2012 - Mazda6 - Suspension

TIRE PRESSURE MONITORING SYSTEM (TPMS) ON-BOARD DIAGNOSIS

On-Board Diagnostic (OBD) Test Description

- The OBD test inspects the integrity and function of the TPMS and outputs the results when requested by the specific tests.
- On-board diagnostic test also:
    - Provides a quick inspection of the TPMS usually performed at the start of each diagnostic procedure.
    - Provides verification after repairs to ensure that no other faults occurred during service.
- The OBD test is divided into 2 tests:
    - Read/clear diagnostic results, and PID monitor.

Read/ clear diagnostic results

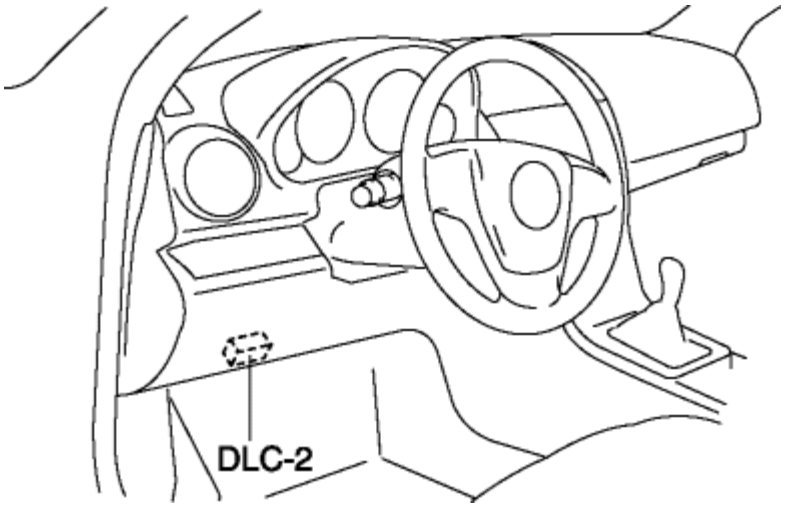
- This function allows you to read or clear DTCs in the instrument cluster memory.

PID/ Data monitor and record

- This function allows you to access certain data values, input signals, calculated values, and system status information.

Reading DTCs Procedure

1. Connect the M-MDS (IDS) to the DLC-2.



2. After the vehicle is identified, select the following items from the initialization screen of the IDS.

a. Select "Self Test".

b. Select "Modules".

c. Select "IC".

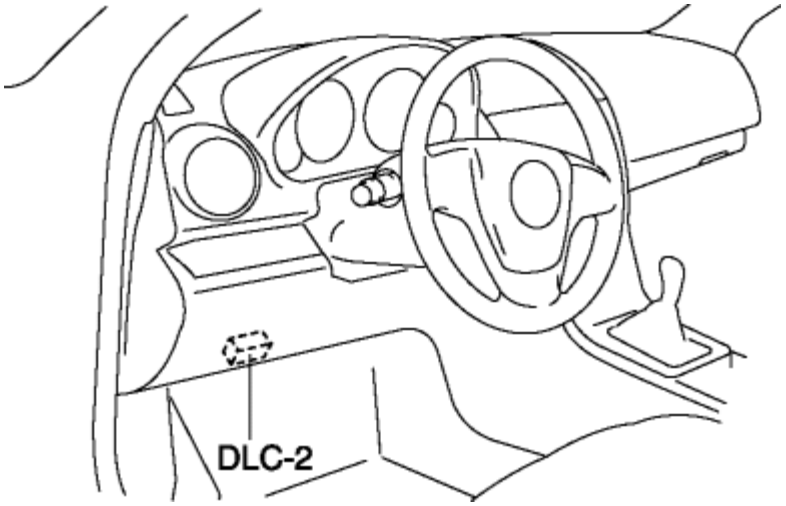
3. Verify the DTC according to the directions on the screen.

- If any DTCs are displayed, perform troubleshooting according to the corresponding DTC inspection after recording the snapshot data. (See **Snapshot data table**.)

4. After completion of repairs, clear all DTCs stored in the instrument cluster. (See **DTC TABLE [INSTRUMENT CLUSTER]**.)

Clearing DTCs Procedures

1. Connect the M-MDS (IDS) to the DLC-2.



2. After the vehicle is identified, select the following items from the initialization screen of the IDS.

a. Select "Self Test".

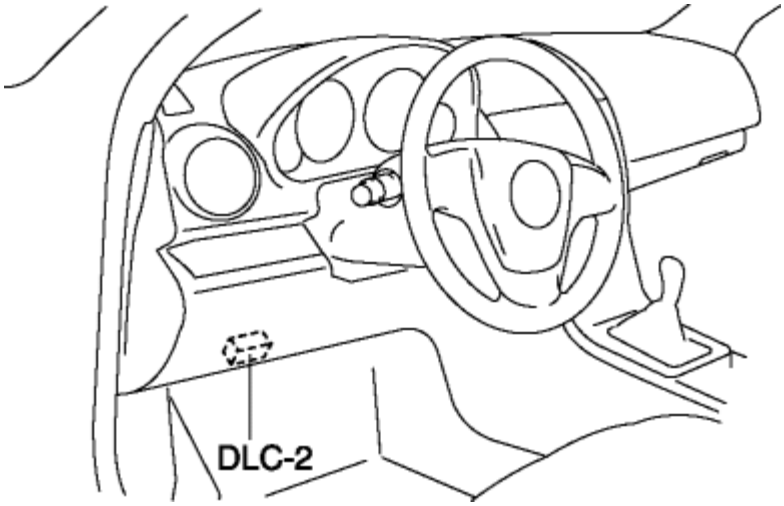
b. Select “Modules”.

c. Select “IC”.

3. Verify the DTC according to the directions on the screen.
4. Press the clear button on the DTC screen to clear the DTC.
5. Switch the ignition to off.
6. Switch the ignition to ON and wait for **5 s or more**.
7. Perform DTC inspection. (See **Reading DTCs Procedure**.)
8. Verify that no DTCs are displayed.

PID/ Data Monitor and Record Procedure

1. Connect the M-MDS (IDS) to the DLC-2.



2. After the vehicle is identified, select the following items from the initialization screen of the IDS.

a. Select “DataLogger”.

b. Select “Modules”.

c. Select “IC”.

3. Select the applicable PID from the PID table.
4. Verify the PID data according to the directions on the screen.

NOTE:

- The PID data screen function is used for monitoring the calculated value of input/output signals in the module.Therefore, if the monitored value of the output parts is not within the specification, it is necessary to inspect the monitored value of input parts corresponding to the applicable output part control. In addition, because the system does not display an output part malfunction as an abnormality in the monitored value, it is necessary to inspect the output parts individually.

DTC Table

DTC M-MDS	Description	Page
C0077:00	Low tire pressure	(See **DTC C0077:00**.)
C2011:49	Wheel unit No.1 internal malfunction	(See **DTC C2011:49/ C2012:49/ C2013:49/ C2014:49**.)
C2012:49	Wheel unit No.2 internal malfunction	
C2013:49	Wheel unit No.3 internal malfunction	
C2014:49	Wheel unit No.4 internal malfunction	
C2011:87	Wheel unit No.1 (No response)	(See **DTC C2011:87/ C2012:87/ C2013:87/ C2014:87**.)
C2012:87	Wheel unit No.2 (No response)	
C2013:87	Wheel unit No.3 (No response)	
C2014:87	Wheel unit No.4 (No response)	
U0100:00	Communication error to PCM	(See **FOREWORD [MULTIPLEX COMMUNICATION SYSTEM]**.)
U0127:00	Without advanced keyless entry and push button start system: • Communication failure between instrument cluster and keyless receiver With advanced keyless entry and push button start system: • Communication failure between instrument cluster and keyless control module	(See **DTC U0127:00**.)
U0300:00	Instrument cluster internal configuration data error	(See **DTC U0300:00**.)
U0401:68	Signal error from PCM	(See **DTC U0401:68 [INSTRUMENT CLUSTER]**.)

U2100:00	Instrument cluster configuration not implemented	(See **DTC U2100:00 [INSTRUMENT CLUSTER]**.)
U3000:42	Instrument cluster general memory failure	(See **DTC U3000:42**.)

PID/ DATA Monitor Table

NOTE:

- When the wheel unit is in sleep mode, the data logger displays a value different from the actual value. (Such as, WU1_P: 0 KPa, WU1_T: -50 °C)

PID Name (Definition)	Unit/Condition	Condition/Specification	Action
WU1_ID WU2_ID WU3_ID WU4_ID (Wheel unit ID code)	-	Indicates the registered ID that is transmitted from the wheel unit	• Replace the wheel unit (See **WHEEL UNIT REMOVAL/ INSTALLATION**.) • Perform the wheel unit ID registration (See **WHEEL UNIT ID REGISTRATION**.)
WU1_P WU2_P WU3_P WU4_P (Tire pressure)	Pa, psi	Indicates the tire pressure (See **WHEEL AND TIRE SPECIFICATION**.) (See **WHEEL AND TIRE SPECIFICATION [General (L.H.D.) specs.]**.)	• Adjust tire pressure (See **TIRE PRESSURE ADJUSTMENT (WITH TPMS)**.) • Replace the wheel unit (See **WHEEL UNIT REMOVAL/ INSTALLATION**.) • Perform the wheel unit ID registration (See **WHEEL UNIT ID REGISTRATION**.)
WU1_T WU2_T WU3_T WU4_T (Tire	°C, °F	Indicates the internal tire air temperature	Adjust tire pressure (See **TIRE PRESSURE ADJUSTMENT (WITH TPMS)**.)

temperature)			
WU1_VPWR WU2_VPWR WU3_VPWR WU4_VPWR (Supply voltage)	Normal/Error	Signal is normal: Normal Signal is abnormal: Error	Replace the wheel unit (See **WHEEL UNIT REMOVAL/ INSTALLATION**.)
WU1_ERR_T WU2_ERR_T WU3_ERR_T WU4_ERR_T (Tire temperature)	Normal/Error	Signal is normal: Normal Signal is abnormal: Error	Replace the wheel unit (See **WHEEL UNIT REMOVAL/ INSTALLATION**.)
WU1_ERR_P WU2_ERR_P WU3_ERR_P WU4_ERR_P (Tire pressure)	Normal/Error	Signal is normal: Normal Signal is abnormal: Error	Replace the wheel unit (See **WHEEL UNIT REMOVAL/ INSTALLATION**.)

Snapshot data table

NOTE:

- Snapshot data items are not displayed, according to detected DTC.
- The tire pressure monitoring system (TPMS) does not identify the location of the malfunctioning wheel unit on the vehicle (RF, LF, LR, RR). The TPMS identifies each wheel unit as No.1, No.2, No.3 and No.4. In order to identify the location of the wheel unit, perform the MALFUNCTIONING WHEEL UNIT IDENTIFICATION procedure. (See.**MALFUNCTIONING WHEEL UNIT IDENTIFICATION**.)

Snapshot data item	Unit	Definition	Description
TOTAL_DIST	km	Displays distance of odometer when a DTC is detected.	Displays distance of odometer when a DTC is detected. (display four last digits)

VSS	KPH, MPH	Vehicle speed	Vehicle speed signal is input from the speed sensor.
WU1_P WU2_P WU3_P WU4_P	Pa, psi	Tire pressure	Tire pressure signal is input from the wheel unit.
WU1_T WU2_T WU3_T WU4_T	°C, °F	Tire internal air temperature	Tire internal air temperature signal is input from the wheel unit.

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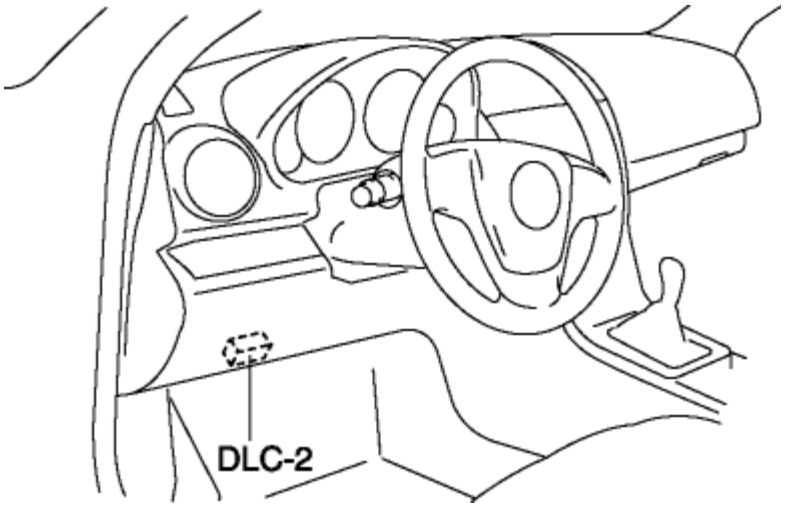

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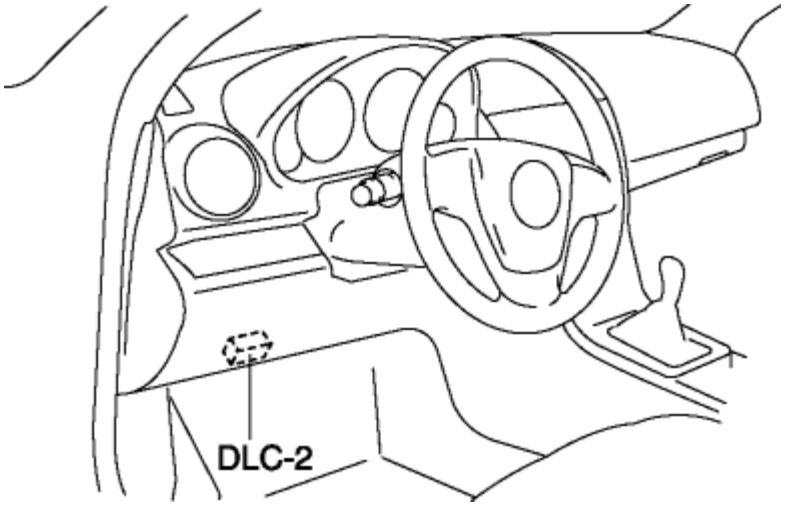

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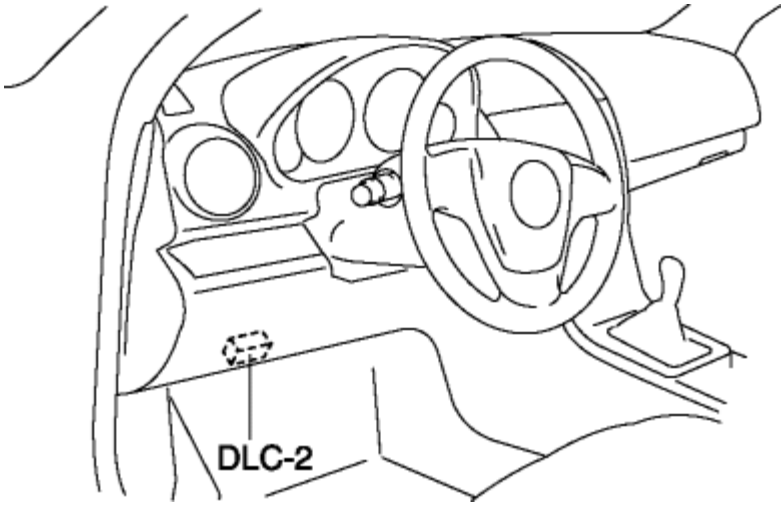

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