



## Stinger WMI Install Guide

Last updated 8/20/2023

Use subject to terms and conditions posted at <http://www.burgertuning.com/terms.html>

THIS PART IS LEGAL FOR USE ONLY IN COMPETITION RACING VEHICLES AS DEFINED UNDER CALIFORNIA LAW, AND IS NOT LEGAL FOR USE IN ANY OTHER MOTOR VEHICLE. California law defines a "racing vehicle" as "a competition vehicle not used on public highways." (Calif. Health & Safety Code 39048) This part may only be used on competition racing vehicles operated exclusively on a closed course in conjunction with a sanctioned racing event. Competition-only motor vehicles may not be driven to a racing event on a public highway and must be transported on a trailer or other carrier. USE OF THIS PART IN ANY OTHER VEHICLE MAY SUBJECT YOU TO FINES AND PENALTIES FOR VIOLATION OF FEDERAL AND/OR STATE LAW, WILL VOID YOUR WARRANTY FROM BURGER MOTORSPORTS, INC, AND CAN VOID YOUR VEHICLE'S WARRANTY. It is your responsibility to comply with all applicable federal and state laws relating to use of this part, and Burger Motorsports, INC hereby disclaims any liability resulting from the failure to use this part in compliance with all applicable federal and state laws.

**Before starting for general electrical safety we suggest you disconnect the negative battery terminal in the trunk.**

Assemble the BMS nozzle adapter:

- 1) Unscrew the 10mm bolts holding down the TMAP sensor
- 2) Screw in the male WMI line fitting to the side of the adapter using RTV black silicon or similar (we do not suggest using teflon tape on any fittings).
- 3) Remove the o-ring from the injector and screw it in to the tip of the adpater with the small hole facing out.
- 4) Place the TMAP sensor in to the adpater and tighten both back down to the chargepipe using the included longer 10mm bolts.



Drop the access panel under the glove box by pulling it down and unplugging the electrical connection attached.



Fish the WMI line and red power wire lead through the existing grommet using a coat hanger or similar to route it through to the engine bay. It will be convenient to tape the wire and WMI line together so they are routed simultaneously.

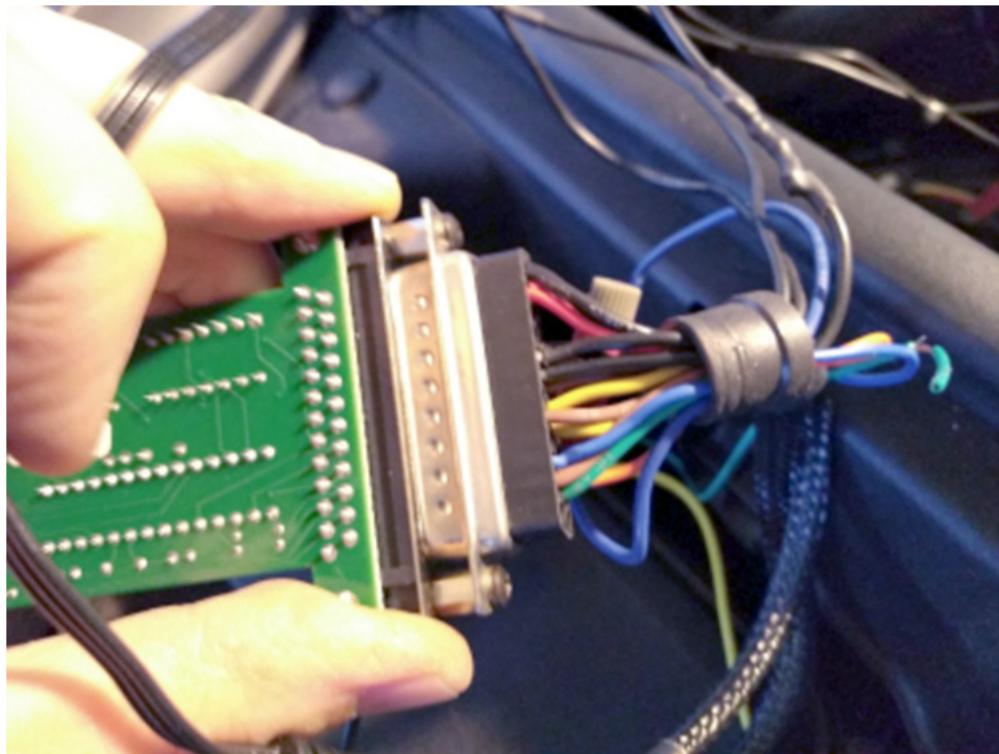
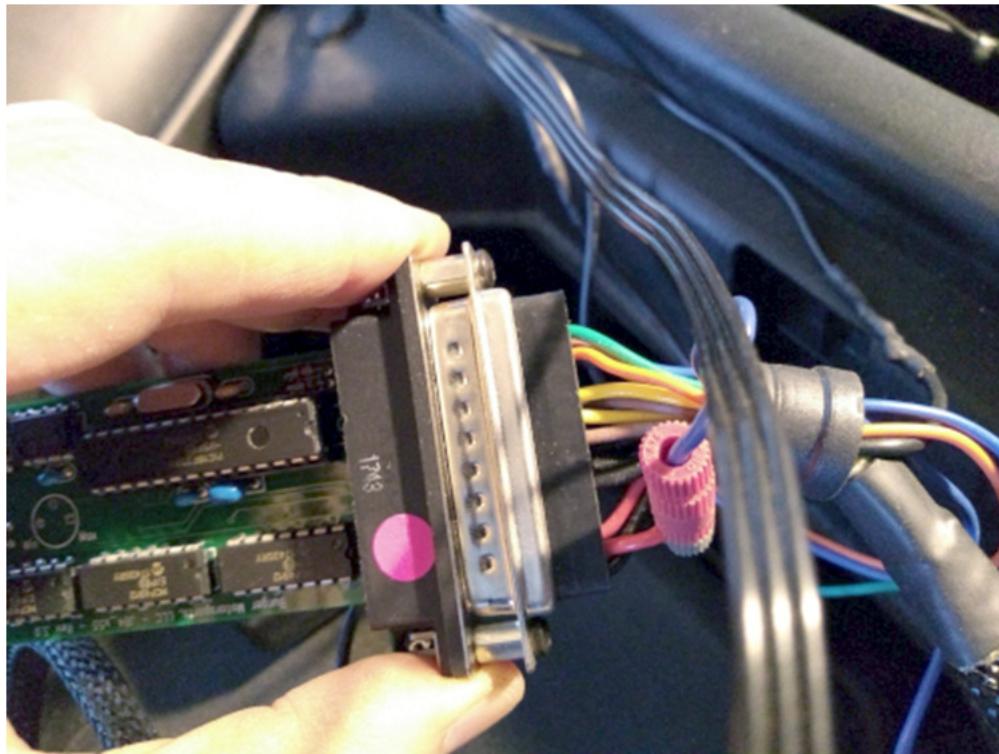




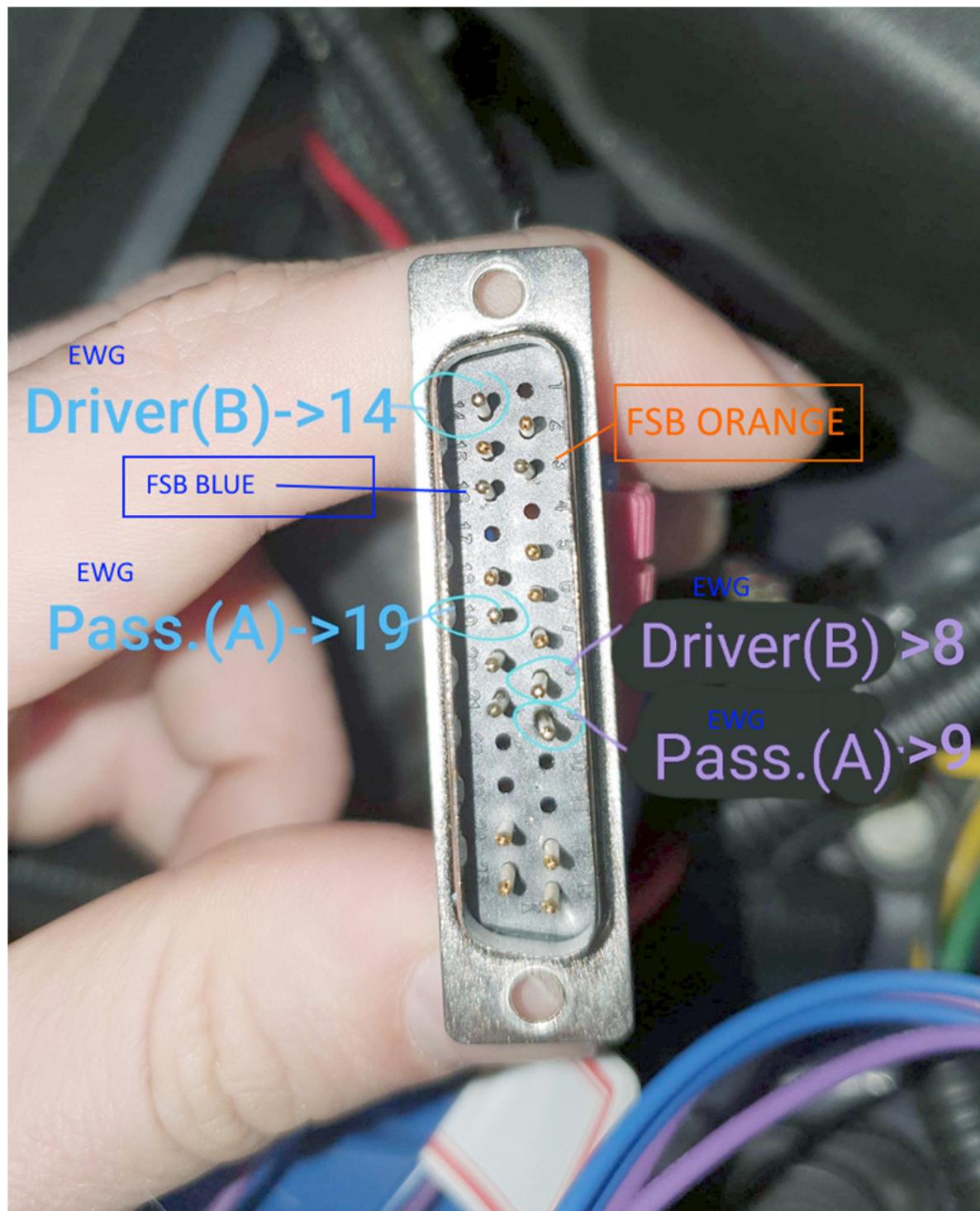
Tighten the solenoid fittings and filter using Teflon paste or silicon sealant. Note the WMI filter is direction and fluid will flow through the filter before flowing through the solenoid. Attach the WMI line to the solenoid input by inserting the line and tightening down the nut for a compression fitting. Locate the solenoid and cut a small piece of line off the spool to route to the nozzle.



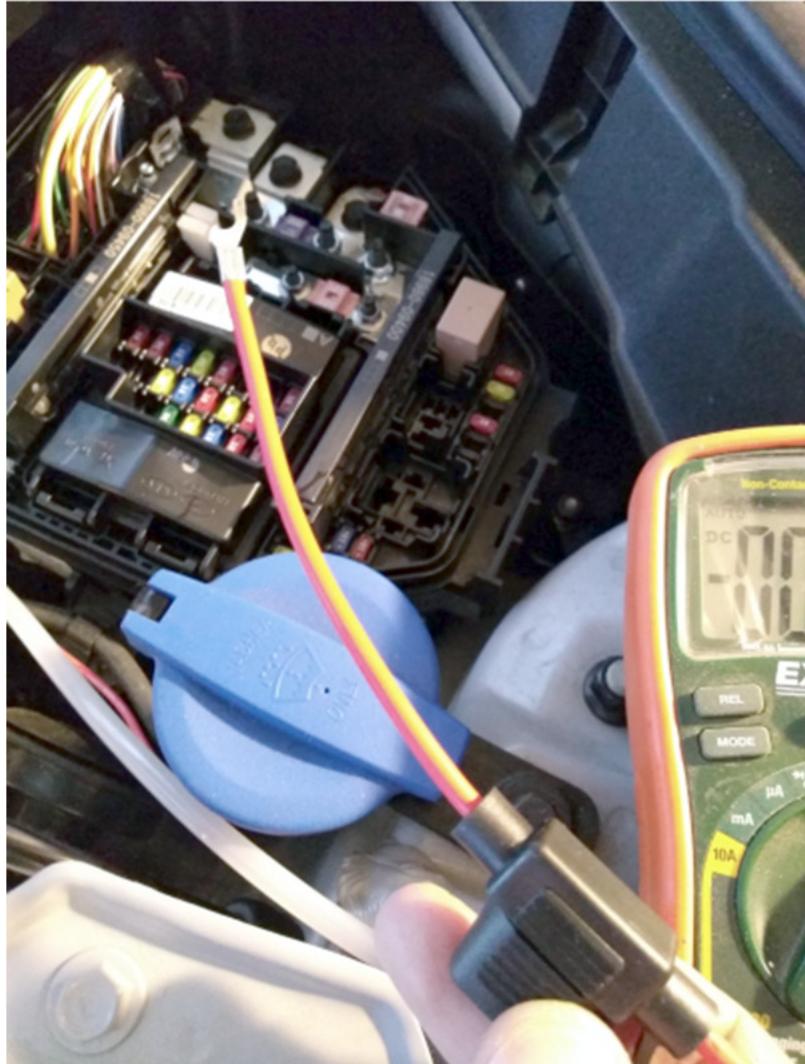
As an electrical overview the FSB has two pins that plug in to the JB4 connector. Open the JB4 control box and route the blue and orange wires through the JB4 grommet. Insert the orange wire in to spot #3, and the blue wire in to spot #16.



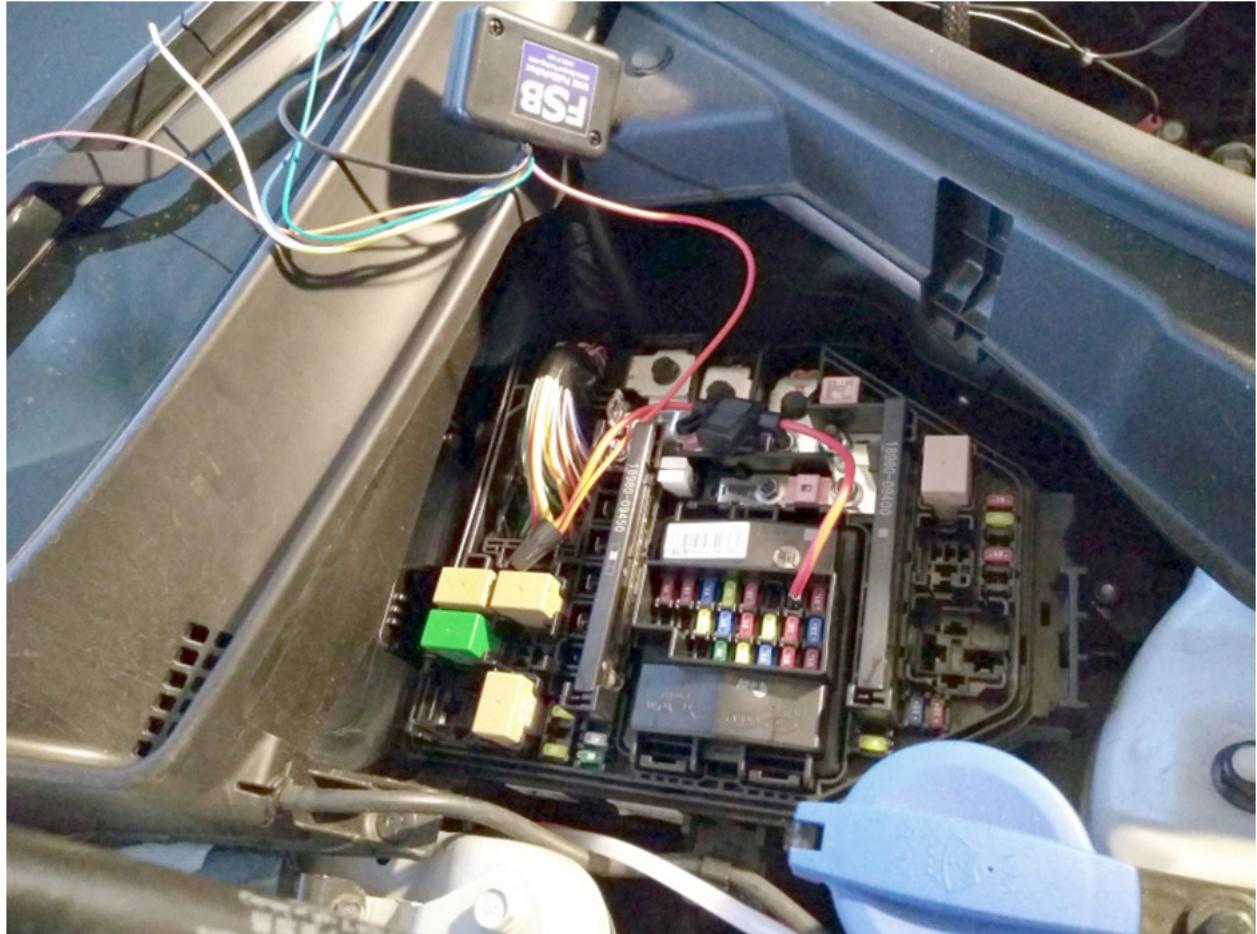
Note pins on the JB4 connector are labeled on both sides.



The FSB red power wire will be routed to an inline fuse using a wire nut for attachment, and then the inline fuse routed in to an unused spot in the fuse box.



Once routed carefully reattach the fuse box cover over the FSB power wire. If you run in to an issue with WMI not turning on, this power wire coming loose or not being properly secured will be a primary suspect. Note, we strongly suggest SWITCHED power for the FSB. Resist the urge to use the easy to reach/attach to CONSTANT power sources.



Loosen this nut to ground the FSB black wire and either one of the black solenoid wires. Make sure fork is fully seated and tighten down the nut. A bad ground will also result in WMI not working properly so this will also be something to check if you run in to issues down the road.



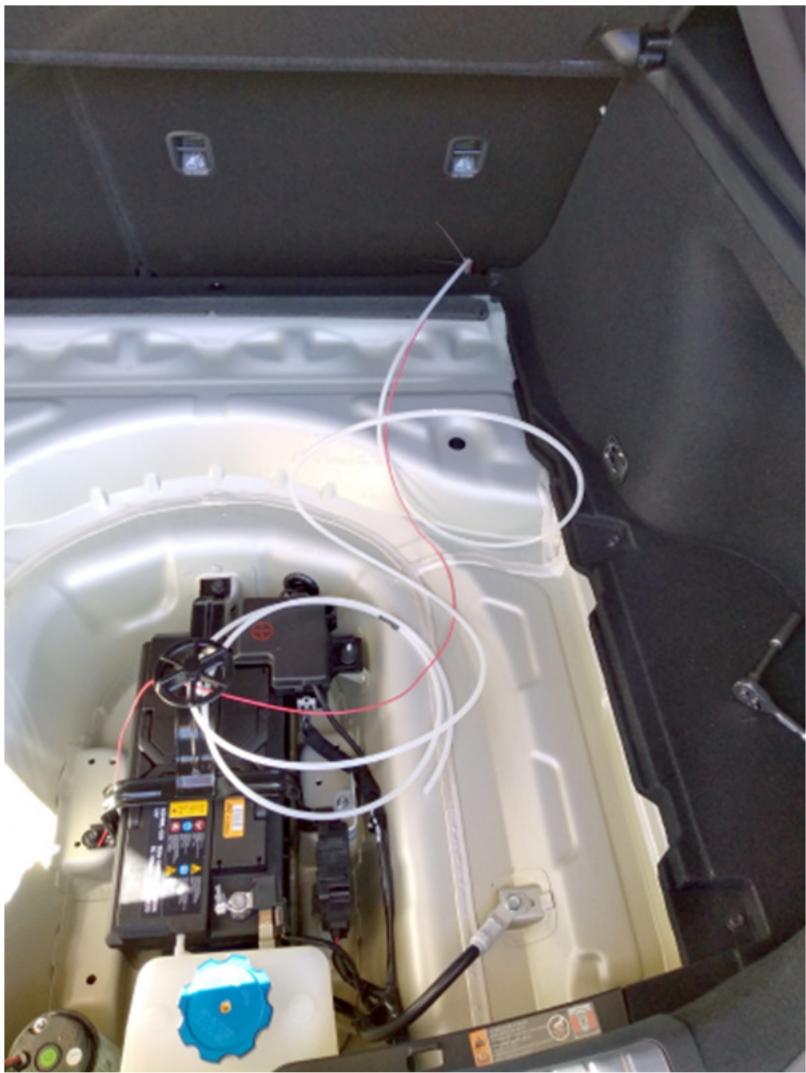
To wrap up the wiring attach the other black solenoid wire to the FSB green connection (this provides power to the solenoid), and attach the FSB yellow PUMP wire to the red wire you routed from inside the vehicle.

Once install is complete and you've done a final test purge to ensure the system is working nicely zip tie the routes together and tuck the FSB along the side of the fuse box out of sight.

Returning inside the car route the WMI line and power wire along the interior panels towards the trunk by tucking them under the plastic trim panels.





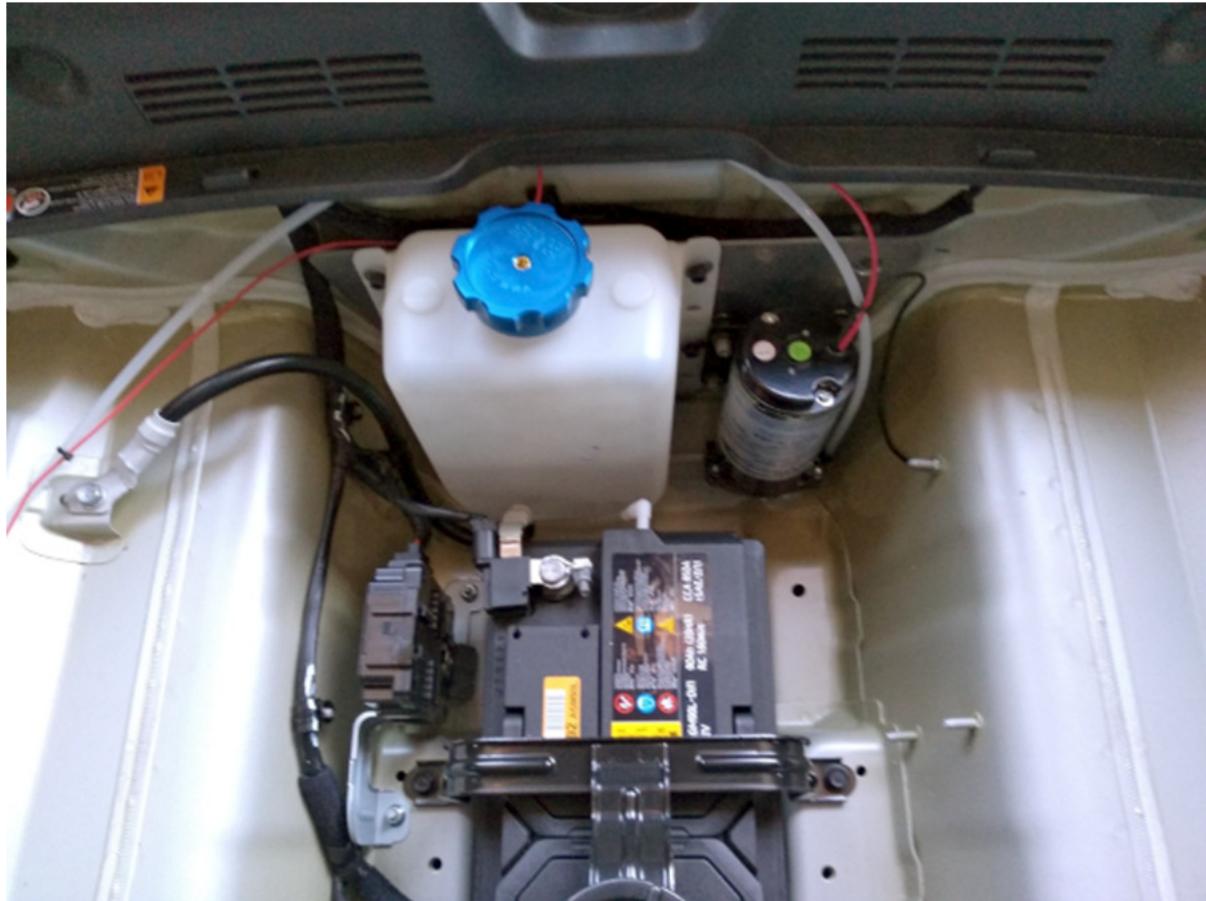


Mount the pump/tank in the spare tire area by custom making a bracket or using the BMS bolt in stealth bracket (not yet released as of wiring of this guide), or route to our 2 gallon integrated tank assembly. Attach the pump ground to a suitable trunk location, we attached a fork and used a 10mm nut to attach it to one of the available studs where the spare tire goes in this photo.

Note the included brass tank fitting needs to be tapped using an 1/4" NPT thread tap. The tanks are shipped untapped allowing for a variety of mounting positions.

Note we strongly suggest a BMS check valve tank cap to avoid the possibility of WMI fumes entering the passenger cabin bay during warmer weather.

After mounting the pump reassemble any loose panels and reconnect the battery.



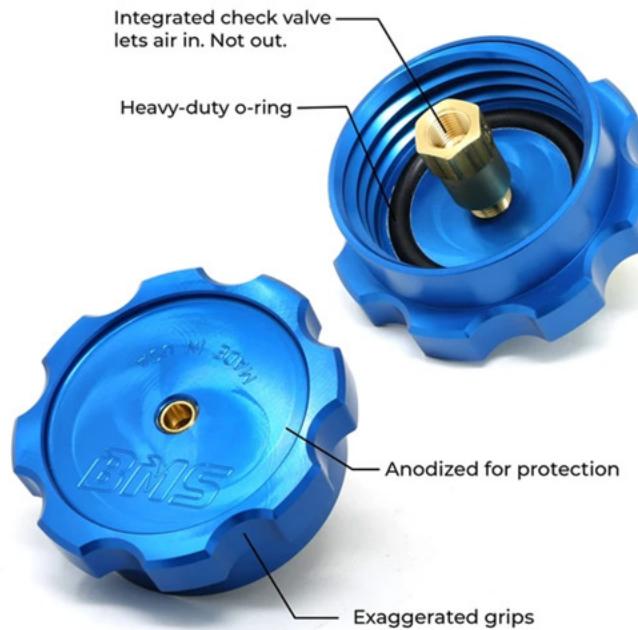
Install the protection diode as shown at the pump. This protects the FSB from shorting out in the event of a poor ground location or loose ground wire.



Possible mounting location for BMS 2 gallon integrated tank.



If you purchased the optional billet vent cap with checkvalve to prevent vapors from leaking out of the tank tighten in the check valve as shown.



Software setup in the JB4:

On the WMI page:

Enter 60 under meth flow scaling. This value is tied back to how the JB4 computes WMI fluid flow and generally doesn't need to be changed unless suggested by BMS technical support.

Enter 8psi under minimum WMI boost, this value is user adjustable and is the minimum boost required before WMI flow will begin. Note, there are several additional factors that contribute to WMI flow including pedal input, engine speed, throttle position, and other mapping values that may change from firmware version to firmware version.

Enter 50 under boost additive. This is the primary user adjustable value and determines how aggressive the boost profile will be under full WMI flow. A value of 75 is roughly equivalent to map5 while a value of 0 is roughly equivalent to map1. As WMI flow increases the JB4 will transition from the lower boost profile to the higher boost profile. In the event you run out of fluid during a run or flow suddenly stops, the JB4 will safely transition back to the lower boost map. Boost will be held low until WMI is properly flowing to avoid tip-in knock common with non-integrated WMI systems.

Note by default WMI is active only on map7. If you wish to turn on WMI for all other maps (but without any boost mapping safety) you can do that by setting meth\_trigger = 1 on the user adjustment page.

Once the basic installation is complete add a little fluid to the system, unplug the line going in to the nozzle or solenoid and stick it in an empty water bottle, and do a test purge to check for leaks and ensure basic functionality. To purge ensure map7 is selected, ignition fully on so system is powered up, and press the purge button at the top of the WMI page. It normally takes 5-10 seconds of initial flow with the line off the nozzle to clear all air out of the pump. Note purging with the line attached to the nozzle will not clear air.

If you ever run the system fully empty and notice your flow in JB4 logs is not coming up to 100% after refilling, repeat this purge process.

If the system is not purging first ensure you have the JB4 set to the WMI map 7, check the FSB ground, and the FSB power. If you open the FSB there is a blinking green LED light when it's powered up and can use that to help diagnose power related issues. Most initial install issues end up being power or ground to the FSB related.