



JB4 for VAG EA888 Gen 3 engines Install Guide

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In preparation for the install for the Golf R, Audi S3 and Audi S1 you may want to drive the car onto ramps or raise it so Plug D further down the install can be accessible.

Step 1: Disconnect battery or let the car go into sleep state

It is advisable to either disconnect the cars battery when doing the install or let the car go to sleep by opening the hood and letting the car stand for 5-10min. Working on the plugs whilst the ECU is still active will trigger faults that will be stored.

Note when battery is disconnected on start up there will be warning on the dash that will get reset once the car become mobile again. This is a safety feature the ECU has and is not related to the install.

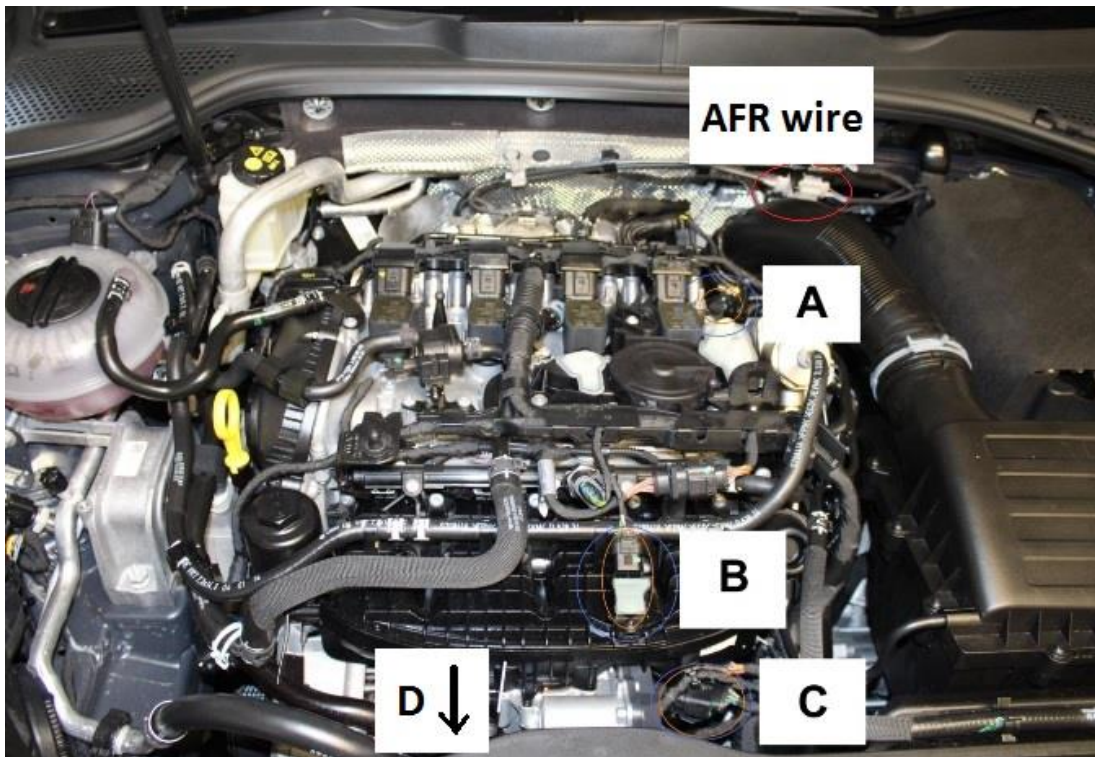
Step 2: Remove the engine cover

The engine cover is held in place by three rubber grommets, it is removed by simply lifting it up. This will expose the 3 sensors (2 sensors for Rev 2 units) that need to be intercepted at the top of the engine bay.

In the engine overview below the sensors are marked A, B, C, and optional AFR Wire. There are slight variances between cars relative to the car having the ROW Dual injection motor or the US single.

Pictured is the dual injection motor but the sensors are in the same locations regardless of type. Sensor D is not pictured since it's at the bottom of the engine bay. On the end of the JB4 box there is also a small Molex plug. The OBD cable that runs from inside the car to the JB4 will be connected to this small plug.

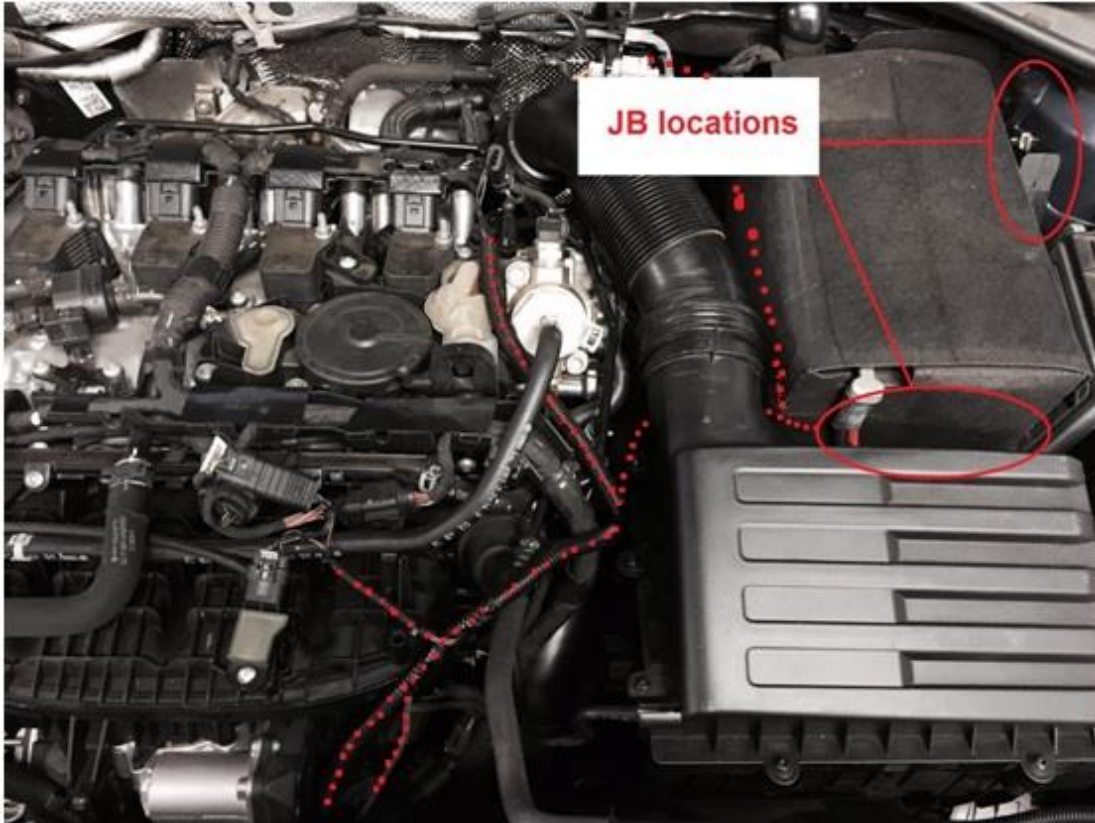
Plug A only applies to older Rev1 Stage1 units. New Rev2 Stage1 & all JB4 units do not utilize this connection.



Step 3: Harness layout and JB placement

The JB unit can be placed either behind the battery box or in the area behind the ECU. The harness passes under the intake pipe to the left of the engine. The JB may be removed from harness for ease of passing the harness under the intake pipe using a flat screw driver. The harness can also go over the pipe if cosmetics is not an issue.

Below is a layout of the JB locations and routes to the sensors. This may vary if a after-market intake is fitted.



Step 4: Connect the JB harness to the car

On the JB harness you will find male and female sets of plugs. The JB works by intercepting and altering the signal going to the ECU hence you will remove the factory plug replacing it with the plug on the JB harness and plug the factory plug into the JB harness.

The optional AFR wire and OBDII cable both are direct connections.

PLUG A: Not applicable to JB4 units purchased new and upgraded JB1 Rev2 units.

Remove the plug from the camshaft sensor by sliding back the grey tab all the way back and then pushing it down. Plug the removed plug into the male plug on the JB harness and the female plug from the JB harness into the sensor. Remember to lock the grey tabs back into place once the plugs have clicked back in.

Note the Golf 1.8T US Spec and some other models do not have this sensor position. In these instances leave it tucked out of the way for future expansion.

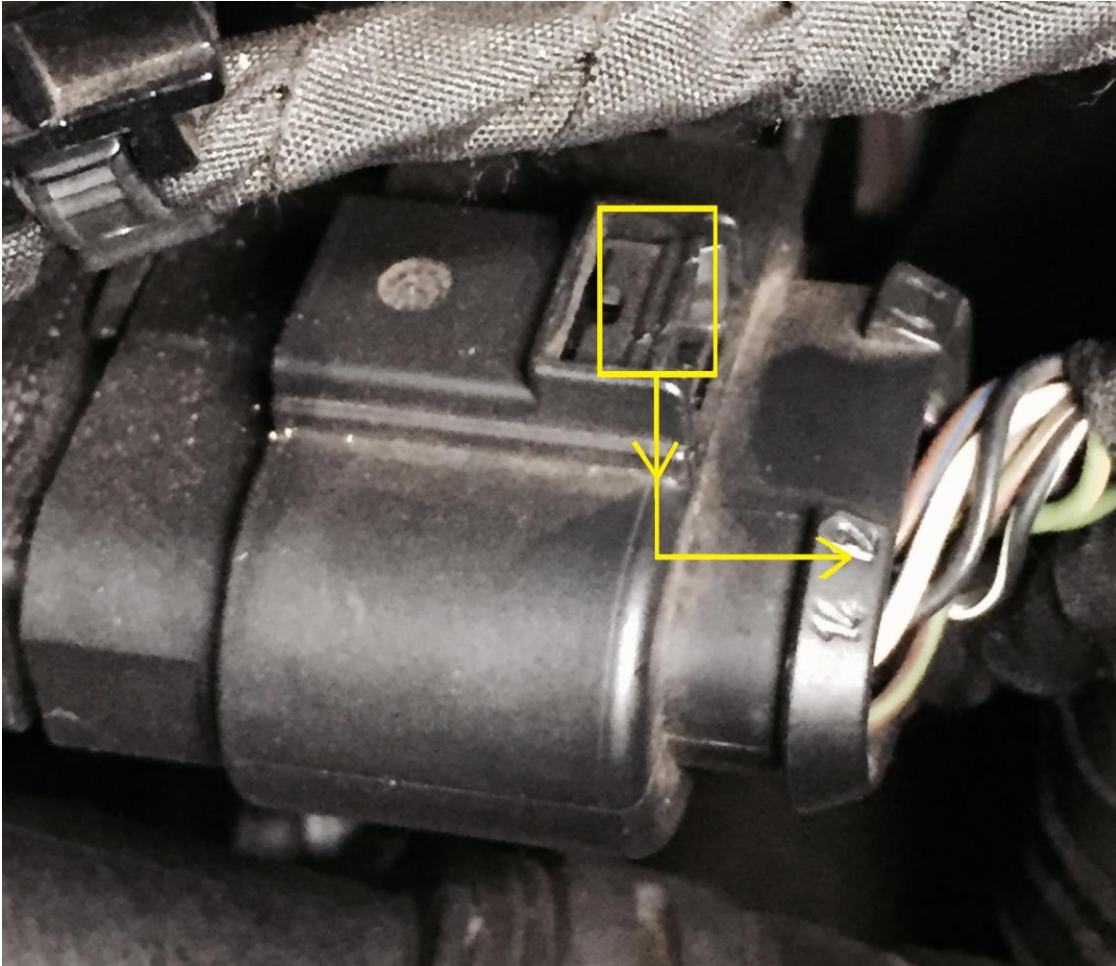


PLUG B: The boost sensor plug on the manifold is removed by pushing the grooved tab down on the end of the sensor (yellow square) and pulling the plug towards the back of the car. Plug the removed plug into the male plug on the JB harness and the female plug from the JB harness into the sensor. Once JB plug is put in sensor lock by pushing grey tab towards sensor.

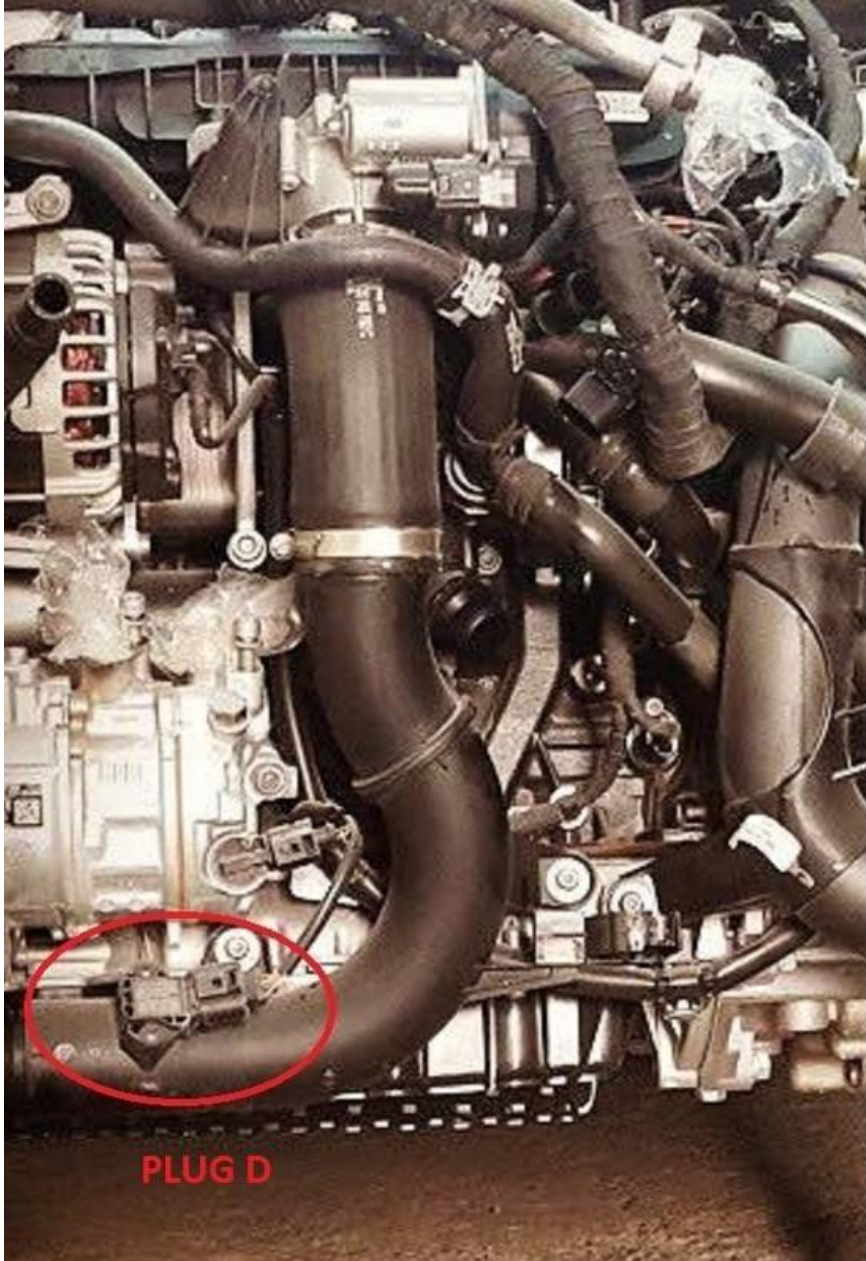


PLUG C:

This is the 14pin plug that sits on the side of the manifold. It is easier to work on if its slid out of its holder by pulling it toward the front of the car. It is removed by pressing on the tab in the back and pulling toward the right as positioned. Plug the removed plug into the male plug on the JB harness and the female plug from the JB harness into the sensor. You can push the sensor back into its holding clips after this.



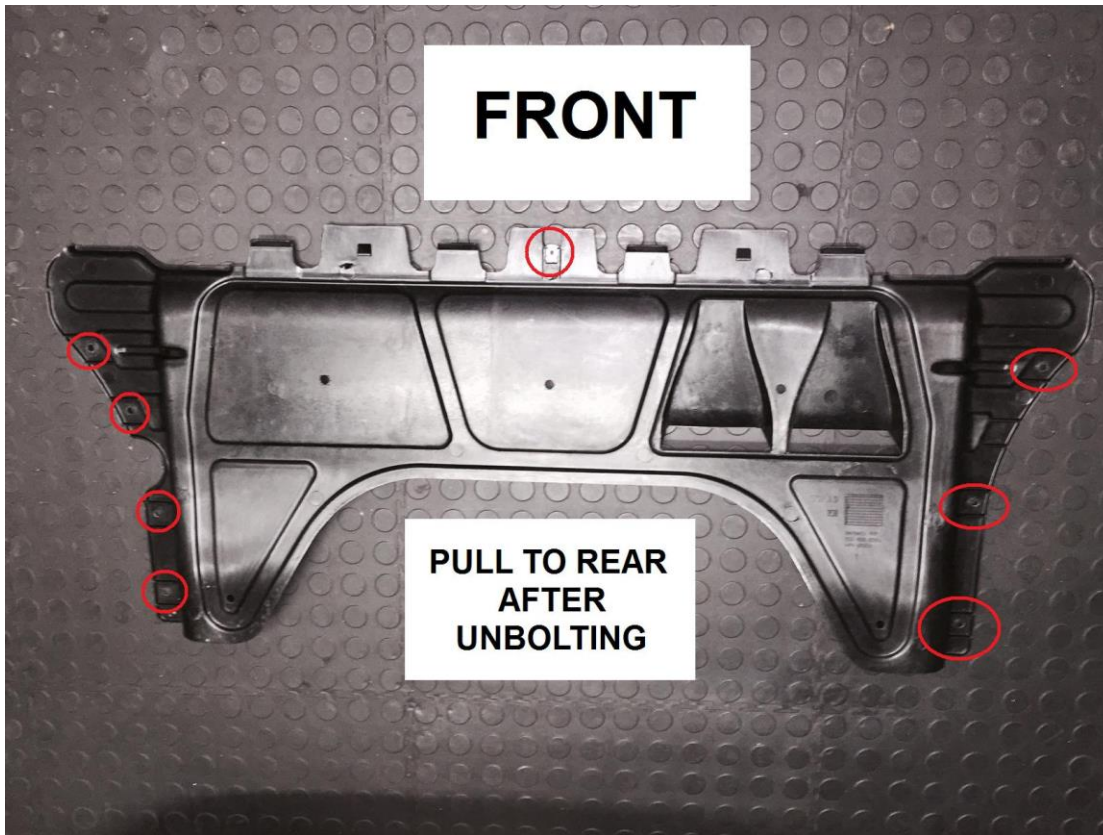
PLUG D:



Plug D is found on the charge pipe which goes to the throttle body. It is visible by looking down past the throttle body and is the plug with the brown, yellow, red and grey wires and is the lower plug of the two in the area. (There is a plug with a visible yellow wire in the same location which connects to the air-con pump with two large silver pipes exiting coming up from this).

50% of our users can access the plug from the top of the motor. If you are not successful you will need to remove the engine under-tray under the car. The removal of the engine under-tray requires 8 x T25 Torx screws (locations circled in red) to be removed and the under-tray slides toward the back of the car and out. Do not forget to put it back once done. **For Golf R, Audi S3 and Audi S1 it is only possible from the bottom.**

ILLUSTRATION



Plug D is removed by pulling the tab away from the sensor toward the left of the car. More effort should be on the away movement with slight pushing down. Usually the plug forms a vacuum so it sometimes helps to push it in and then do the out movement.

You can also use a small flat screw driver to dislodge the locking tab by pushing into the plug where the blue arrow is pointing. You can get a idea of how this works by plugging the two JB plugs into themselves to see how the lock works.

Below is a picture of the plug showing the tab. (For illustration purposes the sensor is on a aftermarket boost pipe).



PLUG D as viewed from below:



AFR WIRE CONNECTION:

This optional connection allows the JB4 to bias the o2 sensor for a greater range of AFR control. To connect the wire you'll be using the included POSI-TAP to attach to the red wire on the gray lambda sensor plug on the firewall. We suggest sliding back the sleeve and connecting 2" back from the plug so that when the POSI-TAP is removed the sleeve slides back over the pin hole covering it up.

If you elect not to install this connection we suggest covering the exposed loose wire with a piece of tape and tucking it out of the way.

Posi-Tap™
TAP CONNECTOR

- TAPS WIRES WITHOUT CUTTING
- TOTAL WIRE INTEGRITY IS MAINTAINED
- INSTALLS IN SECONDS BY HAND
- NO CRIMPING OR TOOLS REQUIRED
- REUSABLE OR PERMANENT
- LESS RESISTANCE
- VIBRATION PROOF
- FULLY INSULATED

POWERS UP TO (4) LEADS AT ONCE!

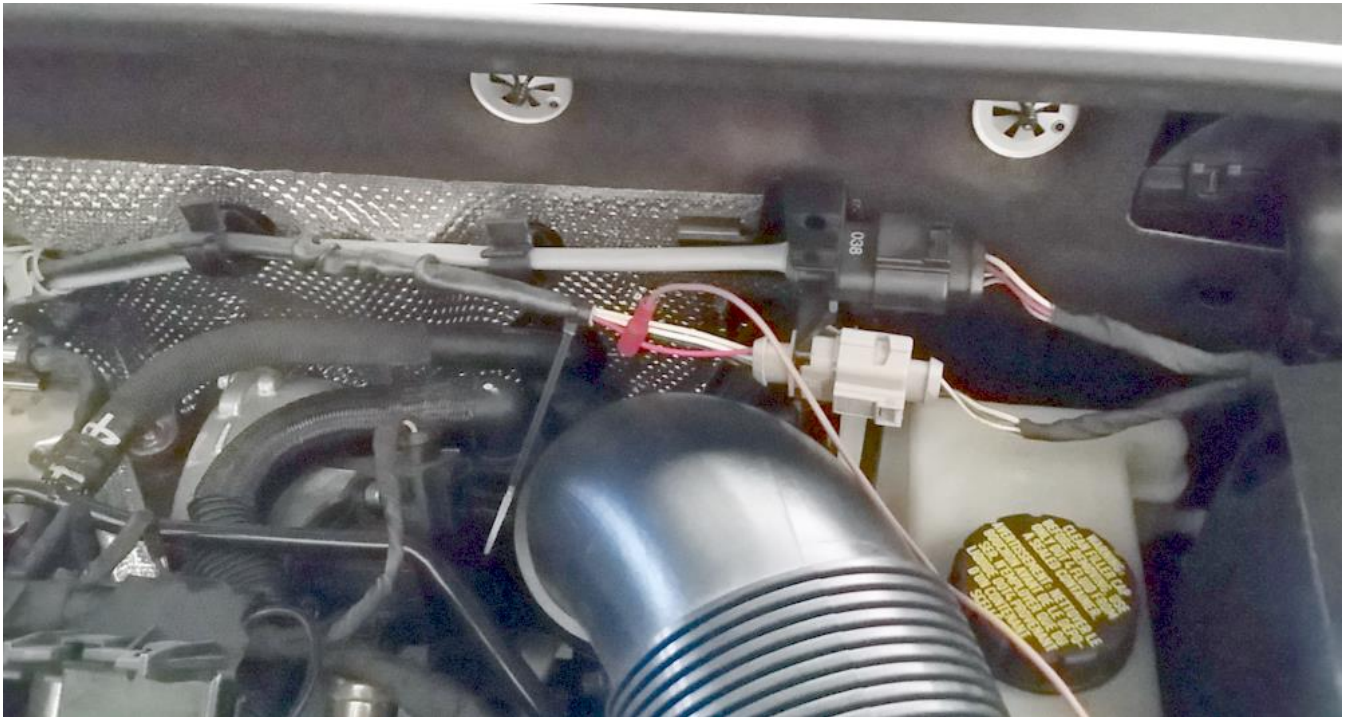
QUICK & EASY

- 1** Insert Hot Wire
- 2** Tighten
- 3** Strip Leads
- 4** Insert & Tighten

NO CRIMPING

NO TOOLS NEEDED

Below is how the AFR POSI-TAP will look if installed. Note wire color is normally blue:



OBD cable from inside car:

The installation of this cable is different for right hand drive and left hand drive cars.

LEFT HAND DRIVE INSTALL

The OBD plug (purple) can be found on the panel above the pedals of the car on the left hand side as pictured below:



The panel can be removed by removing the hex screws holding it in place.

Remove the insulation foam and this will expose a grommet that can be punched to get the wire pushed into the engine bay. In order to avoid removing the battery a wire guide or cable tie can be used by taping onto the end of the OBD wire.



The wire will come out of an area behind the battery and can be run to the JB4 unit and plugged into the Molex plug.



RIGHT HAND DRIVE INSTALL

The OBD plug (purple) can be found on the panel above the pedals of the car on the left hand side as pictured below:



The OBD cable is run through the loop that goes around the front of the brake pedal to the grommet where the grommet in the firewall as pictured. This grommet can be punctured using something sharp. A guide wire can be added to the end of the OBD cable by taping it on and the OBD wire can be pushed through the grommet going in the up direction.



The OBD cable will exit behind the heat material on the firewall. Connect the plug inside the car and pull the cable so there is no slack left in the pedal compartment. This will allow for the cable to clear the steering column without rubbing.

The OBD cable can then be clipped into the clips against the firewall running in the battery direction. At the point of the lambda sensor where the AFR wire is the cable can go to the JB4 unit and plug into the small Molex plug.



At this stage the installation is done. When you start the car if the traction control light and start/stop light are on they will go away as the car drives. The car will take a few full throttle runs to fully adapt. If you need additional installation assistance email george@burgertuning.com