engine MUST be running. Don't switch the engine off until you have completely finished checking the fluid level.*
- 16.** *With the engine running, locate the transmission dipstick and filler tube in the engine bay.*



- 17.** *Locate a clean rag, then remove and clean the dipstick taking note of the indications on the stick. You are aiming for the highest 'hot' notch.*

## THIS PAGE APPLIES TO TRITON MN 4 & 5 SPEED MODELS

18. Re-insert the dipstick into the filler tube all the way and wait for 30 seconds.
19. Remove the dipstick and check the fluid level. If the dipstick is showing low (or no transmission fluid) on the level indicator, you will need to add transmission fluid. Please use fluid as per manufacturers specification.



20. To add fluid, insert a clean funnel into the top of the filler tube and slowly pour the fluid down the filler tube. Add small amounts at a time.



## **THIS PAGE APPLIES TO TRITON MN 4 & 5 SPEED MODELS**

- 21.** *Wait 60 seconds before re-inserting the dipstick to avoid false readings from the fluid running down the filler tube.*
- 22.** *Clean dipstick with the clean rag then re-insert the dipstick into the filler tube all the way.*
- 23.** *Repeat the check, fill, wait, check process until the fluid is at the full line.*
- 24.** *Once the fluid has reached the full level, re-insert the dipstick and clean any spilt fluid around the engine bay or under the vehicle.*
- 25.** *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.*
- 26.** *With engine still running, visually check for leaks and re-tighten any fittings as required.*
- 27.** *Continuing with the engine still running, recheck fluid level by repeating the fluid level checking steps.*
- 28.** *If the fluid is at the correct level, check for any transmission fluid in or around the engine bay and clean.*
- 29.** *Re-install bash plates and grill cover.*
- 30.** *Check for any dirty marks or finger prints left on the vehicle during installation and clean from vehicle.*

*THIS PAGE APPLIES TO TRITON MN 4 & 5 SPEED MODELS*

*This completes the installation of the  
Dual External Transmission Oil Cooler Kit to Suit  
Mitsubishi Triton MN with 4 & 5 Speed Automatic Transmissions*

*PLEASE REMEMBER ALL AUTOMATIC TRANSMISSIONS HAVE A SERVICE INTERVAL OF  
2 YEARS OR 40,000KM TO IMPROVE THE LONGEVITY OF THE TRANSMISSION.*

## THIS PAGE APPLIES TO TRITON MR 6 SPEED MODELS

- 31.** Open bonnet and remove the eleven (11) retaining clips from the grill cover. Then remove the grill cover from the vehicle.

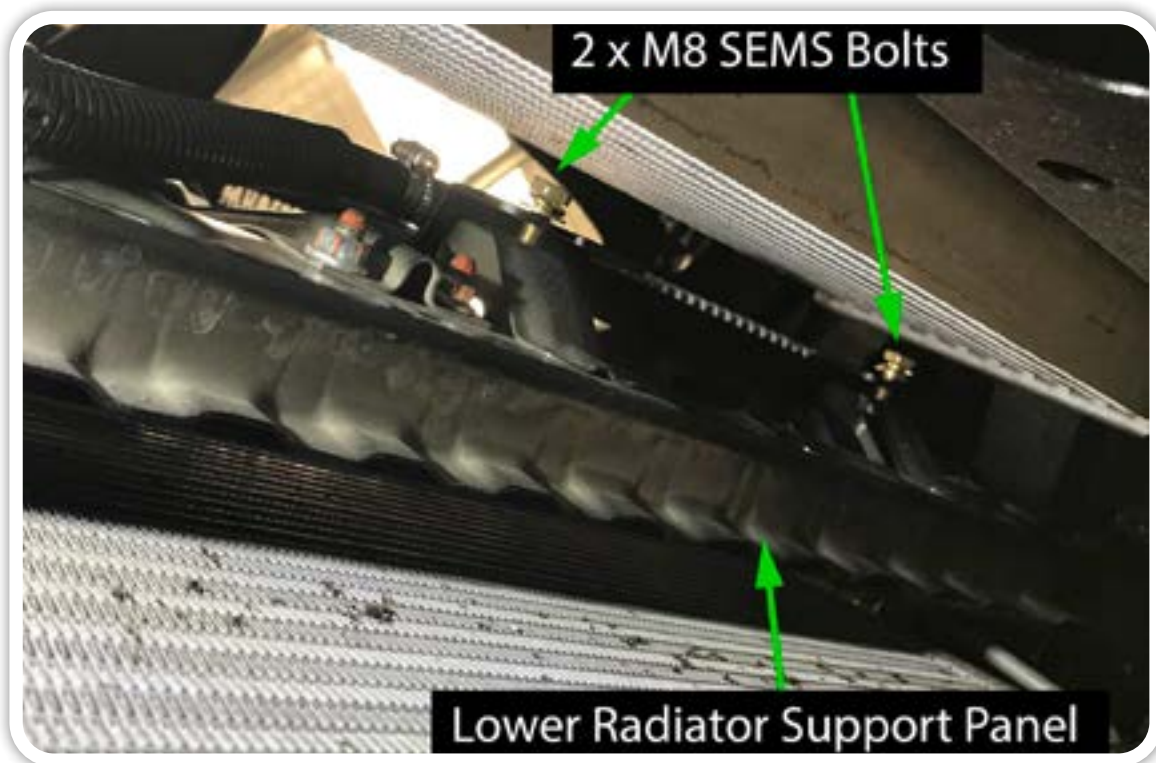


- 32.** Remove any bash plates from under the radiator for ease of access during fitment of the cooler kit.



## THIS PAGE APPLIES TO TRITON MR 6 SPEED MODELS

- 33.** On the passenger side of the vehicle, locate the two M8 threaded holes in the lower radiator support panel. Fit the two (2) supplied M8 Bolts loosely into the threaded holes.



- 34.** Lower the cooler assembly into place while sliding the slotted holes over the M8 bolts in the lower radiator support panel.

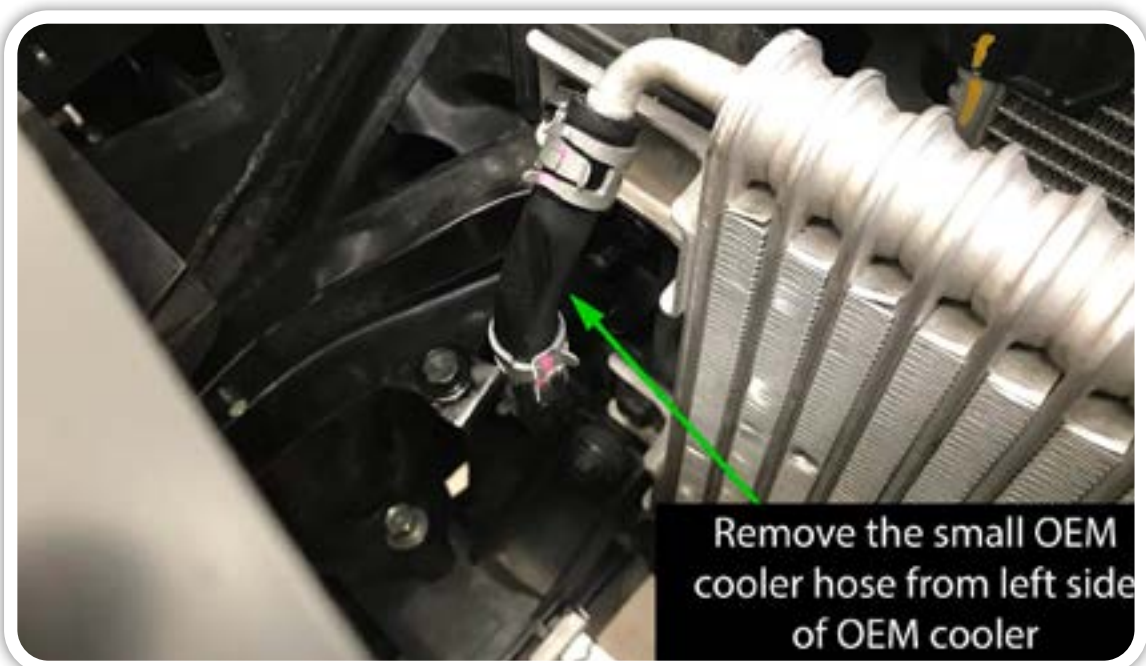


## THIS PAGE APPLIES TO TRITON MR 6 SPEED MODELS

- 35.** Fit the supplied M6 bolt through the top mounting point and into the threaded hole in the upper radiator support panel. We have supplied three (3) flat washers to space the top mount from radiator support panel to avoid bending the lower lip. Tighten all bolts to secure bracket.



- 36.** Remove the short OEM transmission cooler hose on the top of the factory cooler and discard.





## ***THIS PAGE APPLIES TO TRITON MR 6 SPEED MODELS***

- 37.** Place a #3 Phillips screwdriver into the OEM steel cooler line and gently manipulate the outlet towards the drivers side. This is to gain clearance for new cooler hose and screw clamp.



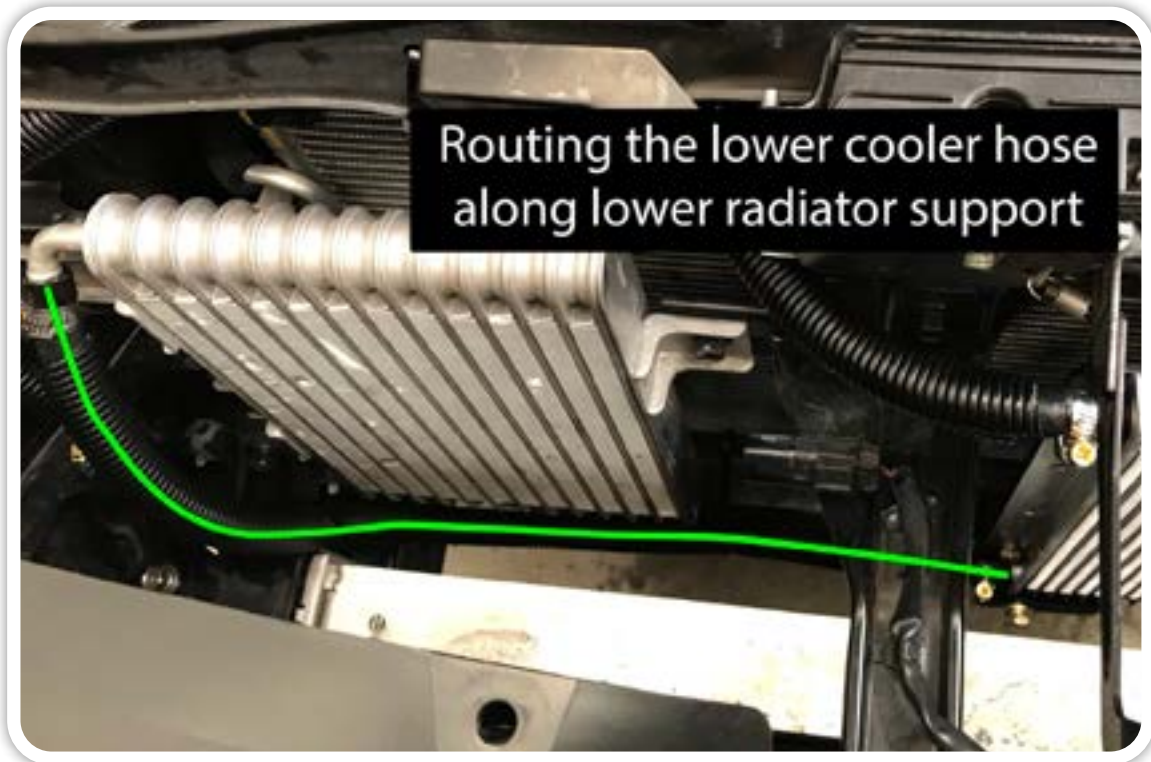
## THIS PAGE APPLIES TO TRITON MR 6 SPEED MODELS

- 38.** Cut the supplied hose in half. Connect one of the halves to the top connection on the supplied cooler.
- 39.** Route this hose around the back of the factory cooler so that it can be cable tied to the upper radiator support panel. Cut to a suitable length as this hose will connect to the black steel cooler line that goes to the transmission. Secure each end with supplied screw clamps.



## THIS PAGE APPLIES TO TRITON MR 6 SPEED MODELS

- 40.** Route the bottom hose on the supplied cooler underneath the factory cooler and along the radiator support panel. Cut to a suitable length as this will connect to the open outlet on the factory cooler. Use a screw clamp to secure.



- 41.** Using supplied cable ties, secure the cooler hose to the radiator support panel.
- 42.** Hold off refitting the top grill cover and bash plate yet so that you can easily check for leaks after the test drive.
- 43.** Next is to check the transmission fluid level and top up the fluid if necessary.

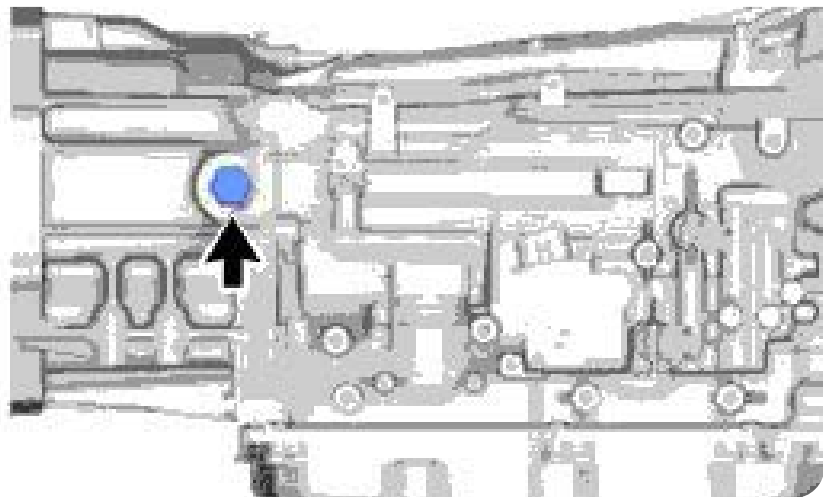
## ***THIS PAGE APPLIES TO TRITON MR 6 SPEED MODELS***

- 44.** *THE ENGINE MUST BE RUNNING WHILE CHECKING TRANSMISSION FLUID.*
- 45.** *Before checking the fluid level, you need to 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.*
- 46.** *In the transmission sump or pan, locate the check valve bolt - the bolt will have "Check" engraved into it.*



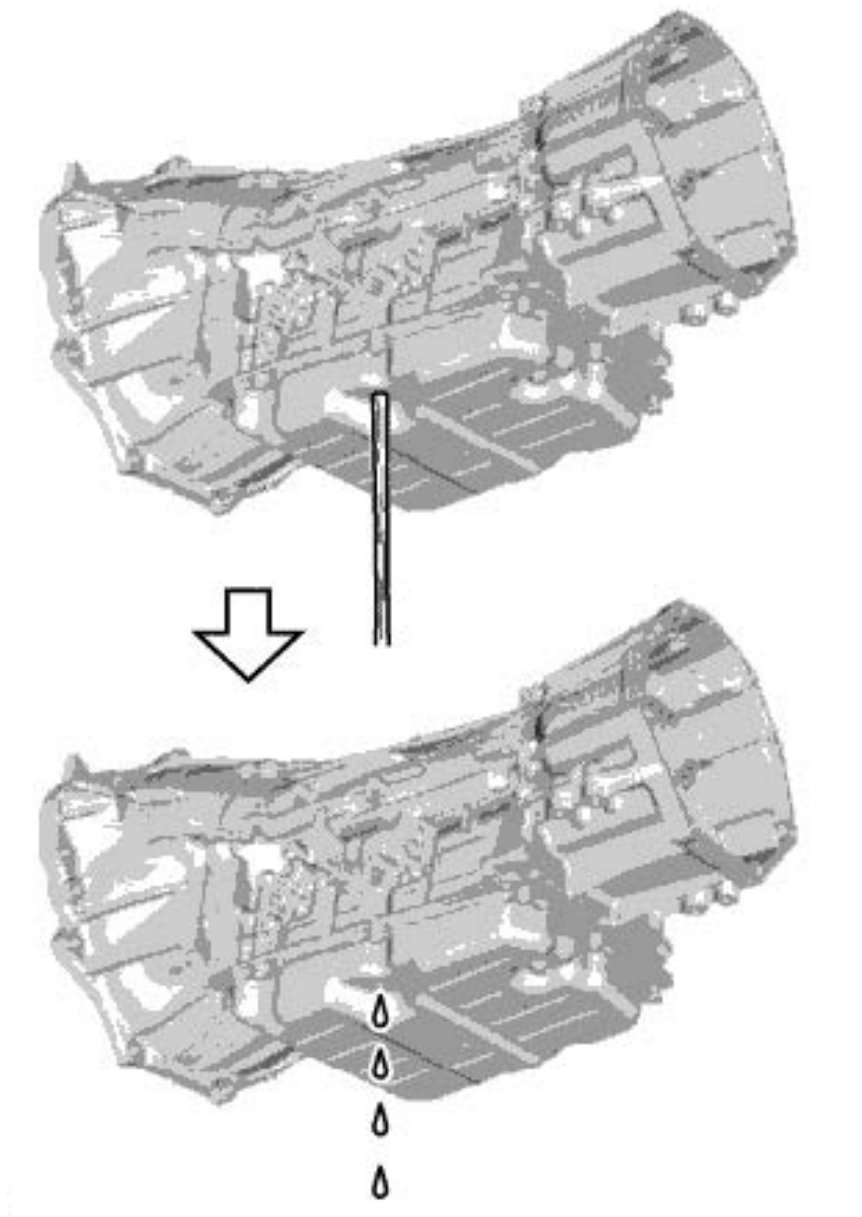
- 47.** *With the engine running, remove using a 5mm Allen key. DO NOT remove the 14mm bolt located at the rear of the transmission pan as this is the drain plug.*
- 48.** *If there is no oil dribbling out of the check plug, locate and remove the 24mm fill plug on the drivers side of the transmission.*

*THIS PAGE APPLIES TO TRITON MR 6 SPEED MODELS*



## THIS PAGE APPLIES TO TRITON MR 6 SPEED MODELS

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



## **THIS PAGE APPLIES TO TRITON MR 6 SPEED MODELS**

- 50.** *Clean all areas of the engine/underneath where transmission fluid may have spilt.*
- 51.** *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.*
- 52.** *With engine still running, visually check for leaks and re-tighten any fittings as required.*
- 53.** *Continuing with the engine still running, recheck fluid level by repeating the steps suitable for you model of vehicle.*

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

- 54.** *If the fluid is at the correct level, clean any transmission fluid off the vehicle.*
- 55.** *Re-install bash plates and grill cover.*

***This completes the installation of the  
Dual External Transmission Oil Cooler Kit to Suit  
Mitsubishi Triton MR with 6 Speed Automatic Transmissions***

***PLEASE REMEMBER ALL AUTOMATIC TRANSMISSIONS HAVE A SERVICE INTERVAL OF  
2 YEARS OR 40,000KM TO IMPROVE THE LONGEVITY OF THE TRANSMISSION.***