

RSK04

AWE Tuning 2000 Audi S4 RS4 K04 Fueling Kit Update 2.0

Update 2.0 for your AWE Tuning RSK04 fueling kit applies to 2000 S4s.

(Update 1.0 upgraded intake boot plug to aluminum and only affected early kits)

After considerable testing, we have found it necessary to convert the 2000 S4 Bosch Mass Air Flow sensors (MAF) to the later 2001-02 Hitachi design. Not only is the Hitachi sensor much less prone to failure than the Bosch sensor, it also allows us to fine tune some drivability issues found with the Bosch sensor.

Parts list:

- 1 Hitachi MAF sensor
- 1 Wiring harness connector with 4 wires
- 1 Rubber wiring boot
- 4 Heat shrink wiring insulation section
- 1 AWE Tuning Hitachi MAF sensor plate
- 1 AWE/GIAC updated ECU chip prom (if requested)

Required tools:

- 1 Wire strippers
- 1 Razor
- 1 Soldering iron with solder
- 1 3mm allen wrench
- 1 Lighter or heat gun

Install time:

Approximately 1.00 hrs

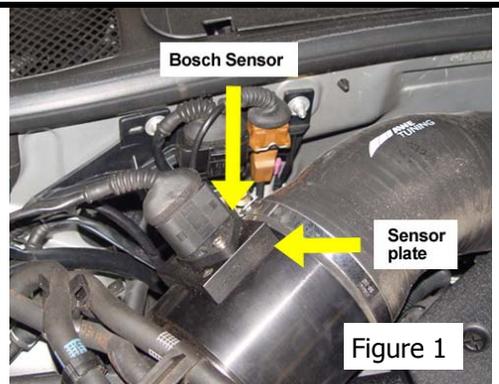
Step 1:

AWE Tuning highly recommends scanning the engine ECU via a scan tool in order to check for fault codes. If you encounter any fault codes, be sure to record them and then contact us for any troubleshooting. In rare situations, our kit can expose a sensor or component that was previously marginal. If there are any fault codes present, please address their causes before installing Update 2.0 .

Step 2:

Remove the decorative cover on top of the airbox to expose the Mass Air Flow sensor (MAF).

This service can be performed with the sensor housing in place on the car. Take care not to drop any items into the housing opening when swapping sensors.

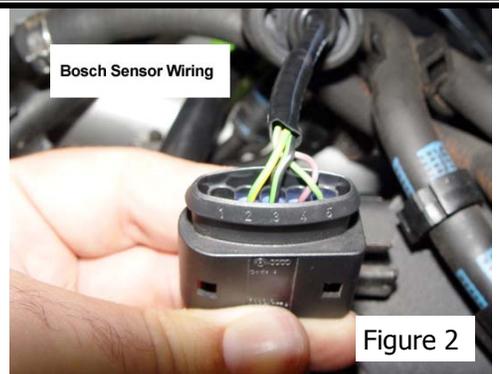


Step 3:

Unclip the sensor harness plug from the sensor, and pull back the rubber boot.

Note the wire colors:

- Pin 1: no wire
- Pin 2: Green/yellow stripe
- Pin 3: Black/green stripe
- Pin 4: Purple/gray stripe
- Pin 5: Green



Step 4:

With the razor, carefully slice the black harness insulation up and away from the connector. Be very careful to only cut this outer insulation, and not the wires themselves.

With the wire cutters, cut the wires at the connector, as shown in Figure 3. Cut as close as you can to the connector. Slide off the Bosch sensor rubber boot and slide on the new Hitachi sensor rubber boot.

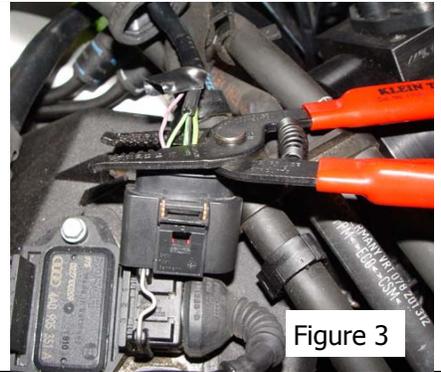


Figure 3

Step 5:

Cut and strip the yellow wires attached to the new Hitachi sensor connector to 1.75", as in Figure 4. Ensure the heat shrink insulation sleeves are in place, as in Figure 4.

Strip the ends of the OEM wires.

NOTE: the green OEM wire runs through a black insulated shield wire. DO NOT strip the green wire so that its bare wires touch the black shield wire. If the green wire touches the black wire, the MAF will not work until the problem is fixed, and a code will be logged in the ECU.

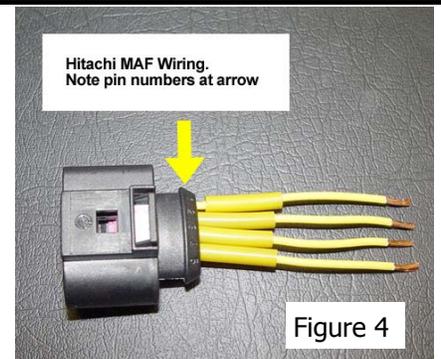


Figure 4

Step 6:

As per the legend below, twist the appropriate yellow wire to its OEM wire, and apply solder to the junction. **USE ONLY FLUX CORE SOLDER AND A VERY HOT SOLDERING IRON.**

Attach:

Pin 1 of Hitachi connector to: Purple/gray stripe wire

Pin 2 of Hitachi connector to: Green/yellow stripe wire

Pin 3 of Hitachi connector to: Black/green stripe wire

Pin 4 of Hitachi connector to: Green wire (NOTE: ensure no solder touches the exposed wiring of the black insulated shield wire at arrow)

Pin 5 of Hitachi connector to: no wire

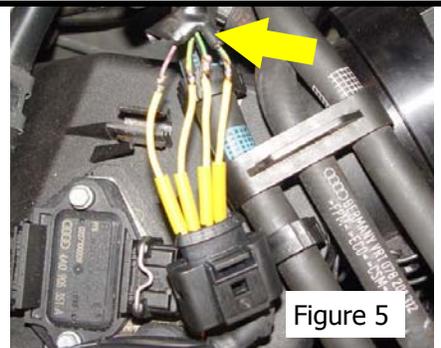


Figure 5

Step 7:

After the solder cools, FIRMLY tug on the wires to ensure a solid solder connection. Then, slide heat shrink insulation sleeves around solder junctions. To shrink the insulation tight to the junction, carefully apply direct heat with a lighter or heat gun.

ENSURE THAT NO WIRES ARE BARE OR ARE TOUCHING, and slide the rubber boot down to the connector and attach.

Step 8:

Unbolt the Bosch sensor from the AWE Tuning MAF housing using a 3mm allen wrench. Pull the sensor out of the MAF housing. Unbolt the MAF sensor plate (see Figure 1) from the MAF housing.

Reusing the bolts, bolt the Hitachi sensor plate to the MAF housing and install the Hitachi sensor. It can install only in one direction.

Plug in the wiring connector and you are finished with the sensor install portion of this Update.

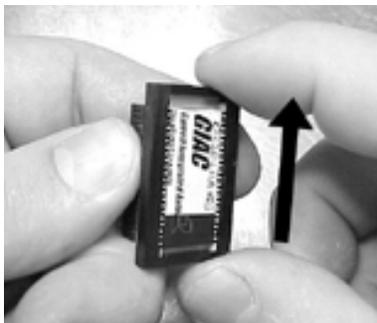
If you have opted to install the updated GIAC chip prom yourself, rather than sending us your ECU, follow the attached install sheet.



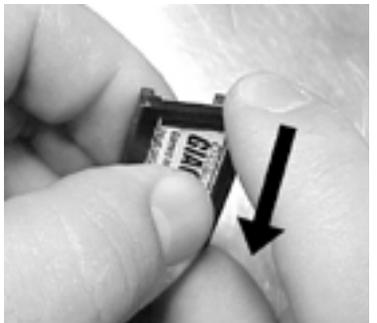
INSTRUCTIONS FOR REPLACING CHIP PROM IN GIAC SOCKET



Remove ECU from vehicle, and open. Observe strict static rules (ground yourself to large metal object before handling). Notice socket with chip prom (pictured above, actual socket may appear differently) sits upon two rows of soldered down pins on ECU circuit board. Gently pull upward on socket assembly to remove. Note that the socket, chip prom, and ECU all have a specific orientation to each other. This orientation is marked by the "dot" on the corner of the chip prom (pointed to in above photo), and a small arrow on the chip prom "frame" (also seen in above photo).



Grasping the socket assembly as seen in above photo, remove the chip prom "frame" by pushing upwards with your thumb. The frame will easily pull off upwards when clicked free. You will notice that the gaps on either side of the chip are uneven depending on frame position. Remove chip prom gently and evenly to avoid damage to pins. There will be a dot on the face of the socket underneath the chip prom. This correlates to the dot on the chip prom itself. Install the new chip prom **in the same orientation as the original**.



Once the new chip prom is seated in the socket properly, reinstall the frame. **Click the frame into position by gently squeezing the socket assembly with your thumb and forefinger of one hand, and sliding the frame with the thumb and forefinger of the other hand.** When seated fully, you should feel a definite click. Reinstall socket assembly and chip prom back onto ECU circuit board **in the same orientation as originally**. Reassemble ECU and install back in vehicle. Follow original start up procedures included with chip.

Contacts:

GIAC: <http://www.GIACusa.com> sales@giacusa.com
AWE Tuning: <http://www.awe-tuning.com> sales@awe-tuning.com 1-888-565-2257