



TECH TIP

GM IAT and A/C

Many of the GM OBDII systems have the intake air temperature (IAT) sensor pulling double duty as an ambient sensor. As an ambient sensor, the PCM uses the information to determine A/C compressor operation.

When ambient temperatures are below 40°F the PCM will not ground the compressor clutch relay. Since this is a normal program operation, there is no trouble code set. Also, all the regular input signals for A/C system will show normal when tested.

If the IAT sensor or its wiring become damaged the signal to the PCM could indicate a reading as low as -49°F. The PCM will ignore the A/C request signal and not allow compressor operation. Usually, there is no reference to this PCM programming in service manuals.

When a customer brings their vehicle in for a "No A/C" complaint, take note of how the engine is performing. A bad IAT circuit can cause a rough idle or driveability concern. This is just another reason why a scan tool is becoming a normal tool for A/C diagnosis.