



## BMW FMCCRAD11 Installation Instructions



Please thoroughly read through and familiarise yourself with these instructions in their entirety prior to beginning any part of the installation process of any component. Please also ensure the vehicle and engine has cooled down sufficiently to avoid risking possible skin burns or other injury.

### **TOOLS NEEDED:**

Flat blade screw driver or trim removal tool

8/10/13mm Socket & Ratchet Drive

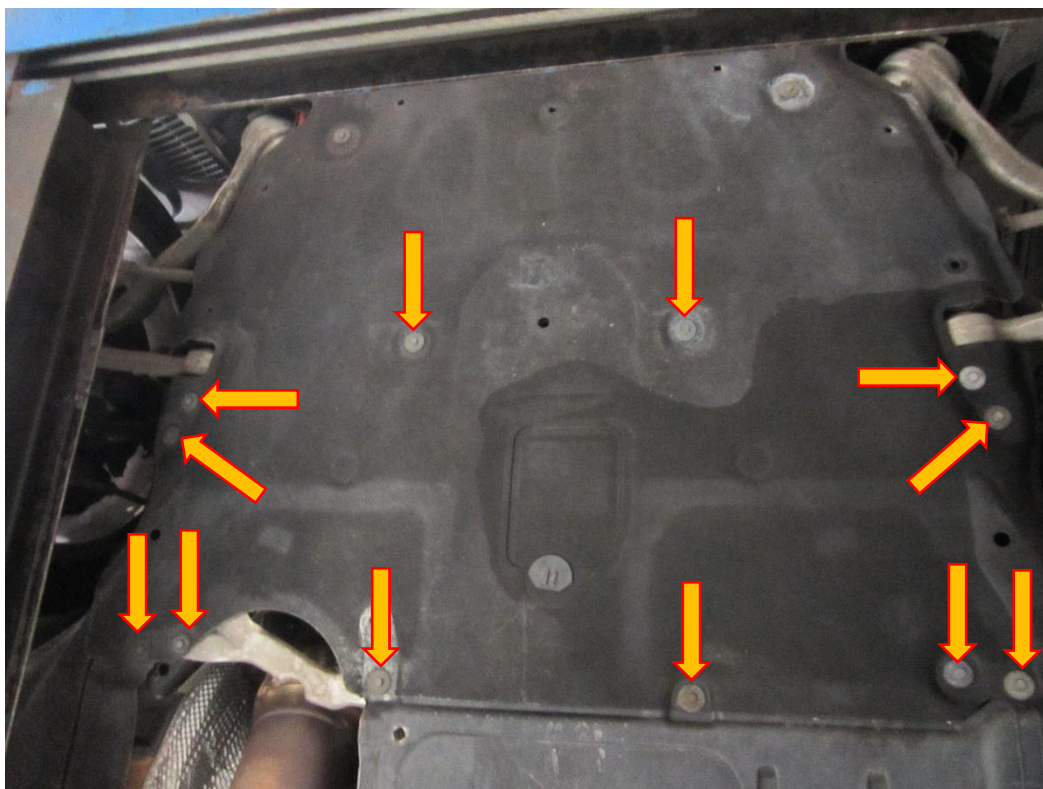
T27/T30/T40/T45 Torx driver

E11 Socket & Ratchet Drive

Axle Stands & car jack/car ramp

17mm torque wrench/wheel brace

1. Park the vehicle securely and raise the car in the air using a car ramp or jack and axle stands. Locate the twenty three 8mm fasteners that secure the belly pan to the vehicle. Use an 8mm socket and ratchet or 8mm spanner to remove the fasteners.





2. Remove the four 8mm fasteners at the bottom of the bumper.



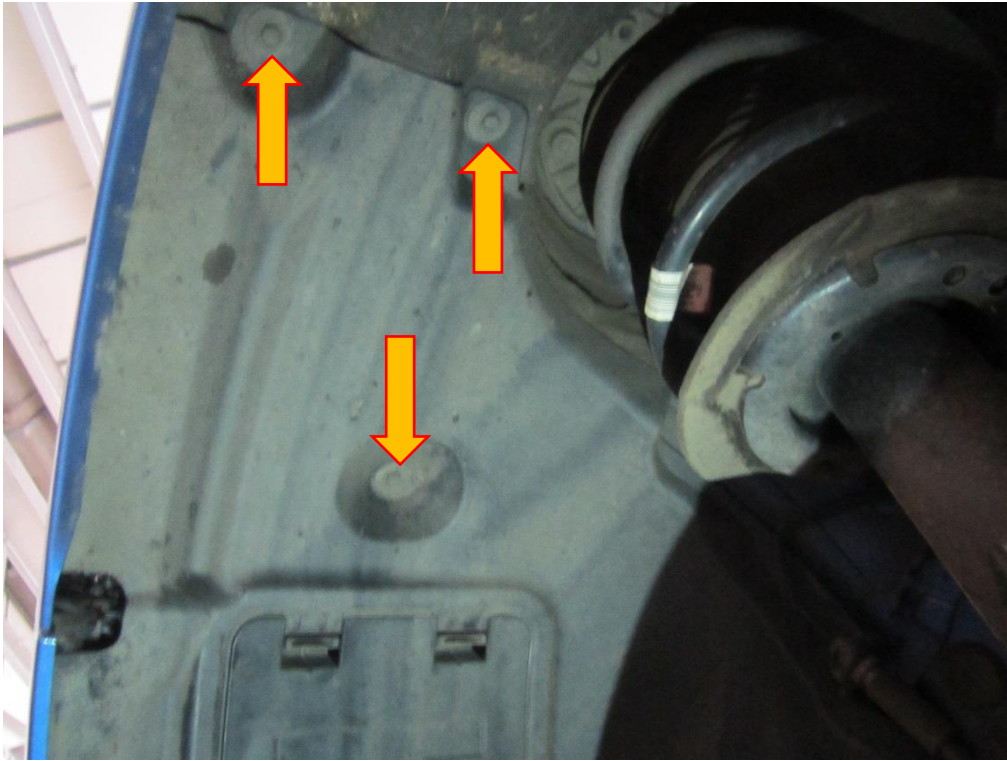
3. Remove both front wheels to gain access to the inner splash guards.



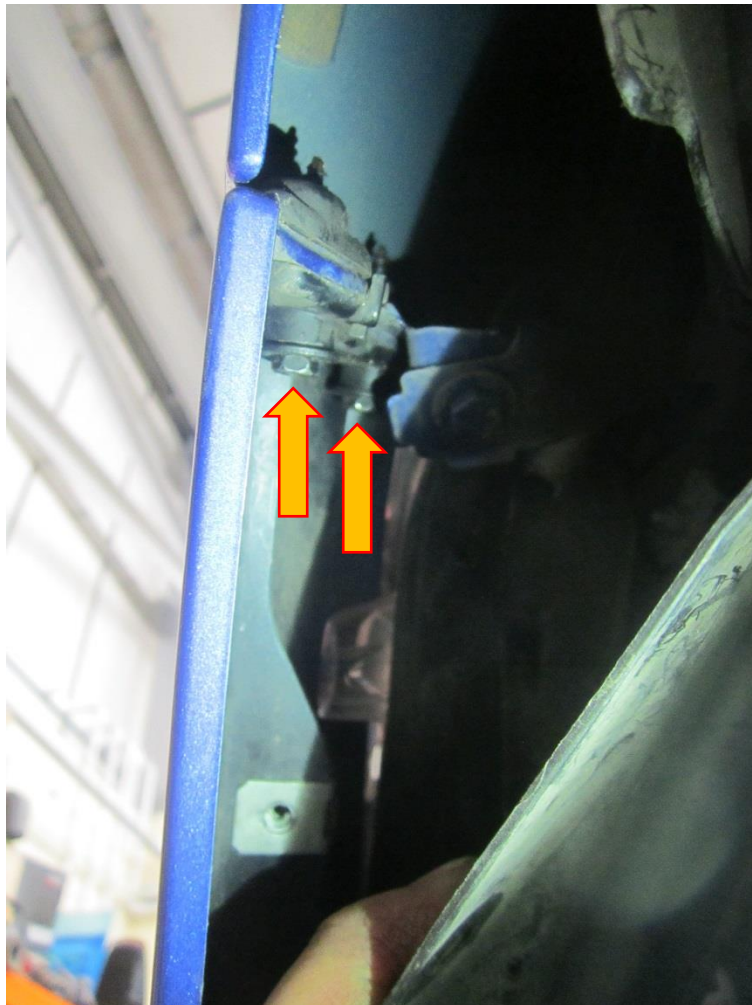
4. With the wheels removed, first locate all ten 8mm fasteners that hold the inner splash guard in place and remove them like before with the use of an 8mm socket and ratchet or spanner. The splash guard will now pull away from the vehicle. This also needs to be repeated on the opposite side of the vehicle.



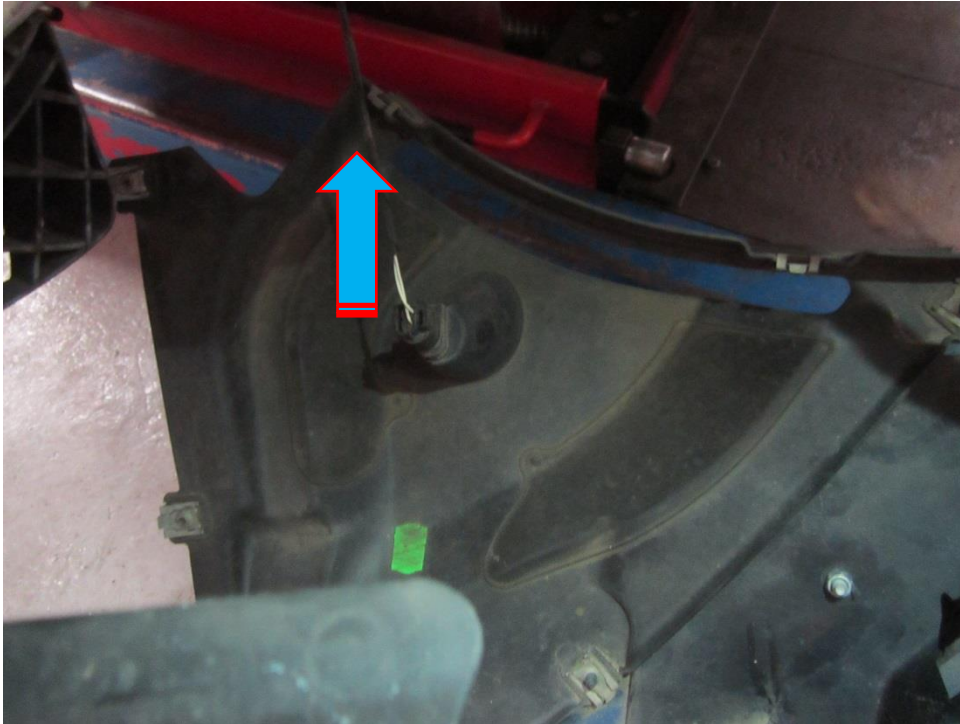




5. Now with the splash guard removed from the vehicle you will see the two 8mm fasteners that are attaching the top corner of the bumper to the wings, these both need to be removed on opposite sides of the vehicle.



- Unclip the loom to the temperature sensor that is located on the nearside of the inner bumper.

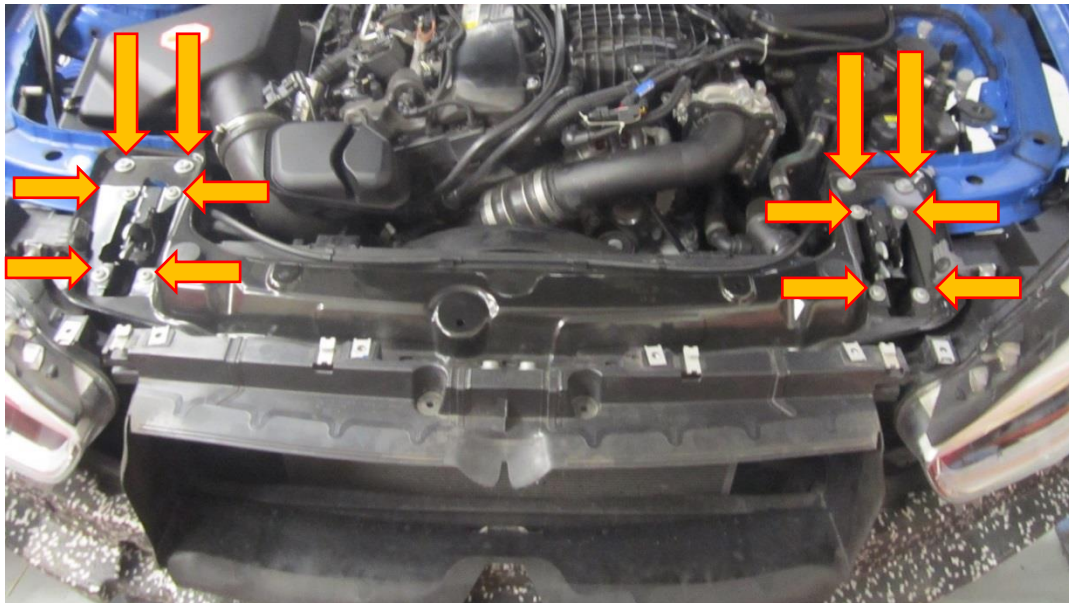


- Remove the rubber seal that runs along the top of the bumper, with this removed it will reveal the six T30 fasteners that secure the top of the bumper to the vehicle. Use a T30 Torx driver/socket to undo and remove these fasteners. The bumper will now pull away from the vehicle.





8. With the bumper off the vehicle you will need to remove the four T40 Torx fasteners located at the top of the slam panel, then remove the eight T30 Torx fasteners which secure the bonnet catches. Push the bonnet catches through the gap in the slam panel to make the removal of the panel easier.



9. The next part of the slam panel removal is to locate the four T30 Torx and two T45 Torx fasteners which will all need removing with the relevant Torx driver/socket and ratchet.



10. The last part of the slam panel to undo is the T30 Torx fastener which holds the slam panel to the head light. Remove both fasteners, one at each side of the vehicle. The slam panel will now lift out of the engine bay, pull it upwards and angle outwards to remove it from the vehicle.

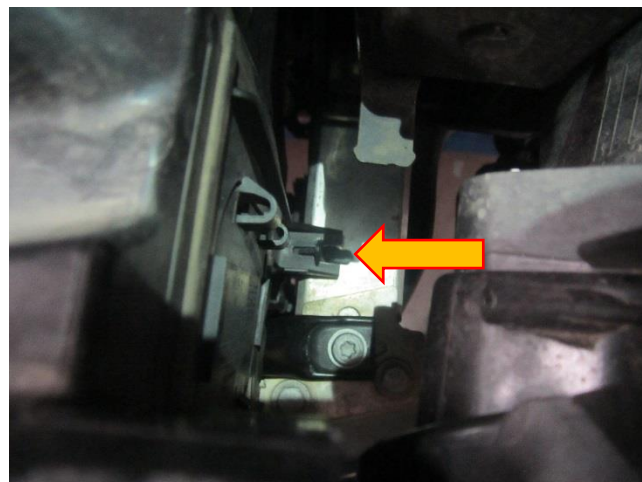




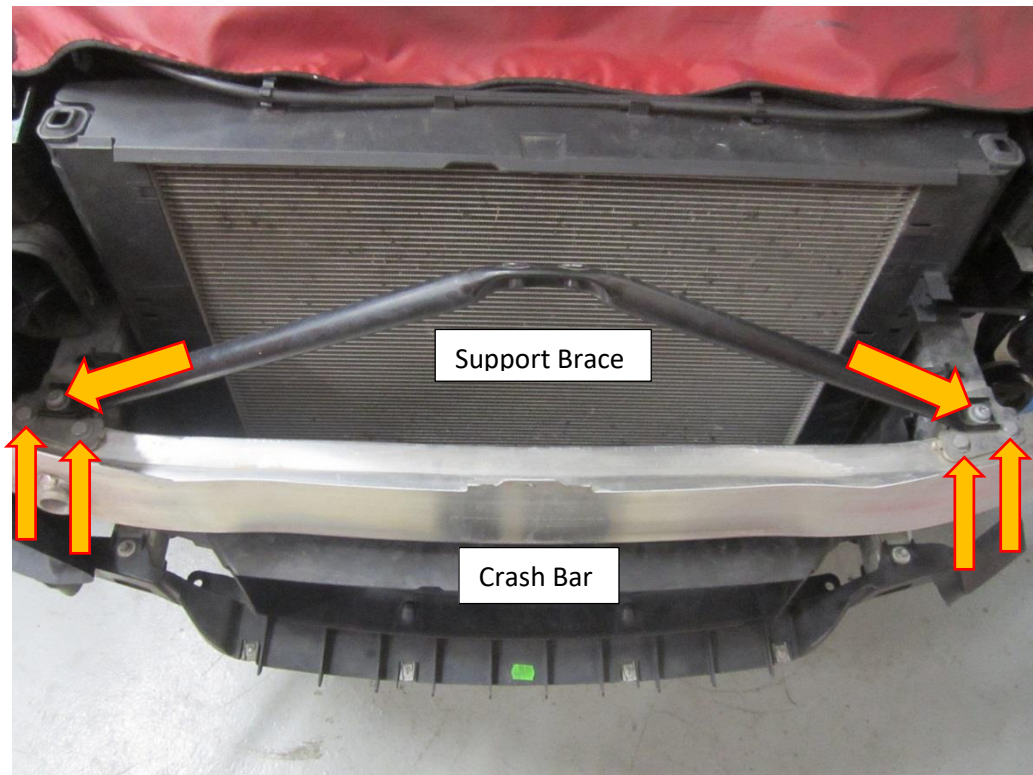
11. Remove the foam protector strip attached to the crash bar, this just unclips and pulls away from the vehicle.



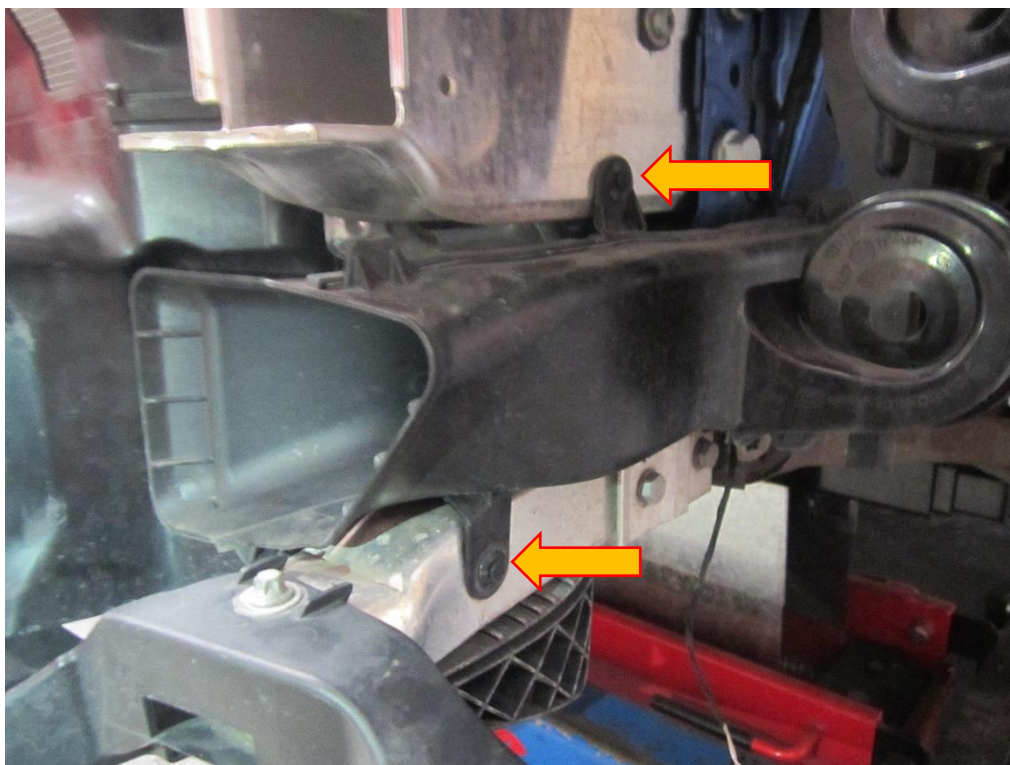
12. To remove the top air duct, first remove the rubber trim in the middle attached to the crash bar. There are two plastic fasteners that attach the duct to the crash bar, these can be removed by prising them off with a trim tool or flat blade screw driver. Finally, there are two tabs which hold the top ducting to the lower ducting, one each side. Push the tab outward to release it, now the duct can be removed from situ .



13. The support brace above the crash bar needs to be removed, it is held in place with two T45 Torx fasteners, the bar will now be free from the vehicle. Next remove the four 13mm fasteners which attach the crash bar to the vehicle, once removed the crash bar can be removed from the vehicle.



14. There are two plastic fasteners that hold the brake ducts which are either side of the radiators, remove these plastic fasteners with the use of a trim tool or flat blade screw driver.



15. With the brake duct removed the lower air duct will now pull away from the vehicle.

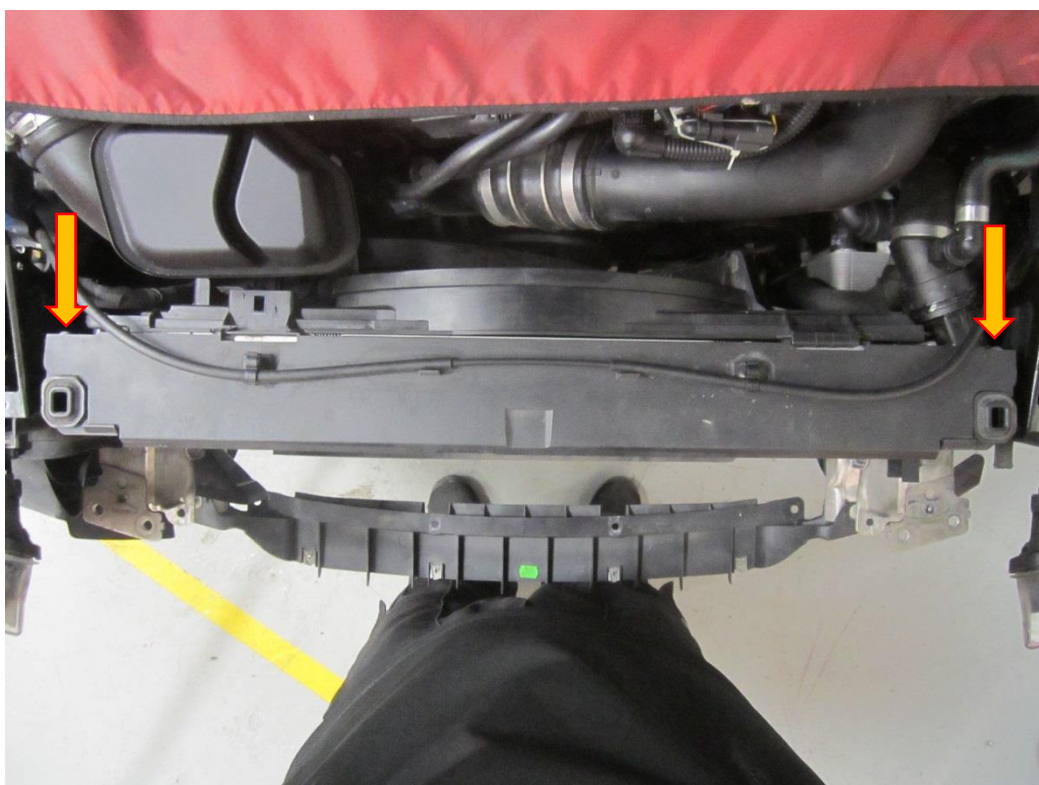




16. The lower bumper support is secured in place with two E11 fasteners, undo both fasteners and remove the support from the vehicle.

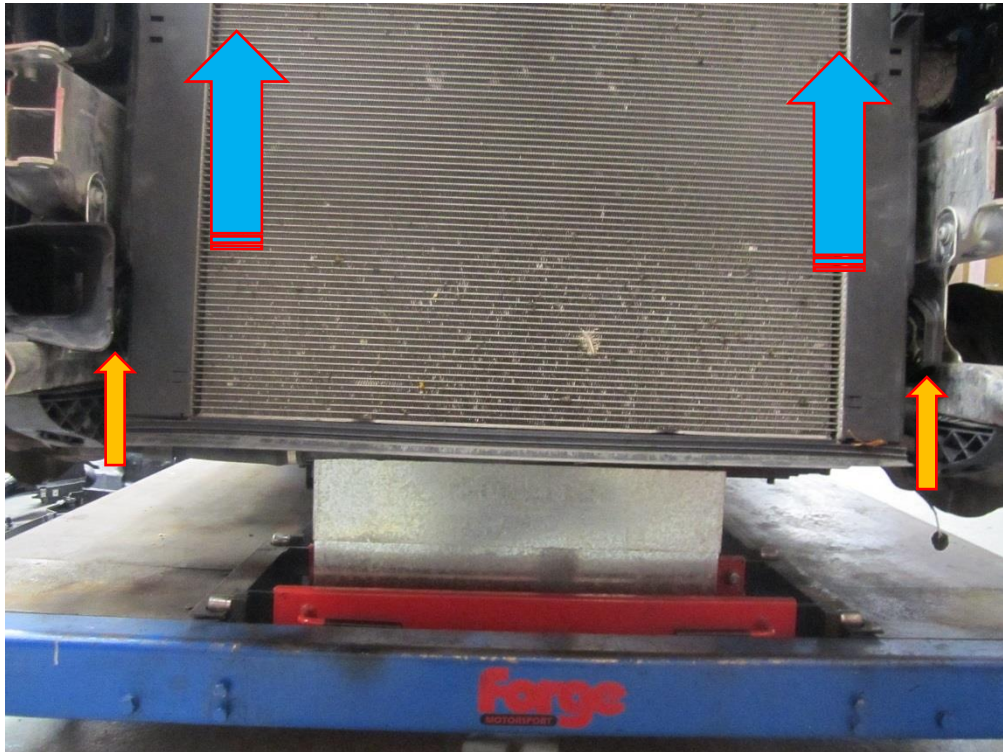


17. Undo and remove the two T27 Torx fasteners at the top of the radiator frame. There are two more T27 Torx fasteners at the bottom of the radiator frame on the underside, these also need removing, this bottom panel can be removed once you have un-clipped it from the coolant hose.

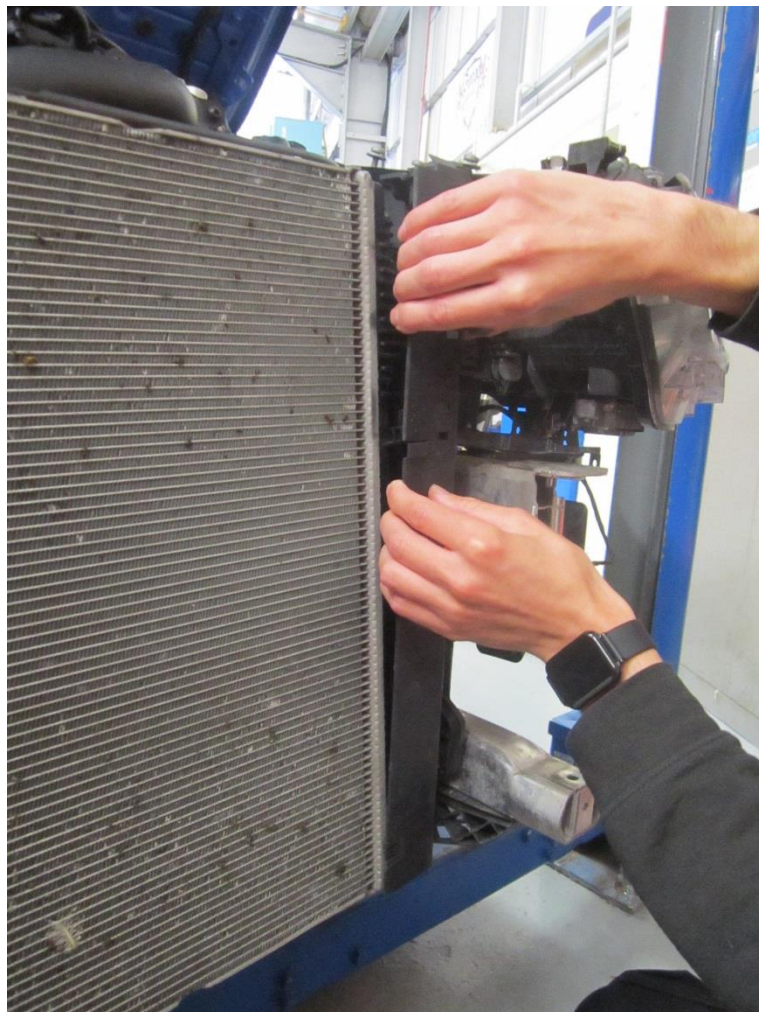




18. There are two T27 Torx fasteners that hold the whole radiator assembly to the vehicle, both need to be removed. You will now be able to lift the radiator assembly off the hook mounts.



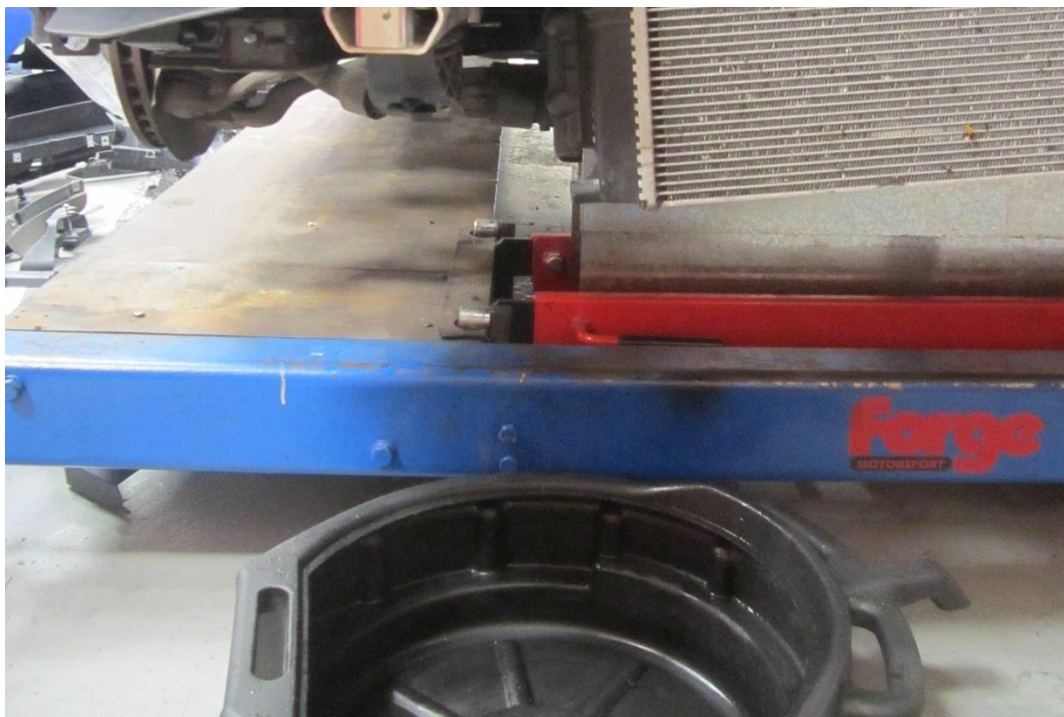
19. The two sides to the radiator frame are attached to the charge cooler radiator, these will simply pull away with a sharp tug.



20. Remove the offside brake ducting, It is held in place with two plastic fasteners. Remove both fasteners to free the ducting from the vehicle.

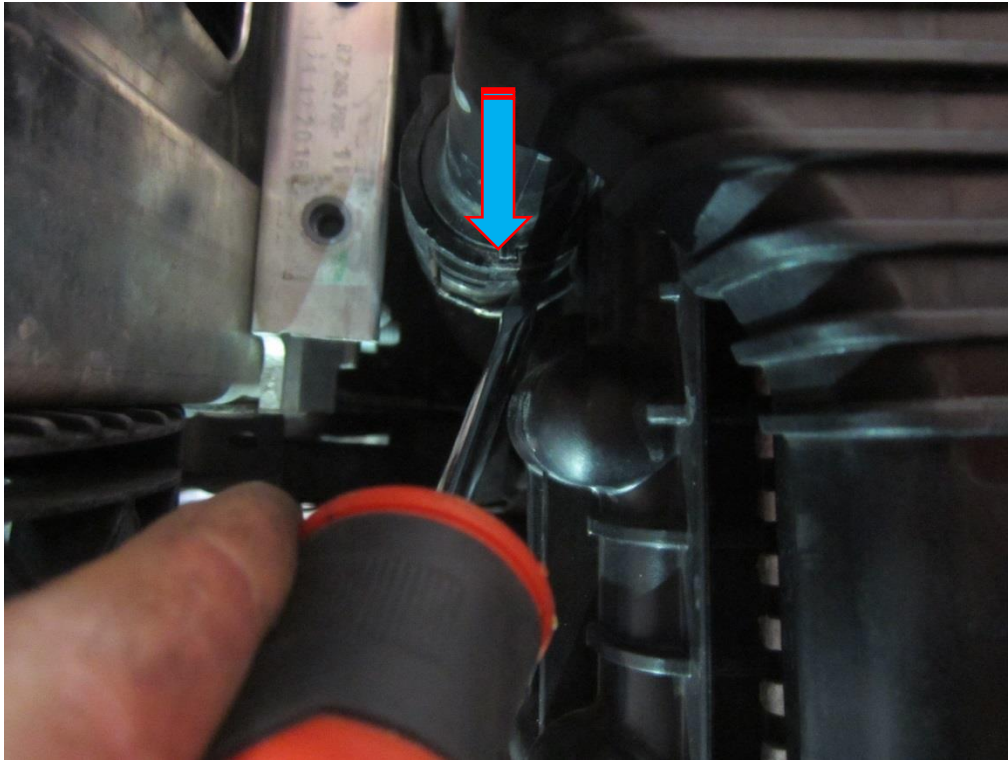


21. Place a drain pan or bucket under the offside hose going to the OE charge cooler in order to catch the coolant.

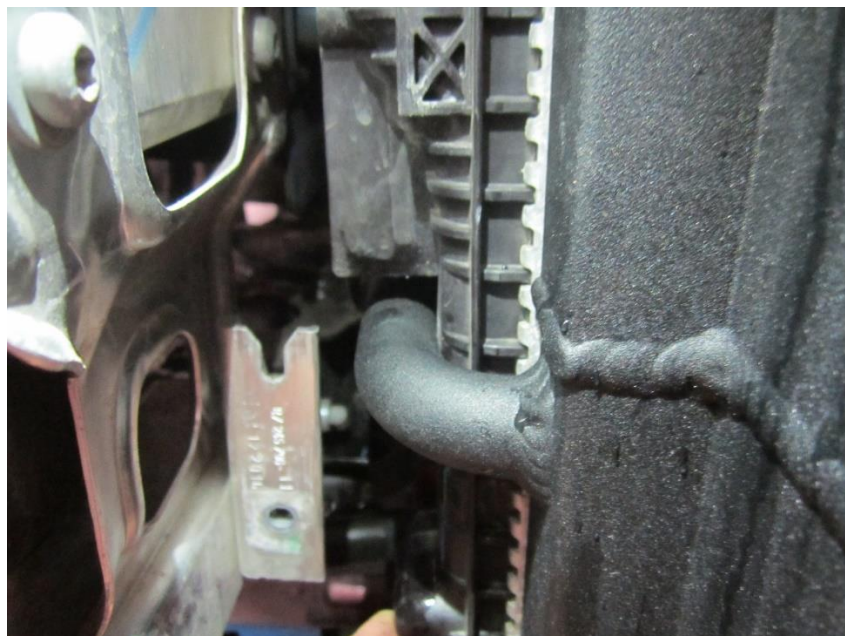




22. Use a flat blade screw driver to release the clip that holds the coolant hose coupler, now separate the coupler from the radiator and let the coolant drain into the drain pan below. When the coolant comes to a stop, release the coupler on the other side and remove the radiator from the vehicle.

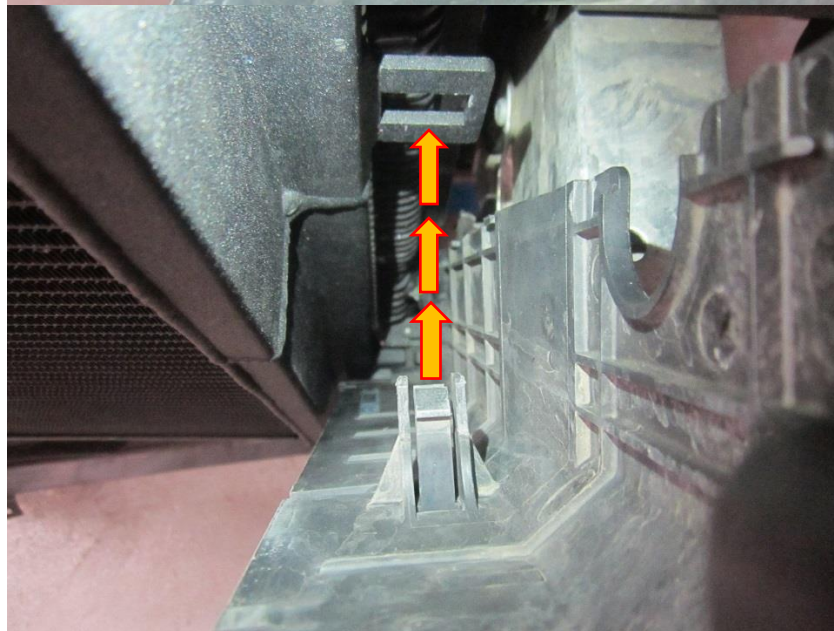
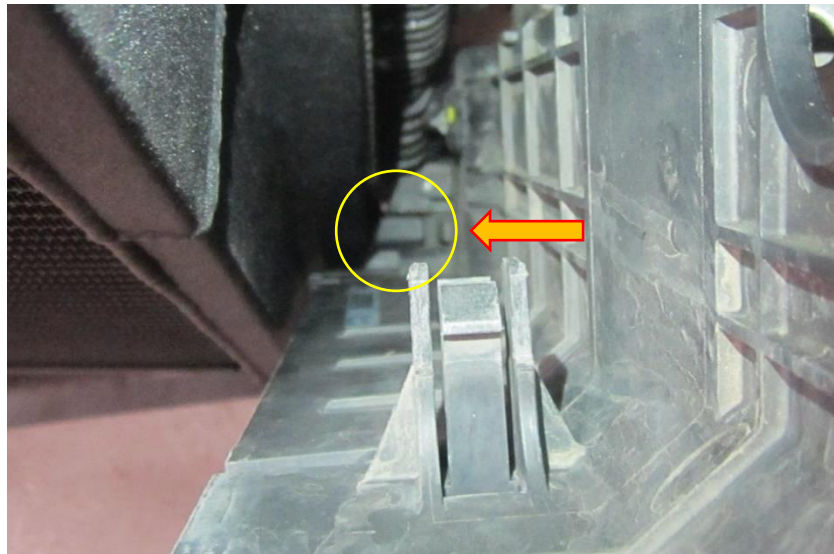


23. install your new Forge Motorsport FMCCRAD11 where the OE radiator fitted and re connect the coolant hoses, this should have a positive click when housed correctly.



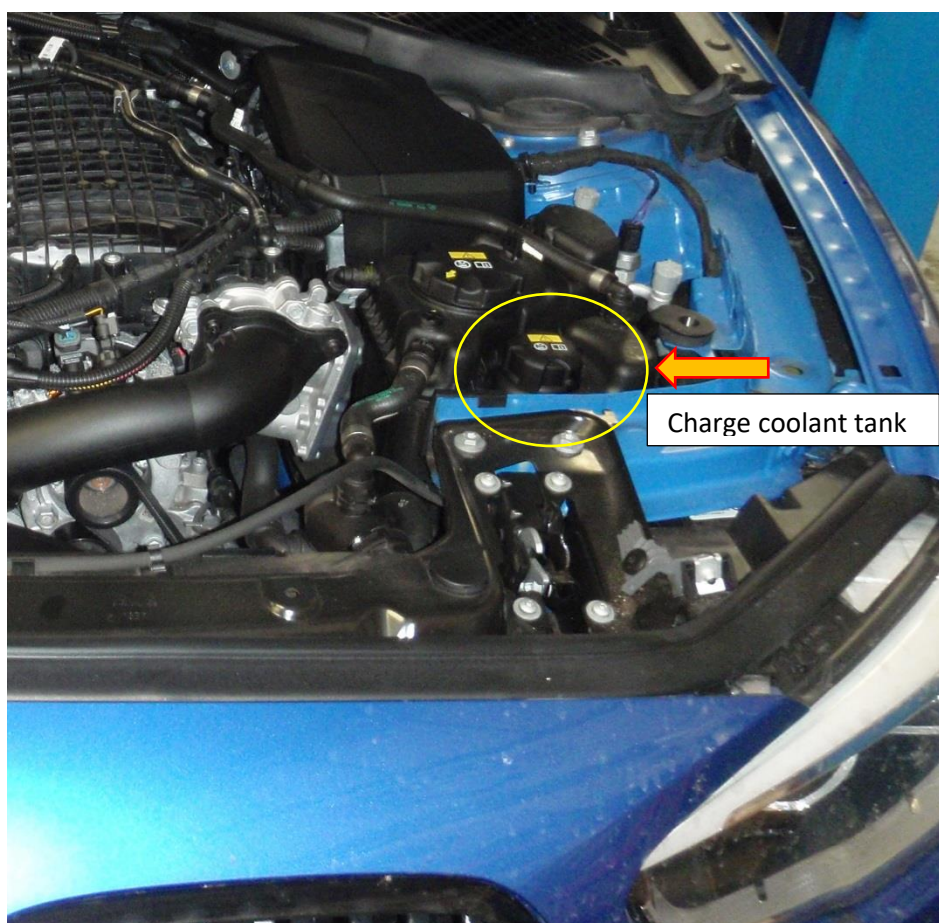
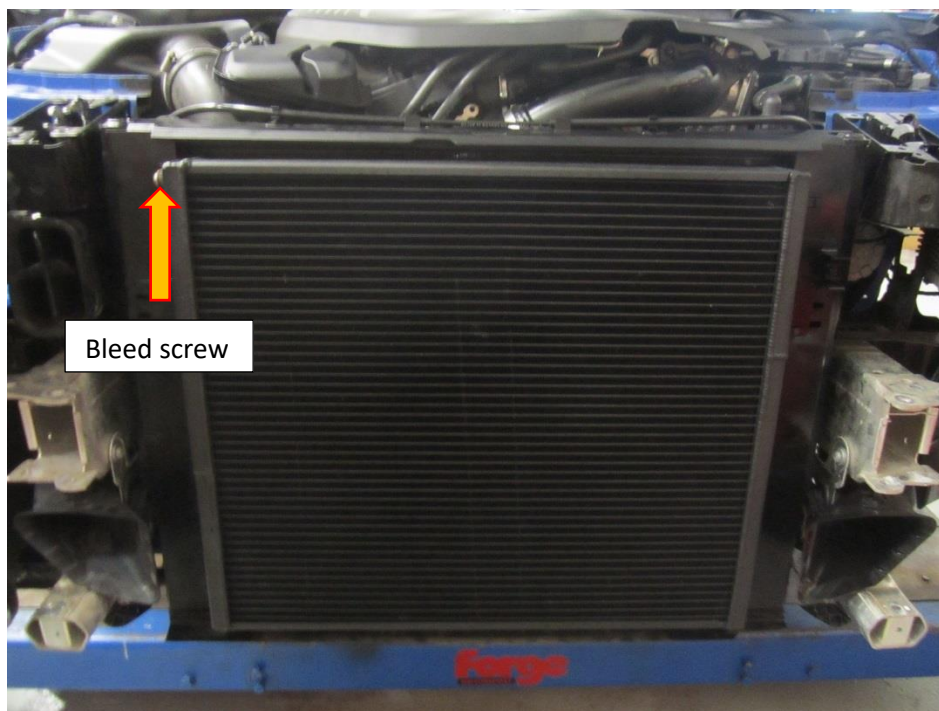
24. Make up the radiator frame by attaching the bottom panel to the side panels using the T27 fasteners removed earlier. Once the three parts are together position the pegs at the bottom of the Forge radiator with the mounting point at the bottom of the frame. Now push fit both sides of the frame and locate the

fastening clip into its locating point on the Forge radiator. Re fit the two T27 Torx fasteners that attach the top part of the radiator frame to the frame sides.





25. Reposition the radiator assembly back on the mounting hook and secure in place by re fitting the two T27 Torx fasteners. At this stage you can re fill the coolant back into the charge cooler system. Forge Motorsport recommend using Genuine BMW coolant. Undo and remove the bleed screw then fill the system with a mixture of coolant and water to the recommended ratio, fill the system until coolant begins to pour from the bleed, replace the bleeding screw. Fill the coolant tank to the maximum line.



26. Refit the rest of the vehicle in reverse order of disassembly, take the car for a good test drive and top up coolant as/if necessary.

The installation of your Forge FMCCRAD11 is now complete, enjoy your added performance from your new Forge Motorsport product.

**Forge Motorsport accept no liability for invalidation of your manufacturer's warranty or failure of any component or part due to incorrect installation of Forge Motorsport products.**

You may also be interested in these other Forge Motorsport products for the BMW M135/M140 available from your nearest forge motorsport dealer.

Check out [WWW.FORGEMOTORSPORT.CO.UK](http://WWW.FORGEMOTORSPORT.CO.UK) and [WWW.FORGEMOTORSPORT.COM](http://WWW.FORGEMOTORSPORT.COM)

For a full range of performance products for your vehicle.

As always, with any questions or concerns about this product or anything else, please feel free to contact your local or preferred Forge Motorsport Dealer/Installer, or you may contact us directly.

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## **Important Information Regarding Your New Forge Cooling Product**

Thank you for purchasing a Forge Motorsport cooling product. You now have a product that simply leaves the competition behind – made in Great Britain, with a lifetime warranty. All you need to do now is install and maintain the product correctly to maximise its full potential.

All Forge products are tested before leaving our facility to ensure you 100% satisfaction and reliability.

### **General information and care for your Forge cooling product:**

- On installing your intercooler/radiator, be sure that all hose clamps and fittings are tightened to prevent any leakage.
- Ensure that the intercooler/radiator and the associated plumbing components are not rubbing on any body parts. This can cause premature failure and warranty invalidation from Forge.
- Do not use any car cleaning products, particularly traffic film remover solutions or shampoos to clean your intercooler, radiator or oil cooler. The use of these products can damage the Forge cooling systems and invalidate your warranty.
- Any cleaning should be done with hot soapy water and well rinsed.
- We recommend that you should inspect your product on a regular basis for bent and/or crushed fins. Any bent fins should be carefully straightened to allow ambient air to pass through the core face.
- At the time of installing your Forge product, an approved coolant must be used and added to the coolant system. Be sure you never mix coolant and always use distilled water.
- On Forge Oil Coolers, please ensure all hose clamps and fixings are tightened and secured to prevent leakage.
- Do not exceed 9 bar (130 psi) rating on your oil cooler.

### **What should you do if a fault develops?**

If you suspect that you have an issue, you should take your vehicle back to where the installation of your Forge product was carried out, or to a suitable and qualified tuner for investigation of the problem.

If you suspect that the problem has occurred due to faulty manufacture, please contact your Forge dealer or Forge Motorsport UK, Forge Motorsport USA or Forge Motorsport Asia, depending on your geographical location, to discuss the issue.

### **How to get the Best from your Forge cooling products**

- Ensure the fitting is carried out by a reputable and competent garage, tuner, or mechanic.
- Carry out regular visual checks, inspections, and servicing.
- Only fit the Forge cooling product for the application that it was designed for.
- Do not fit other parts that could detrimentally affect the efficiency of your Forge cooling product.



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