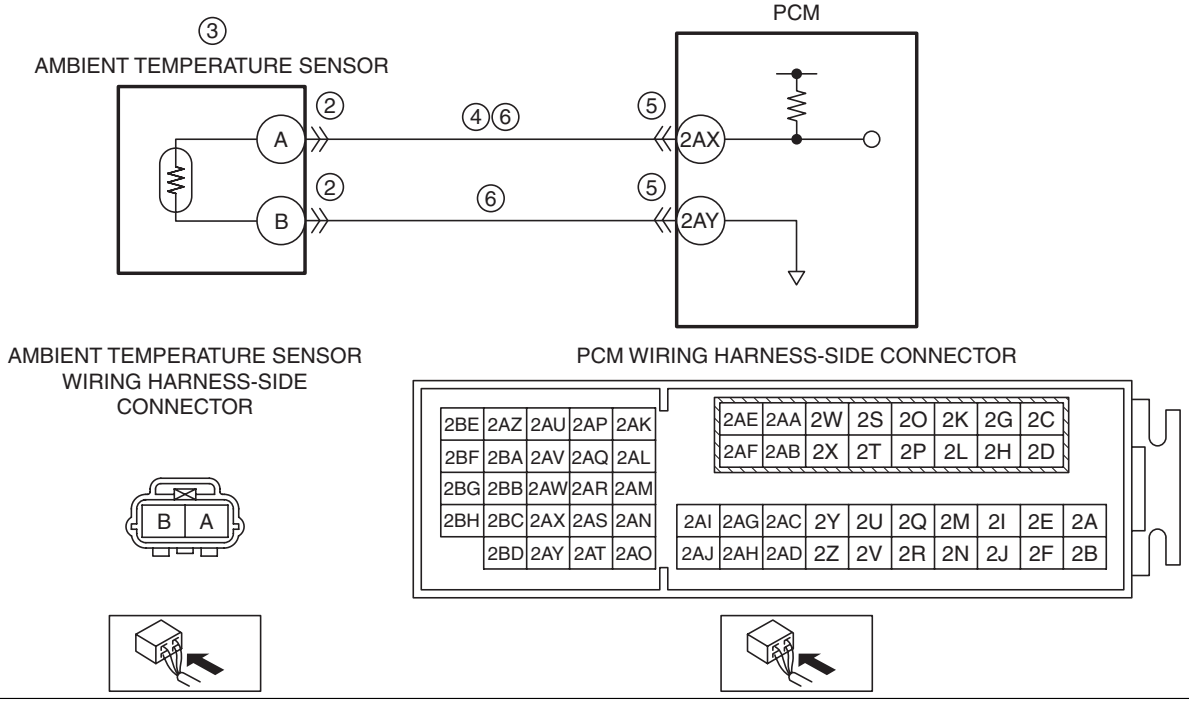
DTC P0072:00 [SKYACTIV-D 2.2]

id0102s4145900

DTC P0072:00	Ambient temperature sensor circuit low input
DETECTION CONDITION	• The PCM monitors the input signal from the ambient temperature sensor. If the voltage from the ambient temperature sensor is **below 0.2 V** for **5 s**, the PCM determines that the ambient temperature sensor circuit has a malfunction. **Diagnostic support note** • This is a continuous monitor (other). • The check engine light does not illuminate. • FREEZE FRAME DATA (Mode 2)/Snapshot data is not available. • DTC is stored in the PCM memory.
FAIL-SAFE FUNCTION	Not applicable
POSSIBLE CAUSE	• Ambient temperature sensor connector or terminals malfunction • Ambient temperature sensor malfunction • Short to ground in wiring harness between ambient temperature sensor terminal A and PCM terminal 2AX • PCM connector or terminals malfunction • Ambient temperature sensor signal circuit and ground circuit are shorted to each other • PCM malfunction



Diagnostic Procedure

STEP	INSPECTION		ACTION
1	**VERIFY RELATED SERVICE INFORMATION AVAILABILITY** • Verify related Service Information availability. • Is any related Service Information available?	Yes	Perform repair or diagnosis according to the available Service Information. • If the vehicle is not repaired, go to the next step.
		No	Go to the next step.
2	**INSPECT AMBIENT TEMPERATURE SENSOR CONNECTOR CONDITION** • Switch the ignition off. • Disconnect the ambient temperature sensor connector. • Inspect for poor connection (such as damaged/ pulled-out pins, corrosion). • Is there any malfunction?	Yes	Repair or replace the connector and/or terminals, then go to Step 7.
		No	Go to the next step.

STEP	INSPECTION		ACTION
3	**INSPECT AMBIENT TEMPERATURE SENSOR** • Inspect the ambient temperature sensor. (See AMBIENT TEMPERATURE SENSOR INSPECTION [MANUAL AIR CONDITIONER].) (See AMBIENT TEMPERATURE SENSOR INSPECTION [FULL-AUTO AIR CONDITIONER].) • Is there any malfunction?	Yes	Replace the ambient temperature sensor, then go to Step 7. (See AMBIENT TEMPERATURE SENSOR REMOVAL/INSTALLATION [MANUAL AIR CONDITIONER].) (See AMBIENT TEMPERATURE SENSOR REMOVAL/INSTALLATION [FULL-AUTO AIR CONDITIONER].)
		No	Go to the next step.
4	**INSPECT AMBIENT TEMPERATURE SENSOR SIGNAL CIRCUIT FOR SHORT TO GROUND** • Verify that the ambient temperature sensor connector is disconnected. • Inspect for continuity between ambient temperature sensor terminal A (wiring harness-side) and body ground. • Is there continuity?	Yes	If the short to ground circuit could be detected in the wiring harness: • Repair or replace the wiring harness for a possible short to ground. If the short to ground circuit could not be detected in the wiring harness: • Replace the PCM (short to ground in the PCM internal circuit). (See PCM REMOVAL/INSTALLATION [SKYACTIV-D 2.2].) Go to Step 7.
		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 connector and/or terminals, then go to Step 7.
		No	Go to the next step.
6	**INSPECT AMBIENT TEMPERATURE SENSOR SIGNAL CIRCUIT AND GROUND CIRCUIT FOR SHORT TO EACH OTHER** • Verify that the ambient temperature sensor and PCM connectors are disconnected. • Inspect for continuity between ambient temperature sensor terminals A and B (wiring harness-side). • Is there continuity?	Yes	Repair or replace the wiring harness for a possible short to each other, then go to the next step.
		No	Go to the next step.
7	**VERIFY DTC TROUBLESHOOTING COMPLETED** • Always reconnect all disconnected connectors. • Clear the DTC from the PCM memory using the M-MDS. (See AFTER REPAIR PROCEDURE [SKYACTIV-D 2.2].) • Perform the KOEO or KOER self test. (See KOEO/KOER SELF TEST [SKYACTIV-D 2.2].) • Is the same DTC present?	Yes	Repeat the inspection from Step 1. • If the malfunction recurs, replace the PCM. (See PCM REMOVAL/INSTALLATION [SKYACTIV-D 2.2].) 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 [SKYACTIV-D 2.2].) • Are any DTCs present?	Yes	Go to the applicable DTC inspection. (See DTC TABLE [SKYACTIV-D 2.2].)
		No	DTC troubleshooting completed.