



R1200C CHIP INSTALLATION INSTRUCTIONS

TOOLS REQUIRED:

1. 3mm Hex key, ball end preferred;
2. 4mm Hex key, ball end preferred;
3. 5mm Hex key, ball end preferred;
4. #2 Phillips® head screwdriver, long;
5. Small flat blade screwdriver, NON-MAGNETIC tip;
6. Medium flat blade screwdriver, suitable for use as pry bar;
7. T30 Torx™, tamper-proof;
8. Adjustable fuel flow restriction clamps, qty: 2, refer to photo in step 3;
9. Masking tape: useful for labeling fuel lines, vent hoses, screw locations;
10. Clear RTV silicone;
11. Medium wire ties, qty: 2, for fuel tank vent hoses @ fuel cell;

This instruction set provides a basic task list to follow, though presumes mechanical familiarity and confidence in disassembly of the bike. The following BMW service manual provides more detailed instruction on bike disassembly.

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Electrostatic discharge (ESD) mat and wrist ground strap are highly recommended.

EXTERIOR DISASSEMBLY

1. Remove both sets of side covers.
2. Remove front seat (2x 5mm Hex).
3. Remove fuel tank. **LESS FUEL IS BETTER.**

Clamp off the fuel supply and return hoses at the plastic fuel pipes. These hoses **MUST** be clamped to avoid substantial fuel loss. Some late bikes may be equipped with a quick-connect fitting (not shown). Simply depress the spring and pull fittings apart; push together to reconnect.





CONTROL UNIT REMOVAL

1. The control unit and harness connections should be visible now that the tank has been removed. Remove the four Phillips® head control unit mounting screws, as shown.



2. Pull control unit up and off of the E-box mounting plate. IF you are using an aftermarket exhaust system, pull off the black plastic cover of the E-box and remove the cat code plug from location as shown.



NOTE: DURING NEXT STAGES OF CHIP INSTALLATION AND REPLACEMENT, IT IS CRITICAL THAT THE POTENTIAL FOR STATIC DISCHARGE BE ELIMINATED OR REDUCED. GIVEN THE MEANS BY WHICH INFORMATION IS STORED ON THE EPROM, IT IS POSSIBLE TO ERASE, CORRUPT, OR DAMAGE THE FILE FOR EITHER STOCK OR PERFORMANCE MAPS, OR CONTROL UNIT WITH ANY FORM OF ELECTROSTATIC DISCHARGE. AN ESD MAT AND WRIST GROUND STRAP ARE HIGHLY RECOMMENDED!

3. Place the control unit face up on a clean, dust-free countertop or workspace with the BMW/Bosch label facing you. Remove four T-30 Torx™ tamper-proof screws as shown.



4. With non-magnetic slot-head screwdriver, gently pry the case-halves open from topside. **Remember! The top has the label.** NOTE: The factory silicone bead has high adhesion characteristics; two screwdrivers may be required to slowly break this bead, allowing some material to remain on both case-halves. The adhesive has a nasty tendency to pinch fingertips when the halves snap together, so BE CAREFUL!



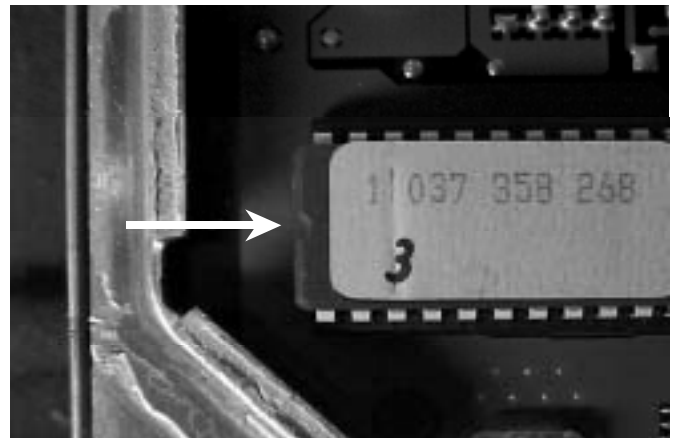
5. Lift cover off of the control unit from left-hand side as shown. **NOTE: Main printed circuit board should remain attached to the bottom cover.**



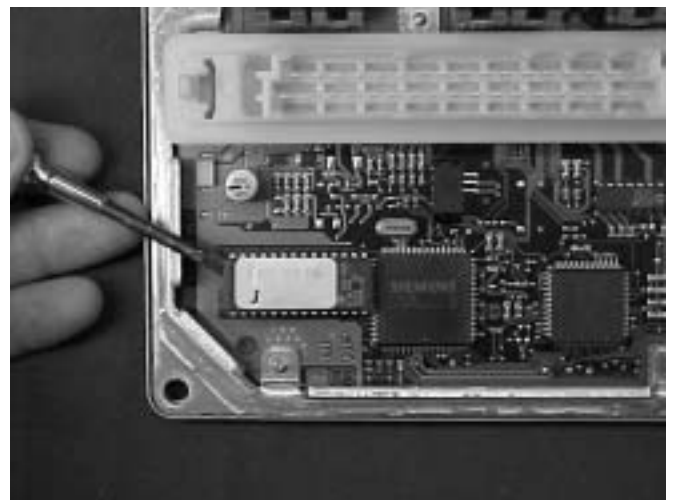
6. Locate the socketed chip on the printed circuit board. This can be easily identified by the white plastic “H” shaped retaining clip. This clip is shown in front of the thumb in step #5. Remove the H-clip using a NON-MAGNETIC thin blade screwdriver inserted into one of the two small slots opposing each other, in the center of the clip. Gently pry the screwdriver up, away from the circuit board. This should pop the clip upwards and loose on one side. Use same procedure on the other side of the retaining clip.



7. Note installation direction of the EPROM. Direction is designated by a notch formed in one end. As shown here, the notch goes to the outside edge of the control unit. Serious damage could result if a chip is installed backwards, so this is a critical step.

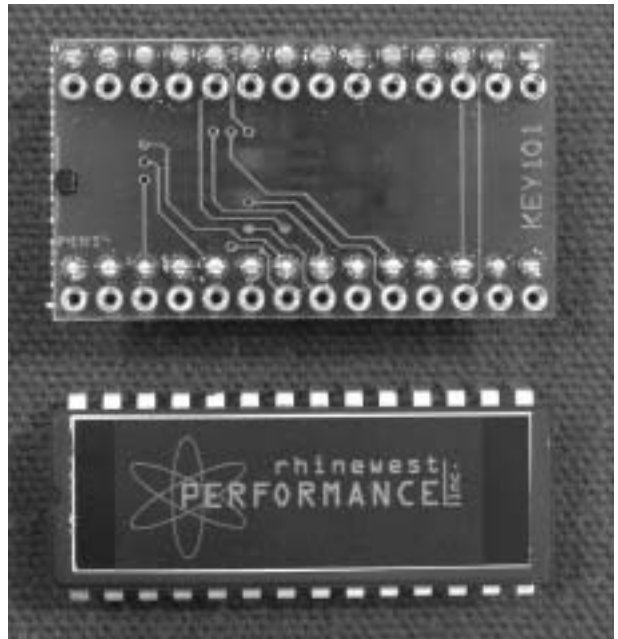


8. Remove the chip from its socket by inserting the NON-MAGNETIC thin blade screwdriver between the short end of the chip and the socket, as shown. Pry upwards gently. Work slowly and gently pry from alternating ends of the chip. **DO NOT pry the socket away from the printed circuit board!** Make sure that it is the EPROM that is being removed. Avoid skin contact with the legs or pins on the chip as well, holding the silicon wafer from the short ends. Set the original program chip in or on the anti-static plastic box to avoid possibility of static charge damage.

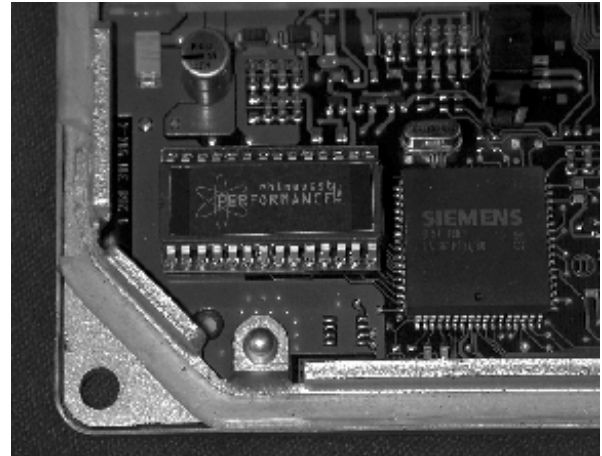




9. Photo shows new encryption board and EPROM to be installed. First, install the encryption board into the vacant socket on the circuit board. Note that the small black dot on the left-hand edge of the encryption board (with KEY 130 or KEY 101 legible at lower RH corner) will correspond to the notch on one edge of the EPROM orienting the pins to their correct addresses. Carefully inspect the alignment of the pins to their corresponding sockets. Only when certain of correct alignment, press the encryption board downward and into place gently. Avoid excessive circuit board deflection. Follow similar procedure for installation of performance chip into the encryption board: partially install the far row of legs or pins into the socket. Use thumbs and index fingers to gently compress and align the near side row of pins into the relevant sockets. Exercise caution to avoid bending the pins!



10. Store the stock EPROM in the black plastic box that the performance EPROM was shipped inside to avoid accidental erasure.
11. Reassemble control unit in reverse order. The H-clip will not be reinstalled. Also, run a thin bead of clear RTV silicone over the existing sealer. This will prevent moisture intrusion into the control unit.
12. Reinstall control unit, fuel tank, and remaining fairing trim pieces.



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