

INSTALLATION TIPS

DIAGNOSING GM DIS SYSTEM

GM vehicle owners are currently experiencing a high replacement rate of their own DIS modules. However, a majority of these modules are not defective and are diagnosed improperly due to other problems in the system.

Note: These tests assume the fuel system is operating properly.

Check for adequate spark from each coil (25,000 volts).

If you get adequate spark from all coils:

1. Check for a reference signal from the module to the computer. (See Specification Chart). No reference signal – replace module. Good reference signal – check wiring or faulty computer.

If you do not get adequate spark (25,000 volts) from one coil(s), but do get spark from the other coil(s):

1. Check ignition coil(s) for carbon tracking.
2. Check ignition coil(s) for proper resistance (See Specification Chart).
3. Substitute bad coil(s) with a known good coil. Good spark – coil was the problem. No spark – replace module.

No spark from all coils:

1. Check for battery voltage at the module.
2. Check module ground circuit.

If they check good:

1. Check crank sensor resistance (See Specification Chart).
2. Check to see if crank sensor is magnetized (it should be).
3. Inspect crank sensor terminals for damage or fatigue.
4. Check for proper output to crank shaft sensor (See Specification Chart). If the crank sensor is good – replace the module.

Specification Chart

DIS Ignition Coil Resistance:

Primary – .35 to 1.5 ohms

Secondary – 5000 to 7000 ohms

Crank Sensor Specifications	Resistance (ohms)		Min. Voltage Output (Slow crank/low batt.)
	at 70° F.	at 0° F.	
Engine			
2.0, 2.2, 2.8, 3.1, 3.4L	900-1200	750-1100	300 millivolts AC*
2.3L	500-900	450-800	200 millivolts AC*
2.5L	800-900	650-800	300 millivolts AC*

**Please note that these output specifications are the latest GM specifications, and that they are different from specifications listed in many manuals.*

The minimum voltage output at cranking can also be checked using a “Scan” tester and observing the RPM parameter. If an RPM reading is observed, the crankshaft position sensor circuit is operating properly. If no reading is observed, a problem is present. Component testing is necessary in order to isolate the problem.

INSTALLATION & REMOVAL

DIS SYSTEM

Removal

1. Disconnect negative battery cable.
2. Disconnect spark plug wires at coil assembly.
NOTE: Mark location of wires for proper installation.
3. Disconnect wire connector at DIS ignition module.
4. Loosen bracket assembly on engine and remove entire assembly off car.
NOTE: This step is not necessary if you have access to module nuts.
5. Remove nuts/screws on back of module and separate module/coil assembly from bracket. **IMPORTANT:** Do not damage silicone gaskets, nuts or screws. They must be transferred to new module.

Installation

6. Install DIS module assembly to engine.
7. Connect spark plug wires noting proper location.
8. Connect electrical connectors.
9. Connect negative battery cable.

Torque Table

Item	N.m	In. Lbs.	Ft. Lbs.
Coil nuts/screws	4.5	40	--
Module nuts/screws - 4 Cyl.	27	--	20
- 6 Cyl.	--	--	19
Sensor - Bolts - Exc. 1988	10	88	--
- 1988	--	71	--
- Screws	2.3	20	--

Idle Relearn Procedure (ECM Memory Updating)

NOTE: If the ECM is without battery power for any reason, the IACV position information for a stable satisfactory engine idle is "lost" and is replaced with a "default" value.

To restore the lost IACV position information due to an absence of battery power, perform the following procedure:

1. Restore the battery power and place air conditioning controls (if equipped) in the "OFF" position.
2. Firmly apply the parking brake and block the drive wheels. Start the engine, and shift the transaxle to "DRIVE" for automatics or "NEUTRAL" for manuals.
3. Allow the engine to run a maximum of 10 minutes or until the engine cooling fan has cycled once, whichever occurs first.
4. Shift transaxle to "PARK" (A/T), "NEUTRAL" (M/T). Turn the ignition key to "OFF" position for at least 5 seconds.
5. Repeat Step #2.
6. Allow engine to run for at least 5 minutes.

This procedure will allow the ECM memory to be updated with the "correct" IACV position and provide a stable idle quality.

LIMITED WARRANTY

5 Years or 50,000 Miles (whichever comes first.)

SHOULD THIS MODULE FAIL, FOR ANY REASON OTHER THAN MISAPPLICATION OR DELIBERATE ABUSE, IT WILL BE REPLACED FREE OF CHARGE.

If failure should occur, return defective module and proof of purchase to any authorized distributor or dealer for verification and replacement under this warranty. Warranty is limited to replacement of the defective module. The warranty is extended only to the original purchaser, for the vehicle on which the module was originally installed. This warranty applies only to passenger car, truck, or tractor ignition use. Cost of removal and installation not included. Not responsible for injury, property damage or other consequential damages arising directly or indirectly from actual or alleged defect in material and/or workmanship.