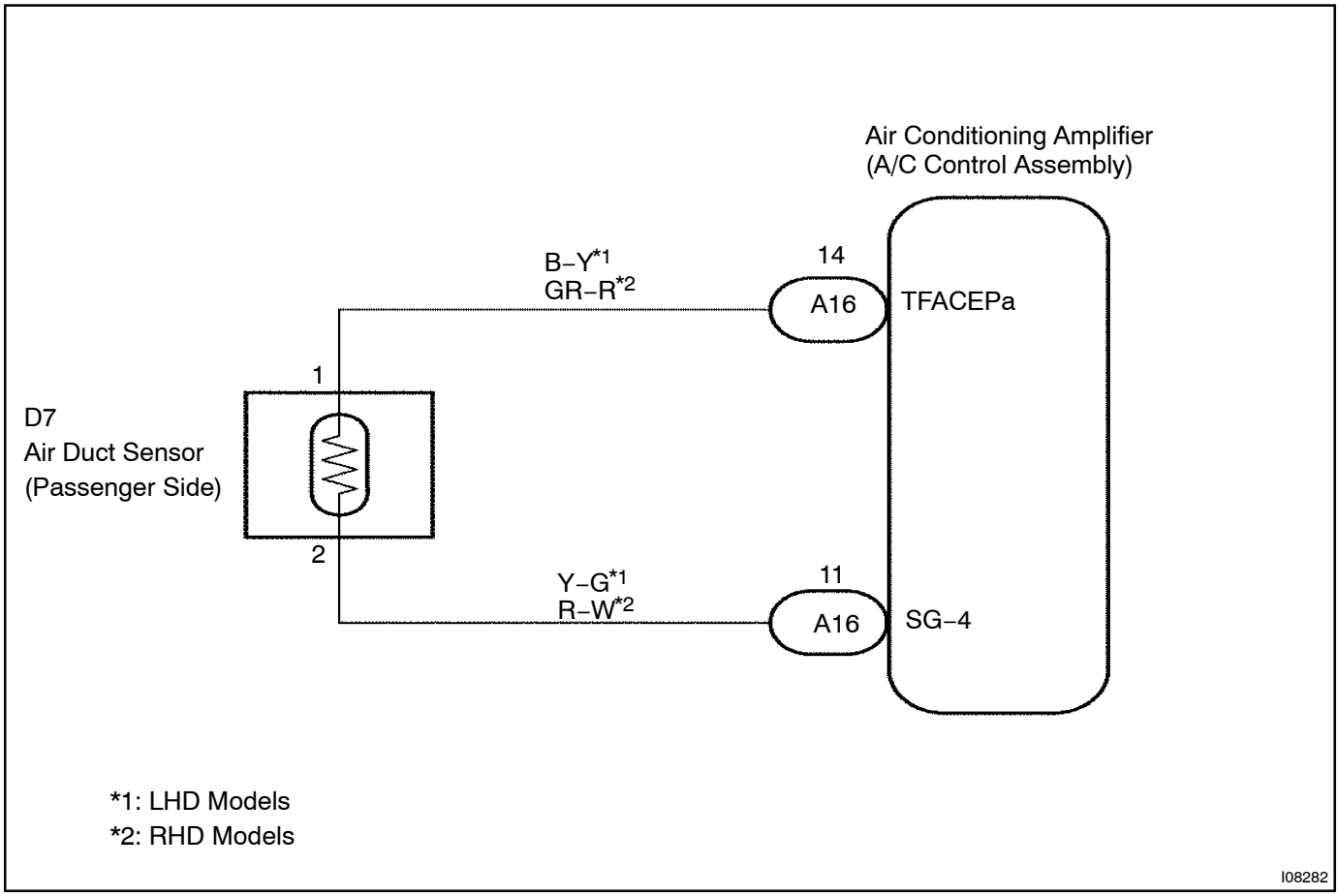
| DTC | B1416 | AIR DUCT SENSOR CIRCUIT (PASSENGER SIDE) |
|---|---|---|

## CIRCUIT DESCRIPTION

This sensor detects the register temperature and sends the appropriate signals to the A/C amplifier.

| DTC No. | Detection Item | Trouble Area |
|---|---|---|
| B1416 | Air duct sensor circuit (Passenger side) (Open or short) | • Air duct sensor<br>• Harness or connector between duct sensor and A/C amplifier<br>• A/C amplifier |

## WIRING DIAGRAM



# INSPECTION PROCEDURE

| 1 | READ VALUE ON INTELLIGENT TESTER II |
|---|---|

(a) Connect the intelligent tester II to the DLC3.
(b) Turn the ignition switch to the ON position and push the intelligent tester II main switch on.
(c) Select the item below in the DATA LIST, and read the display on the intelligent tester II.

**DATA LIST / AIR CONDITIONER:**

| Item | Measure Item/Display (Range) | Normal Condition | Diagnostic Note |
|---|---|---|---|
| Duct sensor (P side) (Duct Temp–P) | Duct sensor (Passenger side) / min.: –12.7°C (9.14°F) max.: 76.55°C (169.79°F) | Actual duct temperature is displayed (Passenger side) | – |

**OK:**

**The display is as specified in the normal condition.**

**Result:**

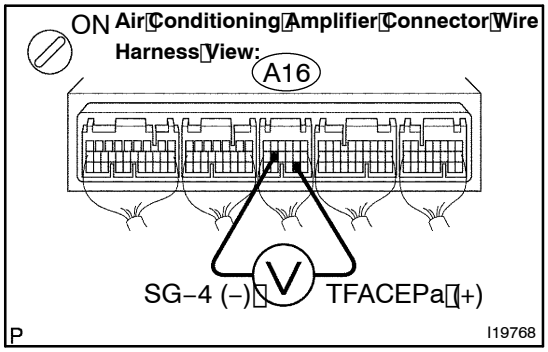
| | |
|---|---|
| NG | A |
| OK (Checking from the PROBLEM SYMPTOM TABLE) | B |
| OK (Checking from the DTC) | C |

**B** → **PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE (SEE PAGE 05–778)**

**C** → **REPLACE AIR CONDITIONING AMPLIFIER (SEE PAGE 55–15)**

**A**

## 2 INSPECT AIR CONDITIONING AMPLIFIER(TFACEPa – SG–4)




(a) Remove the A/C amplifier with connectors still connected.
(b) Turn the ignition switch to the ON position.
(c) Measure the voltage according to the value(s) in the table below.

**Standard:**

| Tester connection | Condition | Specified condition |
|---|---|---|
| A16–14 (TFACEPa) – A16–11 (SG–4) | Ignition switch ON at 25°C (77°F) | 1.8 to 2.2 V |
| A16–14 (TFACEPa) – A16–11 (SG–4) | Ignition switch ON at 50°C (122°F) | 0.8 to 1.2 V |

HINT:
As the temperature increases, the voltage decreases.

**Result:**

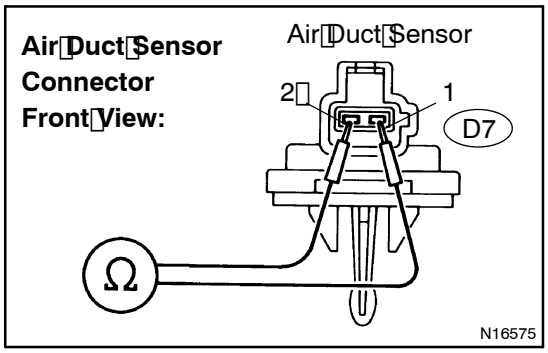
| | |
|---|---|
| NG | A |
| OK (Checking from the PROBLEM SYMPTOM TABLE) | B |
| OK (Checking from the DTC) | C |

**B** → **PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE (SEE PAGE 05–778)**

**C** → **REPLACE AIR CONDITIONING AMPLIFIER (SEE PAGE 55–16)**

**A**

## 3 INSPECT AIR DUCT SENSOR




(a) Remove the air duct sensor.
(b) Measure the resistance according to the value(s) in the table below.

**Standard:**

| Tester connection | Condition | Specified condition |
|---|---|---|
| D7–1 – D7–2 | at 0°C (32°F) | 14.5 to 19.0 kΩ |
| D7–1 – D7–2 | at 25°C (77°F) | 4.8 to 5.2 kΩ |
| D7–1 – D7–2 | at 50°C (122°F) | 1.6 to 2.0 kΩ |

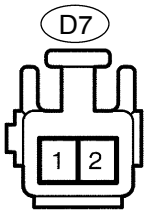
HINT:
As the temperature increases, the resistance decreases.

**NG** → **REPLACE AIR DUCT SENSOR**

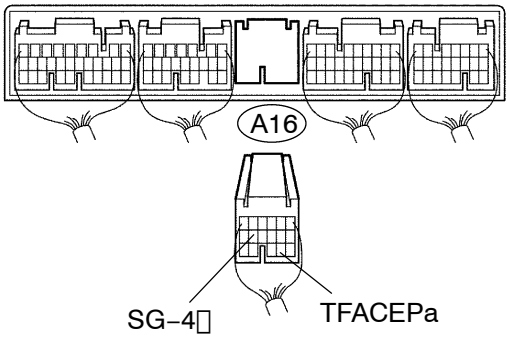
**OK**

| 4 | CHECK HARNESS AND CONNECTOR(AIR CONDITIONING AMPLIFIER – AIR DUCT SENSOR) (SEE PAGE 01–44) |
|---|---|

**Air Duct Sensor Connector**
**Front View:**




**Air Conditioning Amplifier Connector**
**Wire Harness View:**




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

**Standard:**

| Tester connection | Condition | Specified condition |
|---|---|---|
| A16–14 (TFACEPa) – D7–1 | Always | Below 1 Ω |
| A16–11 (SG–4) – D7–2 | Always | Below 1 Ω |
| A16–14 (TFACEPa) – Body ground | Always | 10 kΩ or higher |
| A16–11 (SG–4) – Body ground | Always | 10 kΩ or higher |

**NG** → **REPAIR OR REPLACE HARNESS OR CONNECTOR**

**OK**

**REPLACE AIR CONDITIONING AMPLIFIER (SEE PAGE 55–16)**