



BAVARIAN AUTOSPORT

Performance Computer Chip Installation Instructions

SAFETY WARNING: Be sure the ignition switch is in the **OFF** position before removing or attaching any electrical connectors.

IMPORTANT NOTES: If these instructions do not appear to match your engine control unit (ECU), **STOP** . . . and call Bavarian Autosport before continuing.

NOTE: The installation of a Bavarian Autosport Performance Chip in your BMW will require the use of 92-RMS (or higher) octane unleaded gasoline. Serious engine damage could occur if the engine is run under heavy load or high RPM with use of fuel with a lower octane rating.

318i/is/ic/ti

90 thru 95

PART NUMBERS:

BAV.M42.100; BAV.M42.200; BAV.M42.300; BAV.M42.400; BAV.M42.500

325i/is

93 thru 95

BAV.M50.300

525i/it

93 thru 95

BAV.M50.300

PROCEDURE:

1. Control Unit Removal:

318i/is 90-91, 318ic 92

- Open the glove box and remove the pins which secure the limiting straps to the sides of the glove box and let it hang freely.
- Remove the fasteners securing the plastic glove box roof panel. Pull down the panel and let it rest on the glove box.
- Remove the 10mm bolts or phillips head screws which secure the ECU. Gently let the ECU drop downward. Remove the wiring harness from the ECU and pull the ECU from the car.

318i/is/ti, 325i/is

- Open the engine hood. Note the black soundproofing cover located on the passenger side of the firewall behind the positive terminal (marked "+") near the right side hood hinge. The soundproofing cover is fastened to the firewall with reusable plastic rivets. Using a small screwdriver, remove the rivets by prying the center section out from the outer body. When the center pin is pulled out about halfway the rivet can be pulled from the cover.
- Fold the soundproofing cover away to gain access to the plastic cover behind it. Remove the four Phillipshead screws and tilt the cover forward, this will allow it to unhook from the channel along the bottom. Release the wiring harness from the cover and set the cover aside.
- The engine ECU is located on the bottom of the compartment. Remove the wiring harness connector by lifting the metal clasp on the connector and pulling the connector free of the ECU.
- Remove the two phillips head screws and the clamps retaining the ECU (the clamps are specific to the left and right sides, note their positions for reassembly). Slide the ECU straight out of the compartment.



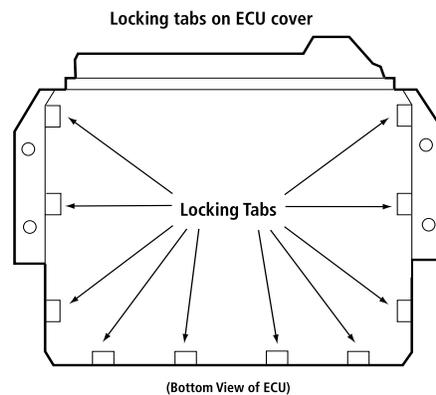
Call Toll Free: **1.800.535.2002**

525i/it

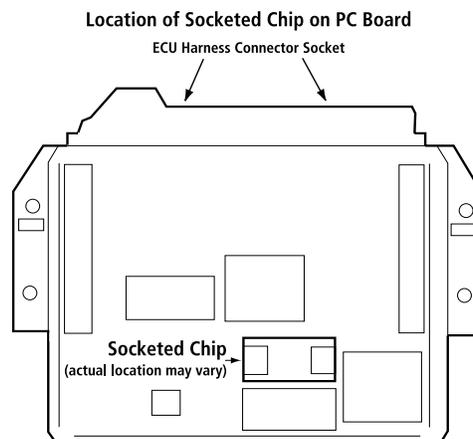
- a) Open the engine hood, note the black plastic cover located at the rear of the engine bay on the passenger side (between the strut tower and the firewall). Loosen the four phillips head screws that secure the plastic cover (they do not remove from the cover) pull the cover up and set it aside.
- b) There will be 2 or 3 control units under the cover. The engine ECU is the one that is closest to the firewall. Lift the metal clasp on the wiring harness connector and disconnect the harness from the ECU.
- c) The ECU is secured to the chassis by two metal clips, one on each side of the ECU. Using a pair of pliers or screwdriver, remove the clips by pulling or prying up on each clip.
- d) Pull the ECU directly upward and remove it from the car.

CAUTION: The Bavarian Autosport Performance Chip and your BMW's ECU are sensitive to static electricity and can be damaged by the natural charge that builds up on your body and clothing. Prior to opening the ECU or handling the Performance Chip, you should discharge any static buildup by touching a metal cold water faucet or metal desk or workbench, be sure to touch a bare metal area.

2. Lay the ECU on your workbench with the Bosch label facing up. Using the supplied Torx wrench, remove the four Torx head screws securing the cover to the base.
3. (See figure 1) Turn the ECU over so that the Bosch label is facing downward. Use a screwdriver to pry up the metal tabs around the perimeter of the box. Pry the tabs until they are straight up and remove the cover from the base. Lay the cover aside.

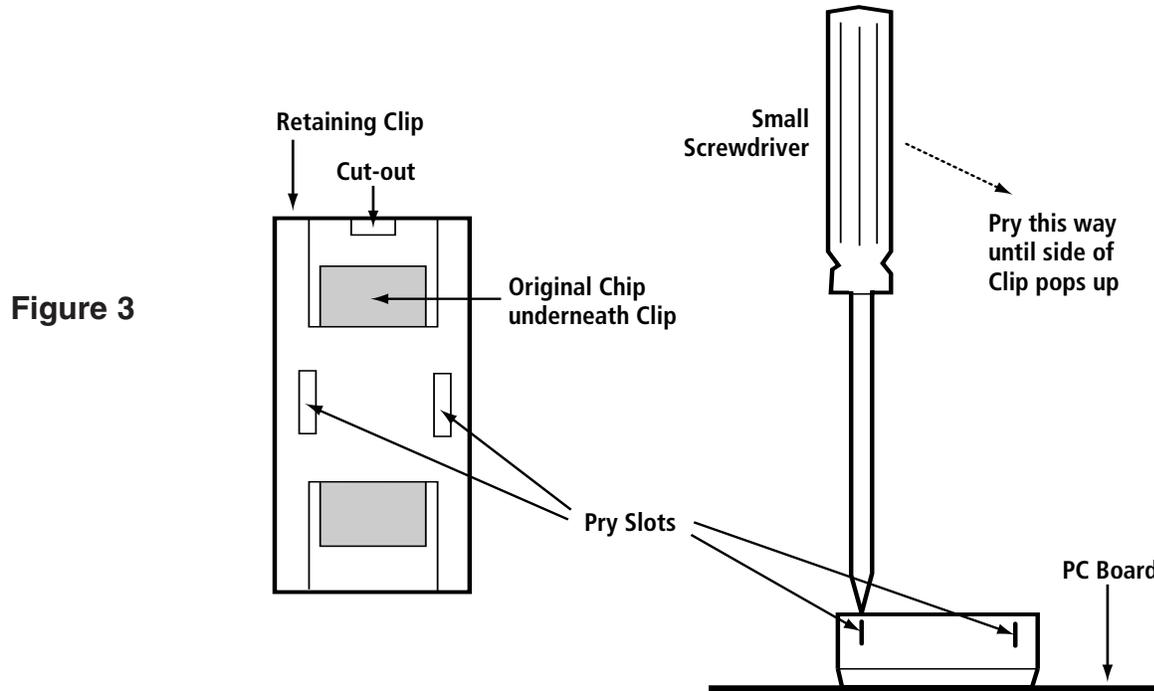
Figure 1

4. (See figure 2) Place the Ecu on the bench with the PC board facing up. Locate the one chip on the PC board that is mounted on a socket. This chip will be elevated above the other chips on the board and should have a plastic "H" retaining clip over it.

Figure 2

5. (See figure 3) To remove the "H" clip, insert a small screwdriver into the small slot on one of the sides of the clip. Pry the end of the screwdriver away from the chip to release the side of the clip. Repeat for the other side of the clip, and remove it.

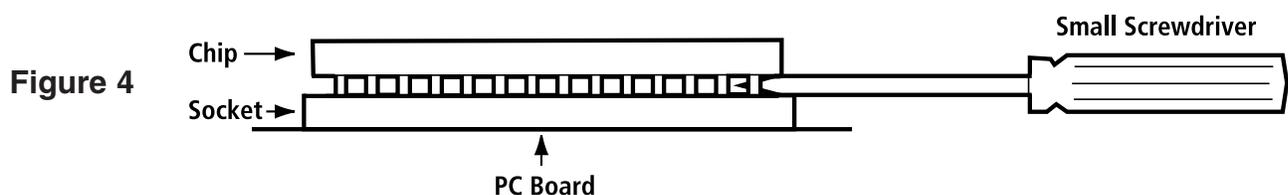
Removing "H" Shaped Retaining Clip



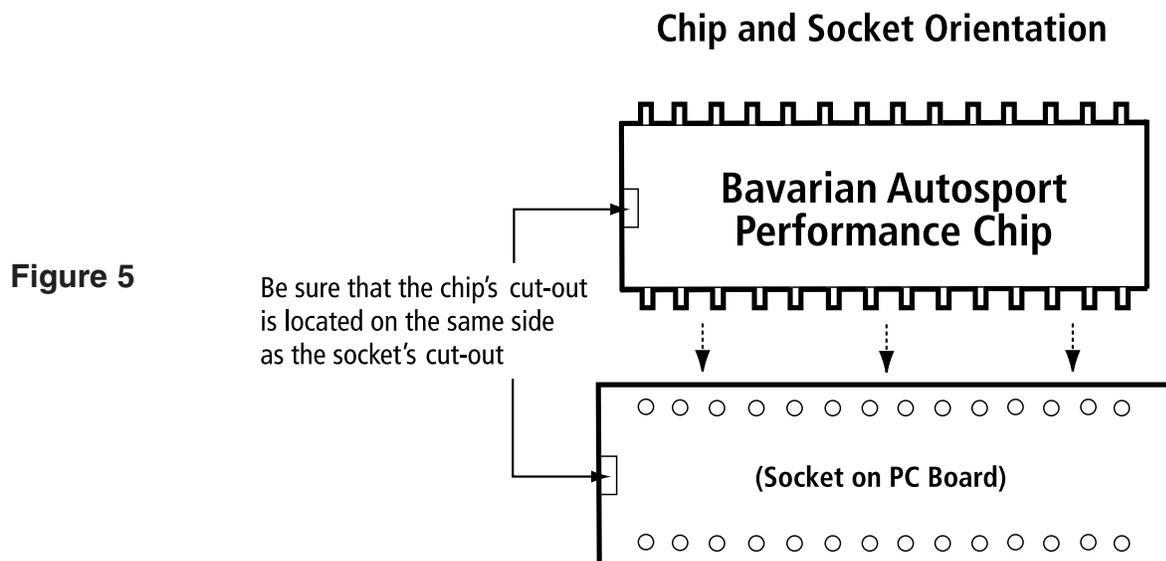
6. (See figure 4) Observe that the chip has a small cut out on one end and that the socket has a corresponding cut out. The new Performance Chip must be installed in this same position*. Remove the chip from the socket by gently inserting a small screwdriver under the chip from one end (be sure you insert between the chip and the socket, not under the socket!) and carefully rock the screwdriver from side to side then lift up. Work from both ends of the chip to lift it evenly from the socket. In removing the chip from the socket hold the chip at the ends, not over the pins. Set the chip on the metal ECU cover to protect it from damage due to static electricity.

***CAUTION:** In rare instances, the referencing slot on the original chip will not be at the same end as the referencing slot in the socket. In these cases, the new performance chip should be installed with the referencing slot in the same position as the original chip.

Prying Chip from Socket



7. (See figure 5) Remove the Performance Chip from the antistatic box, holding the chip by the ends. Observe the small cut-out on one end of the chip. This cut-out corresponds to the cut-out in the one end of the socket (the chip must be installed with the cut-outs lined up) Notice that the two rows of pins are slightly wider than the two rows of contacts in the socket (the number of pins on the chip should match the number of contacts on the socket). Gently press the outer side of each row of pins against the benchtop in order to bring the rows closer together until the chip will fit properly into the socket. Carefully insert the chip into the socket taking care to line the pins up with the socket contacts. Apply even pressure on both ends of the chip and push it into the socket until it is fully seated (support the underside of the PC board with your other hand while pushing on the chip). Use the box from the Performance Chip to store your original chip.



8. Reinstall the “H” retaining clip by snapping it over the Performance chip and socket until both sides “click” and are seated.
9. Reinstall the ECU cover and gently bend the locking tabs back down against the base (if any of the tabs break off, don't worry about it. Just be sure the broken tab does not go inside the ECU.). Install the Torx screws in the top of the cover. Reinstall the ECU in the car.