DME-02, DME Control Unit Chip Installation (Including KLR Chip for Turbos)

Tools

- Phillips Screwdriver
- Straight Tip Screwdriver
- 7mm wrench or 7mm socket and ratchet

Other Procedures Needed

- DME-01, DME Control Unit Removal and Installation

Procedure

1. Using DME-01, remove the DME Control Unit (and KLR for Turbos).
2. Before removing the control unit(s) from the mounting bracket, pay particular attention to how they are mounted on the bracket. I recommend drawing a picture showing how they are mounted, especially for turbocharged cars where there are two units. Then, remove the control unit(s) from the mounting bracket.
3. Once the control unit(s) are removed, place them on a clean, dry, flat surface.
4. If the air in your work area is particularly dry, or you have a problem with static electricity, you should invest in a grounding strap to attach to your wrist. Static electricity is your worst enemy from here on.
5. Turn the control unit so that the back side of the module is facing up.
6. Using a small flat tip screwdriver, pry up the casing tabs on the rear of module.
7. When all tabs are raised, slide the module cover off.
8. What you will find inside the unit is two printed circuit boards mounted face-to-face. Separation between the two circuit boards is maintained by plastic posts. The posts are mounted to the bottom circuit board and the top board clips onto the top of the plastic post via tabs at the top of the post. The post are actually two-piece posts which are split in the middle. The two halves of the post simply snap together. The two circuit boards are connected electrically via a ribbon cable at the end of the board opposite the electrical connector. To replace the appropriate chip the two circuit boards must be separated from each other.
9. To separate the boards, place the tip of a small flat tip screwdriver between the slit at the middle of the post. Pry back and forth gentle until the two halves of the post separate (some posts may have a pin in the center which must be pulled out to allow the posts to separate).
10. Once all the posts are separated, lift the top circuit board up on the side of the board closest to the ribbon cable. Then slide the board toward the ribbon cable side. The will allow you to slide the other edge of the circuit board out of the electrical connector.
11. You should now be able to "open" the circuit boards and lay them out flat.
12. The chip to be replaced should be easily identifiable. On the late model cars (1985.5 and newer), it should be the only chip on the boards that is not soldered in place. Instead, it will be inserted into a socket connector.

NOTE

Before removing the old chip (Turbocharged cars) make sure you have identified the correct chip for installation. On 1988 model and newer cars this is simplified because the DME control unit uses a 28 pin chip while the KLR Unit uses a 24 pin chip. However, pre-1988 model cars all use a 24 pin chip for both the DME and KLR. For turbocharged cars, it's a good idea to mark the old chips before removal to identify which control unit it came from, just in case you decide to go back to the factory chips in the future. Also, make sure you look at how the chip is oriented in the socket before removal (All cars). There is an indent on one end of the socket and on one end of the chip. If the new chip is not installed such that the indents line up, the chip may be permanently damaged.

13. To remove the old chip, slide a small flat tip screwdriver under one end of the chip an pry up gently. DO NOT try to completely remove the chip by prying up on one end. Move to the other end of the chip, slide the screwdriver under the edge, and pry up gently. Move back and forth between both ends of the chip until the chip comes completely out of the socket.
14. Install the new chip, ensuring that all of the legs on the chip are aligned with their respective holes in the chip socket. Again, make sure the orientation of the chip is correct (indents lined up). Slide the chip into the socket and gently press down on the center of the chip until it is fully seated.
15. Fold the two circuit boards together and slide the top circuit board into the slot on the electrical connector.
16. Make sure that the posts on both circuit boards are aligned and press down gently to snap them together.
17. Install the control unit cover and bend the tabs to hold the cover in place.
18. Mount the control unit(s) to the mounting bracket.
19. Before bolting the control unit(s) into the car, attach the electrical connector (and the hose for the KLR on turbocharged cars).
20. Using DME-01, install the control unit(s) into the car.
