

2012 - Mazda6 - Body and Accessories

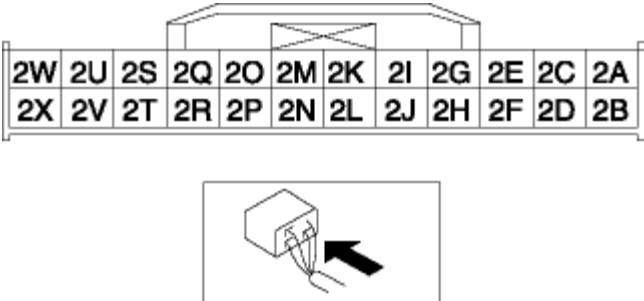
NO. 9 TACHOMETER INDICATION IS DEFECTIVE [INSTRUMENT CLUSTER (WITH MALFUNCTION WARNING LIGHT)]

9	Tachometer indication is defective
POSSIBLE CAUSE	• PCM malfunction • Instrument cluster malfunction • Connector or pin malfunction • Short circuit in wiring harness between CAN-L, CAN-H and ground • Open circuit in CAN wiring harness (CAN-L, CAN-H) • CAN wiring harness (CAN-L, CAN-H) short each other

Diagnostic procedure

STEP	INSPECTION	ACTION
1	• Start the engine. ▪ Does the tachometer needle move smoothly? ▪ Does the tachometer needle indicate correct engine speed?	Yes Troubleshooting completed. (The system is normal.)
		No Go to the next step.
2	• Retrieve the DTC related to the PCM using the M-MDS. (See ON-BOARD DIAGNOSTIC TEST [MZR 2.5].) (See ON-BOARD DIAGNOSTIC TEST [MZI 3.7 V6].) • Is there any DTC retrieved?	Yes Go to the applicable troubleshooting procedure. (See DTC TABLE [MZR 2.5] .) (See DTC TABLE [MZI 3.7 V6] .)
		No Go to the next step.
3	• Start the engine. • Verify that the speedometer and water temperature gauge indications. • Do the tachometer and water temperature gauge	Yes Go to the next step.
		No Go to Step 5.

	function properly?		
4	- Inspect the tachometer indication when the following commands are send to the instrument cluster using the M-MDS active command modes TACHOMTR. (See ACTIVE COMMAND MODES TABLE [INSTRUMENT CLUSTER].) - Does the tachometer move according to active command modes?	Yes Verify that the PCM is connected securely. If the PCM is poorly connected: Connect the connector securely. If a malfunction is in the PCM side connector: Replace the PCM. (See DTC TABLE [MZR 2.5].) (See DTC TABLE [MZI 3.7 V6].) If a malfunction is in the vehicle side connector: Repair or replace the malfunctioning part.	
		No	Replace the instrument cluster. (See INSTRUMENT CLUSTER REMOVAL/ INSTALLATION.)
5	- Retrieve the DTC of instrument cluster using the M-MDS. (See DTC INSPECTION [INSTRUMENT CLUSTER].) - Is there any DTC retrieved?	Yes Go to applicable DTC inspection. (See DTC TABLE [INSTRUMENT CLUSTER].)	
		No	Go to the next step.
6	- Disconnect the negative battery cable. - Measure the resistance between the DLC-2 terminals F and E. - Is the resistance below 60 ohms?	Yes Go to the next step.	
		No	Go to Step 7.
7	- Disconnect the negative battery cable. - Inspect the DLC-2 terminals F and E for short to power supply or ground. - Is there any malfunction?	Yes	- Inspect the wiring harness and CAN system-related module. - Repair or replace the malfunctioning

			part.
		No	Replace the instrument cluster.
8	- Switch the ignition to off. - Inspect the instrument cluster connector terminals for poor connection (such as damaged/pulled-out pins, and corrosion). - Are the terminals normal?	Yes	Go to the next step.
		No	Repair or replace the terminal.
9	- Disconnect the negative battery cable. - Measure the resistance between the instrument cluster connector terminals 2X and 2W. - Is the resistance 114—126 ohms?	Yes	- Inspect the wiring harness and CAN system-related module. - Repair or replace the malfunctioning part.
		No	Replace the instrument cluster. (See INSTRUMENT CLUSTER REMOVAL/ INSTALLATION .)

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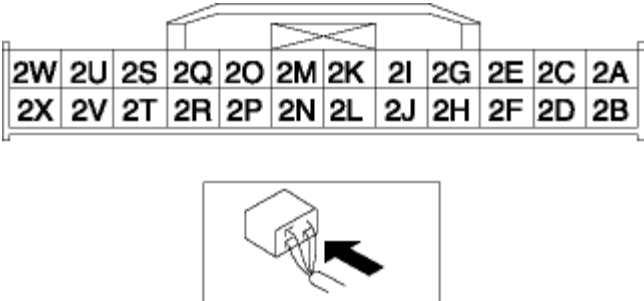
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