

2012 - Mazda6 - Engine

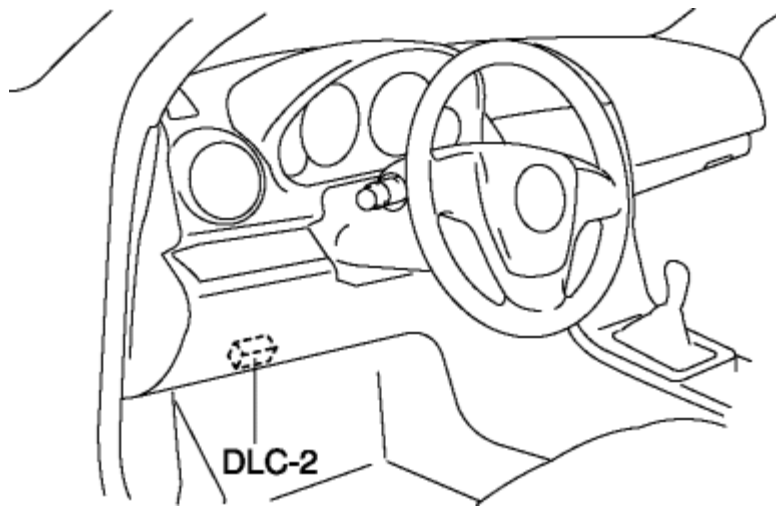
ENGINE TUNE-UP [MZI 3.7 V6]

NOTE:

- If the accelerator pedal is depressed continuously for a specified time, the engine speed may decrease to the idle speed. This is due to the fuel cut control operation, which prevents overheating, and it does not indicate a malfunction.

Engine Tune-up Preparation

1. Verify that the selector lever is in the P position.
2. Connect the M-MDS to the DLC-2.



3. Turn off the electrical loads.
4. Verify that no DTCs are available.
5. Warm up the engine as follows.
 - a. Start the engine.
 - b. Perform no-load racing at **2,500—3,000 rpm** for **3 min.** (ECT is **approx. 80 °C { 176 °F }** or more)
 - c. Release the accelerator pedal.
 - d. Wait until the cooling fans stop.

Ignition Timing Inspection

1. Perform "Engine Tune-up Preparation". (See [Engine Tune-up Preparation.](#))

NOTE:

- The ignition timing cannot be adjusted.
- The M-MDS is required to verify the ignition timing.

2. Verify that the ignition timing (M-MDS: SPARKADV) is within the specification using M-MDS function.

Ignition timing

- Approx. BTDC 13 °

3. Verify that ignition timing advances when the engine speed increases gradually.

- If it is not within the specification, refer to "ENGINE SYMPTOM TROUBLESHOOTING". (See [SYMPTOM DIAGNOSTIC INDEX \[MZI 3.7 V6\]](#).)

Idle Speed Inspection

1. Perform "Engine Tune-up Preparation". (See [Engine Tune-up Preparation](#).)

NOTE:

- The idle speed cannot be adjusted.
- The M-MDS is required to verify the idle speed.

2. Verify that the idle speed (M-MDS: RPM) is within the specification using M-MDS.

Idle speed (P position)

- No load: 570—670 rpm
- Electrical load on: 570—730 rpm
- Power steering oil pump operation: 600—700 rpm
- A/C and heater operation: 570—745 rpm

Idle Mixture Inspection

1. Perform "Engine Tune-up Preparation". (See [Engine Tune-up Preparation](#).)

2. Verify that the idle speed and ignition timing are within the specification. (See [Ignition Timing Inspection](#).) (See [Idle Speed Inspection](#).)

3. Insert an exhaust gas analyzer into the tailpipe.

4. Verify that the CO and HC concentrations are within regulation.

CO concentration

- Within the regulation

HC concentration

- Within the regulation

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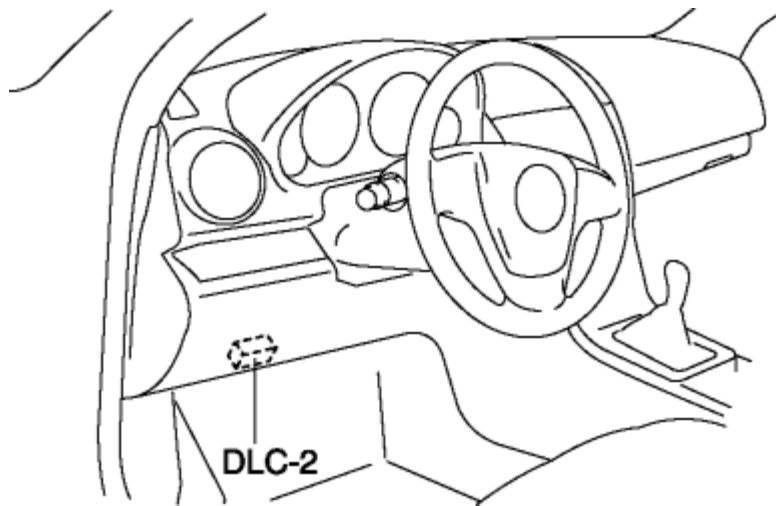
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