JE: Integrated Ignition Coil Pack A, B, or C Failure

JE: Introduction

JE1 CHECK FOR DIAGNOSTIC TROUBLE CODES (DTCS)

Are DTCs P0350, P0351, P0352, or P0353 present?

Yes	No
GO to JE2.	For all other DTCs, GO to Section 4, Diagnostic Trouble Code (DTC) Charts and Descriptions.

JE2 DETERMINE WHICH COIL IS NOT FIRING PROPERLY

Note: Electronic ignition engine timing is entirely controlled by the PCM. Electronic ignition timing is NOT adjustable. Do not attempt to check base timing. You will receive false readings.

- Determine which coil is not firing properly using the information from Pinpoint Test JB or a DTC and the table at the beginning of this pinpoint test.
- Record the suspect cylinder, coil and PCM pin number from the table.

Is the suspect cylinder number, coil driver and PCM pin number recorded?

Yes	No
GO to JE3.	To obtain the required information, REPEAT step, GO to JE2.

JE3 DTC P0351, P0352, P0353: CHECK IGN START/RUN VOLTAGE TO THE COIL PACK

- Suspect coil connector disconnected.
- Ignition ON, engine OFF.
- Measure the voltage between:

(+) Coil Pack Assembly Connector, Harness Side	(-)
IGN START/RUN	Ground

Is the voltage greater than 10 V?

Yes	No
GO to JE4.	The IGN START/RUN has a circuit concern. CHECK the condition of the related fuses/fuse links. If OK, REPAIR the open circuit. If the fuse/fuse link is damaged, CHECK the IGN START/RUN circuit for a short to ground. REPAIR as necessary. CARRY OUT the misfire monitor drive cycle. REFER to Section 2, On Board Diagnostic (OBD) Drive Cycle. CLEAR the DTCs. REPEAT the self-test.

JE4 CHECK THE FUNCTIONALITY OF THE SUSPECT COIL DRIVER (CD) CIRCUIT

- Ignition OFF.
- Remove the fuel pump fuse to disable the fuel pump.
- Connect a test lamp between IGN START/RUN and the suspect CD circuit (determined from the table) at the coil pack harness connector.
- Observe the test lamp while cranking the engine.

Does the test lamp blink consistently?

Yes	No
GO to JE8 .	GO to JE5 .

JE5 CHECK THE SUSPECT CD CIRCUIT FOR AN OPEN IN THE HARNESS

- Ignition OFF.
- PCM connector disconnected.
- Measure the resistance between:

(+) Coil Pack Assembly Connector, Harness Side	(-) PCM Connector, Harness Side
Suspect coil driver	Suspect coil driver

Is the resistance less than 5 ohms?

Yes	No
GO to JE6 .	REPAIR the open circuit. CARRY out the misfire monitor drive cycle. REFER to Section 2, On Board Diagnostic (OBD) Drive Cycle . CLEAR the DTCs. REPEAT the self-test.

JE6 CHECK THE SUSPECT CD CIRCUIT FOR A SHORT TO VOLTAGE IN THE HARNESS

- Ignition ON, engine OFF.
- Measure the voltage between:

(+) PCM Connector, Harness Side	(-)
Suspect coil driver	Ground

Is any voltage present?

Yes	No
REPAIR the short circuit. CARRY out the misfire monitor drive cycle. REFER to Section 2, On Board Diagnostic (OBD) Drive Cycle . CLEAR the DTCs. REPEAT the self-test.	GO to JE7 .

JE7 CHECK THE SUSPECT CD CIRCUIT FOR A SHORT TO GROUND IN THE HARNESS

- Ignition OFF.
- Measure the resistance between:

(+) PCM Connector, Harness Side	(-)
Suspect coil driver	Ground

Is the resistance greater than 10K ohms?

Yes	No
GO to JE9 .	REPAIR the short circuit. CARRY out the misfire monitor drive cycle. REFER to Section 2, On Board Diagnostic (OBD) Drive Cycle . CLEAR the DTCs. REPEAT the self-test.

JE8 CHECK THE SUSPECT COIL FOR DAMAGE

- Ignition OFF.
- Remove the spark plug wire from the suspect coil tower (as determined from the table).
- Connect the Air Gap Spark Tester 303-D037 (D81P-6666-A) or equivalent to the suspect spark plug wire.
- Observe the spark tester while cranking the engine.

Is a bluish-white spark present?

Yes	No
GO to Pinpoint Test Z .	INSTALL a new coil pack as needed. REFER to the Workshop Manual Section 303-07, Engine Ignition. CARRY out the misfire monitor drive cycle. REFER to Section 2, On Board Diagnostic (OBD) Drive Cycle . CLEAR the DTCs. REPEAT the self-test.

JE9 CHECK FOR CORRECT PCM OPERATION

- Disconnect all the PCM connectors.
- Visually inspect for:
  - pushed out pins
  - corrosion
- Connect all the PCM connectors and make sure they seat correctly.
- Carry out the PCM self-test and verify the concern is still present.

Is the concern still present?

Yes	No
INSTALL a new PCM. REFER to Section 2, Flash Electrically Erasable Programmable Read Only Memory (EEPROM) , Programming the VID Block for a Replacement PCM.	The system is operating correctly at this time. The concern may have been caused by a loose or corroded connector.