

2012 - Mazda6 - Engine

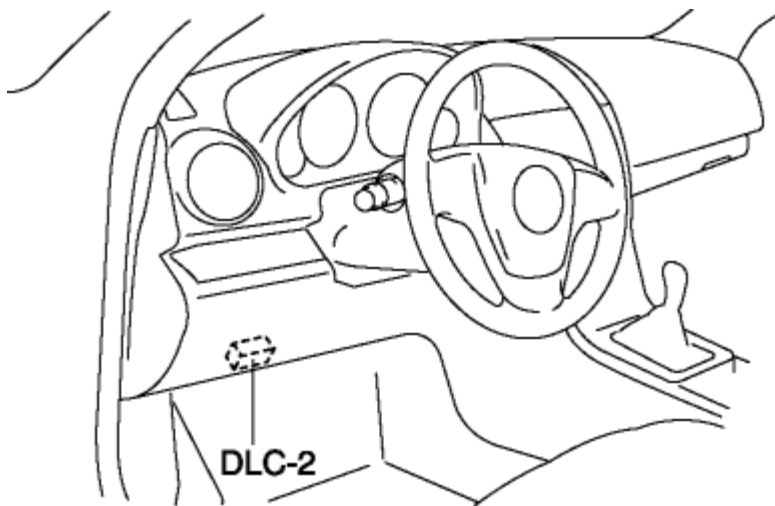
ENGINE TUNE-UP [MZR 2.5]

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 the following:
 - ATX: Selector lever is in P or N position.
 - MTX: Shift lever is in neutral position.
2. Warm up the engine to normal operating temperature.
 - a. Increase the engine speed to **2,500—3,000 rpm** until the cooling fan starts running.
 - b. When the cooling fan starts running, release the accelerator pedal and wait until the cooling fan stops running.
3. Turn off all electrical loads.
4. Connect the M-MDS to the DLC-2.



Idle Speed Inspection

NOTE:

- Idle speed is not adjustable.
 - Idle speed verification requires M-MDS.
1. Complete the engine tune-up preparation. (See [Engine Tune-up Preparation](#).)
 2. Verify that the idle speed (M-MDS: RPM) is within the specification.

Idle speed (ATX: P, N position, MTX: Neutral position)

- 600—700 rpm

Ignition Timing Inspection

NOTE:

- The ignition timing cannot be adjusted.
 - The M-MDS is required to verify the ignition timing.
1. Complete the engine tune-up preparation. (See [Engine Tune-up Preparation](#).)
 2. Verify the ignition timing (M-MDS: SPARKADV) using the PID/data monitor function of the M-MDS.

Ignition timing

- Approx. BTDC 12°
3. Verify that ignition timing advances when the engine speed increases gradually.

Idle Mixture Inspection

1. Verify that the idle speed and ignition timing are within the specification. (See [Idle Speed Inspection](#).) (See [Ignition Timing Inspection](#).)
2. Insert an exhaust gas analyzer into the tailpipe.
3. Verify that the CO and HC concentrations are within regulation.

CO concentration

- Within the regulation

HC concentration

- Within the regulation

Idle-up Speed Control Inspection

NOTE:

- Idle speed is not adjustable.
- Idle speed verification requires M-MDS.

1. Complete the engine tune-up preparation. (See [Engine Tune-up Preparation](#).)
2. Verify that the engine speed (M-MDS: RPM) is within the specification when each load is applied. (The speed decrease just after the load is applied is not considered.)
 - If the engine speed is not within the specification when a specified load is applied, inspect the related input parts, wiring harnesses, and connectors.

Idle-up speed (ATX: P, N position, MTX: Neutral position)

- A/C on : 600—850 rpm
- Electrical loads on: 650—750 rpm (MTX), 600—750 rpm (ATX)
- While turning steering wheel: 650—750 rpm

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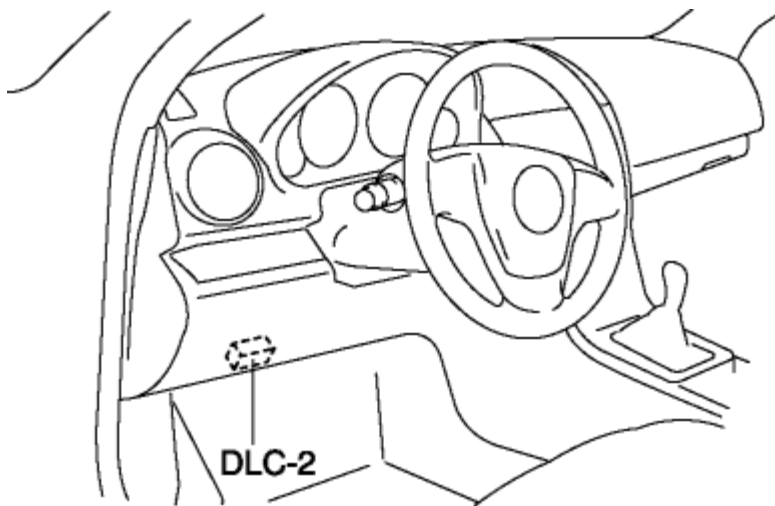
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