



Kia / Hyundai Turbo JB4

Last Updated: 2-24-2020

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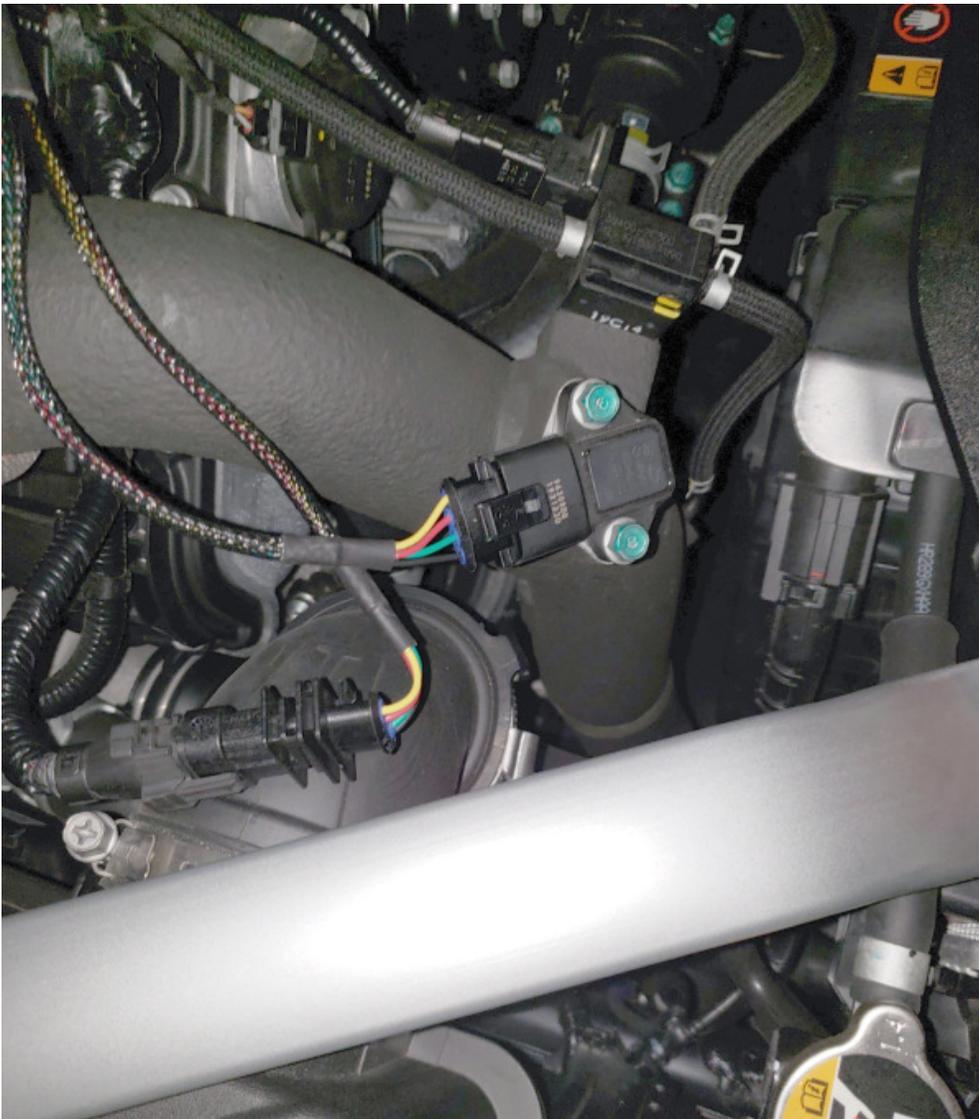


Optional JB4 App Shown

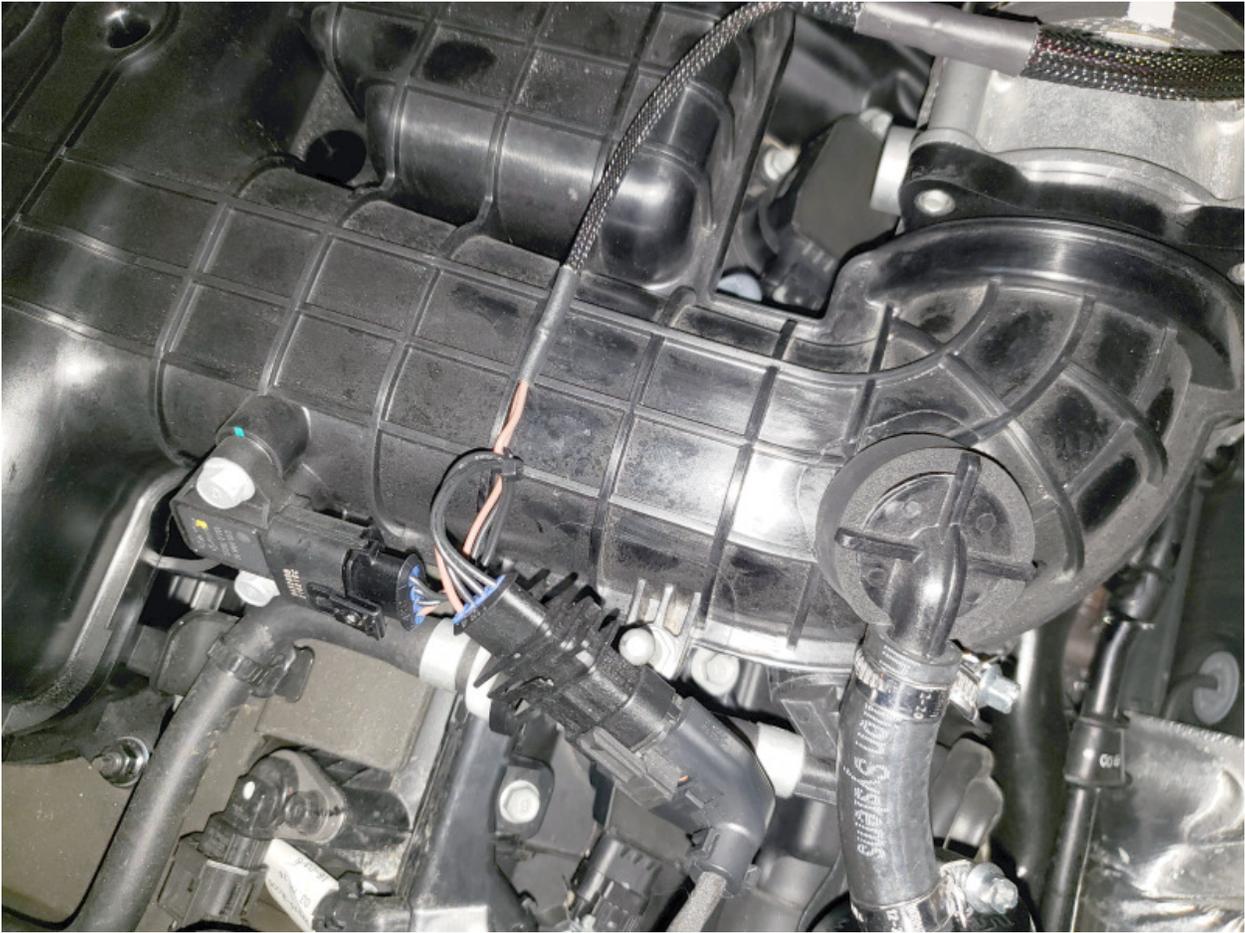
Open the hood, lock the doors, place your key far enough from the car not to wake it up, and wait 5 min for the vehicles computer to go to sleep.

The JB4 harness has two similar looking connectors on it for. The one with the rainbow colored wires will attach to the TMAP sensor in the front of the engine, while the one with the brown wires will attach to the MAP sensor on the back of the intake manifold. You'll unplug the factory sensor, plug the JB4 harness plug in, and plug the factory plug back in to the matching JB4 harness plug completing the loop. This guide features photos for the 3.3L model but the 2L and 1.6L models are essentially the same with the sensors being located in slightly different locations under the hood.

Attach the rainbow connection to the TMAP sensor on the charge piping:



Attach the brown connection to the MAP sensor on the intake manifold:

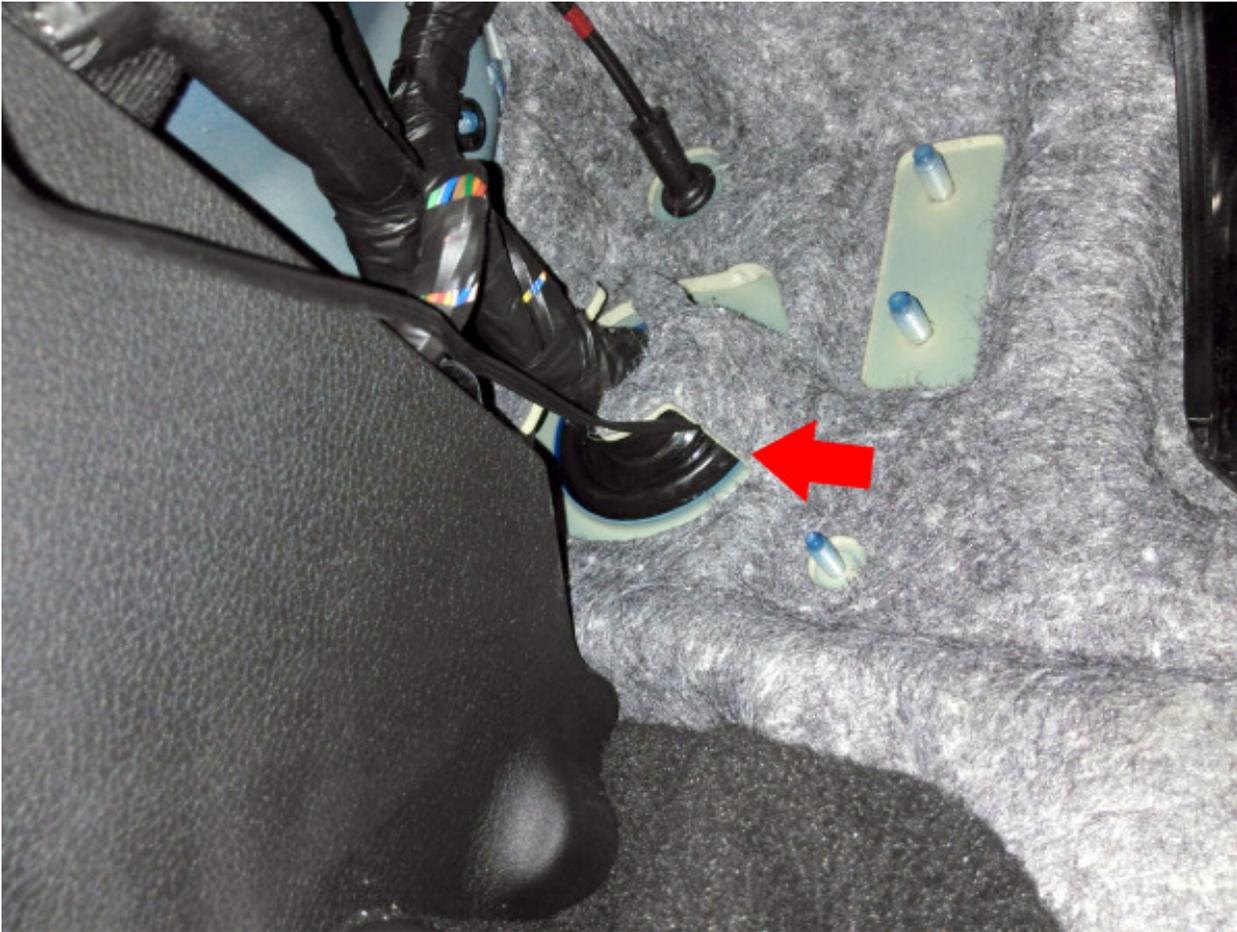


Finally, route the cables and place the control box as shown. Shown with optional JB4 Mobile adapter attached. Note attaching JB4 mobile to the metal enclosure may reduce it's range so best to leave it not attached.



The optional OBDII cable unlocks full CANbus control for the most advanced tuning and logging features and is strongly suggested. The cable can be routed the “quick” way through the door jamb or the “clean” way through the firewall detailed below.

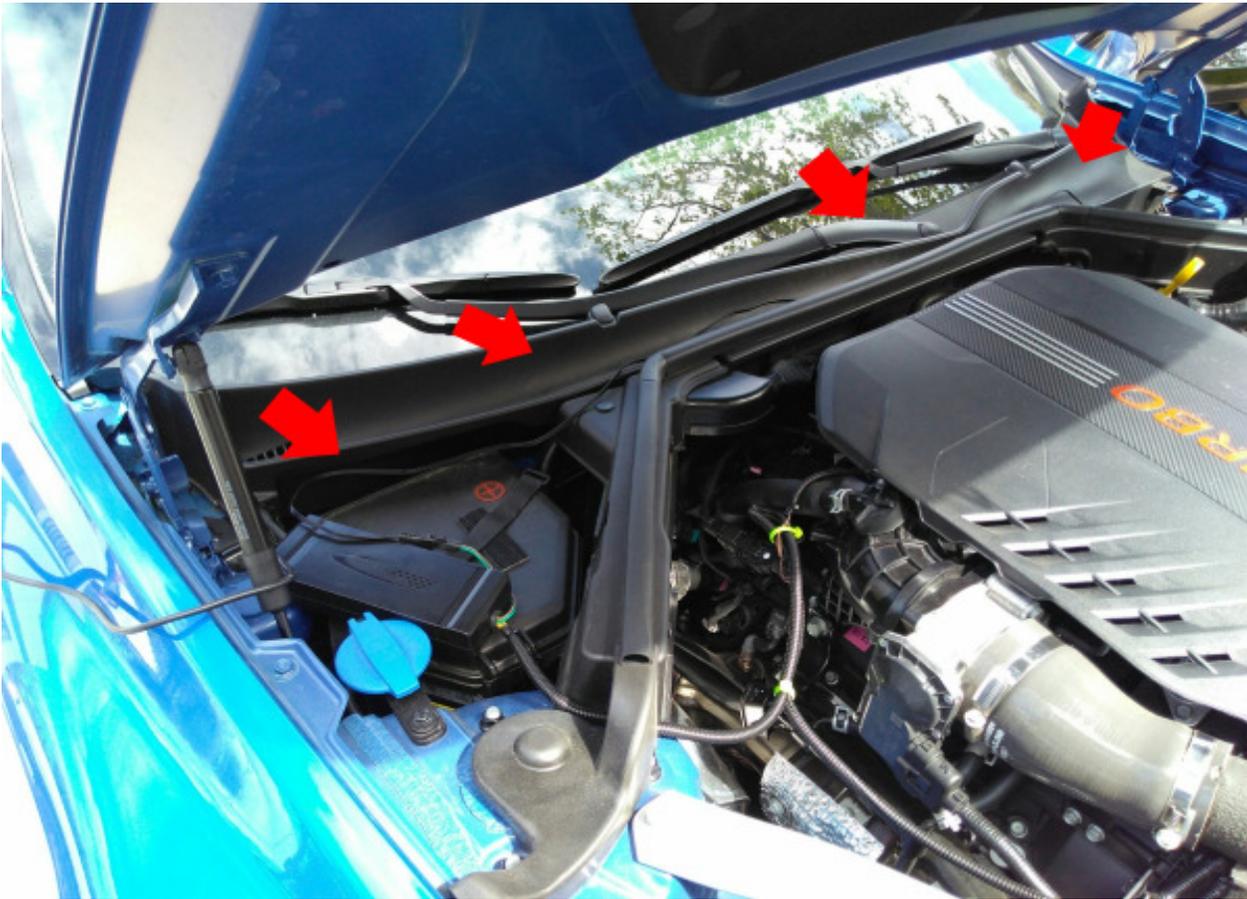
Plug the cable in to the OBDII port and using a screwdriver slightly push out the grommet as shown. Pass the wire in to the engine bay, and then push the grommet back in from the engine side.



Remove the brake booster cover by popping up the 3 plastic locks that hold it down, reach down and pull the OBDII wire up.



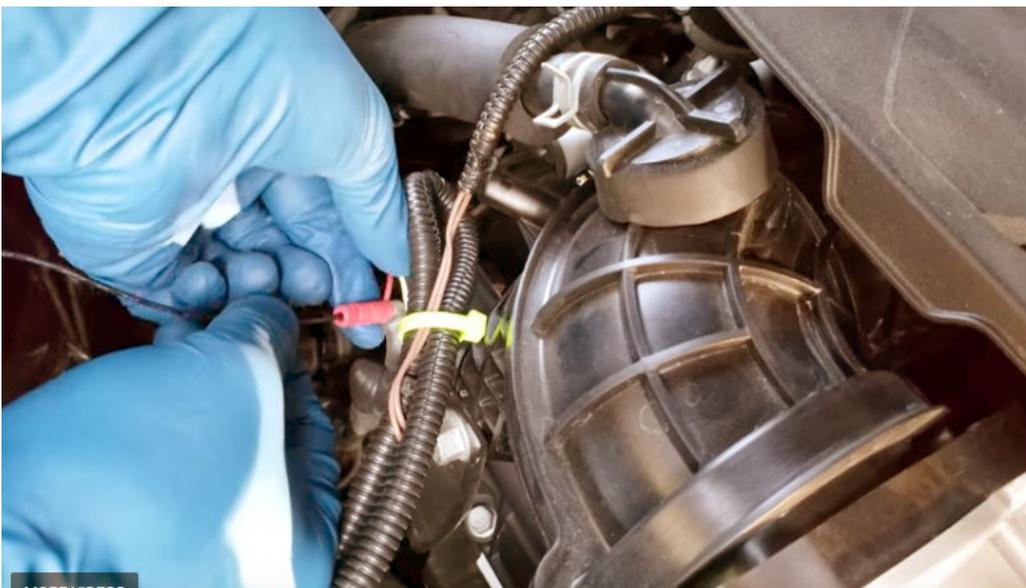
Route the cable across the cowl tucking it under the rubber grommet and plug it in to the 2 position matching connector near the JB4 control box. The latch on the connector must line up with the clip for CANbus to operate.



The JB4 includes optional black fuel control wires giving the JB4 the ability to directly change the air/fuel ratio. The factory tuning runs in the 10:1 range and leaning that out to 11.5:1 has proven to be worth significant power at higher engine speed. Note these are preinstalled on the JB4 harness now so only need to be attached to the o2 sensor signal wire to enable using the included posi-taps or our optional fuel harness adapters.

No setting changes are needed to enable the fuel control wires.

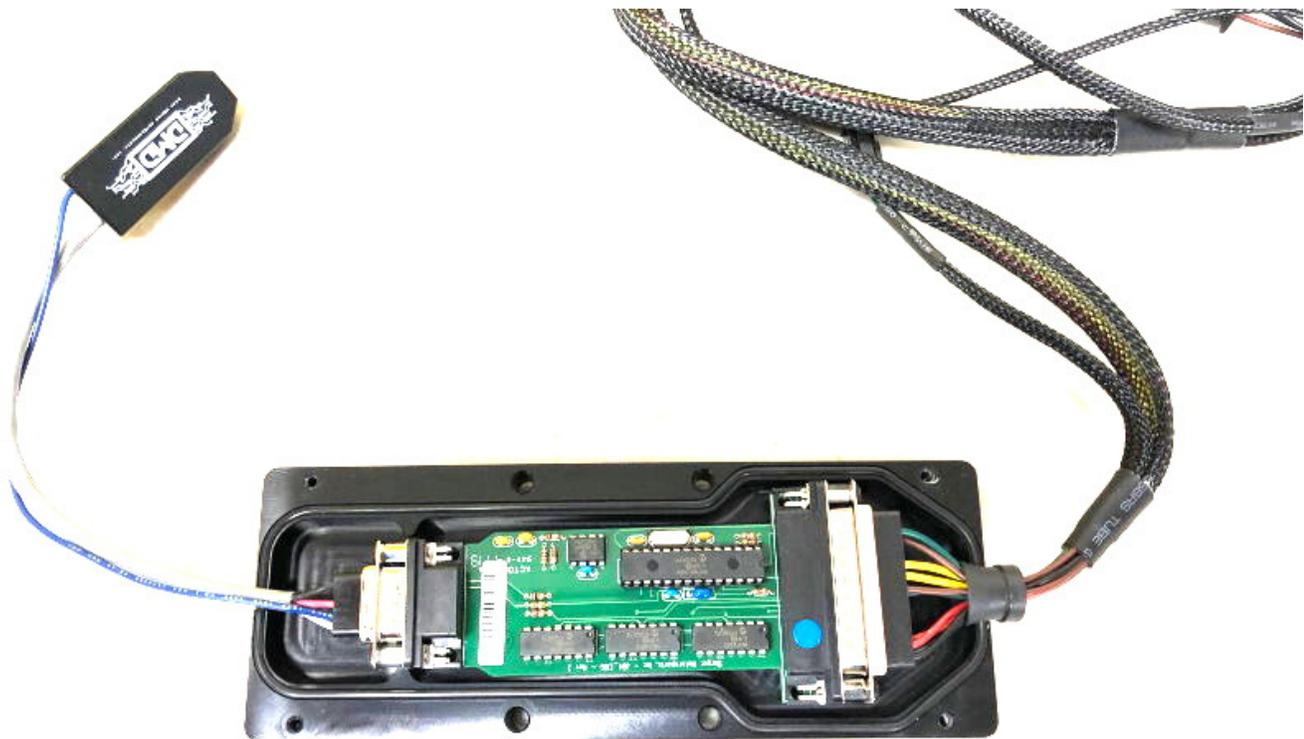
For 3.3L they attach to the primary o2 sensor signal RED wire. For 1.6/2L applications only the longer wire is used and it goes to the primary o2 sensor signal WHITE wire. For those using the optional harness adapters the 3.3L signal wire is also RED for your convenience. There is a video posted in the main support thread linked below showing you how to attach the posi-taps.



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>



Reinstall the engine cover and installation is complete!

The JB4 comes preset to Map 1 which runs approximately 4psi over stock peak tapering to 2psi over stock at redline.

Maps can be changed using the JB4 Wireless Mobile Connect Kit or BMS Data Cable to adjust boost levels, record data logs, read/delete fault codes, and load free firmware updates.

Refer to the link below for the full map guide, software, firmware updates, how to videos, and tuning details.

<http://www.n54tech.com/forums/showthread.php?t=52020>