



# Installation Manual

S55/B58 F-Series Stage 4 / 4.5 fuel pump kit

601-0198/0199/0200/0201



This installation is not recommended for a novice or the “new guy” in the shop. Use caution when installing, as 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 performance shop for installation.

**NOTE: Precision Raceworks, LLC 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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## Kit Contents

QTY	Description	QTY	Description
1	Replacement Fuel pump with add on Hybrid pump	1	AN-6 Flare to 3/8" female quick connect
1	Regulator		
1	Regulator bracket (black triangle)		
1	Fuel Filter		
1	Boost reference harness		
3	Fuel Lines		
1	AN-6 ORB to AN-6 Flare Adapter		

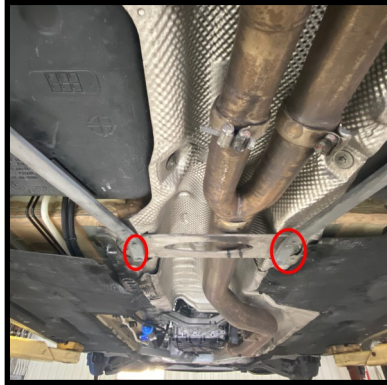
## Tools Necessary

Description	Description
10mm socket	13/16" SAE open end wrench
13mm socket	11/16" SAE open end wrench
Ratchet	4mm Allen Key
5mm Allen Key	

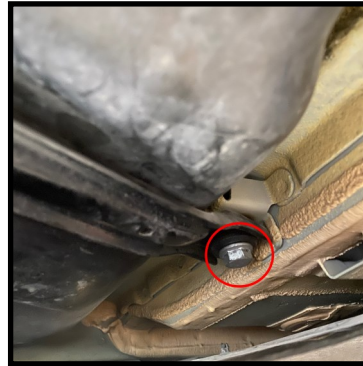
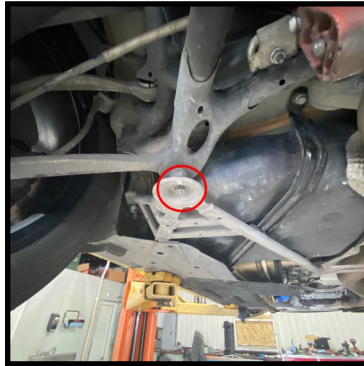
This section of the manual is intended to show the assembly of the **Precision Raceworks (description and part number here)** and final assembly. For instructions of the removal or installation of factory components, please refer to your service manual

1. Unpackage your kit and verify contents inside the box matches the list found on previous page
2. Remove rear seat by lifting on the front portion of the seat and then remove the cover for the fuel pump access using a 10mm socket.
3. Disconnect the power connector from the fuel pump top hat, and then run the car until it dies to remove fuel pressure from your line (to not make as much of a mess in the next step).
4. Using rags to capture any left over fuel, disconnect the fuel line from the top of the fuel pump. Move both out of your way.
5. Remove lock ring holding fuel pump in by either using the appropriate lock ring tool, or if that is unavailable, you may use a flat head screwdriver and a hammer to carefully remove the lock ring. If you do this, make sure to do small taps on each ear, as you do not want to break any of the ears
6. Pull straight up on the top hat. Unplug the drivers side sending unit under the pump top hat as well, do not remove both.
7. To fully remove the fuel pump, the suction line must be rocked down to pull the pump out, and then press the locking tab to remove the line fully from the bottom of the pump. Be very careful to not damage the float arm.
8. Install the pump by first inserting the pump for the outside of the bucket into the tank.  
\*\*\*\*NOTE\*\*\*\* for stage 3 setup only— , remove the clip at the bottom of the post with the spring to remove the tophat from the bucket. (you may discard the clip)
9. Then re-install the suction line back into the bottom of the new pump.
10. Once the bucket is in the tank, slide it to the side to allow you to slide the add on pump onto the metal bracket.
11. Finish making your connections and finish inserting the pump into the tank lining up the tab to where it belongs.
12. Then re-install the lock ring and connect the very short section of harness with the large connector to the top hat (red to positive and black to negative)
13. Going under the car (a lift is helpful for the following steps), remove the panels covering the driver side where the fuel lines
14. When installing the fuel lines, you may need to drop the tank entirely. This instruction guide will not go over the process of doing this, but will go over how to drop it partially to allow just enough access to run the lines. **Please be extremely cautious, as depending on how full your tank is, the tank could be extremely heavy.**  
\*\*\*\*NOTE\*\*\*\* routing the Hobb switch harness with the fuel lines is an easy way to route this line, but not the only way.

15. Remove the four bolts holding this brace in the circled location.



16. Loosen the rear nuts (do not remove), and loosen the front tank brackets. This will allow the tank to sag down towards the front of the tank.

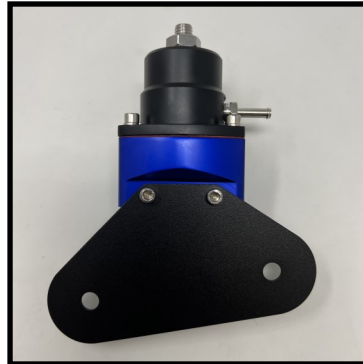


17. Identify your lines from the tank to regulator line bag. Feed line has a female straight AN6 connection on one end and the return line has a female 90 degree AN6 connection on one end. You will want to mark one of the lines with tape at the 90 degree quick connect fitting for identification later.

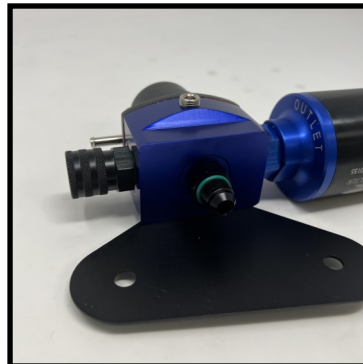
18. Remove OEM line from over the tank (this will be removed as we go. Run Both lines from the Tank to regulator bag up from the bottom of the tank on the driver side (US car) over the axle and to the side of the tank with the fuel pump. You will feed both lines through using the 90 degree quick connect fittings. **DO NOT REMOVE FITTINGS** this will void your warranty, as the metal ferrule used to seal the connector will fail if the fitting is removed (you may run lines either from the bottom to the pump, or from the pump to the bottom, just make sure that both Quick connect 90's are at the fuel pump.



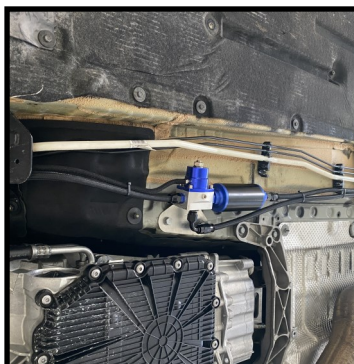
19. Now it is time to assemble the regulator and filter assembly to prepare to install in the car. Attach the metal bracket as shown in the pictures below. If your boost reference nipple does not point in this direction, then remove all four screws, rotate the top portion of the assembly, and re-assemble, making sure that the spring and flat washer are in the same order as before.



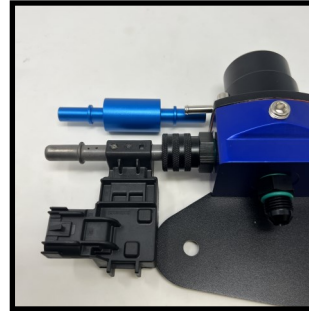
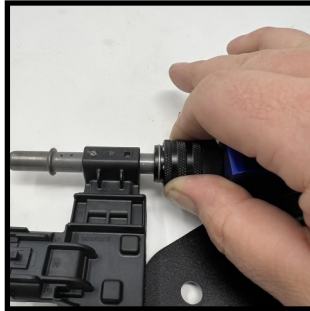
20. Now install the fittings in the correct place. You will be installing: 3/8" female Quick connect with an6 threads, AN6 ORB to AN6 Flare adapter, and fuel filter. Make sure that the fuel filter OUTPUT is facing the regulator. Also make sure that you tighten until the o-ring disappears and the faces meet flat.



21. Now install the regulator bracket in the car using the two bolts found near the transmission as seen in these photos. The bolts used are M8x1.25x16mm Stainless Steel Flange Nuts. You may also install the primary feed line and return line as seen in the photos at this time.



22. If you are using an ethanol sensor, please install it in the 3/8" female quick connect now. If not, use the blue dummy ethanol sensor that is included in your kit. To use these quick connects, simply slide the sleeve all the way back, push the fitting in all the way. Then Release the sleeve and give it a tug test to ensure it is locked in.



23. Now, you will finish removing the OEM fuel line. If you have an S55, you will remove the fuel line from the hard pipe underneath the manifold and use the remaining line to connect from the ethanol sensor (or dummy) to the HPFP hard pipe. If you have a B58, then you will disconnect the fuel line from the hard pipe under the car.
24. At this point it is a good time to wire the Boost Reference harness. If you are utilizing the included Hobb Switch, simply install it into a 1/8" NPT port either in the manifold or in your aftermarket charge pipe. Be sure to use Teflon tape on the threads to prevent leaks
25. Run the small two wire extension harness from the Hobb switch to the trunk. You can choose any route that makes the most sense in your application, but along the same path as the fuel line could be a viable option. Just make sure to have the orientation so that the fitting at the engine bay will connect to the Hobb switch. This will then plug into the main section of the boost reference harness in the trunk.
26. Moving to the trunk, remove the 30amp fuse from the boost reference harness, and install the Red wire with the ring terminal on the positive post of the battery, and the black wire with the ring terminal either on the negative post or grounded to chassis. The relay does not need to be mounted.
27. Route the wire with the large plug to the fuel pump area. You may have to cut a hole in the cover to run the wires through that you installed on the top hat in a previous step. Connect the two connectors.
28. Now connect the Hobb Switch extension harness to the main harness using the supplied plugs and re-install the 30amp fuse.
29. ADJUSTING YOUR REGULATOR—You will need to have the ability to read the fuel pressure of the car without the car running for this step!
30. Manually activate the secondary pump—you may do this through any method you choose, but we recommend unplugging the harness to the hobb switch (either in the engine bay at the switch itself, or where the switch connects to the main harness. You can then use either a ball of aluminum foil or a paperclip that doesn't have a plastic coating to connect the two pins together to trigger the ground switch in the relay.
31. Adjust the regulator using the allen key in the top of the domed portion of the regulator to adjust your fuel pressure to 72 psi (or whichever pressure your tuner recommends) Then use the lock nuts to prevent the adjustment screw from backing out while driving.
32. Reconnect hobb switch harness correctly.
33. NOTE: If you are wanting to utilize the 1-to-1 boost reference of the regulator, you must attach a vacuum line from the nipple on the side of the regulator to a vacuum(boost) port in the engine bay. You may either tap into existing vacuum lines, or add a nipple to your manifold.
34. Replace any panels that were removed and clean up after yourself! You are done!