

BMW 88-Pin # 1 Insert
M-MIS-90251



Use only for ECU Bosch Number
ending in 413 (1-layer board)

Attention !

**You must have the correct
setting for handling
electrostatic sensitive devices
to perform this procedure.**

BMW 88-Pin Connector ECU “Motronic”- 3 year warranty

This remanufactured ECU is NOT coded to your vehicle. If it fails to start by itself or after swapping E-Proms, you may need to re-code the ECU and the EWS II (if equipped) with a BMW MODIC factory tool. Perform an E-Prom SWAP only if ProgRama computer fails from moment of installation. Do not return your core until you have a working unit. If you are not comfortable SWAPPING the E-Prom, we will do it free of charge in 48-hour Turn Around.

Your cars original E-Prom has been programmed for efficient engine operation in your car. Your engine may not run correctly until the cars original E-Prom is installed in your ProgRama Computer. Exchanging the E-Prom in your computer is an easy task and with caution can be done with out damage. We encourage you to read through the procedure and consider exchanging the E-Prom your self, however you may send both computers to ProgRama where we will exchange E-Proms for you. Use the numbered pictures attached so it can help on the step-by-step instructions. **(The warranty will not be voided by replacing the E-Prom)**

Instructions for E-Prom Swap on 1-layer circuit board ECU.

It is imperative that the mechanic discharge static electricity buildup before opening computer. This can be done by touching a grounded metal surface such as an above ground lift. Handling the E-Prom in a high static area with out this protection will cause damage.

Do Not Touch E Prom Pins!!

Pic 1-4) Your control unit may have four T20 screws securing the top cover. They must be removed first. The Tabs that securely close the cover are fragile and will break when bent too far away from the base. Only lift tabs one mm. The sides of the cover are flexible and with careful levering can be moved away allowing the base to clear the tabs and then the cover can be pulled away with out damage.

Pic 5-6) The E-Prom is covered with a removable plastic locking cover. Insert a small flat bladed screwdriver in to one of two narrow openings at the top of the cover and with gentile levering the lock will disengage and the cover will lift off exposing the E-Prom.

Pic 7) The E-Prom has a notch on one end, which aligns with a notch found in one end of the socket. It may help to use a magic marker to mark the board just below this notch before removing the E-Prom. Also mark the cars original E-Prom so as to distinguish it from the other E-Prom.

Pic 8-9) The E-prom removing tool, supplied with your computer, can now be used to lift the E-Prom from the socket. This is easily done by securely attaching the E-Prom tool to the E-Prom and pulling straight up from the socket with out bending the pins.

Pic 10-13) To install replacement E-Prom, first align notch and then align one row of pins. Then align second row of pins making sure all pins have started before firmly pushing down on E-Prom until seated. Install plastic locking cover making sure it locks when pushed down.

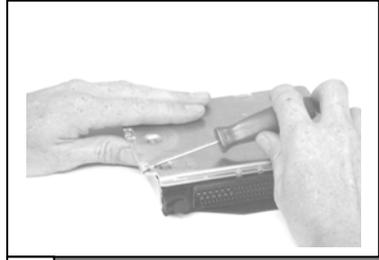
Pic 14-16) To install cover start with positioning the end tabs first, then align the front opening with plastic groove. Lever the sides to allow the side tabs to clear the base and then use pliers to close side tabs. Gently push down on end tabs with screwdriver and install screws to finish the installation of cover.

Your BMW will now run as it was originally programmed to run.

Note: Completely assemble your old computer and return for core credit to your supplier.

If your car fails to start or fails to run correctly after performing this procedure please contact ProgRama Inc. for technical support at (800) 668-8843, or email techsupport@programainc.com

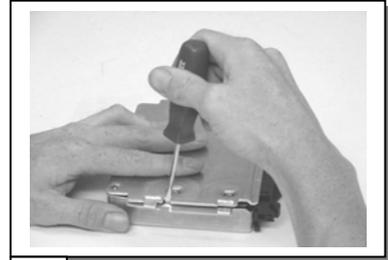
Instruction for 1-layer/ 1-board ECU



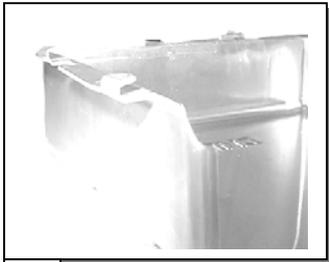
1



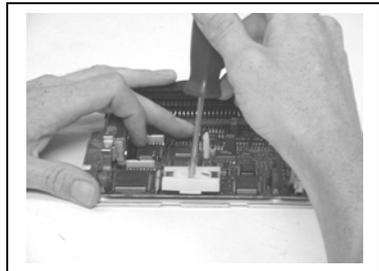
2



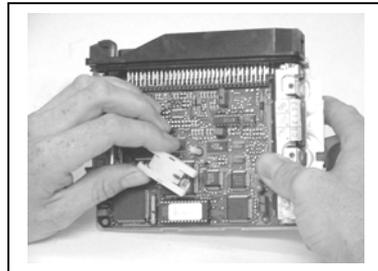
3



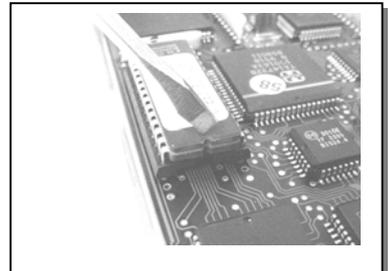
4



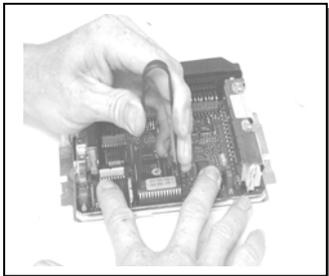
5



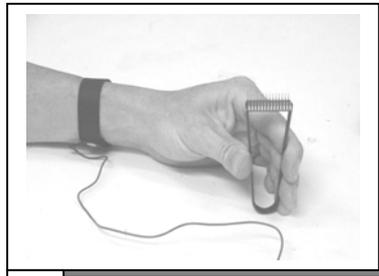
6



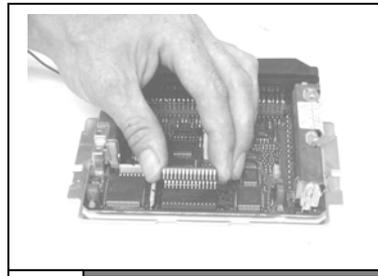
7



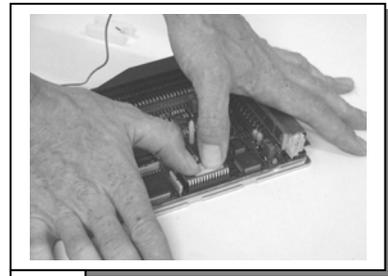
8



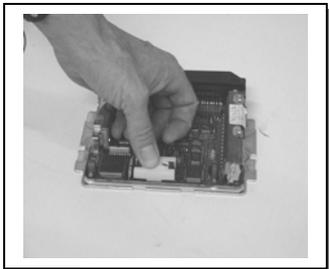
9



10



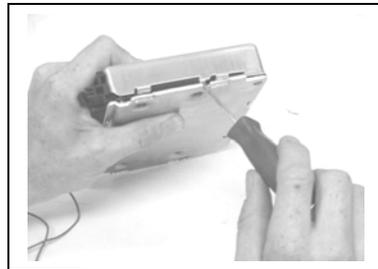
11



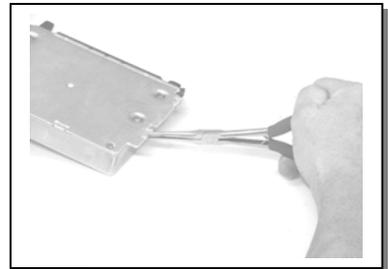
13



14



15



16