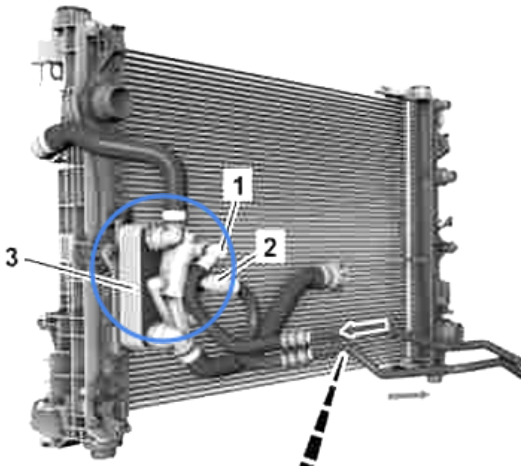
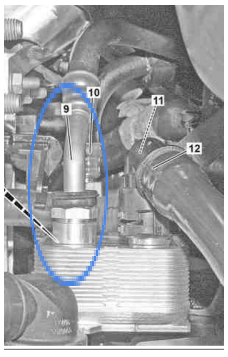
ModalWorks M177 C63 Split Cooling Installation

OEM Fluid Cooler Removal

1. Pop hood and ensure the engine bay compartment is cool to the touch before proceeding.
2. Remove lower engine compartment under tray with 8mm socket wrench
3. Remove front bumper following this pdf: Bumper Removal Instructions
4. Access OEM Transmission heat exchanger from under the vehicle, it is located behind the engine radiator circled below:



5. First unclip the retention clips on the transmission line (shown within the blue oval below) and slide the transmission oil lines out following the procedure.



Detach oil line

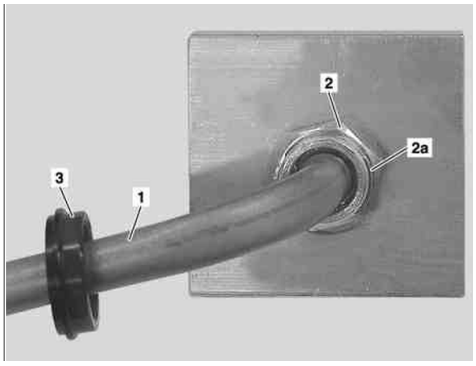
1 Clean separating point and surrounding area thoroughly.

Ensure scrupulous cleanliness.
Even the smallest dirt particles in the hydraulic components can lead to malfunctions or even a total failure of the transmission.

2 Release dust cap (3) and push back along oil line (1) until connector (2) is accessible.

3 Position a suitable tool (e.g. hook) at one end of the retaining clamp (2a) and pull the retaining clamp (2a) off the connector (2).

4 Pull oil line (1) out of connector (2) and seal connections



6. Unclip coolant lines and remove:

Open clutch

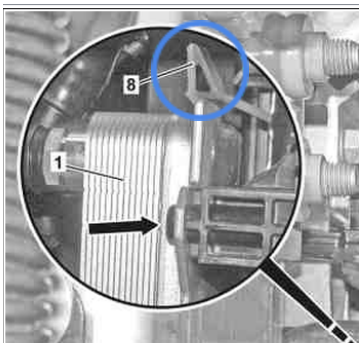
1 Slide nose (2) of catch spring (3) to position (B).

Never pull on the eyelet (1).
Otherwise, the catch spring (3) will lose its pretension.

2 Detach coolant line from assembly part.

3 Check sealing ring for damage.

7. Now that all lines are disconnected, the assembly can be removed. Push the retaining clip upwards carefully (if you are rough, it will break). Once unlatched, the assembly can slide out towards the ground.



Installing Upgraded Fluid Divorcer

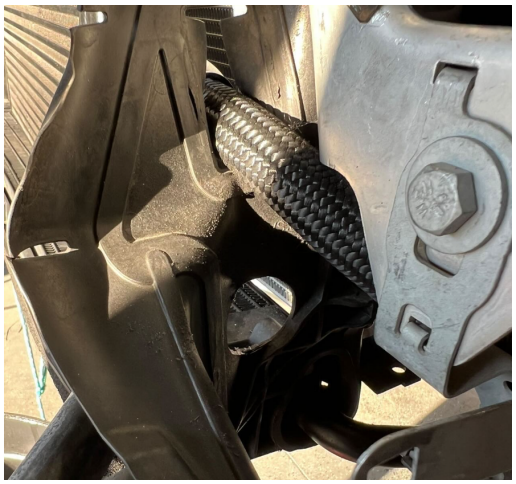
8. Attach the 180º AN10 connector on the top portion of the new billet splitter. Align the hose as shown below, keep it partially tightened until it is fully assembled onto the vehicle.

9. Remove the thermostat from the OEM cooler assembly by unscrewing the 3x M6 nuts.
10. Install your original thermostat or replace with the upgraded version onto the new Modalworks billet fluid divorcer.

11. Install the billet fluid divorcer and thermostat assembly onto the vehicle. Take care not to damage the OEM plastic snap hook during install.
12. Reinstall coolant lines onto the billet fluid divorcer.

Installing the Transmission Cooler

13. To route the new lines, drill a 1" hole into OEM plastic approximately 1.5” below the OEM opening. The upper line on the billet divider goes to the upper port on the transmission cooler.

14. Install large angle brackets to the transmission cooler with short m8x10 screws and lock washers. Torque down until the spring washers are flat.
15. Remove horn mounts, disassemble horns from the brackets. New brackets and mounting location will be used with the new cooler.
16. Install angle mounting brackets with provided 4x M8x20 screws, washers and nuts to the crash bar. The bracket will bend into place to take the shape of the front crash bar. Tighten until the bracket looks like the image below:

17. Connect the 180º end piece to the top port on the cooler through the upper opening and the straight AN10 line to the lower. The lower line should not be installed to the fluid divider at this time. The final mounting should look like the image below:

Filling with transmission Oil

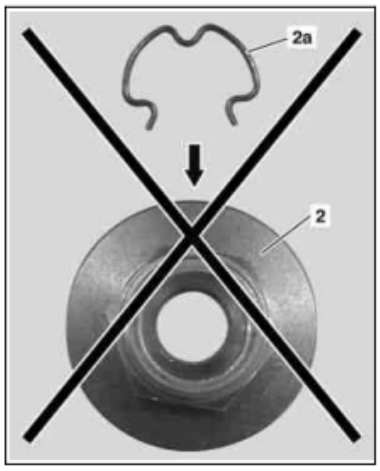
18. Prior to starting to fill, decide whether you will do a transmission fluid flush at this time. If you are considerably above stock power levels we recommend doing a flush at 15k miles instead of 30k miles. If so proceed to drain the transmission, exchange filter, and re-install the pan before proceeding, otherwise continue onto step 18.

19. On the transmission thermostat, attach the lower line per the procedure below. Keep the upper line disconnected, we will use this to monitor when the cooler is fully filled.

Install oil line

ⓘ The safety clamp (2a) must be replaced each time a oil line is detached.

Ⓟ The safety clamp (2a) must not be pushed straight over the connector (2).
The safety clamp (2a) will otherwise be overstretched and correct sealing of the connection can no longer be assured.



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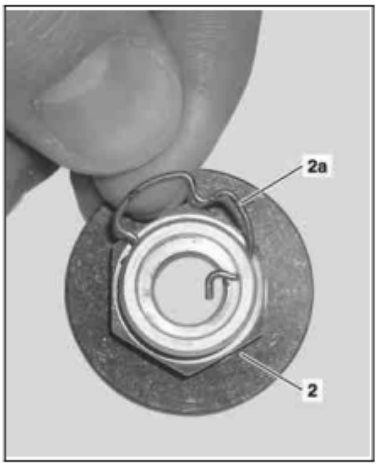
6 Insert one end of new securing clamp (2a) into a cutout (2b) of connector (2).

7 Push securing clamp (2a) in direction of arrow until it fully engages in connector (2).



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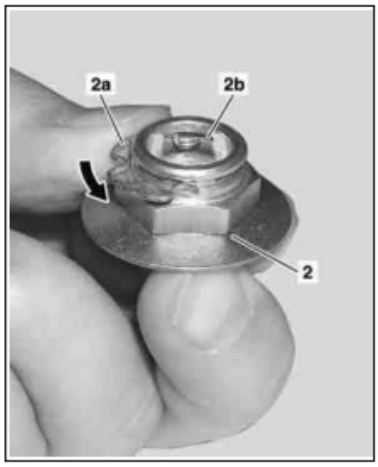

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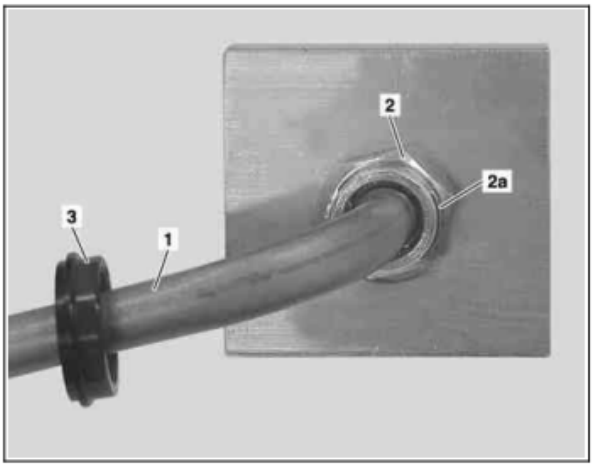
8 Push dust cap (3) onto oil line (1).

9 Introduce oil line (1) straight into the connector (2) until it audibly and noticeable latches.

10 Push dust cap (3) onto the connector (2) until it latches and can turn freely.

ⓘ If the dust cap (3) cannot be pushed over the connection, the oil line (1) is not fully engaged in the connector (2) or the safety clamp (2a) is overstretched.

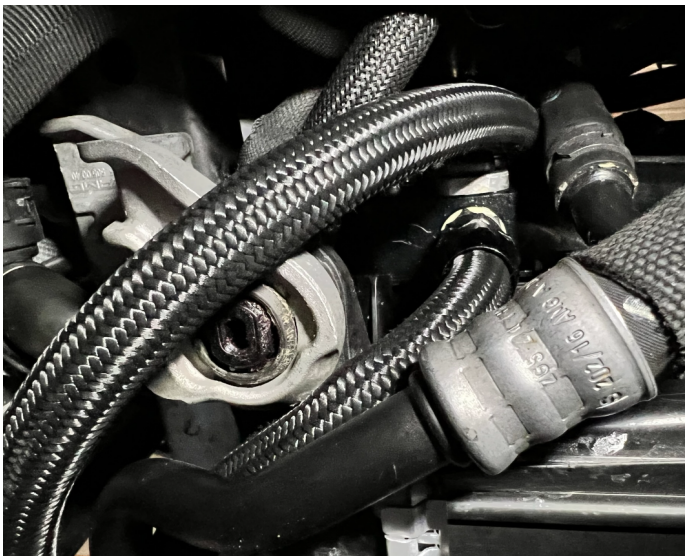


20. Using a narrow funnel, fill the lower transmission cooler line (AN10) with new ATF fluid. The fill end of the line should be raised as high as possible during filling. Add approximately 1 quart of new ATF.

21. Monitor the transmission thermostat fluid line connection to see when fluid has reached back to the thermostat. Once fluid comes out of the upper transmission line connection port, stop filling.

22. Attach the upper OEM transmission line to the thermostat following the procedure from step 18.

23. Quickly install the lower line to the billet splitter to minimize spillage. The view from under the vehicle should look similar to the image below:



24. Confirm all AN connections are tightened
25. Top off the transmission oil via the transmission pan following OEM filling guidelines.

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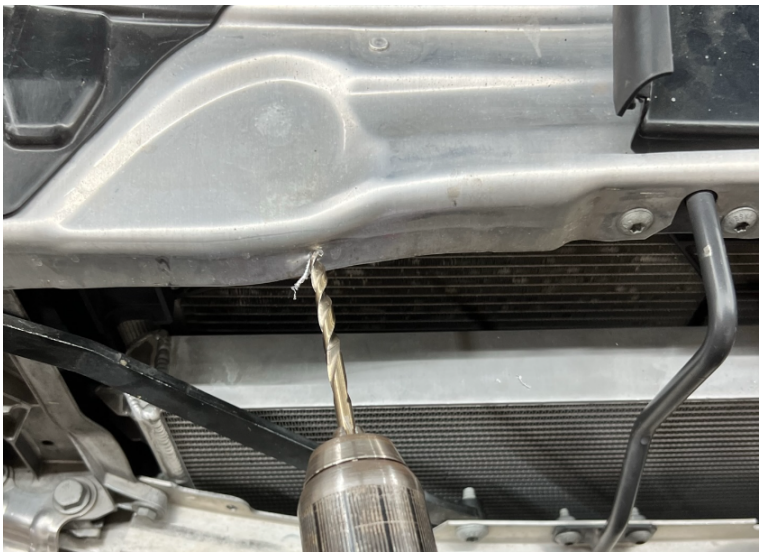
Horn Installation

26. Using the provided small brackets, install the horns to the brackets reusing the OEM nut.

27. Drill a ¼” hole approximately 3” to the left of the hood latch. Take care to not let the drill bit contact the components behind the radiator support.



28. Install both horns onto the upper radiator support with the provided M6 bolts, nuts and washer. Make sure the hood closes without the latch contacting the horn.