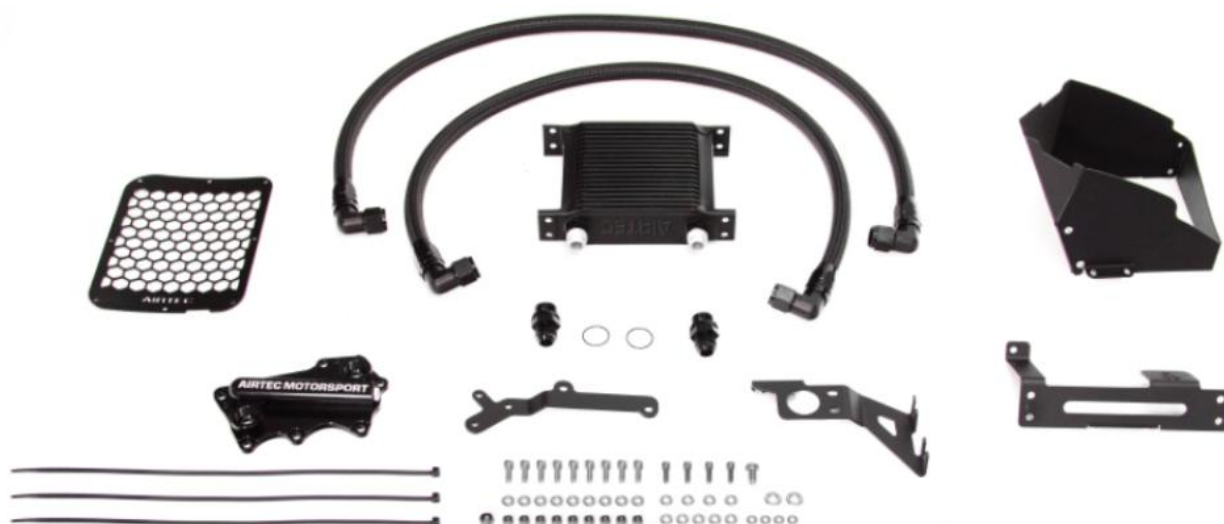


AIRTEC MOTORSPORT Fitting Instructions

Vehicle:	BMW M140i
Product:	Oil Cooler Kit
Part number:	ATMSBMW46



Kit Contents:

1x AIRTEC Motorsport Oil Cooler	1x M8x16mm Button Head Bolts
1x AIRTEC Motorsport Oil Adapter Plate	1x M8 Nyloc Nut
1x Top Mounting Bracket	2x M8 Pan Washers
1x Bottom Mounting Bracket	9x M6x16 Socket Head Bolts
1x Front Air Scoop	9x M6 Nyloc Nuts
1x Rear Mesh	M6 Pan Washers
1x Horn Remounting Bracket	4x M5x16 Socket Head Bolts
2x Oil Lines with Fittings	4x M5 Pan Washers
2x AN10 to M22 Fittings with O-Rings	3x Large Cable Ties (200mm)
1x M12x.15 Plug	

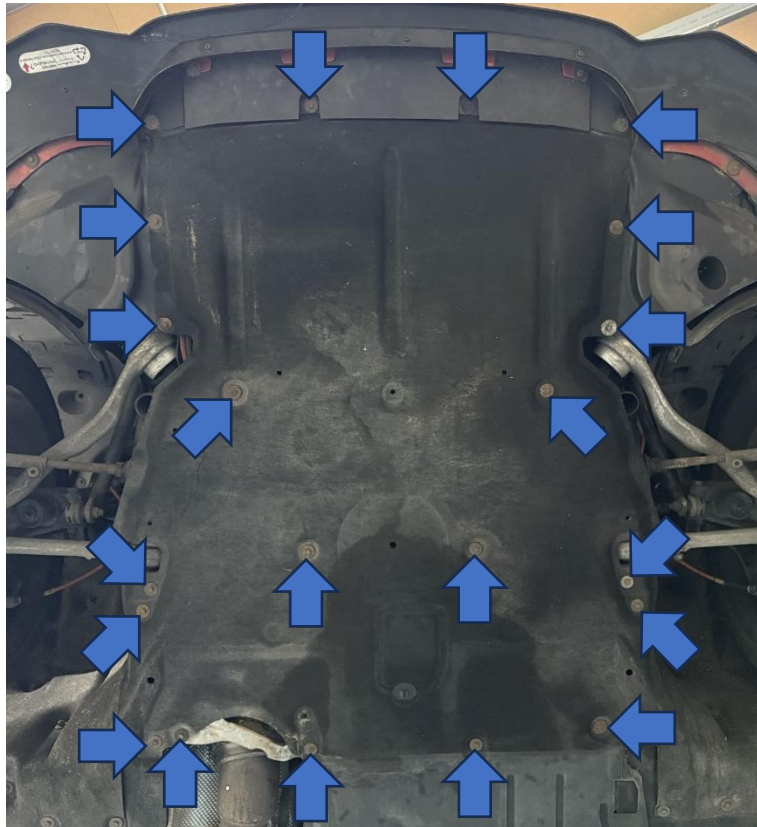
Tools Required:

Ratchet and Socket Set	Dremel Cutting Tool
Narrow Torx Sockets	Drill and 5mm Drill Bit
Allen Key Socket Set	Adjustable Spanner
Sharp Knife	AN Fitting Spanner

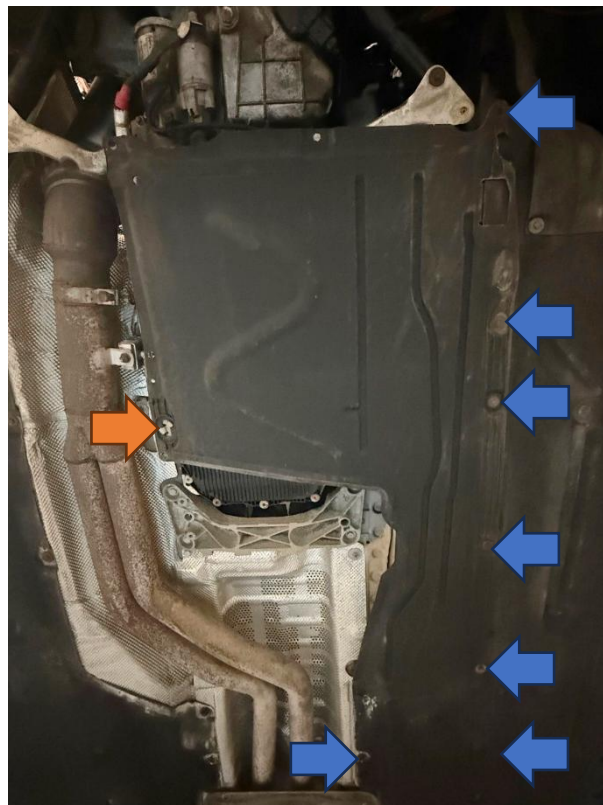
PLEASE THOROUGHLY READ THESE INSTRUCTIONS AND MAKE SURE YOU ARE FAMILIAR WITH THE STEPS BEFORE CARRYING THEM OUT

Instructions:

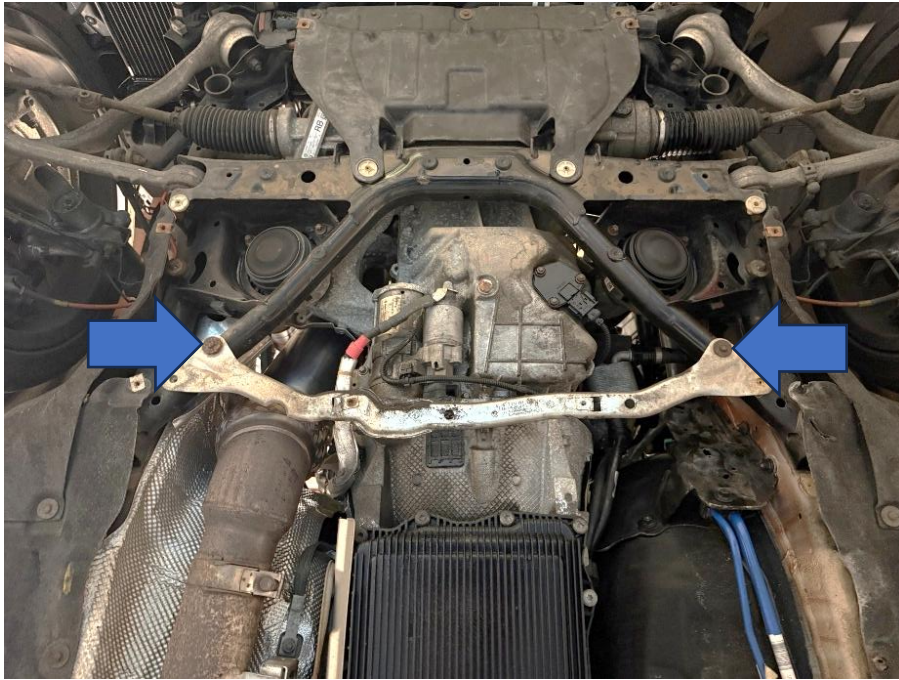
1. Firstly, working under the car remove the under tray by undoing the 21 8mm screws securing it.



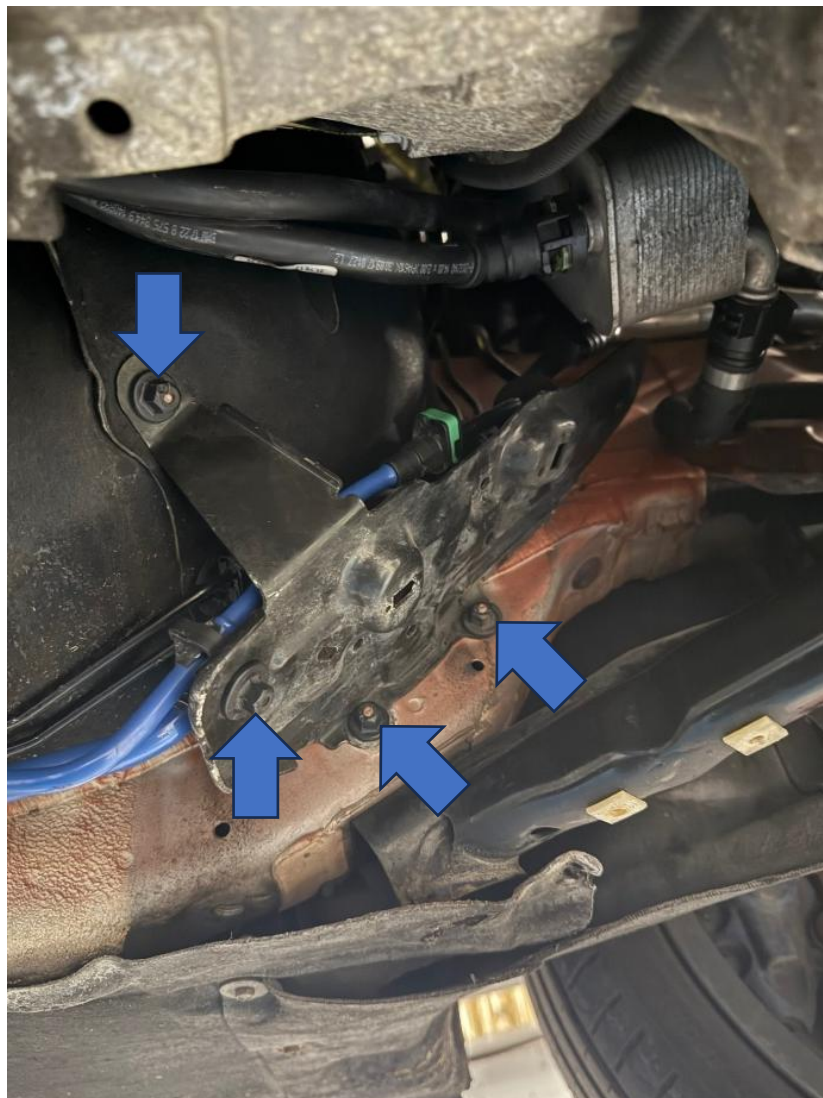
2. Now remove the secondary under tray further back by releasing all the fixings (blue arrows) on the right-hand side when facing the rear of the car. Once the under tray is loose, rotate it around the metal bracket located on the left-hand side (orange arrow). It will release once it's in the correct position.



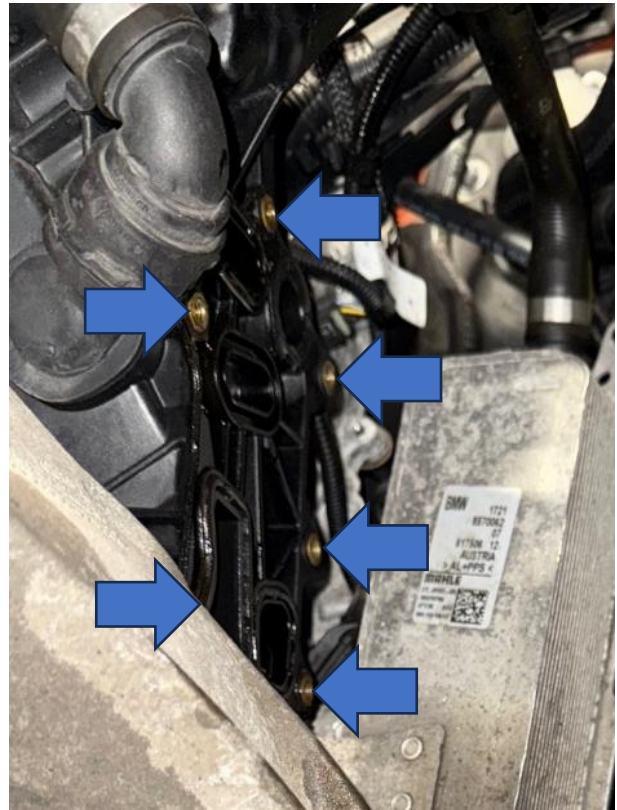
3. To allow more clearance, remove the under tray support bracket. It's secured with two 8mm screws.



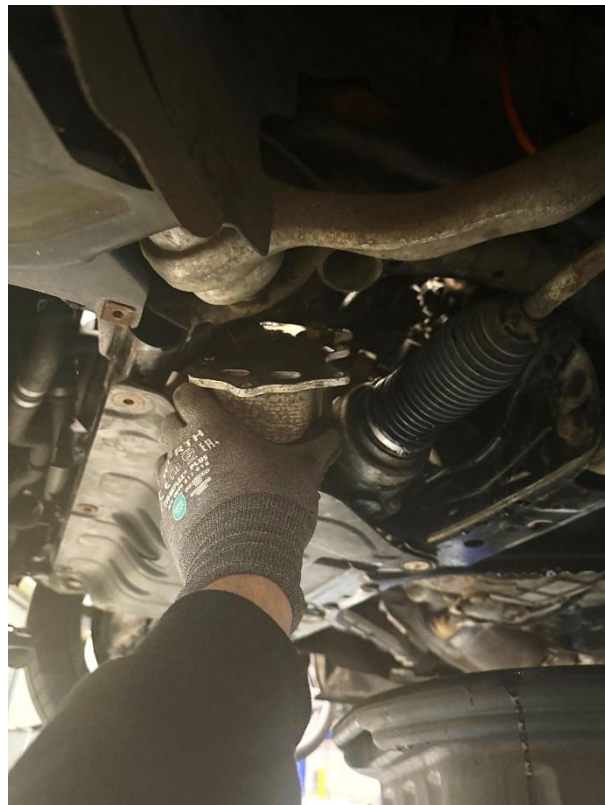
4. Next, remove the bracket supporting the fuel lines by undoing the four 10mm plastic nuts securing it.



5. Locate the original oil cooler (blue arrow) and remove the six T30 Torx bolts securing it place.
Please note: The top bolts next to the gearbox cooler require a narrow head Torx bit. Have an oil drain pan on hand to collect the oil and coolant when you remove the bolts.



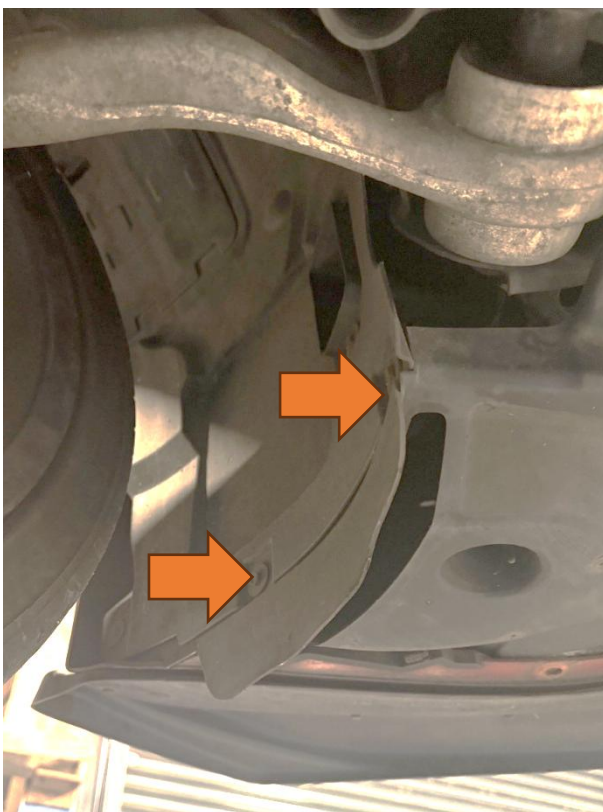
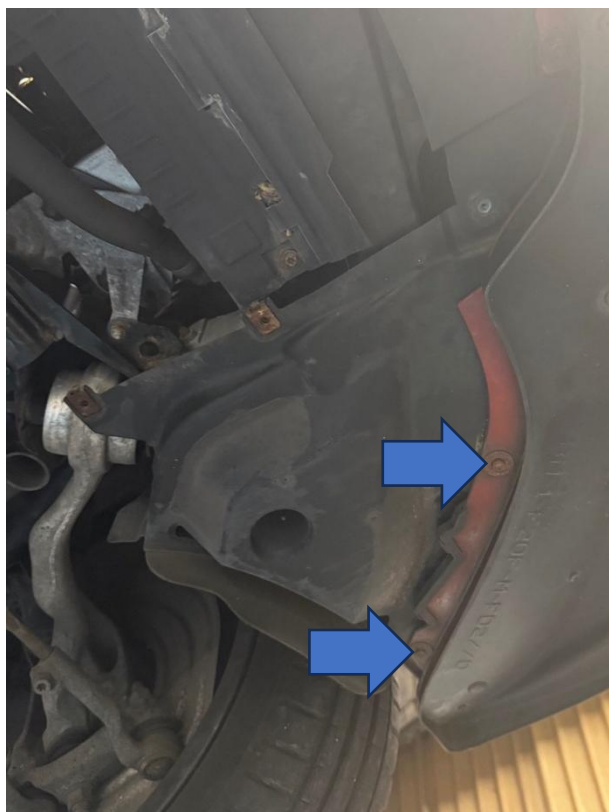
6. Once the original oil cooler is loose, move it towards the steering rack. Make sure it's in the rotation as shown and carefully remove from the car.



7. Before fitting the AIRTEC Motorsport oil cooler adapter plate, secure the AN10 fittings with the O-rings supplied in the kit to the plate. Check the seals in the oil cooler housing on the engine are still seated correctly and then install the new plate in the same orientation, securing with the original bolts.



8. Next, remove the two 8mm bolts (blue arrows) at the front securing the plastic panel to the front bumper and the two bolts (orange arrows) at the back passing through the inner wheel arch liner.



9. Before moving the panel away from the car, carefully lower it and unclip the temperature sensor wiring.



10. Remove the four 8mm bolts holding the front of the bumper. This will release the bottom of the bumper.



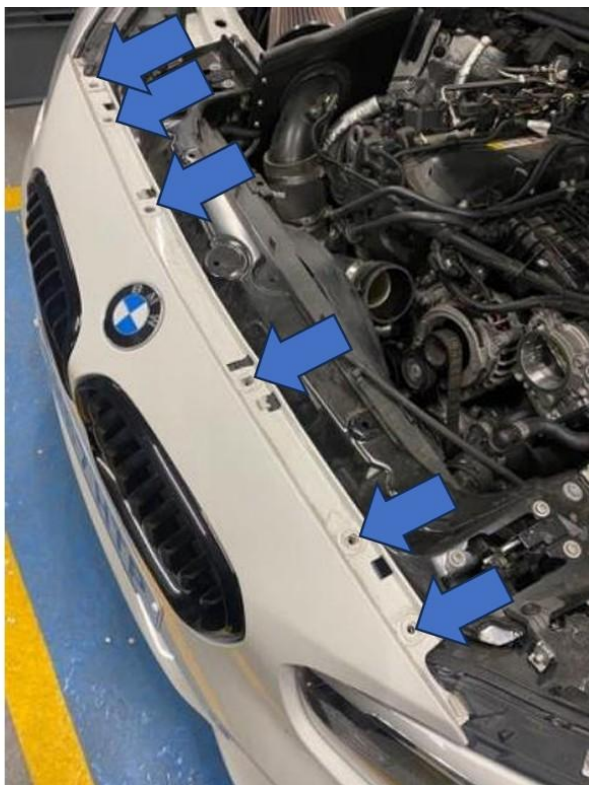
11. Next remove all 8mm bolts holding the inner wheel arch liners in place. You can then unhook them from the brake ducts before pulling away from the bumper.



12. To release both sides of the bumper, remove two 8mm bolts on either side holding the bumper to front wings.



13. At the top of the bumper remove the rubber trim along the top lip and undo the six T30 bolts underneath. Once everything is removed, carefully but firmly pull the bumper away from the car. Please be aware that cars optioned with front parking sensors will require the wiring to be unplugged.



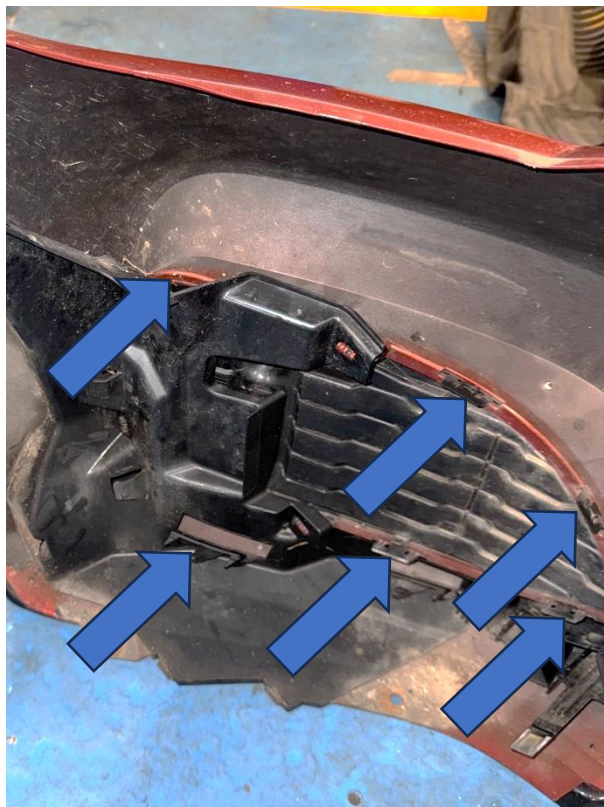
14. With the bumper off, unclip the right-hand side outer bumper trim by releasing the small tabs (blue arrows). The other clips are behind the black plastic surround use a small trim to get behind this panel.



15. Once the canard is removed, undo the T25 Torx bolt from upper edge of the bumper grille assembly.

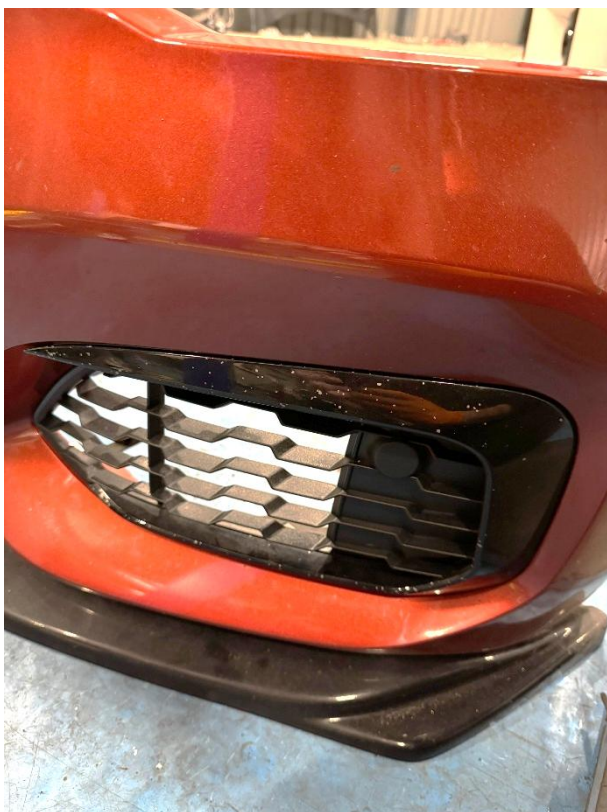
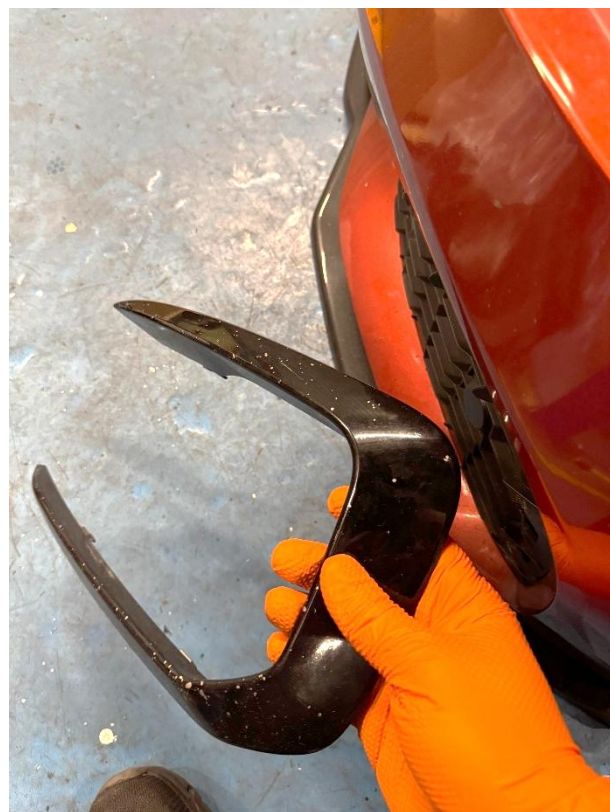


16. Next, release the grille section from the front bumper. Do this by squeezing the plastic release clips around the edge.

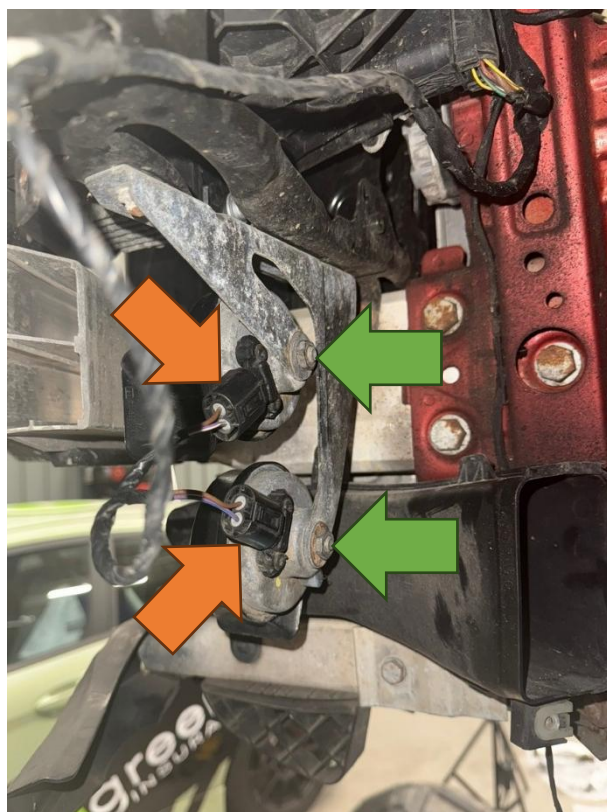


17. If you have opted for the direct replacement open grille from BMW, you can fit it now.

If you have **not** opted for the replacement grille, trim away the closed sections of the rear part of the grille to open it up, as shown. They refit it together with the T25 Torx screw and canard.



18. Locate the horns (blue arrow) and unclip both wiring clips (orange arrows). Then undo the 13mm nuts (green arrows) and remove the horns.



19. Now take the main mounting bracket supplied in the kit and locate it as shown. Secure with the M8 Button Head bolt, Nyloc nut and washers provided (blue arrow) together with the M6 Socket Head bolt with Nyloc nut and washers supplied in the kit (orange arrow).



20. Locate the two 13mm bolts below the brake duct and loosen them (**do not remove**).



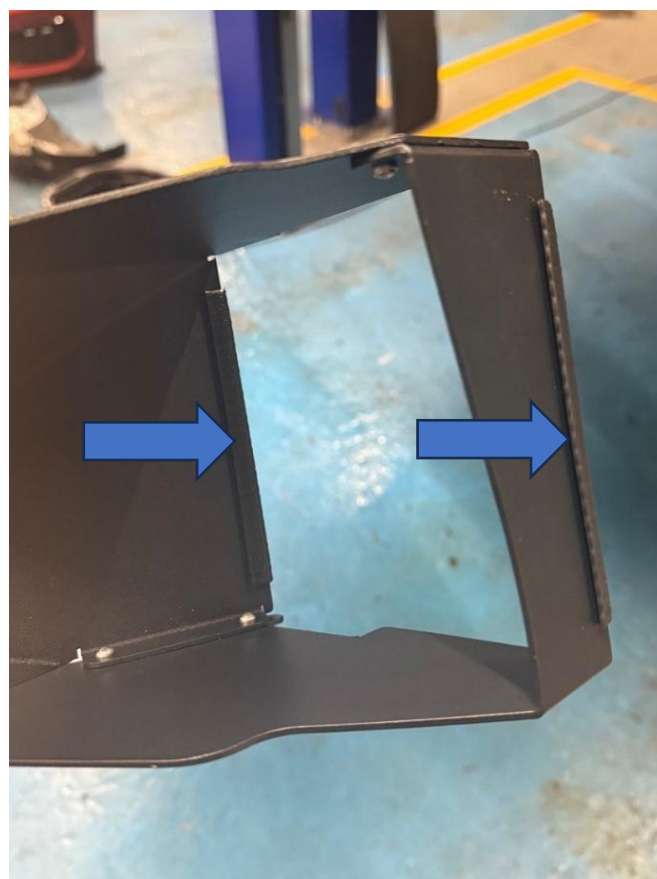
21. Secure the AIRTEC Motorsport oil cooler to the mounting bracket using the four M6 Socket Head bolts and Nyloc nuts with washers supplied in the kit.



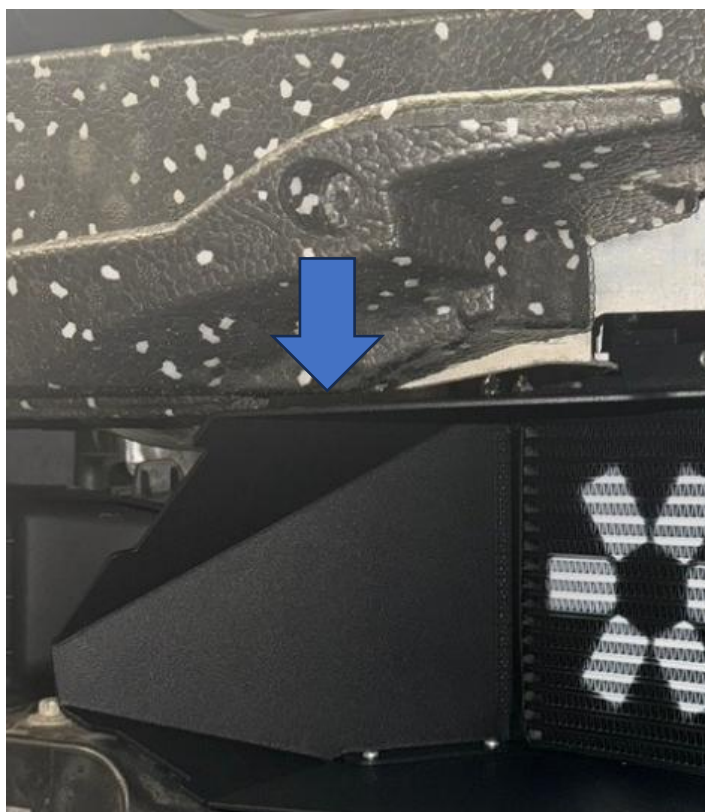
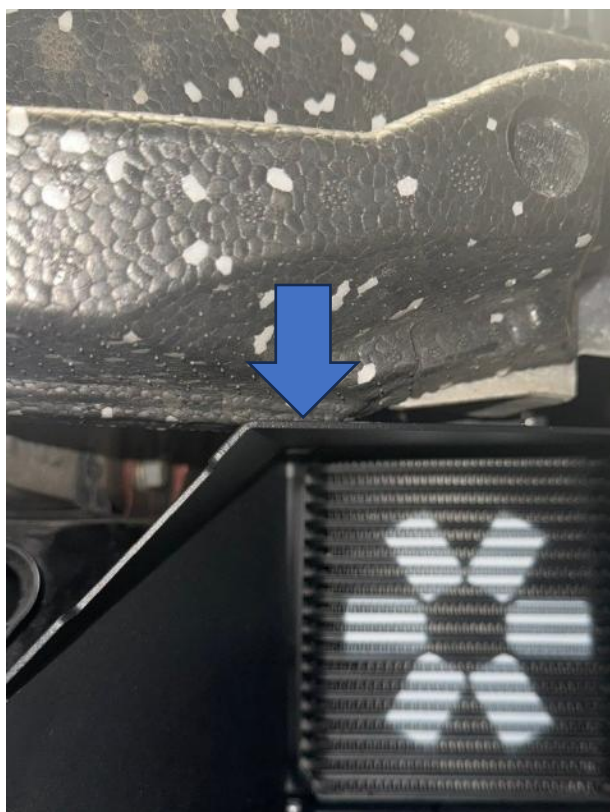
22. Next slide the second mounting bracket up under the oil cooler and behind the two 13mm bolts loosened in Step 20. Secure the oil cooler first with the two sets of the M6 bolts, Nyloc nuts and washers provided (blue arrow). Once complete, retighten the 13mm bolts.



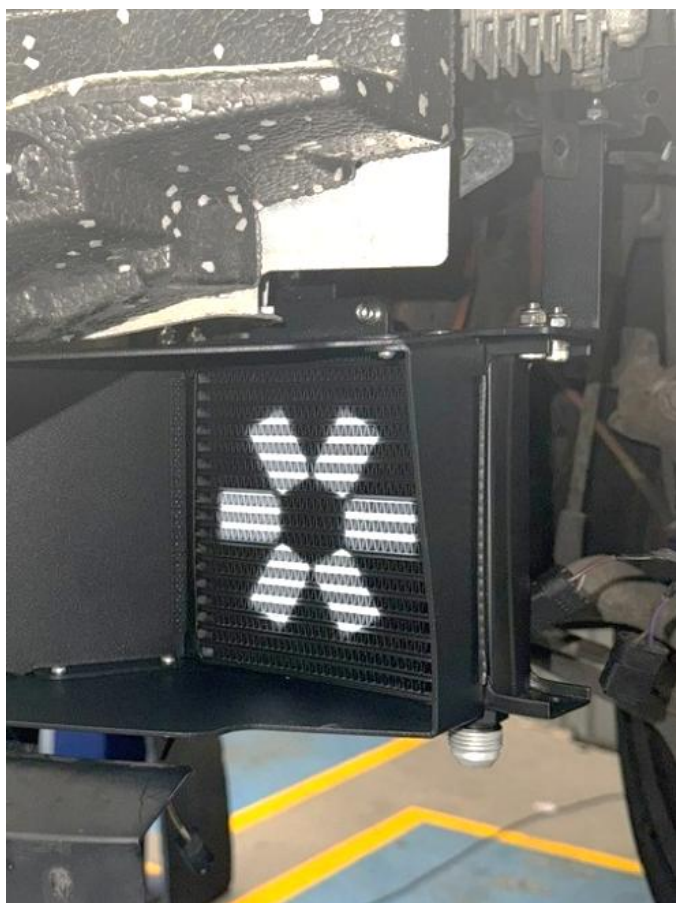
23. Before installing the air scoop, add the two small trim piece sections supplied in the kit as shown.



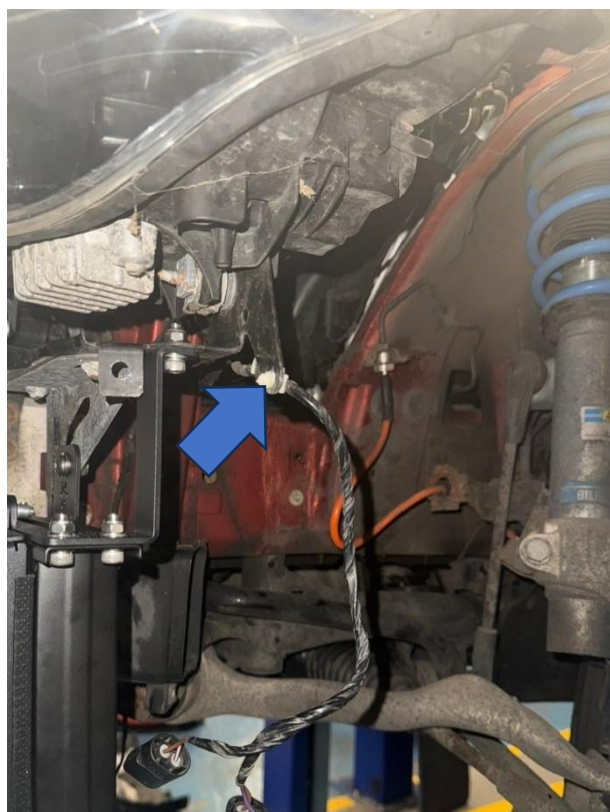
24. Trial fit the scoop on the oil cooler assembly and observe if the foam crash structure fouls on the scoop. If it does, mark on the foam where it touches and remove small section to allow clearance, as shown.



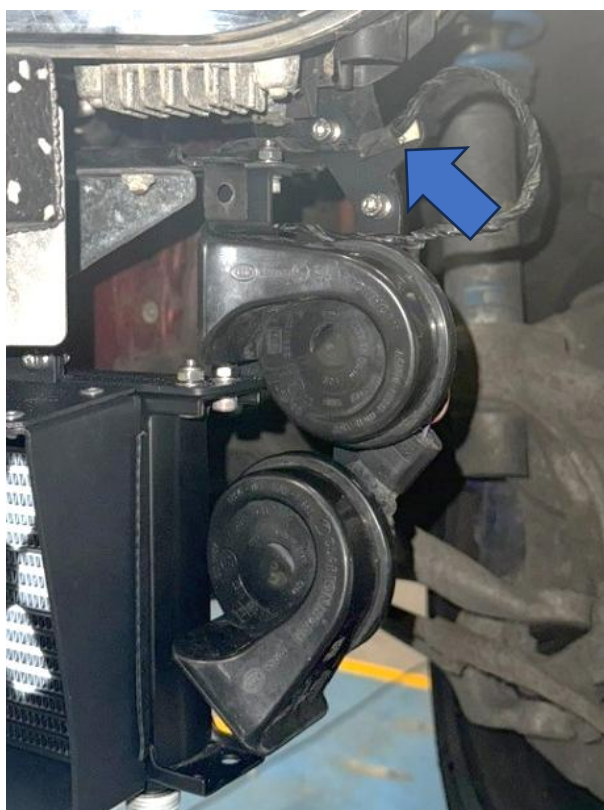
25. Next, attach the scoop using the provided M5 bolts and washers into the Rivnuts already fitted to the brackets. There are four fixings in total, two at the top and two at the bottom.



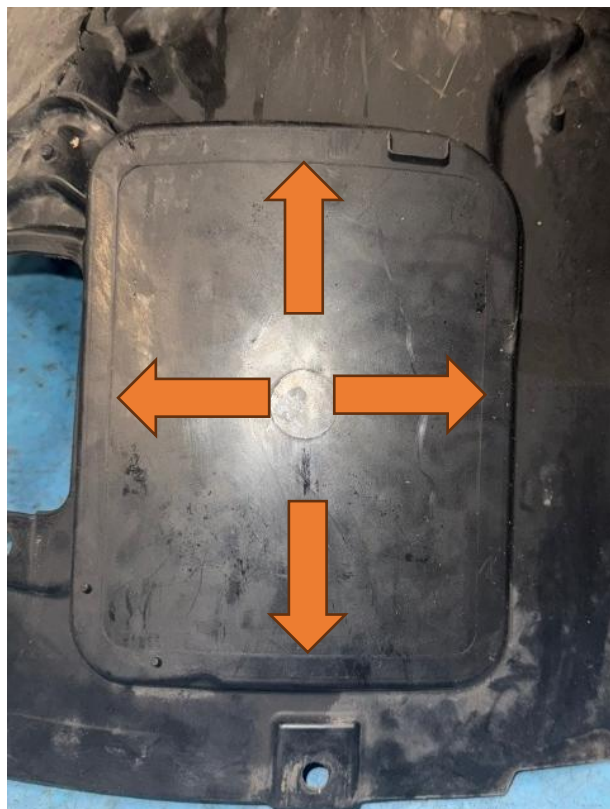
26. Now unclip the horn wiring (blue arrow) and mount the replacement horn bracket supplied in the kit using the remaining M6 bolts, washers and Nyloc nuts (orange arrows).



27. Take the horns removed in Step 18 and mount in the orientation shown to allow clearance between the oil cooler and front bumper. Use the original nuts and washers to secure and use the opening on the bracket to secure the wiring clip (blue arrow).



28. On the inner wheel arch liner removed in Step 11, cut the centre of the curved section, as shown. Use the original plastic markings as a guide to remove the correct amount of material, using a sharp knife or Dremel tool to cut through the plastic.



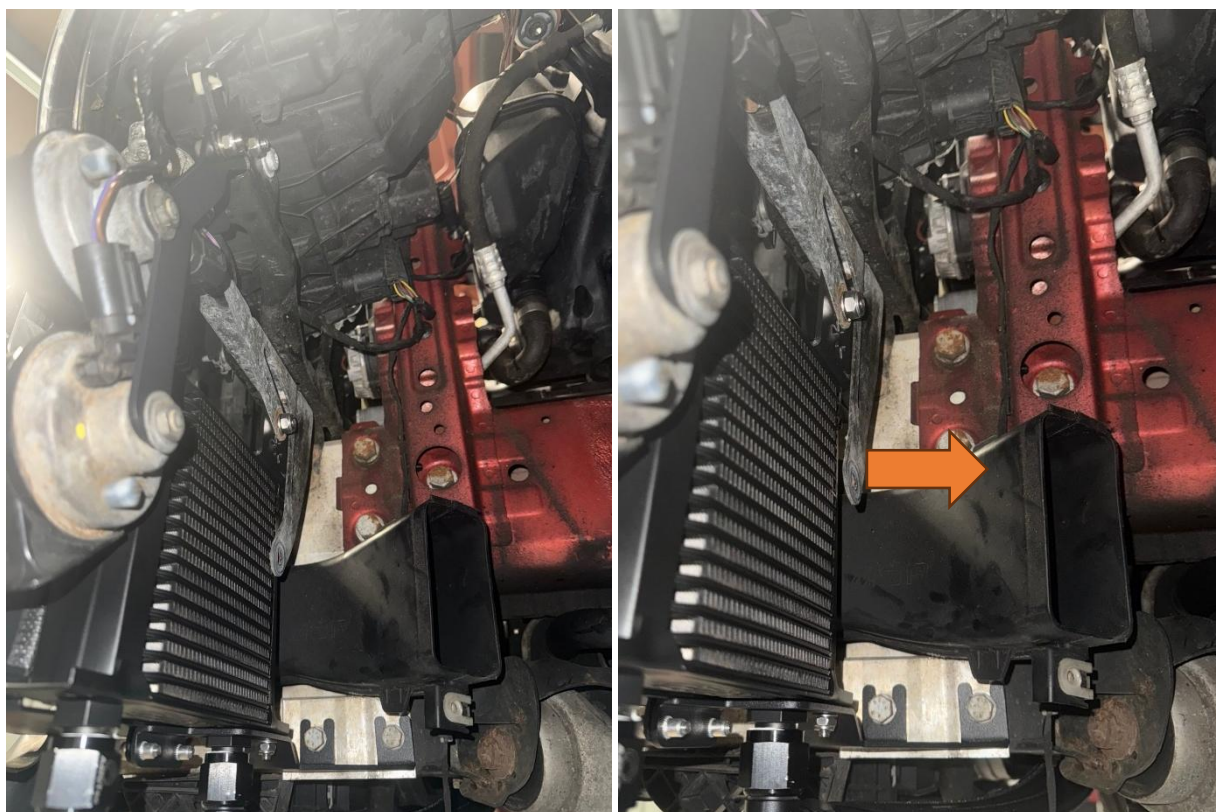
29. Place the mesh supplied in the kit into the recess and use it as a guide to drill eight 8mm mounting holes. You can then secure the mesh to the wheel arch liner with the M5 bolts, Nyloc nuts and washers provided.



30. Now connect the oil lines between the AIRTEC Motorsport oil cooler and adaptor plate. Pass the lines up and over the subframe (blue arrow) and then down towards the oil cooler (orange arrow). Use the provided cable ties to secure the lines in place and ensure cannot move or touch anything that does move.



31. Carefully pull the original horn bracket away from the back of the oil cooler. There is clearance without doing this, but it is a precaution in case of any possible large vibration.



32. **IMPORTANT:** Finally, top up the oil (approx. 500ml) and start the car. Look immediately for leaks from any of the four connections and the adapter plate. If there are, turn the engine off and retighten the fittings. Then let the car get to full operating temperature, recheck the oil level and top up if required. Once the level is correct, refit the bumper, inner arch liner and undertray in reverse of removal.

PLEASE NOTE: Please take extra care when routing the oil lines to ensure they do not and cannot foul on anything, as this can cause the line to fail.

