DTC	P0571	BRAKE SWITCH ”A” CIRCUIT

CIRCUIT DESCRIPTION

When the brake pedal is depressed, the stop lamp switch sends a signal to the hybrid vehicle control ECU. Receiving the signal, the hybrid vehicle control ECU cancels the cruise control. Even if there is a malfunction in the stop lamp signal circuit while the cruise control is in operation, normal driving is maintained due to fail–safe function.

Cruise control is cancelled when positive battery voltage is applied to terminal STP.

When the brake pedal is depressed, positive voltage is applied to terminal STP of the hybrid vehicle control ECU through the STOP fuse and the stop lamp switch, and the hybrid vehicle control ECU cancels the cruise control.

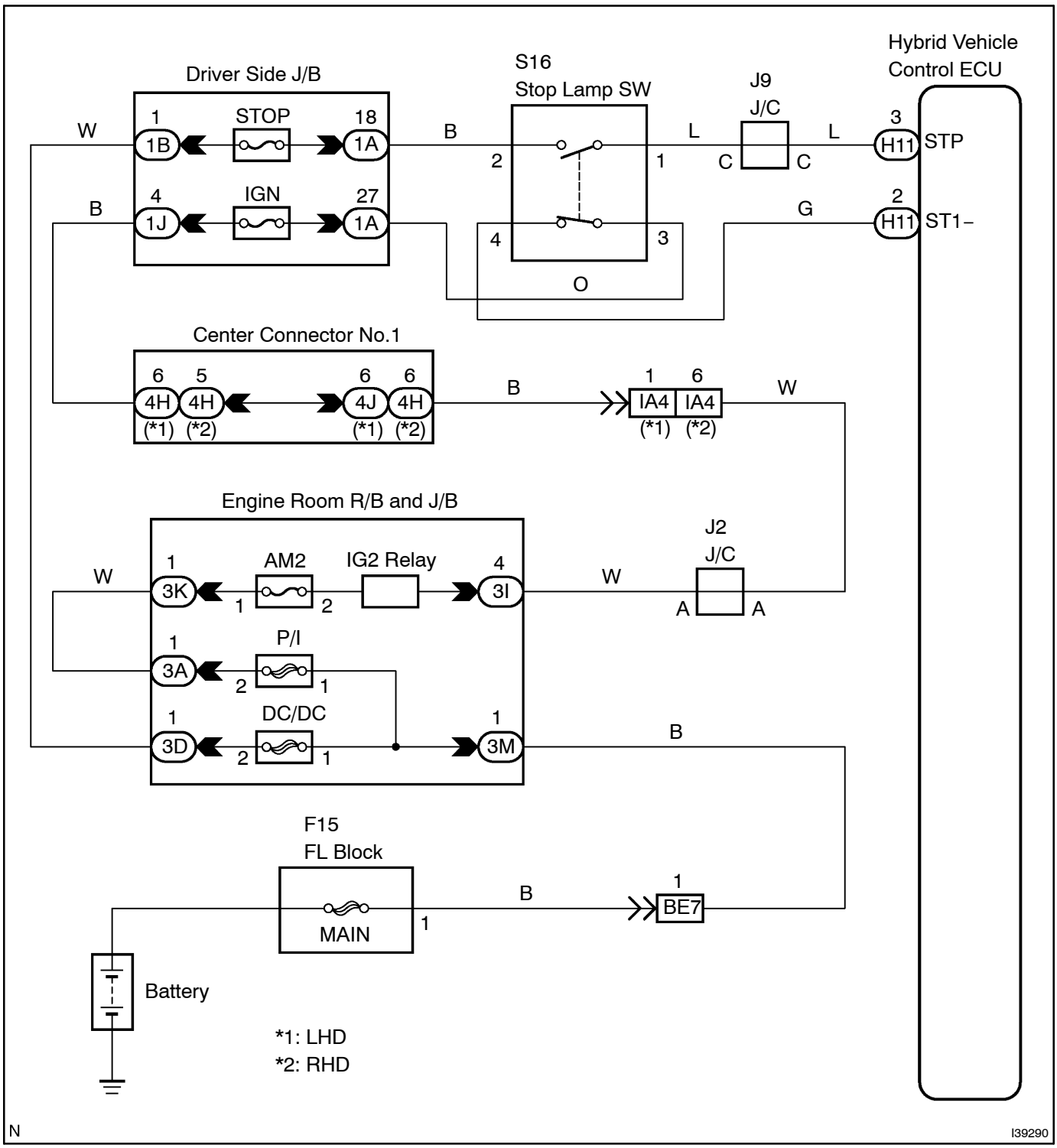
When the brake pedal is released, positive voltage is applied to terminal ST1– of the hybrid vehicle control ECU through the IGN fuse and the stop lamp switch, and the hybrid vehicle control ECU operates the cruise control.

HINT:

Inspect the fuses and relays before confirming the suspected areas which are shown in the table below.

DTC No.	DTC Detecting Condition	Trouble Area
P0571	The trouble code is output when voltages of terminals ST1– and STP of the hybrid vehicle control ECU are both below 1 V for 0.5 sec. or more.	• Stop lamp switch • Stop lamp switch circuit • Hybrid vehicle control ECU

WIRING DIAGRAM



INSPECTION PROCEDURE

1 INSPECT STOP LAMP SWITCH OPERATION

(a) Check that the stop lamp comes on when the brake pedal is depressed, and goes off when the brake pedal is released.

OK:

The stop lamp comes on/goes off normally.

HINT:

The stop lamp uses the circuit on the terminal STP side of the hybrid vehicle control ECU.

NG → **INSPECT STOP LAMP SWITCH CIRCUIT (SEE PAGE 05–12)**

OK

2 READ VALUE OF INTELLIGENT TESTER II

(a) Connect the intelligent tester II to the DLC3.

(b) Turn the power switch on (IG).

(c) Select the items "Stp Light SW M–CPU", "Stp Light SW S2–CPU", and "Stp Light S1–CPU" in the DATA LIST, and check the display on the tester screen when the brake pedal is depressed and when it is released.

HYBRID VEHICLE CONTROL ECU:

Item	Measurement Item/ Display (Range)	Normal Condition	Diagnostic Note
Stp Light SW M–CPU	Stop lamp switch signal (Main CPU)/ON or OFF	ON: Brake pedal is depressed OFF: Brake pedal is released	–
Stp Light SW S2–CPU	Stop lamp switch signal (Sub CPU)/ON or OFF	ON: Brake pedal is depressed OFF: Brake pedal released	–
Stp Light SW S1–CPU	Stop lamp switch signal (Sub CPU)/ON or OFF	ON: Brake pedal is depressed OFF: Brake pedal is released	–

OK:

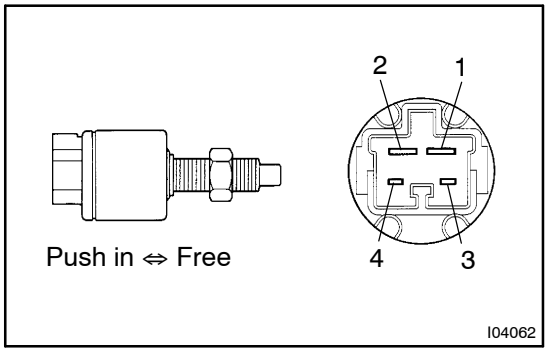
When brake pedal operation is performed, the standard values will be above.

NG → **Go to step 3**

OK

PROCEED TO NEXT CIRCUIT INSPECTION SHOWN ON PROBLEM SYMPTOMS TABLE (SEE PAGE 05–2451)

3 INSPECT STOP LAMP SWITCH ASSY



(a) Disconnect the stop lamp switch assy connector.
(b) Measure the resistance according to the value(s) in the table below.

Standard:

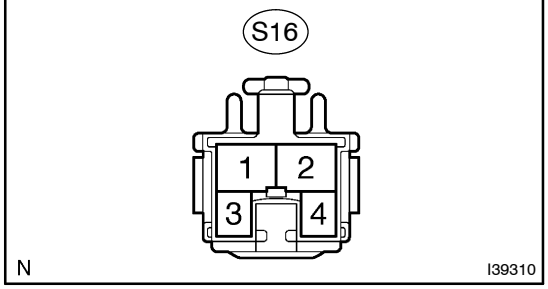
Switch Condition	Terminal Connection	Specified Value
Switch pin free	3 – 4	10 kΩ or higher
Switch pin pushed in	3 – 4	Below 1 Ω

NG → **REPLACE STOP LAMP SWITCH ASSY**

OK

4 CHECK HARNESS AND CONNECTOR (STOP LAMP SWITCH – BATTERY)

Wire Harness Front View:



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

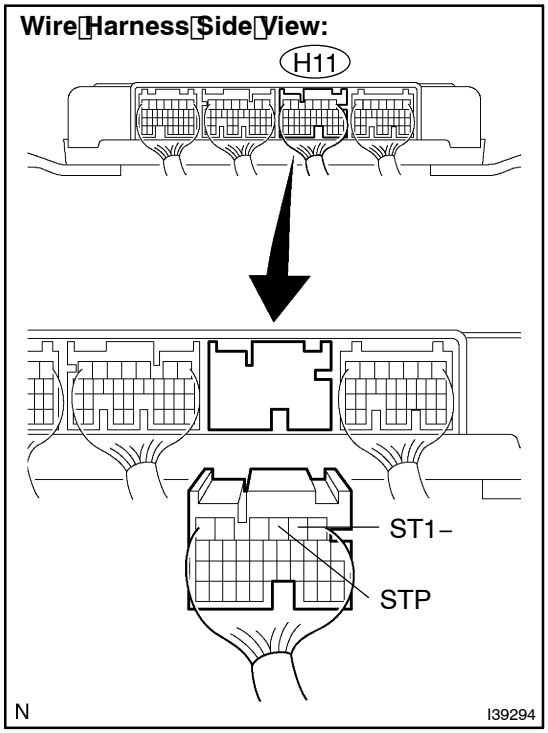
Standard:

Symbol (Terminal Connection)	Condition	Specified Value
S16–3 – Body ground	Always	10 to 14 V

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

OK

5	INSPECT HYBRID VEHICLE CONTROL ECU



(a) Reconnect the stop lamp switch connector.
(b) Disconnect the H11 connector from the hybrid vehicle control ECU.
(c) Turn the power switch on (IG).
(d) Measure the voltage according to the value(s) in the table below.

Standard:

Symbol (Terminal Connection)	Pedal Condition	Specified Value
STP (H11–3) – Body ground	Brake pedal is depressed	10 to 14 V
STP (H11–3) – Body ground	Brake pedal is released	Below 1 V
ST1– (H11–2) – Body ground	Brake pedal is depressed	Below 1 V
ST1– (H11–2) – Body ground	Brake pedal is released	10 to 14 V

NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR (STOP LAMP SWITCH – HYBRID VEHICLE CONTROL ECU)**

OK →

REPLACE HYBRID VEHICLE CONTROL ECU (SEE PAGE 21–128)