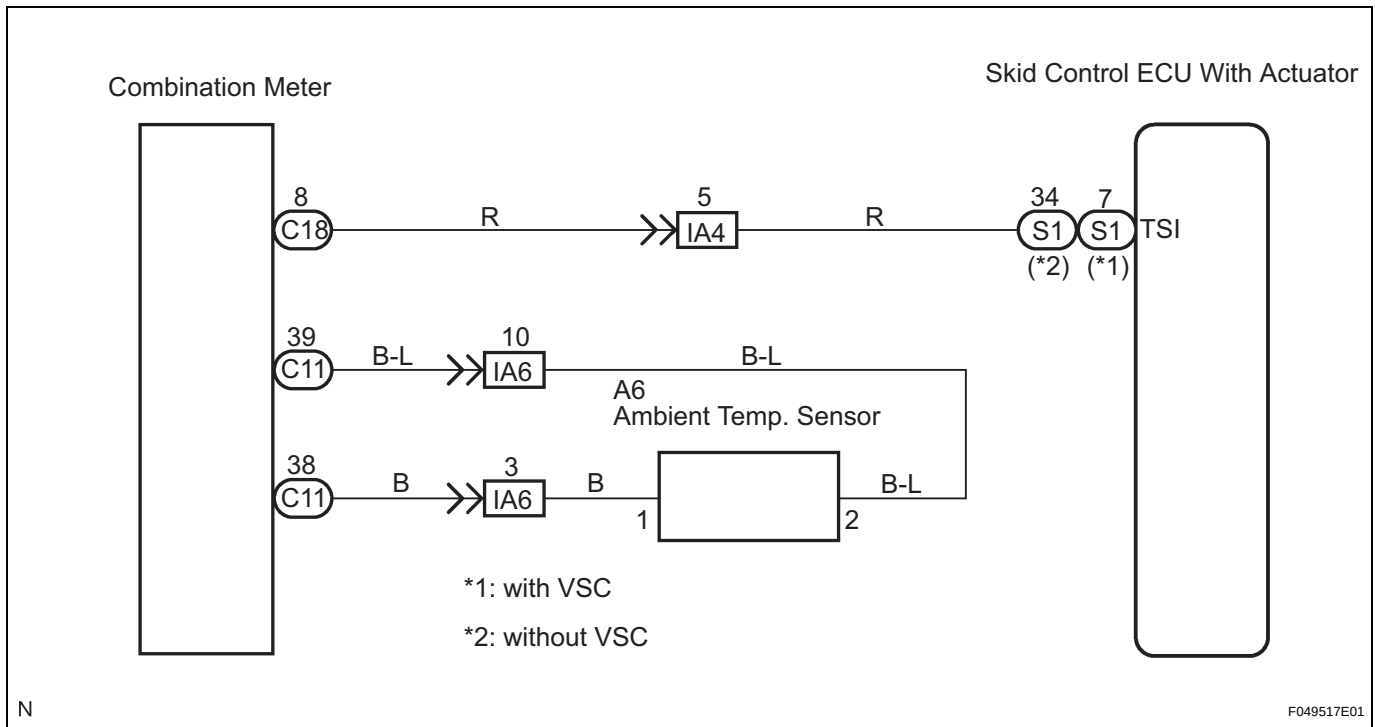


Ambient Temperature Sensor Circuit

DESCRIPTION

The ambient temperature sensor sends the outside temperature signal to the combination meter assembly. The combination meter assembly transmits the signal to the skid control ECU as a communication signal. The skid control ECU controls the tire pressure warning system, depending on the changes of the outside temperature.

WIRING DIAGRAM



INSPECTION PROCEDURE

1 CHECK COMBINATION METER ASSEMBLY

- (a) Check if the outside temperature reading on the combination meter assembly is equal to the actual temperature.

NG

Go to step 3

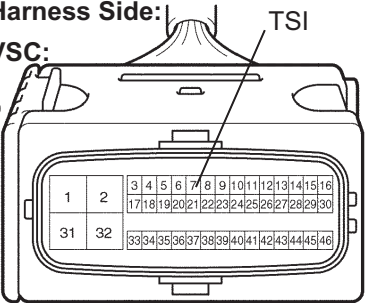
OK

TW

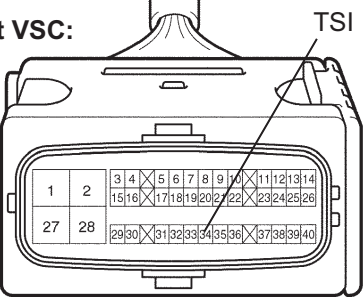
2

CHECK HARNESS AND CONNECTOR (BRAKE ACTUATOR ASSEMBLY - COMBINATION METER ASSEMBLY)

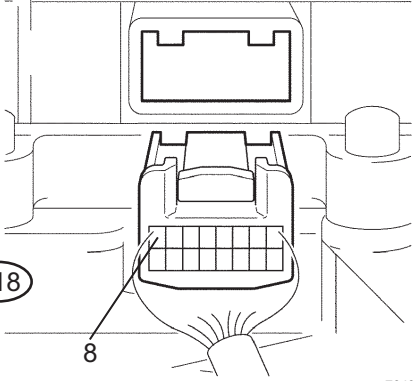
Wire Harness Side:
with VSC:



Wire Harness Side:
without VSC:



Combination Meter Assembly:



P

F049499E02

- (a) Disconnect the brake actuator assembly S1 connector and combination meter assembly C18 connector.
- (b) Measure the resistance according to the value(s) in the table below.

Resistance (with VSC)

Tester Connection	Specified Condition
S1-7 (TSI) - C18-8	Below 1 Ω
S1-7 (TSI) - Body ground	10 kΩ or higher

Resistance (without VSC)

Tester Connection	Specified Condition
S1-34 (TSI) - C18-8	Below 1 Ω
S1-34 (TSI) - Body ground	10 kΩ or higher

NG

REPAIR OR REPLACE HARNESS OR CONNECTOR

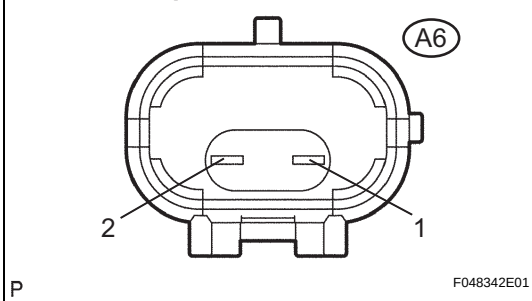
OK

TW

PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE

3 INSPECT AMBIENT TEMPERATURE SENSOR

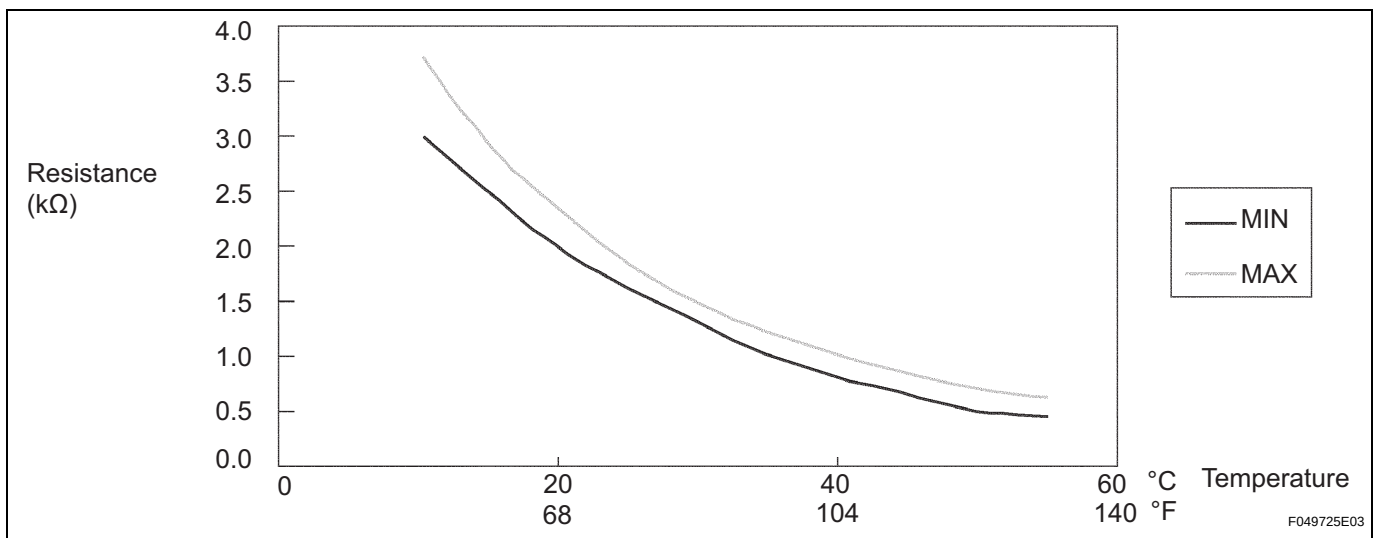
Ambient Temperature Sensor:



- Remove the ambient temperature sensor and disconnect the A6 connector.
- Measure the resistance according to the value(s) in the table below.

Resistance

Tester connection	Condition	Specified condition
A6-1 - A6-2	50°F (10°C)	3.00 to 3.73 kΩ
A6-1 - A6-2	59°F (15°C)	2.45 to 2.88 kΩ
A6-1 - A6-2	68°F (20°C)	1.95 to 2.30 kΩ
A6-1 - A6-2	77°F (25°C)	1.60 to 1.80 kΩ
A6-1 - A6-2	86°F (30°C)	1.28 to 1.47 kΩ
A6-1 - A6-2	95°F (35°C)	1.00 to 1.22 kΩ
A6-1 - A6-2	104°F (40°C)	0.80 to 1.00 kΩ
A6-1 - A6-2	113°F (45°C)	0.65 to 0.85 kΩ
A6-1 - A6-2	122°F (50°C)	0.50 to 0.70 kΩ
A6-1 - A6-2	131°F (55°C)	0.44 to 0.60 kΩ
A6-1 - A6-2	140°F (60°C)	0.36 to 0.50 kΩ



HINT:

As the temperature increases, the resistance decreases (see the illustration).

NOTICE:

- Even slightly touching the sensor may change the resistance value. Be sure to hold the connector of the sensor.
- When measuring, the sensor temperature must be the same as the ambient temperature.

NG

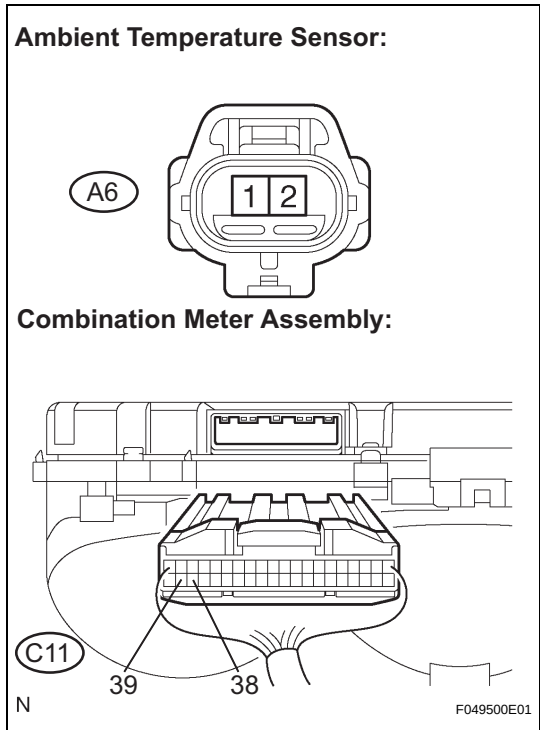
REPLACE AMBIENT TEMPERATURE SENSOR

OK

TW

4

CHECK HARNESS AND CONNECTOR (COMBINATION METER ASSEMBLY - AMBIENT TEMPERATURE SENSOR)



- (a) Disconnect the combination meter assembly C11 connector and ambient temperature sensor A6 connector.
- (b) Measure the resistance according to the value(s) in the table below.

Resistance

Tester connection	Specified condition
C11-39 - A6-2	Below 1 Ω
C11-38 - A6-1	Below 1 Ω
C11-39 - Body ground	10 k Ω or higher
C11-38 - Body ground	10 k Ω or higher

NG

REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

REPLACE COMBINATION METER ASSEMBLY