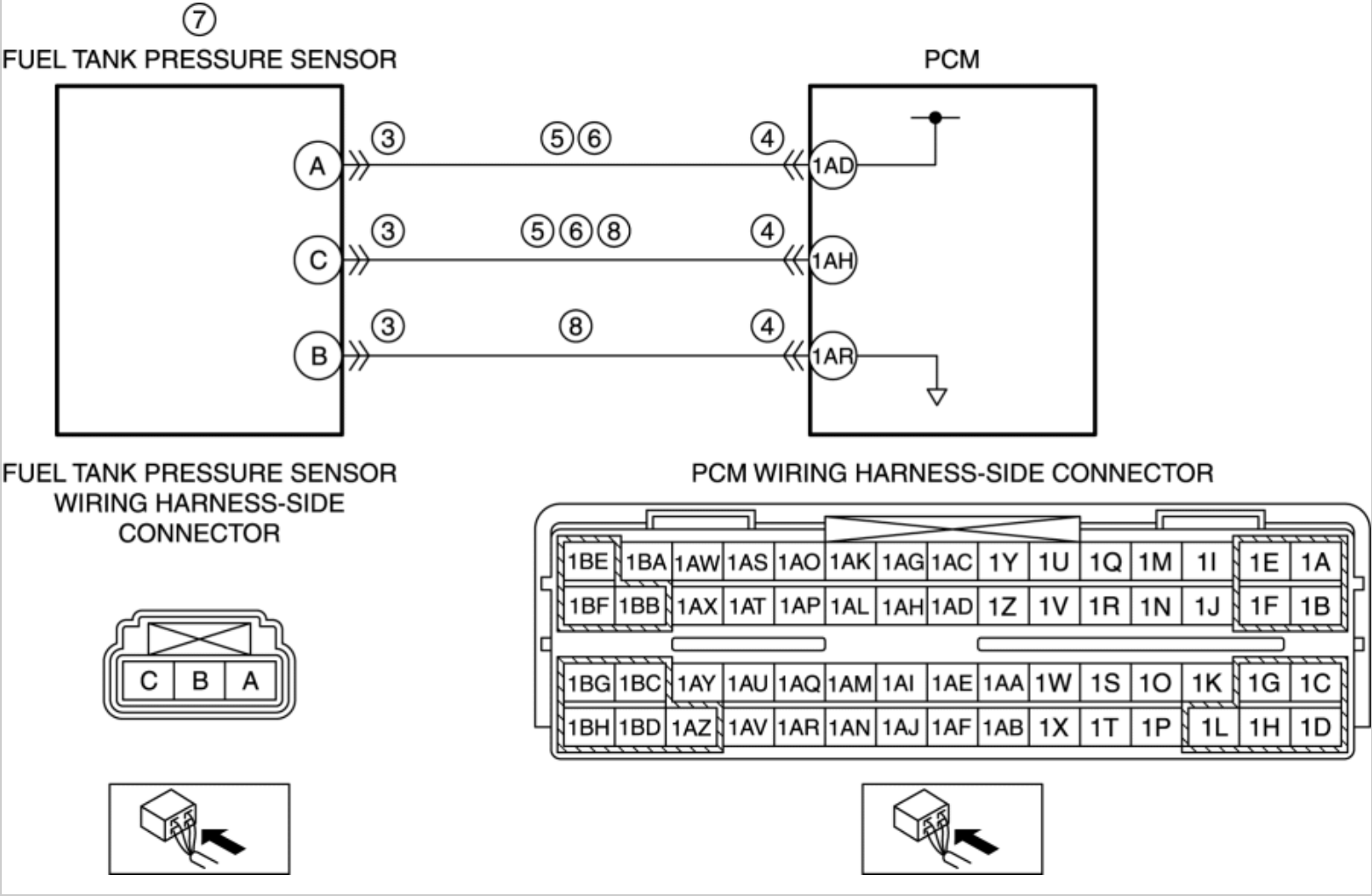


2012 - Mazda6 - Engine

DTC P0453:00 [MZR 2.5]

DTC P0453:00	Fuel tank pressure sensor high 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 jumps above 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 • PCM connector or terminal malfunction • Short circuit in fuel tank pressure sensor power circuit and signal circuit each other • Short to power supply in wiring harness between fuel tank pressure sensor terminal A and PCM terminal 1AD • Short to power supply in wiring harness between fuel tank pressure sensor terminal C and PCM terminal 1AH • Fuel tank pressure sensor malfunction • Open circuit in wiring harness between fuel tank pressure sensor terminal B and PCM terminal 1AR • 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?	YesGo to the next step.
		NoRecord 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?	YesPerform repair or diagnosis according to the available repair information. If the vehicle is not repaired, go to the next step.
		NoGo 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).	YesRepair or replace the terminal and/or connector, then go to Step 9.
		NoGo to the next step.

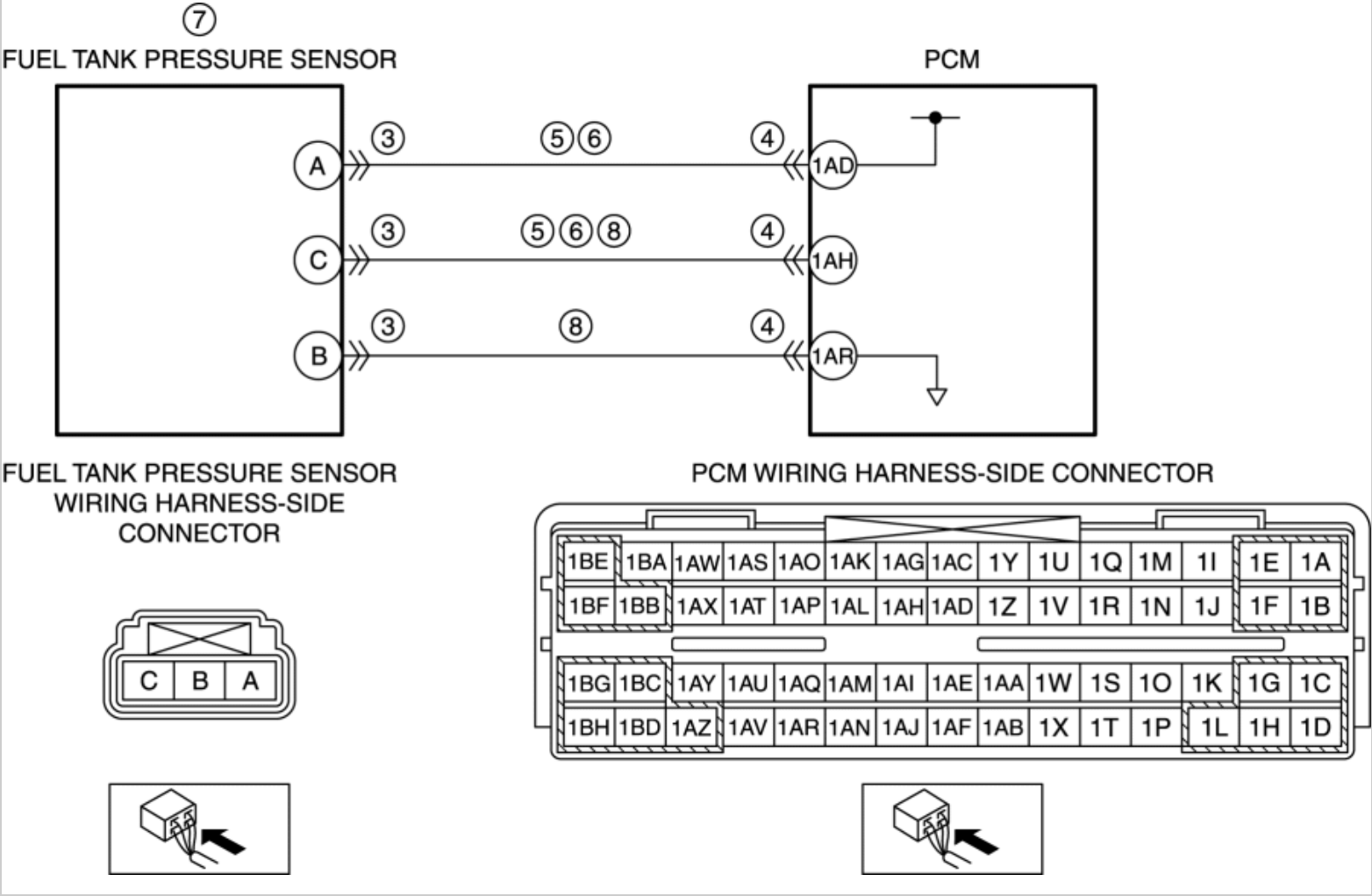
	Is there any malfunction?		
4	INSPECT PCM CONNECTOR CONDITION - Disconnect the PCM connector. - Inspect for poor connection (such as damaged/pulled-out pins, corrosion). - Is there any malfunction?	Yes	Repair or replace the terminal and/or connector, then go to Step 9.
		No	Go to the next step.
5	INSPECT FUEL TANK PRESSURE SENSOR POWER SUPPLY CIRCUIT AND SIGNAL CIRCUIT FOR SHORT EACH OTHER - Fuel tank pressure sensor and PCM connectors are disconnected. - Inspect for continuity between fuel tank pressure sensor terminal C and A (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.
6	INSPECT FUEL TANK PRESSURE SENSOR CIRCUIT FOR SHORT TO POWER SUPPLY - Fuel tank pressure sensor and PCM connectors are disconnected. - Switch the ignition to ON (engine off). - Measure the voltage between the following terminals and body ground: - Fuel tank pressure sensor terminal C (wiring harness-side) - Fuel tank pressure sensor terminal A (wiring harness-side) - Is there any voltage?	Yes	Repair or replace the wiring harness for a possible short to power supply, then go to Step 9.
		No	Go to the next step.
7	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 Step 9. (See FUEL TANK REMOVAL/ INSTALLATION [MZR 2.5].)
		No	Go to the next step.
8	INSPECT FUEL TANK PRESSURE SENSOR CIRCUIT FOR OPEN CIRCUIT - Fuel tank pressure sensor and PCM connectors are disconnected. - Switch the ignition to off. - Inspect for continuity between the following terminals: - Fuel tank pressure sensor terminal B (wiring harness-side) and PCM terminal 1AR - Is there continuity?	Yes	Go to the next step.
		No	Repair or replace the wiring harness for a possible open circuit, then 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?	<table><tr><td>Yes</td><td>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.</td></tr><tr><td>No</td><td>Go to the next step.</td></tr></table>	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.
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?	<table><tr><td>Yes</td><td>Go to the applicable DTC inspection. (See DTC TABLE [MZR 2.5].)</td></tr><tr><td>No</td><td>DTC troubleshooting completed.</td></tr></table>	Yes	Go to the applicable DTC inspection. (See DTC TABLE [MZR 2.5] .)	No	DTC troubleshooting completed.
Yes	Go to the applicable DTC inspection. (See DTC TABLE [MZR 2.5] .)					
No	DTC troubleshooting completed.					

2012 - Mazda6 - Engine

DTC P0453:00 [MZR 2.5]

DTC P0453:00	Fuel tank pressure sensor high 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 jumps above 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 • PCM connector or terminal malfunction • Short circuit in fuel tank pressure sensor power circuit and signal circuit each other • Short to power supply in wiring harness between fuel tank pressure sensor terminal A and PCM terminal 1AD • Short to power supply in wiring harness between fuel tank pressure sensor terminal C and PCM terminal 1AH • Fuel tank pressure sensor malfunction • Open circuit in wiring harness between fuel tank pressure sensor terminal B and PCM terminal 1AR • 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?	YesGo to the next step.
		NoRecord 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?	YesPerform repair or diagnosis according to the available repair information. If the vehicle is not repaired, go to the next step.
		NoGo 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).	YesRepair or replace the terminal and/or connector, then go to Step 9.
		NoGo to the next step.

	Is there any malfunction?		
4	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.
5	INSPECT FUEL TANK PRESSURE SENSOR POWER SUPPLY CIRCUIT AND SIGNAL CIRCUIT FOR SHORT EACH OTHER - Fuel tank pressure sensor and PCM connectors are disconnected. - Inspect for continuity between fuel tank pressure sensor terminal C and A (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.
6	INSPECT FUEL TANK PRESSURE SENSOR CIRCUIT FOR SHORT TO POWER SUPPLY - Fuel tank pressure sensor and PCM connectors are disconnected. - Switch the ignition to ON (engine off). - Measure the voltage between the following terminals and body ground: - Fuel tank pressure sensor terminal C (wiring harness-side) - Fuel tank pressure sensor terminal A (wiring harness-side) - Is there any voltage?	Yes	Repair or replace the wiring harness for a possible short to power supply, then go to Step 9.
		No	Go to the next step.
7	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 Step 9. (See FUEL TANK REMOVAL/ INSTALLATION [MZR 2.5].)
		No	Go to the next step.
8	INSPECT FUEL TANK PRESSURE SENSOR CIRCUIT FOR OPEN CIRCUIT - Fuel tank pressure sensor and PCM connectors are disconnected. - Switch the ignition to off. - Inspect for continuity between the following terminals: - Fuel tank pressure sensor terminal B (wiring harness-side) and PCM terminal 1AR - Is there continuity?	Yes	Go to the next step.
		No	Repair or replace the wiring harness for a possible open circuit, then 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.
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.