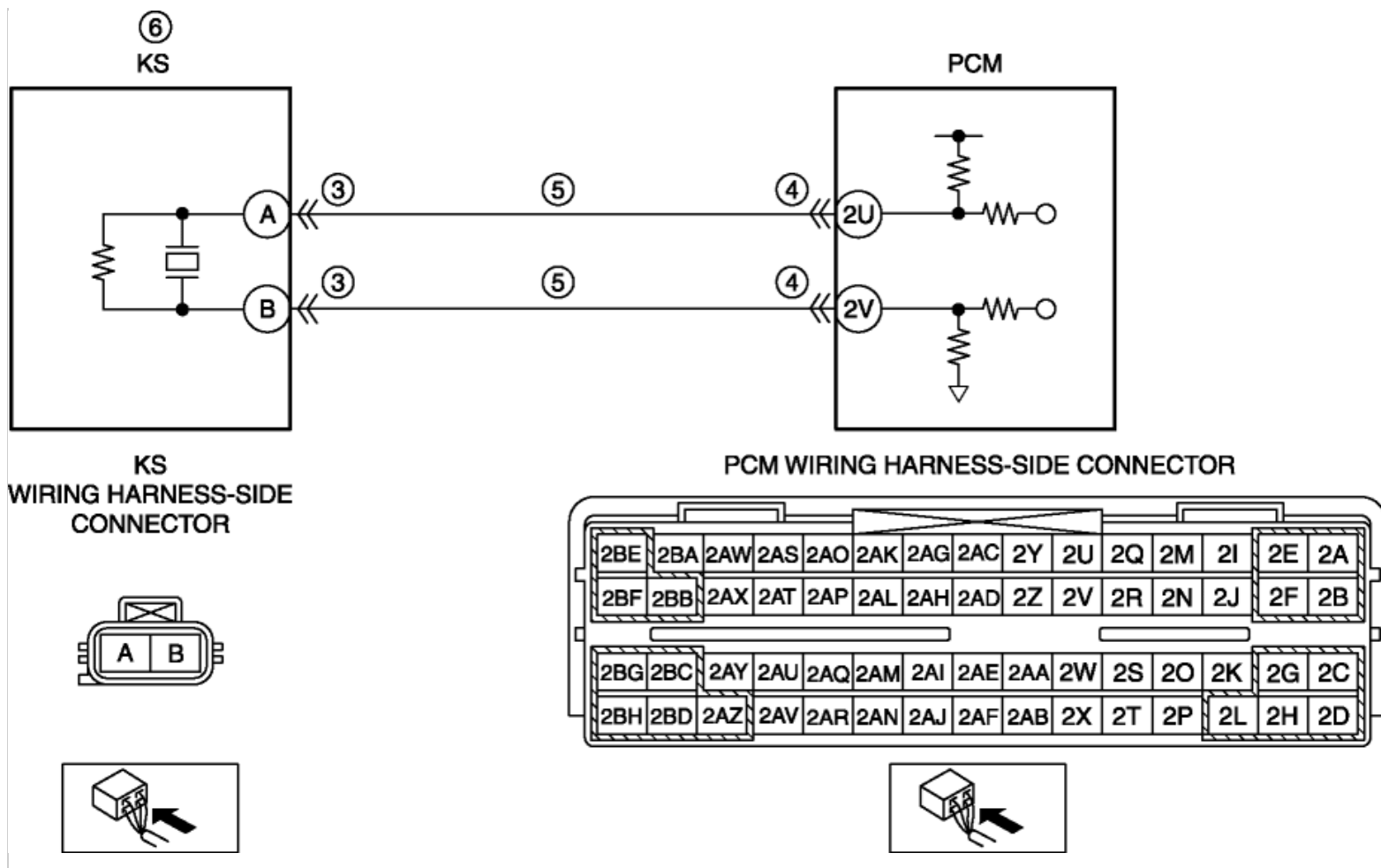


2012 - Mazda6 - Engine

DTC P0328:00 [MZR 2.5]

DTC P0328:00	KS circuit high input
DETECTION CONDI TI ON	• The PCM monitors the input signal from the KS when the engine is running. If the input voltage is above 4.8 V for 5 s, the PCM determines that KS circuit has a malfunction. Diagnostic support note • This is a continuous monitor (CCM). • The MIL illuminates if the PCM detects the above malfunction conditions 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 • PCM connector or terminal malfunction • Short to power supply in wiring harness between KS terminal A and PCM terminal 2U • Short to power supply in wiring harness between KS terminal B and PCM terminal 2V • KS malfunction • PCM malfunction



Diagnostic procedure

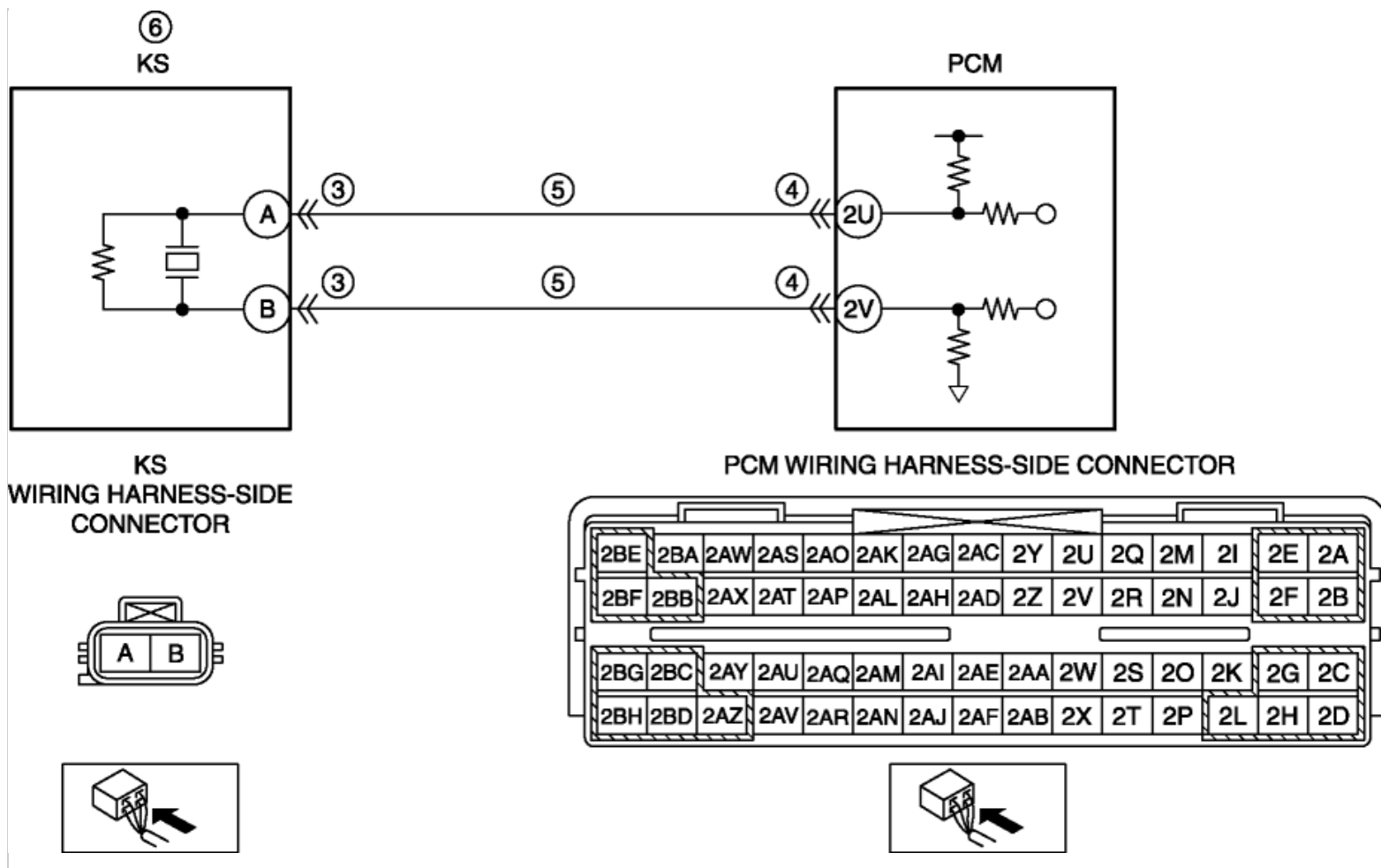
STEP	INSPECTION	ACTION
1	VERIFY FREEZE FRAME DATA (MODE 2)/ SNAPSHOT DATA HAS BEEN RECORDED Has the FREEZE FRAME DATA (Mode 2)/snapshot data been recorded?	Yes Go to the next step.
		No Record the FREEZE FRAME DATA (Mode 2)/snapshot data on the repair order, then go to the next step.
2	VERIFY RELATED 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 7.
		No Go to the next step.
4	INSPECT PCM CONNECTOR CONDITION Disconnect the PCM connector.	Yes Repair or replace the terminal and/or connector, then go to Step 7.

	- Inspect for poor connection (such as damaged/pulled-out pins, corrosion). - Is there any malfunction?	No	Go to the next step.
5	INSPECT KS CIRCUIT FOR SHORT TO POWER SUPPLY - KS and PCM connectors are disconnected. - Switch the ignition to ON (engine off). - Measure the voltage between the following terminals and body ground: - KS terminal A (wiring harness-side) - KS terminal B (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 7.
		No	Go to the next step.
6	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.
7	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 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.
8	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 P0328:00 [MZR 2.5]

DTC P0328:00	KS circuit high input
DETECTION CONDI TI ON	• The PCM monitors the input signal from the KS when the engine is running. If the input voltage is above 4.8 V for 5 s, the PCM determines that KS circuit has a malfunction. Diagnostic support note • This is a continuous monitor (CCM). • The MIL illuminates if the PCM detects the above malfunction conditions 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 • PCM connector or terminal malfunction • Short to power supply in wiring harness between KS terminal A and PCM terminal 2U • Short to power supply 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 7.
		No Go to the next step.
4	INSPECT PCM CONNECTOR CONDITION Disconnect the PCM connector.	Yes Repair or replace the terminal and/or connector, then go to Step 7.

	- Inspect for poor connection (such as damaged/pulled-out pins, corrosion). - Is there any malfunction?	No	Go to the next step.
5	INSPECT KS CIRCUIT FOR SHORT TO POWER SUPPLY - KS and PCM connectors are disconnected. - Switch the ignition to ON (engine off). - Measure the voltage between the following terminals and body ground: - KS terminal A (wiring harness-side) - KS terminal B (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 7.
		No	Go to the next step.
6	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.
7	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 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.
8	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.