DTC	P0500	Vehicle Speed Sensor Malfunction

DTC	P0503	Vehicle Speed Sensor "A" Intermittent / Erratic / High

DESCRIPTION

The cruise control system uses the same vehicle speed signal that is sent to the ECM for the SFI system. If DTC P0500 is detected, perform the diagnosis using the inspection procedure for DTC P0500 in the SFI system (See page ES-283). The speed signal is converted for use by the cruise control inside the ECM. Both the SFI system and the cruise control system can set DTC P0500, however the detection conditions of the two systems are different.

DTC No.	DTC Detection Condition	Trouble Area
P0500	The vehicle speed signal from the vehicle speed sensor is cut for 0.14 sec. or more while cruise control is in operation	• Vehicle speed sensor • Vehicle speed sensor signal circuit • ECM
P0503	Momentary interruption and noise are detected when a rapid change of vehicle speed occurs while cruise control is in operation	• Vehicle speed sensor • Vehicle speed sensor signal circuit • ECM

CC

WIRING DIAGRAM

Refer to DTC P0500 (See page ES-284).

INSPECTION PROCEDURE

Refer to DTC P0500 (See page ES-284).

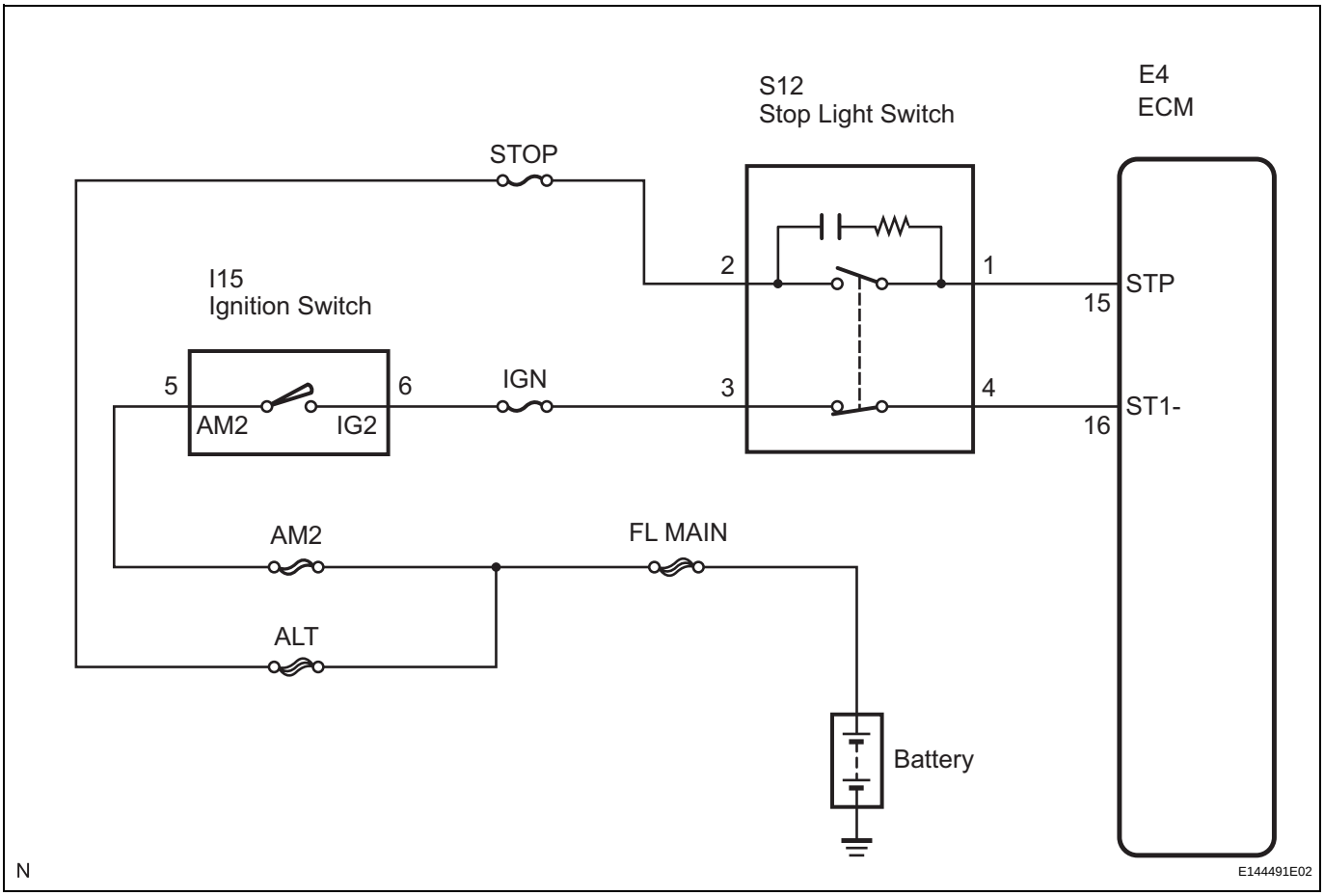
DTC	P0571	Brake Switch "A" Circuit

DESCRIPTION

When the brake pedal is depressed, the stop light switch sends a signal to the ECM. When the ECM receives this signal, it cancels the cruise control. The fail-safe function operates to enable normal driving even if there is a malfunction in the stop light signal circuit. The cancellation condition occurs when voltage is applied to terminal STP. When the brake is applied, voltage is normally applied to terminal STP of the ECM through the STOP SW fuse and the stop light switch, and the ECM turns the cruise control off.

DTC No.	DTC Detection Condition	Trouble Area
P0571	Voltage of STP terminal and that of ST1- terminal of ECM are less than 1 V for 0.5 sec. or more	• Stop light switch • Stop light switch circuit • ECM

WIRING DIAGRAM



INSPECTION PROCEDURE

1	READ VALUE OF INTELLIGENT TESTER

(a) Connect the intelligent tester to the DLC3.
(b) Turn the ignition switch to the ON position, and turn the intelligent tester main switch on.

(c) Check the DATA LIST for proper functioning of the stop light switch.

ECM (Cruise control):

Tester Display	Measurement Item/Range	Normal Condition	Diagnostic Note
STP LIGHT SW M	Stop light switch signal (Main CPU) / ON or OFF	ON: Brake pedal depressed OFF: Brake pedal released	-
STP LIGHT SW S2	Stop light switch signal (Sub CPU) / ON or OFF	ON: Brake pedal depressed OFF: Brake pedal released	-
STP LIGHT SW S1	Stop light switch signal (Sub CPU) / ON or OFF	ON: Brake pedal depressed OFF: Brake pedal released	-

OK:
When the brake pedal is operated, the display changes as shown above.

NG → **Go to step 2**

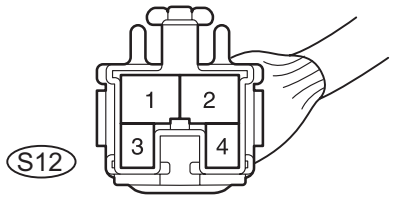
OK

REPLACE ECM (See page ES-498)

CC

2 CHECK HARNESS AND CONNECTOR (STOP LIGHT SWITCH - BATTERY)

Stop Light Switch Wire Haness Side Connector Front View:



N E114084E14

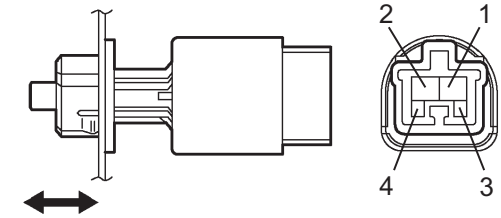
(a) Disconnect the S12 stop light switch connector.
(b) Measure the voltage according to the value(s) in the table below.
Standard voltage

Tester Connection	Condition	Specified Condition
S12-2 - Body ground	Always	10 to 14 V
S12-3 - Body ground	Ignition switch on	10 to 14 V

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

OK

3 INSPECT STOP LIGHT SWITCH



H E065594E60

(a) Remove the stop light switch.
(b) Measure the resistance according to the value(s) in the table below.
Standard resistance

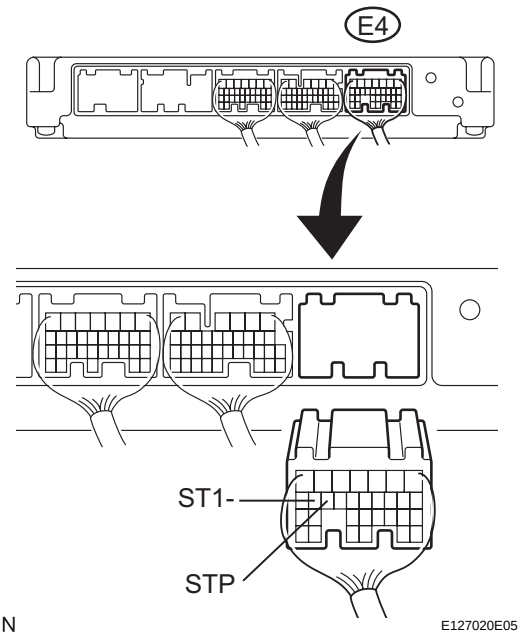
Tester Connection	Switch Condition	Specified Condition
1 - 2	Switch pin not pushed	Below 1 Ω
3 - 4	Switch pin not pushed	10 kΩ or higher
1 - 2	Switch pin pushed	10 kΩ or higher
3 - 4	Switch pin pushed	Below 1 Ω

NG → **REPLACE STOP LIGHT SWITCH**

OK

4	CHECK ECM

ECM Wire Harness View:



(a) Reconnect the S12 stop light switch connector.
(b) Disconnect the E4 connector from the ECM.
(c) Turn the ignition switch to the ON position.
(d) Measure the voltage according to the value(s) in the table below.

Standard voltage

Tester Connection	Brake Pedal Condition	Specified Condition
E4-15 (STP) - Body ground	Depressed	10 to 14 V
E4-15 (STP) - Body ground	Released	Below 1 V
E4-16 (ST1-) - Body ground	Depressed	Below 1 V
E4-16 (ST1-) - Body ground	Released	10 to 14 V

NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR (STOP LIGHT SWITCH - ECM)**

OK →

REPLACE ECM (See page ES-498)