

TO: **ALL SALES FORCE**

FROM: **Blue Streak Tech-Line**

#: **BDTECB202**

SUBJECT: **Frequently Asked Questions**

Q. I recently purchased a brand new OBD II computer from the GM dealer and it doesn't start my car. What's wrong with the computer?

R. You probably purchased a computer that has not been programmed. General Motors began using electronically re-programmable computers back in the 1990 model year on some of their vehicles, even before the implementation of OBD II regulations. When you buy a computer from the O.E., it is blank, meaning there is no operating system or engine calibration stored in the ECM's memory. These ECM's use what are known as "Flash" memory microchips instead of the traditional removable PROM chip. The O.E. leaves it up to you to decide where you are going to get the ECM programmed. If you purchase your ECM from Blue Streak, we will program the computer for you according to the specifications of the vehicle into which it will be installed.

Q. After installing my newly rebuilt Chrysler SMEC engine controller, my vehicle restarted and ran great, but I still have no battery charge from my alternator. What else could be wrong?

R. The Chrysler SMEC/SBEC engine controllers provide a switched ground path for the alternator field circuit. If the controller was just rebuilt and you still have no alternator charge, the dark green wire that runs from the controller to the alternator field circuit must be inspected for any possible cuts, chafing, abrasions, corroded connectors, or circuit "opens". If the wiring checks out, the brushes inside the alternator may be worn beyond acceptable limits.

- Q. I just installed a new ECM in my GM vehicle and it still doesn't run properly. However, when I hook up my scan-tool and enter the Data stream function, the vehicle clears up and runs perfectly. What is wrong with the computer?
- R. The computer is fine, but the vehicle grounds are not. By hooking up the scan-tool and entering the Data stream function, you have provided the ECM with a good ground through the vehicle diagnostic link connector (ALDL connector) via the scan-tool. Inspect all ECM grounds not only by continuity checks, but by a voltage drop test as well. All ECM grounds must have **less than** a 50 milli-volt (0.05 volt) drop across the ground circuit.
- Q. I recently installed a new O2 sensor in the vehicle after replacing the computer. The O2 sensor output is good, as I have verified the signal with an oscilloscope, but the computer isn't reading the signal and it does not go into closed loop. Also, there is no reading in the scan-tool data stream for O2 sensor voltage. Why doesn't the ECM see the signal?
- R. One or more of the connections between the O2 sensor and the ECM may be corroded. Typically there are at least two connectors between the O2 sensor and the ECM, one between the O2 sensor and the vehicle wiring harness, and the other between the vehicle wiring harness and the ECM. A voltage drop test must be performed on the O2 sensor signal circuit. A voltage drop as low as 0.2 volts is enough to fudge the O2 signal to the ECM, as an O2 sensor which is at ideal operating temperature will only produce 0.15 to 0.95 volts. If you take into account the 0.2 volt drop across the signal circuit, the O2 sensor voltage signal is reduced by more than 20% before it has even reached the ECM, possibly causing a code for low-circuit voltage, lean mixture, or no signal present. Keep those connectors clean.

- Q. I heard that several GM computers that employ surface mount technology (SMT) may become intermittent in operation over time due to manufacturing defects. Realizing this, I replaced the ECM in my customers' vehicle after performing a Tap-test to make sure that the intermittent problem was in fact due to a defective ECM. However, the vehicle still has an intermittent miss, even with the rebuilt ECM. Can this problem be fixed?
- A. This problem can be fixed, and it is fixed with every Blue Streak remanufactured GM SMT computer. The reason that some SMT computers become intermittent is due to the conformal-coat that is applied to the ECM circuit board. The conformal-coat is applied to the circuit board to help protect the ECM from corrosion and the elements. However, after some time, the conformal-coat may shift, swell, or spread, causing the movement of certain electronic components on the board. This creates the potential for intermittent contacts between these electronic components and the circuit board. At Blue Streak, all remanufactured GM SMT ECMs have the original conformal-coat removed, all solder joints are then re-flowed and the ECMs are exhaustively tested. A new conformal-coat is then applied using a process that virtually eliminates the re-occurrence of an intermittent ECM, and the ECM is tested once again. If after installing the remanufactured ECM you still have an intermittent miss in the vehicle and you have checked the wiring harness for chafing and shorts, chances are pretty good that you have a problem with the vehicle wiring harness connector at the ECM. If you remove the pins from the harness connector and cinch them down, they will have a stronger grip on the ECM pins. This should eliminate your intermittent engine miss.