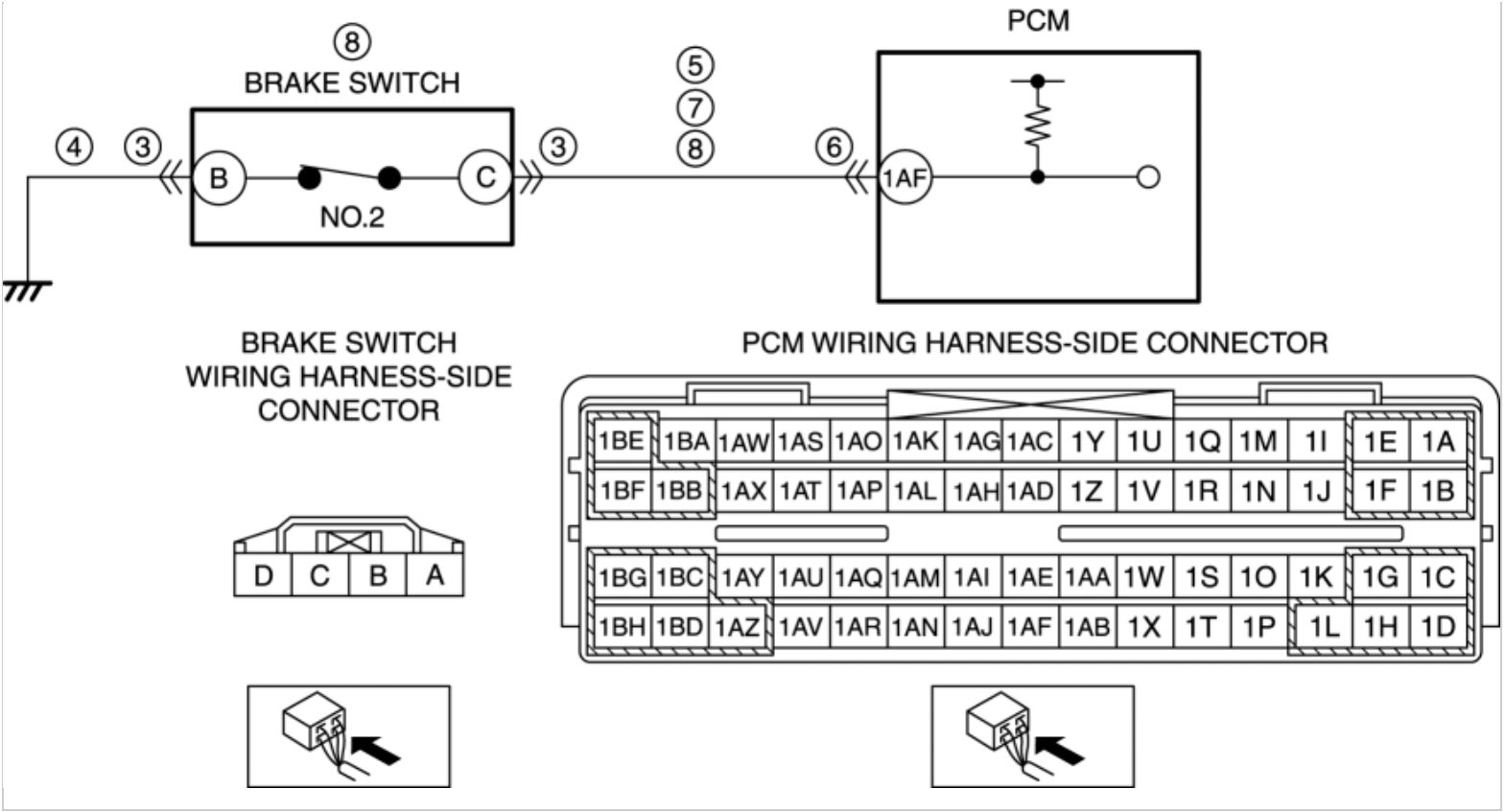
2012 - Mazda6 - Engine

DTC P0571:00 [MZR 2.5]

DTC P0571:00	Brake switch circuit problem
DETECTION CONDITION	• The PCM monitors switching in conjunction with brake switches No.1 and No.2. If either No.1 or No.2 do not switch for a continuous five times even though either No.1 or No.2 is switched from off to on or from on to off, P0571:00 is detected. **Diagnostic support note** • This is a continuous monitor (other). • The MIL does not illuminate. • FREEZE FRAME DATA (Mode 2) /Snapshot data is not available. • The DTC is stored in the PCM memory.
POSSIBLE CAUSE	**NOTE:** • Inspect the brake switch with it installed to the brake pedal, otherwise the brake switch may not operate normally. If the brake switch is removed from the brake pedal, replace the brake switch with a new one. • Brake switch connector or terminal malfunction • Open circuit in wiring harness between brake switch terminal B and body ground • Short to ground in wiring harness between brake switch terminal C and PCM terminal 1AF • PCM connector or terminal malfunction • Short to power supply in wiring harness between brake switch terminal C and PCM terminal 1AF • Open circuit in wiring harness between brake switch terminal C and PCM terminal 1AF • Brake switch No.2 malfunction • PCM malfunction



Diagnostic procedure

STEP	INSPECTION		ACTION
1	**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.
2	**VERIFY RELATED PENDING AND STORED DTC** • Switch the ignition to off, then to ON (engine off). • Verify pending and stored DTCs using the M-MDS. (See **ON-BOARD DIAGNOSTIC TEST [MZR 2.5]**.) • Is the DTC P0703:00 also present?	Yes	Go to the applicable DTC inspection. (See **DTC P0703:00 [MZR 2.5]**.)
		No	Go to the next step.
3	**INSPECT BRAKE SWITCH CONNECTOR CONDITION** • Switch the ignition to off. • Disconnect the brake switch 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.
4	**INSPECT BRAKE SWITCH GROUND CIRCUIT FOR OPEN CIRCUIT**	Yes	Go to the next step.

	• Brake switch connector is disconnected. • Inspect for continuity between brake switch terminal B (wiring harness-side) and body ground. • Is there continuity?	No	Repair or replace the wiring harness for a possible open circuit, then go to Step 9.
5	**INSPECT BRAKE SWITCH SIGNAL CIRCUIT FOR SHORT TO GROUND** • Brake switch connector is disconnected. • Inspect for continuity between brake switch terminal C (wiring harness-side) and body ground. • 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.
6	**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.
7	**INSPECT BRAKE SWITCH SIGNAL CIRCUIT FOR SHORT TO POWER SUPPLY** • Brake switch and PCM connectors are disconnected. • Switch the ignition to ON (engine off). • Measure the voltage between brake switch terminal C (wiring harness-side) and body ground. • 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.
8	**INSPECT BRAKE SWITCH SIGNAL CIRCUIT FOR OPEN CIRCUIT** • Brake switch and PCM connectors are disconnected. • Switch the ignition to off. • Inspect for continuity between brake switch terminal C (wiring harness-side) and PCM terminal 1AF (wiring harness-side). • Is there continuity?	Yes	Replace the brake switch, then go to the next step. (See **BRAKE PEDAL REMOVAL/INSTALLATION**.)
		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.	Yes	Repeat the inspection from Step 1. • If the malfunction recurs,

	• Clear the DTC from the PCM memory using the M-MDS. (See **AFTER REPAIR PROCEDURE [MZR 2.5]**.) • Switch the ignition to ON (engine off). • Depress and release the brake pedal **more than 5 times**. • Perform the DTC Reading Procedure. (See **ON-BOARD DIAGNOSTIC TEST [MZR 2.5]**.) • Is the same DTC present?		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

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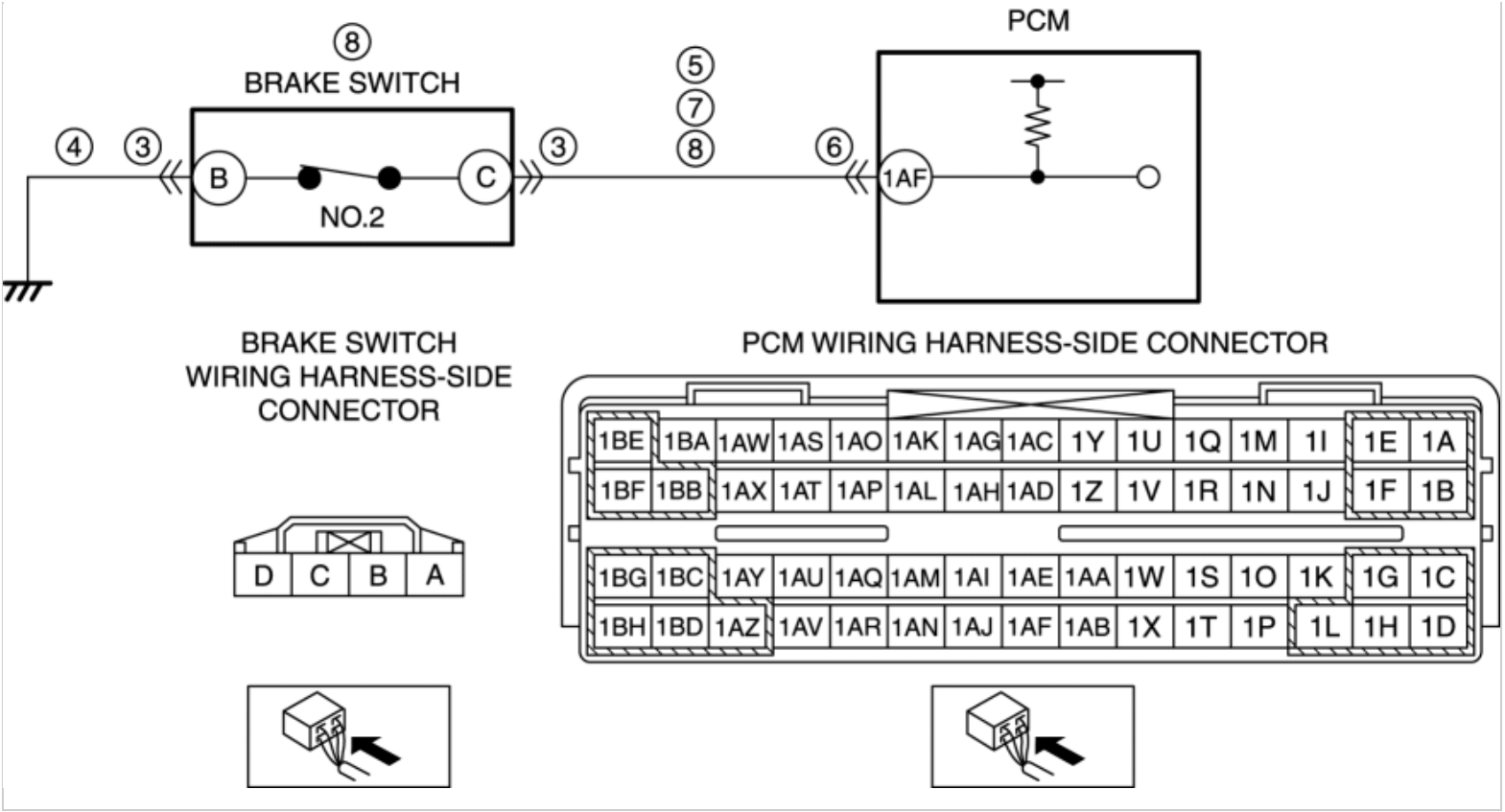
DTC P0571:00	Brake switch circuit problem
DETECTION CONDITION	• The PCM monitors switching in conjunction with brake switches No.1 and No.2. If either No.1 or No.2 do not switch for a continuous five times even though either No.1 or No.2 is switched from off to on or from on to off, P0571:00 is detected. **Diagnostic support note** • This is a continuous monitor (other). • The MIL does not illuminate. • FREEZE FRAME DATA (Mode 2) /Snapshot data is not available. • The DTC is stored in the PCM memory.
POSSIBLE CAUSE	**NOTE:** • Inspect the brake switch with it installed to the brake pedal, otherwise the brake switch may not operate normally. If the brake switch is removed from the brake pedal, replace the brake switch with a new one. • Brake switch connector or terminal malfunction • Open circuit in wiring harness between brake switch terminal B and body ground • Short to ground in wiring harness between brake switch terminal C and PCM terminal 1AF • PCM connector or terminal malfunction • Short to power supply in wiring harness between brake switch terminal C and PCM terminal 1AF • Open circuit in wiring harness between brake switch terminal C and PCM terminal 1AF • Brake switch No.2 malfunction • PCM malfunction



Diagnostic procedure

STEP	INSPECTION		ACTION
1	**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.
2	**VERIFY RELATED PENDING AND STORED DTC** • Switch the ignition to off, then to ON (engine off). • Verify pending and stored DTCs using the M-MDS. (See **ON-BOARD DIAGNOSTIC TEST [MZR 2.5]**.) • Is the DTC P0703:00 also present?	Yes	Go to the applicable DTC inspection. (See **DTC P0703:00 [MZR 2.5]**.)
		No	Go to the next step.
3	**INSPECT BRAKE SWITCH CONNECTOR CONDITION** • Switch the ignition to off. • Disconnect the brake switch 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.
4	**INSPECT BRAKE SWITCH GROUND CIRCUIT FOR OPEN CIRCUIT**	Yes	Go to the next step.

	• Brake switch connector is disconnected. • Inspect for continuity between brake switch terminal B (wiring harness-side) and body ground. • Is there continuity?	No	Repair or replace the wiring harness for a possible open circuit, then go to Step 9.
5	**INSPECT BRAKE SWITCH SIGNAL CIRCUIT FOR SHORT TO GROUND** • Brake switch connector is disconnected. • Inspect for continuity between brake switch terminal C (wiring harness-side) and body ground. • 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.
6	**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.
7	**INSPECT BRAKE SWITCH SIGNAL CIRCUIT FOR SHORT TO POWER SUPPLY** • Brake switch and PCM connectors are disconnected. • Switch the ignition to ON (engine off). • Measure the voltage between brake switch terminal C (wiring harness-side) and body ground. • 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.
8	**INSPECT BRAKE SWITCH SIGNAL CIRCUIT FOR OPEN CIRCUIT** • Brake switch and PCM connectors are disconnected. • Switch the ignition to off. • Inspect for continuity between brake switch terminal C (wiring harness-side) and PCM terminal 1AF (wiring harness-side). • Is there continuity?	Yes	Replace the brake switch, then go to the next step. (See **BRAKE PEDAL REMOVAL/INSTALLATION**.)
		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.	Yes	Repeat the inspection from Step 1. • If the malfunction recurs,

	• Clear the DTC from the PCM memory using the M-MDS. (See **AFTER REPAIR PROCEDURE [MZR 2.5]**.) • Switch the ignition to ON (engine off). • Depress and release the brake pedal **more than 5 times**. • Perform the DTC Reading Procedure. (See **ON-BOARD DIAGNOSTIC TEST [MZR 2.5]**.) • Is the same DTC present?		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