

BMS S55 JB4 Install Guide

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Before working on your vehicles electrical system *always* disconnect the negative battery terminal in the trunk.

The JB4_S55 can be installed in three different configurations or stages. The stage is determined by which connectors you choose to install. Higher states include more difficult to install connectors but allow use of higher power maps and additional features.

Also note that additional firmware, directions, notes, and support, are always posted to n54tech.com in the //M section. We have staff technical staff on hand regularly monitoring the forum ready to provide assistance and tuning help if needed.

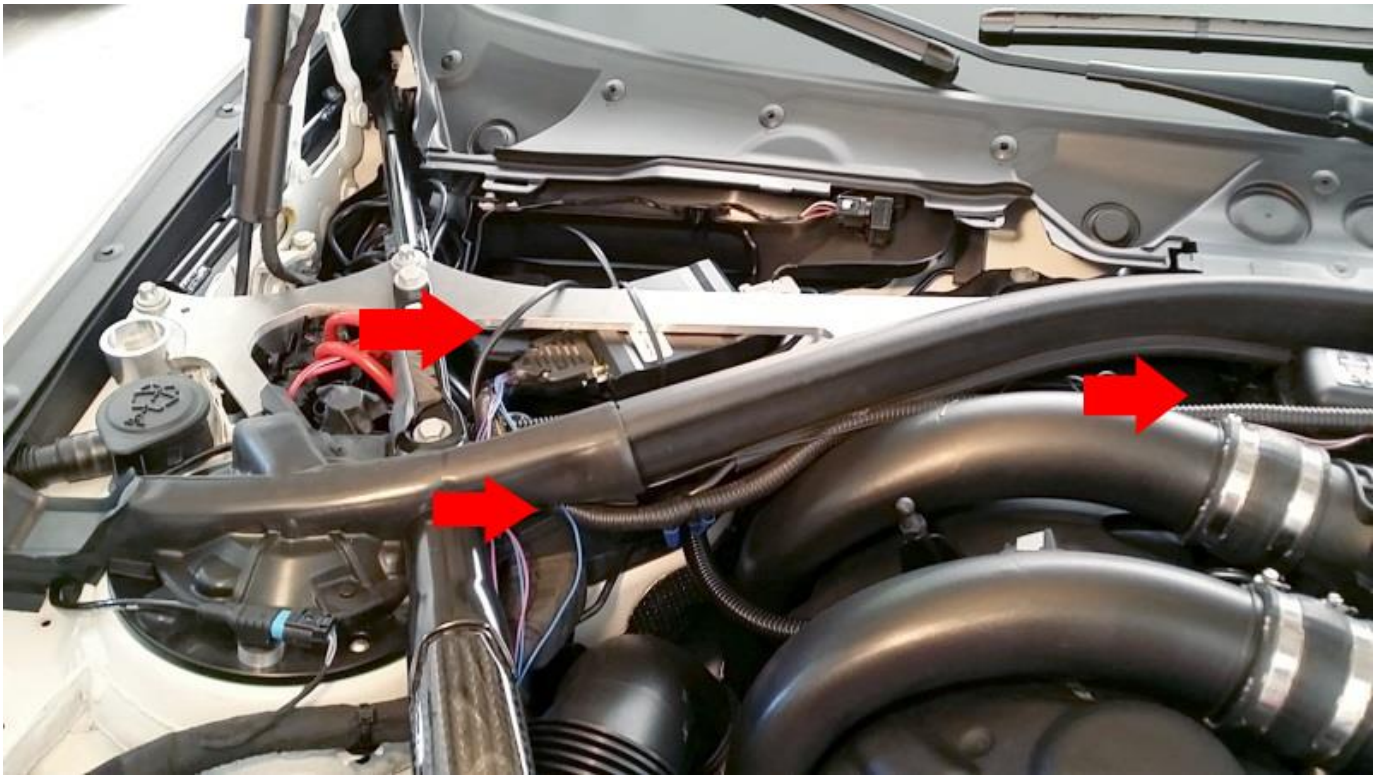
Stage 1:

The simplest format of the install Stage1 allows use of map 1 which will add approximately 4psi of boost across the board. This results in average power gains of around 40hp and 40tq to the wheels on pump fuels. Higher octane will add additional power.

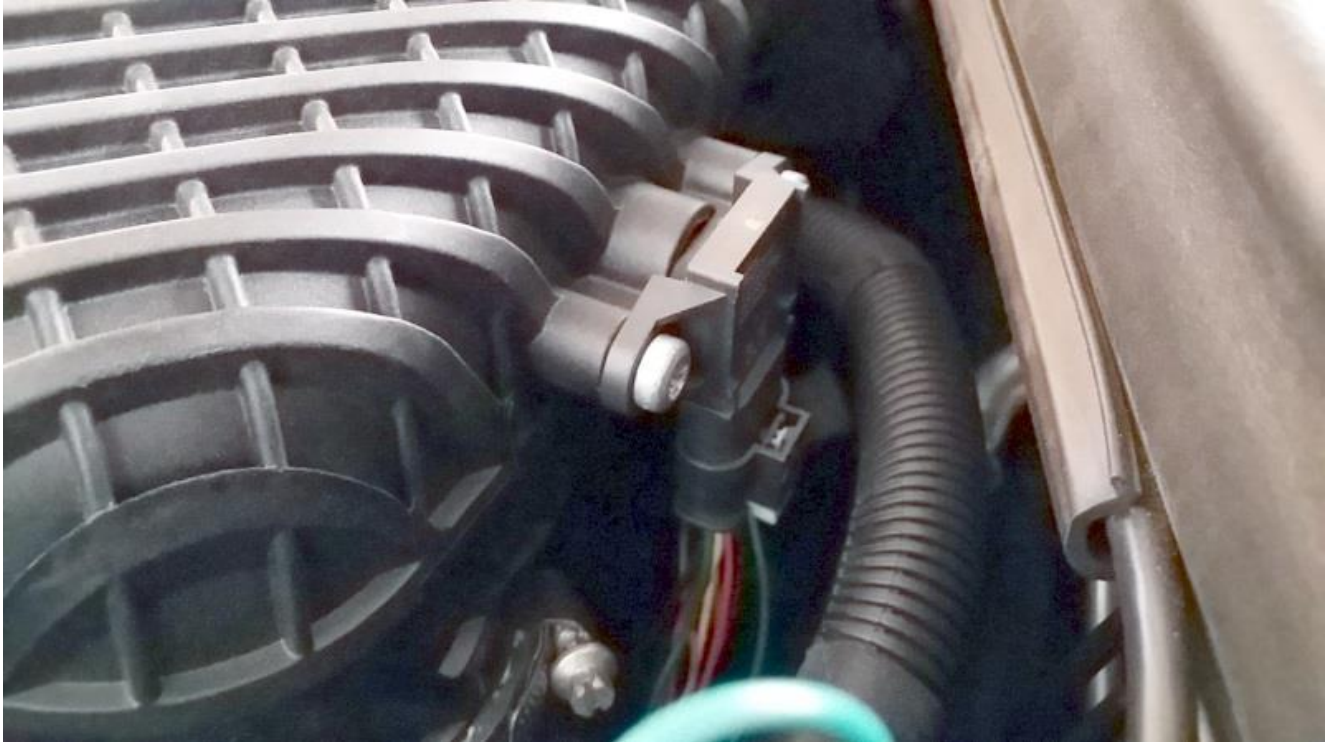
Remove the passenger side cowl by removing the plastic rivet holding it to the aluminum brace and turning the three 10mm plastic bolts. Place the cover out of the way.



The JB4 control box will sit under the aluminum brace. We suggest using a zip tie to hold it up. Route the harness under the rubber grommet as shown. **Note we've covered the jumper battery post with a piece of black tape. Accidentally touching the USB cable to this positive battery jumper post will fry the JB4 board and may damage the TMAP ground circuit requiring a bypass to be installed. Take extra caution to ensure the USB cable never touches this or any other voltage sources.**



The first connection for Stage1 is to the TMAP connection. Unplug the OEM sensor, plug the JB4 rainbow patch in to the sensor, and plug the OEM plug in to the JB4 harness.



The second connection for Stage1 is the MAP connection. This one is more difficult to reach and will take some patience. If you have larger hands you may also need to temporarily unscrew and push the intercooler water reservoir out of the way to make additional space to reach the sensor. Like the TMAP sensor unplug the OEM connector, plug the JB4 brown patch in to the sensor, and plug the OEM connector in to the JB4 harness.



For the Stage1 installation these are the only harness wires used. The rest can be tucked out of the way.

Reinstall the cowl cover you originally removed, reconnect the negative battery cable, and Stage1 installation is complete!

Stage 2:

Stage2 adds CAN bus access and related features including:

- 1) Detailed data logging including air/fuel ratios, ignition advance, throttle position, and several others.
- 2) The ability to enable/disable the unit from the steering wheel. DME code reading and deleting via the laptop interface.
- 3) The ability to use stronger absolute boost target maps vs. the load targeting map 1.
- 4) Many more CAN based features to come via free software updates as development continues.

All new JB4_S55 systems shipped after 6/15/2015 include the new OBDII CANbus method. Older systems can retrofit by purchasing the OBDII CANbus cable from our website.



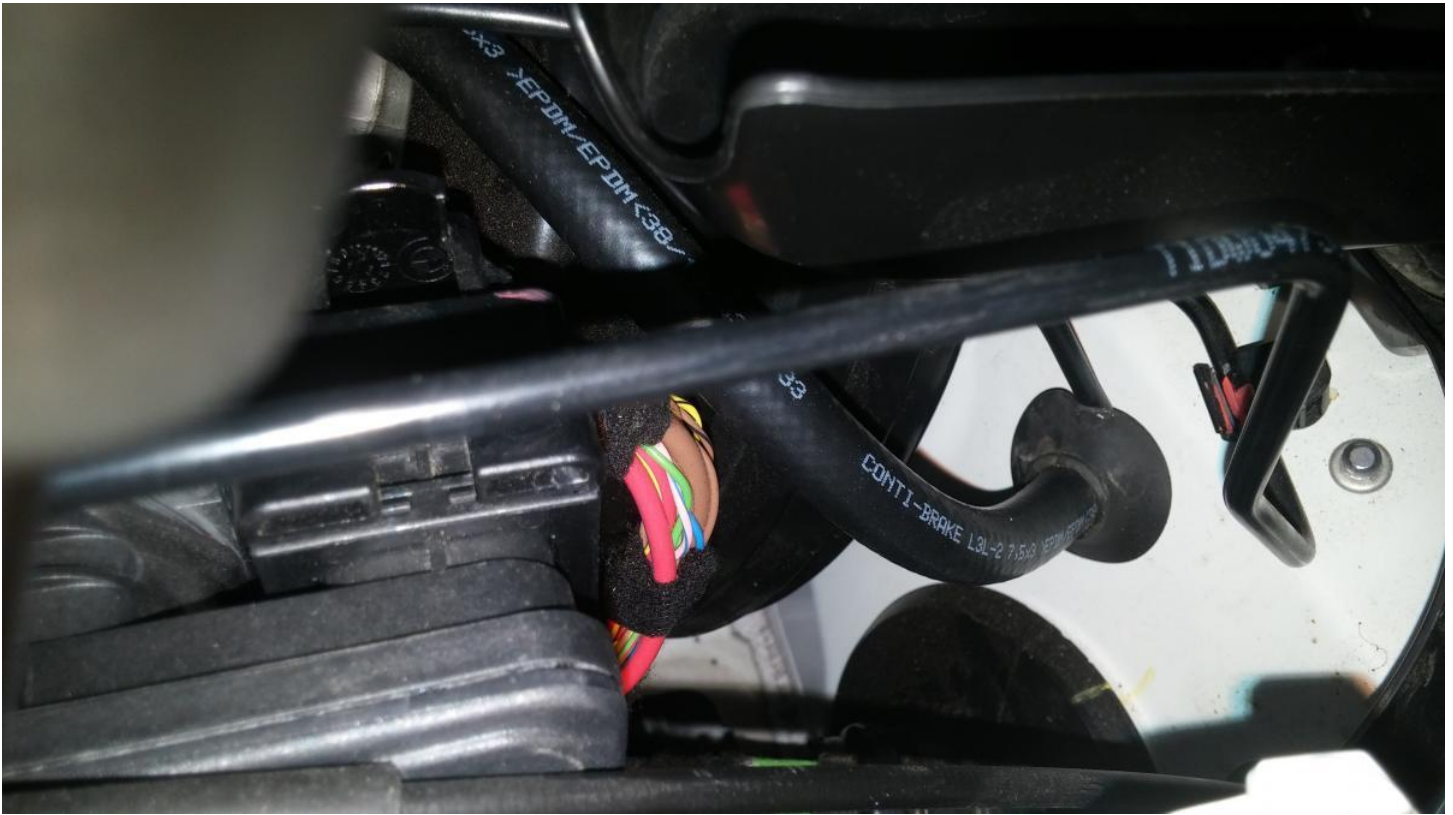
2) Remove the panel under the steering wheel by removing the 2x 10mm bolts, and if you need the room unplug the courtesy light and speaker connection so the panel can be moved out of the way all together.



- 3) Pop the hood and remove the driver side cowl cover by turning the 3 10mm plastic bolts and popping out the plastic eyelet clip.
- 4) Using a long screwdriver push in on the rubber firewall cap pushing it in to the interior compartment. You'll see it fall down by the pedals and can put it away for safe keeping.
- 5) Feed the OBDII wire from the interior through the hole to the engine compartment.



Note if equipped with a manual transmission the clutch line is routed through the same grommet. You can push it out of the way to route the wire or use a wire hanger or similar to push it through.



6) Plug the black Molex connection in to the OBDII cable.



7) Reinstall the interior panel and route the OBDII connection to the OBDII plug with the wire tucked behind the panel you've reinstalled.



8) Reinstall any removed covers.

Reconnect the negative battery cable. Stage 2 installation is now complete. Refer to n54tech in the //M section for videos on how to change maps, use the CANbus features, updates, etc.

Stage 3:

The highest stage, Stage 3 adds additional connections for fuel mass and direct electronic wastegate control. These additional connections allow the use of racing fuel maps, ethanol maps, and are suggested for those who are looking to push their M3/M4 to its limits.

Of the additional connections the fuel mass is the most difficult to reach. Although the sensor is easy to see the clip that holds the connector to the sensor is sometime rotated such that it's impossible to reach without first loosening and turning the sensor 180 degrees. If this is the case with your vehicle you'll need to use a 1 1/16" wrench to turn the fuel pressure sensor, install the connector, and then retighten the sensor. Like when you were working with the MAP sensor it may facilitate the process to first unscrew and pull the intercooler water reservoir out of the way.



The last connections are to the electronic wastegates. Note that these connections are only utilized for maps 6+ when running more than 25psi and we don't suggest installing them if you only plan to run lower maps.

The vehicle will need to be completely cooled down. Removing the strut brace also makes reaching these connections easier. To do that you'll remove the driver side cowl cover and the various 13mm bolts holding the strut brace to the vehicle. The wastegate connectors are interchangeable and either one can be installed to either wastegate.



Stage 3 installation is complete! Reconnect the negative battery cable and reinstall any covers or parts you've removed during the installation process.

Refer to the n54tech S55 thread for the current map guide, most up to date firmware, and additional directions.

Installing JB4 MOBILE BlueTooth Adapter:

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>

