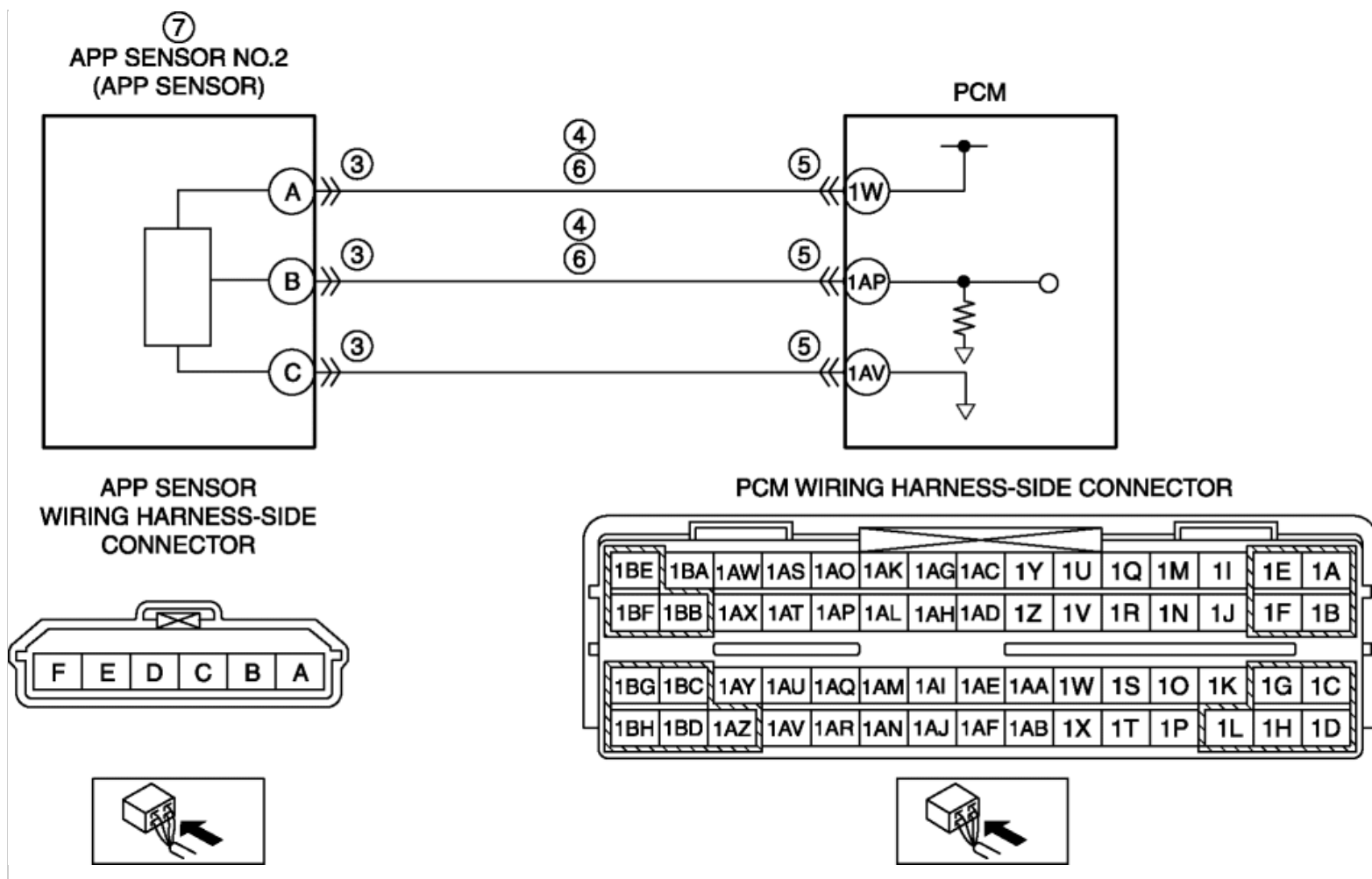


2012 - Mazda6 - Engine

DTC P2127:00 [MZR 2.5]

DTC P2127:00	APP sensor No.2 circuit low input
DETECTION CONDITION	• The PCM monitors the input voltage from APP sensor No.2 when the engine is running. If the input voltage is less than 0.2 V, the PCM determines that the APP sensor No.2 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 the first drive cycle. • FREEZE FRAME DATA (Mode 2)/Snapshot data is available. • The DTC is stored in the PCM memory.
POSSIBLE CAUSE	• APP sensor connector or terminal malfunction • Short to ground in wiring harness between APP sensor terminal A and PCM terminal 1W • Short to ground in wiring harness between APP sensor terminal B and PCM terminal 1AP • PCM connector or terminal malfunction • Open circuit in wiring harness between APP sensor terminal A and PCM terminal 1W • Open circuit in wiring harness between APP sensor terminal B and PCM terminal 1AP • APP sensor No.2 malfunction • PCM malfunction



Diagnostic procedure

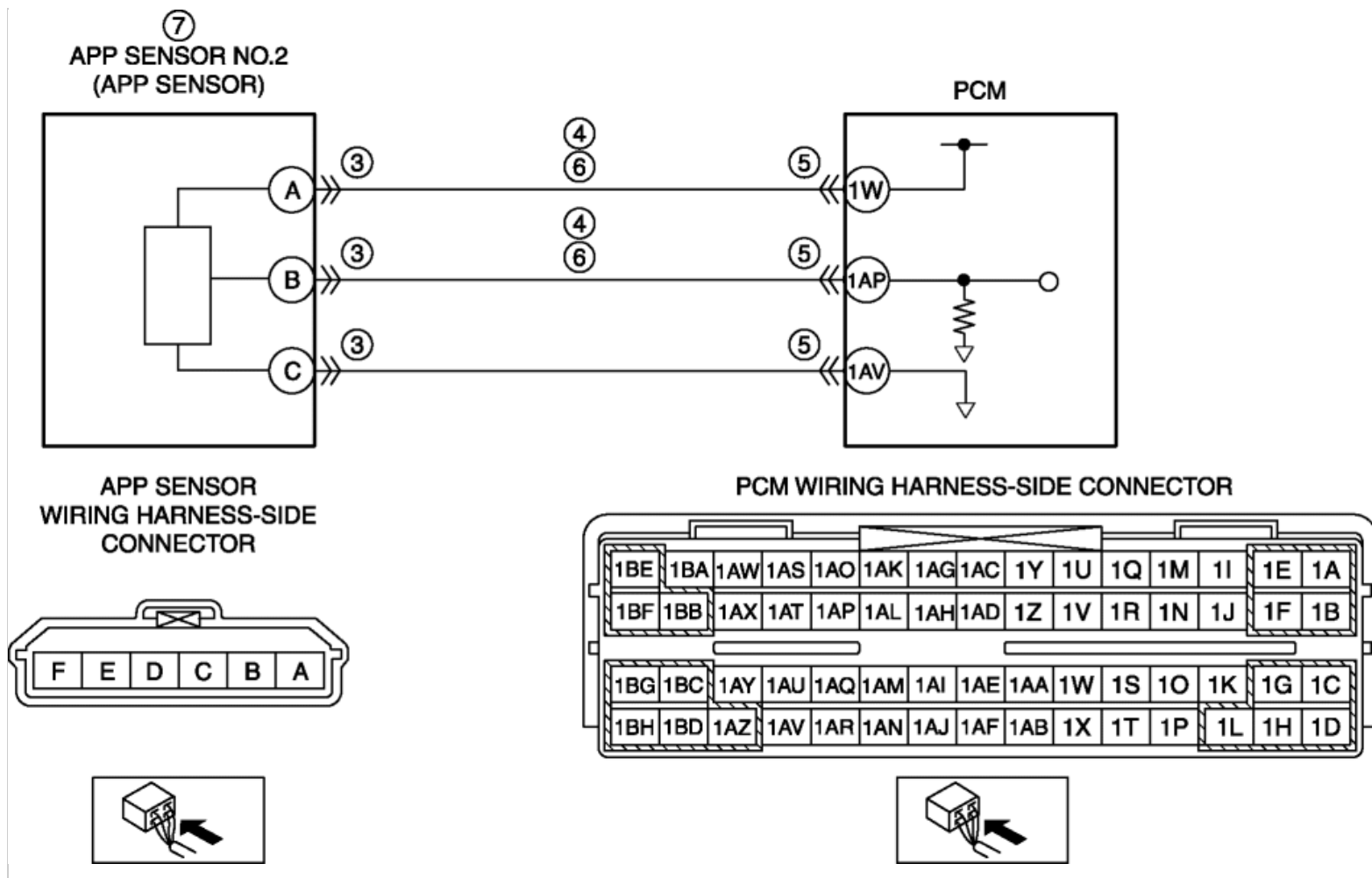
STEP	INSPECTION	ACTION
1	VERIFY FREEZE FRAME DATA (MODE 2)/ SNAPSHOT DATA HAS BEEN RECORDED Has the FREEZE FRAME DATA (Mode 2)/snapshot data been recorded?	Yes Go to the next step.
		No Record the FREEZE FRAME DATA (Mode 2)/snapshot data on the repair order, then go to the next step.
2	VERIFY RELATED 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 APP SENSOR CONNECTOR CONDITION - Switch the ignition to off. - Disconnect the APP sensor 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 8.
		No Go to the next step.
4	INSPECT APP SENSOR NO.2 CIRCUIT FOR SHORT TO GROUND	Yes If the short to ground circuit could be detected:

	• APP sensor connector is disconnected. • Inspect for continuity between the following terminals and body ground: ▪ APP sensor terminal A (wiring harness-side) ▪ APP sensor 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 8.
		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 8. No Go to the next step.
6	INSPECT APP SENSOR NO.2 CIRCUIT FOR OPEN CIRCUIT • APP sensor and PCM connectors are disconnected. • Inspect for continuity between the following terminals: ▪ APP sensor terminal A (wiring harness-side) and PCM terminal 1W (wiring harness-side) ▪ APP sensor terminal B (wiring harness-side) and PCM terminal 1AP (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 8.
7	INSPECT APP SENSOR NO.2 • Reconnect all disconnected connectors. • Inspect the APP sensor No.2. (See ACCELERATOR PEDAL POSITION (APP) SENSOR INSPECTION [MZR 2.5].) • Is there any malfunction?	Yes Replace the APP sensor, then go to the next step. (See ACCELERATOR PEDAL REMOVAL/ INSTALLATION [MZR 2.5].) No Go to the next step.
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].) • 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.
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 P2127:00 [MZR 2.5]

DTC P2127:00	APP sensor No.2 circuit low input
DETECTION CONDITION	• The PCM monitors the input voltage from APP sensor No.2 when the engine is running. If the input voltage is less than 0.2 V, the PCM determines that the APP sensor No.2 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 the first drive cycle. • FREEZE FRAME DATA (Mode 2)/Snapshot data is available. • The DTC is stored in the PCM memory.
POSSIBLE CAUSE	• APP sensor connector or terminal malfunction • Short to ground in wiring harness between APP sensor terminal A and PCM terminal 1W • Short to ground in wiring harness between APP sensor terminal B and PCM terminal 1AP • PCM connector or terminal malfunction • Open circuit in wiring harness between APP sensor terminal A and PCM terminal 1W • Open circuit in wiring harness between APP sensor terminal B and PCM terminal 1AP • APP sensor No.2 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 APP SENSOR CONNECTOR CONDITION - Switch the ignition to off. - Disconnect the APP sensor 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 8.
		No Go to the next step.
4	INSPECT APP SENSOR NO.2 CIRCUIT FOR SHORT TO GROUND	Yes If the short to ground circuit could be detected:

	• APP sensor connector is disconnected. • Inspect for continuity between the following terminals and body ground: ▪ APP sensor terminal A (wiring harness-side) ▪ APP sensor 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 8.
		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 8. No Go to the next step.
6	INSPECT APP SENSOR NO.2 CIRCUIT FOR OPEN CIRCUIT • APP sensor and PCM connectors are disconnected. • Inspect for continuity between the following terminals: ▪ APP sensor terminal A (wiring harness-side) and PCM terminal 1W (wiring harness-side) ▪ APP sensor terminal B (wiring harness-side) and PCM terminal 1AP (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 8.
7	INSPECT APP SENSOR NO.2 • Reconnect all disconnected connectors. • Inspect the APP sensor No.2. (See ACCELERATOR PEDAL POSITION (APP) SENSOR INSPECTION [MZR 2.5].) • Is there any malfunction?	Yes Replace the APP sensor, then go to the next step. (See ACCELERATOR PEDAL REMOVAL/ INSTALLATION [MZR 2.5].) No Go to the next step.
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].) • 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.
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.

