



WORKSHEET 2-2
Engine Active Tests

Vehicle	Year/Prod. Date	Engine	Transmission
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Worksheet Objectives

In this worksheet you will use Inspection Mode and the Diagnostic Tester to perform a compression test and an idle speed inspection.

Tools and Equipment

- Vehicle
- Repair Manual or TIS
- Diagnostic Tester
- Compression Gauge

Section 1 - Compression Test

1. Allow the engine to warm up to normal operating temperature. Stop the engine.
2. Remove the air cleaner assembly, the ignition coils and the spark plugs.
3. Connect the Diagnostic Tester to DLC 3.
4. Go to OBD/MOBD, HV ECU, ACTIVE TEST, CRANKING RQST.
5. Insert a compression gauge into the spark plug hole.
6. Follow the Diagnostic Tester’s on-screen instructions.
7. Turn CRANKING RQST ON and then start the vehicle. If the engine stops, hold the accelerator pedal to finish the test.

Note: In Cranking Mode, the engine speed is automatically controlled at 250 rpm and the throttle valve is also automatically opened fully. This measurement must be done in as short a time as possible.

8. Record the cranking compression pressure for each cylinder:

9. To stop cranking, turn the ignition key to OFF. On the Diagnostic Tester, press the EXIT button.

10. Using TIS or the Repair Manual, what is the specification for compression pressure? Minimum pressure? Difference between each cylinder?

11. Compare your measurements with the specifications. Are all cylinder compression pressures acceptable? If NO, explain:

Reinstall the spark plugs, ignition coils and air cleaner assembly.

Section 2 - Idle Speed Inspection

1. Place the vehicle in Park and engage the emergency brake. This test will only work with the emergency brake engaged. Turn the A/C switch OFF.
2. Start the vehicle and warm up the engine. Race the engine at 2,250 rpm for about 90 seconds.
3. Using the Diagnostic Tester, go to OBD/MOBD, HV ECU, ACTIVE TEST, INSPECTION MODE and follow the on-screen instructions.
4. Turn Inspection Mode ON, and then start the vehicle. This mode allows the engine to continuously run.

Note: When the accelerator pedal position is depressed 60% or greater, the engine speed is controlled at 2,250 rpm.

5. What warning light is ON?

6. Why do you think this warning light is ON?

7. What is the specified idle speed with cooling fan off?

8. Allow the engine to idle. What is the idle speed?

9. List two possible causes for the low engine idle speed:

Note: The Idle Speed Inspection test allows for maintenance inspections such as IG Timing, Noise Isolation, etc.

Section 2a - Idle Speed Inspection Without Diagnostic Tester

1. Perform the following steps (2 - 5) within 60 seconds.
 2. Turn the Power switch ON.
 3. Fully depress the accelerator pedal twice while in Park.
 4. Fully depress the accelerator pedal twice while in Neutral.
 5. Fully depress the accelerator pedal twice with the transmission while in Park.
 6. What error warning light is now flashing?
 7. Is this normal?
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8. Start the vehicle (READY ON).
 9. Where in the Repair Manual is this information found?
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10. Turn Inspection Mode OFF. Driving the vehicle without deactivating Inspection Mode may damage the transaxle.

Return the vehicle to its normal condition.