

R53 Mini Cooper S Oil Cooler Fitting Instructions

Tools needed:

- Ratchet and Socket Set including Torx Bits
- Jubilee Hose Driver or Flat-Bladed Screwdriver
- Trim Removal Tool or Flat-Bladed Screwdriver
- Adjustable Spanner or Hose Fitting Spanner
- Drill and 9mm drill bit
- Riv Nut Tool
- Jack and axle stand or ramp (to remove wheel)
- 500ml of correct grade oil (to top up after fitting)

Kit Includes:

- 1x AIRTEC Motorsport Oil Cooler
- 1x AIRTEC Motorsport CNC Oil Modine
- 2x AN8 Oil Lines
- 1x Pro Hoses Silicone Hose
- 2x M6x20mm Button Head Bolts
- 2x M6 Mudguard Washers
- 4x M6x16mm Button Head Bolts
- 8x M6 Pan Washers
- 4x M6 Nyloc Nuts
- 2x M6 Steel Riv Nuts
- 6x 20mm Jubilee Clips
- 2x Hose Separators
- **OPTIONAL** – 1x Oil Thermostat and 2x extra oil lines with fittings – as shown below

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



Instructions:

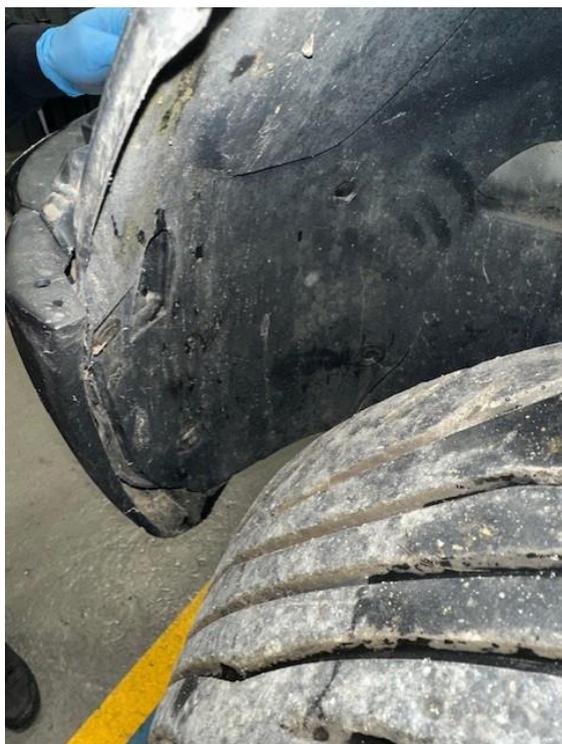
1. Start by removing the two bolts on the top of the bumper. These are usually T30 Torx bolts, but can be 10mm, as shown here.



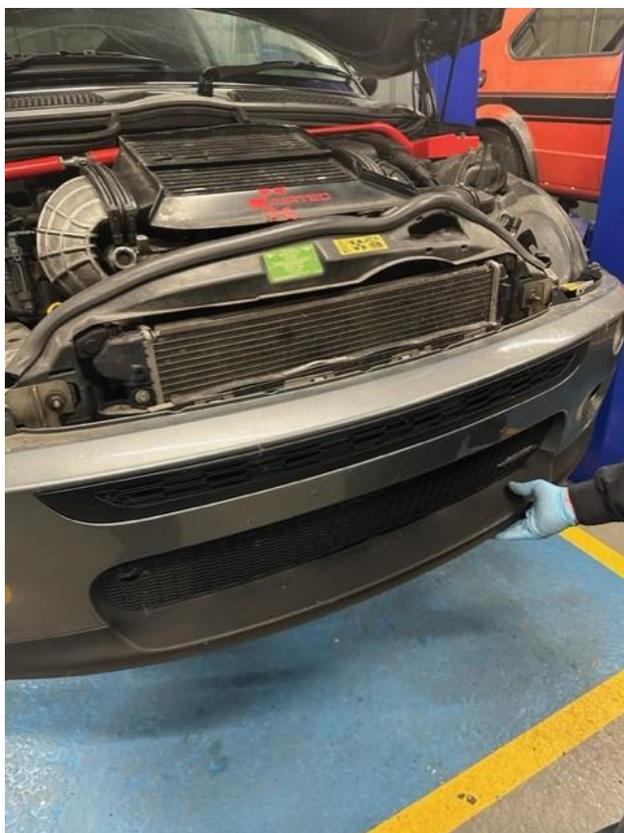
2. From underneath, remove the seven Phillips screws holding the lower front bumper in place.



3. Remove the fixings inside the front of the inner arch liners to allow access to the 10mm bolt holding each side of the bumper in place.



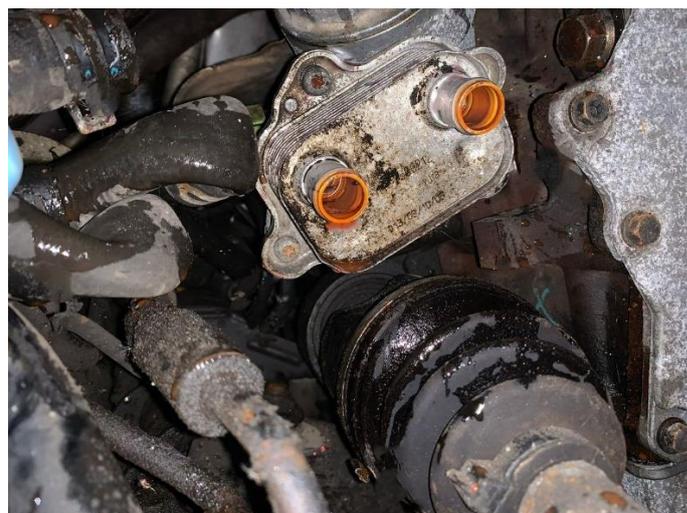
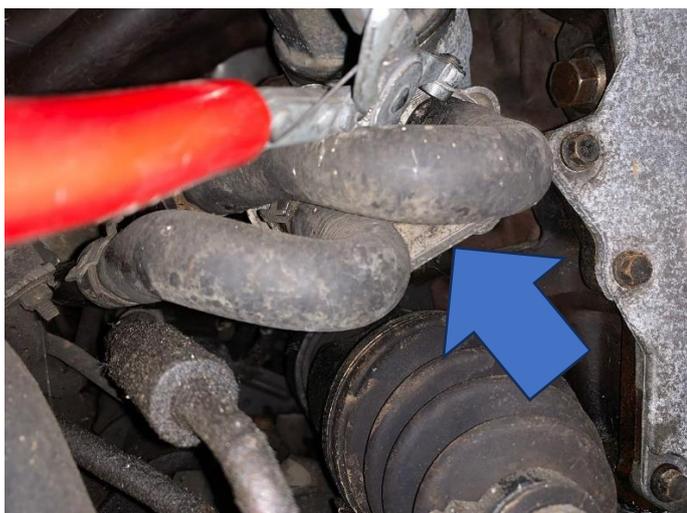
4. Now carefully pull the bumper off the top tabs to release it **but do not fully remove it yet.**



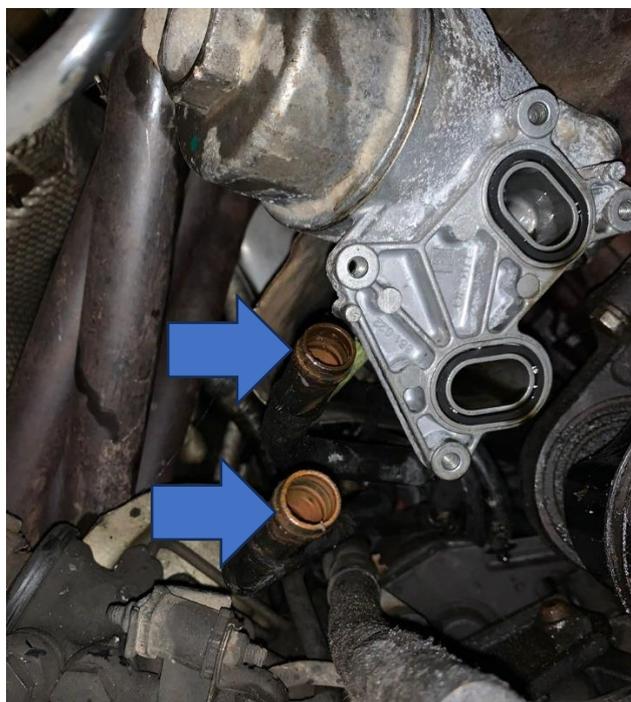
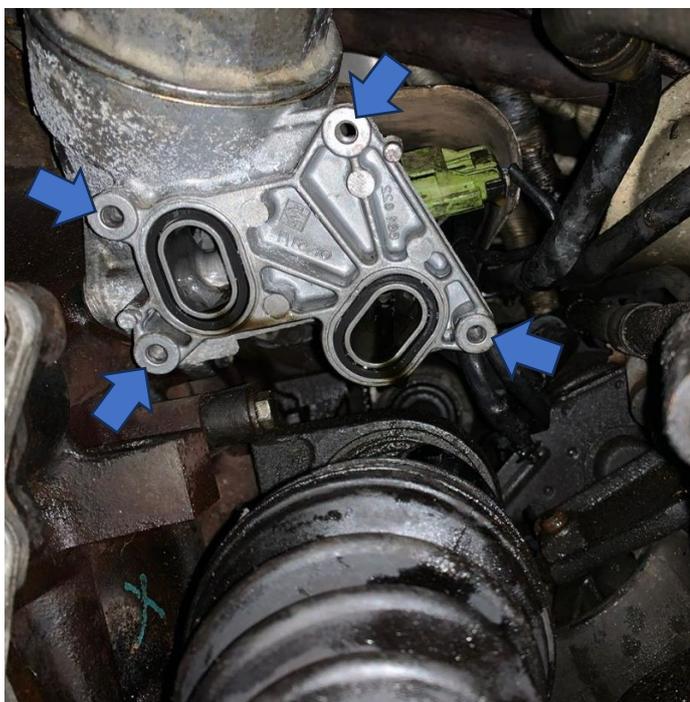
5. Now the bumper is released, carefully pull it forward a small amount and disconnect the plugs for both the side lights and indicators as well as the temperature sensor on the right-hand side.



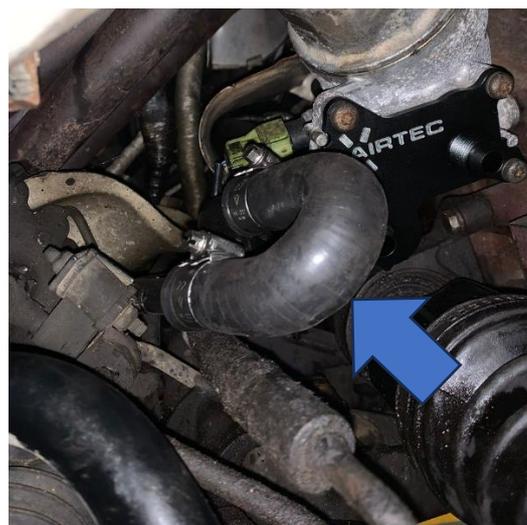
6. Remove the wheel on the driver's side and look inside the inner arch to find the original oil cooler Modine and pipework, located above the driveshaft. Then release both the hose clips and remove the hoses from the oil cooler. **Please note: some coolant will leak from here, so be prepared to clean up the excess.**



7. Remove the four bolts holding the original oil Modine in place. **Please note: some oil may seep out when removed, some oil will leak from here, so be prepared to clean up the excess.** You can then remove the two rubber hoses disconnected in Step 6 completely, leaving just the two hard pipes, as shown.



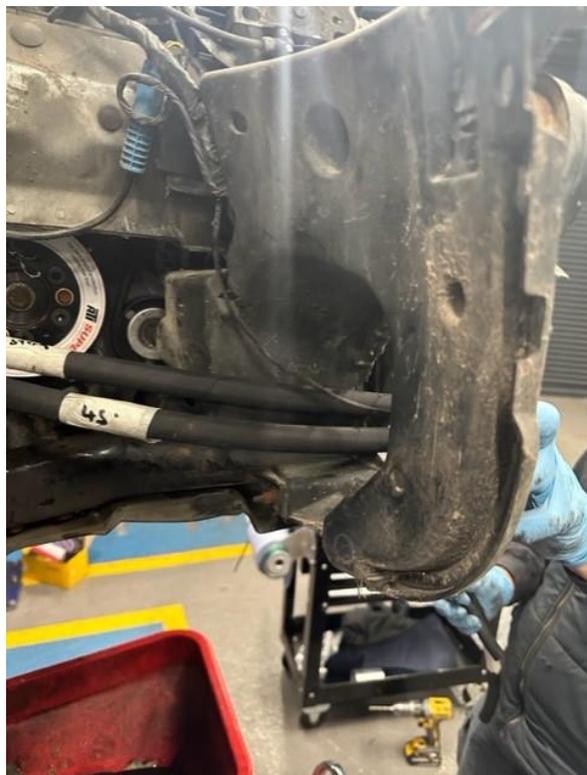
8. Reusing the old bolts, fit the new AIRTEC Motorsport sandwich plate. Then install the supplied silicone hose with jubilee clips to connect the two pipes together, as shown.



9. Now install the two long oil lines to the sandwich plate. Please note, the right-hand hose uses the straight connector and the left-hand side uses the 45-degree angled hose, as show. Fully tighten these connectors using a hose fitting spanner or an adjustable spanner.



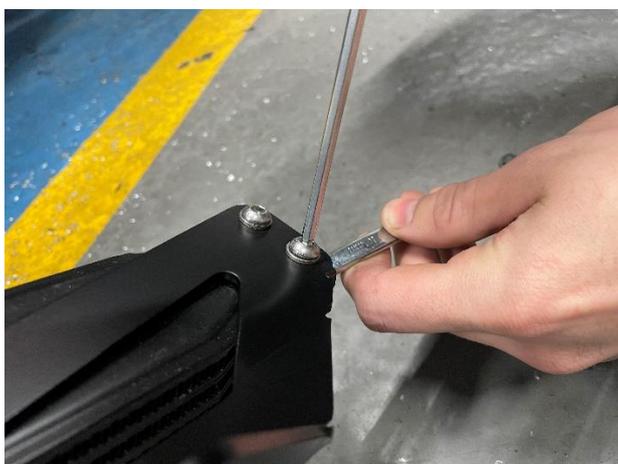
10. Run the lines past the crankshaft pulley and then pass them through in the gap below the fog light. Make sure there's plenty of slack so the lines keep close to the inside of the wheel arch but away from the pulley.



11. If you have the optional Mocal thermostat, your pre-cut oil lines will place it here. Please follow the Mocal fitting instructions for installation.



12. Now fit the bracket to the oil cooler using the bolts, washers and nyloc nuts as shown. Then attach the two remaining hose connections to the oil cooler and fully tighten.



13. Hold the bracket up to the car's crash bar and centre it. Then mark the two outer holes and drill out using a 9mm drill bit.



14. Now install the supplied M6 Riv Nuts and fit the oil cooler in place using the supplied bolts with large washers and fully tighten.



15. Fit the two hose separators in place to keep the oil lines neat and away from anything that they could come into contact with. These separators can be fitted wherever they are most needed and maybe in different positions depending on the car.



9. **IMPORTANT:** Finally, top up the oil and start the car. Look immediately for leaks from any of the connections. If there are, turn the engine off and retighten the fittings and repeat. Then let the car get to full operating temperature, let it cool and recheck the oil level and top up if required. The bumper, wheels and arch liners can then be refitted in reverse of removal.

