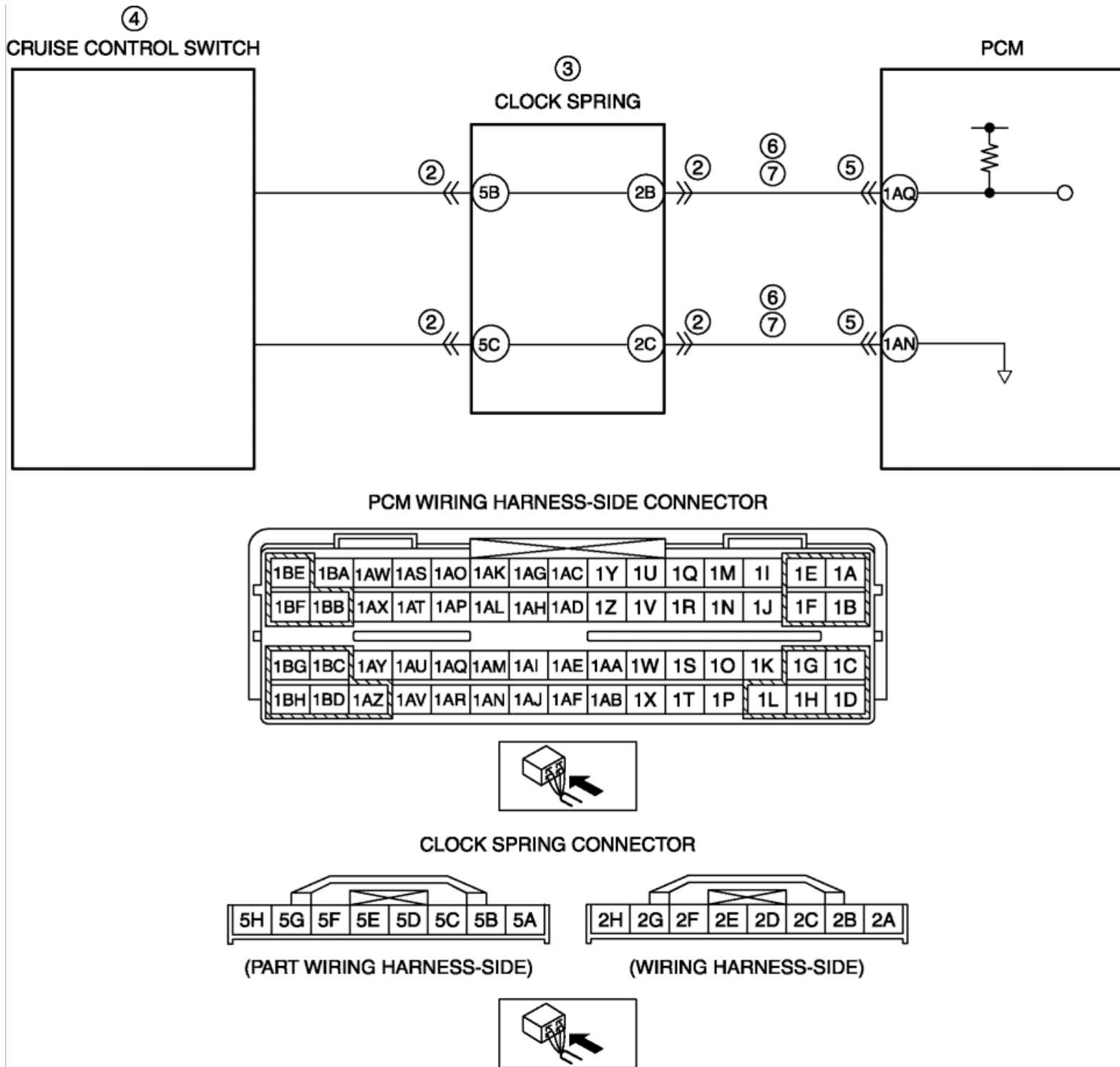


2012 - Mazda6 - Engine

DTC P0581:00 [MZR 2.5]

DTC P0581:00	Cruise control multi-function input circuit high input
DETECTION CONDITION	• The PCM monitors the input signal from the cruise control switch. If the PCM detects that the cruise control switch voltage is above 4.84 V, the PCM determines that the cruise control switch circuit has a malfunction. Diagnostic support note • This is a continuous monitor (other). • The MIL does not illuminate. • FREEZE FRAME DATA (Mode2)/Snapshot data is not available. • The DTC is stored in the PCM memory.
POSSIBLE CAUSE	• Clock spring connector or terminals malfunction • Clock spring malfunction • Cruise control switch malfunction • PCM connector or terminals malfunction • Short to power supply in wiring harness between the following terminals: ▪ Clock spring terminal 2B—PCM terminal 1AQ ▪ Clock spring terminal 2C—PCM terminal 1AN • Open circuit in wiring harness between the following terminals: ▪ Clock spring terminal 2B—PCM terminal 1AQ ▪ Clock spring terminal 2C—PCM terminal 1AN • 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.

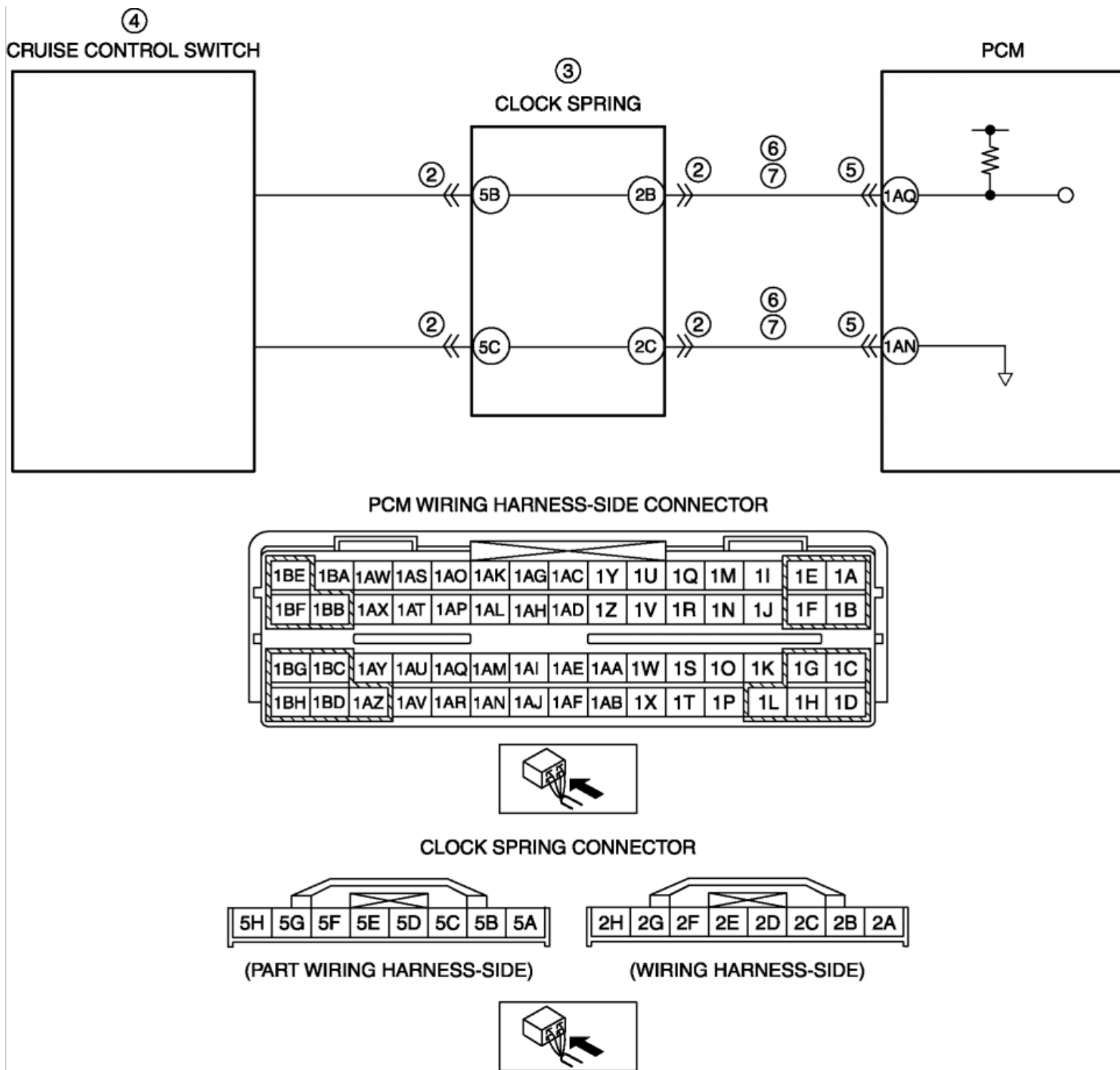
2	INSPECT CLOCK SPRING CONNECTOR CONDITION WARNING: - Handling the air bag system components improperly can accidentally deploy the air bag modules and pre-tensioner seat belts, which may seriously injure you. Read the air bag system service warnings and cautions before handling the air bag system components. (See AIR BAG SYSTEM SERVICE WARNINGS.) (See AIR BAG SYSTEM SERVICE CAUTIONS.) - Switch the ignition to off. - Disconnect the clock spring connector. - Inspect for poor connection (such as damaged/pulled-out pins, and corrosion). - Is there any malfunction?	Yes Repair or replace the connector or terminals, then go to Step 8. No Go to the next step.
3	INSPECT CLOCK SPRING - Inspect the clock spring. (See CLOCK SPRING INSPECTION.) - Is there any malfunction?	Yes Replace the clock spring, then go to Step 8. (See CLOCK SPRING REMOVAL/INSTALLATION.) No Go to the next step.
4	INSPECT CRUISE CONTROL SWITCH - Inspect the cruise control switch. (See CRUISE CONTROL SWITCH INSPECTION [MZR 2.5].) - Is there any malfunction?	Yes Replace the steering switch, then go to Step 8. (See STEERING SWITCH REMOVAL/INSTALLATION.) 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, and corrosion). - Is there any malfunction?	Yes Repair or replace the connector or terminals, then go to Step 8. No Go to the next step.
6	INSPECT CRUISE CONTROL SWITCH CIRCUIT FOR SHORT TO POWER SUPPLY - Clock spring and PCM connectors are disconnected. - Switch the ignition to ON (engine off). - Measure the voltage between the following terminals (wiring harness-side) and body ground: - Clock spring terminal 2B - Clock spring terminal 2C - Is there any voltage?	Yes Repair or replace the wiring harness for a possible short to power supply, then go to Step 8. No Go to the next step.
7	INSPECT CRUISE CONTROL SWITCH CIRCUIT FOR OPEN CIRCUIT - Clock spring and PCM connectors are disconnected. - Switch the ignition to off. - Inspect for continuity between the following terminals (wiring harness-side): - Clock spring terminal 2B —PCM terminal 1AQ	Yes Go to the next step. No Repair or replace the wiring harness for a possible open circuit, then go to the next step.

	▪ Clock spring terminal 2C—PCM terminal 1AN • Is there continuity?		
8	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].) • Start the engine and warm it up completely. • Perform the DTC Reading Procedure. (See ON-BOARD DIAGNOSTIC TEST [MZR 2.5].) • Is the same 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.
9	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 P0581:00 [MZR 2.5]

DTC P0581:00	Cruise control multi-function input circuit high input
DETECTION CONDITION	• The PCM monitors the input signal from the cruise control switch. If the PCM detects that the cruise control switch voltage is above 4.84 V, the PCM determines that the cruise control switch circuit has a malfunction. Diagnostic support note • This is a continuous monitor (other). • The MIL does not illuminate. • FREEZE FRAME DATA (Mode2)/Snapshot data is not available. • The DTC is stored in the PCM memory.
POSSIBLE CAUSE	• Clock spring connector or terminals malfunction • Clock spring malfunction • Cruise control switch malfunction • PCM connector or terminals malfunction • Short to power supply in wiring harness between the following terminals: ▪ Clock spring terminal 2B—PCM terminal 1AQ ▪ Clock spring terminal 2C—PCM terminal 1AN • Open circuit in wiring harness between the following terminals: ▪ Clock spring terminal 2B—PCM terminal 1AQ ▪ Clock spring terminal 2C—PCM terminal 1AN • 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	INSPECT CLOCK SPRING CONNECTOR CONDITION WARNING: - Handling the air bag system components improperly can accidentally deploy the air bag modules and pre-tensioner seat belts, which may seriously injure you. Read the air bag system service warnings and cautions before handling the air bag system components. (See AIR BAG SYSTEM SERVICE WARNINGS.) (See AIR BAG SYSTEM SERVICE CAUTIONS.) - Switch the ignition to off. - Disconnect the clock spring connector. - Inspect for poor connection (such as damaged/pulled-out pins, and corrosion). - Is there any malfunction?	YesRepair or replace the connector or terminals, then go to Step 8.	NoGo to the next step.
3	INSPECT CLOCK SPRING - Inspect the clock spring. (See CLOCK SPRING INSPECTION.) - Is there any malfunction?	YesReplace the clock spring, then go to Step 8.	(See CLOCK SPRING REMOVAL/ INSTALLATION .)
		NoGo to the next step.	
4	INSPECT CRUISE CONTROL SWITCH - Inspect the cruise control switch. (See CRUISE CONTROL SWITCH INSPECTION [MZR 2.5].) - Is there any malfunction?	YesReplace the steering switch, then go to Step 8.	(See STEERING SWITCH REMOVAL/ INSTALLATION .)
		NoGo to the next step.	
5	INSPECT PCM CONNECTOR CONDITION - Disconnect the PCM connector. - Inspect for poor connection (such as damaged/pulled-out pins, and corrosion). - Is there any malfunction?	YesRepair or replace the connector or terminals, then go to Step 8.	NoGo to the next step.
6	INSPECT CRUISE CONTROL SWITCH CIRCUIT FOR SHORT TO POWER SUPPLY - Clock spring and PCM connectors are disconnected. - Switch the ignition to ON (engine off). - Measure the voltage between the following terminals (wiring harness-side) and body ground: - Clock spring terminal 2B - Clock spring terminal 2C - Is there any voltage?	YesRepair or replace the wiring harness for a possible short to power supply, then go to Step 8.	NoGo to the next step.
7	INSPECT CRUISE CONTROL SWITCH CIRCUIT FOR OPEN CIRCUIT - Clock spring and PCM connectors are disconnected. - Switch the ignition to off. - Inspect for continuity between the following terminals (wiring harness-side): - Clock spring terminal 2B —PCM terminal 1AQ	YesGo to the next step.	NoRepair or replace the wiring harness for a possible open circuit, then go to the next step.

	▪ Clock spring terminal 2C—PCM terminal 1AN • Is there continuity?		
8	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].) • Start the engine and warm it up completely. • Perform the DTC Reading Procedure. (See ON-BOARD DIAGNOSTIC TEST [MZR 2.5].) • Is the same 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.
9	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.