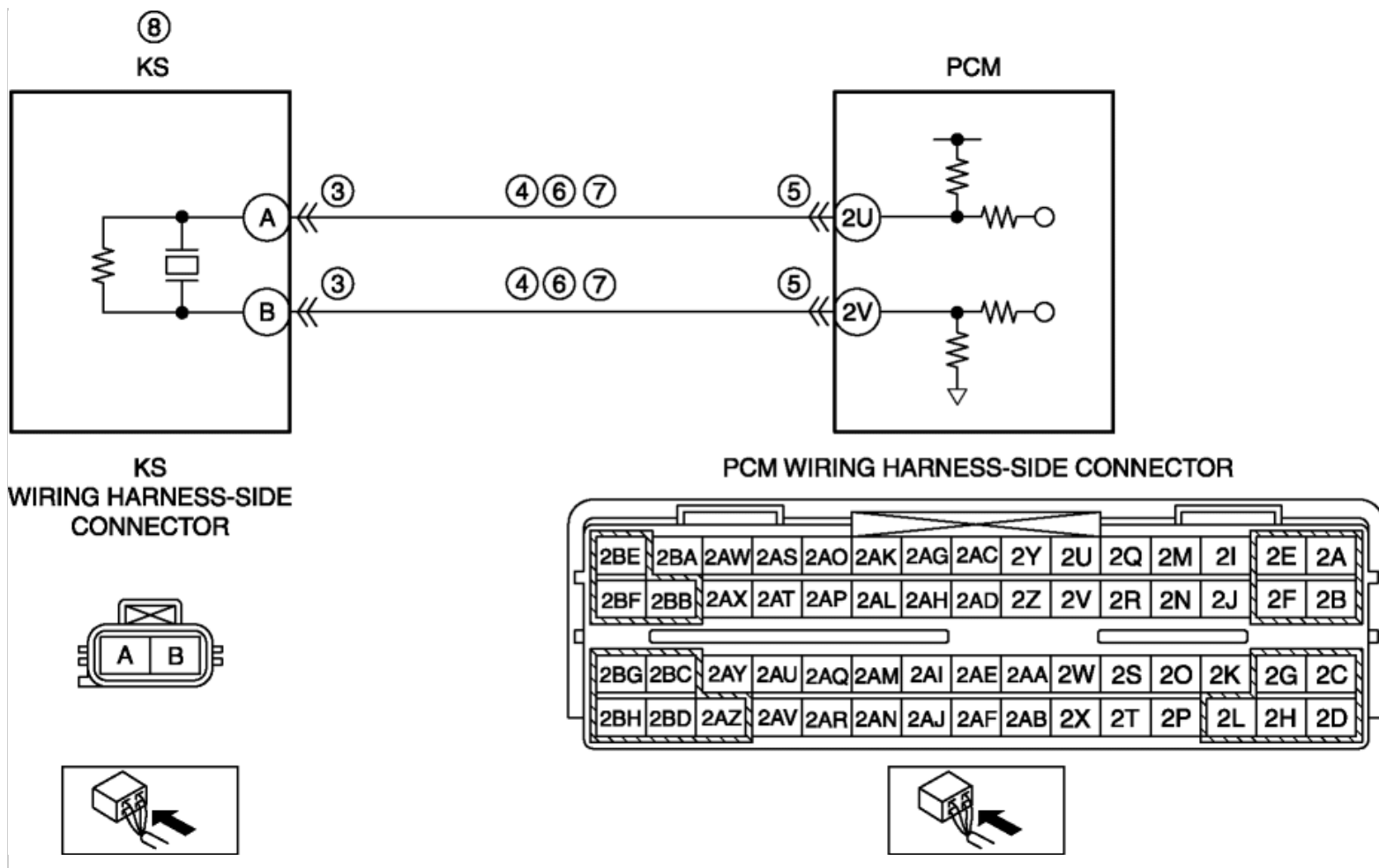


2012 - Mazda6 - Engine

DTC P0327:00 [MZR 2.5]

DTC P0327:00	KS circuit low input
DETECTION CONDI TI ON	• The PCM monitors input signal from the KS when the engine is running. If the input voltage is below 0.2 V for 5 s, the PCM determines that the KS circuit has a malfunction. Diagnostic support note • This is a continuous monitor (CCM). • The MIL illuminates if the PCM detects the above malfunction condition during first drive cycle. • FREEZE FRAME DATA (Mode 2)/Snapshot data is available. • The DTC is stored in the PCM memory.
POSSI BLE CAUSE	• KS connector or terminal malfunction • Short to ground in wiring harness between KS terminal A and PCM terminal 2U • Short to ground in wiring harness between KS terminal B and PCM terminal 2V • PCM connector or terminal malfunction • Short circuit in KS circuits each other • Open circuit in wiring harness between KS terminal A and PCM terminal 2U • Open circuit in wiring harness between KS terminal B and PCM terminal 2V • KS 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 KS CONNECTOR CONDITION - Switch the ignition to off. - Disconnect the KS 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 KS CIRCUIT FOR SHORT TO GROUND KS connector is disconnected.	Yes If the short to ground circuit could be detected:

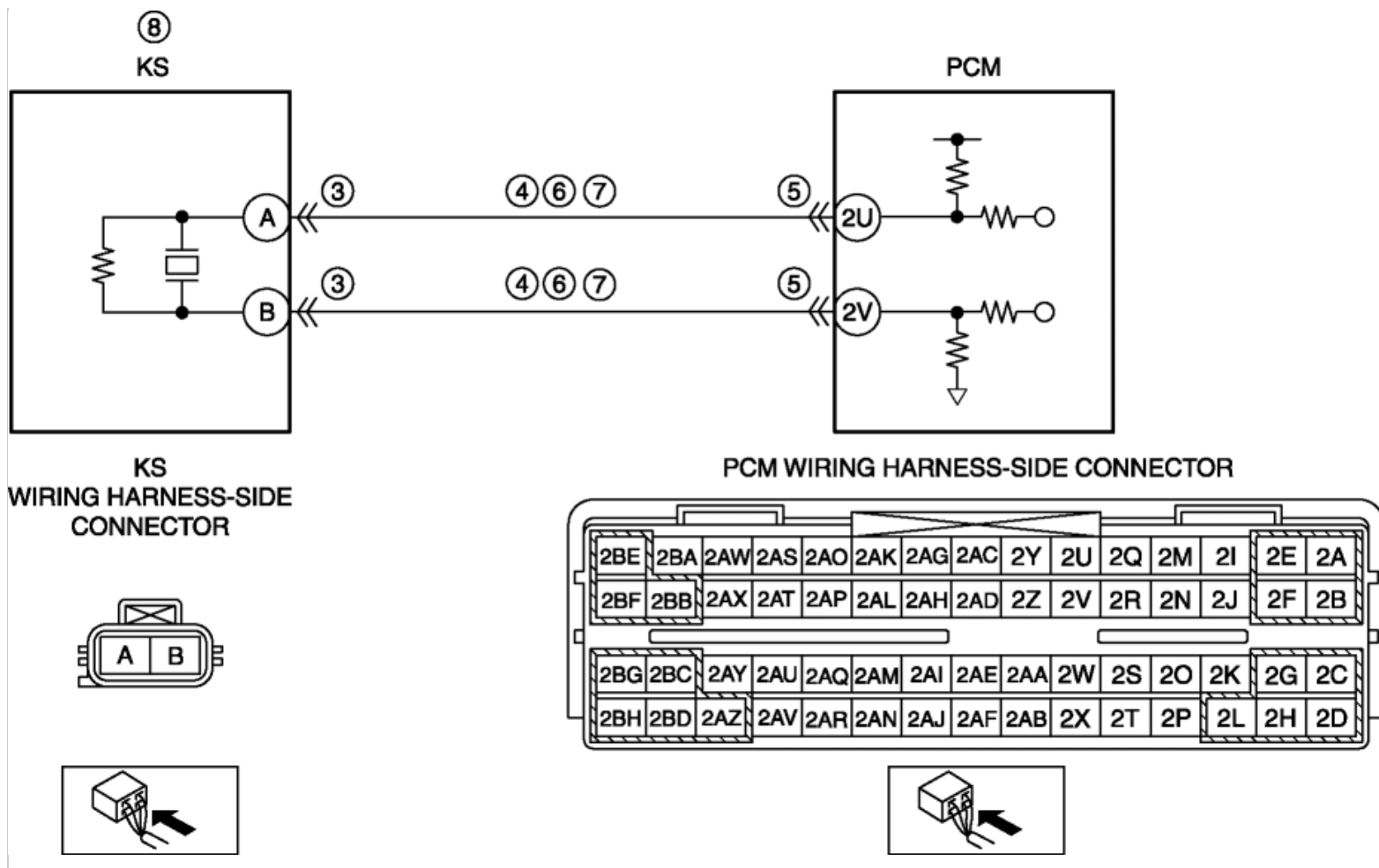
	- Inspect for continuity between the following terminals and body ground: - KS terminal A (wiring harness-side) - KS terminal B (wiring harness-side) - Is there continuity?	- Repair or replace the wiring harness for a possible short to ground. If the short to ground circuit could not be detected: - Replace 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 KS CIRCUITS FOR SHORT EACH OTHER - KS and PCM connectors are disconnected. - Inspect for continuity between KS terminals A 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 KS CIRCUIT FOR OPEN CIRCUIT - KS and PCM connectors are disconnected. - Inspect for continuity between the following terminals: - KS terminal A (wiring harness-side) and PCM terminal 2U (wiring harness-side) - KS terminal B (wiring harness-side) and PCM terminal 2V (wiring harness-side) - Is there continuity?	Yes Go to the next step. No Repair or replace the wiring harness for a possible open circuit, then go to Step 9.
8	INSPECT KS - Inspect the KS. (See KNOCK SENSOR (KS) INSPECTION [MZR 2.5].) - Is there any malfunction?	Yes Replace the KS, then go to the next step. (See KNOCK SENSOR (KS) 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.	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.

	(See KOE0/ KOER SELF TEST [MZR 2.5] .)	No	Go to the next step.
	• Is the same DTC present?		
10	VERIFY AFTER REPAIR PROCEDURE	Yes	Go to the applicable DTC inspection.
	• Perform the "AFTER REPAIR PROCEDURE". (See AFTER REPAIR PROCEDURE [MZR 2.5] .)		(See DTC TABLE [MZR 2.5] .)
	• Are any DTCs present?	No	DTC troubleshooting completed.

2012 - Mazda6 - Engine

DTC P0327:00 [MZR 2.5]

DTC P0327:00	KS circuit low input
DETECTION CONDI TI ON	• The PCM monitors input signal from the KS when the engine is running. If the input voltage is below 0.2 V for 5 s, the PCM determines that the KS circuit has a malfunction. Diagnostic support note • This is a continuous monitor (CCM). • The MIL illuminates if the PCM detects the above malfunction condition during first drive cycle. • FREEZE FRAME DATA (Mode 2)/Snapshot data is available. • The DTC is stored in the PCM memory.
POSSI BLE CAUSE	• KS connector or terminal malfunction • Short to ground in wiring harness between KS terminal A and PCM terminal 2U • Short to ground in wiring harness between KS terminal B and PCM terminal 2V • PCM connector or terminal malfunction • Short circuit in KS circuits each other • Open circuit in wiring harness between KS terminal A and PCM terminal 2U • Open circuit in wiring harness between KS terminal B and PCM terminal 2V • KS 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 KS CONNECTOR CONDITION - Switch the ignition to off. - Disconnect the KS 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 KS CIRCUIT FOR SHORT TO GROUND KS connector is disconnected.	Yes If the short to ground circuit could be detected:

	- Inspect for continuity between the following terminals and body ground: - KS terminal A (wiring harness-side) - KS terminal B (wiring harness-side) - Is there continuity?	- 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 KS CIRCUITS FOR SHORT EACH OTHER - KS and PCM connectors are disconnected. - Inspect for continuity between KS terminals A 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 KS CIRCUIT FOR OPEN CIRCUIT - KS and PCM connectors are disconnected. - Inspect for continuity between the following terminals: - KS terminal A (wiring harness-side) and PCM terminal 2U (wiring harness-side) - KS terminal B (wiring harness-side) and PCM terminal 2V (wiring harness-side) - Is there continuity?	Yes Go to the next step. No Repair or replace the wiring harness for a possible open circuit, then go to Step 9.
8	INSPECT KS - Inspect the KS. (See KNOCK SENSOR (KS) INSPECTION [MZR 2.5].) - Is there any malfunction?	Yes Replace the KS, then go to the next step. (See KNOCK SENSOR (KS) 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.	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.

	(See KOE0/ KOER SELF TEST [MZR 2.5] .)	No	Go to the next step.
	• Is the same DTC present?		
10	VERIFY AFTER REPAIR PROCEDURE	Yes	Go to the applicable DTC inspection.
	• Perform the "AFTER REPAIR PROCEDURE". (See AFTER REPAIR PROCEDURE [MZR 2.5] .)		(See DTC TABLE [MZR 2.5] .)
	• Are any DTCs present?	No	DTC troubleshooting completed.