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Model Year Start: 2023	Model: Prius Prime	Prod Date Range: [12/2022 -]
Title: BRAKE CONTROL / DYNAMIC CONTROL SYSTEMS: ELECTRONICALLY CONTROLLED BRAKE SYSTEM: C13807E; Stop Lamp Relay Actuator Stuck On; 2023 - 2024 MY Prius Prius Prime [12/2022 -]		

DTC	C13807E	Stop Lamp Relay Actuator Stuck On
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DESCRIPTION

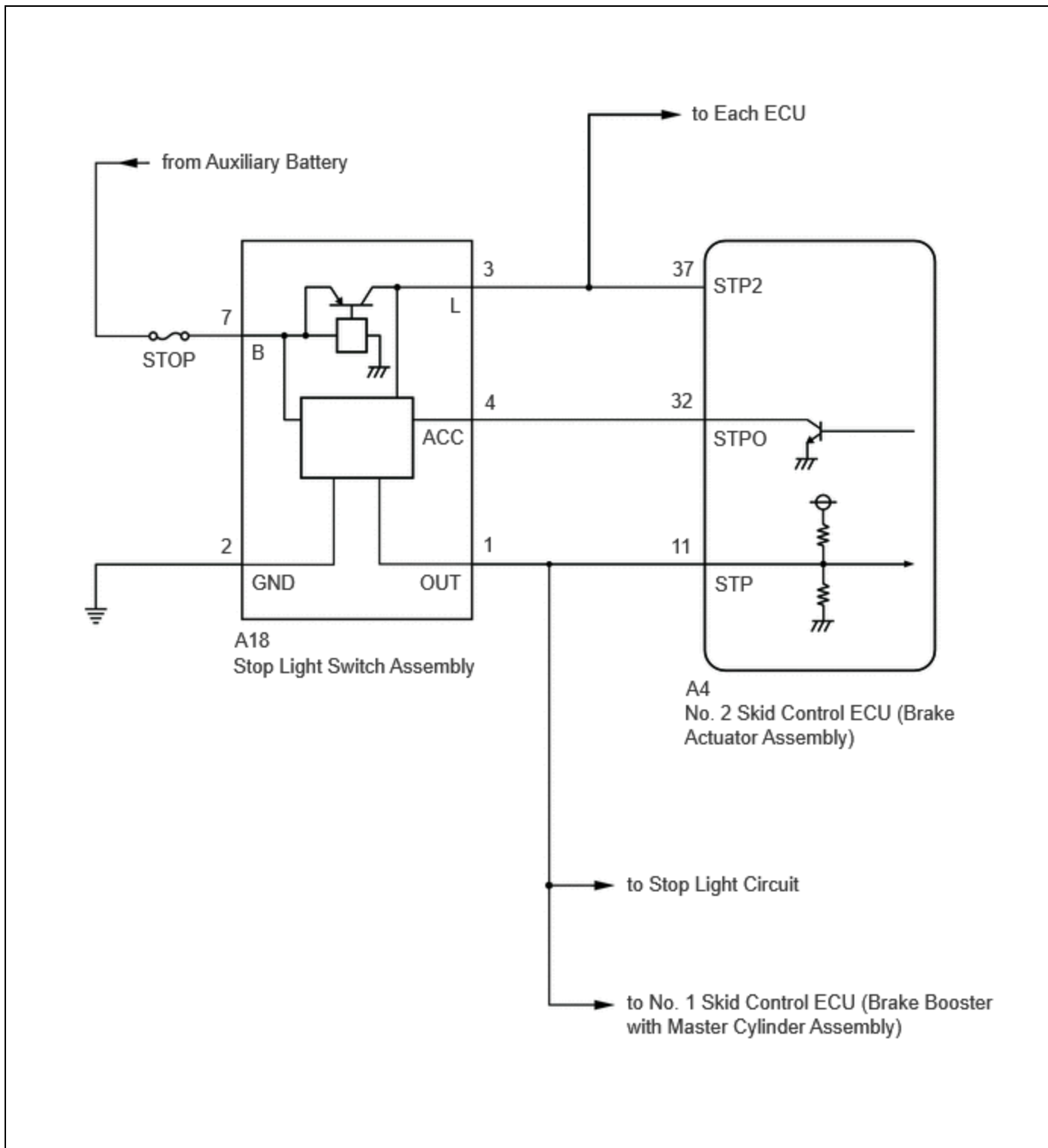
When any of the following conditions are met, the No. 2 skid control ECU (brake actuator assembly) sets the drive output (STPO) ON which operates the stop light control relay (stop light switch assembly) and turns on the stop lights.

Illumination Conditions:

- Pre-collision brake is operating.
- The dynamic radar cruise control system is operating and is applying the brakes.
- Secondary collision brake is operating.
- Brake hold is operating.
- The parking brake is engaged while the vehicle is being driven.
- The advanced park system is operating and is applying the brakes. (w/ Advanced Park)

DTC NO.	DETECTION ITEM	DTC DETECTION CONDITION	TROUBLE AREA	MIL	DTC OUTPUT FROM	PRIORITY	NOTE
C13807E	Stop Lamp Relay Actuator Stuck On	When the IG1 terminal voltage exceeds 10 V and the +BS terminal voltage is 9.5 V or higher, stop light drive output (STPO) is OFF, STP2 is OFF and STP is ON continuously for 5 seconds or more.	<ul style="list-style-type: none"> • Wire harness and connector • Stop light switch assembly • STP circuit • STP2 circuit • No. 2 skid control ECU (brake actuator assembly) 	Does not come on	Brake/EPB	B	Output ECU: No. 2 skid control ECU (brake actuator assembly)

WIRING DIAGRAM



CAUTION / NOTICE / HINT

NOTICE:

Inspect the fuses for circuits related to this system before performing the following procedure.

PROCEDURE

1.	CHECK DTC
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(a) Check the DTCs that are output.

Chassis > Brake/EPB > Trouble Codes

RESULT	PROCEED TO
Only C13807E is output	A
C13807E and other DTCs are output	B

B ▶ REPAIR CIRCUITS INDICATED BY OUTPUT DTCs

A



2.	CHECK STOP LIGHT ILLUMINATION STATUS
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(a) With the brake pedal released, check the illumination status of the stop lights.

RESULT	PROCEED TO
The stop lights are illuminated.	A
The stop lights are not illuminated.	B

B ▶ GO TO STEP 6

A



3.	CHECK BRAKE ACTUATOR ASSEMBLY
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Procedure1

(a) Make sure that there is no looseness at the locking part and the connecting part of the connectors.

OK:

The connector is securely connected.

Pre-procedure1

(b) Disconnect the A4 No. 2 skid control ECU (brake actuator assembly) connector.

Procedure2

(c) Check both the connector case and the terminals for deformation and corrosion.

OK:

No deformation or corrosion.

Procedure3

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

Standard Voltage:



[Click Location & Routing\(A4\).](#)

[Click Connector\(A4\).](#)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION	RESULT
A4-11 (STP) - Body ground	Stop light switch assembly off (Brake pedal released)	Below 1.5 V	V

Post-procedure1

(e) None

OK **REPLACE BRAKE ACTUATOR ASSEMBLY**

NG



4.	CHECK STOP LIGHT SWITCH ASSEMBLY
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Procedure1

(a) Make sure that there is no looseness at the locking part and the connecting part of the connectors.

OK:

The connector is securely connected.

Pre-procedure1

(b) Disconnect the A18 stop light switch assembly connector.

Procedure2

(c) Check both the connector case and the terminals for deformation and corrosion.

OK:

No deformation or corrosion.

Procedure3

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

Standard Voltage:



[Click Location & Routing\(A4\)](#)

[Click Connector\(A4\)](#)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION	RESULT
A4-11 (STP) - Body ground	Always	Below 1.5 V	V

Post-procedure1

(e) None

OK ► **REPLACE STOP LIGHT SWITCH ASSEMBLY**

NG



5.	CHECK FOR SHORT TO +B IN STP CIRCUIT
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(a) Check that there is no short to +B in the STP circuit (wire harnesses, connectors, stop lights and ECUs).

OK:

No short to +B.

OK ► **USE SIMULATION METHOD TO CHECK**

NG ► **REPAIR OR REPLACE MALFUNCTIONING PART**

6.	CHECK BRAKE ACTUATOR ASSEMBLY
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Procedure1

(a) Make sure that there is no looseness at the locking part and the connecting part of the connectors.

OK:

The connector is securely connected.

Pre-procedure1

(b) Disconnect the A4 No. 2 skid control ECU (brake actuator assembly) connector.

Procedure2

(c) Check both the connector case and the terminals for deformation and corrosion.

OK:

No deformation or corrosion.

Procedure3

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

Standard Voltage:



[Click Location & Routing\(A4\).](#)

[Click Connector\(A4\).](#)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION	RESULT
A4-37 (STP2) - Body ground	Stop light switch assembly on (Brake pedal depressed)	11 to 14 V	V

Post-procedure1

(e) None

OK **REPLACE BRAKE ACTUATOR ASSEMBLY**

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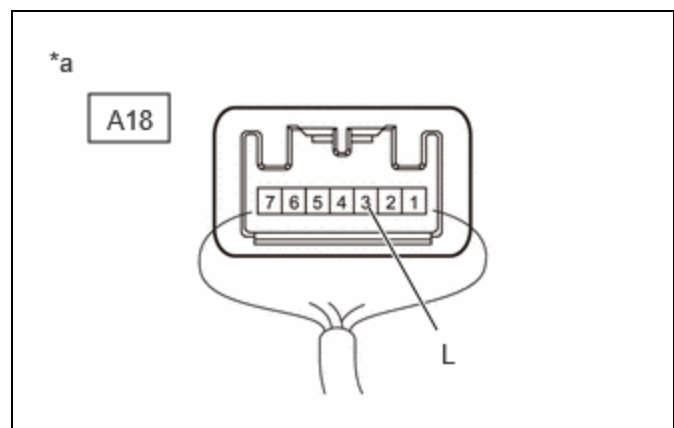


7.	CHECK HARNESS AND CONNECTOR (STOP LIGHT SWITCH ASSEMBLY - BRAKE ACTUATOR ASSEMBLY)
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(a) Make sure that there is no looseness at the locking part and the connecting part of the connector.

OK:

The connector is securely connected.



*a	Component with harness connected (Stop Light Switch Assembly)
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(b) Measure the voltage according to the value(s) in the table below.

Standard Voltage:



[Click Location & Routing\(A18\).](#)

[Click Connector\(A18\)](#)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION	RESULT
A18-3 (L) - Body ground	Stop light switch assembly on (Brake pedal depressed)	11 to 14 V	V

OK ► REPAIR OR REPLACE HARNESS OR CONNECTOR

NG



8. CHECK FOR SHORT TO GROUND IN STP2 CIRCUIT

(a) Check that there is no short to ground in the STP2 circuit (wire harnesses, connectors and ECUs)

OK:

There is no short to ground.

OK ► REPLACE STOP LIGHT SWITCH ASSEMBLY

NG ► REPAIR OR REPLACE MALFUNCTIONING PART

