

DTC	P0504	BRAKE SWITCH "A"/"B" CORRELATION
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CIRCUIT DESCRIPTION

In addition to turning on the stop lamps, the stop lamp switch signals are used for a variety of engine, transmission and suspension functions. The stop lamp switch is designed with two complementary signal outputs, STP and ST1-. The ECM analyzes these signal outputs to detect malfunctions in the stop lamp switch.

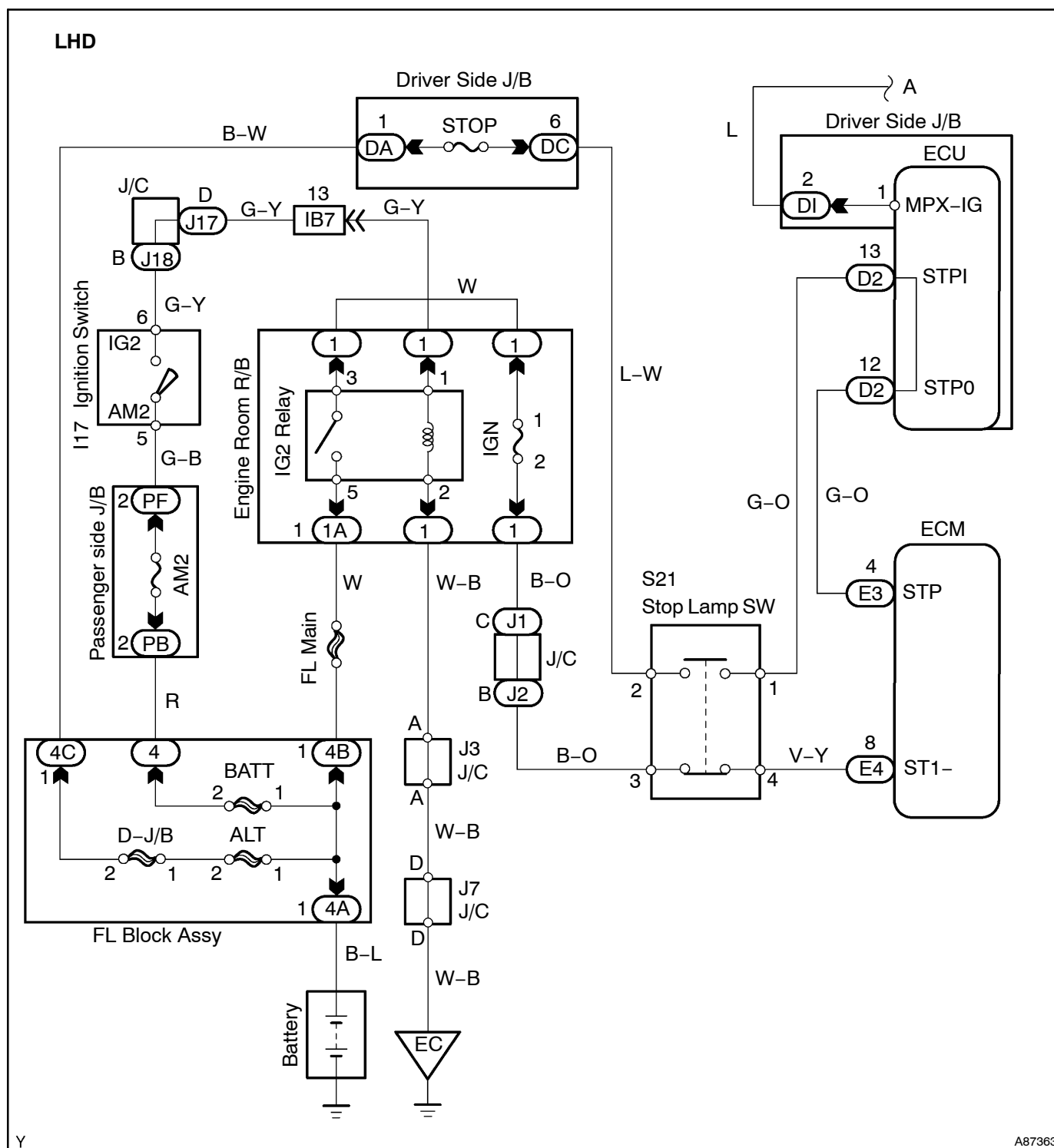
DTC No.	DTC Detection Condition	Trouble Area
P0504	Conditions (a), (b) and (c) continue for 0.5 sec. or more: (a) Ignition switch ON (b) Brake pedal released (c) STP signal is OFF when the ST1- signal is OFF	• Short in stop lamp switch signal circuit • Stop lamp fuse • Stop lamp switch • ECM

HINT:

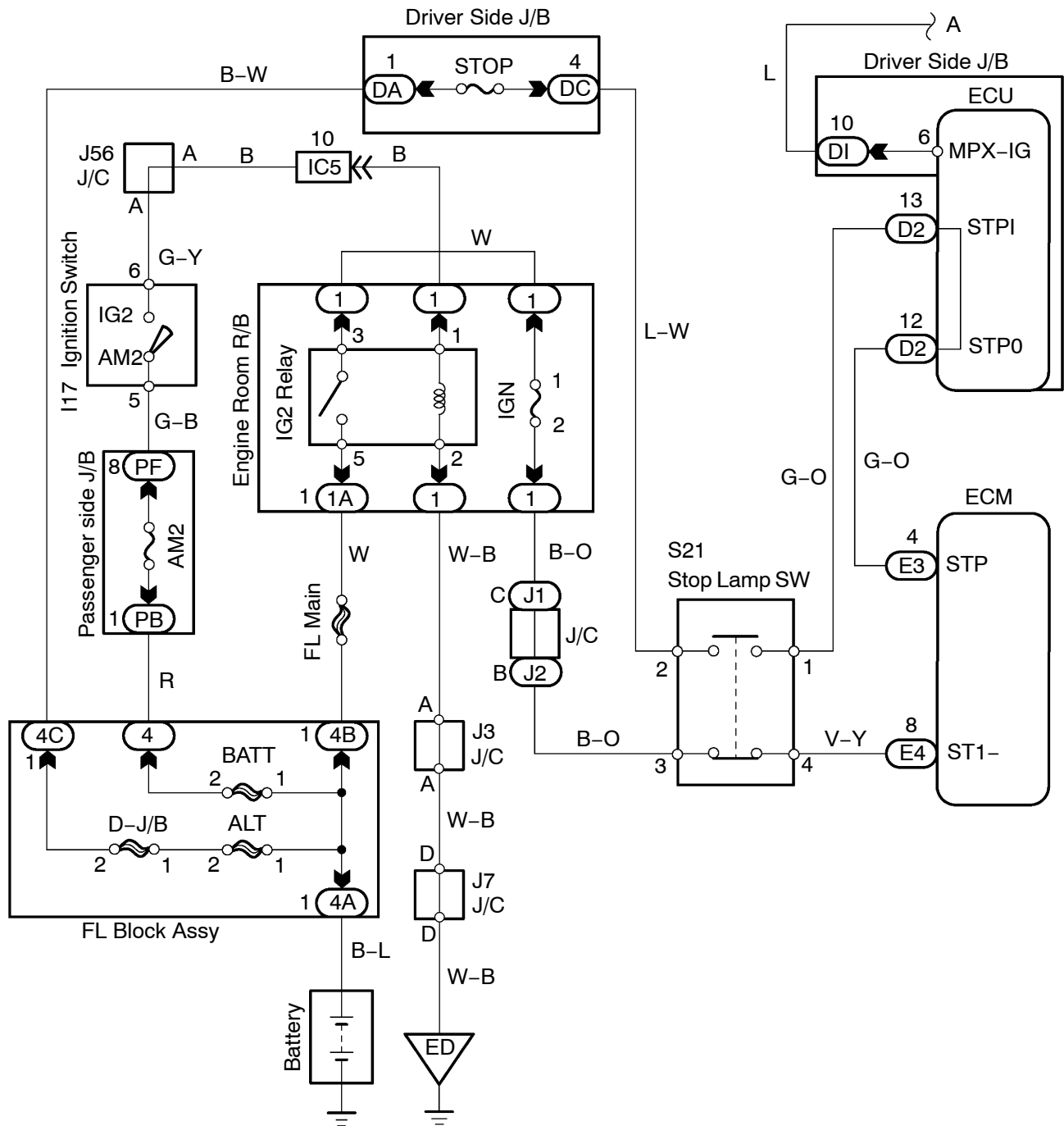
Normal condition is as shown in the table below. The signals can be read using the Intelligent Tester II.

Signal	Brake Pedal Released	In Transition	Brake Pedal Depressed
STP	OFF	ON	ON
ST1-	ON	ON	OFF

WIRING DIAGRAM

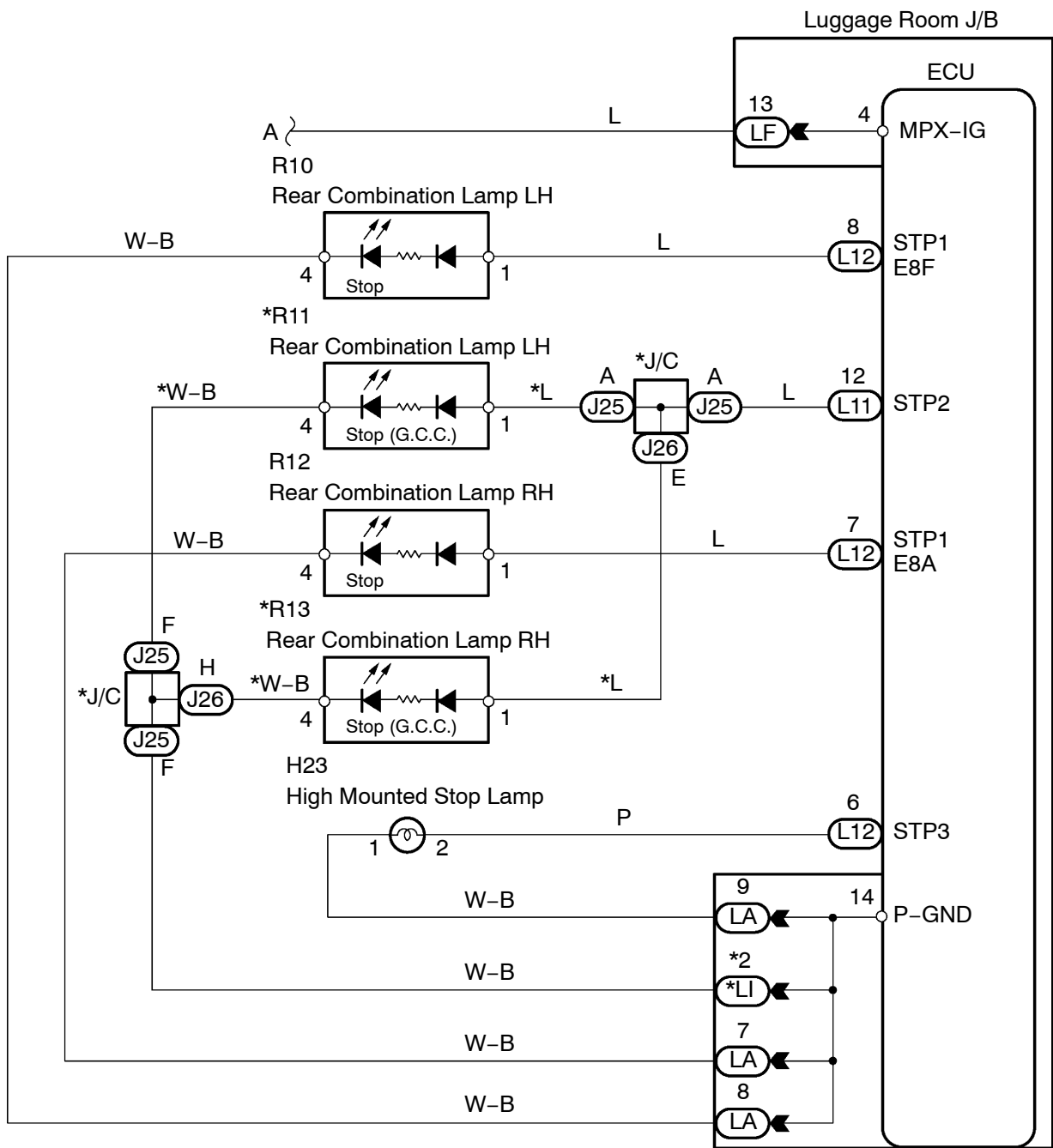


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*: LHD only

INSPECTION PROCEDURE

1 CHECK STOP LAMP SWITCH ASSY

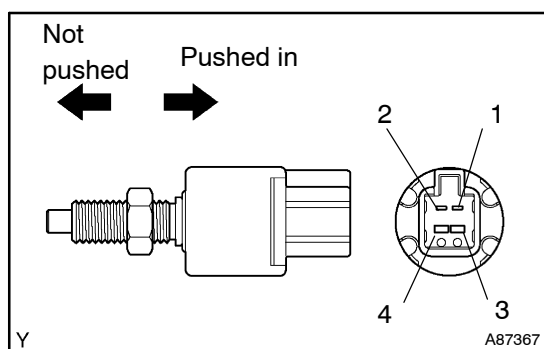
- (a) Check if the stop lamps turn on and off normally when the brake pedal is depressed and released.

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REPAIR OR REPLACE STOP LAMP SWITCH CIRCUIT

OK

2 INSPECT STOP LAMP SWITCH ASSY



- (a) Measure the resistance between each pair of the terminals.

Standard:

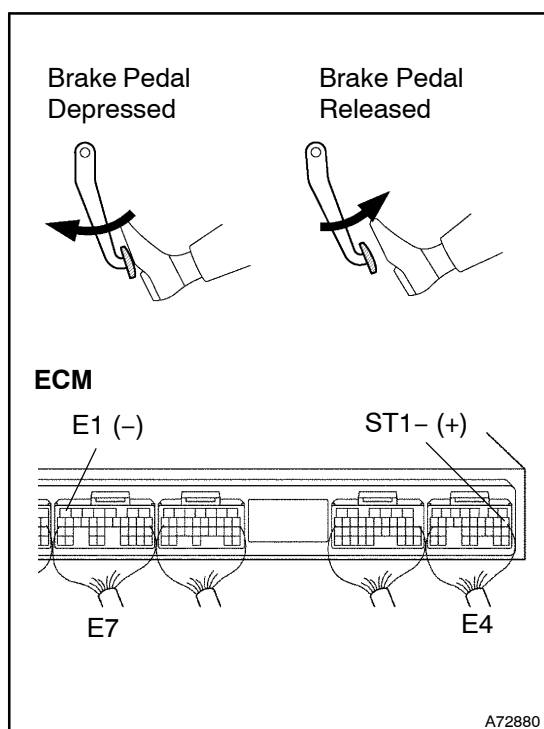
Switch Position	Tester Connection	Specified Condition
Switch pin not pushed	1 - 2	Below 1 Ω
Switch pin not pushed	3 - 4	10 k Ω or higher
Switch pin pushed in	1 - 2	10 k Ω or higher
Switch pin pushed in	3 - 4	Below 1 Ω

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REPLACE STOP LAMP SWITCH ASSY

OK

3 READ VALUE OF INTELLIGENT TESTER II



- (a) Turn the ignition switch ON.
 (b) Enter the following menus: Enter/ Diagnosis/ OBD·MOBD/ Power train/ Engine and ECT/ Data List/ All Data /Stop Light Switch.
 (c) Confirm the stop lamp switch condition.

Standard:

Brake Pedal	Specified Condition
Depressed	STP Signal ON
Released	STP Signal OFF

- (d) Measure the voltage of the ECM connectors.

Standard:

Tester Connection	Brake Pedal	Specified Condition
E4-8 (ST1-) - E7-7 (E1)	Depressed	Below 1.5 V
E4-8 (ST1-) - E7-7 (E1)	Released	7.5 to 14 V

OK

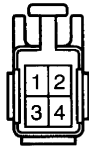
CHECK FOR INTERMITTENT PROBLEMS
 (See page 05-11)

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4 CHECK WIRE HARNESS (STOP LAMP SWITCH - ECM)

Wire Harness Side

S19
Stop Lamp Switch



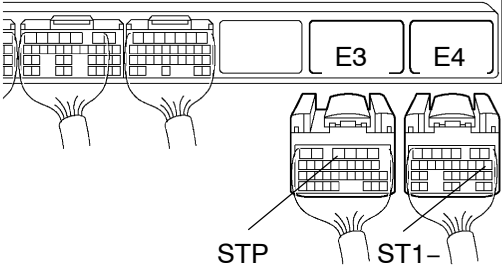
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- (a) Disconnect the S19 stop lamp switch connector.
- (b) Disconnect the E3 and E4 ECM connectors.
- (c) Measure the resistance of the wire harness side connectors.

Standard:

Tester Connection	Specified Condition
S19-1 (Stop lamp switch) - E3-4 (STP)	Below 1 Ω
S19-4 (Stop lamp switch) - E4-8 (ST1-)	Below 1 Ω
S19-1 (Stop lamp switch) or E3-4 (STP) - Body ground	10 k Ω or higher
S19-4 (Stop lamp switch) or E4-8 (ST1-) - Body ground	10 k Ω or higher

ECM



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REPAIR OR REPLACE HARNESS AND CONNECTOR

OK

REPLACE ECM (See page 10-21)