**We Support**
**ASE NATEF**

# Set Opposite Code

**Meets NATEF Task:** (A8-B-2) Diagnose the causes of emissions or driveability concerns resulting from malfunctions in the computerized engine control system with stored diagnostic trouble codes. (P-1)

**Name** _____ **Date** _____ **Time on Task** _____

**Make/Model/Year** _____ **VIN** _____ **Evaluation:  4   3   2   1**

If a diagnostic trouble code is set, a commonly used method of diagnosis is to attempt to set the opposite code after clearing the original code. For example, if a throttle position (TP) code is set, clear the DTC and attempt to set a DTC for the opposite condition.

- If a signal high DTC is set, clear the code and turn the ignition switch on (engine off), unplug the sensor and a signal low DTC should be set.

- If a signal low DTC is set, unplug the sensor connector and using a jumper wire, connect the 5-volt reference to the signal terminal in the connector (not at the sensor). Turn the ignition switch on (engine off) and the opposite DTC should set.
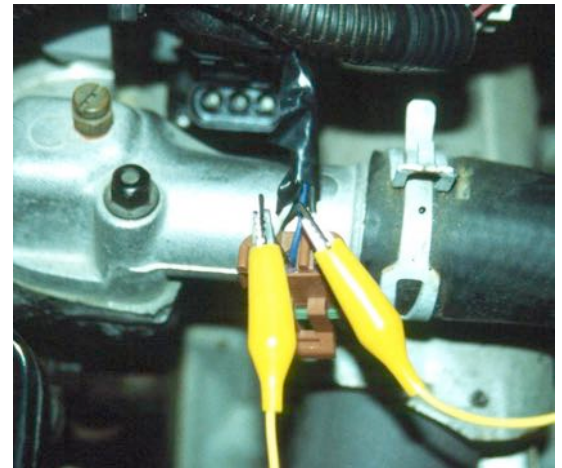


_____ **1.** Set a DTC for TP or MAP sensor.

      a.  Which sensor was used? _____
      b.  What code set? _____
      c.  Meaning of code set? _____

_____ **2.** Clear the DTC.

_____ **3.** Disconnect the sensor wiring and use a jumper wire to set the opposite code.

      a.  What code was set? _____
      b.  **OK** _____ **NOT OK** _____

**Results:**

If the opposite code *does* set, the cause of the original DTC is the result of a fault in the sensor (component) itself.

If the opposite DTC *does not* set, the problem is likely due to a wiring fault.

**NOTE:**  Always consult a factory service manual for the factors that must be met for a DTC to be set. Be sure that all factors are present when attempting to set the opposite code.