

2012 - Mazda6 - Engine

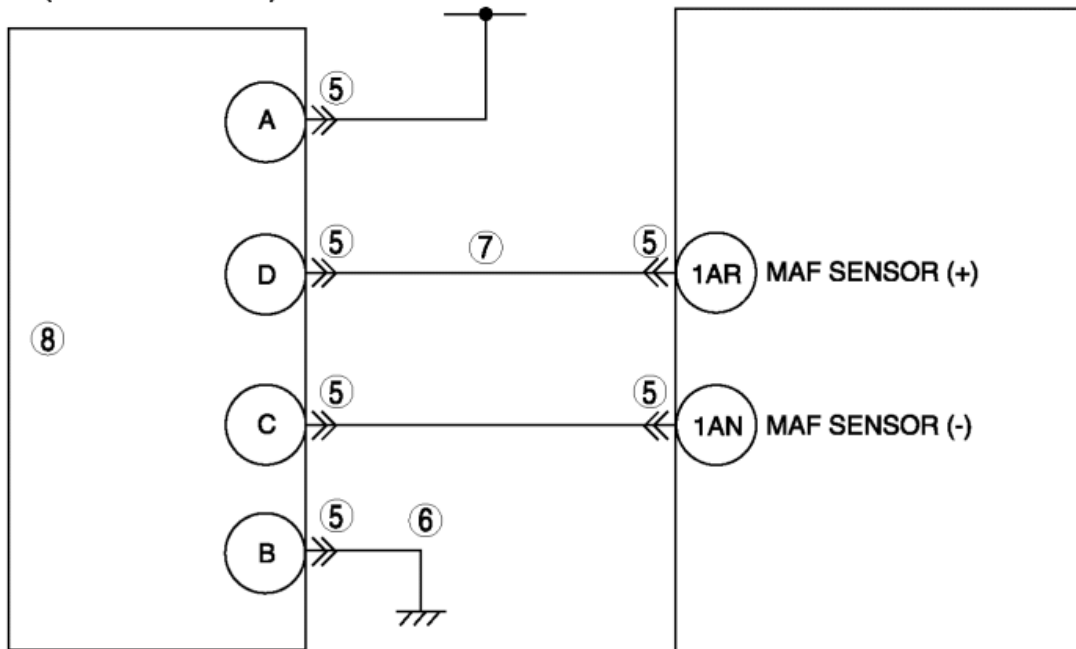
DTC P1101:00 [MZI 3.7 V6]

DTC P1101:00	MAF sensor out of self-test range
DETECTI ON CONDI TI ON	• The MAF sensor circuit is monitored by the PCM for an out of range air flow (or voltage) input. If, during KOEO, the air flow voltage signal is more than 0.27 V with the ignition switch in the ON position (Engine off). Likewise, the test fails if the airflow voltage signal is not within 0.46 to 2.44 V with the ignition switch in the ON position (Engine running) (KOER).
POSSI BLE CAUSE	• Low battery charge • Open circuit wiring harness between MAF sensor terminal B (wiring harness-side) and body ground • Open circuit wiring harness between MAF sensor terminal C (wiring harness-side) and PCM terminal 1AN (wiring harness-side) • MAF sensor malfunction • Connector or terminal malfunction

MAF SENSOR (MAF/IAT SENSOR)

MAIN RELAY

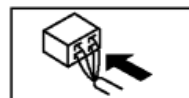
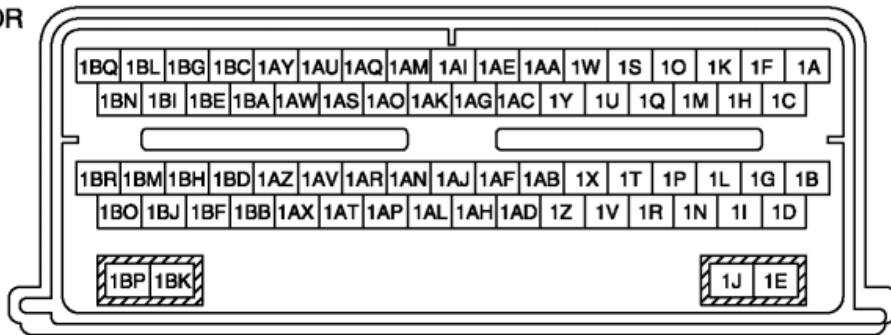
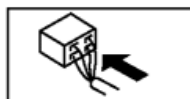
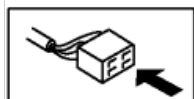
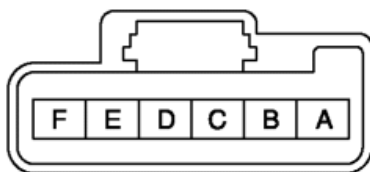
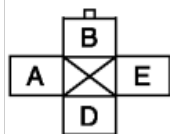
PCM



PCM WIRING HARNESS-SIDE CONNECTOR

MAIN RELAY

MAF/IAT SENSOR WIRING HARNESS-SIDE CONNECTOR



Diagnostic procedure

STEP	INSPECTION	ACTION
1	VERIFY FREEZE FRAME DATA HAS BEEN RECORDED Has FREEZE FRAME DATA been recorded?	Yes Go to the next step.
		No Record FREEZE FRAME DATA on the repair order, then go to the next step.
2	VERIFY RELATED REPAIR INFORMATION AVAILABILITY - Verify related Service Bulletins availability. - Is any related Service Bulletins available?	Yes Perform repair or diagnosis according to available Service Bulletins. If vehicle is not repaired, go to the next step.
		No Go to the next step.

3	VERIFY RELATED PENDING CODE OR STORED DTC - Verify the related PENDING CODE or stored DTCs. - Are other DTCs present?	Yes	Go to appropriate DTC inspection. (See DTC TABLE [MZI 3.7 V6] .)
		No	Go to the next step.
4	INSPECT MAF SIGNAL SENT TO PCM - Switch the ignition ON (Engine running). - Access MAF PID using the M-MDS - Is the voltage between 0.46–2.44 V	Yes	Perform the “INTERMITTENT CONCERN TROUBLESHOOTING”. Then go to Step 10.
		No	Go to the next step.
5	INSPECT MAF SENSOR AND PCM CONNECTOR FOR POOR CONNECTION - Switch the ignition off. - Disconnect the MAF/IAT sensor and PCM connector. - Inspect for poor connection (such as damaged/pulled-out pins, corrosion). - Are there any malfunction?	Yes	Repair or replace suspected part, then go to Step 10.
		No	Go to the next step.
6	INSPECT MAF SENSOR GROUND CIRCUIT FOR OPEN CIRCUIT - Switch the ignition off. - Inspect continuity between MAF sensor terminal B (wiring harness-side) and body ground. - Is there continuity?	Yes	Go to the next step.
		No	Repair or replace suspected part, then go to Step 10.
7	INSPECT MAF SENSOR SIGNAL CIRCUIT FOR OPEN CIRCUIT - Switch the ignition off. - Inspect continuity between MAF sensor terminal C (wiring harness-side) and PCM terminal 1AN (wiring harness-side). - Is there continuity?	Yes	Go to the next step.
		No	Repair or replace suspected part, then go to Step 10.
8	INSPECT MAF SENSOR - Inspect the MAF sensor. (See MASS AIR FLOW (MAF) SENSOR INSPECTION [MZI 3.7 V6] .) - Is there any malfunction?	Yes	Replace the MAF/IAT sensor, then go to Step 10.
		No	Go to the next step.
9	INSPECT FOR CORRECT PCM OPERATION - Disconnect all the PCM connectors. - Visually inspect for: - Pushed out pins - Corrosion - Connect all the PCM connectors and verify that they seat correctly. - Retrieve DTCs using the M-MDS. - Is the PENDING CODE for this DTC present?	Yes	Go to the next step.
		No	The system is correctly. Go to the next step.
10	VERIFY TROUBLESHOOTING OF DTC P1101:00 HAS BEEN COMPLETED	Yes	Repeat the inspection from Step 1. If the malfunction recurs,

	• Verify that all disconnected connectors reconnected. • Clear the DTC from the PCM memory using the M-MDS. • Start engine. • Perform the KOEO or KOER self-test. (See KOEO/ KOER SELF TEST [MZI 3.7 V6] .) • Is same DTC present?		replace the PCM. (See PCM REMOVAL/ INSTALLATION [MZI 3.7 V6] .) Go to the next step.
		No	Go to the next step.
11	VERIFY AFTER REPAIR PROCEDURE • Perform the "AFTER REPAIR PROCEDURE". (See AFTER REPAIR PROCEDURE [MZI 3.7 V6] .) • Are any DTCs present?	Yes	Go to the applicable DTC inspection. (See DTC TABLE [MZI 3.7 V6] .)
		No	Troubleshooting completed.

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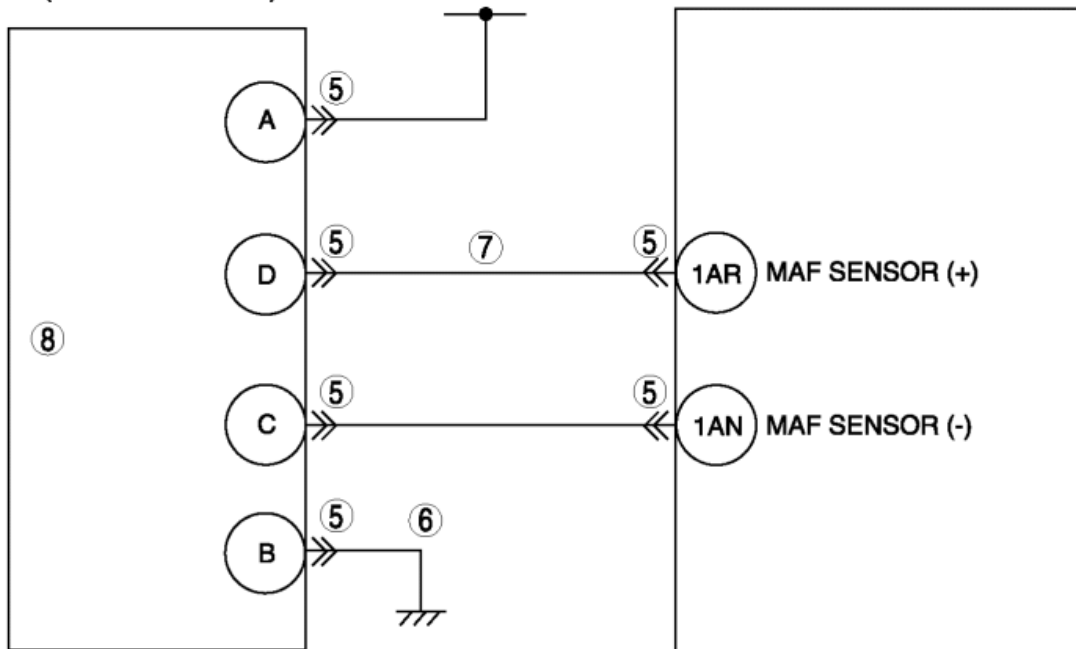
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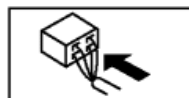
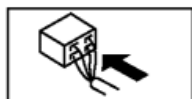
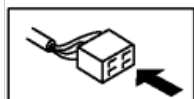
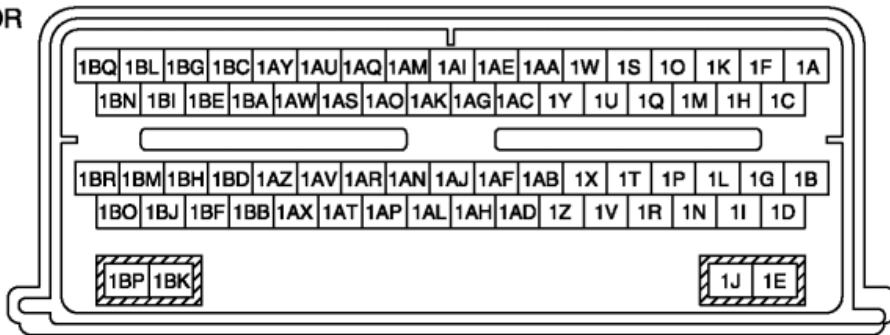
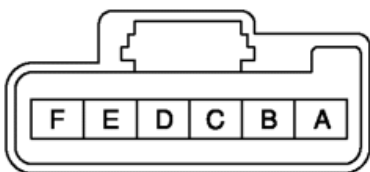
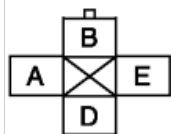
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