

2012 - Mazda6 - Body and Accessories

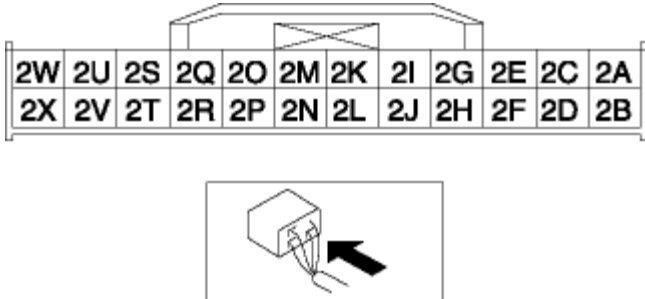
NO. 10 WATER TEMPERATURE GAUGE INDICATION IS DEFECTIVE [INSTRUMENT CLUSTER (WITH MALFUNCTION WARNING LIGHT)]

10	Water temperature gauge 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 water temperature gauge needle move to medium range gradually and stay there?	Yes Troubleshooting completed. (The system is normal.)
		No Go to the next step.
2	• Retrieve the DTC of 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 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 tachometer and speedometer indications. • Do the tachometer and heat gauge work properly?	Yes Go to the next step.
		No Go to Step 5.

4	Verify that the heat gauge indication when following commands are send to instrument cluster using M-MDS active command modes ECT_GAUGE. (See ACTIVE COMMAND MODES TABLE [INSTRUMENT CLUSTER].) Does the water temperature gauge move according to active command modes?	Yes Verify that the PCM is connected securely. If the PCM is poor connection: Connect the connector securely. If malfunction is in the PCM side connector: Replace PCM. (See PCM REMOVAL/ INSTALLATION [MZR 2.5].) (See PCM REMOVAL/ INSTALLATION [MZI 3.7 V6].) If malfunction is in vehicle side connector: Repair or replace 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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