

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.

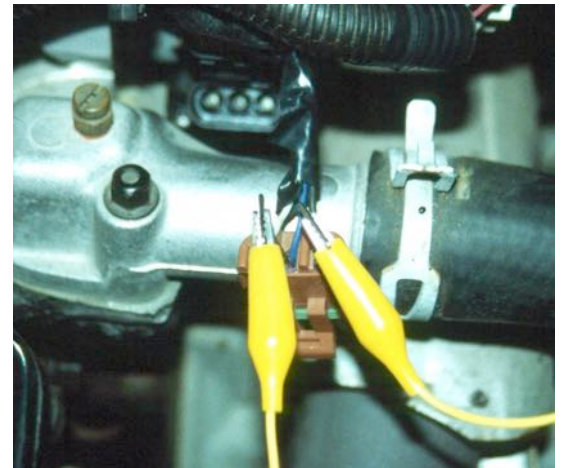
_____ 1. Set a DTC for TP or MAP sensor.

- Which sensor was used? _____
- What code set? _____
- Meaning of code set? _____

_____ 2. Clear the DTC.

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

- What code was set? _____
- 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.