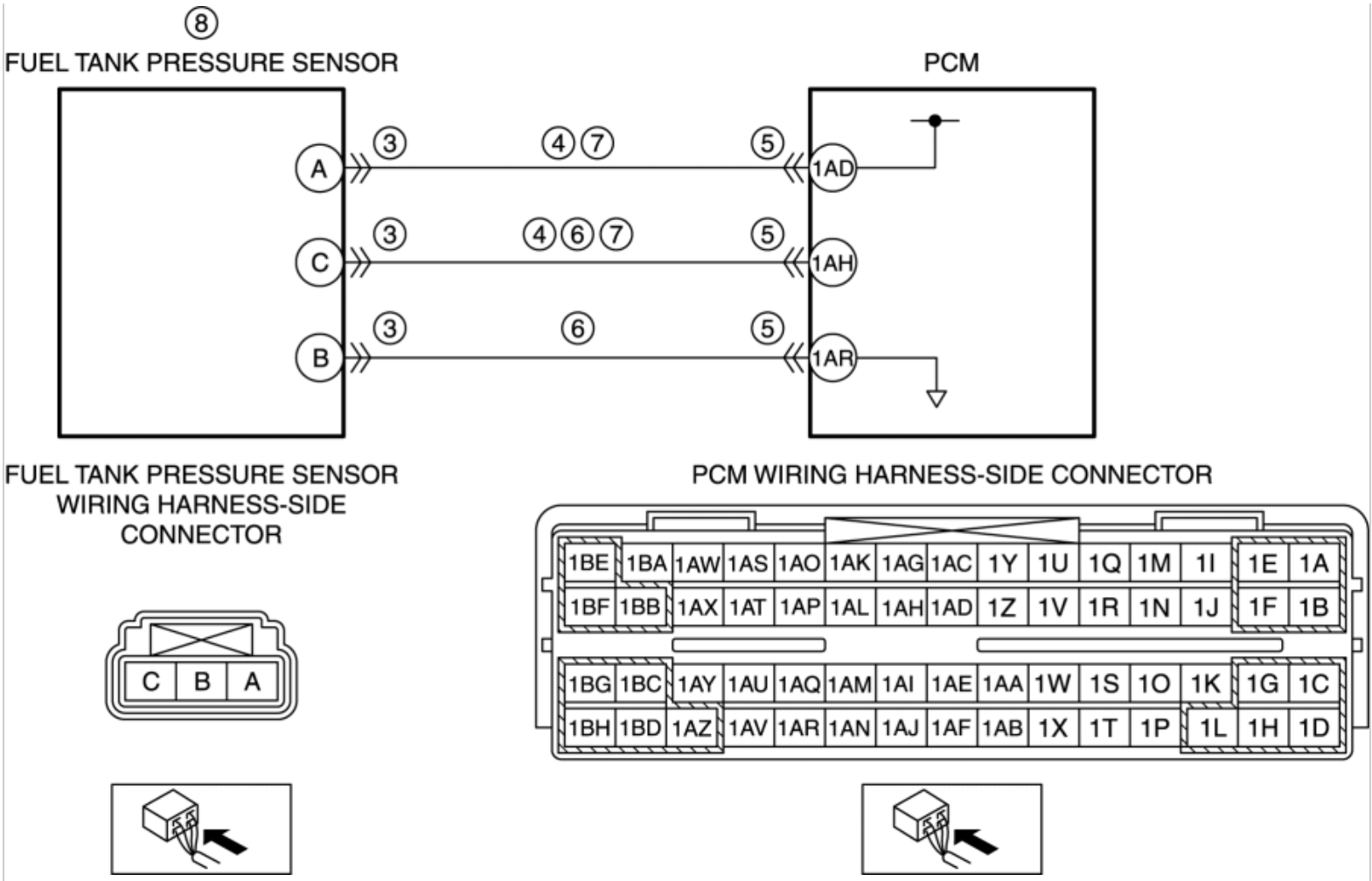
2012 - Mazda6 - Engine

DTC P0452:00 [MZR 2.5]

DTC P0452:00	Fuel tank pressure sensor low input
DETECTION CONDITION	• The PCM monitors the EVAP control system fuel tank pressure sensor input signal to the PCM. The test fails when the signal average drops below a minimum allowable calibrated parameter. **Diagnostic support note** • This is a continuous monitor (CCM). • The MIL illuminates if the PCM detects the above malfunction condition in two consecutive drive cycles or in one drive cycle while the DTC for the same malfunction has been stored in the PCM. • PENDING CODE is available if the PCM detects the above malfunction condition during the first drive cycle. • FREEZE FRAME DATA (Mode 2)/Snapshot data is available. • The DTC is stored in the PCM memory.

POSSIBLE CAUSE	• Fuel tank pressure sensor connector or terminal malfunction
	• Short to ground in wiring harness between the following terminals:
	  ▪ Fuel tank pressure sensor terminal C—PCM terminal 1AH
	  ▪ Fuel tank pressure sensor terminal A—PCM terminal 1AD
	• PCM connector or terminal malfunction
	• Short circuit in fuel tank pressure sensor signal circuit and ground circuit each other
	• Open circuit in wiring harness between the following terminals:
	  ▪ Fuel tank pressure sensor terminal C—PCM terminal 1AH
	  ▪ Fuel tank pressure sensor terminal A—PCM terminal 1AD
	• Fuel tank pressure sensor malfunction
	• PCM malfunction



Diagnostic procedure

STEP	INSPECTION		ACTION
1	**VERIFY FREEZE FRAME DATA (MODE 2)/ SNAPSHOT DATA HAS BEEN RECORDED** • Has the FREEZE FRAME DATA (Mode 2)/snapshot data been recorded?	Yes	Go to the next step.
		No	Record the FREEZE FRAME DATA (Mode 2)/snapshot 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 repair information available?	Yes	Perform repair or diagnosis according to the available repair information. • If the vehicle is not repaired, go to the next step.
		No	Go to the next step.
3	**INSPECT FUEL TANK PRESSURE SENSOR CONNECTOR CONDITION** • Switch the ignition to off. • Disconnect the fuel tank pressure sensor connector. • Inspect for poor connection (such as damaged/pulled-out pins, corrosion).	Yes	Repair or replace the terminal and/or connector, then go to Step 9.
		No	Go to the next step.

	• Is there any malfunction?		
4	**VERIFY FUEL TANK PRESSURE SENSOR SIGNAL CIRCUIT FOR SHORT TO GROUND** • Fuel tank pressure sensor connector is disconnected. • Inspect for continuity between the following terminals (wiring harness-side) and body ground: ▪ Fuel tank pressure sensor terminal C—PCM terminal 1AH ▪ Fuel tank pressure sensor terminal A—PCM terminal 1AD • Is there continuity?	Yes	If the short to ground circuit could be detected: • Repair or replace the wiring harness for a possible short to ground. If the short to ground circuit could not be detected: • Replace the PCM (short to ground in PCM internal circuit). (See **PCM REMOVAL/ INSTALLATION [MZR 2.5]**.) Go to Step 9.
		No	Go to the next step.
5	**INSPECT PCM CONNECTOR CONDITION** • Disconnect the PCM connector. • Inspect for poor connection (such as damaged/pulled-out pins, corrosion). • Is there any malfunction?	Yes	Repair or replace the terminal and/or connector, then go to Step 9.
		No	Go to the next step.
6	**INSPECT FUEL TANK PRESSURE SENSOR SIGNAL AND GROUND CIRCUITS FOR SHORT EACH OTHER** • Fuel tank pressure sensor and PCM connectors are disconnected. • Inspect for continuity between fuel tank pressure sensor terminals C and B (wiring harness-side). • Is there continuity?	Yes	Repair or replace the malfunctioning wiring harness, then go to Step 9.
		No	Go to the next step.
7	**INSPECT FUEL TANK PRESSURE SENSOR CIRCUIT FOR OPEN CIRCUIT** • Verify that the fuel tank pressure sensor and PCM connectors are disconnected. • Inspect for continuity between the following terminals (wiring harness-side): ▪ Fuel tank pressure sensor terminal C—PCM terminal 1AH ▪ Fuel tank pressure sensor terminal A—PCM terminal 1AD • Is there continuity?	Yes	Go to the next step.
		No	Repair or the replace the wiring harness for a possible open circuit, then go to Step 9.
8	**INSPECT FUEL TANK PRESSURE SENSOR** • Inspect the fuel tank pressure sensor. (See **FUEL TANK PRESSURE SENSOR INSPECTION [MZR 2.5]**.) • Is there any malfunction?	Yes	Replace the evaporative hose component, then go to the next step. (See **FUEL TANK REMOVAL/ INSTALLATION [MZR 2.5]**.)
		No	Go to the next step.

9	**VERIFY DTC TROUBLESHOOTING COMPLETED** • Make sure to reconnect all disconnected connectors. • Clear the DTC from the PCM memory using the M-MDS. (See **AFTER REPAIR PROCEDURE [MZR 2.5]**.) • Perform the KOEO or KOER self test. (See **KOEO/ KOER SELF TEST [MZR 2.5]**.) • Is the PENDING CODE for this DTC present?	Yes	Repeat the inspection from Step 1. • If the malfunction recurs, replace the PCM. (See **PCM REMOVAL/ INSTALLATION [MZR 2.5]**.) 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 [MZR 2.5]**.) • Are any DTCs present?	Yes	Go to the applicable DTC inspection. (See **DTC TABLE [MZR 2.5]**.)
		No	DTC troubleshooting completed.

< Previous Next >

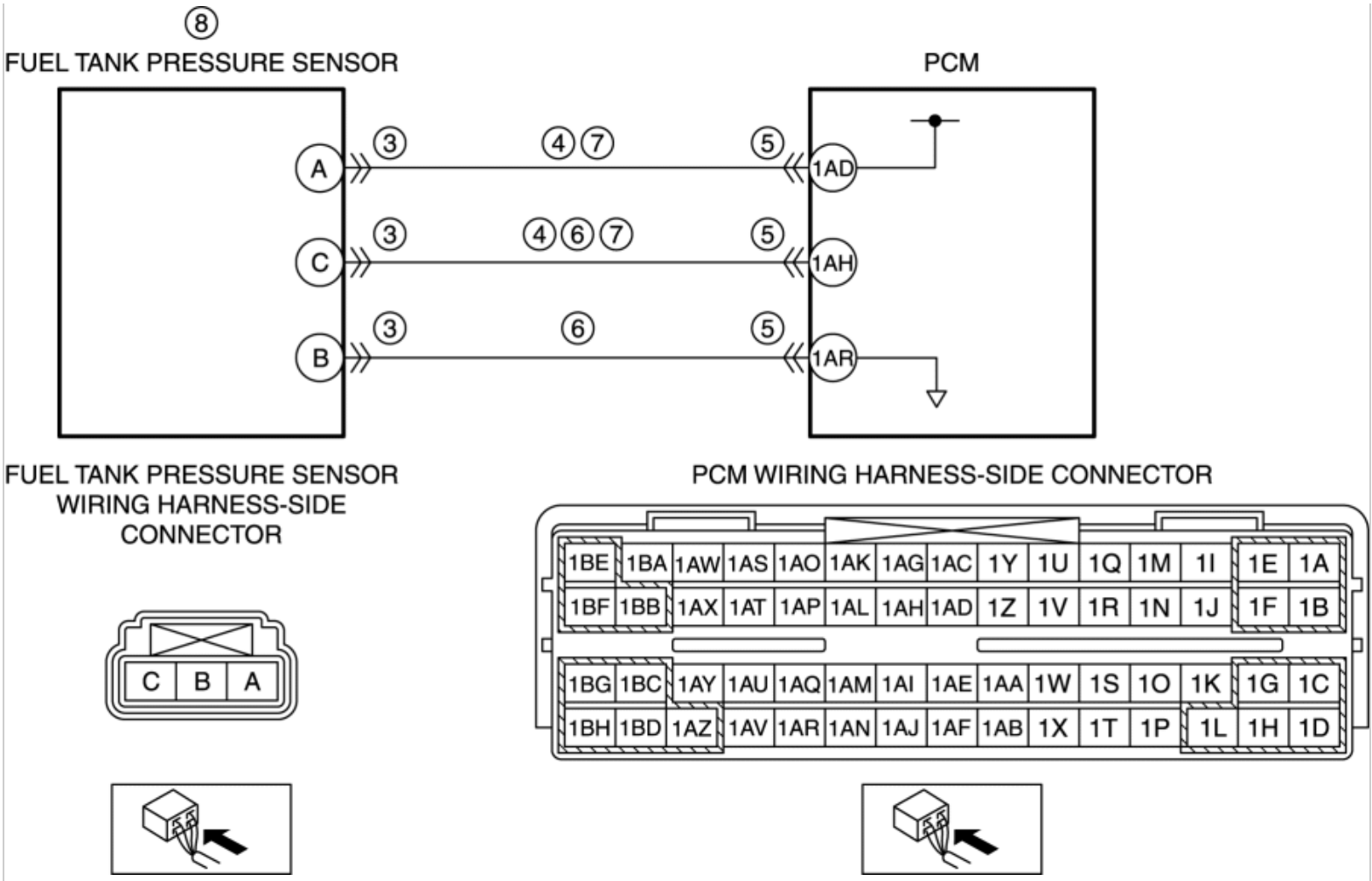
Back to Top

2012 - Mazda6 - Engine

DTC P0452:00 [MZR 2.5]

DTC P0452:00	Fuel tank pressure sensor low input
DETECTION CONDITION	• The PCM monitors the EVAP control system fuel tank pressure sensor input signal to the PCM. The test fails when the signal average drops below a minimum allowable calibrated parameter. **Diagnostic support note** • This is a continuous monitor (CCM). • The MIL illuminates if the PCM detects the above malfunction condition in two consecutive drive cycles or in one drive cycle while the DTC for the same malfunction has been stored in the PCM. • PENDING CODE is available if the PCM detects the above malfunction condition during the first drive cycle. • FREEZE FRAME DATA (Mode 2)/Snapshot data is available. • The DTC is stored in the PCM memory.

POSSIBLE CAUSE	• Fuel tank pressure sensor connector or terminal malfunction
	• Short to ground in wiring harness between the following terminals:
	  ▪ Fuel tank pressure sensor terminal C—PCM terminal 1AH
	  ▪ Fuel tank pressure sensor terminal A—PCM terminal 1AD
	• PCM connector or terminal malfunction
	• Short circuit in fuel tank pressure sensor signal circuit and ground circuit each other
	• Open circuit in wiring harness between the following terminals:
	  ▪ Fuel tank pressure sensor terminal C—PCM terminal 1AH
	  ▪ Fuel tank pressure sensor terminal A—PCM terminal 1AD
	• Fuel tank pressure sensor malfunction
	• PCM malfunction



Diagnostic procedure

STEP	INSPECTION		ACTION
1	**VERIFY FREEZE FRAME DATA (MODE 2)/ SNAPSHOT DATA HAS BEEN RECORDED** • Has the FREEZE FRAME DATA (Mode 2)/snapshot data been recorded?	Yes	Go to the next step.
		No	Record the FREEZE FRAME DATA (Mode 2)/snapshot 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 repair information available?	Yes	Perform repair or diagnosis according to the available repair information. • If the vehicle is not repaired, go to the next step.
		No	Go to the next step.
3	**INSPECT FUEL TANK PRESSURE SENSOR CONNECTOR CONDITION** • Switch the ignition to off. • Disconnect the fuel tank pressure sensor connector. • Inspect for poor connection (such as damaged/pulled-out pins, corrosion).	Yes	Repair or replace the terminal and/or connector, then go to Step 9.
		No	Go to the next step.

	• Is there any malfunction?		
4	**VERIFY FUEL TANK PRESSURE SENSOR SIGNAL CIRCUIT FOR SHORT TO GROUND** • Fuel tank pressure sensor connector is disconnected. • Inspect for continuity between the following terminals (wiring harness-side) and body ground: ▪ Fuel tank pressure sensor terminal C—PCM terminal 1AH ▪ Fuel tank pressure sensor terminal A—PCM terminal 1AD • Is there continuity?	Yes	If the short to ground circuit could be detected: • Repair or replace the wiring harness for a possible short to ground. If the short to ground circuit could not be detected: • Replace the PCM (short to ground in PCM internal circuit). (See **PCM REMOVAL/ INSTALLATION [MZR 2.5]**.) Go to Step 9.
		No	Go to the next step.
5	**INSPECT PCM CONNECTOR CONDITION** • Disconnect the PCM connector. • Inspect for poor connection (such as damaged/pulled-out pins, corrosion). • Is there any malfunction?	Yes	Repair or replace the terminal and/or connector, then go to Step 9.
		No	Go to the next step.
6	**INSPECT FUEL TANK PRESSURE SENSOR SIGNAL AND GROUND CIRCUITS FOR SHORT EACH OTHER** • Fuel tank pressure sensor and PCM connectors are disconnected. • Inspect for continuity between fuel tank pressure sensor terminals C and B (wiring harness-side). • Is there continuity?	Yes	Repair or replace the malfunctioning wiring harness, then go to Step 9.
		No	Go to the next step.
7	**INSPECT FUEL TANK PRESSURE SENSOR CIRCUIT FOR OPEN CIRCUIT** • Verify that the fuel tank pressure sensor and PCM connectors are disconnected. • Inspect for continuity between the following terminals (wiring harness-side): ▪ Fuel tank pressure sensor terminal C—PCM terminal 1AH ▪ Fuel tank pressure sensor terminal A—PCM terminal 1AD • Is there continuity?	Yes	Go to the next step.
		No	Repair or the replace the wiring harness for a possible open circuit, then go to Step 9.
8	**INSPECT FUEL TANK PRESSURE SENSOR** • Inspect the fuel tank pressure sensor. (See **FUEL TANK PRESSURE SENSOR INSPECTION [MZR 2.5]**.) • Is there any malfunction?	Yes	Replace the evaporative hose component, then go to the next step. (See **FUEL TANK REMOVAL/ INSTALLATION [MZR 2.5]**.)
		No	Go to the next step.

9	**VERIFY DTC TROUBLESHOOTING COMPLETED** • Make sure to reconnect all disconnected connectors. • Clear the DTC from the PCM memory using the M-MDS. (See **AFTER REPAIR PROCEDURE [MZR 2.5]**.) • Perform the KOEO or KOER self test. (See **KOEO/ KOER SELF TEST [MZR 2.5]**.) • Is the PENDING CODE for this DTC present?	Yes	Repeat the inspection from Step 1. • If the malfunction recurs, replace the PCM. (See **PCM REMOVAL/ INSTALLATION [MZR 2.5]**.) 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 [MZR 2.5]**.) • Are any DTCs present?	Yes	Go to the applicable DTC inspection. (See **DTC TABLE [MZR 2.5]**.)
		No	DTC troubleshooting completed.

< Previous Next >

Back to Top