BMW M5/M6 F10/F12 Charge Cooler Fitting Instructions

Tools Required:

- Ratchet and Socket Set
- Torx Sockets
- E8 E-Torx Socket
- Small Flat-Blade Screwdriver/Pick Tool
- Jubilee Clip Flexi-Driver/Flat-Blade Screwdriver
- 4-litres Correct Grade Coolant

Kit Contents:

- 2x AIRTEC Motorsport Charge Coolers
- 8x M6x50mm Socket Head Bolts
- 8x M6 Pan Washers
- 6x M5x12mm Socket Head Bolts
- 6x M5 Pan Washers
- 2x Pro Hoses Silicone Connectors
- 4x 80mm Jubilee Clips

PLEASE THOROUGHLY READ THESE INSTRUCTIONS AND MAKE SURE YOU ARE FAMILIAR WITH THE STEPS BEFORE CARRYING THEM OUT

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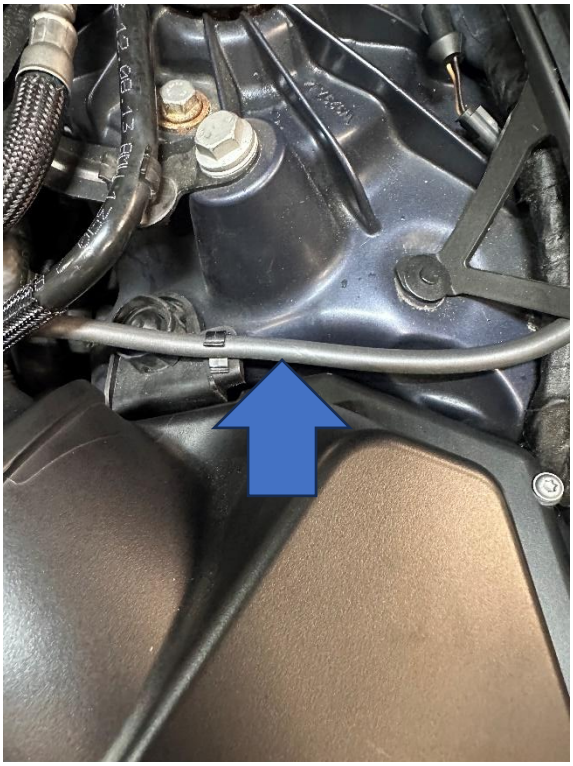
Instructions:

1. Firstly, remove both air boxes by unplugging the MAF sensors (blue arrows), then undo the jubilee clips holding the original intake pipes to the turbo inlets on both sides (orange arrows) and then undo the T27 Torx bolts (green arrows) holding the air boxes in.

2. Release the coolant hoses secured to the air box lids along with the vacuum line from the right-hand air box. The air boxes and intake hoses can then be removed from the car by pulling up to release them from their rubber mounts.



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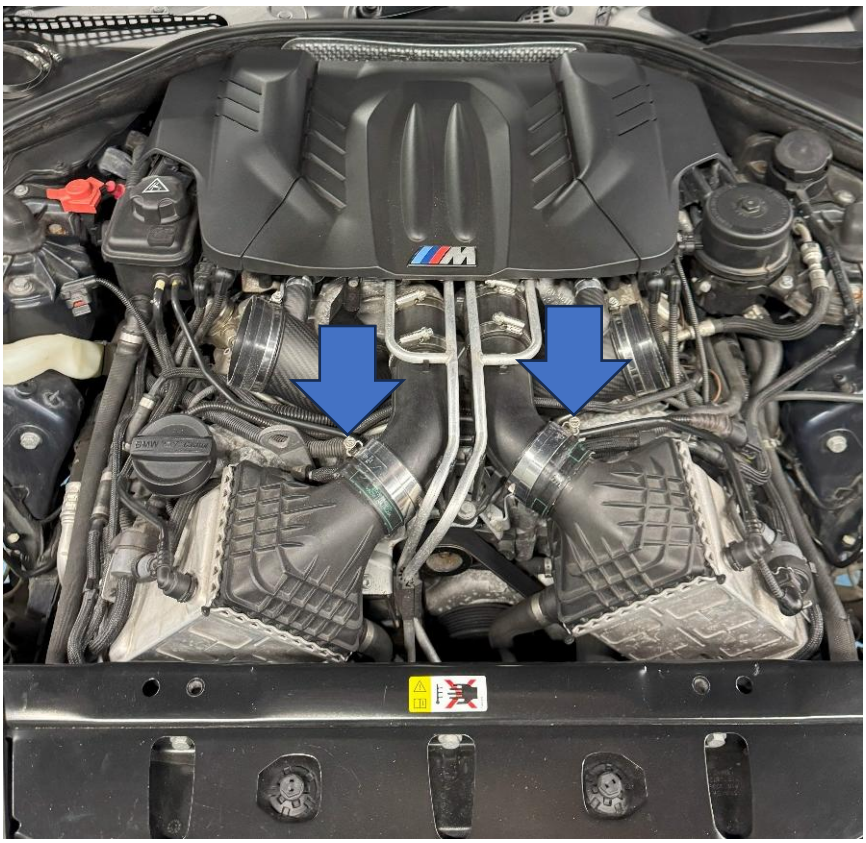
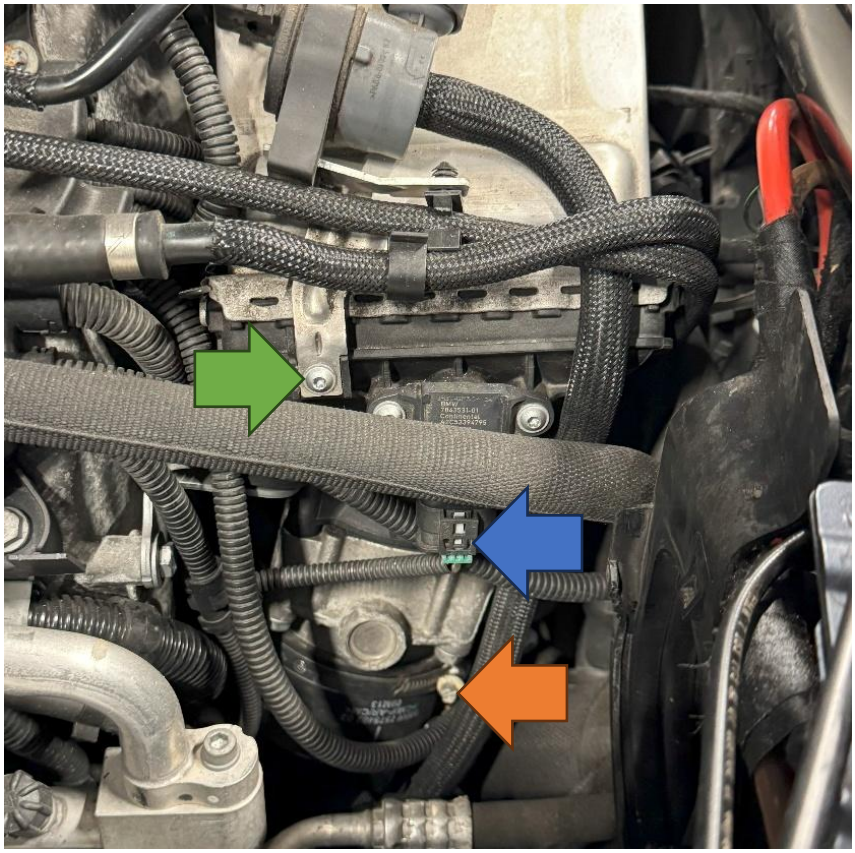
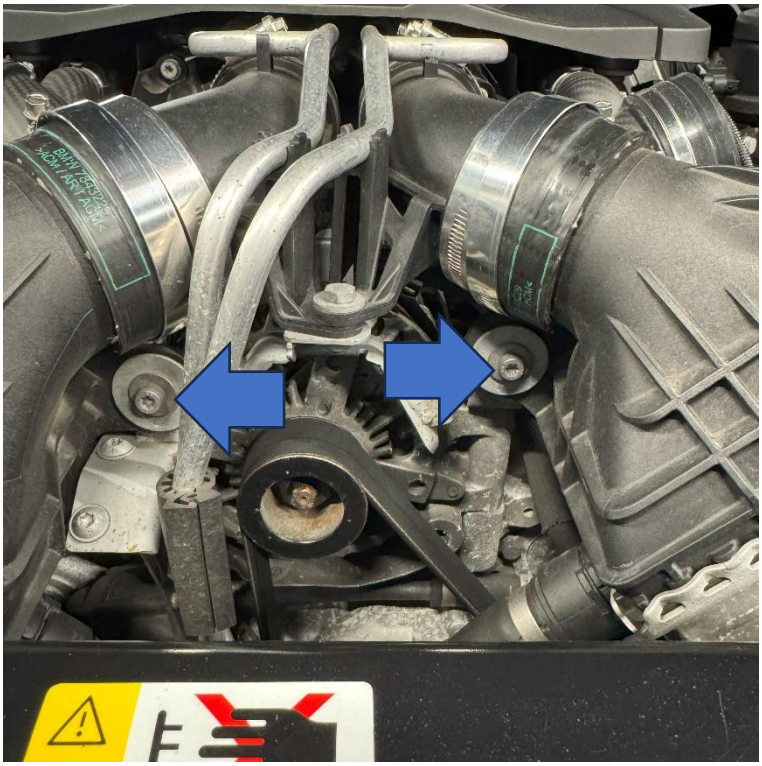
3. Undo the jubilee clips holding the hoses onto the top of the charge coolers.



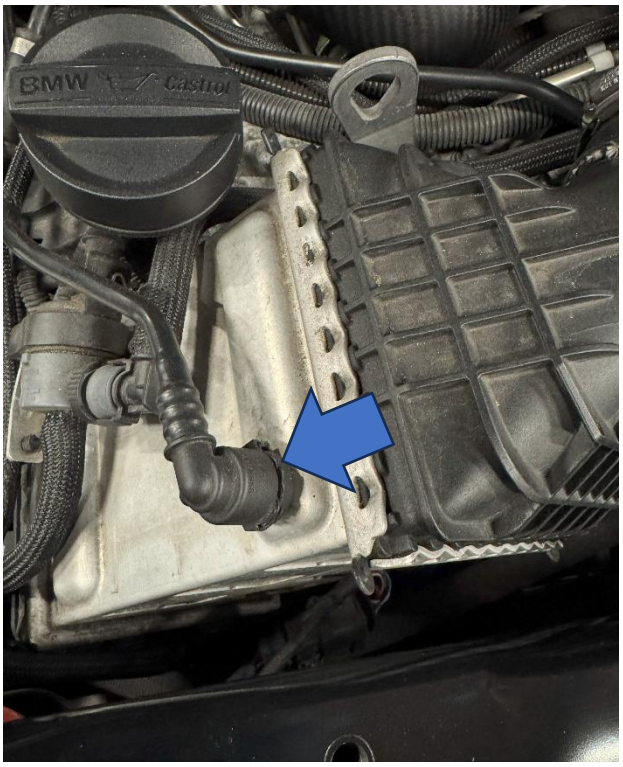
4. Unplug the MAP sensor (blue arrow) and loosen the jubilee clip attaching the boost pipe to the throttle body (orange arrow) and then undo the T20 Torx bolt holding the bracket to the charge cooler (green arrow).



5. Undo the T27 Torx bolt holding the charge coolers at the top.

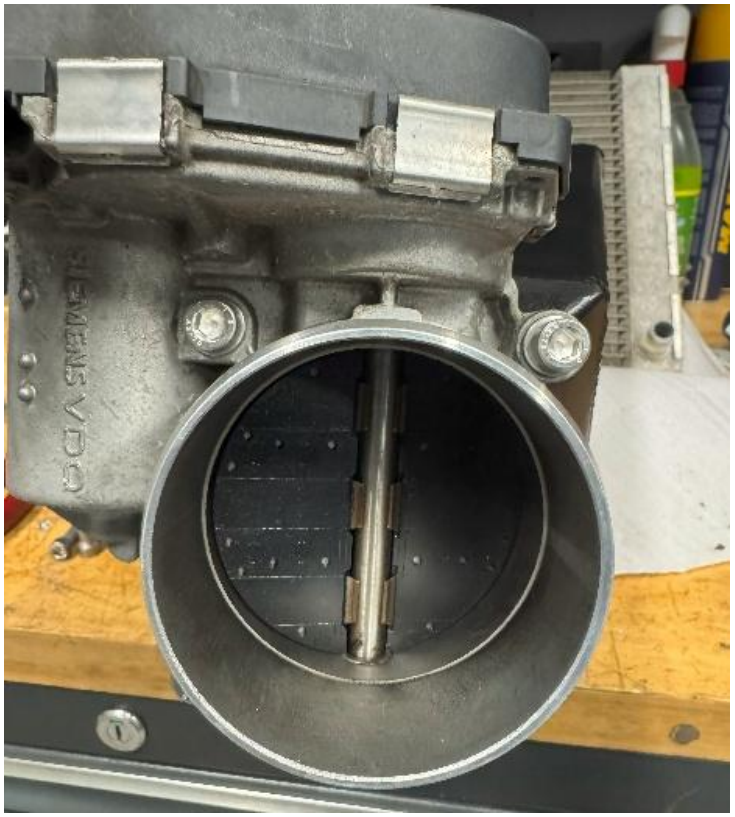


6. Clamp the charge cooler lines or drain the system and then using a small flat-blade screwdriver undo the spring clips for the top bleed hose and two main hoses, then remove the hoses. Please note: Even with the hoses clamped expect a small amount of coolant spill.



7. To release the charge cooler, pull it gently towards you it from the top pipe and then lift it upwards and it will come out of the lower boost hose. Once raised, you will be able to unplug the throttle body connector and remove the whole charge cooler from the car.

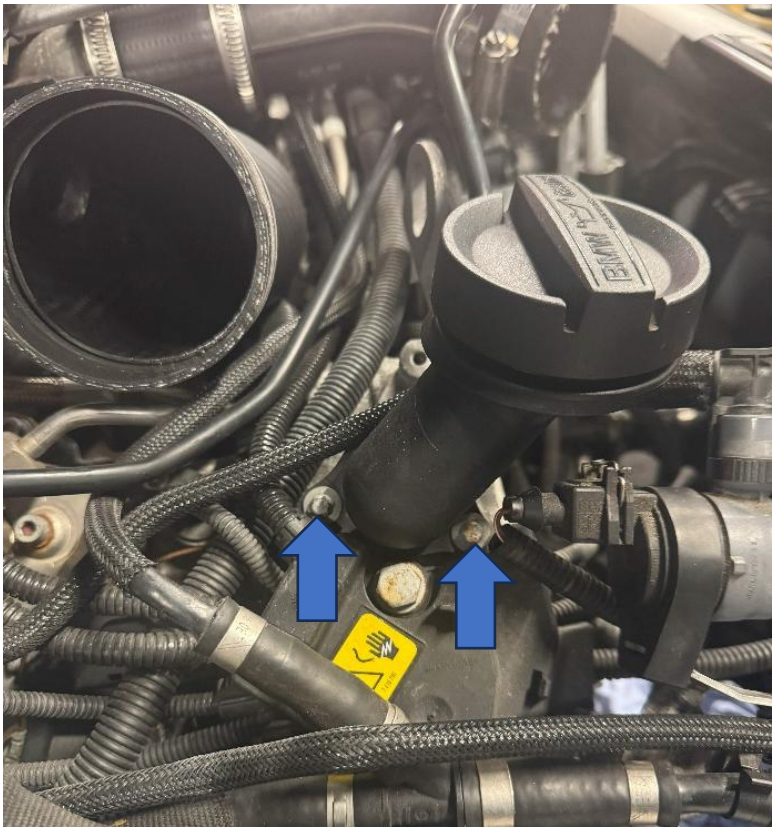
8. With the charge cooler on a bench, you can swap over the throttle body, MAP sensor and mounting rubbers. Start by undoing the four 10mm bolts securing the throttle body and then install onto the AIRTEC Motorsport charge cooler, ensuring it is the same orientation using the supplied M6x45mm Socket Head bolts with washers.



9. The MAP sensor can then be swapped over by undoing the two T20 Torx bolts and reinstalling it onto the AIRTEC Motorsport charge cooler using the supplied M5 Socket Head bolts with washers.

10. Then swap the rubber mounting grommet over by removing the two metal outer washers followed by the rubber and install them onto the new AIRTEC Motorsport charge cooler.

11. In order to reinstall the left-hand charge cooler, you will need to remove the oil filler by undoing the two E8 Socket Head Bolts. Make sure you cover the opening to stop anything dropping inside whilst you install the new charge cooler, then refit the oil filler immediately.



12. Reconnect the throttle body plug before lowering the charge cooler into place. Due to its increased size, it can be difficult to lower into position so make sure no cables or pipes are trapped as you lower into the boost hose. Install the Pro Hoses silicone connector onto the charge cooler and then ft to the original upper boost pipe.

13. Reconnect the water pipes removed in Step 6 and install the original T27 Torx upper securing bolt removed in Step 5. Then install the two upper jubilee clips supplied and tighten the original lower one. You can then reconnect the MAP sensor and use the supplied M5 bolts with washers to reconnect the bracket removed in Step 4 to the charge cooler.

14. Now repeat the process for the right-hand charge cooler.

15. Finally, once both sides are in, reinstall install the air boxes. Locate the header tank for the charge coolant system and top up with the correct grade coolant before following the BMW bleeding process, which can be found online.

    Please note: We recommend following the bleeding process to drive the car and then allow it to cool sufficiently before checking the coolant level again, as it may require more coolant.