1990 Chrysler NEW YORKER

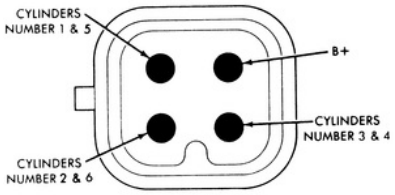
Submodel: FIFTH AVENUE | **Engine Type:** V6 | **Liters:** 3.3
Fuel Delivery: FI | **Fuel:** GAS

3.0L Engine

This test is only for the 3.0L engine found in the 1991–92 Premier and Monaco vehicles.

1. Determine that sufficient battery voltage (12.4 volts) is present for the cranking and ignition systems. Connect a voltmeter to the negative (-) and positive (+) terminals of the battery.
2. Attach the voltmeter to the wiring harness coil connector at the B+ pin.
3. Crank the engine for 5 seconds while monitoring the voltage at the B+ connector terminal. If the voltage remains near zero during the entire period of cranking, refer to Section 4 for diagnostic trouble codes and further testing.

Fig. 1: Ignition coil terminal identification — 3.0L Premier and Monaco engine



4. If voltage is at near-battery voltage, and drops to zero after 1–2 seconds of cranking, refer to Section 4 for diagnostic trouble codes and further testing.
5. If voltage remains at near-battery voltage during the entire 5 seconds, turn the key **OFF** and remove the Single Board Engine Controller (SBEC) 60-way connector. Check the 60-way connector for any loose or pushed out terminals.

3.3L and 3.8L Engines

This no-start test checks the camshaft position sensor and the crankshaft position sensor. Refer to the ignition coil tests before commencing with this test, much time may be saved if the problem lies within the coil.

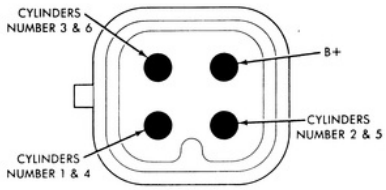
The PCM supplies 8.0 volts to the camshaft position sensor and crankshaft position sensor through one circuit. If the 8.0 volt supply circuit shorts to ground, neither sensor will produce a signal (output voltage to the PCM).

When the ignition key is turned and left in the **ON** position, the PCM automatically energizes the Auto Shutdown (ASD) relay. However, the PCM de-energizes the relay within one second because it has not received a crankshaft position sensor signal indicating engine rotation.

During cranking, the ASD relay will not energize until the PCM receives a crankshaft signal. Secondly, the ASD relay remains energized only if the PCM senses a camshaft position sensor signal immediately after detecting the crankshaft position sensor signal.

1. Check battery voltage with a voltmeter. Make sure to always attach the positive voltmeter wire to the positive (+) terminal of the component being checked. Do the same with the negative (-) wire also. Voltage for the battery should be approximately 12.66 volts or higher to perform the failure-to-start test.
2. Unplug the harness connector from the coil pack.

Fig. 2: Ignition coil terminal identification — 3.3L and 3.8L engines



3. Connect a test light (or voltmeter) to the B+ (battery voltage) terminal of the coil electrical connector and ground. The wire for the B+ terminal is dark green with a black tracer.
4. Turn the ignition key to the **ON** position. The test light should flash on and then off. Do not turn the key to the **OFF** position, leave it in the **ON** position.
   - A. If the test light flashes momentarily, the PCM grounded the ASD relay. Proceed to Step 5.
   - B. If the test light did not flash, the ASD relay did not energize. The cause is either the relay itself or one of the relay circuits. Test the circuits for a ground or open circuit, refer to Section 6 for further electrical information on circuits. Since Chrysler does not give a procedure for testing the relay with a voltmeter, ohmmeter or test light, have the component tested at a reputable automotive service center familiar with Chrysler vehicles.
5. Crank the engine. If the key was placed in the **OFF** position after Step 4, turn the ignition to the **ON** position before cranking the engine. Wait for the test light to flash once, then

crank the engine.

A. If the test light momentarily flashes during cranking, the PCM is not receiving a camshaft position sensor signal. Test the camshaft position sensor circuits for a ground or open circuit, refer to Section 6 for further electrical information on circuits. Since Chrysler does not give a procedure for testing the camshaft position sensor with a voltmeter, ohmmeter or test light, have the component tested at a reputable automotive service center familiar with Chrysler vehicles.

B. If the test light did not flash during cranking, unplug the camshaft position sensor connector. Turn the ignition key to the **OFF** position. Turn the key to the **ON** position, wait for the test light to momentarily flash once, then crank the engine. If the test light momentarily flashes, the camshaft position sensor is shorted and must be replaced with a new one. If the light did not flash, the cause of the no-start is in either the crankshaft position sensor/camshaft position sensor 8.0 volt supply circuit, or the crankshaft position sensor 5 volt output or ground circuits. Have the crankshaft position sensor checked, after checking the sensor circuits for a ground or open circuit, by a reputable automotive service shop familiar with Chrysler vehicles. Refer to Section 6 for more information on how to check a circuit and for the wiring diagrams.