A Very Unusual Electrical Noise Problem, and How I Got Lucky

This car was in for engine repairs. There was also a request to repair intermittent operation of the HVAC. The HVAC button panel display would show --- when it was malfunctioning.

After the engine repairs some fine tuning of the fueling was needed. After driving for a few minutes, the idle speed would increase from the programmed 750 to about 1000 rpm. I noticed that the IAC count was rapidly varying from 30 to 40. The IAC count should be zero when the idle speed is higher than the programmed value. Since I was doing full load fuel tuning, I ignored the problem because the idle control has no effect at full throttle. I went on and completed the full throttle fuel tuning.

I took a closer look at the idle control problem and noticed that the idle was normal until the engine went into closed loop fuel control. In closed loop the idle was much too high and the IAC values were varying wildly.

I installed a new IAC valve and there was no change. I have heard of a defective alternator creating electrical noise that disrupts the engine control system. I unplugged the alternator control cable from the alternator to turn it off. There was no change with the IAC problem. Next, I installed spare engine control computer. No change. Now what! The end of the day had arrived and I planned to continue the next day.

Morning came and so did rain. I do not test drive in the rain so I decided to repair the HVAC problem.

The HVAC control panel was responding to the buttons and displaying the temperature as it should. After about two minutes, the --- appeared on the LCD display. The button panel displays --- when the communications link between the button panel and the HVAC computer, known as the Programmer is not working. The Programmer often fails when the electrolytic capacitors age out. I noticed that a low-level screeching sound was emitted by the Programmer during the malfunction.

I replaced the four capacitors and the Programmer and the HVAC system returned to normal operation. I hope that it is good for another 28 years.

Now it was time to go back to the IAC problem. Amazingly, it was gone.

In conclusion, it seems that the electrical problem with the Programmer power supply was interfering with the engine control system. The electrical noise was causing the IAC system to malfunction after the engine went into closed loop fuel control. It is interesting to observe that the Programmer module is located on the fiberglass firewall above the accelerator pedal. About two inches forward lies the engine harness that contains the IAC control wires. Strange but true! Boy did I get lucky.