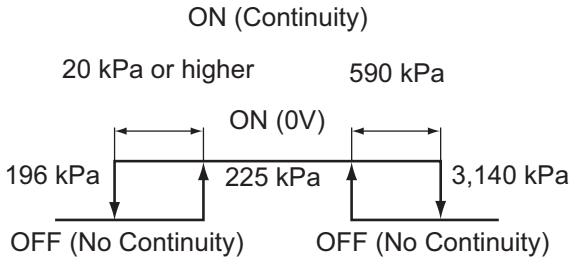
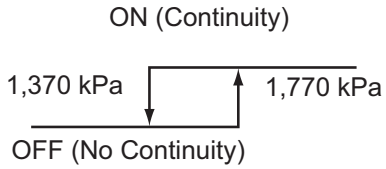
DTC	B1423/23	Pressure Switch Circuit

DESCRIPTION

Low and High Pressure Cut Side:



Middle Pressure Cut Side:



H

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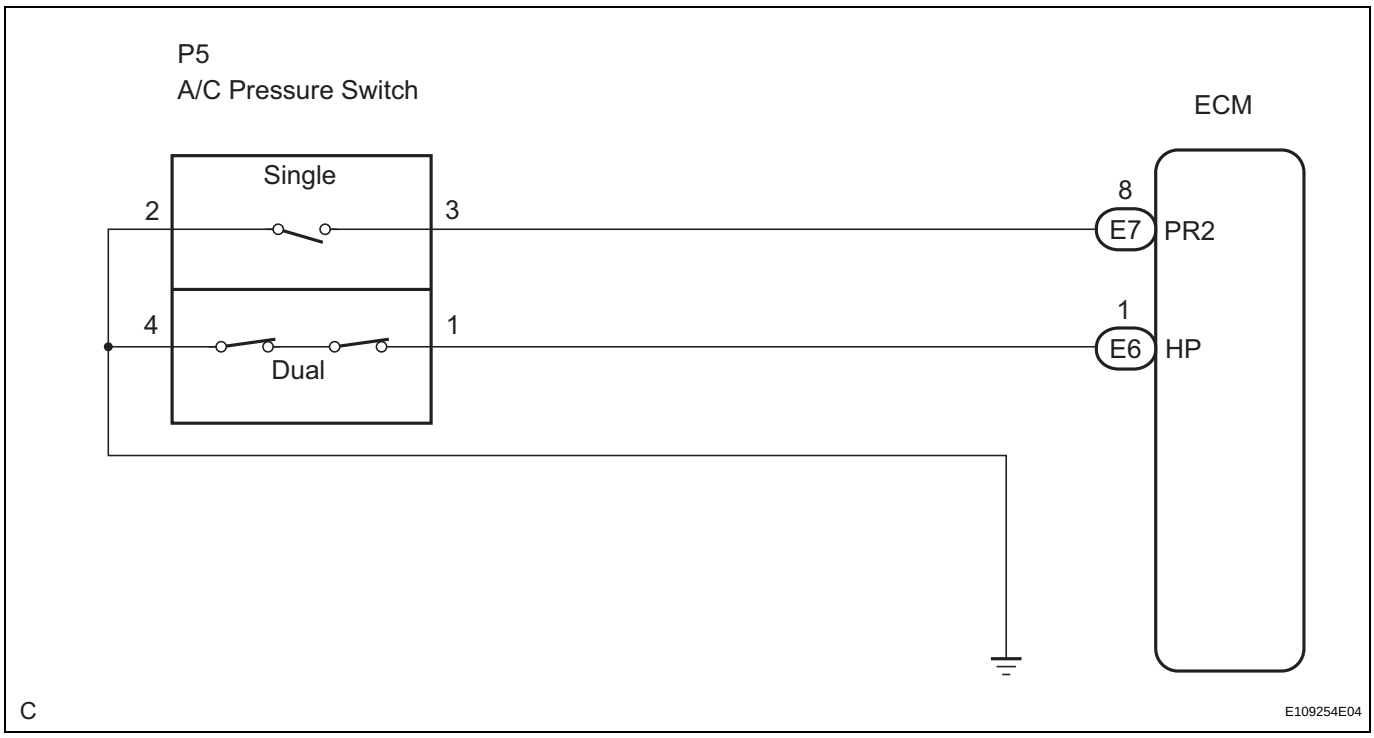
The A/C pressure switch to detect the refrigerant pressure is located in the sight glass side of the pipe on the high-pressure side. This DTC is output when the refrigerant pressure is either significantly low (below 196 kPa (2.0 kgf/cm^2, 28 psi) or significantly high (over 3,140 kPa (32.0 kgf/cm^2, 455 psi). Then the A/C pressure switch has built-in switches to detect high and low pressure and is turned off when either of them is determined to be detective. The A/C amplifier assembly continuously monitors the pressure switch signal after the ignition switch is turned on. It stops compressor control and outputs the DTC when it detects the signal indicating that the switch is turned off.

DTC No.	DTC Detecting Condition	Trouble Area
B1423/23	• Open or short in pressure switch circuit • Abnormal refrigerant pressure Below 196 kPa (2.0 kgf/cm^2, 28 psi) Over 3,140 kPa (32.0 kgf/cm^2, 455 psi)	• A/C Pressure switch • Harness or connector between pressure switch and ECM, A/C Pressure switch and body ground • Multiplex communication circuit • Refrigerant pipe line • ECM • A/C amplifier assembly

WIRING DIAGRAM



AC

1	INSPECT REFRIGERANT PRESSURE

(a) Set the manifold gauge (See page AC-124).
(b) Read the manifold gauge pressure when the following conditions are established.
- Temperature at the air inlet with the switch set at RECIRCULATION is 30 to 35°C (86 to 95°F)
- Ignition switch is ON.
- Blower speed control switch is at "HI" position
- Temperature control dial is at "COOL" position
- Air conditioning switch is ON
- Doors are fully open

Standard:

Pressure on high pressure side

1.37 to 1.57 MPa (13.9 to 16.0 kgf/cm^2, 198 to 228 psi)

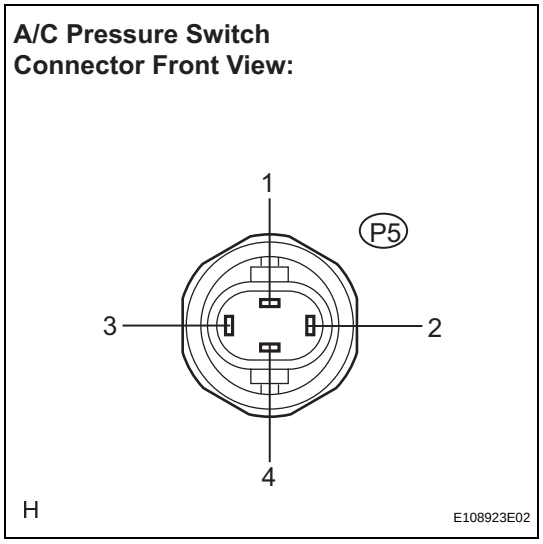
HINT:

If the refrigerant pressure is below 196 kPa (2.0 kgf/cm^2, 28 psi), the refrigerant amount in the air conditioning cycle may have decreased significantly for reasons such as a gas leakage.

NG → **CHECK AND REPLACE AIR CONDITIONING CYCLE**

OK

2	CHECK AIR CONDITIONING OPERATION



(a) Disconnect the connector from the A/C pressure switch.
(b) Connect the terminals 1 and 4 of the connector of the pressure switch on the vehicle wire harness side using a service wire.
(c) Turn the ignition switch ON.
(d) Turn the air conditioning switch ON and check that the compressor is operated.
(e) Check that the compressor is not operated when terminals 1 and 4 (that were connected in the prior step) are disconnected.

OK:

Terminals 1 and 4 connected: the compressor is operated

Terminals 1 and 4 disconnected: the compressor is not operated

(f) Check that the electrical fan is operated when disconnecting terminals 2 and 3 (that were connected in the prior step).

OK:

Terminals 2 and 3 connected: the electrical fan is operated

Terminals 2 and 3 disconnected: the electrical fan is not operated

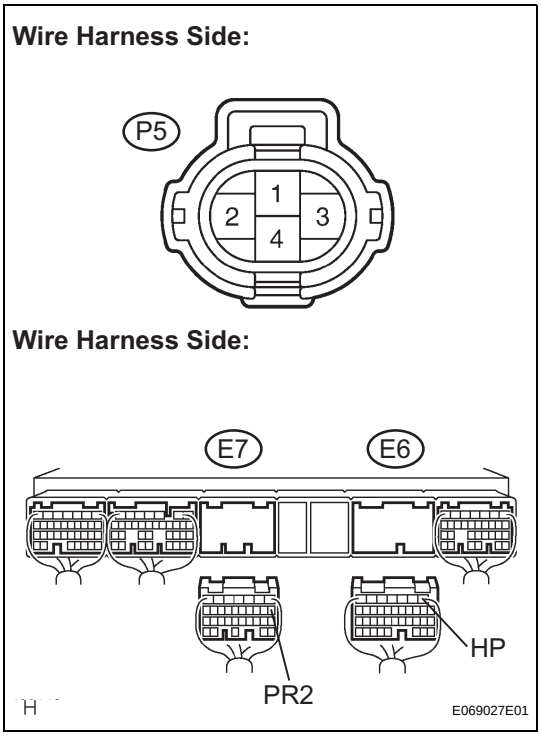
NG → **Go to step 3**

OK →

REPLACE A/C PRESSURE SWITCH

AC

3	CHECK HARNESS AND CONNECTOR (A/C PRESSURE SWITCH - ECM)



(a) Disconnect the connectors from the A/C pressure switch and ECM.

(b) Measure the resistance according to the value(s) in the table below.

Standard resistance

Tester connection (Symbols)	Condition	Specified condition
E7-8 (PR2) - P5-3	Always	Below 1 Ω
E6-1 (HP) - P5-1	Always	Below 1 Ω
E7-8 (PR2) - Body round	Always	10 kΩ or higher
E6-1 (HP) - Body ground	Always	10 kΩ or higher
P5-2 - Body ground	Always	Below 1 Ω
P5-4 - Body ground	Always	Below 1 Ω

Result

Result	Proceed to
NG	A
OK (Checking from the PROBLEM SYMPTOMS TABLE)	B
OK (Checking from the DTC)	C

B → PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE

C → REPLACE ECM

A

REPAIR OR REPLACE HARNESS OR CONNECTOR