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.*

325e/es
85 thru 87

PART NUMBERS:
BAV.M20.200A; BAV.M20.200B

528e
85 thru 87

BAV.M20.200A; BAV.M20.200B

PROCEDURE:

1. Control Unit Removal:

325e/es
a) Open the glove box and remove the pins which secure the limiting straps to the sides of the glovebox and let it hang open freely.
b) Remove the fasteners securing the plastic glove box roof panel. Pull down the panel and let it rest on the glove box.
c) 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.

528e
a) Open the glovebox and remove the pins which secure the limiting straps to the side of the glovebox and let the glovebox hang down freely.
b) Remove the vinyl glovebox "roof" or "cover" by unhooking it from the rear edge of the glovebox. The rear edge of the cover has a long clip which slides over the top edge of the rear of the glovebox, just push it up and off. Pull the rear of the cover out and up over the top of the dashboard and secure it with a piece of tape.
c) Remove the 10mm 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.

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.
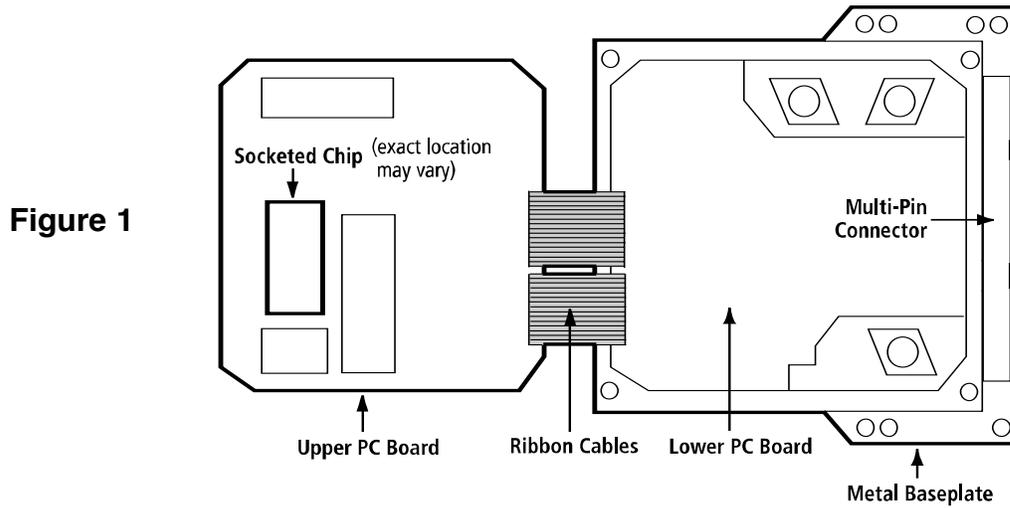
2. Lay the ECU on your workbench with the Bosch label facing down. Remove the four Torx screws (using the supplied Torx tool) or phillips head screws from the bottom cover (the one without the Bosch label). Remove the cover and set it aside.

3. Remove the four Torx or phillips head screws which are securing the PC board to the ECU chassis. Remove the rubber isolator and gently lift the PC board from the chassis and, using the ribbon connector cable as a hinge, flip it over onto the workbench.

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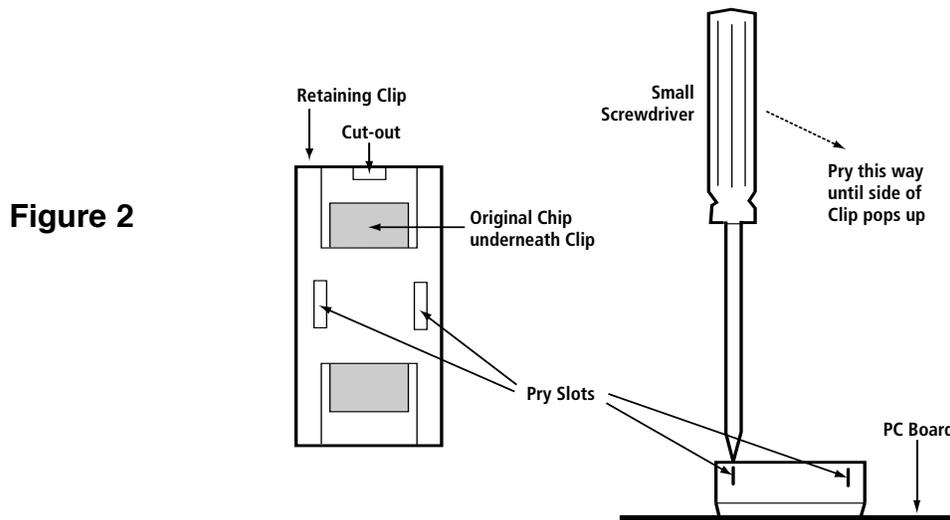
4. *(See figure - 1)* Locate the one chip on the PC board that is mounted on a socket. This chip will be elevated above the other chips on the board and may have a plastic "H" retaining clip over it.

Example Location of Socketed Chip on PC Board

Figure 1

Socketed Chip (exact location may vary)

Multi-Pin Connector

Upper PC Board   Ribbon Cables   Lower PC Board

Metal Baseplate

5. *(See figure - 2)* If the chip does have the 'H' clip retainer, remove it by inserting 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

Figure 2

Retaining Clip

Cut-out

Original Chip underneath Clip

Pry Slots

Small Screwdriver

Pry this way until side of Clip pops up

PC Board

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6. *(See figure - 3)* 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.

Prying Chip from Socket

Figure 3
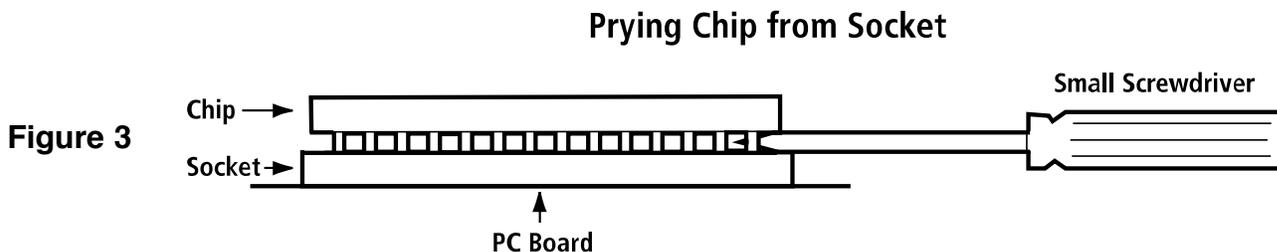
*CAUTION: In rare instances, the referencing slot on the original chip will not be at the same end as the referencing slot in the socket. In these cases, the new performance chip should be installed with the referencing slot in the same position as the original chip.

7. *(See figure - 4)* 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.

Chip and Socket Orientation

Figure 4
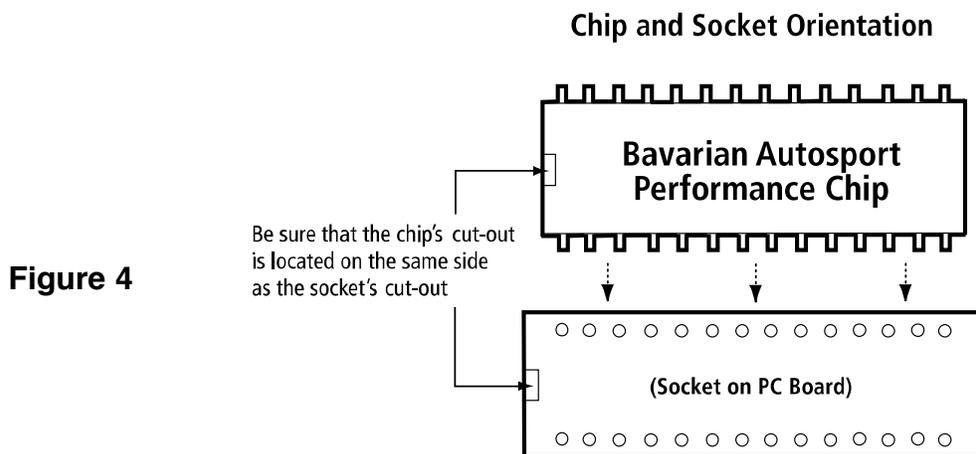
8. Reinstall the "H" retaining clip by snapping it over the Performance Chip and socket until both sides "click" and are seated.
9. Flip the PC board back over and position it into the ECU chassis. Replace the rubber isolator and the four screws. Position the cover on the chassis and install the four cover screws.
10. Reinstall the ECU in the car.

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