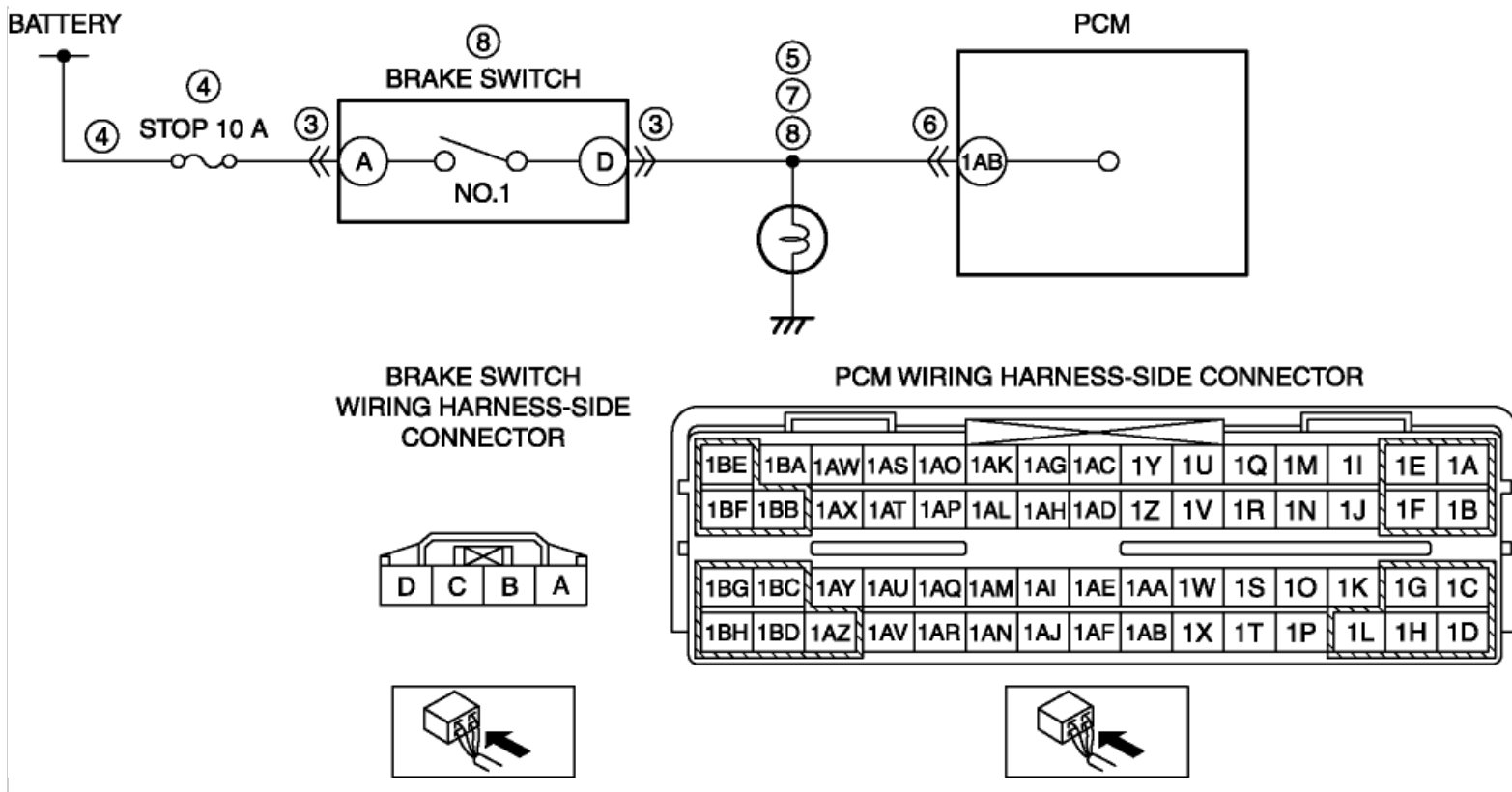


2012 - Mazda6 - Engine

DTC P0703:00 [MZR 2.5]

DTC P0703:00	Brake switch input circuit problem
DETECTION CONDITION	- The PCM monitors the input signal from the brake switch No.1. If the input signal does not change while following decelerating 8 times, the PCM determines that there is a brake switch No.1 input circuit problem. MONITORING CONDITIONS - Vehicle speed: from above 30 km/ h { 19 mph} to 30 km/ h { 19 mph} or less - Deceleration rate: exceed 2.4 km/ h { 1.5 mph} per 1 s 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	- Brake switch connector or terminal malfunction - Short to ground or open circuit in brake switch No.1 power supply circuit - Short to ground in wiring harness between brake switch terminal A and battery positive terminal - STOP 10 A fuse malfunction - Open circuit in wiring harness between brake switch terminal A and battery positive terminal - Short to ground in wiring harness between brake switch terminal D and PCM terminal 1AB - PCM connector or terminal malfunction - Short to power supply in wiring harness between brake switch terminal D and PCM terminal 1AB - Open circuit in wiring harness between brake switch terminal D and PCM terminal 1AB - Brake switch No.1 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 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 NO.1 POWER SUPPLY CIRCUIT FOR SHORT TO GROUND OR OPEN CIRCUIT - Brake switch connector is disconnected. - Switch the ignition to ON (engine off). - Measure the voltage between brake switch terminal A (wiring harness-side) and body ground. - Is the voltage B+ ?	Yes Go to the next step. No Inspect the STOP 10 A fuse. - If the fuse is melt: - Repair or replace the wiring harness for a possible short to ground.

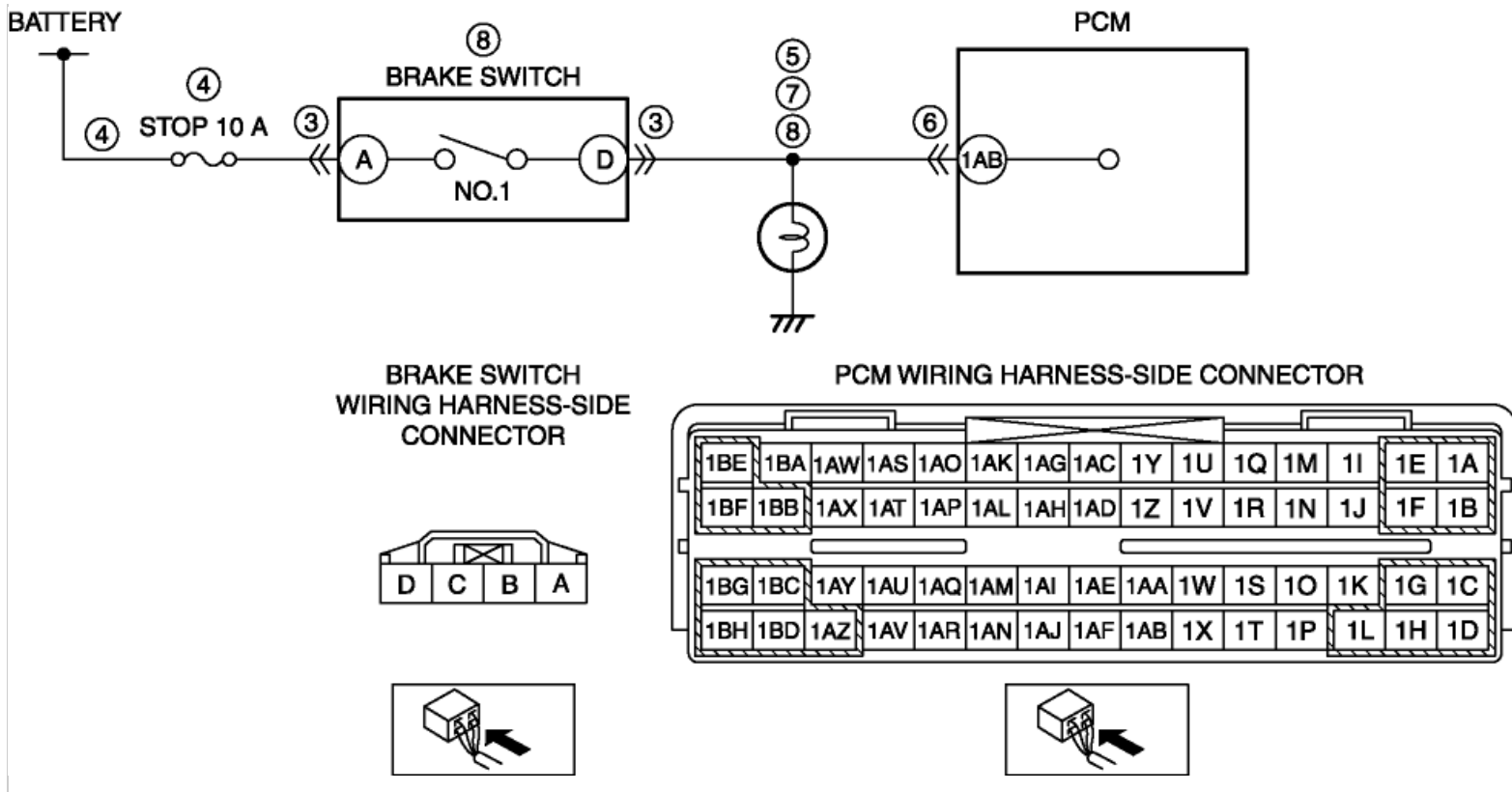
			▪ Replace the fuse. • If the fuse is deterioration: ▪ Replace the fuse. • If the fuse is normal: ▪ Repair or replace the wiring harness for a possible open circuit. Go to Step 9.
5	INSPECT BRAKE SWITCH NO.1 SIGNAL CIRCUIT FOR SHORT TO GROUND • Brake switch connector is disconnected. • Switch the ignition to off. • Inspect for continuity between brake switch terminal D (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 NO.1 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 D (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 NO.1 SIGNAL CIRCUIT FOR OPEN CIRCUIT • Brake switch and PCM connectors are disconnected. • Switch the ignition to off. • Inspect for continuity between brake switch terminal D (wiring harness-side) and PCM terminal 1AB (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. • Clear the DTC from the PCM memory using the M-MDS. (See AFTER REPAIR PROCEDURE [MZR 2.5].) • Drive the vehicle.	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.	

	Repeat deceleration 8 times under both of the following conditions: ▪ Vehicle speed: from above 30 km/ h { 19 mph} to 30 km/ h { 19 mph} or less ▪ Deceleration rate: exceed 2.4 km/ h { 1.5 mph} per 1 s • Perform the Pending Trouble Code Access Procedure. (See ON-BOARD DIAGNOSTIC TEST [MZR 2.5].) • Is the PENDING CODE for this DTC present?		
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.

2012 - Mazda6 - Engine

DTC P0703:00 [MZR 2.5]

DTC P0703:00	Brake switch input circuit problem
DETECTION CONDITION	- The PCM monitors the input signal from the brake switch No.1. If the input signal does not change while following decelerating 8 times, the PCM determines that there is a brake switch No.1 input circuit problem. MONITORING CONDITIONS - Vehicle speed: from above 30 km/ h { 19 mph} to 30 km/ h { 19 mph} or less - Deceleration rate: exceed 2.4 km/ h { 1.5 mph} per 1 s 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	- Brake switch connector or terminal malfunction - Short to ground or open circuit in brake switch No.1 power supply circuit - Short to ground in wiring harness between brake switch terminal A and battery positive terminal - STOP 10 A fuse malfunction - Open circuit in wiring harness between brake switch terminal A and battery positive terminal - Short to ground in wiring harness between brake switch terminal D and PCM terminal 1AB - PCM connector or terminal malfunction - Short to power supply in wiring harness between brake switch terminal D and PCM terminal 1AB - Open circuit in wiring harness between brake switch terminal D and PCM terminal 1AB - Brake switch No.1 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 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 NO.1 POWER SUPPLY CIRCUIT FOR SHORT TO GROUND OR OPEN CIRCUIT - Brake switch connector is disconnected. - Switch the ignition to ON (engine off). - Measure the voltage between brake switch terminal A (wiring harness-side) and body ground. - Is the voltage B+ ?	Yes Go to the next step.
		No Inspect the STOP 10 A fuse. - If the fuse is melt: - Repair or replace the wiring harness for a possible short to ground.

			▪ Replace the fuse. • If the fuse is deterioration: ▪ Replace the fuse. • If the fuse is normal: ▪ Repair or replace the wiring harness for a possible open circuit. Go to Step 9.
5	INSPECT BRAKE SWITCH NO.1 SIGNAL CIRCUIT FOR SHORT TO GROUND • Brake switch connector is disconnected. • Switch the ignition to off. • Inspect for continuity between brake switch terminal D (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 NO.1 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 D (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 NO.1 SIGNAL CIRCUIT FOR OPEN CIRCUIT • Brake switch and PCM connectors are disconnected. • Switch the ignition to off. • Inspect for continuity between brake switch terminal D (wiring harness-side) and PCM terminal 1AB (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. • Clear the DTC from the PCM memory using the M-MDS. (See AFTER REPAIR PROCEDURE [MZR 2.5].) • Drive the vehicle.	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.	

	Repeat deceleration 8 times under both of the following conditions: ▪ Vehicle speed: from above 30 km/ h { 19 mph} to 30 km/ h { 19 mph} or less ▪ Deceleration rate: exceed 2.4 km/ h { 1.5 mph} per 1 s • Perform the Pending Trouble Code Access Procedure. (See ON-BOARD DIAGNOSTIC TEST [MZR 2.5].) • Is the PENDING CODE for this DTC present?		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.