BMS Water/Methanol/Alcohol WMI Kit Install Guide for AMG C63/C63S M177
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Always be aware that using water/methanol/alcohol injection involves risk of fire and engine damage and care should be taken to reduce these risks.

Fittings:
When assembling the compression fittings, make sure to use the orientation of the nylon sleeve below. Place the brass hex onto the hose first, then the nylon sleeve, then insert the hose end over the metal nipple on the other end of the fitting, then tighten the brass hex securely. Teflon paste is not required on the portion of the fittings using the nylon crush sleeve. Use Teflon paste when attaching threaded connections not using a nylon crush sleeve.

Tank Assembly:

Suggested line layout:

Rinse the meth tank with clean water to remove any manufacturing residue before assembly.

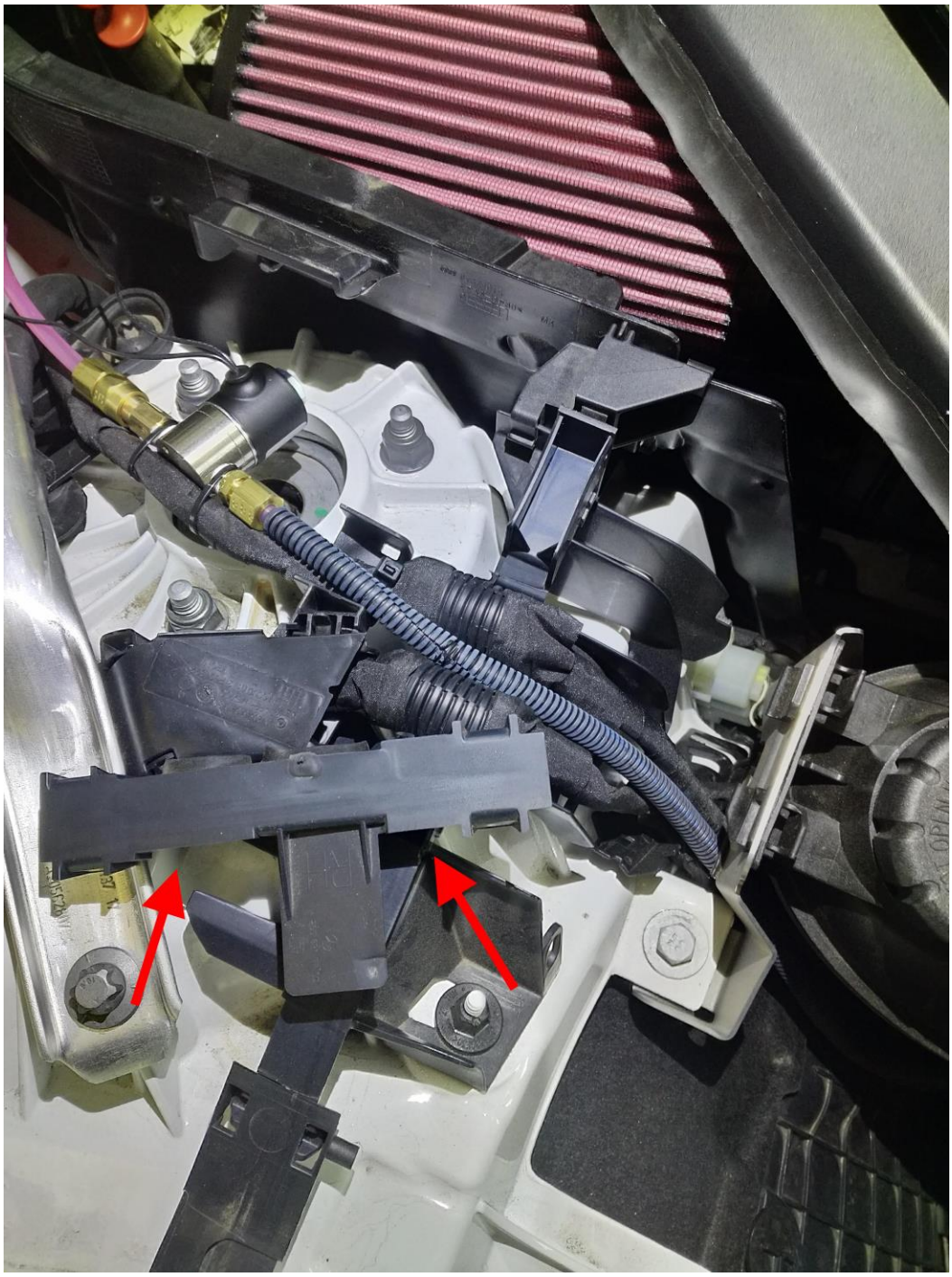
Raise the passenger side cowl cover panel from under the hood by twisting the retaining clips and lifting the cover.

Remove the cabin filter by unclipping it from the retaining tabs.

Secure the meth pump ground to the ground location with brown wires attached at the outboard side of the opening. The red pump wire will be attached in a later step.

Tank placement:

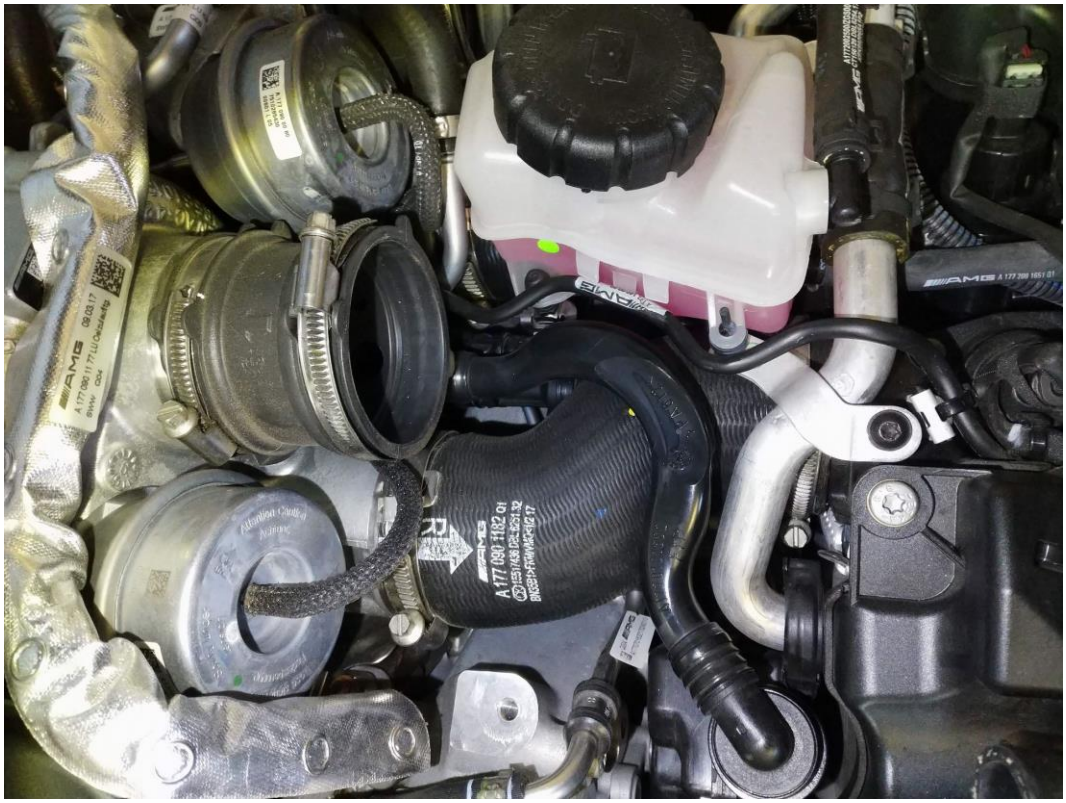
Suggested solenoid placement and line routing:



Make sure to replace the plastic cover shown after routing the line. Extend one solenoid wire and connect at the ground location used for the meth pump. The other will be connected in a later step. Teflon paste should be used a the threaded connections into the solenoid. Note the direction of the arrow on the solenoid noting flow. The filter should be placed on the inlet side of the solenoid, again noting the flow direction arrow.

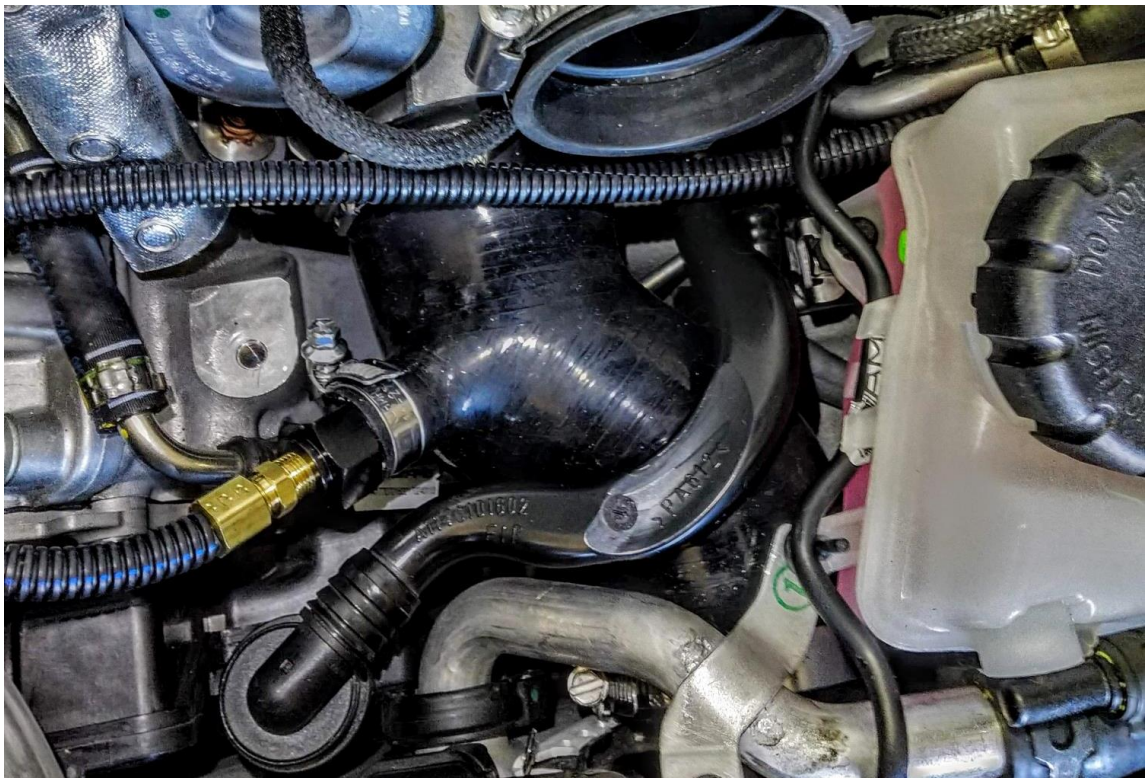
Coupler installation:

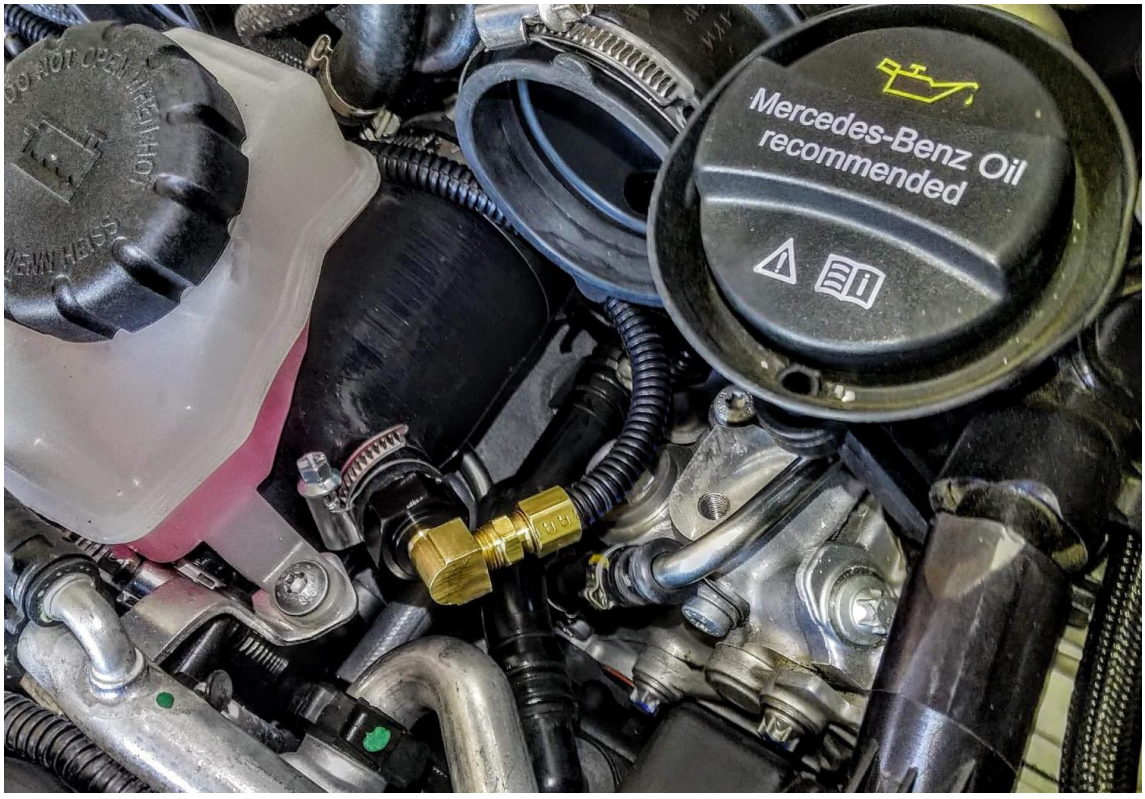
Remove the intake system to provide access to the rubber couplers below. Tip the coolant reservoir out of the way by lifting it off of its rubber retainers.
Passenger side:

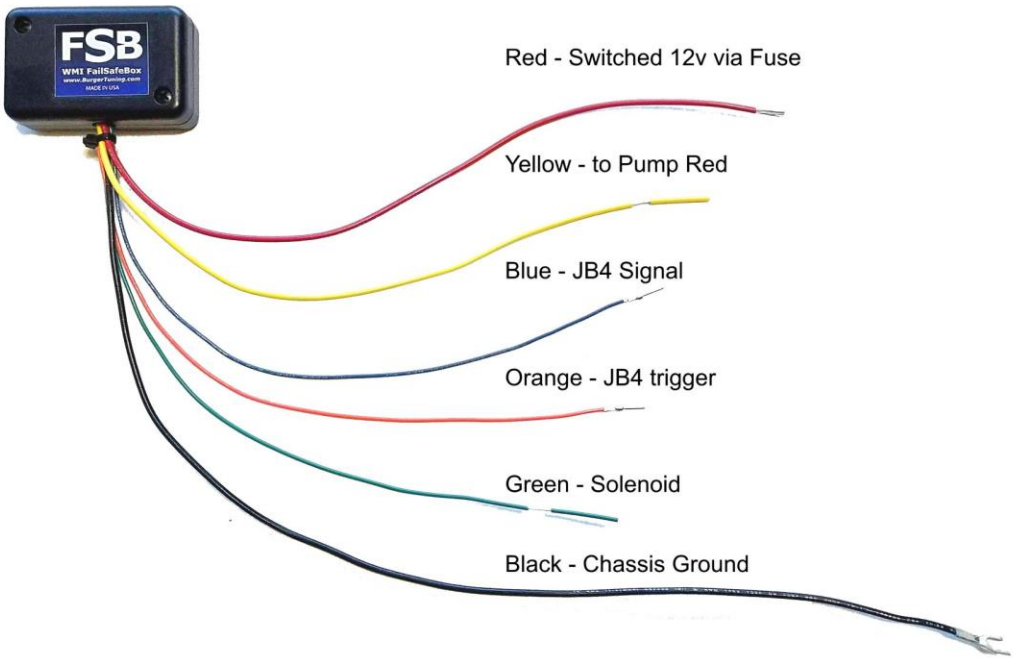


Loosen the clamps holding the rubber coupler in place. Using a screwdriver or other pry tool, release and remove the coupler. Repeat for the driver's side coupler.

Install the silicone couplers on each side. Suggested hardware orientation and line routing shown.





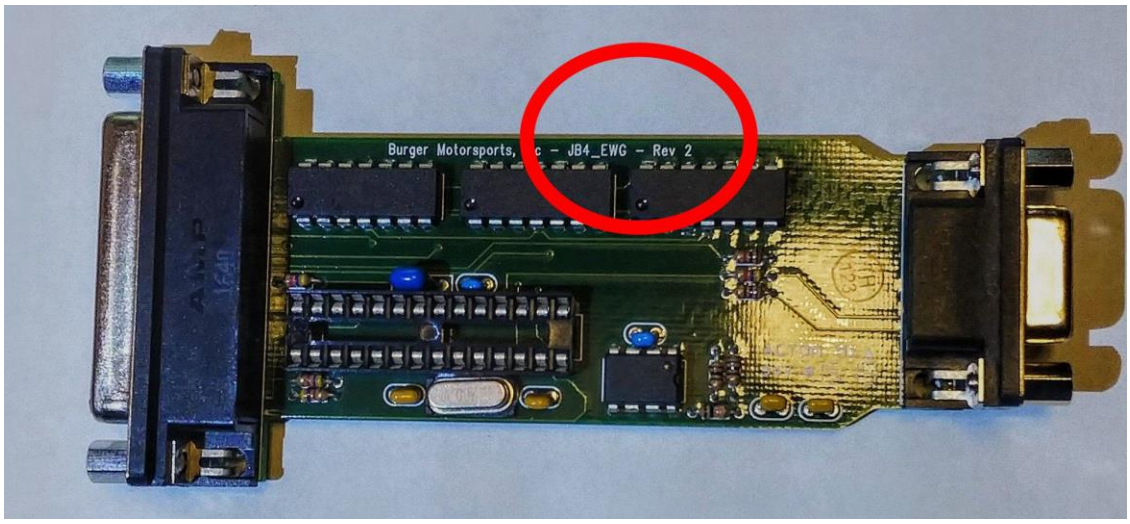


FSB Wiring:

Place the FSB in the driver's side cowl area near the JB4 enclosure. Twist the retaining clip to lift the cover. Open the JB4 enclosure by loosening the fasteners on the metal casing and separate the halves to expose the board within.

Orange Wire:
Use spot #3 in the JB4's 25-pin harness connection for the orange wire. Route the wire through the JB4's harness grommet to ensure it is protected when the enclosure is replaced.

Blue Wire:
The EWG Rev2 board is required for this signal to read properly. To install, insert this wire into position 9 of the JB4's 9-pin connection for the JB4 Connect Kit or BMS Data Cable. A photo of the EWG Rev2 board is below:

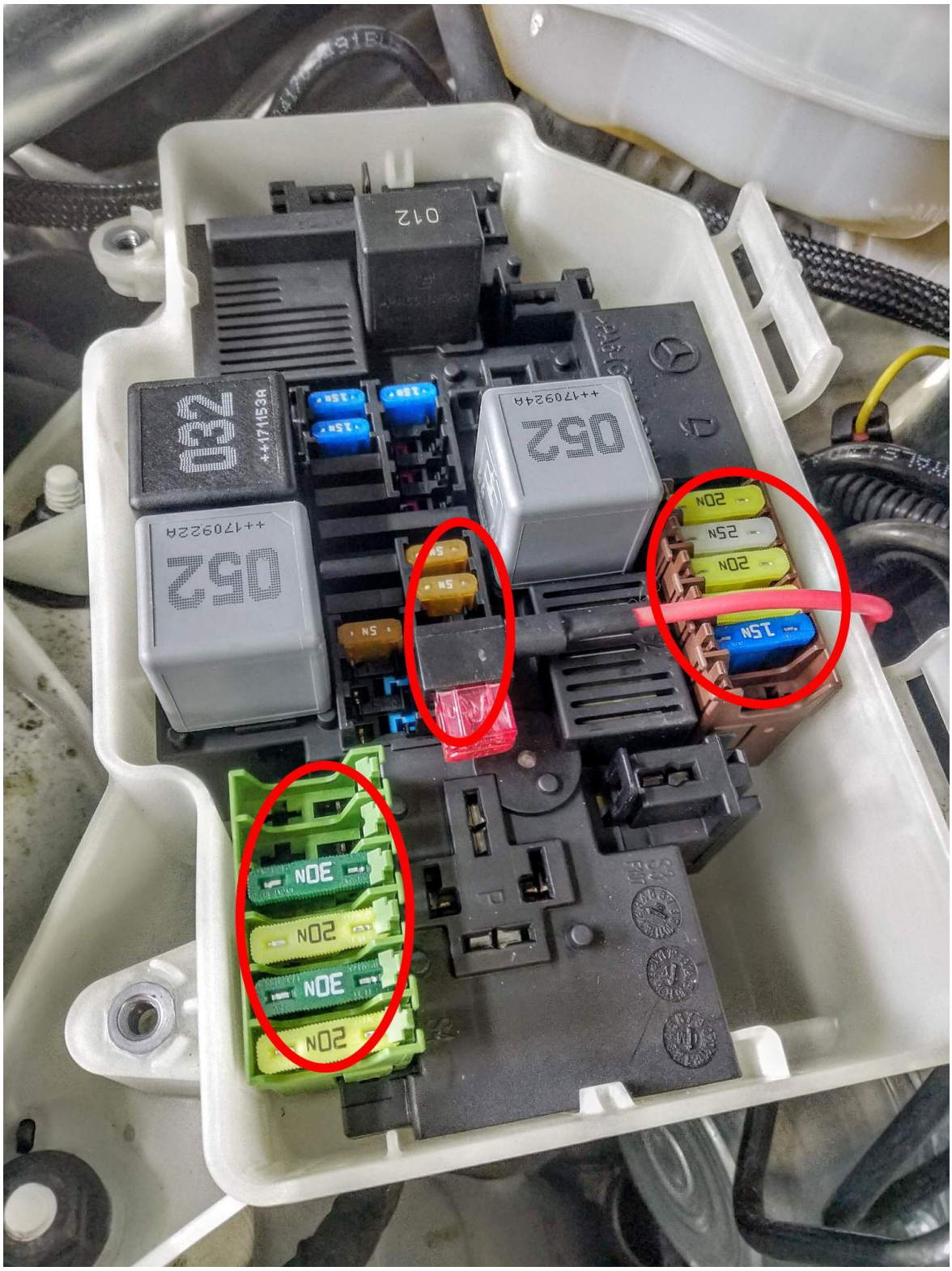


Ground: Route the black ground to a chassis ground. A bad ground can damage the FSB resulting in WMI getting stuck on while ignition is on so find a ground that has OEM ground wires (normally brown) going to it.

A suitable ground point with factory wires attached to it, such as the location shown near the brake booster, is ideal:

FSB Red Wire +12v:
Open the fuse panel under the driver's cowl panel near the brake booster using a T25 Torx tool to loosen the two fasteners and remove the cover (the fasteners will remain embedded in the cover).

Using a piggyback fuse tap or other suitable connection method such as shown below, connect the red wire in one of the locations shown.



PUMP POWER:
Extend the yellow wire to the WMI pump located under the passenger side cowl panel under the hood and attach with a wirenut or suitable fastener.

SOLENOID WIRING:
Both solenoid wires are interchangeable. Attach one to the FSB green connection using spare wire as needed to extend it. Attach the other solenoid wire to a suitable ground location by the solenoid.

Pump ground: The pump black wire will be connected to a chassis ground under the passenger side cowl panel.

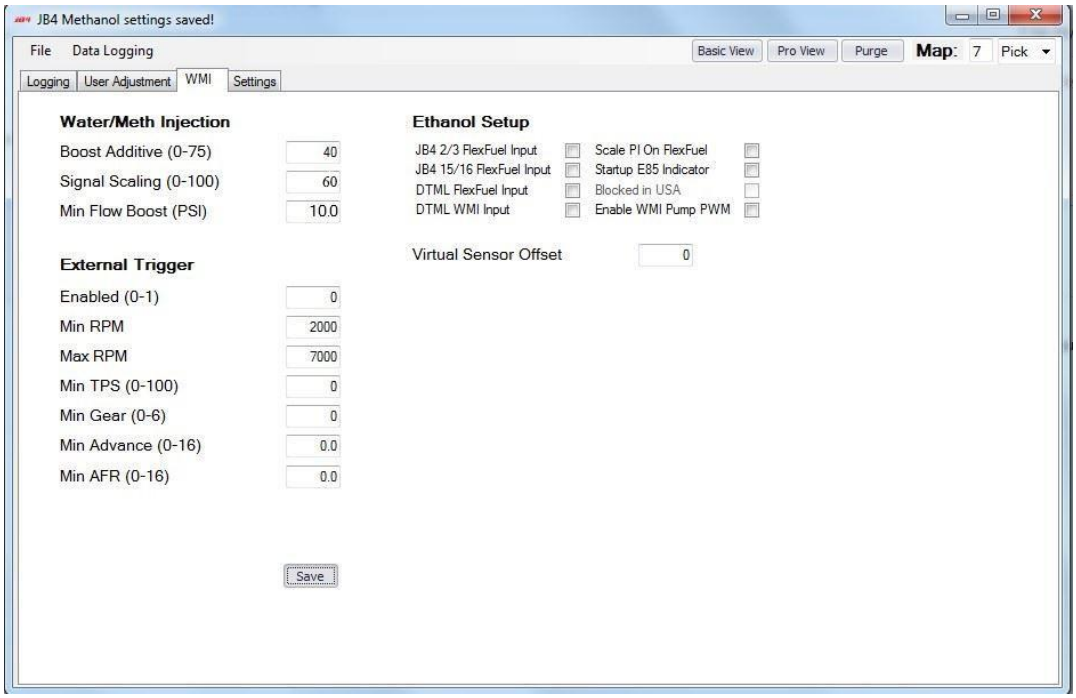
Take care to replace the JB4 board into the enclosure as it is possible to crush the board if you place it improperly. The enclosure halves should make complete contact without any force applied. Ensure this before tightening down the fasteners.

JB4 setup:
Using your BMS DATA cable or JB4 Connect Kit you'll have to enter a few settings to enable the meth integration.

Under the meth tab set Signal Scaling to 60. Then set Boost Additive to 40. The Boost Additive determines how aggressive the JB4 will be with boost when WMI is at full flow. We suggest the 40 setting for pump gas as a starting point. If you happen to run higher octane fuel such as race gas or E85 then this value can be increased. The maximum suggested setting for factory turbos is 75. Note the WMI maps are application specific so refer to the JB4 thread for your application for additional information.

The WMI map is map7. WMI can be used on other maps with reduced safety function so refer to the application specific JB4 thread for additional settings. Some of external trigger and ethanol settings are also active for WMI so be sure to set those as shown below.

Default JB4 WMI settings:



WMI flow for vehicles using the blue meth flow wire:

Note when the system is operating normally you will see a WMI flow reading of 60% to 100%. It's normal for the flow reading to vary between 60-100% based on weather, fluid injected, nozzle size, etc. Readings below 60% indicate a flow issue. If you run out of meth the reading will drop to 10% or less. If you have a wiring or electrical issue the reading will drop to 0%.

Priming system:

The first time you install and any time you run the system dry you will need to prime the pump to get all of the air out of the pump and lines. If you see air bubbles in the line feeding the pump you will need to resolve that issue first and then prime to remove air from the pump after. Any time air is detected in the pump or lines leading in to the pump the JB4 will give a lower meth reading. Note it is normal to see air pockets in the short line between the solenoid and the nozzle when the system is off. It is also normal to see an occasional air bubble in the line feeding the pump. But many bubbles combined with a consistent low flow reading indicate air is leaking in to the system.

Select the JB4 WMI map (7). With ignition on and JB4 software connected press the small “Purge” button on the WMI tab repeatedly to activate/test the pump. Each press will activate the pump for around a second and it should take 6-8 seconds to push all the air from the pump and get it properly primed.

If you are unable to get fluid to come out using the methods above you have a wiring or installation issue and will need to further troubleshoot. Assuming fluid comes out everything should be working properly.