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Model Year Start: 2023	Model: Prius Prime	Prod Date Range: [12/2022 -]
Title: POWER ASSIST SYSTEMS: POWER STEERING SYSTEM: C151A17; Power Steering Torque Sensor "A" Supply Voltage Circuit Voltage Above Threshold; 2023 - 2024 MY Prius Prius Prime [12/2022 -]		

DTC	C151A17	Power Steering Torque Sensor "A" Supply Voltage Circuit Voltage Above Threshold
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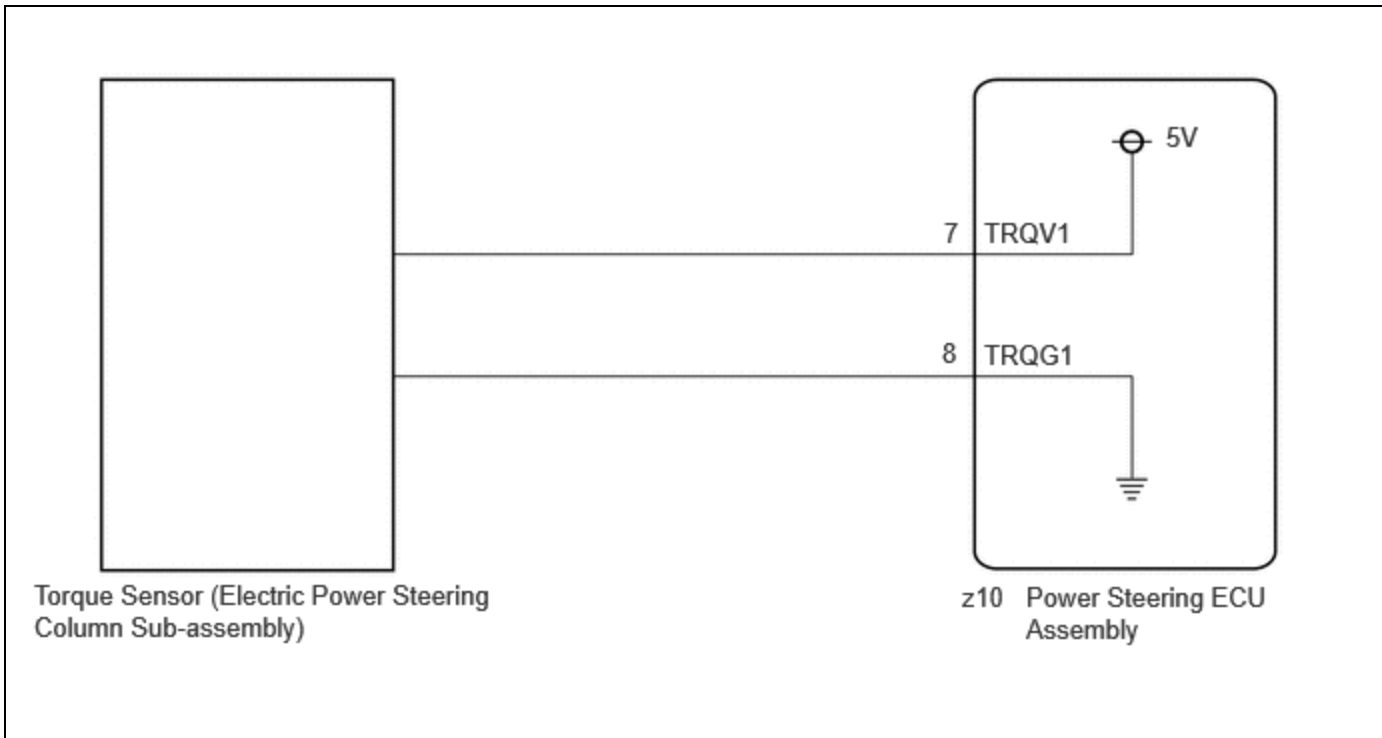
DESCRIPTION

The power steering ECU assembly supplies a voltage of 5 V to the torque sensor (electric power steering column sub-assembly) and monitors the voltage value of the Hall IC inside the torque sensor (electric power steering column sub-assembly) which changes in response to changes in the magnetic flux density (steering torque) detected by the Hall IC, and calculates the assist torque.

While DTC C151A17 is detected, power assist is stopped due to fail-safe operation.

DTC NO.	DETECTION ITEM	DTC DETECTION CONDITION	TROUBLE AREA	WARNING INDICATE	DTC OUTPUT FROM	PRIORITY	RETURN-TO-NORMAL CONDITION
C151A17	Power Steering Torque Sensor "A" Supply Voltage Circuit Voltage Above Threshold	TRQV1 voltage is 5.6 V or more	<ul style="list-style-type: none"> Torque sensor (Electric power steering column sub-assembly) Power steering ECU assembly 	EPS warning light: Comes on	EMPS	A	Ignition switch ON again

WIRING DIAGRAM



PROCEDURE

1.	INSPECT TORQUE SENSOR (ELECTRIC POWER STEERING COLUMN SUB-ASSEMBLY) (CHECK FOR SHORT)
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Pre-procedure1

- (a) Disconnect the z10 power steering ECU assembly connector.

Procedure1

- (b) Measure the resistance according to the value(s) in the table below.

Standard Resistance:



[Click Location & Routing\(z10\)](#)

[Click Connector\(z10\)](#)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION	RESULT
z10-7 (TRQV1) - Body ground	Always	10 kΩ or higher	kΩ
z10-7 (TRQV1) - z10-8 (TRQG1)	Always	10 kΩ or higher	kΩ

Post-procedure1

- (c) None

NG **REPLACE ELECTRIC POWER STEERING COLUMN SUB-ASSEMBLY**

OK
▼

2. INSPECT POWER STEERING ECU ASSEMBLY (POWER SOURCE OF TORQUE SENSOR)

Pre-procedure1

(a) Start the engine.

Procedure1

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

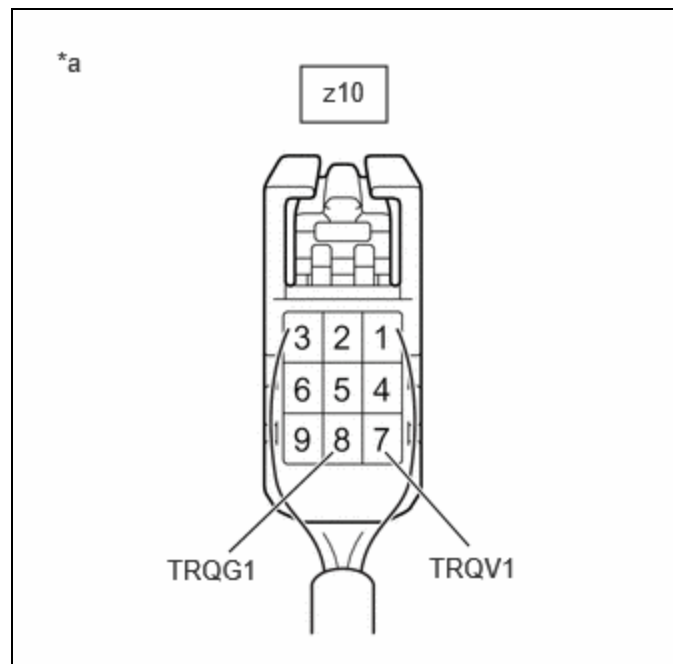
Standard Voltage:



[Click Location & Routing\(z10\)](#)

[Click Connector\(z10\)](#)

TESTER CONNECTION	SWITCH CONDITION	SPECIFIED CONDITION	RESULT
z10-7 (TRQV1) - z10-8 (TRQG1)	Ignition switch ON	4.5 to 5.5 V	V



*a Component with harness connected (Power Steering ECU Assembly)

Post-procedure1

(c) None

OK ► REPLACE ELECTRIC POWER STEERING COLUMN SUB-ASSEMBLY INFO

NG ► REPLACE POWER STEERING ECU ASSEMBLY INFO

