**Q50/Q60 Stage1 to JB4 Beta Upgrade**

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Before starting disconnect the negative battery terminal or uninstall the Stage1. You don’t want to work with live electrical wiring.

The upgrade kit consists of two components:

- New JB4 board
- Small plug with a green and brown wire for OBD connection with pins at the end

To fit the plugs unscrew the harness from the JB1 enclosure and remove the AMP plug cover at the end of the harness from the wiring harness. It’s the big large black plug as pictured below. You will need to unscrew the two flat screws circled to remove the cover.

Once the cover is removed the wired pins can be pushed into the connector. The pins are numbered as below when viewing the pin side.

When pushing pins in be cautious you have the correct slot as they cannot be pulled back out once they clicked in. With the pin partially in double check the slot number.
Step 1: Install Molex Connector On Harness:

The green and brown wires have a Molex plug on the end that will be joined eventually to the OBDII wire that plugs inside the car.

Molex plug green goes in to #2, brown #15. (if you look at the pin side of the harness you will see they are numbered as per previous diagram). From the other side push each respective wire into place. They will click into place and you can give the wire a pull and see if it’s locked in place. If you feel you need to force the pin in rather pull it from the other side with a small long nose pliers.
Step 2: Route OBDII cable to engine bay:

The OBDII cable plugs in under the dash board and will be pushed through a factory grommet under the dash out in to the engine bay.
Identify this rubber grommet from the engine bay and under the dash. You’ll use a long screwdriver to push the grommet out from under the dash allowing you to feed the OBDII wire in to the engine bay.
From the inside, you may need to push aside some insulation to get a clear view of the grommet.
When routed the OBDII cable will look like this. You can then push the grommet back in from the engine bay side.
The arrow on the grommet needs to line up with the nipple on the firewall for the grommet to fully seat and seal over the OBDII cable.
Plug the OBDII cable in to the Molex connector installed in the previous step:

Finally, open the Stage1 enclosure using a screwdriver to twist in to the tab on the side, remove the Stage1 control board, and replace it with the JB4 control board.

Maps & Settings:

The JB4 maps are currently as follows:

- **Map0** - JB4 disabled
- **Map1** - 4psi peak
- **Map2** - 5psi peak
- **Map3** - User Adjustable fixed boost map (similar to Stage1) where “boost safety” setting on the user adjustment page determines boost added across the power band
- **Map4** - Stock boost with CANbus active for data logging
- **Map5** - 6psi peak
- **Map6** - User adjustable by RPM map using settings on user adjustment page. A setting of 5.0 would request 5psi over stock at that specific engine speed.
- **Map7** - 7psi peak

Note that DWP which is used on Stage1 to adjust throttle sensitivity is not used for this purpose on the JB4 and can be left at 0. The JB4 instead reads gas pedal input and other engine data via CANbus to scale boost as function of how far down you press the gas pedal.