

Chart A-3 (2 of 5): Engine Cranks But Will Not Run

DIAGNOSTIC AIDS:

This chart assumes that battery voltage and engine cranking speed are OK, and there is adequate fuel in the tank.

Water or foreign material in fuel system can cause a no start.

A defective MAP sensor may cause a no start or a start and stall condition. To determine if the MAP sensor is causing the problem, disconnect the electrical connector. The ECM will then use a default value for the sensor. If the condition is corrected and the connections are OK, then replace the sensor.

An intermittent may be caused by a poor connection, rubbed through wire insulation or a wire broken inside the insulation. Check for the following items:

Poor connection or damaged harness. Inspect the ECM harness and connectors for improper mating, broken locks, improperly formed or damaged terminals, poor terminal to wire connection, and damaged harness.

If above are all OK, refer to "Hard Start" in "Troubleshooting" section.

Step	Action	Value(s)	Yes	No
1	Was the "On-Board Diagnostic" (OBD) System Check performed?	—	Go to Step 2	Go to OBD System Check
2	Disconnect Throttle Position (TP) sensor. Does The Engine Start?	—	Go to Step 14	Go to Step 3
3	1. Key "OFF" for minimum of 10 seconds. 2. Key "ON." 3. Listen for fuel pump to run. Does Fuel Pump Run For 2 Seconds?	—	Go to Step 4	Go to Chart A-4
4	Crank engine for 1 second and listen for fuel pump to run. Does Fuel Pump Run?	—	Go to Step 5	Go to Step 9
5	Check for secondary ignition spark. Is Adequate Spark Present At All Cylinders?	—	Go to Step 6	Go to Chart A-7

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Step	Action	Value(s)	Yes	No
6	1. Disconnect one injector electrical connector. 2. Connect test light J34730-2C to injector harness connector. 3. While cranking engine, check for blinking light. 4. Remove test light and reconnect injector harness connector. Repeat this test for all injectors. 5. If any lights are blinking dimly, check for shorted injector by comparing injector resistance values. Were All Lights Blinking Brightly?	—	Go to Step 7	Go to Step 10
7	1. Install fuel pressure gauge. 2. Ignition "OFF" for 10 seconds. 3. Ignition "ON." Fuel pump will run for about 2 seconds. 4. Note fuel pressure with pump running. The pressure may drop after the pump stops running. Is Fuel Pressure Within Specified Value?	34-38 psi (234-262 kPa)	Refer to Diagnostic Aids on Facing Page	Go to Chart A-4
8	Check for secondary ignition spark. Is Adequate Spark Present At All Cylinders?	—	Go to Step 9	Refer to Ignition System Check_
9	1. Ignition "OFF." 2. Disconnect ECM "J2" connector. 3. Using a DVOM connected to ground, probe "J2-8" of the ECM harness connector while cranking the engine. Is The Voltage Within The Specified Value?	1-2 volts	Go to Step 20	Go to Step 15
10	Was The Test Light A Steady Light?	—	Go to Step 11	Go to Step 12
11	Check the injector driver circuit with the steady light for a short to ground. If circuit is not shorted, check resistance across each injector in the circuit. Is Resistance Greater Than The Specified Value?	10 Ohms	Go to Step 20	Go to Step 16

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12	<ol style="list-style-type: none"> 1. Disconnect injector that did not blink. 2. Ignition "ON". 3. Using a test light connected to ground, probe injector harness connector terminals. <p>Does Test Light Illuminate Brightly On Both Terminals?</p>	—	Go to Step 13	Go to Step 17
13	<ol style="list-style-type: none"> 1. Reconnectors. 2. Ignition "OFF". 3. Disconnect ECM. 4. Ignition "ON". 5. Using a test light connected to ground, probe ECM harness terminals "J2-5" and "J2-21". <p>Does Test Light Illuminate Brightly?</p>	—	Go to Step 19	Go to Step 18
14	<p>Replace faulty TP sensor.</p> <p>Is Action Complete?</p>	—	Go to OBD System Check	—
15	<ol style="list-style-type: none"> 1. Locate and repair open or short to ground in CKT 430. 2. If OK, replace faulty ignition control module. <p>Is Action Complete?</p>	—	Go to OBD System Check	—
16	<p>Locate and repair short to ground or replace any injector that measures under 10 ohms.</p> <p>Is Action Complete?</p>	—	Go to OBD System Check	—
17	<ol style="list-style-type: none"> 1. If the light was "OFF" on both terminals, locate and repair open in injector feed circuit. 2. Due to the injectors wired in parallel, there should be a light on both terminals. If not, locate and repair open in the harness to the tested injector. <p>Is Action Complete?</p>	—	Go to OBD System Check	—

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Step	Action	Value(s)	Yes	No
18	Locate and repair open in CKT 467 or CKT 468. Is Action Complete?	—	Go to OBD System Check	—
19	Check for short to ground in CKT 467 or CKT 468. If a problem is found, repair as necessary. Was A Problem Found?	—	Go to OBD System Check	—
20	Check the injector driver circuit with the steady light for a short to ground. If circuit is not shorted, check resistance across injector in the circuit. Is Resistance Close To The Specified Value?	—	Go to OBD System Check	—
21	1. All checks made to this point would indicate that the ECM is at fault. However, there is a possibility of CKT 467 and CKT 468 being shorted to a voltage source in the engine harness or the injector harness. 2. Disconnect all injectors. 3. Ignition "ON". 4. Using a test light connected to ground, probe CKT 467 and CKT 468 on the ECM side of the injector harness (Test one injector harness on each side of the engine). If light is "ON", locate and repair short to voltage. 5. Check injector harness connector. Be sure that terminals are not backed out of connector and contacting each other. 6. If all OK, replace faulty ECM. Is Action Complete?	—	Go to OBD System Check	—
22	Repair faulty ECM connections or replace faulty ECM. Is Action Complete?	—	Go to OBD System Check	—

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