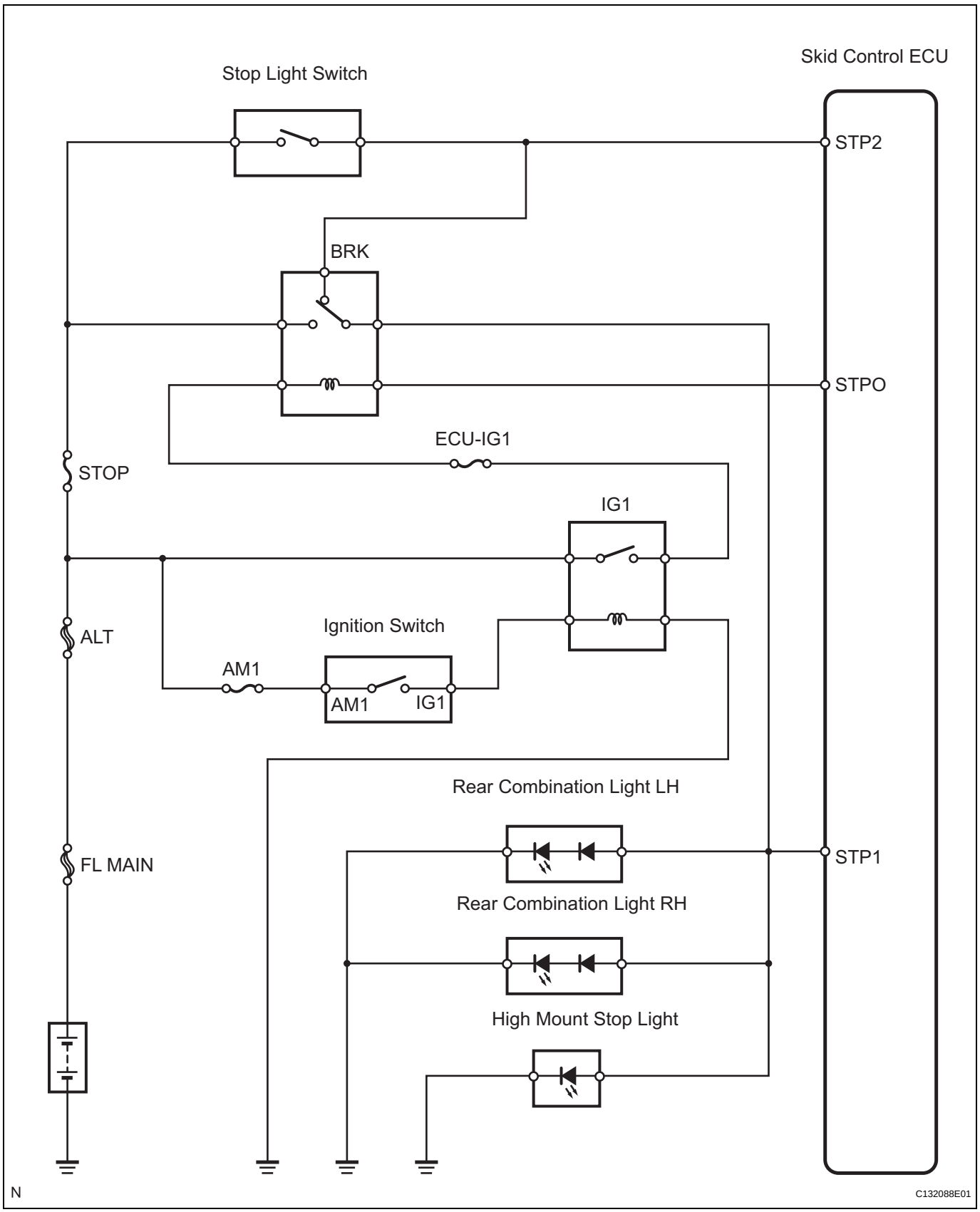
DTC	C1380/64	Stop Light Control Relay Malfunction

DESCRIPTION

The skid control ECU inputs the stop light switch signal and detects the status of the brake operation.

DTC No.	DTC Detection Condition	Trouble Area
C1380/64	When one of following conditions is met: 1. When stop light control relay is ON, relay OFF condition continues for 5 seconds or more. 2. When stop light control relay is OFF, relay ON condition continues for 5 seconds. 3. When stop light control relay is OFF, stop switch monitor (STP2) OFF condition continues for 5 seconds or more.	• Stop light • Stop light switch circuit • Stop light control (BRK) relay • ABS and TRACTION actuator (skid control ECU)

WIRING DIAGRAM



BC

INSPECTION PROCEDURE

NOTICE:

When replacing the ABS and TRACTION actuator, perform zero point calibration (see page BC-24).

1	CHECK STOP LIGHT (OPERATION)

(a) Check that the light illuminates when the brake pedal is depressed, and turns off when the brake pedal is released.

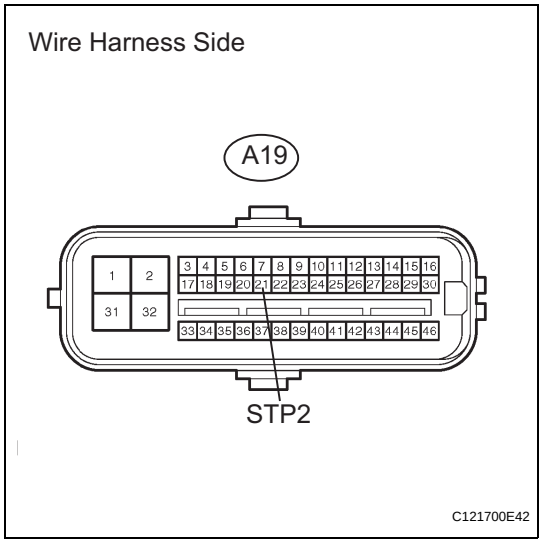
OK

Condition	Stop Light Condition
Brake pedal depressed	Illuminates
Brake pedal released	Turn off

NG → **Go to step 9**

OK

2	CHECK WIRE HARNESS (SKID CONTROL ECU - BATTERY)



(a) Disconnect the A19 ECU connector.
(b) Measure the voltage of the wire harness side connector.

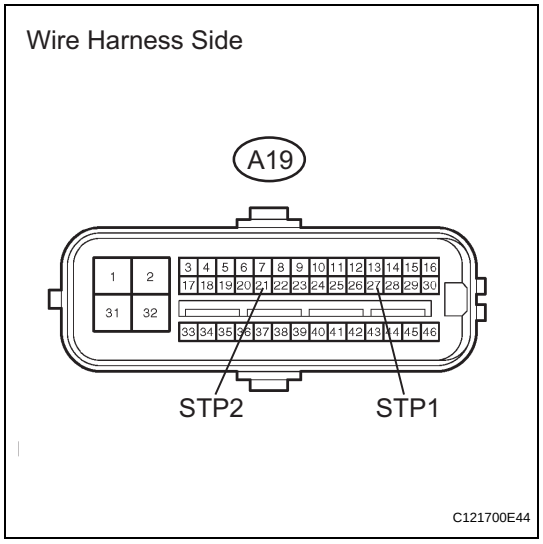
Standard voltage

Tester Connection	Switch Condition	Specified Condition
A19-21 (STP2) - Body ground	Brake pedal depressed	8 to 16 V
A19-21 (STP2) - Body ground	Brake pedal released	Below 1.5 V

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

OK

3 CHECK WIRE HARNESS (SKID CONTROL ECU)



(a) Disconnect the A19 ECU connector.
(b) Measure the resistance of the wire harness side connector.

Standard resistance

Tester Connection	Specified Condition
A19-21 (STP2) - A19-27 (STP1)	Below 1 Ω

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

OK

4 PERFORM ACTIVE TEST BY INTELLIGENT TESTER (STOP LIGHT RELAY)

(a) Select the ACTIVE TEST, generate a control command, and then check that the stop light relay operates.

Skid control ECU

Item	Test Details	Diagnosis Note
STP LAMP RELAY	Turn stop light relay ON / OFF	Observe stop light

OK:
The stop lights illuminate or turn off.

NG → **Go to step 6**

OK

5 RECONFIRM DTC

(a) Clear the DTC (see page BC-47).
(b) Start the engine.
(c) Drive the vehicle at a speed of 5 km/h (3 mph) or more for several seconds.
(d) Check if the same DTC is output (see page BC-47).

Result

Result	Proceed to
DTC is not output	A
DTC is output	B

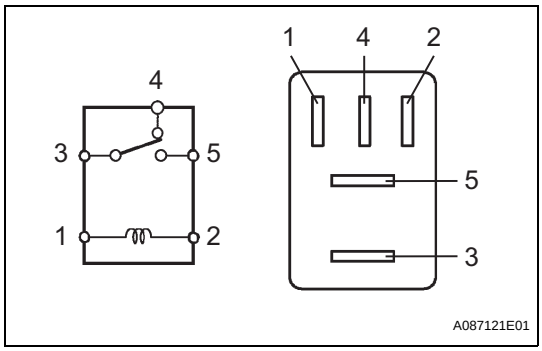
B → **END**

BC

A

REPLACE ABS AND TRACTION ACTUATOR ASSEMBLY

6 INSPECT STOP LIGHT CONTROL RELAY (Marking: BRK)



(a) Remove the stop light control relay from the engine room No. 1 relay block.
(b) Measure the resistance of the relay.
Standard resistance

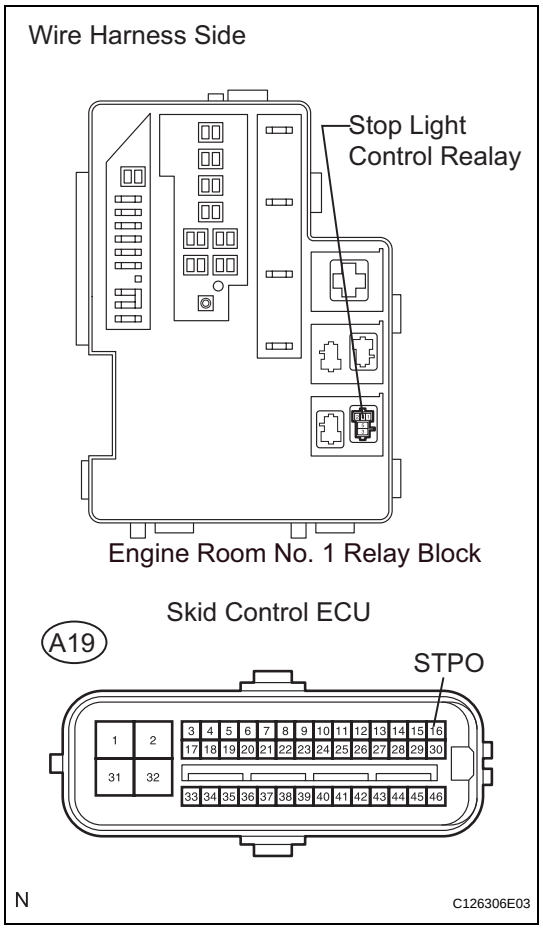
Tester Connection	Specified Condition
3 - 4	Below 1 Ω
3 - 5	10 kΩ or higher
3 - 4	10 kΩ or higher (when battery voltage is applied to terminals 1 and 2)
3 - 5	Below 1 Ω (when battery voltage is applied to terminals 1 and 2)

NG → **REPLACE STOP LIGHT CONTROL RELAY**

OK

BC

7 CHECK WIRE HARNESS (ENGINE ROOM NO. 1 RELAY BLOCK - SKID CONTROL ECU AND BATTERY)



(a) Remove the stop light control relay.
(b) Disconnect the A19 ECU connector.
(c) Measure the voltage of the wire harness side connector.

Standard voltage

Tester Connection	Condition	Specified Condition
BRK relay terminal 5 - Body ground	Always	8 to 16 V
BRK relay terminal 2- Body ground	Ignition switch ON	8 to 16 V

(d) Measure the resistance of the wire harness side connector.

Standard resistance

Tester Connection	Specified Condition
BRK relay terminal 1 - A19-16 (STPO)	Below 1 Ω

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

OK

8 RECONFIRM DTC

(a) Clear the DTC (see page BC-47).
(b) Start the engine.
(c) Drive the vehicle at a speed of 5 km/h (3 mph) or more for several seconds.
(d) Check if the same DTC is output (see page BC-47).

Result

Result	Proceed to
DTC is not output	A
DTC is output	B

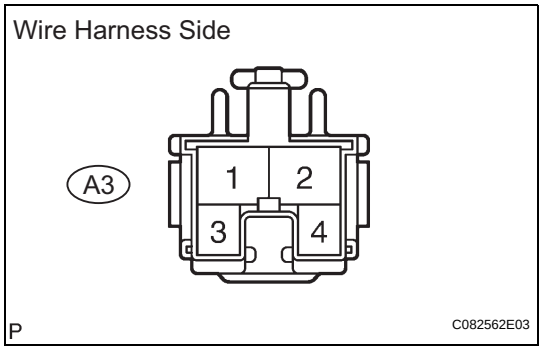
B → **END**

A

REPLACE ABS AND TRACTION ACTUATOR ASSEMBLY

BC

9	CHECK WIRE HARNESS (STOP LIGHT SWITCH - BATTERY)



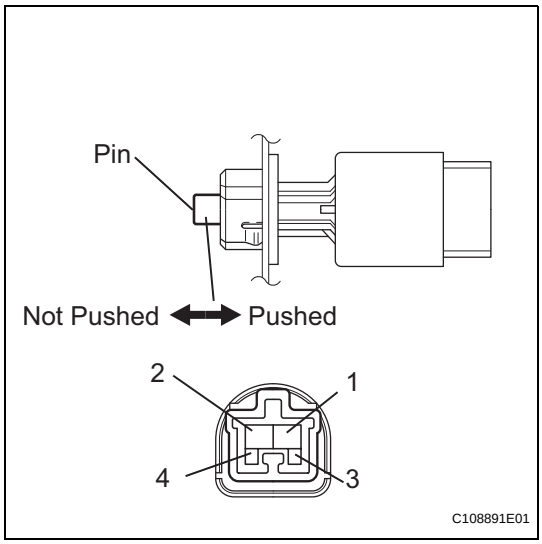
(a) Disconnect the A3 switch connector.
(b) Measure the voltage of the wire harness side connector.
Standard voltage

Tester Connection	Specified Condition
A3-2 - Body ground	10 to 14 V

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

OK

10	INSPECT STOP LIGHT SWITCH ASSEMBLY



(a) Remove the stop light switch connector.
(b) Measure the resistance of the switch.
Standard resistance

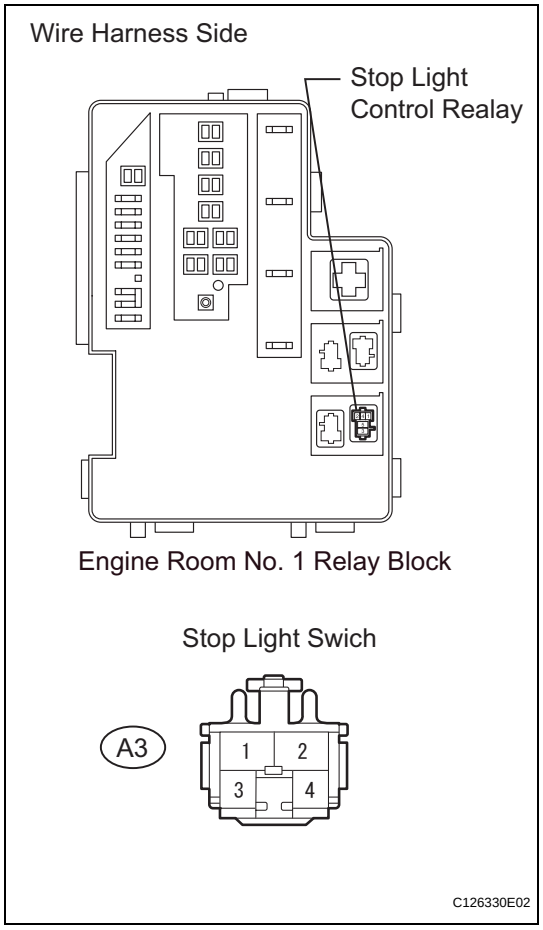
Tester Connection	Switch Condition	Specified Condition
1 - 2	Switch pin not pushed	Below 1 Ω
1 - 2	Switch pin pushed	10 kΩ or higher
3 - 4	Switch pin not pushed	10 kΩ or higher
3 - 4	Switch pin pushed	Below 1 Ω

NG → **REPLACE STOP LIGHT SWITCH ASSEMBLY**

OK

BC

11 CHECK WIRE HARNESS (STOP LIGHT SWITCH - STOP LIGHT CONTROL RELAY)



(a) Disconnect the A3 switch connector.
(b) Remove the stop light control relay.
(c) Measure the resistance of the wire harness side connectors.

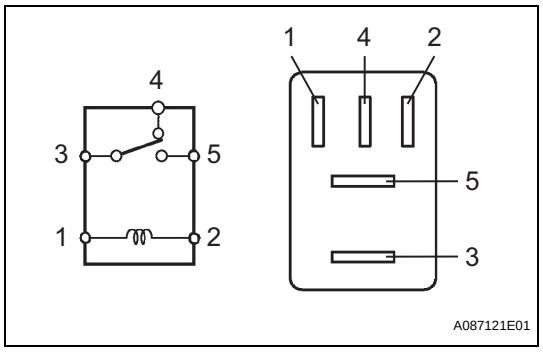
Standard resistance

Tester Connection	Specified Condition
A3-1 - BKR relay terminal 4	Below 1 Ω
A3-1 - Body ground	10 kΩ or higher

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

OK

12 INSPECT STOP LIGHT CONTROL RELAY (Marking: BRK)



(a) Remove the stop light control relay from the engine room No. 1 relay block.
(b) Measure the resistance of the relay.

Standard resistance

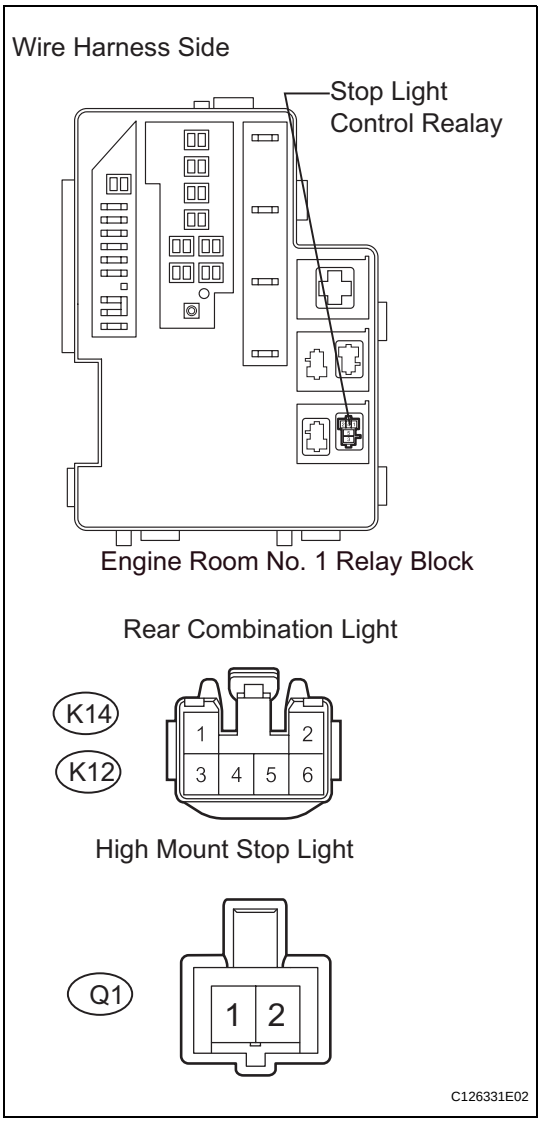
Tester Connection	Specified Condition
3 - 4	Below 1 Ω
3 - 5	10 kΩ or higher
3 - 4	10 kΩ or higher (when battery voltage is applied to terminals 1 and 2)
3 - 5	Below 1 Ω (when battery voltage is applied to terminals 1 and 2)

NG → **REPLACE STOP LIGHT CONTROL RELAY**

OK

BC

13	CHECK WIRE HARNESS (STOP LIGHT AND REAR COMBINATION LIGHT - CONTROL RELAY)



(a) Disconnect the Q1, K12 and K14 light connectors.
(b) Remove the stop light control relay.
(c) Measure the resistance of the wire harness side connectors.

Standard resistance

Tester Connection	Specified Condition
K14-4 - BKR relay terminal 3	Below 1 Ω
K14-4 - Body ground	10 kΩ or higher
K14-1 - Body ground	Below 1 Ω
K12-4 - BKR relay terminal 3	Below 1 Ω
K12-4 - Body ground	10 kΩ or higher
K12-1 - Body ground	Below 1 Ω
Q1-2 - BKR relay terminal 3	Below 1 Ω
Q1-2 - Body ground	10 kΩ or higher
Q1-1 - Body ground	Below 1 Ω

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

OK

CHECK FOR INTERMITTENT PROBLEMS