# **INSTRUCTIONS FOR NOID LIGHTS**

Disconnect electrical harness from injector. Plug NOID LIGHT into harness. Start or crank engine.

- 1. If NOID LIGHT flashes, electrical system is OK to injector. Any problem would be in the injector or fuel system to the injector.
- 2. No light or steady light indicates electrical malfunction. Check diagnostic charts.

### INSTRUCTIONS FOR IAC CIRCUIT TESTERS

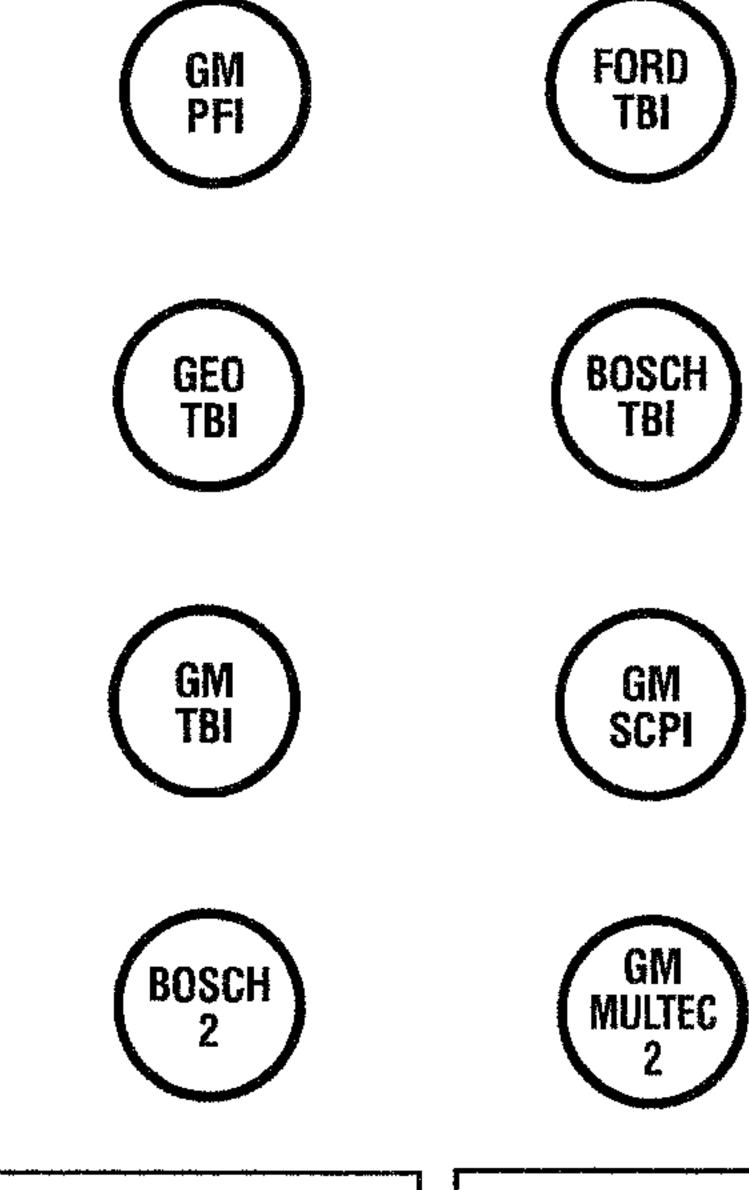
The IAC Circuit Tester is used to test the signals to the Idle Air Control Valve. Included are 2 different types of IAC Circuit Testers. Use the tester that properly fits the IAC connector on the vehicle being tested.

# To use the IAC CIRCUIT TESTER in conjunction with an IAC Speed Control Tester:

- 1. Apply the vehicle's emergency brake and block wheels.
- 2. Start the engine and allow idle to stabilize.
- 3. Connect the IAC Speed Control Tester per manufacturer's specifications.
- 4. Connect the IAC CIRCUIT TESTER to the vehicle's IAC harness.
- Start the engine and increase and decrease engine idle using the IAC Speed Control Tester. (If the engine idle does not respond, the IAC valve is probably defective.)
- 6. As the engine idle increases and decreases both lamps on the IAC CIRCUIT TESTER should flash indicating that the vehicle's ECM is trying to compensate for the change in engine idle. If either lamp (red or green) on the IAC CIRCUIT TESTER does not flash, check for an open circuit between the ECM and the IAC harness. The ECM may also be the cause of failure.

# To use the IAC CIRCUIT TESTER without a Speed Control Tester:

- 1. Apply the vehicle's emergency brake and block wheels.
- 2. Start the engine and allow to stabilize at idle.
- 3. Unplug the IAC harness from the IAC and connect to IAC CIRCUIT TESTER.
- 4. Place a load on the engine that will cause the engine idle to decrease. This can be accomplished by shifting the transmission into drive, turning on the air conditioning and/or turning the steering wheel all the way to the end.
- 5. The decrease in engine idle should cause the ECM to command the IAC to open. If the ECM and associated wiring are functioning properly, both lamps on the IAC CIRCUIT TESTER should flash. If either lamp does not flash check for possible open or shorted wiring to the ECM, or the ECM may also be defective.
- 6. Now remove the engine load previously applied in Step 4. The engine idle should increase causing the ECM to command the IAC to close. If both lights on the IAC CIRCUIT TESTER are flashing, the ECM and wiring are functioning properly. If either lamp does not flash, check for possible open or shorted wiring to the ECM, or the ECM may also be defective.



IAC Signal Tester for 1982 and up GM TBI and PFI Fuel Injection Systems with square 4 pin connectors IAC Signal Tester for 1987 and up GM Model 700 TBI and PFI Fuel Injection Systems with flat 4 pin connectors

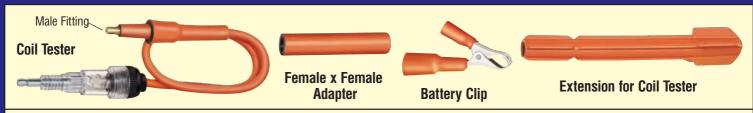
# IN-LINE SPARK CHECKER KIT FOR RECESSED PLUGS

- THE ONE IGNITION SPARK CHECKER FOR TROUBLESHOOTING VIRTUALLY ALL DOMESTIC AND IMPORTED CARS, SUV'S AND TRUCKS
- A MUST FOR TESTING NEWER VEHICLES WITH RECESSED SPARK PLUGS
- ALSO TESTS CONVENTIONAL AND COIL ON PLUG IGNITION SYSTEMS
- PROVIDES INFORMATION NOT AVAILABLE WITH OBD II CODE READING DEVICES PINPOINTS IF THERE IS A SPARK PLUG, PLUG WIRE, MECHANICAL, FUEL INJECTION OR ELECTRICAL PROBLEM
- FREQUENCY AND INTENSITY OF FLASH INDICATES NATURE OF PROBLEM
- FAST AND EASY TO USE
- INSTALLS QUICKLY

#### **INSTRUCTIONS**

**CAUTION:** DO NOT LET THE TESTER TOUCH ANY HOT ENGINE SURFACES (MANIFOLDS, ENGINE BLOCK, ETC.). KEEP TESTER AND YOUR BODY AWAY FROM MOVING ENGINE PARTS. TO DISCONNECT COIL FROM SPARK PLUG, REFER TO VEHICLE'S SERVICE MANUAL. WEAR SAFETY GOGGLES.

#### I. INSTALLATION



To test vehicles with recessed spark plugs:



- 1. Turn ignition off.
- 2. Remove coil from spark plug.
- Using a twisting motion, connect appropriate end of Extension for Coil Tester onto spark plug.
- 4. Push the bulb end of the Coil Tester into the spark plug boot on coil.
- Insert the male fitting of the Coil Tester wire into the exposed end of the Extension for Coil Tester.
- 6. Start engine.
- 7. Repeat above steps for all of the spark plugs.

To test coil directly to ground:



- 1. Connect Battery Clip to male fitting on Coil Tester.
- 2. Turn ignition off.
- 3. Remove coil from spark plug.
- 4. Push the bulb end of the Coil Tester into the spark plug boot on coil.
- 5. Securely attach Battery Clip to a good engine ground.
- 6. Start engine.
- 7. Repeat above steps for all of the spark plugs.

To test conventional ignition systems:



- 1. Connect Female x Female Adapter to male fitting on Coil Tester.
- 2. Turn ignition off.
- 3. Remove ignition wire from spark plug.
- 4. Push Female x Female Adapter onto spark plug.
- 5. Push the bulb end of Coil Tester into the spark plug boot.
- 6. Start engine.
- 7. Repeat above steps for all of the spark plugs.

#### **II. TESTING**

- **1. CONDITION** Engine does not start; bulb is <u>FLASHING</u>. **INTERPRETATION** The fuel system is most likely at fault.
- **2. CONDITION** Engine does not start; bulb DOES NOT FLASH. **INTERPRETATION** Ignition system components(s) faulty.
- **3. CONDITION** Engine starts; bulb is flashing but not at a constant rate. **INTERPRETATION** Ignition system component(s) faulty.
- CONDITION Flashes are weak and are not constant as RPM of engine is increased. INTERPRETATION – Weak ignition system component(s).

FOR MORE TROUBLESHOOTING INFORMATION, REFER TO THE VEHICLE SERVICE MANUAL

#### **III. BULB REPLACEMENT**

#### USE GE PART NO. NE51H(B2A) OR EQUIVALENT.

UNSCREW KNURLED RETAINER FROM END OF CLEAR PLASTIC BODY. REMOVE BULB FROM CONTACT SPRING. REPLACE WITH NEW BULB BY SLIDING CONTACT SPRING OVER GLASS OF BULB WITH A GENTLE CLOCKWISE TWISTING MOTION. INSTALL NEW BULB AND SPRING INTO CLEAR PLASTIC BODY SO THAT BOTTOM OF BULB FACES KNURLED RETAINER. SCREW KNURLED RETAINER BACK INTO CLEAR PLASTIC BODY.