

BMS W205 AMG C63/C63S M177 JB4 Install Guide

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JB4 Tuner Install Guide

You will need the following tools, at minimum, to complete the install:

Flathead and Philips screwdrivers
7 and 10mm sockets and ratchet
T25 and T30 Torx screwdrivers or bits
Pliers

Helpful but not required tools:

Trim removal tool
Flashlight
Rags
Gloves
Fender protectors
Awl or utility knife

A photo of the tools used to produce this guide is below:



The JB4 install consists of two pairs of MAP sensor connectors, two sets of fuel pressure connectors, and a connection at the OBDII port under the dashboard.

Throughout this guide, references will be made to the various connector pairs by their wire colors and by their gender. Note that electrical connector gender is defined by the pins contained within and not by the housing itself.

Step 1: Disconnect the battery's negative terminal in the trunk

Unlock the vehicle and open the trunk and hood. Make sure to leave the doors unlocked. To prevent any codes, move the vehicle's keys out of range of the vehicle for at least 10 minutes to allow the ECU to go to sleep before proceeding. Keep the keys away from the vehicle until the battery is disconnected.

Remove the trunk lining or pull back the section to expose the negative terminal. Remove the cover over the terminal and loosen the 10mm bolt and disconnect the negative battery cable from the battery.



Do not close the trunk until after you have reconnected the battery or you will not be able to reopen it.

Step 2: Airbox removal

In order to access the sensors, you must remove the air filter housings (airboxes) from the vehicle. Making sure the vehicle is cooled off first, start by removing the covers at the rear of the airboxes as shown in the below photo. It is held on by a tab at the back of the cover.



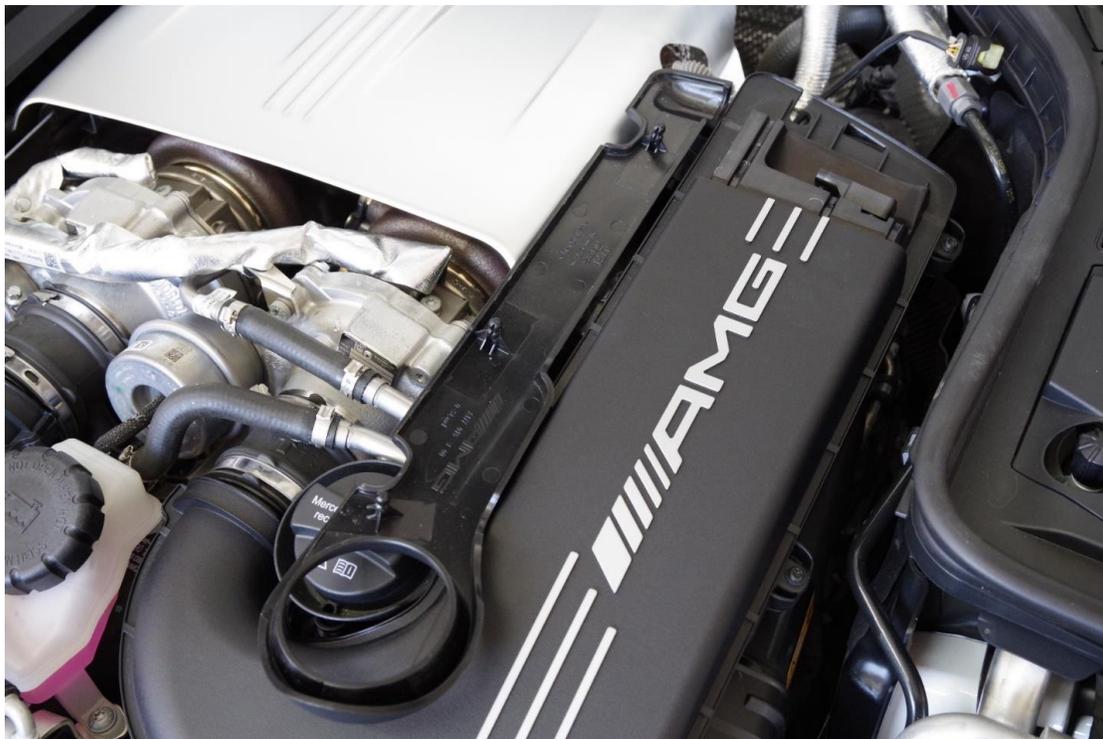
Remove the sensor underneath the cover from the airbox by twisting the sensor while applying pressure. It can be removed when twisted at a specific angle. Repeat at both airboxes.



Using a pair of pliers, pinch the clamp holding the hose at the front of the vehicle near the grille, then slide it back over the hose as shown. Repeat at both sides.



Remove the decorative cover from the airbox by pulling up on the piece.



Loosen the four T25 fasteners at the perimeter of each airbox. You do not need to remove these entirely, they will remain captured when loosened.

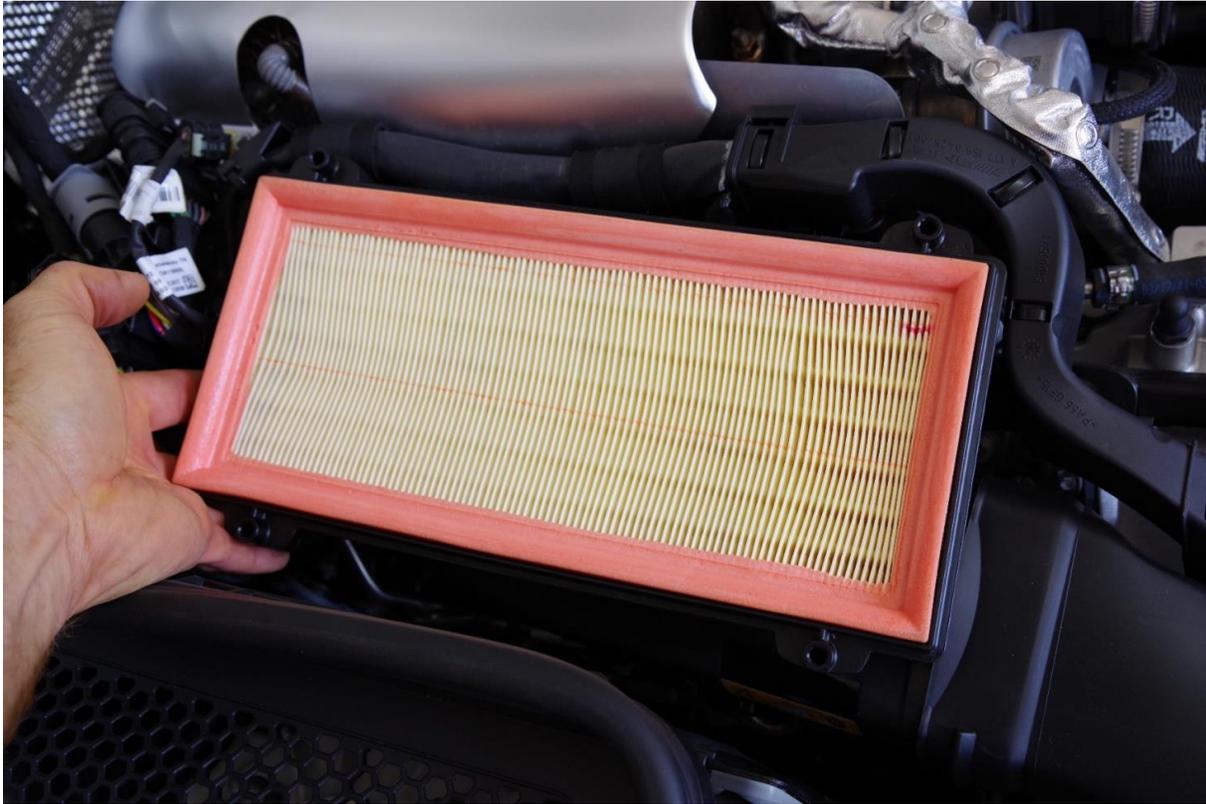
Using a 7mm socket, loosen the clamp at the turbocharger inlet. Repeat for both sides. You can now remove the airbox lid from the vehicle. Twist the lid up to release from the turbocharger and then carefully disconnect the hose at the front of the vehicle. Repeat for both sides, set the parts aside.



Disconnect the airbox inlets from the trim at the front of the vehicle using a trim tool or screwdriver, or by pressing on the tabs with your fingers. Repeat for both sides.



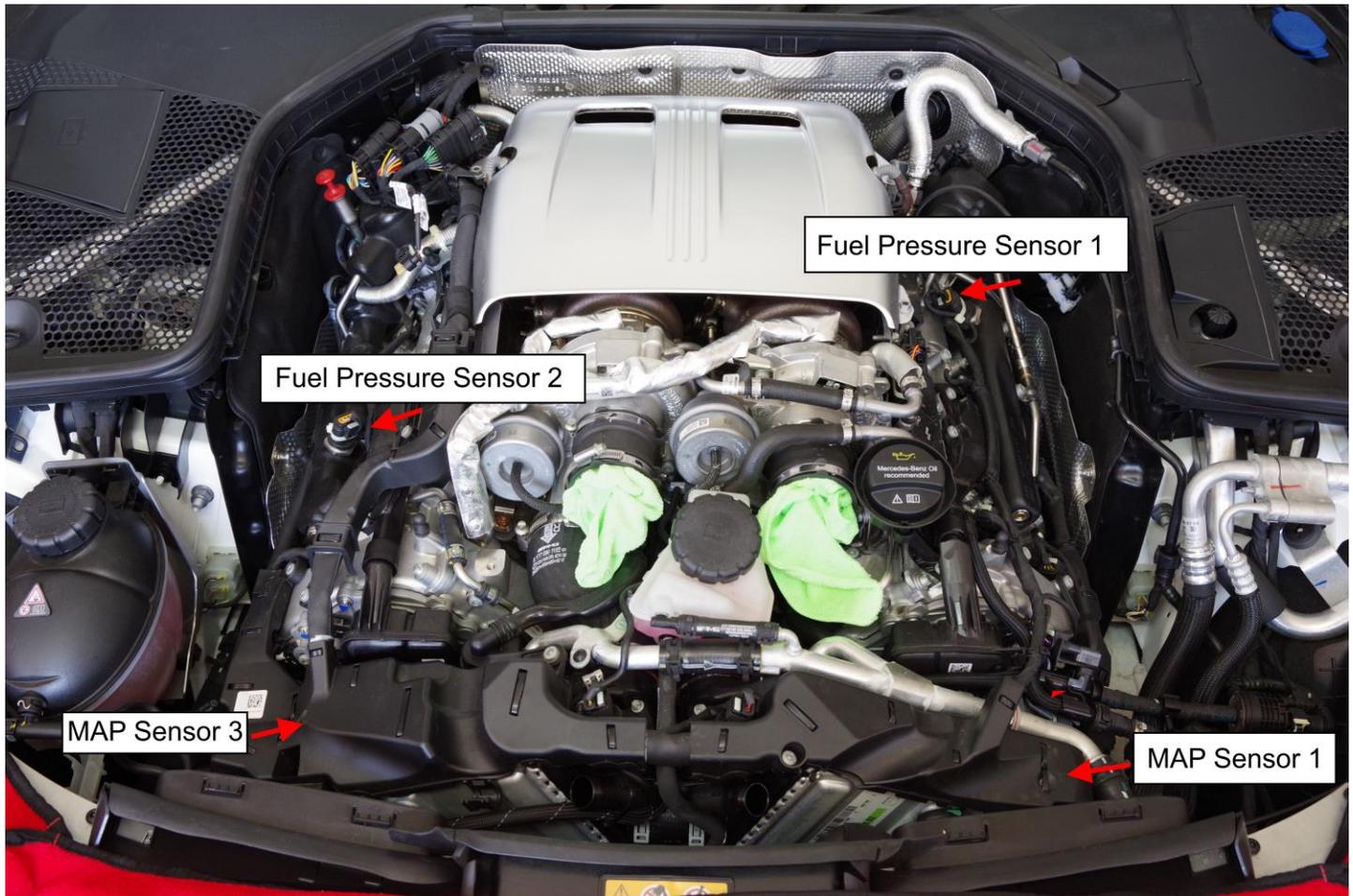
The lower airboxes can be removed by pulling up as shown.



Remove both airboxes, then place a clean rag into each turbocharger inlet to prevent any foreign debris from getting into the turbochargers.



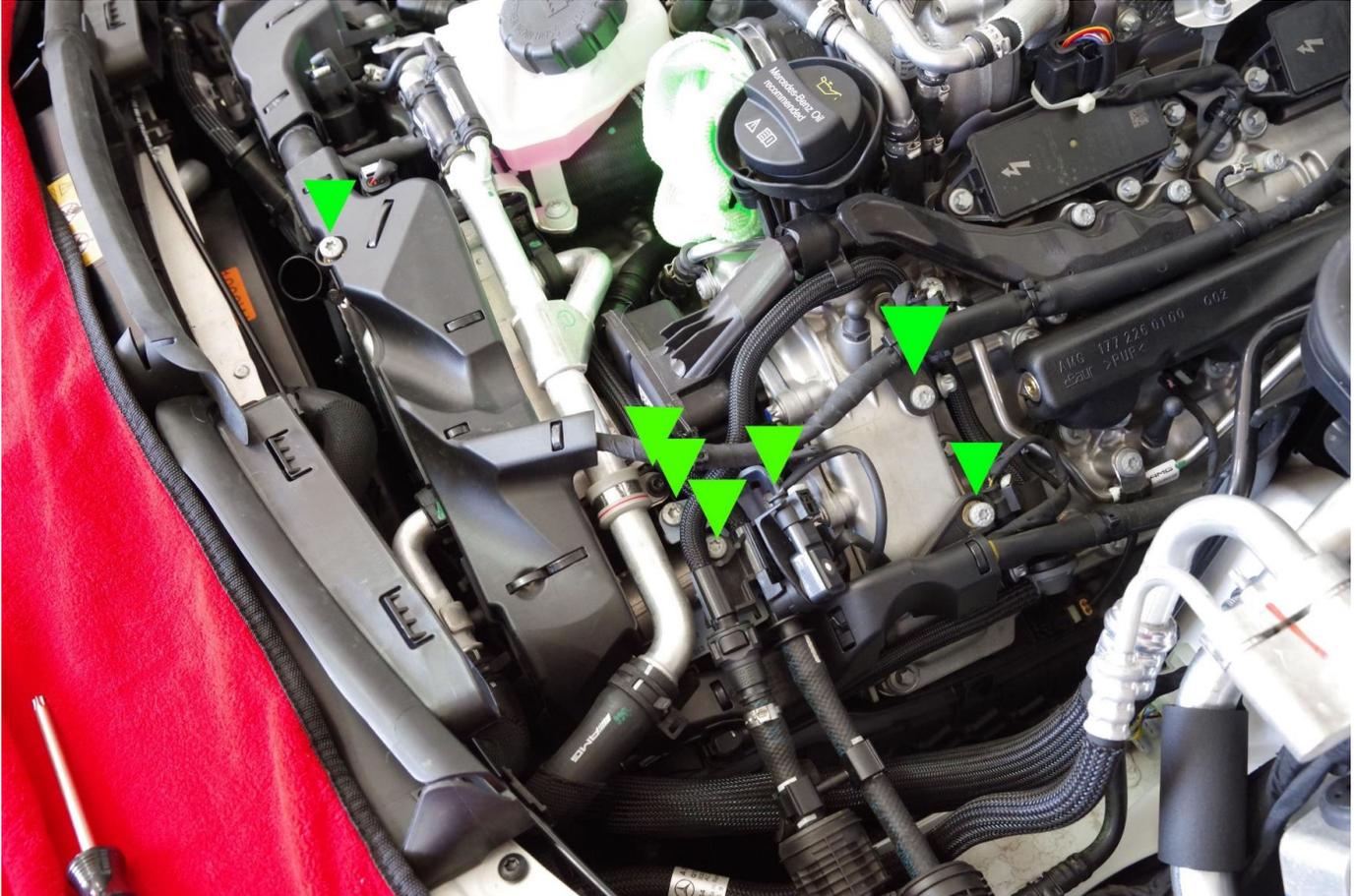
Familiarize yourself with the locations of the sensors that will be used during the JB4 install.



In some installations, an additional two MAP sensor connections are required. If directed by Burger Motorsports support staff, please refer to the additional connections at the end of this guide for connecting these connections.

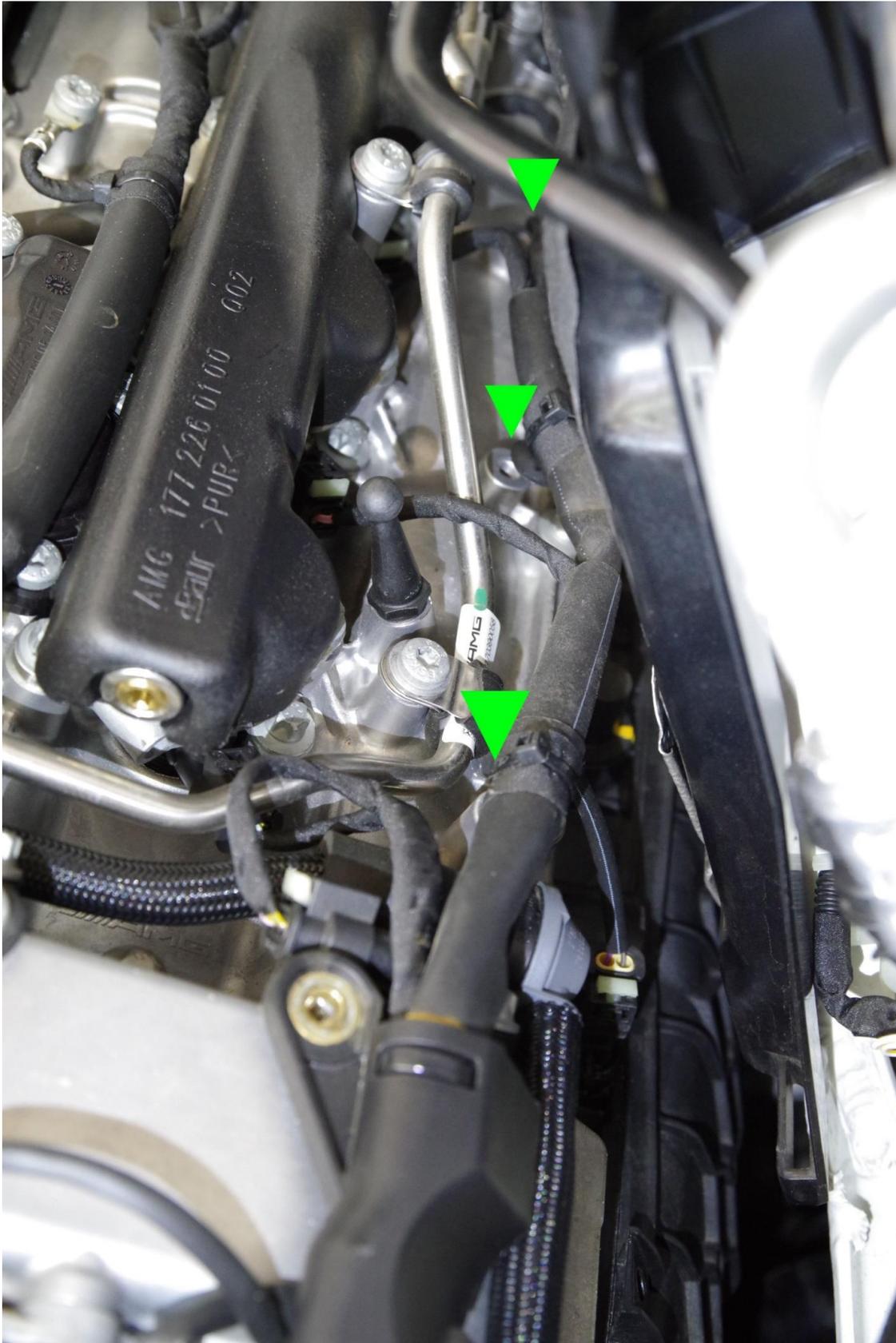
Step 3: MAP Sensor 1 (driver's side in LHD vehicles)

To access MAP sensor 1, loosen and remove the bolts that hold the plastic shrouding containing the factory wire harness, along with the fasteners that hold down the rubber clamp and retention brackets.

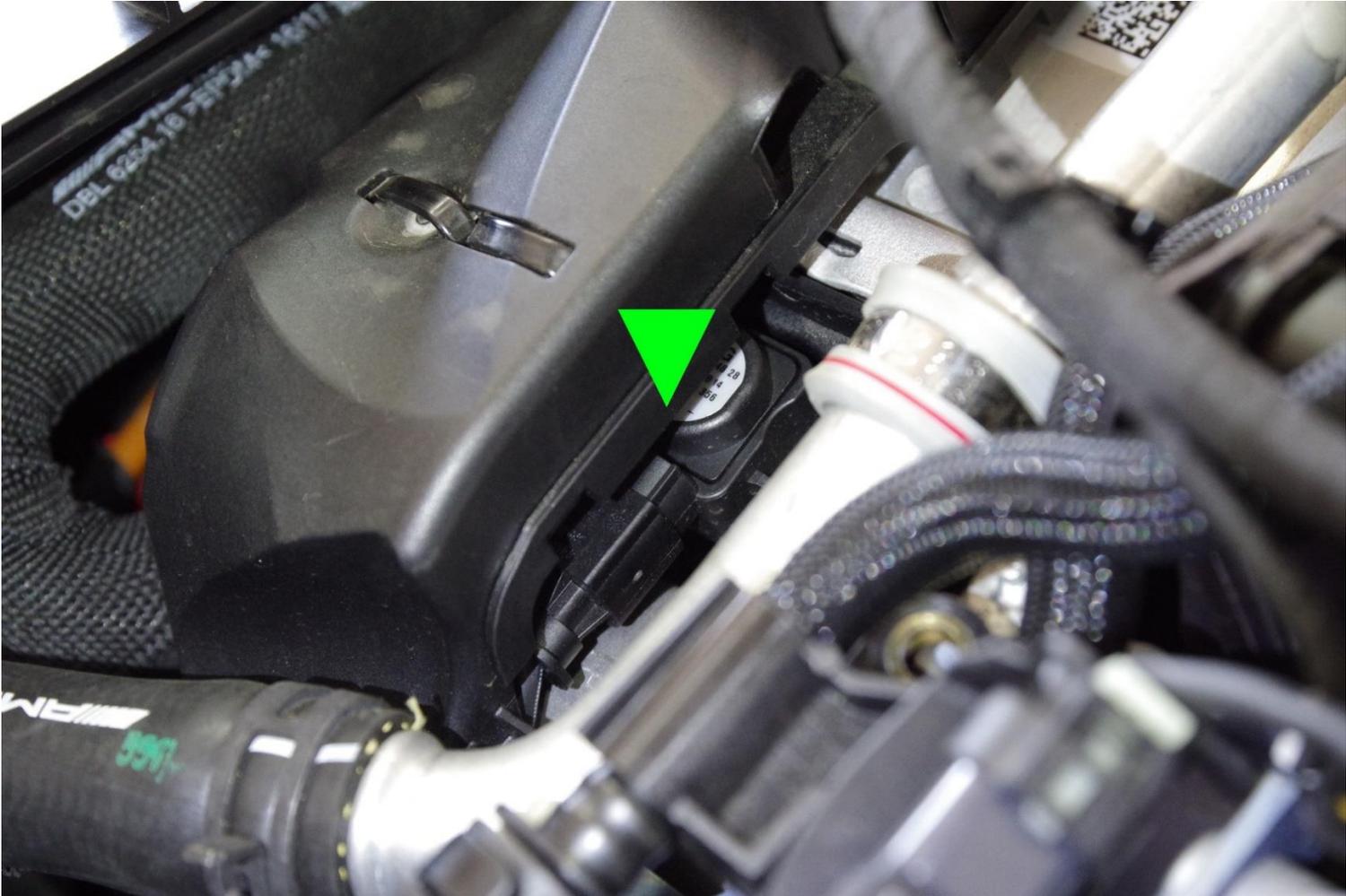


Note for this section: If directed by Burger Motorsports support staff, please refer to the additional connections at the end of this guide for connecting MAP sensor 2's brown connection.

Release the harness from the standoffs at the valve cover as shown if needed for additional clearance.

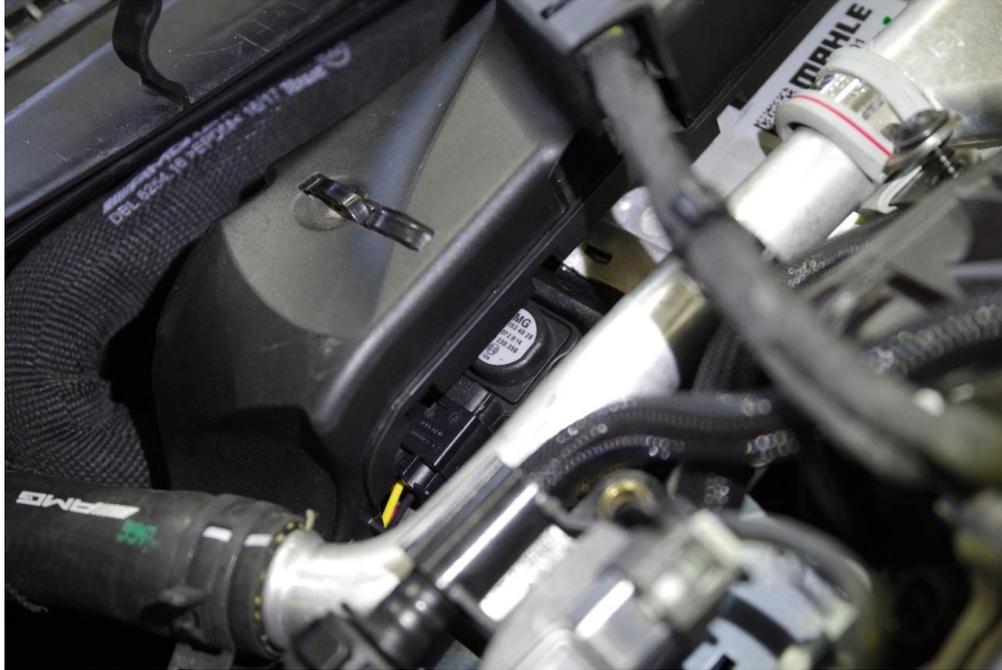


You should now have enough clearance to slightly lift the plastic harness shroud. MAP sensor 1 is shown in the photo below. If you find you do not have sufficient clearance, look for any areas where the shrouding or wiring is taut. Disconnecting additional sensors or fasteners may be required to gain adequate access on some vehicles.

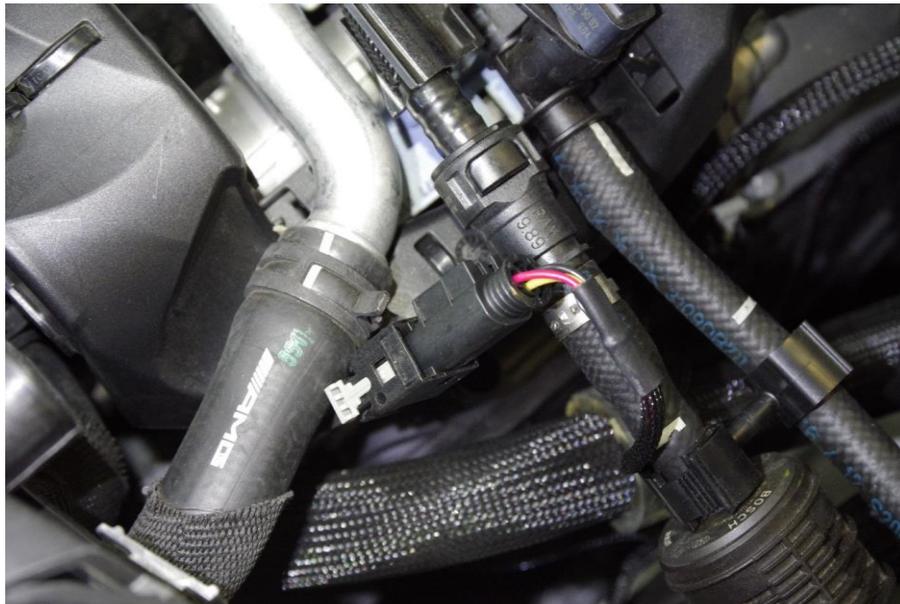


The release clip is found at the front edge of the sensor, toward the front of the vehicle. To release it, you will need to push the tab toward the driver's side of the vehicle first to unlock the tab, then press the tab toward the sensor body while simultaneously putting pressure on the body of the connector. You can use a screwdriver or your fingers for this purpose. Slide the connection off of the sensor.

The JB4's red/yellow/black harness patch will connect at this location. Attach the female connection to the sensor as shown, making sure to firmly press the connection in place.



Connect the JB4's male connection to the factory wiring you removed from the sensor as shown.



Step 4: Fuel Pressure Sensor 1

Locate the fuel pressure sensor as shown.

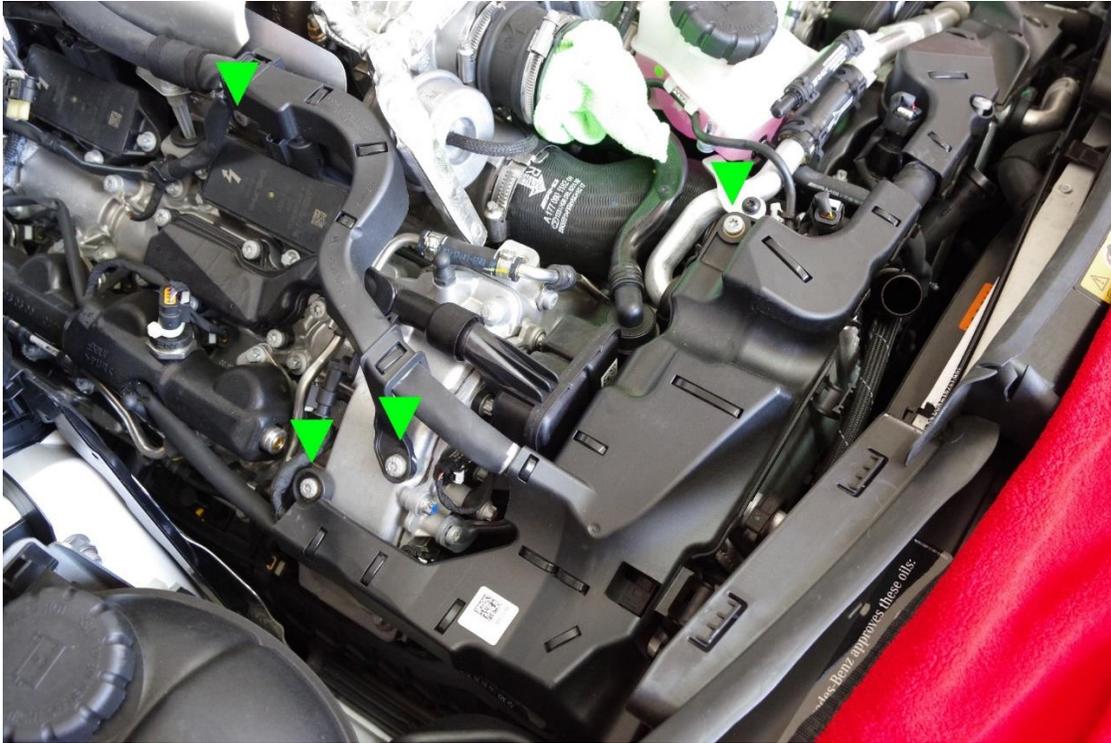


Remove the factory wiring connection in a similar manner to the previous sensors. Place the JB4's orange wire bundle in this location as shown.



Step 5: MAP Sensor 3

Now on the passenger side of the vehicle (LHD), loosen the bolts holding the plastic harness shroud as shown.



MAP sensor 3 can be seen through a small window in the top of the shroud.



Using a screwdriver or other tool, remove the wiring connection at this location and place the JB4's purple wire connection.

Note for this section: If directed by Burger Motorsports support staff, please refer to the additional connections at the end of this guide for connecting MAP sensor 4's white connection.

Step 6: Fuel Pressure Sensor 2

Locate fuel pressure sensor 2 in the location shown.



The JB4's blue wire bundle attaches in this location as shown.



Replace the hardware removed from the harness shroud and reclip any sensors you detached during this part of the process to gain access.

Step 7: JB4 harness routing

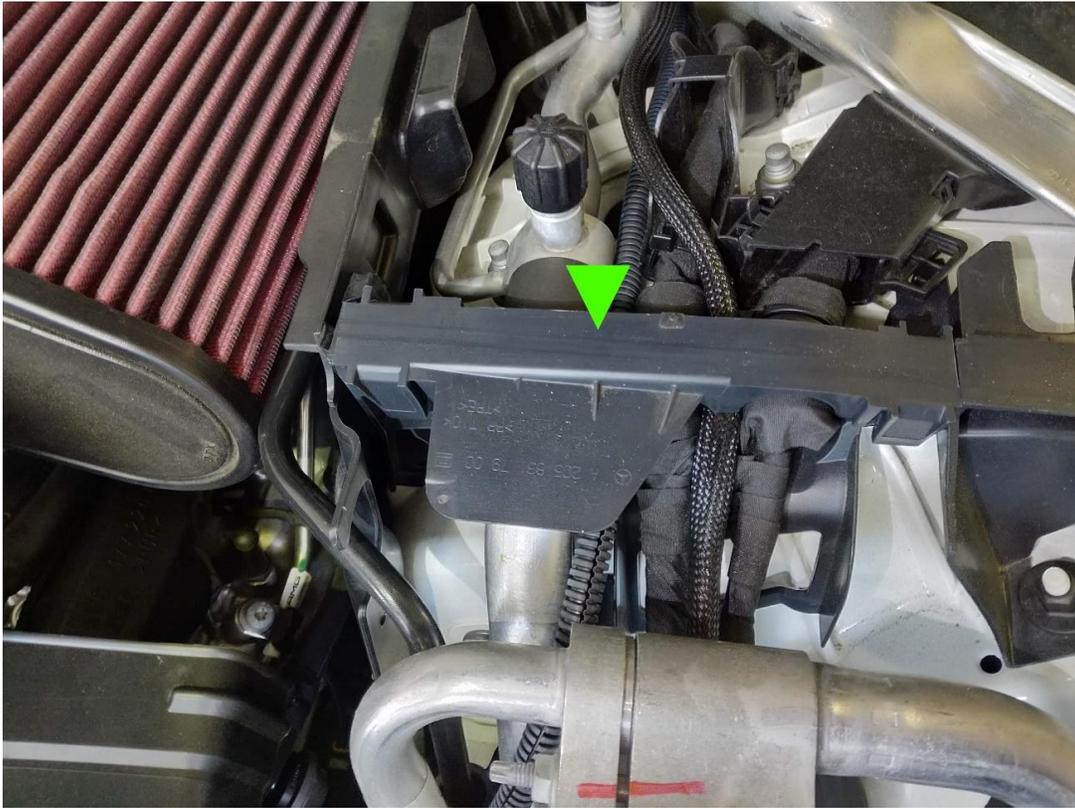
Route the JB4 harness across the front of the engine, securing it with zip ties or within factory clips if possible.



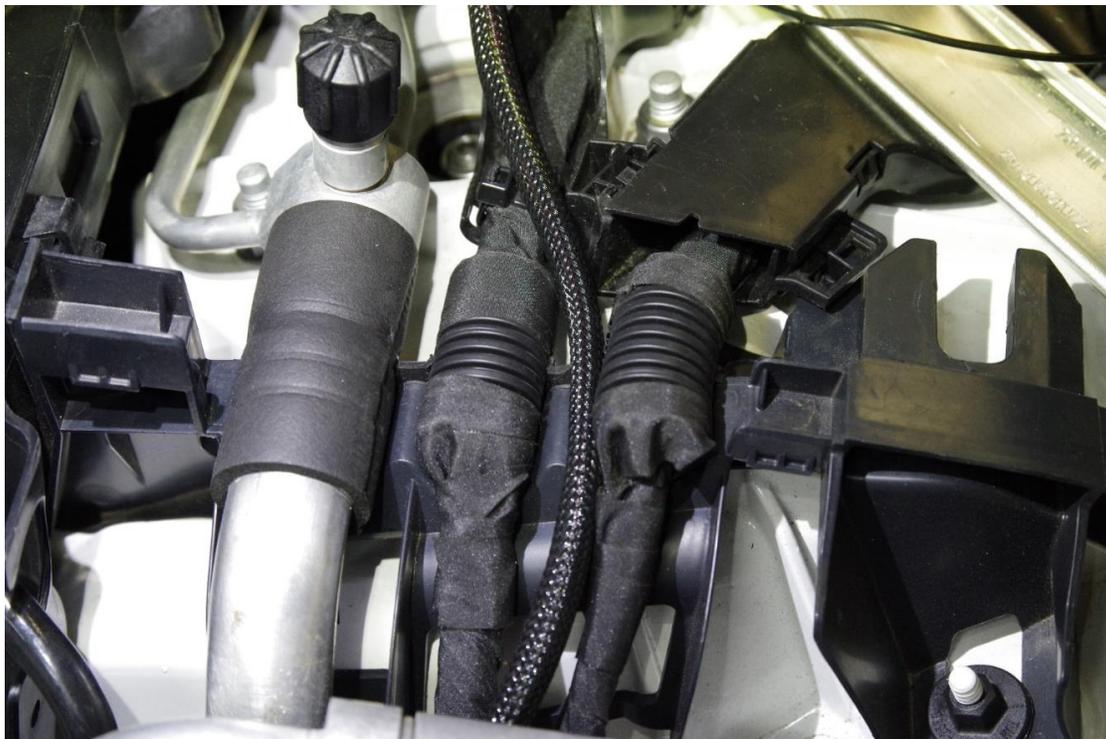
Twist the knob as shown and lift the shroud at the driver's side of the engine compartment (LHD shown).



Remove the plastic cover from the leading edge of the lifted shroud by unclipping it from the retaining tabs.



Lay the JB4 harness across the area as shown.



Step 8: OBDII connection

Under the shroud, find the plastic cover shown at the firewall.



Remove this cover and, using a sharp tool like an awl or utility knife, make an incision into the rubber underneath. A photo of an awl poking through from the engine compartment is shown below.



From the driver's footwell, enlarge the opening enough to fit the small end of the OBDII cable through the hole and into the engine compartment. You may want to wrap the end in tape to protect it as you press it through. Attach the OBDII cable to OBDII port as shown.



Back in the engine compartment, attach the OBDII cable end to the JB4 harness, noting the orientation of the connection.



If you are adding the JB4's Bluetooth Connect kit or USB data cable, this is a good time to attach that to the JB4's circuit board.

If you've purchased the optional JB4 mobile adapter open the enclosure and plug the adapter into the JB4 board directly as shown. When closing the enclosure ensure the control board is properly lined up and only tighten down screws once the case closes smoothly to avoid damaging the JB4 board. Note some older JB4 mobile adapters have a separate blue wire which will need to be attached to the JB4 harness via a posi-tap, refer to the video on the JB4 Mobile adapter page for additional directions.

This video shows how to take apart the JB4 enclosure and plug in the adapter, and for those models that require it, how to attach the posi-tap to the loose blue wire:

<https://youtu.be/Q6NvtItTrUg>

JB4 Connect Kit (Pinned Power) Install Guide

04-13-2020

1) Open the JB4 enclosure.



2) Install the DB9 connector and ensure both screws are secure.



Tuck the JB4's control box into the compartment near the brake booster. Snap the small cover you removed in step 6 back in place carefully over the JB4 harness then and relatch the large shroud over the brake booster area.



Step 9: Replace the airboxes

Reversing the removal procedure, replace the airboxes you removed from the vehicle in step 2, making sure to remove any rags or towels from the turbocharger inlets. Check for any loose hardware.

Step 10: Reconnect the battery

Reconnect the battery's negative terminal in the trunk, replacing any covers removed during this process.

Start the vehicle and drive around normally until it reaches operating temperature. Then with progressively heavier throttle applications, make sure you allow the vehicle to adapt to the new power. Installation is complete!

Find the latest information on the JB4, including, software, firmware, and more information here:

<https://www.jb4tech.com/forums/showthread.php?t=55094>

Map changes, datalogging, updates are done using the BMS data cable or the JB4 Mobile Bluetooth kit.

Information on the JB4 mobile app including installation information is found here:

<https://www.jb4tech.com/forums/showthread.php?t=21742>

Information on the hard-wired USB connection and PC JB4 interface is found here:

<https://www.jb4tech.com/forums/showpost.php?p=197021&postcount=1>

Map guide:

Map 0: Stock operation, JB4 disabled

Map 1: Default performance map, 4psi peak over stock, taper to redline

Map 2: 5psi peak over stock, taper to redline

Map 3: 6psi peak over stock, less taper to redline, suggest E85 mixture or octane booster

Map 4: Low boost VALET map -- Ideal for when "friends" are driving your car

Map 5: 7psi peak request over stock, less taper to redline, requires unleaded racing fuel or E85 mixture

Map 7: 9psi peak request over stock, requires unleaded racing fuel, boost control module

Map 8: WMI (water/meth) progressive mapping -- under development

For any questions on the install, please contact support@burgertuning.com.

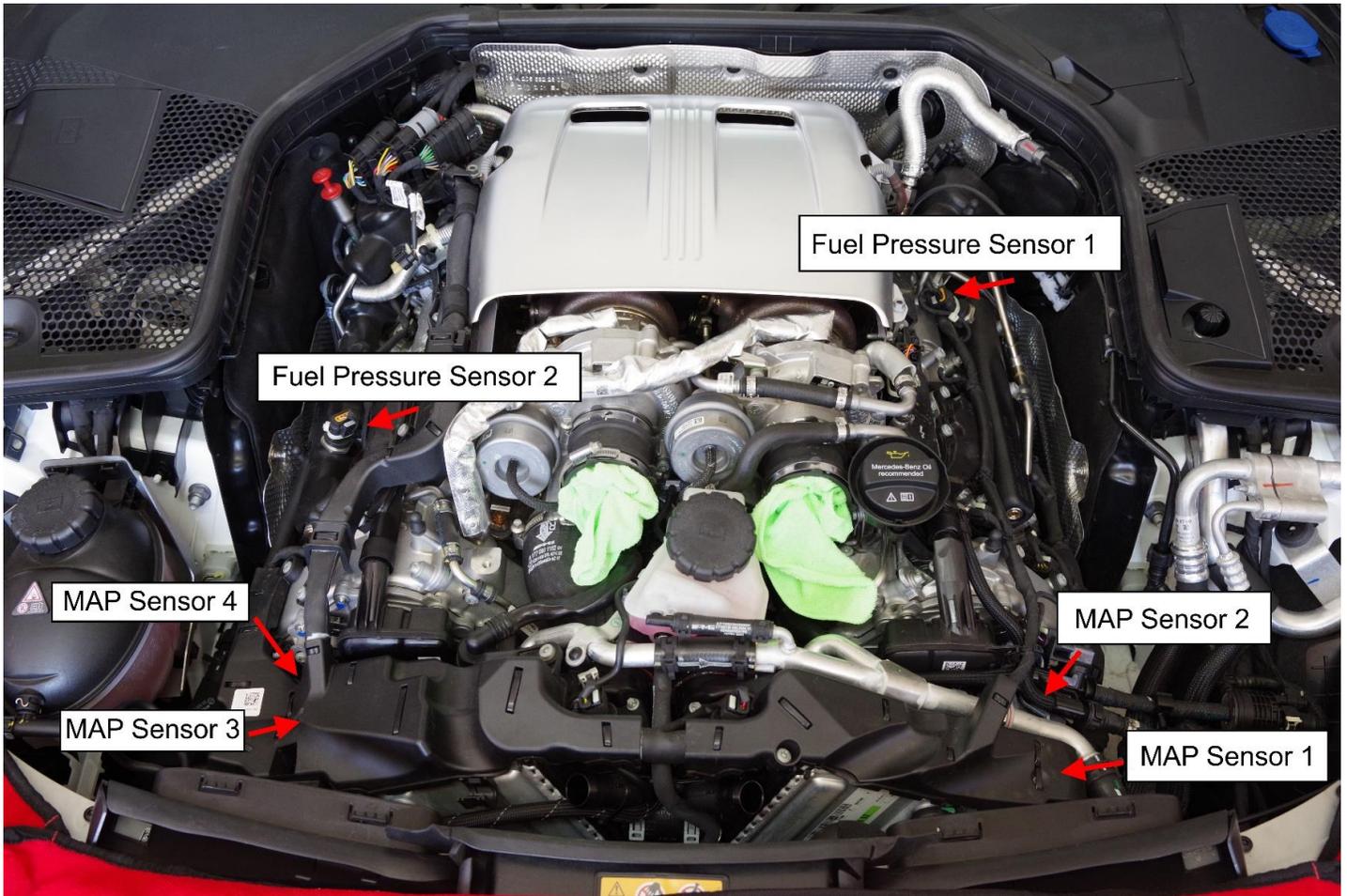
Note for 2020+ models:

The JB4's firmware must be updated via the JB4 Mobile Bluetooth kit or BMS USB cable to platform 54 firmware. A sample of the firmware update is shown here:

<https://www.youtube.com/watch?v=qYzUzBeQMQM>

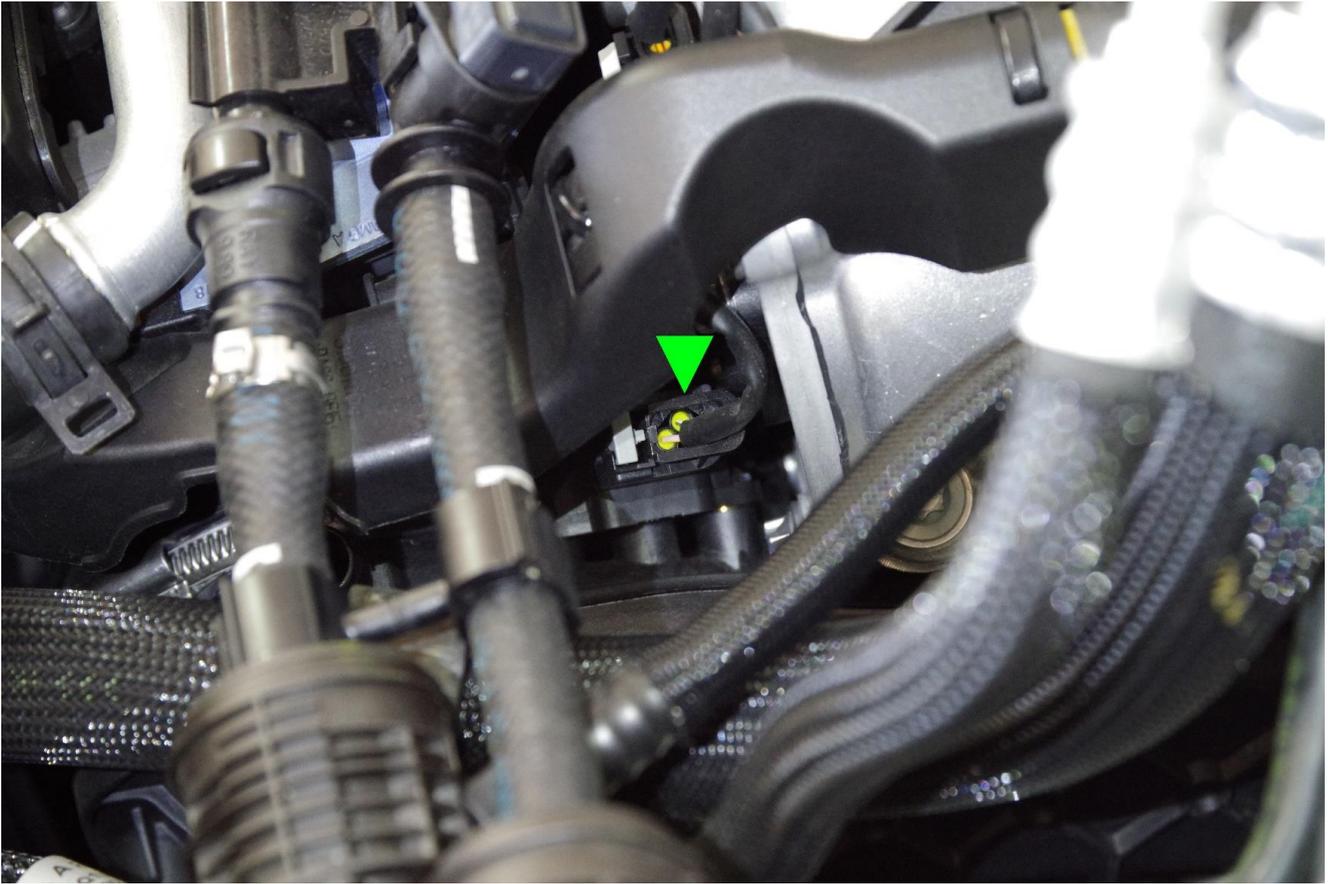
Failure to update the firmware on these models will limit performance and prevent you from logging the full parameter set via the JB4's OBDII connection. Data available in the JB4 Mobile app will be similarly limited.

Supplemental connection information:



Note the locations of MAP sensors 2 & 4.

Locate MAP sensor 2. Remove its connection by unlocking the tab, then pressing the tab while pulling on the connection to release. Do not pull directly on the wires.



Attach the JB4's brown wire bundle female connection to this sensor, then connect the factory wiring you removed from the sensor to the JB4's brown wire male connection.

MAP sensor 4 is found on the passenger side of the engine in a mirror location to the connection on the driver's side. Connect the JB4's white wiring connection at this location.