



INSTALLATION INSTRUCTIONS

FUEL PUMP SLEEVE INSTALLATION KIT

2001-2006 BMW E46 M3

Document# 19-0058

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1. There are 2 common ways to relieve fuel pressure on the BMW.

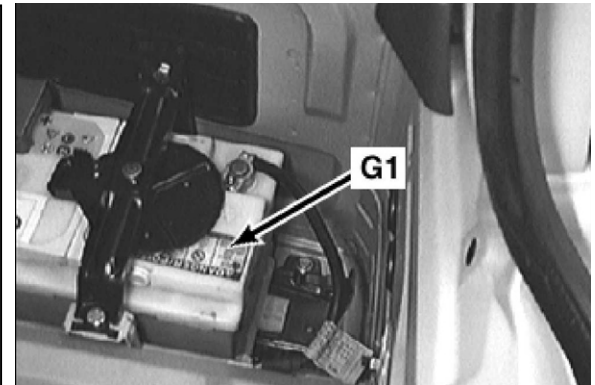
Option 1: Open glove compartment. Rotate the 2 white tabs on the top-inside of the glove box in order to release and swing the fuse box down. To temporarily disable the fuel pump, remove fuse 54. Start vehicle and allow engine to stall. Turn off car and remove key. Reinstall fuse and glove box.

Option 2: There is a Schrader bleed valve found on the factory fuel pressure regulator underneath the vehicle, shown at right.



2. Open Trunk. Unclip the two fasteners that secure the plastic battery cover on the rear right side of the trunk. Remove the plastic cover to gain access to the battery. Unscrew and disconnect the negative terminal of the battery (G1).

Caution: Disconnecting the battery (G1) may cancel the fault memories of some control units. Consequently, before disconnecting the car's battery, always interrogate the fault memories.



3. From inside the cabin, pull up to unclip the rear bench seat and remove from vehicle. Pull the carpet over the metal seat tabs.

Underneath the bench, there are rubber mat insulation. These are used for sound deadening and are very brittle. Fold the right side mat back carefully to expose the fuel pump hanger metal cover.

Remove the four M6 nuts (shown) on the cover using a 10mm socket. It is a good idea to clean this area as it will be dirty.



4. Find the sliding fuel pump connector.

Slide the connector to the right side of the vehicle to unlock.

Now, pull upwards to release it (as shown).



5. To release the factory quick disconnect feed line fitting, simply rotate the connector until both outer tabs can be accessed with a thumb and index finger.

First, push the connector towards the center of the hanger.

Next, squeeze the 2 tabs and then gently pull away from the mating tube, as shown. Have a rag handy as fuel will instantly leak out of this connection.



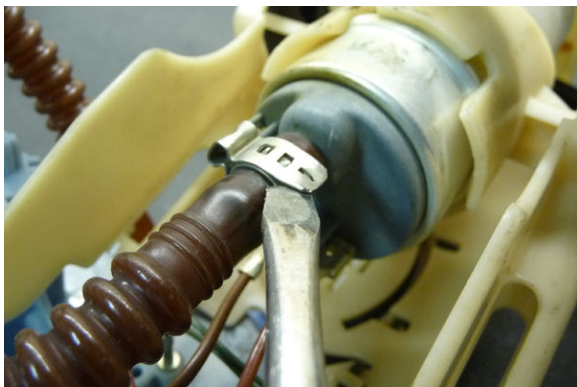
6. To unfasten the ring connection, BMW sells a special tool, P/N: 16 1 020. If not available, a rubber mallet hammer and punch will suffice. There is a small dab of glue that prevents the ring from unscrewing. When spinning the ring counterclockwise this glue will break free. If the ring is stubborn, get a second person to hit the opposing side of the ring simultaneously. Use the loop on top of the hanger and pull upwards.



7. Pull the assembly out of the vehicle being careful not to damage the fuel level sensor arm and set onto a work bench.

To remove the convoluted hose from the stock fuel pump's outlet barb, use a flat head screw driver and pry the pinch clamp's tab upwards.

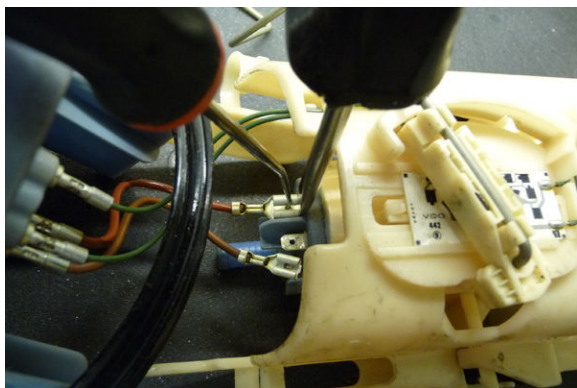
Gently pull the convoluted tube off the BMW fuel pump outlet barb. It will be tight so be patient. This will be reused.



8. To remove the female spade connections on the BMW fuel pump, a pick and flat head screwdriver will be used.

Press the center tab lock downwards with the pick and, simultaneously, pry the spade connector away from the fuel pump with the flat blade (as shown).

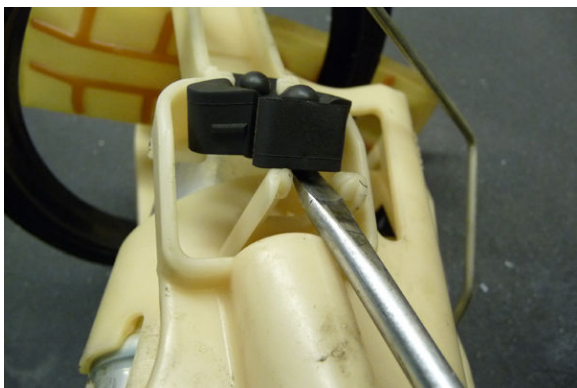
Do this for both the positive (1/4") and negative (3/16") terminals.



9. Pry the rubber isolation grommets off each side of the fuel pump using your fingers and a screwdriver, as shown. These will be reinstalled later.

The BMW fuel pump should now be able to be removed from the factory hanger.

Next, simply rotate and pull the sock filter off the bottom of the BMW fuel pump.

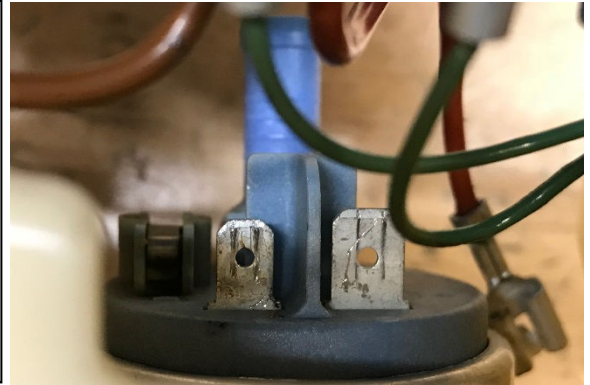


10. Next, the plastic pump holder will need to be separated from the BMW fuel pump. First, take note of the clocking orientation of the plastic holder in respect to the fuel pump's outlet barb. Pull the tabs downward (as shown) to release the pump. NOTE: The holder will come out the bottom of the pump.

The plastic pump holder will be reused. The BMW fuel pump can always be reinstalled easily as this kit is reverse-able.



11. Before connecting the electrical wires, understand how the spade terminals lock into place. There are holes in the male terminals. These are visible on the OEM fuel pump terminals, as shown.



12. If the blue insulation were removed on the included male spade terminals, you would also see these same holes.

NOTES:

1. The picture at right is only to show the metal terminals. Do not remove the terminals from the blue insulation as shown.
2. The Walbro F90000262 fuel pump kit will not include these blue terminals as they are NOT required for this specific pump.



13. The OEM fuel pump wires use female spade terminals. Each of these terminals have tabs that lock into the holes of the male connectors. Depending on the force applied to the tabs when the terminals were removed, it is possible for them to be over bent. In this case, use a small pick to press the tab downwards (as shown in top picture). At this time, also make sure the OEM female connectors are not too "open". This can result in a loose connection. Use some pliers and gently compress each terminal as shown in bottom picture.

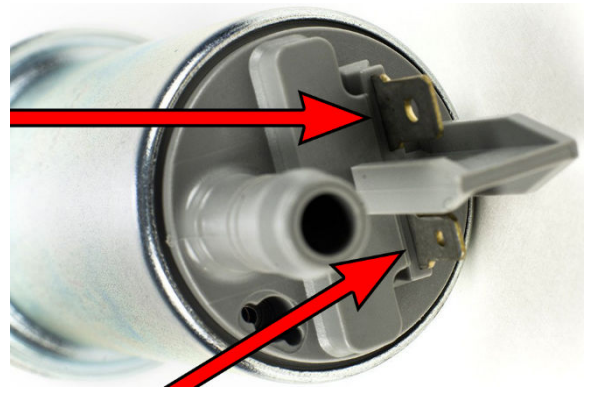


14. The picture at right shows how the spade terminals will properly lock together in later steps. Do not perform this step yet.

It is the INSTALLERS RESPONSIBILITY to ensure a tight electrical connection is achieved. Failure to do so will result in melted wires and pump failure. This type of damage is NOT covered under warranty.

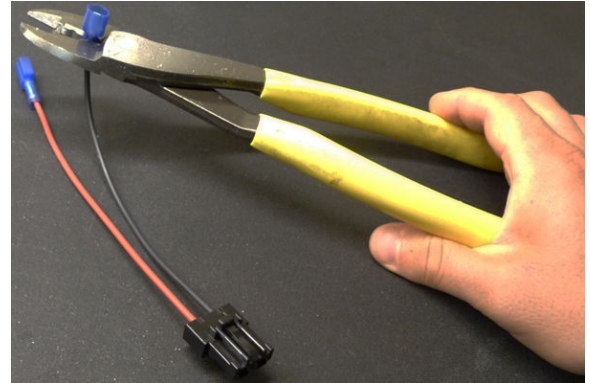


15. If the Walbro F90000262 Fuel Pump was purchased, no adapter wiring harness is required as it uses the same terminals (shown) found on the BMW fuel pump. Skip to Step 18.



16. If the Walbro F90000274 E85, Walbro GSS342 255LPH, AEM 50-1000 Gas, AEM 50-1200 E85, etc. was purchased, it's required to crimp the included male spade connectors to the included flying lead harness.

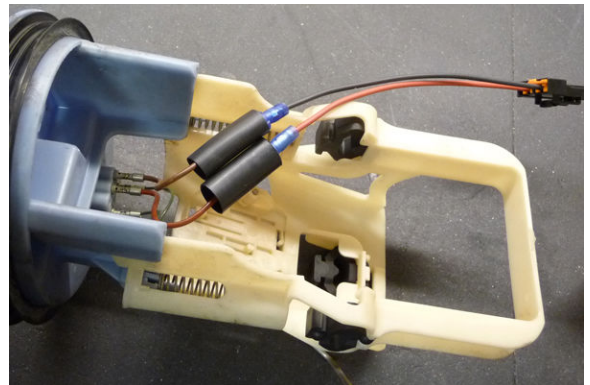
Use the small 3/16" male spade on the black "-" wire and the larger 1/4" male spade on the other "+" wire. Gently give the wires a tug to confirm the crimp.



17. Locate the 2 sections of heat shrink in the kit and slide them over each BMW female spade terminal.

Plug the male spade connectors into the respective BMW female spade connectors. As a test, give the connectors a tug to verify the female spade tab has locked into the male spade hole.

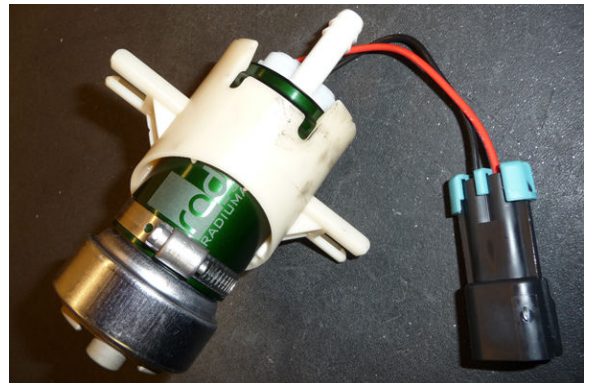
Position both heat shrink tubes so they are covering the exposed BMW female terminals (as shown).



18. First, slide the billet sleeve into the BMW plastic holder. Next, slide the fuel pump into the billet sleeve.

Pump Positioning: For the Walbro F90000262 / F90000274 pumps, bottom out the sleeve onto the wide base (as shown).

For all other pumps, the top of the sleeve and top of the pump should be flush for proper positioning height. Insert the large clamp into the recess and tighten using a 1/4" socket.



19. Locate the new fuel pump sock filter and the metal lock washer. Insert the sock onto the bottom of the pump. This installs only one way. NOTE: filter sock may differ than picture.

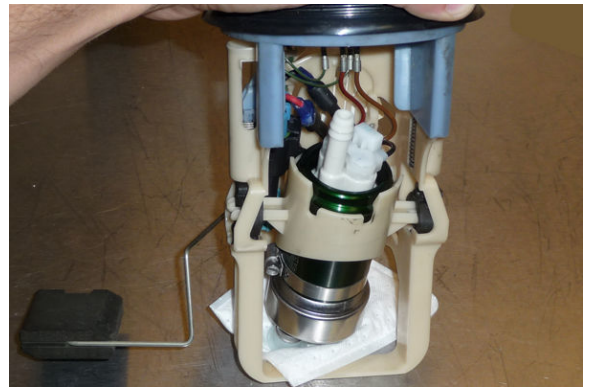
Press the lock washer onto the pump's nipple, until it has fully seated, as shown. NOTE: For Walbro F90000262 / F90000274 pumps, the filter socks will have to go on after the pump is installed into the OEM fuel hanger.



20. Position the new fuel pump assembly back into the BMW hanger. Reinstall the rubber isolation grommets from the previous steps.

NOTE: The Walbro F90000262 / F90000274 pumps will need to be clocked ~45deg (as shown) to allow the sock filter to fit properly.

Plug in the pump connector. To test, compress the entire spring-loaded hanger to be sure there's no wiring interference (as shown).



21. Slide the small clamp over the BMW convoluted tube and then insert the tube over the fuel pump outlet barb.

WALBRO F90000274 ONLY: To fit the convoluted tube over the pump's large outlet barb an extra step is required. Soften the end of the tubing using boiling water or a heat gun and quickly push it over the pump's outlet barb, as shown. This will be a very tight fit.

Carefully tighten the hose clamp.



22. The lower rubber ring seal should always be on the tank. When lowering the hanger, place the upper sealing ring on the inside of the lower ring. Once the hanger's ~30mm long slot is clocked to the tank's mating slot, push downwards. Reinstall the locking ring (shown).

If using the BMW tool, torque to 58 in-lbs (6.5 Nm). Push the quick disconnect fitting back on until you here a "click". Before plugging in the connector, slide its tab outwards for initial engagement.



23. Before installing the metal cover, connect the battery and turn the key to the ON position. Listen for the new fuel pump to confirm the electrical was performed properly and check for fuel leaks.

If no leaks are found, start the vehicle. The engine may run rough for a few seconds until the air is bled from the system. Recheck for leaks.

Lastly, reinstall the metal cover and pop-in the carpet and seat.

