ENGINE CRANKS BUT DOES NOT START

ENGINE CRANKS BUT DOES NOT START

Possible Causes

Possible Causes
SYSTEM DTCS PRESENT
POWERTRAIN FUSES OPEN
FUEL DELIVERY SYSTEM
FUEL CONTAMINATION
FAULTY CRANKSHAFT POSITION SENSOR
INADEQUATE SPARK
POWERTRAIN POWER AND GROUND CIRCUIT(S) OPEN OR HIGH RESISTANCE
ENGINE MECHANICAL PROBLEM

Always perform the PRE-DIAGNOSTIC TROUBLESHOOTING PROCEDURE before proceeding. (Refer to 28 - DTC-Based Diagnostics/MODULE, Powertrain Control (PCM) - Standard Procedure).

1. **NO START PRE-TEST**

NOTE: Verify no faults are set in the Occupant Restraint Controller. If codes are present, they may be the cause of a No Start condition.
NOTE: The following list of items must be checked before continuing with any no start tests.

1. The Battery must be fully charged and in good condition. A low charged Battery may produce invalid test results. If the Battery is low, charge the Battery and then attempt to start the vehicle by cranking the engine for 15.0 seconds, three consecutive times. This will allow any DTCs to set that may have been erased due to a dead Battery.
2. Try to communicate with the PCM using a scan tool. If communication between the scan tool and PCM is not allowed, inspect fuses. If the fuses appear OK, (Refer to 29 - Non-DTC Diagnostics/Communication - Diagnosis and Testing) for the No Response from PCM diagnostic procedure.
3. Read the PCM DTCs with the scan tool. If any DTCs are present, they must be repaired before continuing with any other No Start diagnostic tests. (Refer to 28 - DTC-Based Diagnostics/MODULE, Powertrain Control (PCM) - Diagnosis and Testing) for the related P-code that is reported by the PCM.
4. Make sure that the Communication Bus is functional. Attempt to communicate with other modules on the CAN C bus. If you are unable to establish communication with any modules, (Refer to 29 - Non-DTC Diagnostics/Communication - Diagnosis and Testing) for the Diagnostic CAN C diagnostic procedures.

5. The vehicles security module must be operating properly. Check for DTCs that may be stored in the vehicles security module. Repair the DTCs before continuing.
6. If no DTCs are found, using the scan tool, select Clear PCM (BATT Disconnect).
7. Crank the engine several times. Using the scan tool, read DTCs. If a DTC is present go to and perform the appropriate diagnostic procedure before continuing.

Were any problems found?

Yes

- Repair as necessary.
- Perform the POWERTRAIN VERIFICATION TEST. (Refer to 28 - DTC-Based Diagnostics/MODULE, Powertrain Control (PCM) - Standard Procedure).

No

- Go To **2**

2. **OPEN FUSE**

1. Check for any open fuses that may be related to the No Start condition.

Are any of the fuses open?

Yes

- Check the related circuit(s) for a short to ground and replace the open fuse.
- Perform the POWERTRAIN VERIFICATION TEST. (Refer to 28 - DTC-Based Diagnostics/MODULE, Powertrain Control (PCM) - Standard Procedure).

No

- Go To **3**

3. **IGNITION SYSTEM**

1. Perform the CHECKING THE IGNITION COIL OPERATION test procedure. (Refer to 29 - Non-DTC Diagnostics/Drivability - Gas/Diagnosis and Testing) .

Was the No Start condition solved after following the CHECKING THE IGNITION COIL OPERATION diagnostic procedure?

Yes

- Test Complete.

No

- Go To **4**

4. **FUEL DELIVERY**

1. Verify that the Fuel tank is not empty before continuing.
2. Perform the CHECKING THE FUEL DELIVERY SYSTEM test procedure. (Refer to 29 - Non-DTC Diagnostics/Drivability - Gas/Diagnosis and Testing) .

Was the No Start condition solved after following the CHECKING THE FUEL DELIVERY SYSTEM diagnostic procedure?

Yes

- Test Complete.

No

- Go To **5**

5. **CHECK THE PCM POWERS AND GROUNDS**

1. Perform the CHECKING THE POWERS AND GROUNDS test procedure. (Refer to 29 - Non-DTC Diagnostics/Drivability - Gas/Diagnosis and Testing) .

Were any issues found?

Yes

- Repair as necessary.
- Perform the POWERTRAIN VERIFICATION TEST. (Refer to 28 - DTC-Based Diagnostics/MODULE, Powertrain Control (PCM) - Standard Procedure).

No

- Go To **6**

6. **ENGINE MECHANICAL**

1. Check for any of the following conditions/mechanical problems:

- ENGINE COMPRESSION - must be within specifications.
- ENGINE EXHAUST SYSTEM - must be free of any restrictions or leaks.
- ENGINE VALVE TIMING - must be within specifications, check for broken timing components

Are there any engine mechanical problems?

Yes

- Repair as necessary.
- Perform the POWERTRAIN VERIFICATION TEST. (Refer to 28 - DTC-Based Diagnostics/MODULE, Powertrain Control (PCM) - Standard Procedure).

No

- Go To **7**

7. **POWERTRAIN CONTROL MODULE (PCM)**

1. Using the wiring diagram/schematic as a guide, inspect the wiring and connectors between the related Sensors and the Powertrain Control Module (PCM).
2. Look for any chafed, pierced, pinched or partially broken wires.
3. Look for broken, bent, pushed out or corroded terminals. Verify that there is good pin to terminal contact in the related Sensors and the Powertrain Control Module connectors.
4. Refer to any Technical Service Bulletins (TSBs) that may apply.

Were there any problems found?

Yes

- Repair as necessary.
- Perform the POWERTRAIN VERIFICATION TEST. (Refer to 28 - DTC-Based Diagnostics/MODULE, Powertrain Control (PCM) - Standard Procedure).

No

- Replace and program the Powertrain Control Module (PCM) in accordance with the Service Information.(Refer to 08 - Electrical/8E - Electronic Control Modules/MODULE, Powertrain Control/Removal) .
- Perform the POWERTRAIN VERIFICATION TEST. (Refer to 28 - DTC-Based Diagnostics/MODULE, Powertrain Control (PCM) - Standard Procedure).