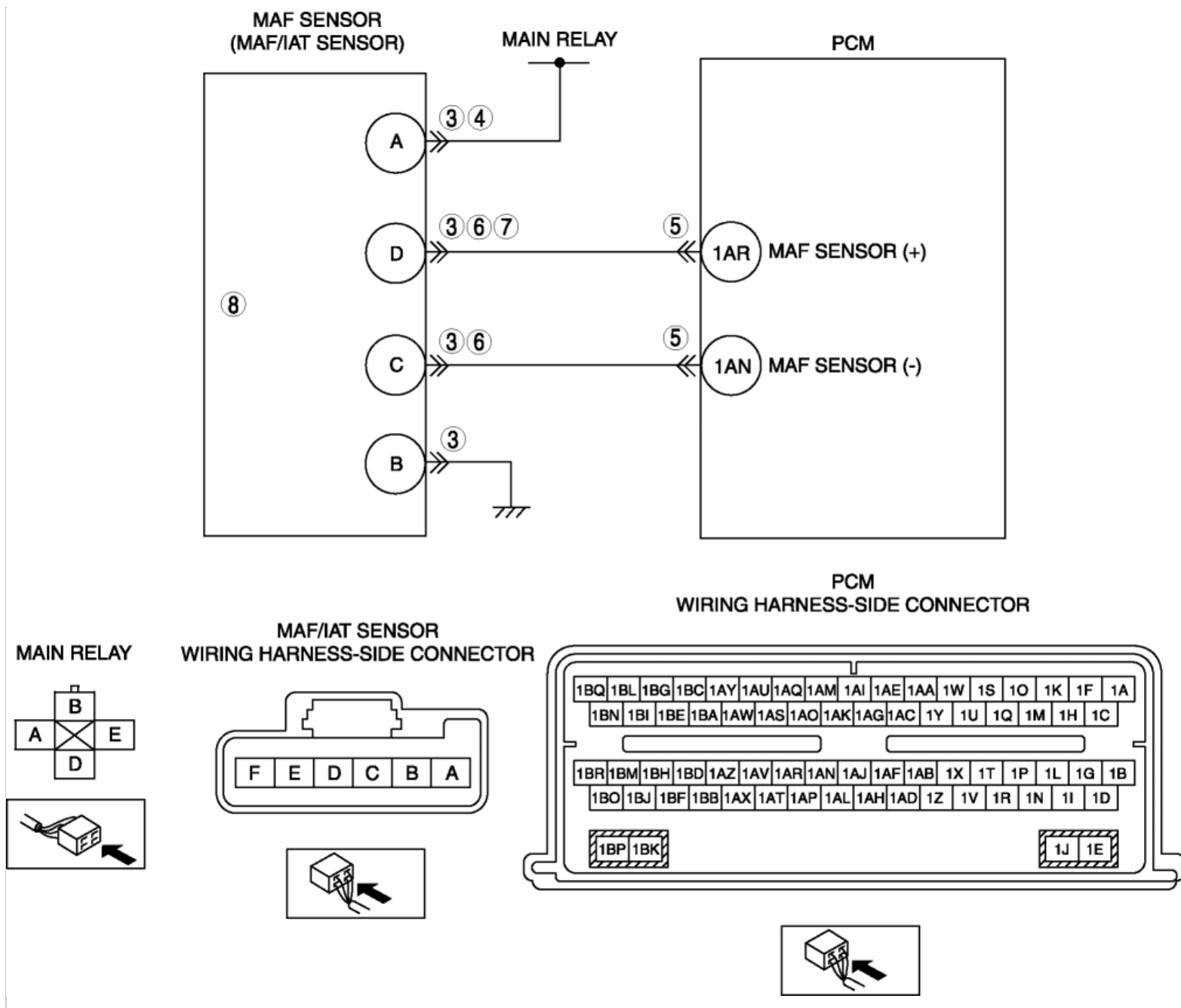


2012 - Mazda6 - Engine

DTC P0102:00 [MZI 3.7 V6]

DTC P0102:00	MAF circuit low input
DETECTION CONDITION	• The MAF sensor circuit is monitored by the PCM for low air flow (or voltage) input through the CCM. If during KOER the air flow (or voltage) changes below a minimum calibrated limit, the test fails.
POSSIBLE CAUSE	• Connector or terminal malfunction • Open circuit wiring harness between MAF sensor terminal A and main relay terminal A • Open circuit wiring harness between MAF sensor terminal C and PCM terminal 1AN • Open circuit wiring harness between MAF sensor terminal D and PCM terminal 1AR • Short to ground circuit between MAF sensor terminal D and PCM terminal 1AR • Open circuit wiring harness between MAF sensor terminal B and body ground • Intake air leak (near the MAF sensor) • A closed throttle indication • MAF sensor malfunction



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 and/or on-line repair information availability. - Is any related Service Bulletins available?	Yes Perform repair or diagnosis according to the available Service Bulletins. If the vehicle is not repaired, go to the next step.
		No Go to the next step.
3	INSPECT MAF SENSOR CONNECTOR FOR POOR	Yes Repair or replace suspected part, then go to Step 10.

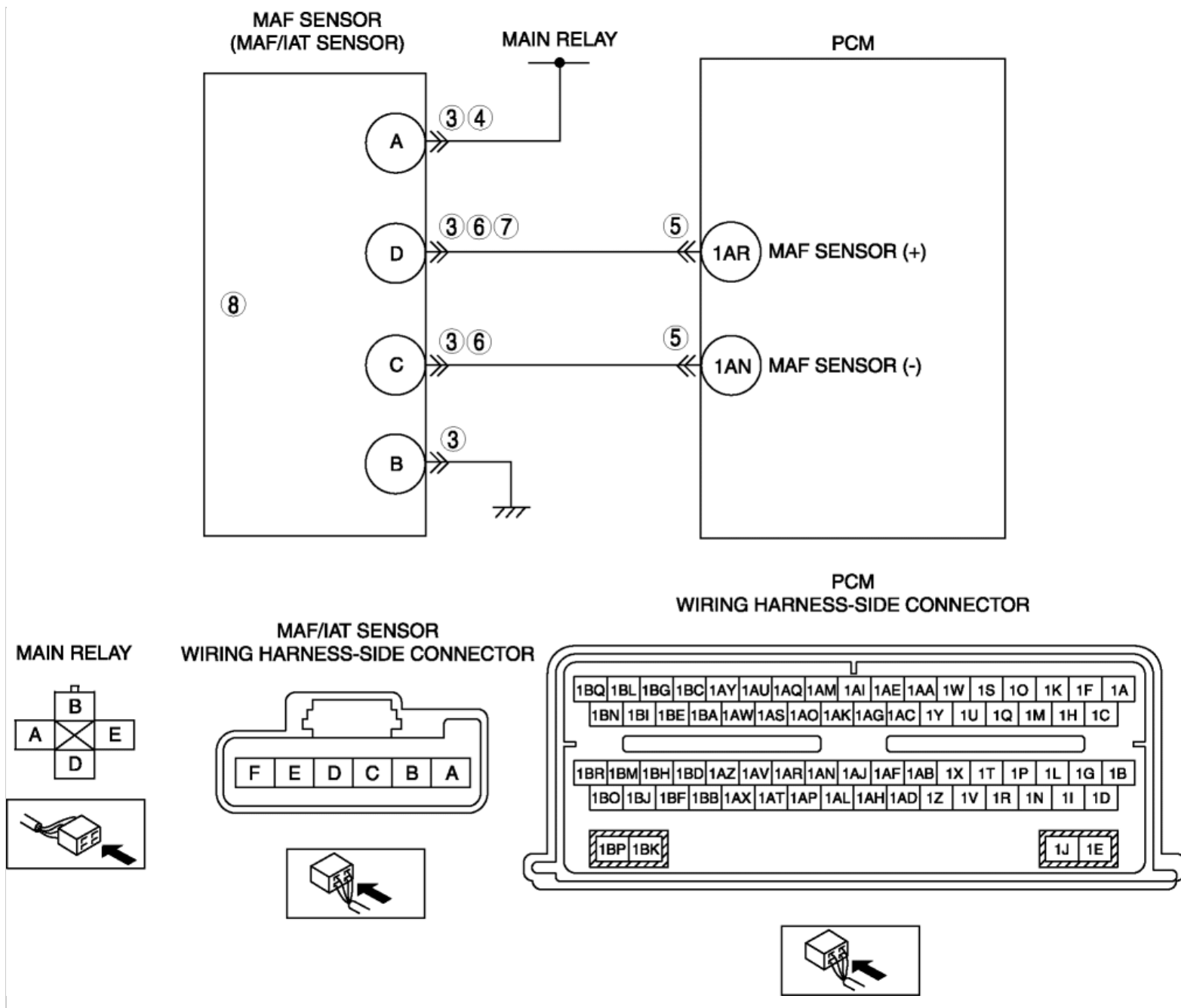
	CONNECTION - Switch the ignition to off. - Disconnect the MAF/IAT sensor connector. - Inspect for poor connection (such as damaged/pulled-out pins, corrosion). - Are there any malfunction?	No Go to the next step.
4	INSPECT POWER SUPPLY CIRCUIT FOR OPEN CIRCUIT - Switch the ignition to ON (Engine off). - Measure the voltage between MAF sensor terminal A (wiring harness-side) and body ground. - Is the voltage B+?	Yes Go to the next step. No Repair or replace suspected part, then go to Step 10.
5	INSPECT PCM CONNECTOR FOR POOR CONNECTION - Switch the ignition to off. - Disconnect the 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 SIGNAL CIRCUIT FOR OPEN CIRCUIT - Remove PCM with PCM connector connected. - Inspect for continuity between the following circuits: - MAF sensor terminal C (wiring harness-side) and PCM terminal 1AN (wiring harness-side) - MAF sensor terminal D (wiring harness-side) and PCM terminal 1AR (wiring harness-side) - Are 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 SHORT TO GROUND - Switch the ignition to off. - Disconnect the MAF/IAT sensor and PCM connector. - Inspect continuity between following circuits: - MAF sensor connector terminal D (wiring harness-side) and body ground - Are there continuity?	Yes Repair or replace suspected part, then go to Step 10. No Go to the next step.
8	INSPECT MAF SENSOR GROUND CIRCUIT FOR OPEN CIRCUIT - Inspect continuity between MAF sensor terminal B (wiring harness-side) and body ground. - Are there continuity?	Yes Go to the next step. No Repair or replace suspected part, then go to Step 10.
9	INSPECT THE MAF SENSOR Inspect the MAF sensor	Yes Replace the MAF/IAT sensor, then go to the next step. (See MASS AIR FLOW (MAF) / INTAKE AIR TEMPERATURE (IAT))

	(See MASS AIR FLOW (MAF) SENSOR INSPECTION [MZI 3.7 V6].) Are there any malfunction?	SENSOR REMOVAL/ INSTALLATION [MZI 3.7 V6].) No Go to the next step.
10	VERIFY TROUBLESHOOTING OF DTC P0102:00 HAS BEEN COMPLETED - Verify that all disconnected connectors reconnected. - Switch the ignition to ON (Engine off). - Clear the DTC from the PCM memory using the M-MDS. - Start engine and warm it up completely. - Is same DTC present?	Yes Repeat the inspection from Step 1. If the malfunction recurs, 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.

2012 - Mazda6 - Engine

DTC P0102:00 [MZI 3.7 V6]

DTC P0102:00	MAF circuit low input
DETECTION CONDITION	• The MAF sensor circuit is monitored by the PCM for low air flow (or voltage) input through the CCM. If during KOER the air flow (or voltage) changes below a minimum calibrated limit, the test fails.
POSSIBLE CAUSE	• Connector or terminal malfunction • Open circuit wiring harness between MAF sensor terminal A and main relay terminal A • Open circuit wiring harness between MAF sensor terminal C and PCM terminal 1AN • Open circuit wiring harness between MAF sensor terminal D and PCM terminal 1AR • Short to ground circuit between MAF sensor terminal D and PCM terminal 1AR • Open circuit wiring harness between MAF sensor terminal B and body ground • Intake air leak (near the MAF sensor) • A closed throttle indication • MAF sensor malfunction



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 and/or on-line repair information availability. - Is any related Service Bulletins available?	Yes Perform repair or diagnosis according to the available Service Bulletins. If the vehicle is not repaired, go to the next step.
		No Go to the next step.
3	INSPECT MAF SENSOR CONNECTOR FOR POOR	Yes Repair or replace suspected part, then go to Step 10.

	CONNECTION - Switch the ignition to off. - Disconnect the MAF/IAT sensor connector. - Inspect for poor connection (such as damaged/pulled-out pins, corrosion). - Are there any malfunction?	No Go to the next step.
4	INSPECT POWER SUPPLY CIRCUIT FOR OPEN CIRCUIT - Switch the ignition to ON (Engine off). - Measure the voltage between MAF sensor terminal A (wiring harness-side) and body ground. - Is the voltage B+?	Yes Go to the next step.
		No Repair or replace suspected part, then go to Step 10.
5	INSPECT PCM CONNECTOR FOR POOR CONNECTION - Switch the ignition to off. - Disconnect the 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 SIGNAL CIRCUIT FOR OPEN CIRCUIT - Remove PCM with PCM connector connected. - Inspect for continuity between the following circuits: - MAF sensor terminal C (wiring harness-side) and PCM terminal 1AN (wiring harness-side) - MAF sensor terminal D (wiring harness-side) and PCM terminal 1AR (wiring harness-side) - Are 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 SHORT TO GROUND - Switch the ignition to off. - Disconnect the MAF/IAT sensor and PCM connector. - Inspect continuity between following circuits: - MAF sensor connector terminal D (wiring harness-side) and body ground - Are there continuity?	Yes Repair or replace suspected part, then go to Step 10.
		No Go to the next step.
8	INSPECT MAF SENSOR GROUND CIRCUIT FOR OPEN CIRCUIT - Inspect continuity between MAF sensor terminal B (wiring harness-side) and body ground. - Are there continuity?	Yes Go to the next step.
		No Repair or replace suspected part, then go to Step 10.
9	INSPECT THE MAF SENSOR Inspect the MAF sensor	Yes Replace the MAF/IAT sensor, then go to the next step. (See MASS AIR FLOW (MAF) / INTAKE AIR TEMPERATURE (IAT))

	(See MASS AIR FLOW (MAF) SENSOR INSPECTION [MZI 3.7 V6].) Are there any malfunction?	SENSOR REMOVAL/ INSTALLATION [MZI 3.7 V6].) No Go to the next step.
10	VERIFY TROUBLESHOOTING OF DTC P0102:00 HAS BEEN COMPLETED - Verify that all disconnected connectors reconnected. - Switch the ignition to ON (Engine off). - Clear the DTC from the PCM memory using the M-MDS. - Start engine and warm it up completely. - Is same DTC present?	Yes Repeat the inspection from Step 1. If the malfunction recurs, 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.