

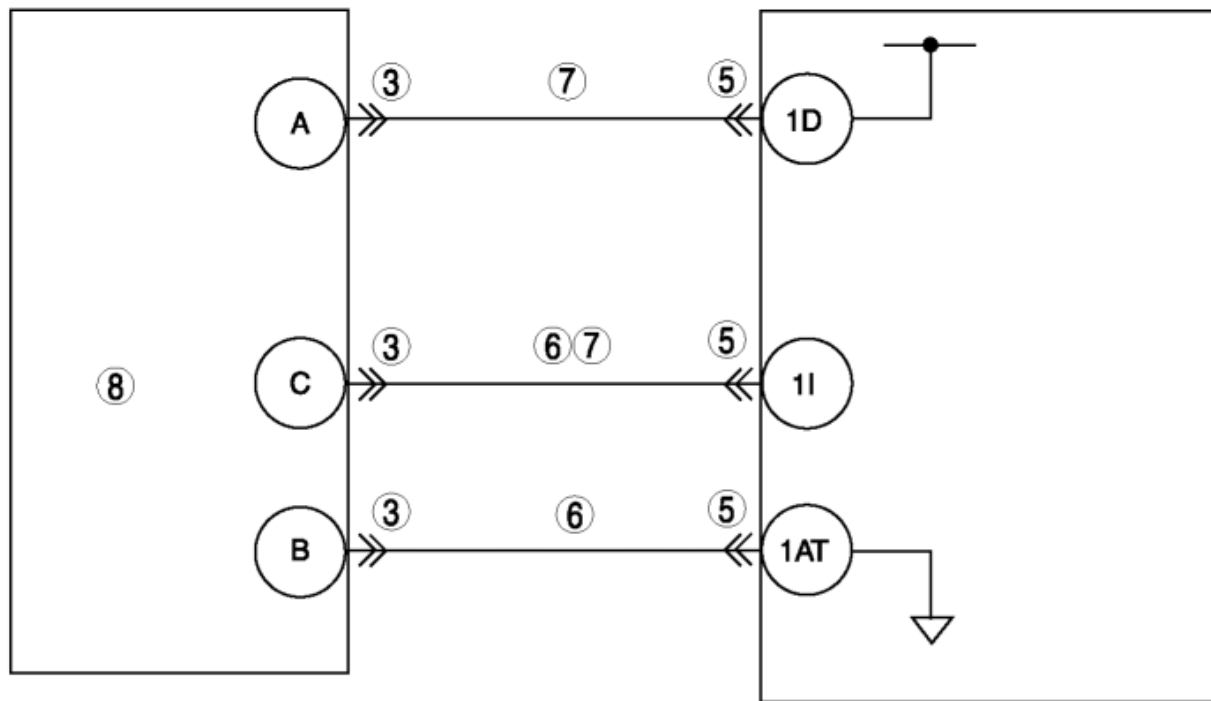
2012 - Mazda6 - Engine

DTC P0453:00 [MZI 3.7 V6]

DTC P0453:00	Fuel tank pressure sensor high input
DETECTION CONDITION	• The PCM monitors the evaporative emission (EVAP) control system fuel tank pressure sensor input signal to the PCM. The test fails when the signal average jumps above a minimum allowable calibrated parameter.
POSSIBLE CAUSE	• Connector or terminal malfunction • Short to the constant voltage supply circuit between fuel tank pressure sensor terminal C and PCM terminal 1I • Short to power supply between fuel tank pressure sensor terminal A and PCM terminal 1D • Open circuit between fuel tank pressure sensor terminal C and PCM terminal 1I • Open circuit between fuel tank pressure sensor terminal B and PCM terminal 1AT • Fuel tank pressure sensor power circuit and signal circuit are shorted each other • Fuel tank pressure sensor malfunction

FUEL TANK PRESSURE SENSOR

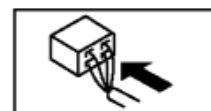
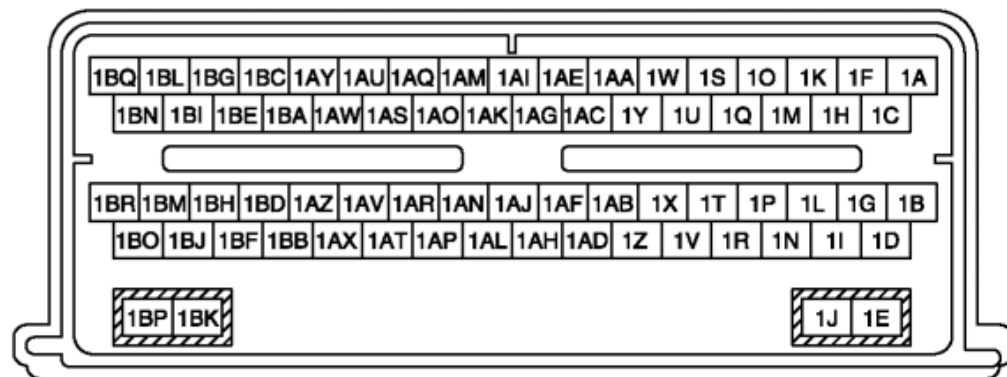
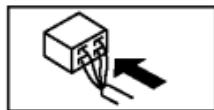
PCM



PCM

WIRING HARNESS-SIDE CONNECTOR

FUEL TANK PRESSURE SENSOR WIRING HARNESS-SIDE CONNECTOR



Diagnostic procedure

STEP	INSPECTION	ACTION
1	VERIFY FREEZE FRAME DATA HAS BEEN RECORDED Has the 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	Yes Perform the repair or diagnosis according to the available repair information. If the vehicle is not

	information availability. Is any related repair information available?		repaired, go to the next step.
		No	Go to the next step.
3	INSPECT FUEL TANK PRESSURE SENSOR CONNECTION FOR POOR CONNECTION - Switch the ignition off. - Disconnect fuel tank pressure sensor 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 9.
		No	Go to the next step.
4	VERIFY FUEL TANK PRESSURE SENSOR SIGNAL CIRCUIT FOR SHORT TO POWER SUPPLY - Switch the ignition ON (Engine off). - Measure the voltage between the following terminals: - Fuel tank pressure sensor terminal C (wiring harness-side) and body ground. - Fuel tank pressure sensor terminal A (wiring harness-side) and body ground. - Are there voltage B+ ?	Yes	Repair or replace suspected part, then go to Step 9.
		No	Go to the next step.
5	INSPECT PCM CONNECTOR FOR POOR CONNECTION - Switch the ignition off. - Disconnect the fuel tank pressure sensor and PCM connector. - Inspect for poor connection (such as damaged/pulled-out pins, corrosion). - Is there any malfunction?	Yes	Repair or replace suspected part, then go to Step 9.
		No	Go to the next step.
6	VERIFY FUEL TANK PRESSURE SENSOR CIRCUIT FOR OPEN CIRCUIT - Inspect for continuity between the following circuits: - Fuel tank pressure sensor connector terminal C (wiring harness-side) and PCM connector terminal 1I (wiring harness-side). - Fuel tank pressure sensor connector terminal B (wiring harness-side) and PCM connector terminal 1AT (wiring harness-side). - Are there continuity?	Yes	Go to the next step.
		No	Repair or replace suspected part, then go to Step 9.
7	INSPECT FUEL TANK PRESSURE SENSOR SIGNAL	Yes	Go to the next step.

	CIRCUIT AND POWER CIRCUIT FOR SHORT EACH OTHER - Switch the ignition off. - Disconnect the fuel tank pressure sensor and PCM connector. - Measure resistance between PCM connector terminal 1D (wiring harness-side) and PCM connector terminal 1I (wiring harness-side). - Is the resistance more than 10 kilohms?	No	Repair or replace suspected part, then go to Step 9.
8	INSPECT FUEL TANK PRESSURE SENSOR - Inspect the fuel tank pressure sensor. (See FUEL TANK PRESSURE SENSOR INSPECTION [MZI 3.7 V6].) - Is the fuel tank pressure sensor normal?	Yes	Go to the next step.
		No	Replace the evaporative hose component, then go to the next step. (See FUEL TANK REMOVAL/ INSTALLATION [MZI 3.7 V6] .)
9	VERIFY TROUBLESHOOTING OF DTC P0453:00 COMPLETED - Make sure to reconnect all disconnected connectors. - Switch the ignition ON (Engine off). - Clear the DTC from the PCM memory using the M-MDS. - Start the 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.
10	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.

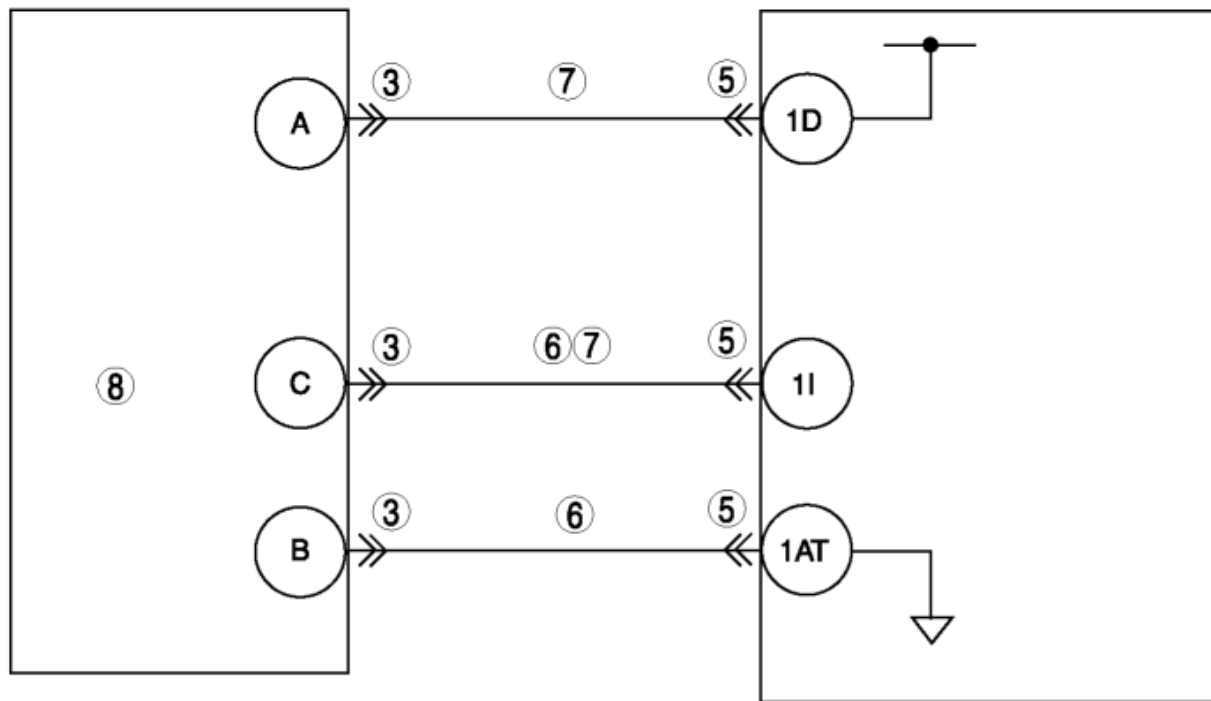
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FUEL TANK PRESSURE SENSOR

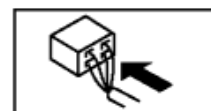
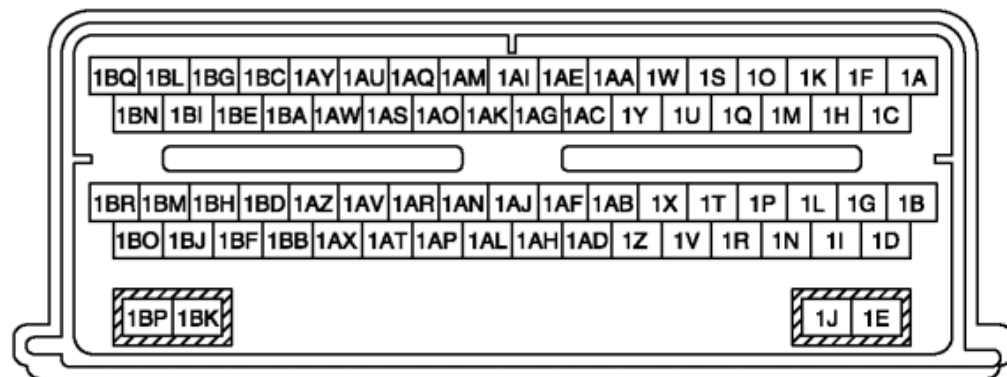
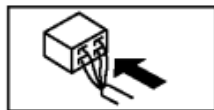
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2	VERIFY RELATED REPAIR INFORMATION AVAILABILITY Verify related Service Bulletins and/or on-line repair	Yes Perform the repair or diagnosis according to the available repair information. If the vehicle is not

	information availability. Is any related repair information available?		repaired, go to the next step.
		No	Go to the next step.
3	INSPECT FUEL TANK PRESSURE SENSOR CONNECTION FOR POOR CONNECTION - Switch the ignition off. - Disconnect fuel tank pressure sensor 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 9.
		No	Go to the next step.
4	VERIFY FUEL TANK PRESSURE SENSOR SIGNAL CIRCUIT FOR SHORT TO POWER SUPPLY - Switch the ignition ON (Engine off). - Measure the voltage between the following terminals: - Fuel tank pressure sensor terminal C (wiring harness-side) and body ground. - Fuel tank pressure sensor terminal A (wiring harness-side) and body ground. - Are there voltage B+ ?	Yes	Repair or replace suspected part, then go to Step 9.
		No	Go to the next step.
5	INSPECT PCM CONNECTOR FOR POOR CONNECTION - Switch the ignition off. - Disconnect the fuel tank pressure sensor and PCM connector. - Inspect for poor connection (such as damaged/pulled-out pins, corrosion). - Is there any malfunction?	Yes	Repair or replace suspected part, then go to Step 9.
		No	Go to the next step.
6	VERIFY FUEL TANK PRESSURE SENSOR CIRCUIT FOR OPEN CIRCUIT - Inspect for continuity between the following circuits: - Fuel tank pressure sensor connector terminal C (wiring harness-side) and PCM connector terminal 1I (wiring harness-side). - Fuel tank pressure sensor connector terminal B (wiring harness-side) and PCM connector terminal 1AT (wiring harness-side). - Are there continuity?	Yes	Go to the next step.
		No	Repair or replace suspected part, then go to Step 9.
7	INSPECT FUEL TANK PRESSURE SENSOR SIGNAL	Yes	Go to the next step.

	CIRCUIT AND POWER CIRCUIT FOR SHORT EACH OTHER - Switch the ignition off. - Disconnect the fuel tank pressure sensor and PCM connector. - Measure resistance between PCM connector terminal 1D (wiring harness-side) and PCM connector terminal 1I (wiring harness-side). - Is the resistance more than 10 kilohms?		No Repair or replace suspected part, then go to Step 9.
8	INSPECT FUEL TANK PRESSURE SENSOR - Inspect the fuel tank pressure sensor. (See FUEL TANK PRESSURE SENSOR INSPECTION [MZI 3.7 V6] .) - Is the fuel tank pressure sensor normal?	Yes	Go to the next step.
		No	Replace the evaporative hose component, then go to the next step. (See FUEL TANK REMOVAL/ INSTALLATION [MZI 3.7 V6] .)
9	VERIFY TROUBLESHOOTING OF DTC P0453:00 COMPLETED - Make sure to reconnect all disconnected connectors. - Switch the ignition ON (Engine off). - Clear the DTC from the PCM memory using the M-MDS. - Start the 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.
10	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.