



BMWZ4 & Toyota Supra A90 FMCCRAD12 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.

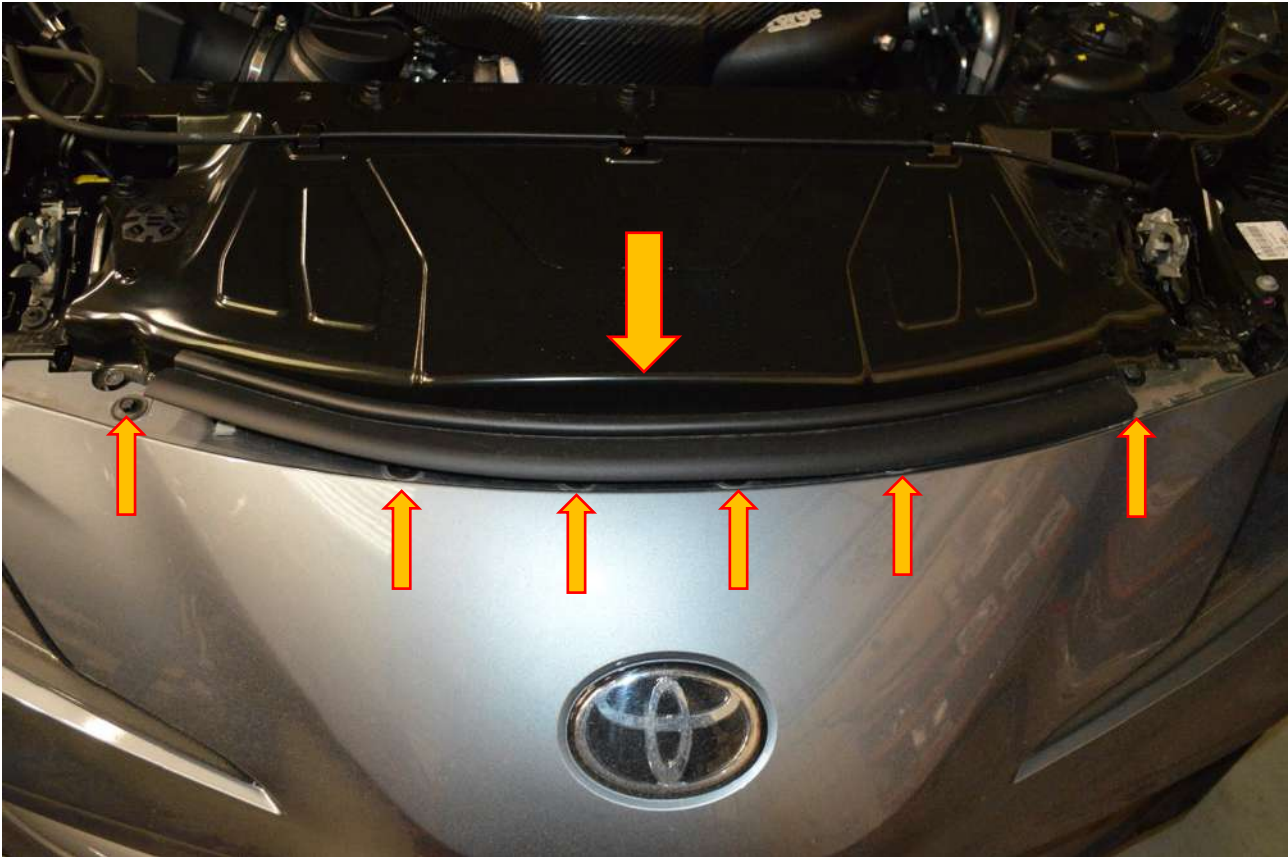
TOOLS NEEDED:

- Flat blade screwdriver or trim removal tool
- Pozi Drive
- M6/M8/M10/13mm Socket & Ratchet Drive
- T27/T30/T40/T50 Torx driver
- E10 Socket & Ratchet Drive
- 3mm Allen Key
- Axle Stands & car jack/car ramp

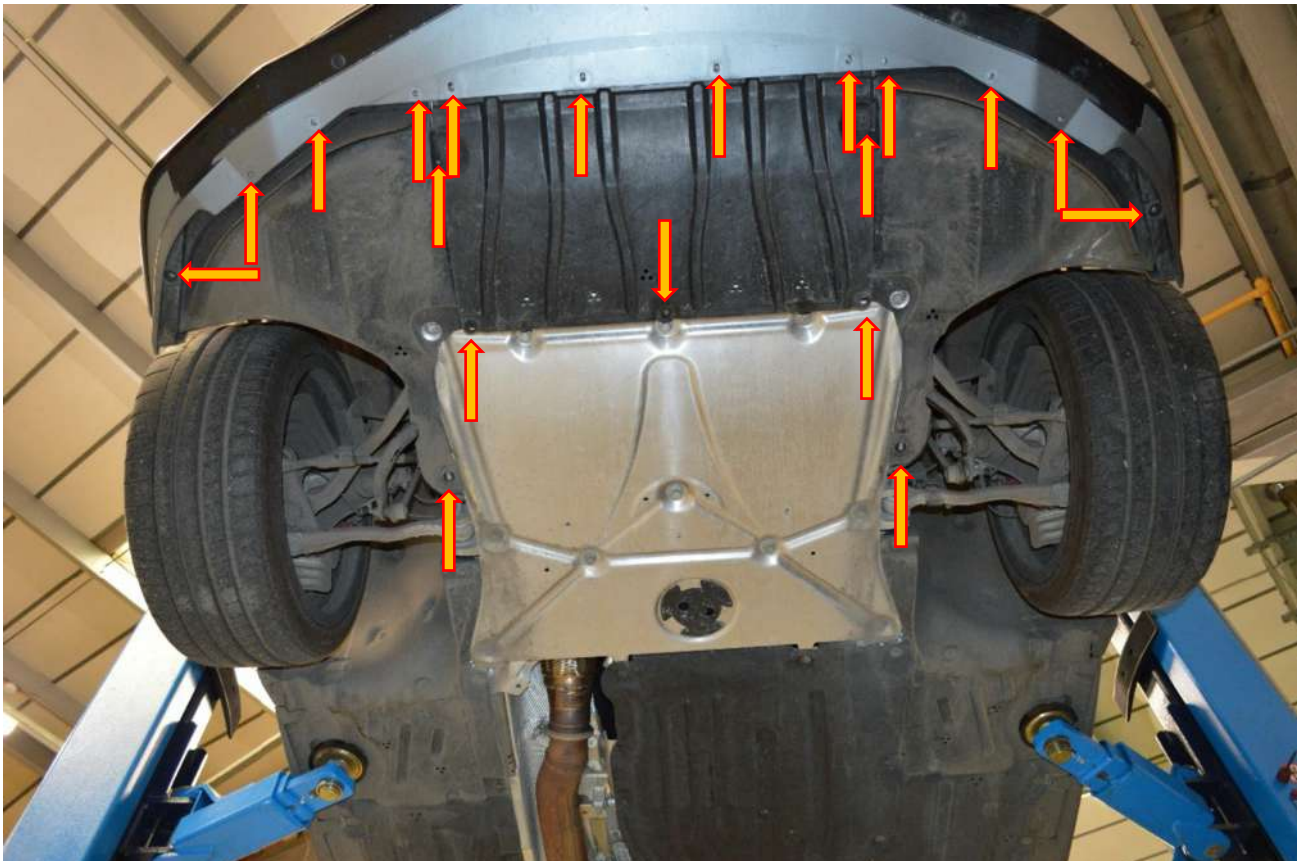
1. Open the bonnet of the vehicle and locate the wheel arch covers, these are held in place with plastic fasteners. Use a trim removal tool or flat blade screwdriver to remove them.



2. Remove the bonnet seal at the front of the engine bay, this just pulls off. With the seal removed you will see six M8 fasteners holding the top of the bumper in place. Use a 13mm socket and ratchet to remove them.



3. Raise the vehicle in the air with either axle stands or a car ramp so you will be able to remove the undertray. There are nineteen M8 fasteners that need to be removed here. You will need a M8 socket and ratchet to release them.



4. Locate the six M8 fasteners that attach the bumper to the wheel arch liners, remove these with an 8mm socket and ratchet.



5. With the splash guard removed you will see the wiring looms attached to the bumper, there is one on both sides of the bumper. Just press the tab in and pull the plugs to release them. At this stage we recommend help from a second person with the removal of the bumper so there is support at both sides of the bumper as you pull it away from the vehicle.



6. Unclip the loom to the pedestrian crash protection system, there is a plug on both sides that needs to be unclipped. Now remove the foam cover from the crash bar.



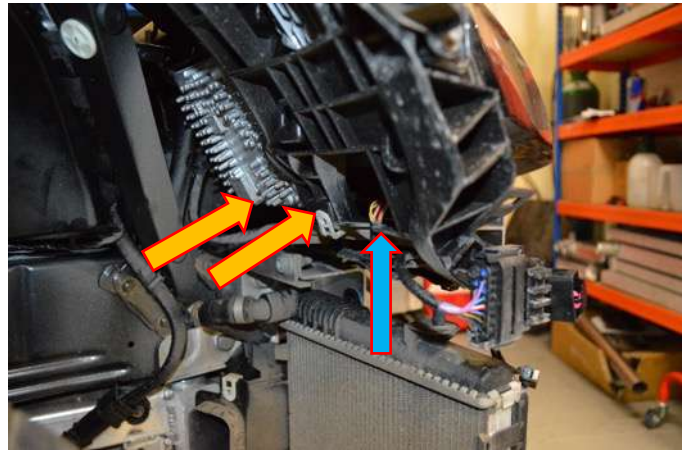
7. Remove the four T30 Torx fasteners which attach the bumper reinforcement.



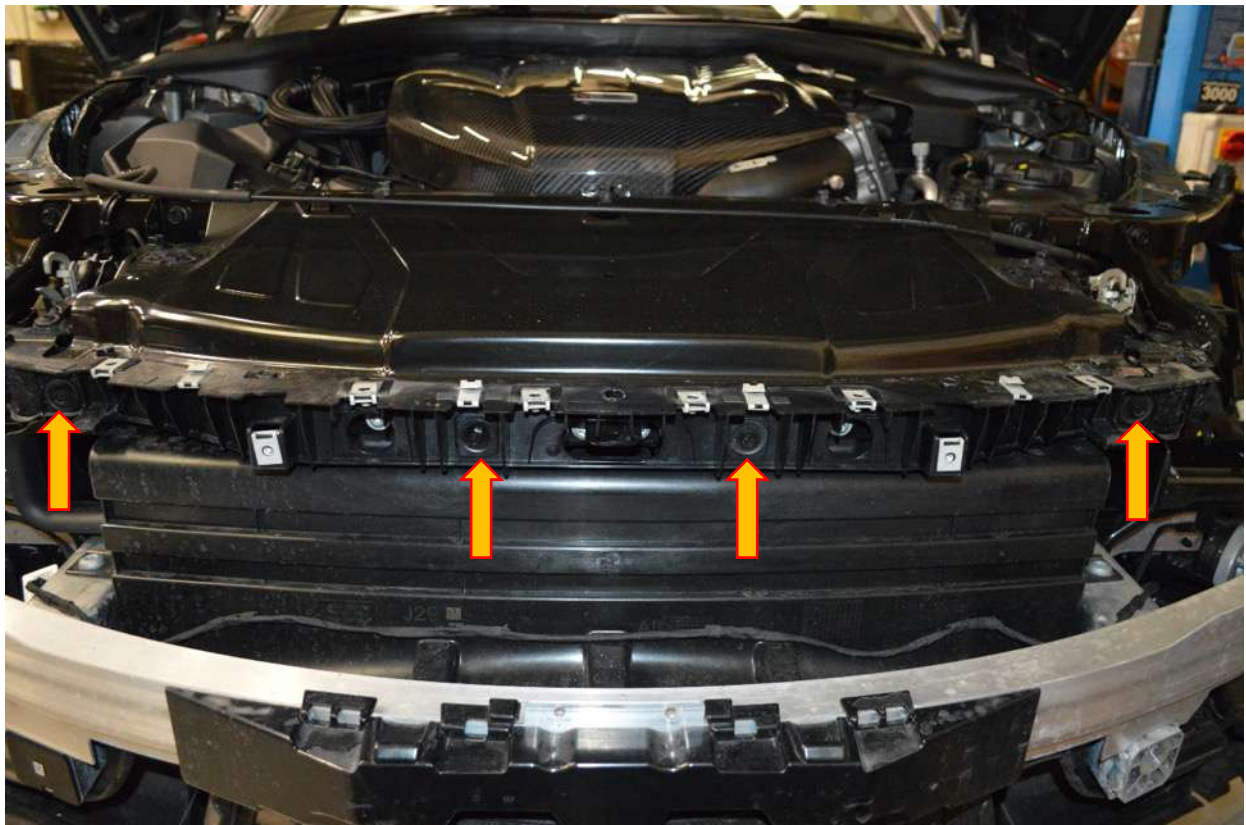
8. Remove eight M8 fasteners that attach the inner arch liner to the vehicle, there is also one plastic pozi fastener at the bottom of the arch liner that also needs to be removed.



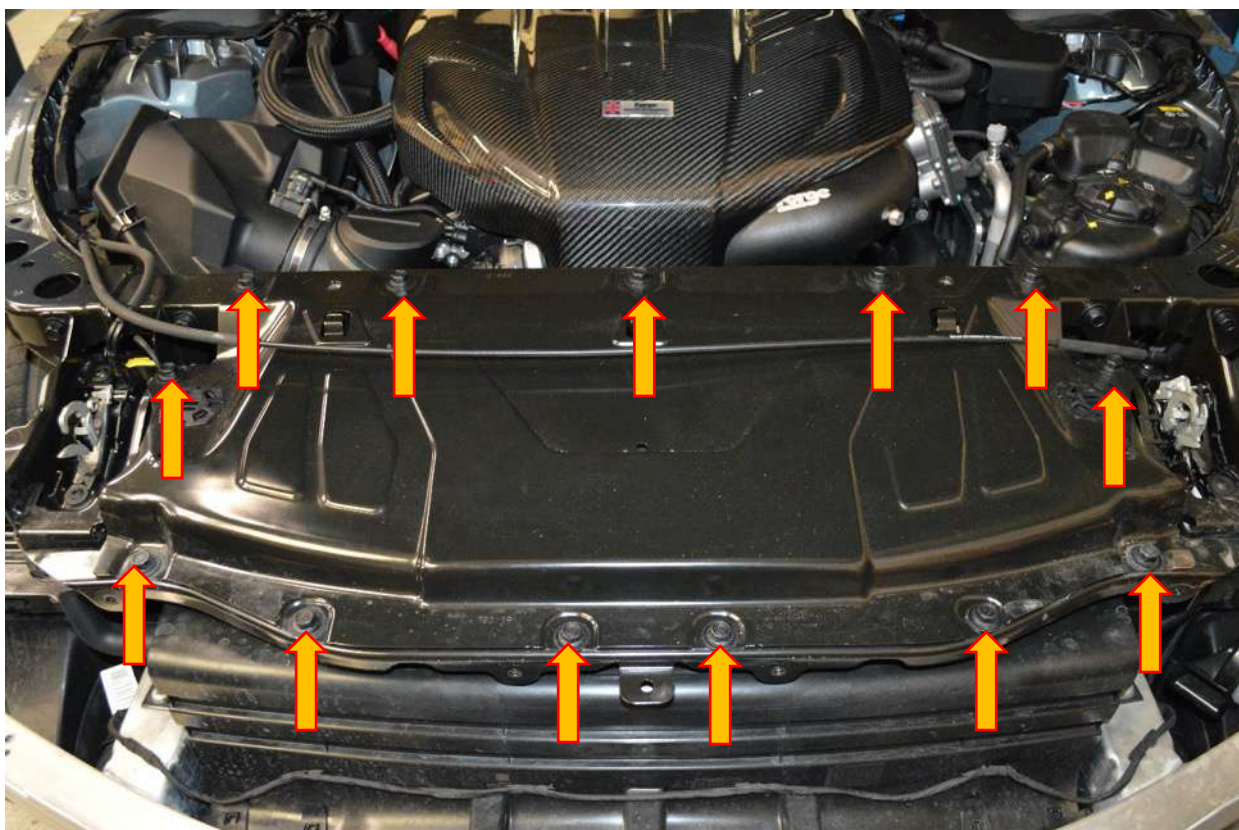
9. Remove both head lights, there are four T30 Torx fasteners which will all need removing with the relevant Torx driver/socket. There is a plug on the back of each light which also needs to be removed.



10. Remove the plastic slam panel, there are four M10 fasteners attaching this to the vehicle, use the relevant socket and ratchet to remove them.



11. Remove the metal slam panel, which is held in place with thirteen 13mm fasteners. Like previous steps use the relevant socket and ratchet to remove them.



12. There is a slam panel locating bar which needs removing, it is held in place with four 13mm, two T50 and two T30 fasteners.

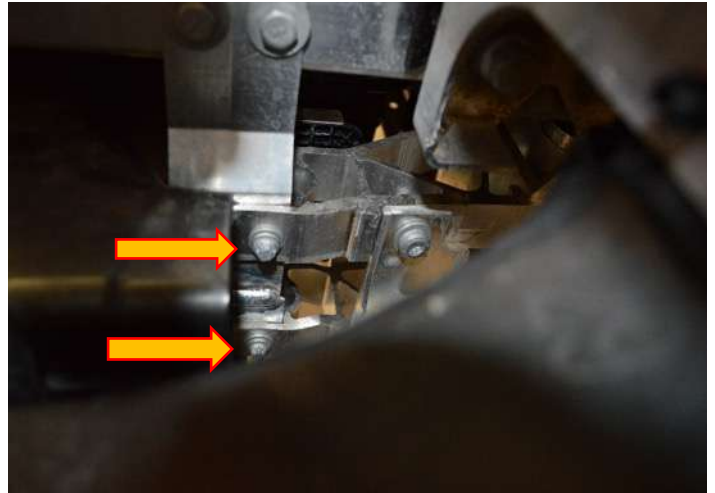


13. Use a flat blade screwdriver to prise the retaining clip for the brake ducts. The ducts will pull away to allow access to the lower crash bar fasteners.



14. Remove the lower crash bar. The crash bar is held in place with four 13mm fasteners and six E10 fasteners. Use the appropriate socket and ratchet to remove all these fasteners.





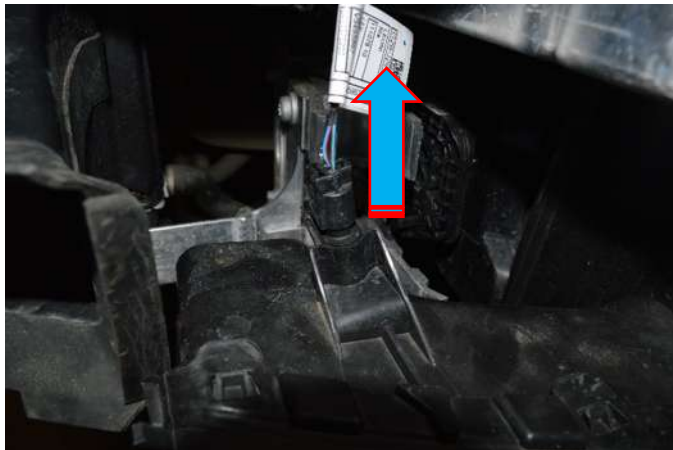
15. Un-clip the wiring loom attached to the plastic duct which runs along the back of the crash bar. Use a trim removal tool or flat blade screwdriver to do this.



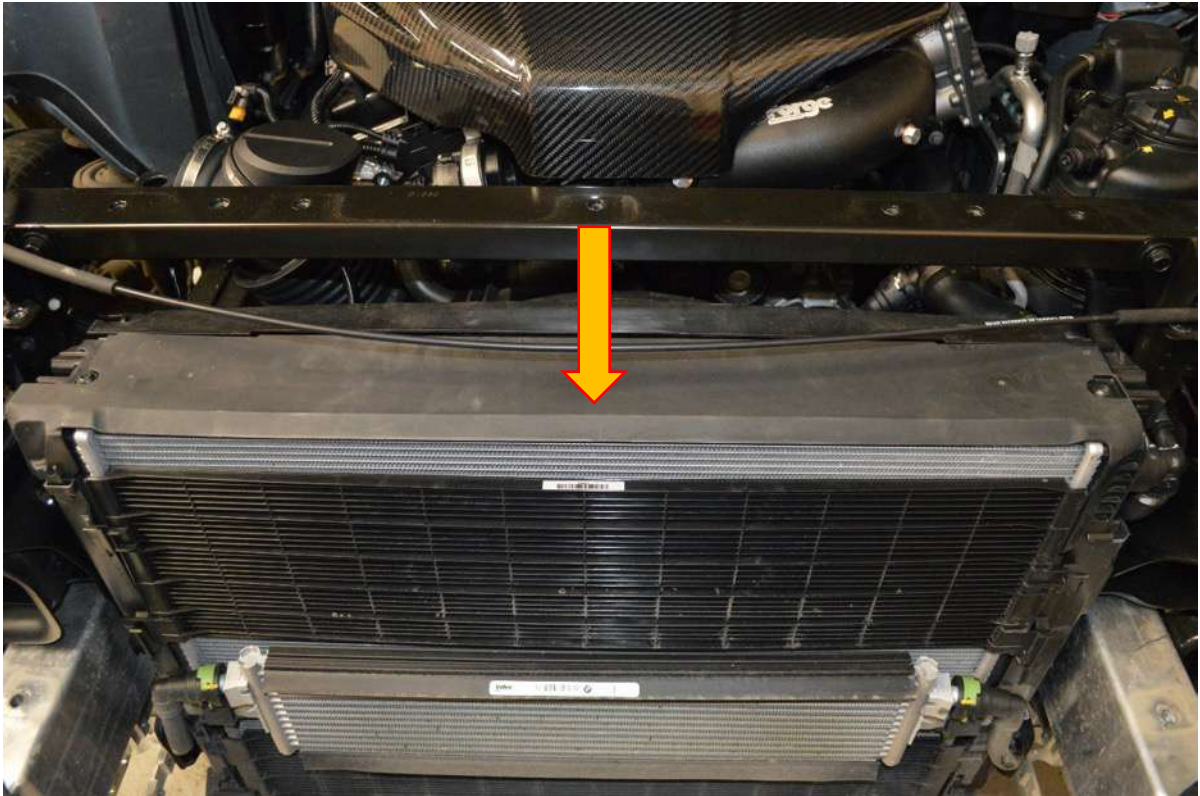
16. Undo and remove the two T50 Torx fasteners attaching the metal cross brace, there is one each side of the brace.



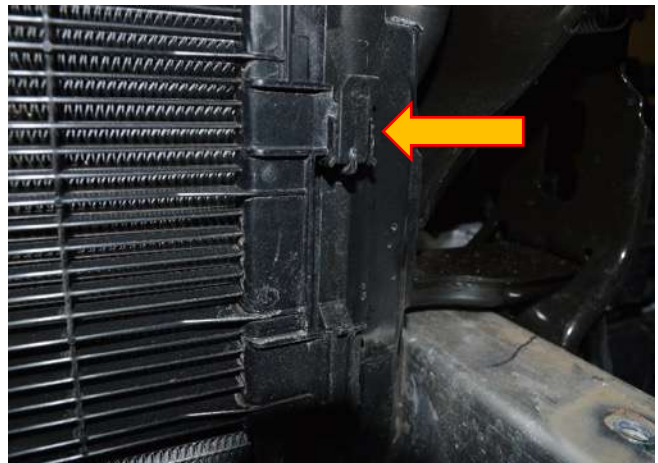
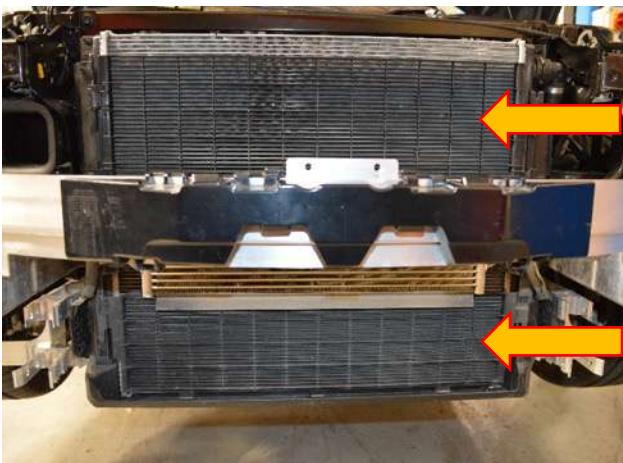
17. Disconnect the air temperature sensor, then remove the plastic cowling.



18. Remove the radiator top plate, there are two T30 Torx fasteners holding it in place, remove both fasteners and un-clip the top plate.



19. Remove upper and lower radiator grills from the OE charge cooler radiator, slide the grill upward while pulling the retaining clip. THESE GRILLS DO NOT GET RE-FITTED.



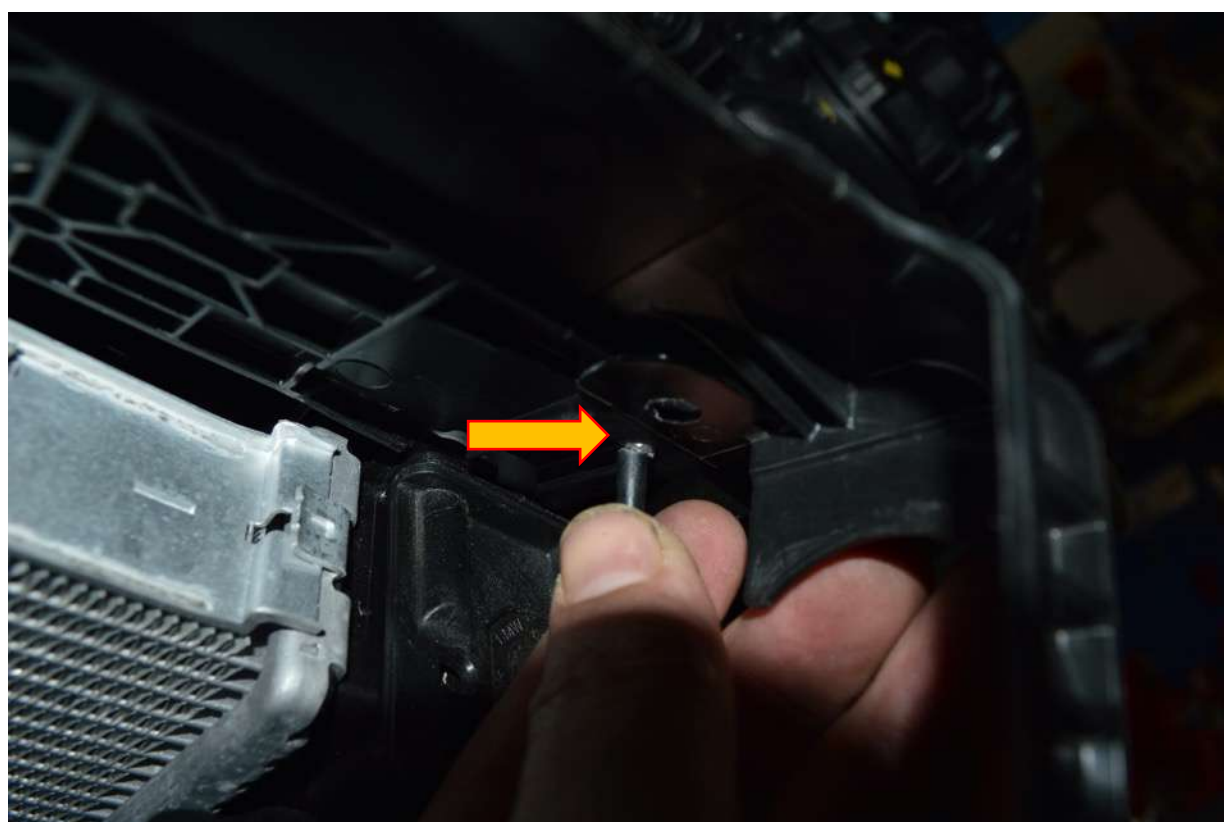
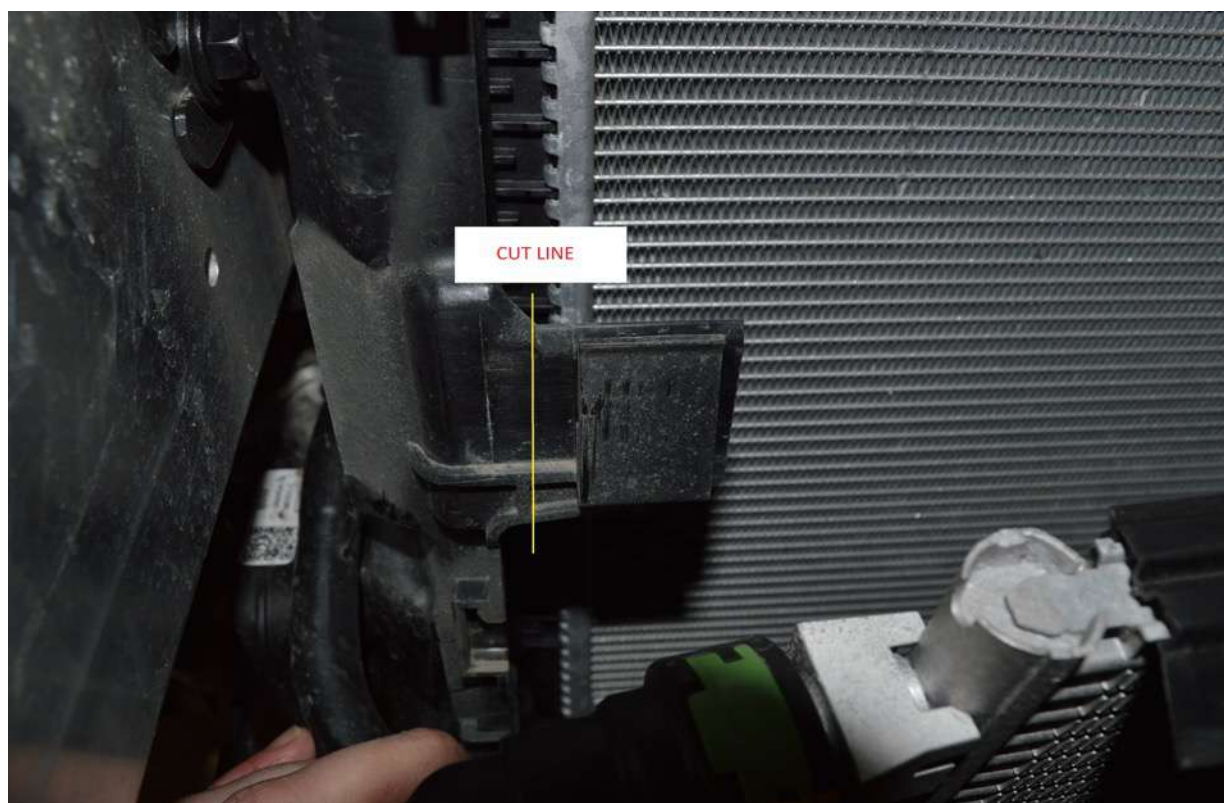
20. Remove the PAS cooler from its brackets BUT DO NOT DISCONNECT FROM ITS HOSES.



21. Remove the lower coupler to drain the charge cooler radiator, then remove the top coupler. Use a flat blade screwdriver to release the spring. You will now be able to lift out the OE charge cooler radiator.



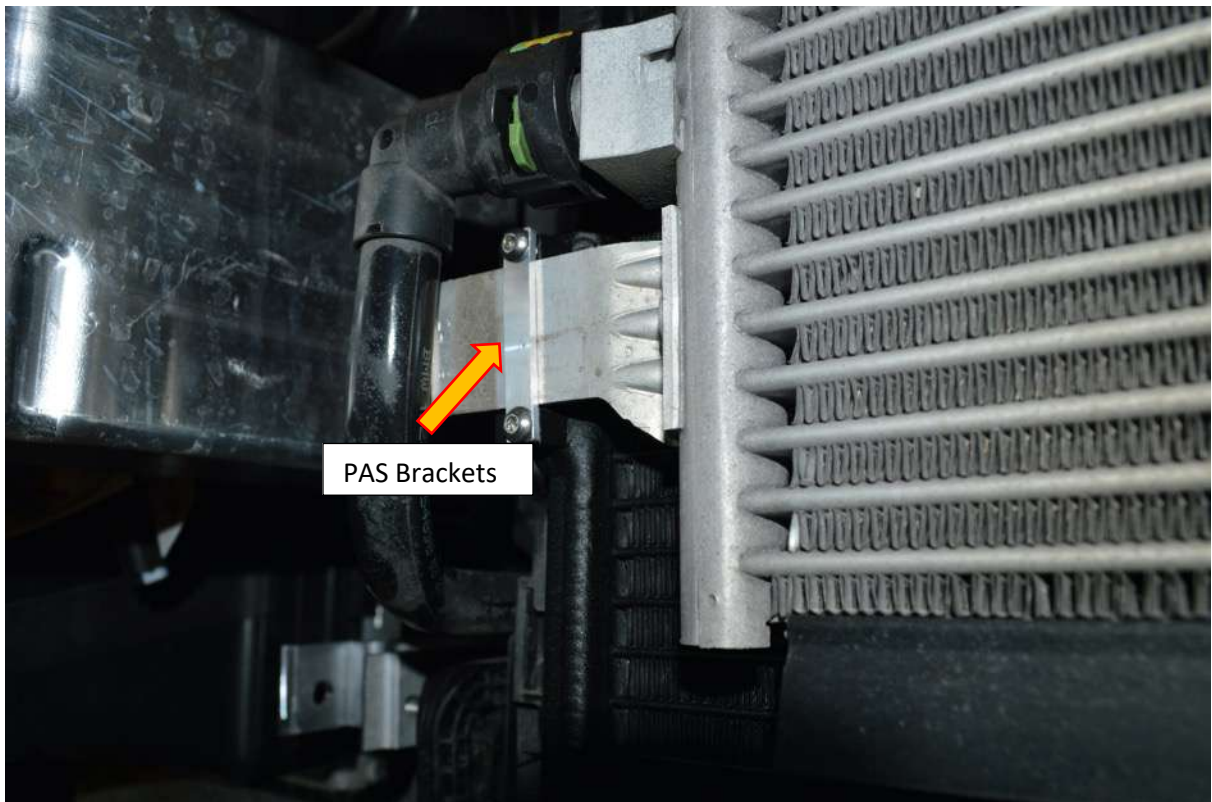
22. The tabs that hold the PAS cooler need to be cut down, use a junior hack saw and make your cut as shown in the picture below. You will need to do this on both sides. There is also a locating pin which needs to snap or be cut off at the top of the radiator.



23. Drop in the FMCCRAD12 into the position where the OE radiator used to be and re-connect the upper and lower couplers.



24. Mount the PAS cooler to the FMCCRAD12 to the machined bosses, use the two machined plates and four M5 fasteners to attach the PAS cooler in firmly place.



25. 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.

26. Fill the charge cooler tank up and bleed the system. Run the car up to temperature and top up with coolant to no more than the max level and no lower than the minimum level indicator inside the coolant tank.



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.

Check out WWW.FORGEMOTORSPORT.CO.UK and WWW.FORGEMOTORSPORT.COM

For a full range of performance products for your vehicle.

If you have 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.

Forge Motorsport UK (+44)1452 380999
Forge Motorsport USA (407)-447-5363
Forge Motorsport ASIA +886-4-22516887

info@forgemotorsport.co.uk
sales@forgemotorsport.com
sales@forgemotorsport.asia



Forge Motorsport



@forgemotorsport



@forgemotorsport



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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.



info@forgemotorsport.co.uk
01452 380999
www.forgemotorsport.co.uk



sales@forgemotorsport.com
407 447 5363
www.forgemotorsport.com



sales@forgemotorsport.asia
886-4-22516887
www.forgemotorsport.asia