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|--|---------------------------|--------------------------------------|
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| Model Year Start: 2023 | Model: Prius Prime | Prod Date Range: [12/2022 -] |
| Title: PARK ASSIST / MONITORING: PANORAMIC VIEW MONITOR SYSTEM: C16891E; IR Floodlight Circuit Resistance Out of Range; 2023 - 2024 MY Prius Prius Prime [12/2022 -] | | |

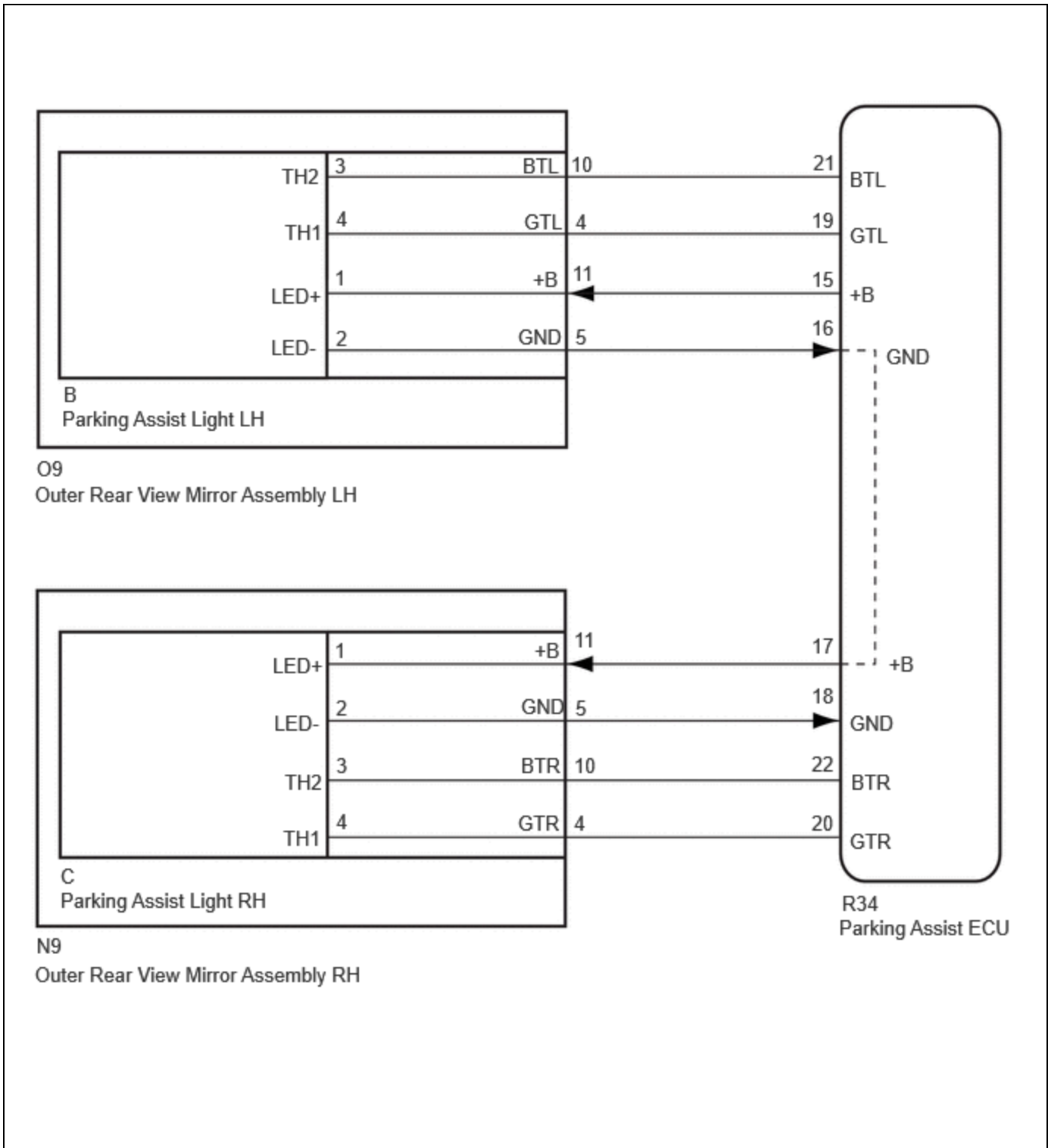
| | | |
|------------|----------------|--|
| DTC | C16891E | IR Floodlight Circuit Resistance Out of Range |
|------------|----------------|--|

DESCRIPTION

This DTC is stored when the parking assist ECU performs a self-diagnosis and detects a parking assist light supply power malfunction.

| DTC NO. | DETECTION ITEM | DTC DETECTION CONDITION | TROUBLE AREA | DTC OUTPUT FROM | PRIORITY |
|---------|---|---|--|--|----------|
| C16891E | IR Floodlight Circuit Resistance Out of Range | Parking assist light supply power malfunction | <ul style="list-style-type: none"> • Harness or connector • Parking assist ECU • Parking assist light LH • Parking assist light RH • Outer rear view mirror assembly LH • Outer rear view mirror assembly RH | Circumference Monitoring Camera Control Module | A |

WIRING DIAGRAM



CAUTION / NOTICE / HINT

NOTICE:

Depending on the parts that are replaced or operations that are performed during vehicle inspection or maintenance, calibration of other systems as well as the panoramic view monitor system may be needed.

Click here [INFO](#)

PROCEDURE

| | |
|-----------|---|
| 1. | CHECK HARNESS AND CONNECTOR (PARKING ASSIST ECU - OUTER REAR VIEW MIRROR ASSEMBLY RH/LH) |
|-----------|---|

Pre-procedure1

- (a) Connect the R34 parking assist ECU connector.
 (b) Connect the O9 outer rear view mirror assembly LH connector.

Pre-procedure2

- (c) Disconnect the N9 outer rear view mirror assembly RH connector.

Procedure1

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

Standard Resistance:



[Click Location & Routing\(R34,O9,N9\)](#)

[Click Connector\(R34\)](#)

[Click Connector\(O9\)](#)

[Click Connector\(N9\)](#)

| TESTER CONNECTION | CONDITION | SPECIFIED CONDITION | RESULT |
|---|-----------|---------------------|--------|
| R34-15(+B) - O9-11(+B) | Always | Below 1 Ω | Ω |
| R34-16(GND) - O9-5(GND) | Always | Below 1 Ω | Ω |
| R34-19(GTL) - O9-4(GTL) | Always | Below 1 Ω | Ω |
| R34-21(BTL) - O9-10(BTL) | Always | Below 1 Ω | Ω |
| R34-17(+B) - N9-11(+B) | Always | Below 1 Ω | Ω |
| R34-18(GND) - N9-5(GND) | Always | Below 1 Ω | Ω |
| R34-22(BTR) - N9-10(BTR) | Always | Below 1 Ω | Ω |
| R34-20(GTR) - N9-4(GTR) | Always | Below 1 Ω | Ω |
| R34-15(+B) or O9-11(+B) - Body ground | Always | 10 kΩ or higher | kΩ |
| R34-16(GND) or O9-5(GND) - Body ground | Always | 10 kΩ or higher | kΩ |
| R34-19(GTL) or O9-4(GTL) - Body ground | Always | 10 kΩ or higher | kΩ |
| R34-21(BTL) or O9-10(BTL) - Body ground | Always | 10 kΩ or higher | kΩ |
| R34-17(+B) or N9-11(+B) - Body ground | Always | 10 kΩ or higher | kΩ |
| R34-18(GND) or N9-5(GND) - Body ground | Always | 10 kΩ or higher | kΩ |
| R34-22(BTR) or N9-10(BTR) - Body ground | Always | 10 kΩ or higher | kΩ |
| R34-20(GTR) or N9-4(GTR) - Body ground | Always | 10 kΩ or higher | kΩ |

Post-procedure1

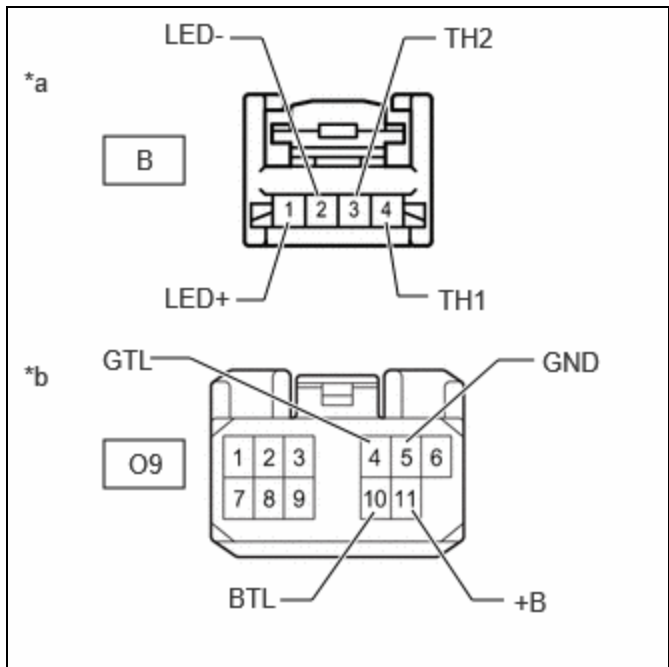
- (e) None

NG ▶ **REPAIR OR REPLACE WIRE HARNESS OR CONNECTOR**

OK
▼

2. CHECK FOR OUTER REAR VIEW MIRROR ASSEMBLY LH

Pre-procedure1



| | |
|----|--|
| *a | Front view of wire harness connector (to Parking Assist Light LH) |
| *b | Component without harness connected (Outer Rear View Mirror Assembly LH) |

(a) Remove the outer rear view mirror assembly LH.

(b) Remove the parking assist light LH from the outer rear view mirror assembly LH.

Procedure1

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

Standard Resistance:



[Click Location & Routing\(O9\)](#)

[Click Connector\(O9\)](#)

| TESTER CONNECTION | CONDITION | SPECIFIED CONDITION | RESULT |
|--------------------------------------|-----------|---------------------|--------|
| B-1(LED+) - O9-11(+B) | Always | Below 1 Ω | Ω |
| B-2(LED-) - O9-5(GND) | Always | Below 1 Ω | Ω |
| B-3(TH2) - O9-10(BTL) | Always | Below 1 Ω | Ω |
| B-4(TH1) - O9-4(GTL) | Always | Below 1 Ω | Ω |
| B-1(LED+) or O9-11(+B) - Body ground | Always | 10 kΩ or higher | kΩ |
| B-2(LED-) or O9-5(GND) - Body ground | Always | 10 kΩ or higher | kΩ |
| B-3(TH2) or O9-10(BTL) - Body ground | Always | 10 kΩ or higher | kΩ |
| B-4(TH1) or O9-4(GTL) - Body ground | Always | 10 kΩ or higher | kΩ |

Post-procedure1

(d) None

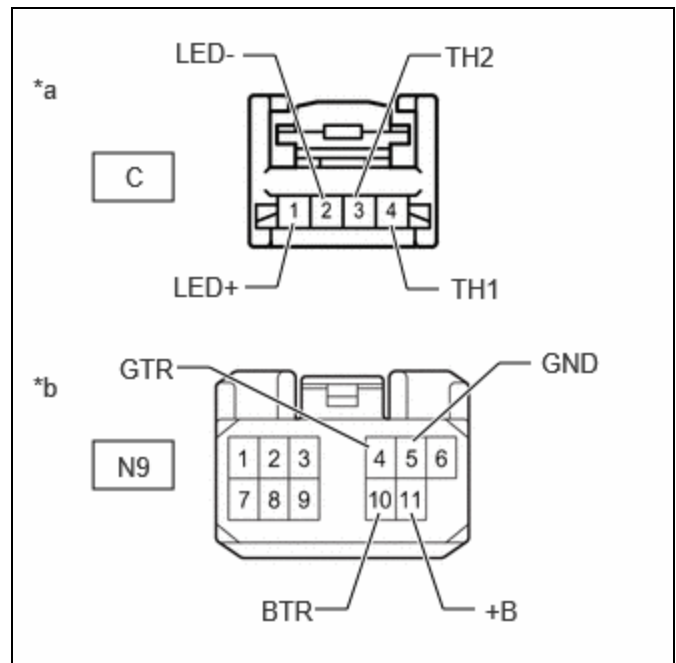
NG ▶ REPLACE OUTER REAR VIEW MIRROR ASSEMBLY LH

OK

| | |
|-----------|---|
| 3. | CHECK OUTER REAR VIEW MIRROR ASSEMBLY RH |
|-----------|---|

Pre-procedure1

(a) Remove the outer rear view mirror assembly RH.



| | |
|----|---|
| *a | Front view of wire harness connector (to Parking Assist Light RH) |
|----|---|

*b

Component without harness connected
(Outer Rear View Mirror Assembly RH)

(b) Remove the parking assist light RH from the outer rear view mirror assembly RH.

Procedure1

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

Standard Resistance:



[Click Location & Routing\(N9\)](#)

[Click Connector\(N9\)](#)

| TESTER CONNECTION | CONDITION | SPECIFIED CONDITION | RESULT |
|--------------------------------------|-----------|-------------------------|------------|
| C-1(LED+) - N9-11(+B) | Always | Below 1 Ω | Ω |
| C-2(LED-) - N9-5(GND) | Always | Below 1 Ω | Ω |
| C-3(TH2) - N9-10(BTR) | Always | Below 1 Ω | Ω |
| C-4(TH1) - N9-4(GTR) | Always | Below 1 Ω | Ω |
| C-1(LED+) or N9-11(+B) - Cody ground | Always | 10 k Ω or higher | k Ω |
| C-2(LED-) or N9-5(GND) - Cody ground | Always | 10 k Ω or higher | k Ω |
| C-3(TH2) or N9-10(BTR) - Cody ground | Always | 10 k Ω or higher | k Ω |
| C-4(TH1) or N9-4(GTR) - Cody ground | Always | 10 k Ω or higher | k Ω |

Post-procedure1

(d) None

NG **REPLACE OUTER REAR VIEW MIRROR ASSEMBLY RH**

OK



4. CHECK PARKING ASSIST LIGHT LH (IRL+ - IRL-)

Pre-procedure1

(a) Remove the parking assist light LH from the outer rear view mirror assembly LH.

Procedure1

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

Standard Resistance:

| TESTER CONNECTION | CONDITION | SPECIFIED CONDITION | RESULT |
|---------------------|-----------|----------------------|------------|
| B-3(TH2) - B-4(TH1) | Always | 0.4 to 90 k Ω | k Ω |

Pre-procedure2

(c) Connect the R34 parking assist ECU connector.

(d) Connect the O9 outer rear view mirror assembly LH connector.

Procedure2

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

Standard Voltage:

| TESTER CONNECTION | CONDITION | SPECIFIED CONDITION | RESULT |
|---------------------|-----------|---------------------|--------|
| B-3(TH2) - B-4(TH1) | IG ON | 2.3 to 3.4 V | V |

Post-procedure1

(f) None

NG  **GO TO STEP 9**

OK



5. CHECK PARKING ASSIST LIGHT RH (IRR+ - IRR-)

Pre-procedure1

(a) Remove the parking assist light RH from the outer rear view mirror assembly RH.

Procedure1

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

Standard Resistance:

| TESTER CONNECTION | CONDITION | SPECIFIED CONDITION | RESULT |
|---------------------|-----------|----------------------|------------|
| C-3(TH2) - C-4(TH1) | Always | 0.4 to 90 k Ω | k Ω |

Pre-procedure2

(c) Connect the R34 parking assist ECU connector.

(d) Connect the N9 outer rear view mirror assembly RH connector.

Procedure2

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

Standard Voltage:

| TESTER CONNECTION | CONDITION | SPECIFIED CONDITION | RESULT |
|---------------------|-----------|---------------------|--------|
| C-3(TH2) - C-4(TH1) | IG ON | 2.3 to 3.4 V | V |

Post-procedure1

(f) None

OK  **REPLACE PARKING ASSIST ECU**

NG



6. REPLACE PARKING ASSIST LIGHT RH

(a) Replace the parking assist light RH with a new or known good one.

HINT:

[Click here](#) 

NEXT



7. CLEAR DTC

Pre-procedure1

(a) None

Procedure1

(b) Clear the DTCs.

Chassis > Circumference Monitoring Camera Control Module > Clear DTCs

Post-procedure1

(c) The ignition switch is turned off.

NEXT



8. CHECK FOR DTC

(a) Check for DTCs.

Chassis > Circumference Monitoring Camera Control Module > Trouble Codes

| RESULT | PROCEED TO |
|---------------------|------------|
| DTCs are not output | A |
| DTCs are output | B |

A ► END**B** ► REPLACE OUTER REAR VIEW MIRROR ASSEMBLY RH**9. REPLACE PARKING ASSIST LIGHT LH**

(a) Replace the parking assist light LH with a new or known good one.

HINT:Click here [INFO](#)**NEXT****10. CLEAR DTC**

Pre-procedure1

(a) None

Procedure1

(b) Clear the DTCs.

Chassis > Circumference Monitoring Camera Control Module > Clear DTCs

Post-procedure1

(c) The ignition switch is turned off.

NEXT**11. CHECK FOR DTC**

(a) Check for DTCs.

Chassis > Circumference Monitoring Camera Control Module > Trouble Codes

| RESULT | PROCEED TO |
|---------------------|------------|
| DTCs are not output | A |
| DTCs are output | B |

A ▶ END

B ▶ REPLACE OUTER REAR VIEW MIRROR ASSEMBLY LH

