



Installation Manual

P/N 601-0175 (Black) or P/N 601-0174 (Blue)

BMW B58 PORT INJECTION

Warning:



This installation is not recommended for a novice or the new guy in the shop. Use caution when installing not to damage any factory components or components included in this kit. If you are not experienced in working on cars we recommend taking this kit to your local BMW Performance shop for installation.

Note: Precision Raceworks holds no responsibility for any damage that occurs or laws that are broken in the installation or use of this kit. This kit is intended for off road purposes only.

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B58 PORT INJECTION PACKAGE CONTENTS

Qty	Description	Qty	Description
1	Port Injection Assembly w/ Injectors	1	Fuel Line
2	AN6 ORB plugs (Preinstalled)	2	Manifold Standoff Risers
9	M6 Allen Screws	6	O-rings for plate to cylinder head

This section of the manual is intended to show the removal, assembly, installation of the **Precision Raceworks Port Injection Kit P/N 601-0175 OR 601-0174**. For removal and install of the intake manifold steps might be missing for your specific car. Please refer to manufactures instructions for removal or installation of the intake manifold from the car as needed.

NOTES: _____

1. Unpackage your Precision Raceworks port injection kit and verify the contents inside the box matches the list found on page 2.
2. Disconnect the negative battery terminal using a 10mm wrench or socket.



3. Remove the engine cover by lifting firmly.



4. Remove the plastic cowl cover on both drivers and passengers side using a 10mm socket to unlock the locking tabs.



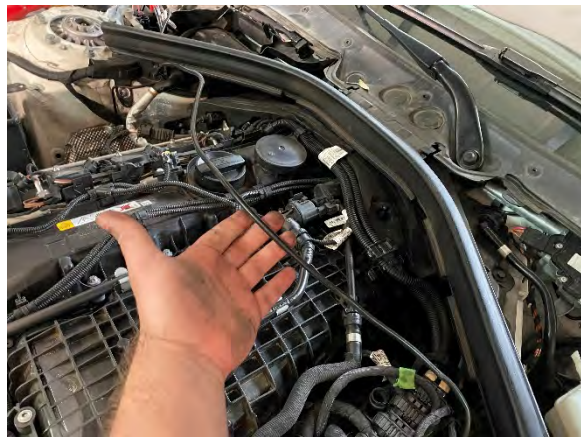
5. Remove the rubber trim on top of the struts located on both the drivers and passengers' sides by removing the push pins.



6. Remove the plastic cover over the DME.



7. Remove the power wire from the rubber trim that goes across back of engine bay.



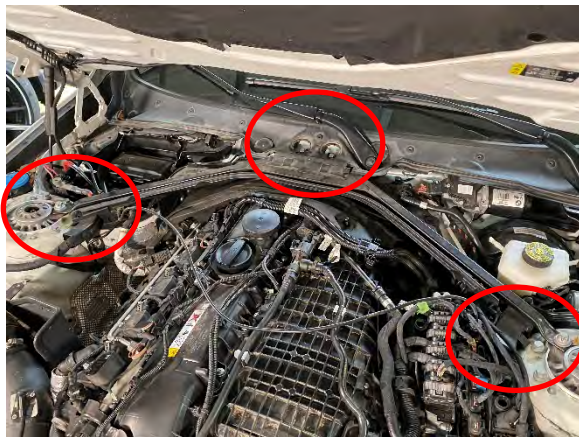
8. Remove the rubber trim located at the back of engine bay by pulling forward on rubber starting at one side.



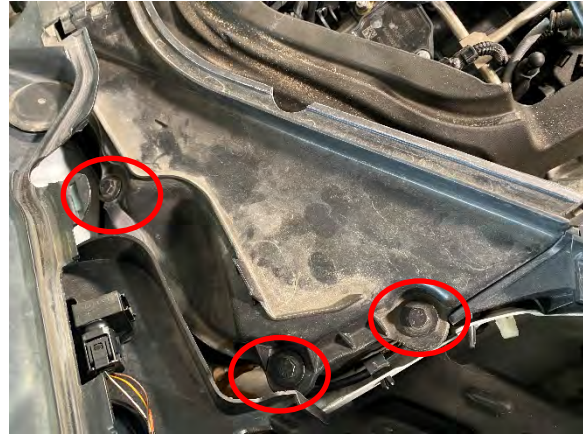
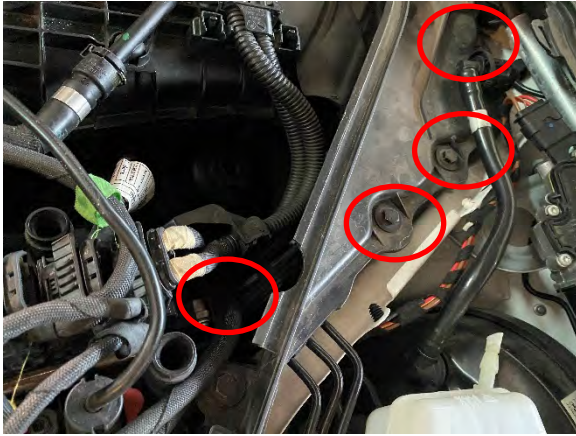
9. Remove the two covers located in the center of the cowl allowing access to the e-torx below.



10. Remove the 4 e-torx circled in Red below then remove the strut tower brace from the car.



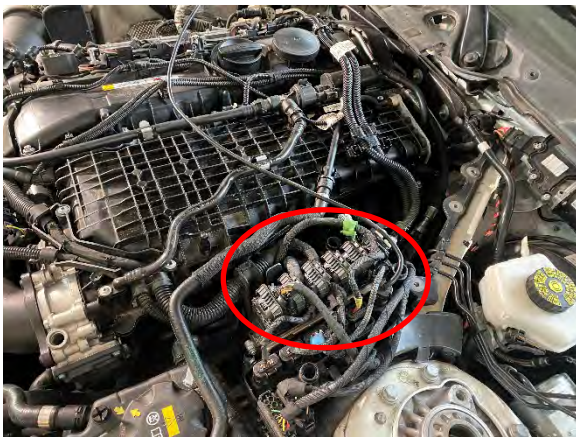
11. Remove the 4 bolts circled in red from drivers side, and 3 bolts circled from passenger side holding the cowl tray in place.



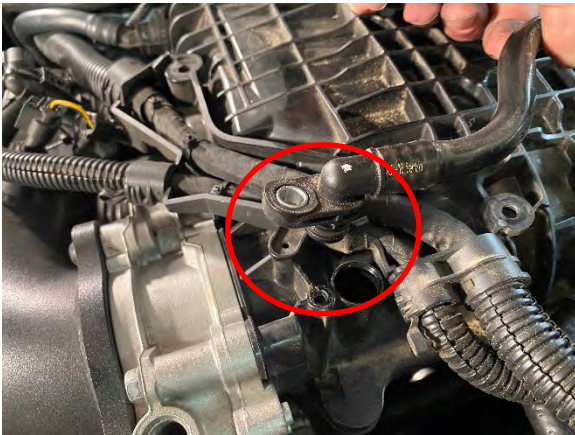
12. Remove the cowl tray and sound dampening foam from the engine bay.



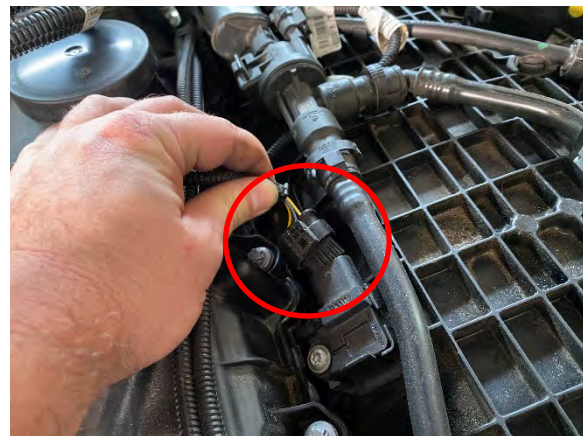
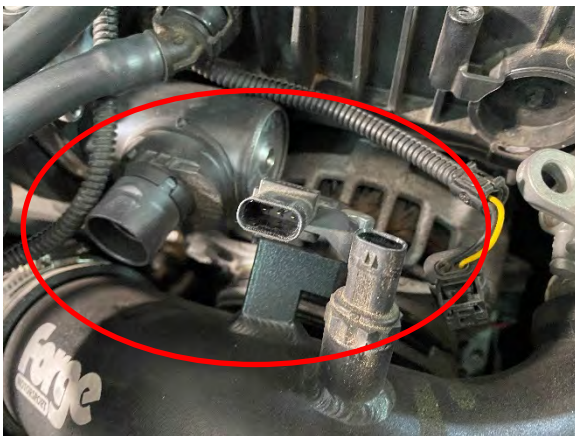
13. Remove the electrical connectors from the DME working from front of car to back of car, each connector has a release that gets pushed down then lever pulls forward releasing the connector from the DME. Also remove cable holding clip by pressing both releases and pushing up.



14. Remove the emissions vacuum hose by removing 1 T20 screw and releasing the quick connect at the other end of the hose.

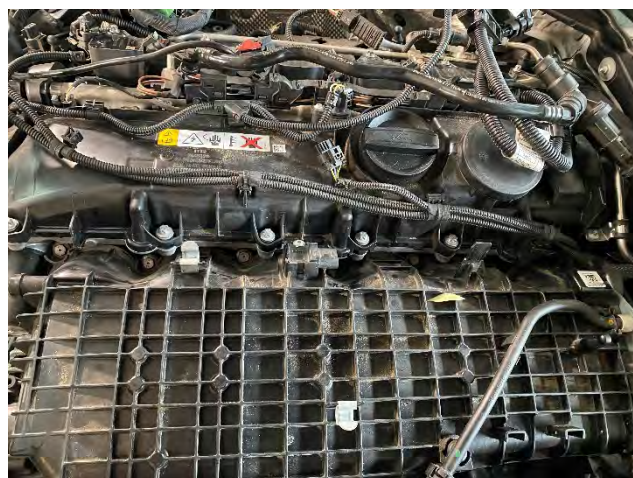


15. Disconnect all wires from the sensors shown below circled in red.



16. Disconnect all remaining plastic hoses that secure to the intake manifold and any other electrical connectors. Push all hoses out of way of intake manifold that are not easy to remove at both ends.

17. Disconnect any remaining wires connect to or running over the top of the intake manifold, and place them over the top of the valve cover so they are out of the way.



18. Disconnect the line circled in red for the intercooler coolant expansion tank and snap coolant hose in place as shown in the second photo to minimize coolant leaking.

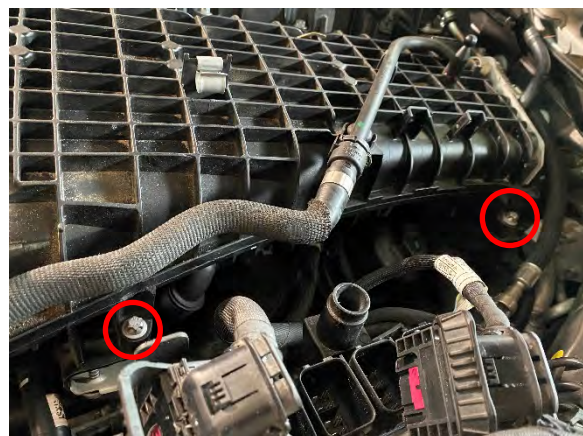
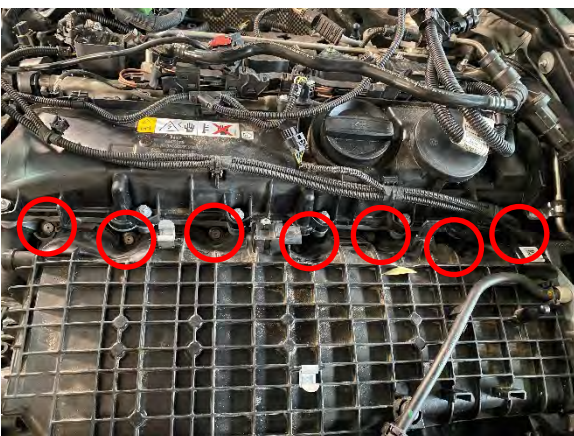


19. Drain coolant from the car for the intercooler expansion tank following manufacturer's instructions. (do not drain coolant for engine cooling system these are two separate tanks).

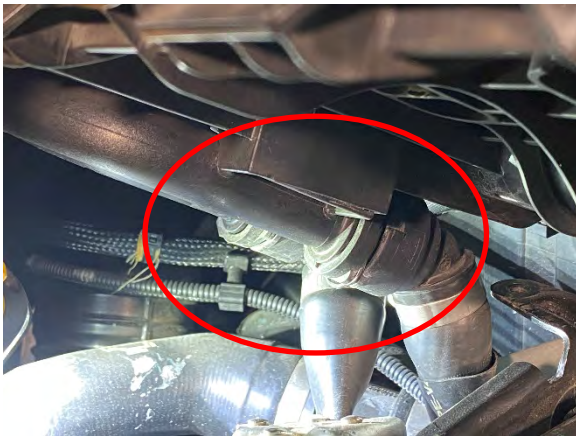
20. Remove the throttle body and charge pipe from the intake manifold and place throttle body below front of manifold out of way (no need to disconnect wiring).



21. Remove the seven 10mm bolts securing the intake manifold to the cylinder head (they don't come out just make sure they are all the way loose) and remove the two screws securing the manifold circled in red.



22. Lift the manifold towards the driver side of the car away from the cylinder head and disconnect the two coolant lines for the intercooler by pulling the release clips away from the hose until they lock then pulling firmly on hose. Once disconnected remove the intake manifold from the car.



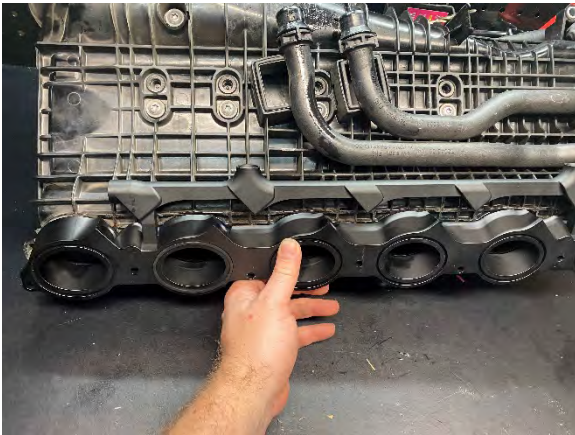
23. Depending on the date of production trimming of manifold may be required, manifolds that come with the 5 tabs circled in red below will require trimming/grinding.



24. For manifolds that require grinding, start by removing all 6 o-rings to prevent damaged. With o-rings removed cut each of the tabs flush with the manifold (note the alignment tabs do not need to be removed).



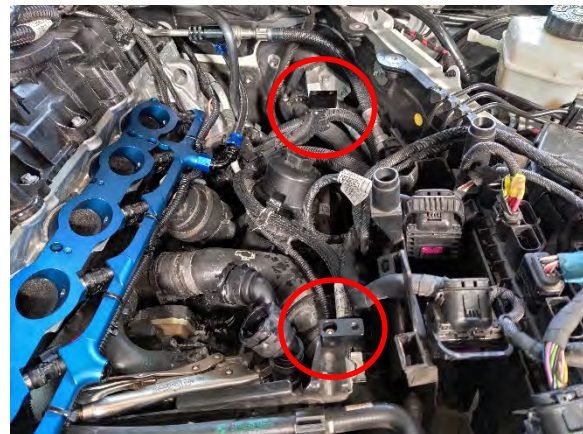
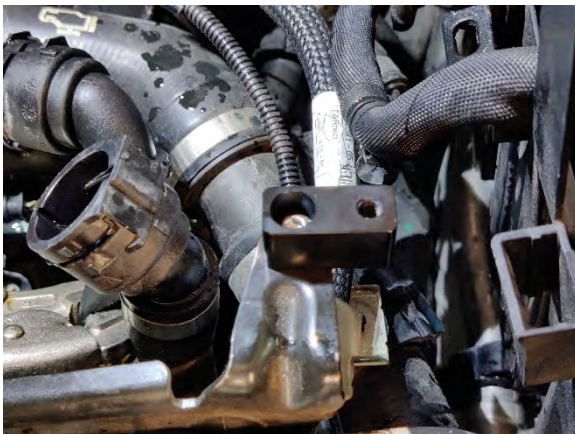
25. With the o-rings still removed from the manifold push the bolts out of the manifold and place port injection plate against the face of manifold. Then while holding firmly inspect for clearance. Minor grinding might be needed to remove corners off some ribs on the manifold so that plate can meet flush against manifold.



26. With the manifold grinding complete, connect the wiring for the injector controller and secure the loom/wiring with zip ties to fuel rail.
27. Install the port injection kit onto the cylinder head, (rotating injectors as needed for proper clearances). Route the factory loom behind injector 6 as shown in the photo and connect the fuel line as shown installing and tightening to fuel rail first.



28. Install the two provided standoffs using the provided screws to secure them to the metal brackets in the car.



29. Reinstall the factory o-rings in the manifold and install the manifold in the reverse order of removal.

Remainder of install is reverse of removal, with a couple exceptions. Please follow below steps when appropriate to finish install.

1. The harness that is secured to the intake manifold with 2 t-20 screws will be too tight to reach the required sensors. Do not pull harness to fit as damage to sensors can occur over time. Cut the factory zip ties and remove the clips securing the wire loom and shift the wiring in the bracket to add about 1" more wire so it fits properly then resecure with zip ties replacing the factory ones that were cut.



2. When Reinstalling the factory emissions valve do not mount to the factory mounting point as it was when removed this can cause pressure from the cowl to push on the valve and can cause damage when engine moves under hard acceleration. Simply slide the plastic mount between the electrical connector and the connection for the emissions valve so it sits secure and sits lower to provide needed clearance. Removing the metal clip and flipping it around will allow for vacuum line to be secured like it was from factory but on opposite side.



3. Engine covers will not fit like factory as the manifold has lifted and shifted towards the driver side of the car. For best fitment we recommend loosening the two mounting posts on top of the valve cover about $\frac{1}{4}$ of an inch. With this method the engine cover can be secured by the two engine cover mounting points and the drivers side rear mounting point. It will not fit exactly like factory and will be a tight fit. However we feel the look with it installed is better than not having it installed and also find the sound dampening it provides to make install of the engine cover worth while.
4. The factory charge pipe will not work with this kit, aftermarket charge pipes that were installed prior to install of the kit will need the silicone coupler adjusted to accommodate the movement in the manifold so that it will reach. Most aftermarket 2 piece charge pipes have enough slack this is not an issue, however we have no way of knowing if any charge pipes will ever be made that do not have the needed slack. In the event your charge pipe is not long enough to allow this minor adjustment a longer silicone boot should be sourced to provide the required length for proper fitment.

12 Month Limited Warranty

Precision Raceworks, LLC warrants to the consumer that all Precision Raceworks products will be free from defects in material and workmanship for a period of twelve (12) months from date of the original purchase. Products that fail within this 12 month warranty period will be repaired or replaced at Precision Raceworks discretion, when determined by Precision Raceworks that the product failed due to defects in material or workmanship.

This warranty is limited to only the repair or replacement of the Precision Raceworks part. In no event shall this warranty exceed the original purchase price of the Precision Raceworks part nor shall Precision Raceworks be responsible for special, incidental or consequential damages or cost incurred due to the failure of this product.

Warranty claims to Precision Raceworks must be transportation prepaid and accompanied with dated proof of purchase. This warranty applies only to the original purchaser of product and is non-transferable. All implied warranties shall be limited in duration to the said 12 month warranty period. Improper use or installation, accident, abuse, unauthorized repairs or alterations voids this warranty.

A Precision Raceworks Warranty Claim Form Must Accompany All Warranty Claims. Products returned to Precision Raceworks with no Return Goods Authorization and or No Warranty Claim Form may be rejected and returned to sender. Precision Raceworks disclaims any liability for consequential damages due to breach of any written or implied warranty on all products manufactured by Precision Raceworks. Warranty returns will only be accepted by Precision Raceworks when accompanied by a valid Return Goods Authorization (RGA) number. Credit for defective products will be issued pending inspection. Product must be received by Precision Raceworks within 30 days of the date RGA was issued.

Please note that before we can issue an RGA for any product, it is first necessary for the installer or end user to contact us at Warranty@PrecisionRaceworks.com to discuss the problem. Most issues can be solved through email or over the phone. Under no circumstances should a product be returned or RGA requested before the above process transpires.

A PRECISION RACEWORKS WARRANTY CLAIM FORM MUST ACCOMPANY ALL ELECTRONICS WARRANTY CLAIMS. Precision Raceworks Products returned to Precision Raceworks with no RGA and or No Warranty Claim Form may be rejected and returned to sender.

A copy of the Precision Raceworks Warranty Claim Form can be obtained by sending a request for the form to Warranty@PrecisionRaceworks.com .