DTC P0533:00 [SKYACTIV-D 2.2]

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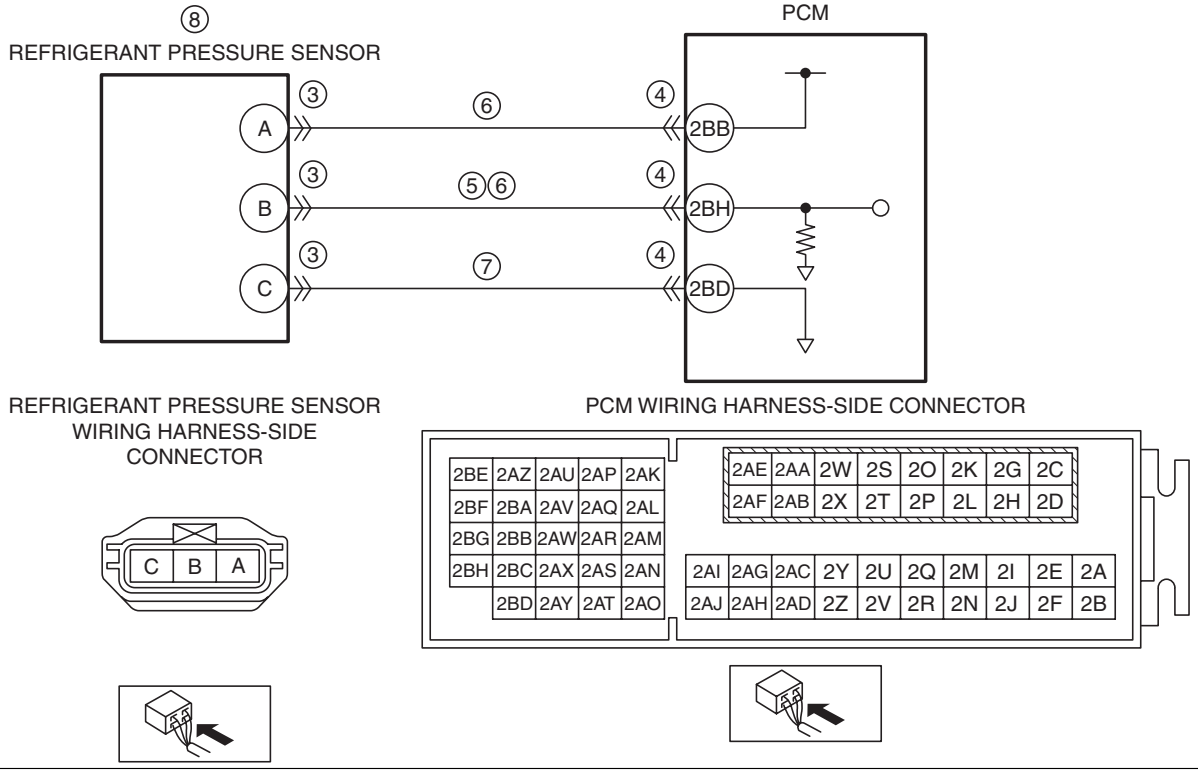
DTC P0533:00	Refrigerant pressure sensor circuit high input
DETECTION CONDITION	• The PCM monitors the input voltage from the refrigerant pressure sensor when the ignition switch is ON. If the input voltage at the PCM terminal 2BH is **above 4.9 V**, the PCM determines that the refrigerant pressure sensor 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	• Inhibits the A/C control.
POSSIBLE CAUSE	• Refrigerant pressure sensor connector or terminals malfunction • PCM connector or terminals malfunction • Short to power supply in wiring harness between refrigerant pressure sensor terminal B and PCM terminal 2BH • Refrigerant pressure sensor power supply circuit and signal circuit are shorted to each other • Open circuit in wiring harness between refrigerant pressure sensor terminal C and PCM terminal 2BD • Refrigerant pressure sensor 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 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.

STEP	INSPECTION		ACTION
3	**INSPECT REFRIGERANT PRESSURE SENSOR CONNECTOR CONDITION** • Switch the ignition off. • Disconnect the refrigerant pressure 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 9.
		No	Go to the next step.
4	**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 9.
		No	Go to the next step.
5	**INSPECT REFRIGERANT PRESSURE SENSOR CIRCUIT FOR SHORT TO POWER SUPPLY** • Verify that the refrigerant pressure sensor and PCM connectors are disconnected. • Switch the ignition ON (engine off). • Measure the voltage at the refrigerant pressure sensor terminal B (wiring harness-side). • Is the voltage **0 V**?	Yes	Go to the next step.
		No	Repair or replace the wiring harness for a possible short to power supply, then go to Step 9.
6	**INSPECT REFRIGERANT PRESSURE SENSOR POWER SUPPLY CIRCUIT AND SIGNAL CIRCUIT FOR SHORT TO EACH OTHER** • Verify that the refrigerant pressure sensor and PCM connectors are disconnected. • Switch the ignition off. • Inspect for continuity between refrigerant pressure 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 Step 9.
		No	Go to the next step.
7	**INSPECT REFRIGERANT PRESSURE SENSOR GROUND CIRCUIT FOR OPEN CIRCUIT** • Verify that the refrigerant pressure sensor and PCM connectors are disconnected. • Inspect for continuity between refrigerant pressure sensor terminal C (wiring harness-side) and PCM terminal 2BD (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 REFRIGERANT PRESSURE SENSOR** • Inspect the refrigerant pressure sensor. (See REFRIGERANT PRESSURE SENSOR INSPECTION [MANUAL AIR CONDITIONER].) (See REFRIGERANT PRESSURE SENSOR INSPECTION [FULL-AUTO AIR CONDITIONER].) • Is there any malfunction?	Yes	Replace the refrigerant pressure sensor, then go to the next step. (See REFRIGERANT PRESSURE SENSOR REMOVAL/ INSTALLATION [MANUAL AIR CONDITIONER].) (See REFRIGERANT PRESSURE SENSOR REMOVAL/ INSTALLATION [FULL-AUTO AIR CONDITIONER].)
		No	Go to the next step.
9	**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].) • Start the engine. • Turn the A/C switch on. • Perform the DTC Reading Procedure. (See ON-BOARD DIAGNOSTIC 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.

STEP	INSPECTION		ACTION
10	**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.