

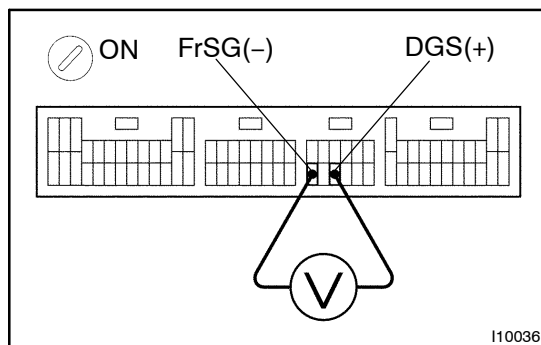
CIRCUIT DESCRIPTION

DTC No.	Detection Item	Trouble Area
18	Open or short in exhaust gas sensor circuit	• Exhaust gas sensor • Harness or connector between exhaust gas sensor and A/C amplifier • A/C amplifier

The diagram illustrates the wiring for the engine room J/B (Junction Box) connected to the A/C Amplifier. It shows three engine room J/B units, each containing a 1L and 1E terminal block. The top J/B is connected to a Y wire, which goes to a 15 IG1 terminal block, then to a Y wire, then to a 10 C10 terminal block, and finally to the DGS (Differential Grounding System) terminal of the A/C Amplifier. The middle J/B is connected to a Y-G wire, which goes to a 2 terminal block, then to a 1 terminal block, then to a W-B wire, then to a 18 1L terminal block, then to a 19 1E terminal block, then to a W-B wire, then to an EB (Earth Bond) terminal, and finally to ground. The bottom J/B is connected to a Y-G wire, which goes to a 4 terminal block, then to a 12 terminal block, then to a Y-G wire, then to a 3 IG1 terminal block, then to a Y-G wire, then to a 12 C10 terminal block, and finally to the FrSG (Frame to Structure Grounding) terminal of the A/C Amplifier. An Exhaust Gas Sensor is connected to the Y-G wire and the 2 terminal block. An A.C. Fuse is connected to the 4 terminal block and the 18 1L terminal block.

INSPECTION PROCEDURE

1	Check voltage between terminals DGS and FrSG of A/C Amplifier.
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**PREPARATION:**

Remove A/C amplifier with connectors still connected.

CHECK:

- (a) Turn ignition switch to ON.
- (b) Check voltage between terminals DGS and FrSG of A/C amplifier assembly connector at the temperature.

OK:**Voltage:**

1.0 – 4.5 V at 10 – 35 °C (50 – 95 °F)

HINT:

When the sensor is exposed to the exhaust gas, the voltage goes down.

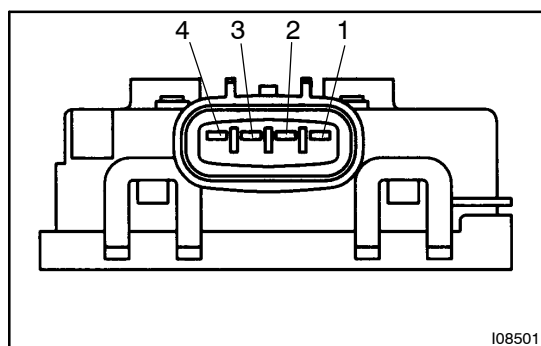
NG

Go to step 2.

OK

Proceed to next circuit inspection shown on problem symptom table (See page [DI-818](#)). However, if DTC 18 is displayed, check and replace A/C amplifier.

2	Check exhaust gas sensor resistance
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**PREPARATION:**

Remove the exhaust gas sensor (See page [AC-91](#)).

CHECK:

- (a) Connect positive (+) lead from the battery to the terminal 4 and negative (-) lead to terminal 1.
- (b) After keeping to apply battery positive voltage between terminals 1 and 4 for more than 30 seconds, measure resistance between terminals 2 and 3.

OK:**Resistance:**

5 – 100 kΩ at 10 – 35 °C (50 – 95 °F)

HINT:

When the sensor is exposed to the exhaust gas, the resistance goes down.

NG

Replace exhaust gas sensor.

OK

3	Check harness and connector between A/C amplifier and exhaust gas sensor.
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NG	Repair or replace harness for connector.
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OK

Check and replace A/C amplifier.
