

DTC	B1423	PRESSURE SWITCH CIRCUIT
------------	--------------	--------------------------------

CIRCUIT DESCRIPTION

The pressure switch sends the appropriate signals to the A/C amplifier when the A/C refrigerant pressure drops too low or rises too high.

G.C.C. Countries Models:

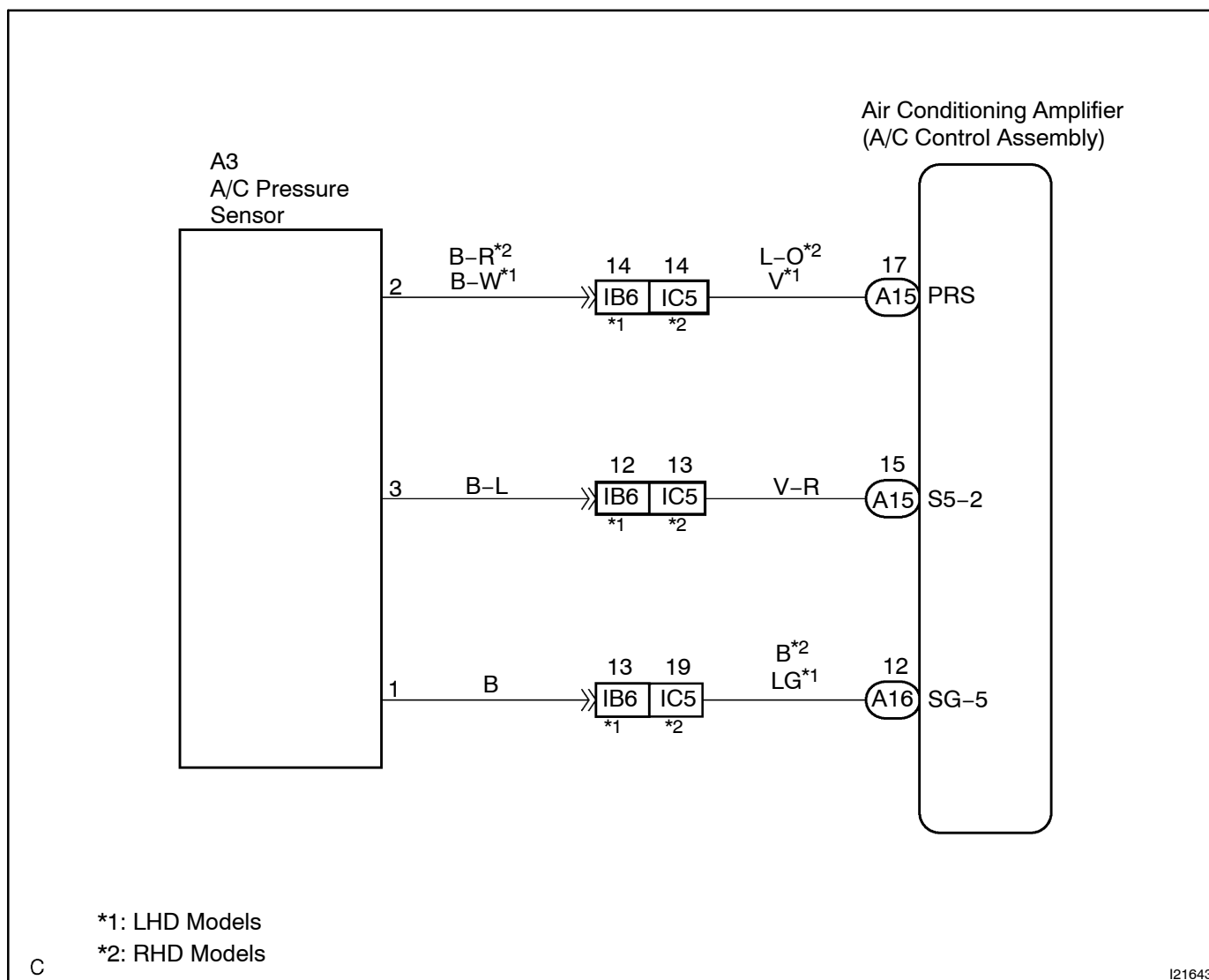
When the A/C amplifier receives these signals, it outputs signals through the A/C amplifier to turn the A/C COMP relay off and turns the magnetic clutch off.

Except G.C.C. Countries Models:

When the A/C amplifier receives these signals, the compressor does not compress refrigerant.

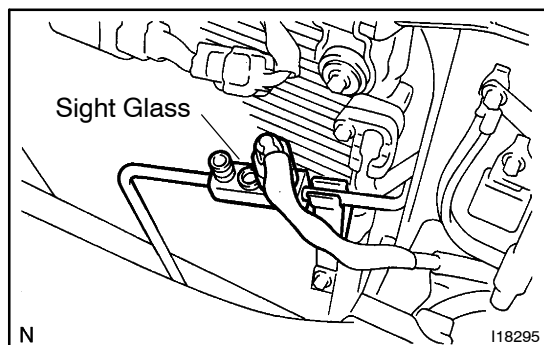
DTC No.	Detection Item	Trouble Area
B1423	Pressure switch circuit (open or short)	• A/C Pressure sensor • Harness or connector between A/C pressure sensor and A/C amplifier • Refrigerant pipe line • A/C amplifier

WIRING DIAGRAM



INSPECTION PROCEDURE

1 CHECK REFRIGERANT VOLUME



(a) Check the sight glass on the liquid tube.

Test conditions:

- Engine is running at 1,500 rpm
- Single A/C:
Blower speed control switch at "HI" position
- Dual A/C:
Front blower switch at "HI" position
Rear blower switch at "HI" position
- A/C switch ON
- Single A/C:
Temperature control switch at "MAX. COOL" position
- Dual A/C:
Rear temperature control switch at "MAX. COOL" position
Front driver side temperature control switch at "MAX. COOL" position
Front passenger side temperature control switch at "MAX. COOL" position
- Fully open the doors

Item	Symptom	Amount of refrigerant	Corrective Actions
1	Bubbles exist	Insufficient*	(1) Check for gas leakage and repair if necessary (2) Add refrigerant until bubbles disappear
2	No bubbles exist	Empty, insufficient or excessive	Refer to 3 and 4
3	No temperature difference between compressor inlet and outlet	Empty or nearly empty	(1) Check for gas leakage with gas leak detector and repair if necessary (2) Add refrigerant until bubbles disappear
4	Considerable temperature difference between compressor inlet and outlet	Proper or excessive	Refer to 5 and 6
5	Immediately after air conditioning is turned off, refrigerant clears	Excessive	(1) Discharge refrigerant (2) Remove air and supply proper amount of purified refrigerant
6	Immediately after air conditioning is turned off, refrigerant foams and then becomes clear	Proper	–

*: Bubbles in the sight glass with ambient temperature higher than usual can be considered normal if cooling is sufficient.

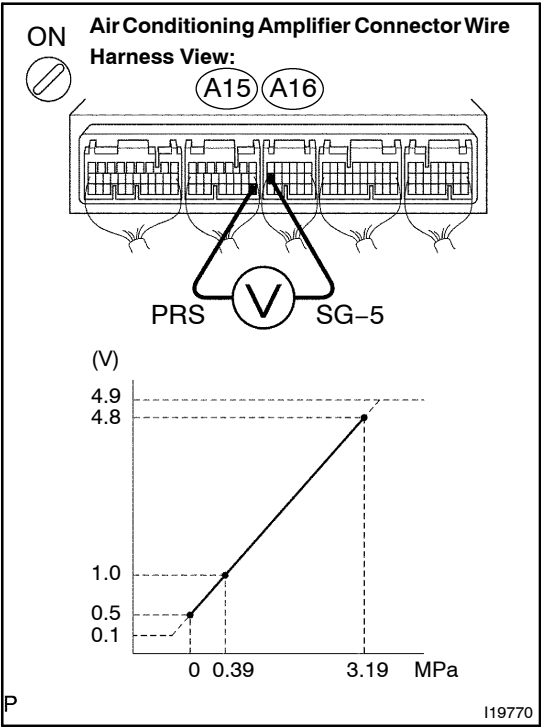
NG

CHARGE REFRIGERANT (SEE PAGE 55-11)

OK

2

INSPECT AIR CONDITIONING AMPLIFIER(PRS, SG-5)



- (a) Remove the A/C amplifier with connector still connected.
- (b) Install the manifold gauge set ([see page 55-5](#)).
- (c) Turn the ignition switch to the ON position.
- (d) Measure the voltage according to the value(s) in the table below.

OK:
The voltage depends on the refrigerant pressure as shown in the chart.

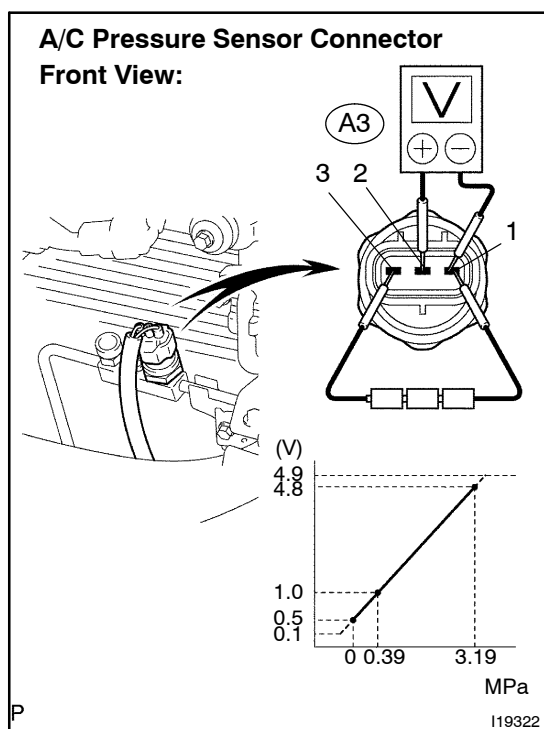
NG

Go to step 3

OK

PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE
([SEE PAGE 05-778](#))

3 INSPECT A/C PRESSURE SENSOR



- Disconnect the A/C pressure sensor connector.
- Install the manifold gauge set ([see page 55-5](#)).
- Connect the positive (+) lead from the three 1.5 V dry cell batteries to terminal 3 and negative (-) lead to terminal 1.
- Check voltage between terminals 2 and 1 of A/C pressure sensor.

OK:

The voltage depends on the refrigerant pressure as shown in the chart.

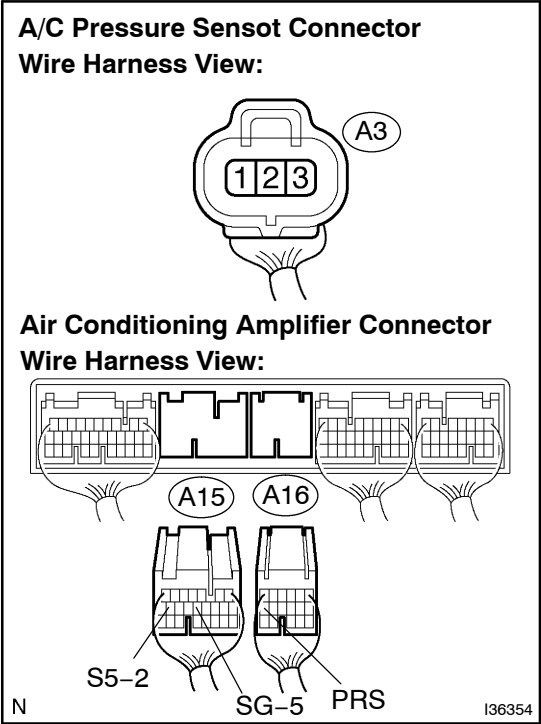
NG

REPLACE A/C PRESSURE SENSOR

OK

4

CHECK HARNESS AND CONNECTOR(A/C PRESSURE SENSOR – AIR CONDITIONING AMPLIFIER) (SEE PAGE 01-44)



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

Standard:

Tester connection	Condition	Specified condition
A3-2 – A15-17 (PRS)	Always	Below 1 Ω
A3-3 – A15-15 (S5-2)	Always	Below 1 Ω
A3-1 – A16-12 (SG-5)	Always	Below 1 Ω
A15-17 (PRS) – Body ground	Always	10 kΩ or higher
A15-15 (S5-2) – Body ground	Always	10 kΩ or higher
A16-12 (SG-5) – Body ground	Always	10 kΩ or higher

Result:

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

A

REPAIR OR REPLACE HARNESS OR CONNECTOR

B

PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE (SEE PAGE 05-778)

C

REPLACE AIR CONDITIONING AMPLIFIER (SEE PAGE 55-16)