

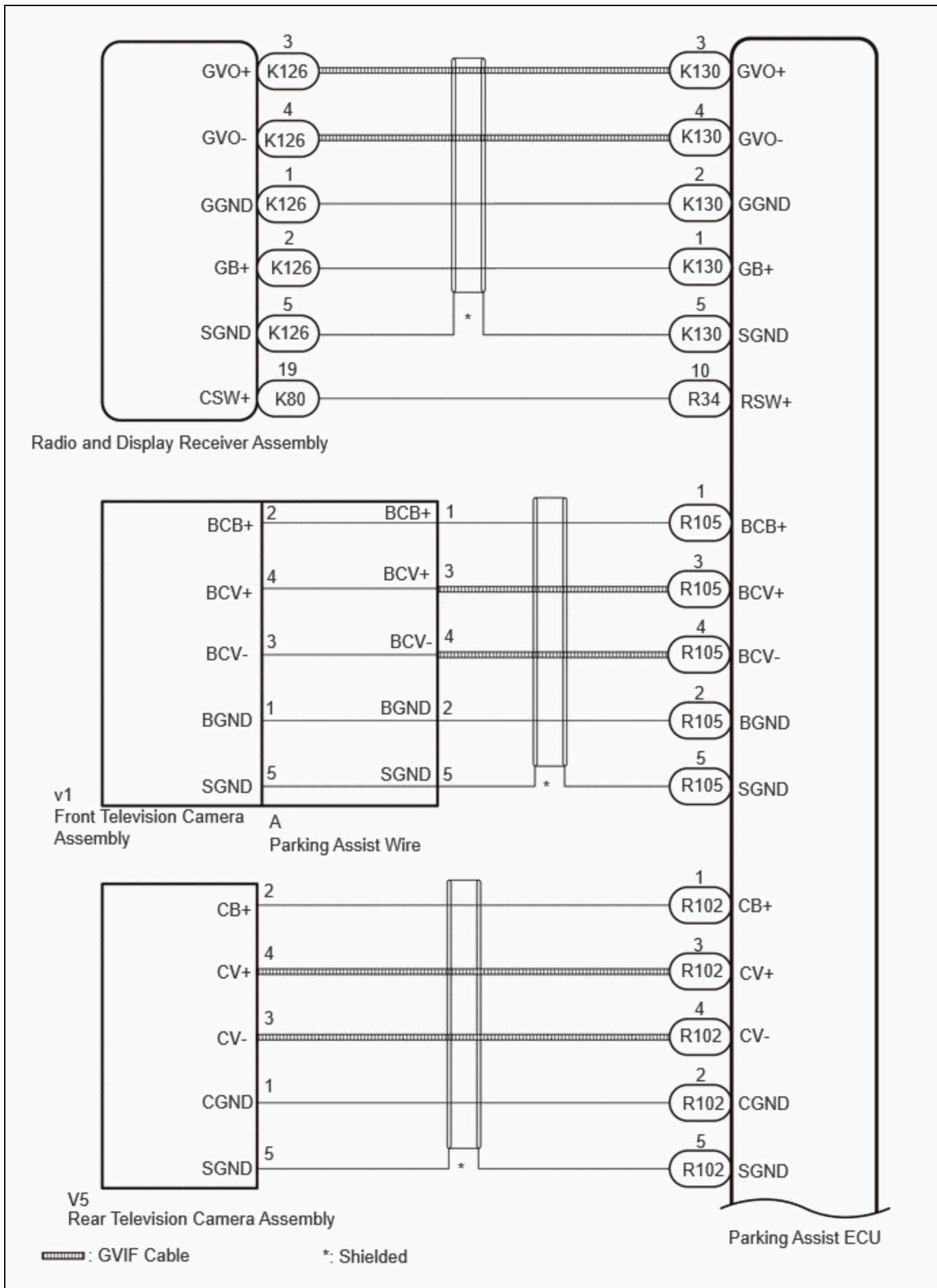
Last Modified: 12-04-2024	6.11:8.1.0	Doc ID: RM10000002918I
Model Year Start: 2023	Model: Prius Prime	Prod Date Range: [12/2022 -]
Title: PARK ASSIST / MONITORING: PANORAMIC VIEW MONITOR SYSTEM: Image from Camera for Panoramic View Monitor is Abnormal; 2023 - 2024 MY Prius Prius Prime [12/2022 -]		

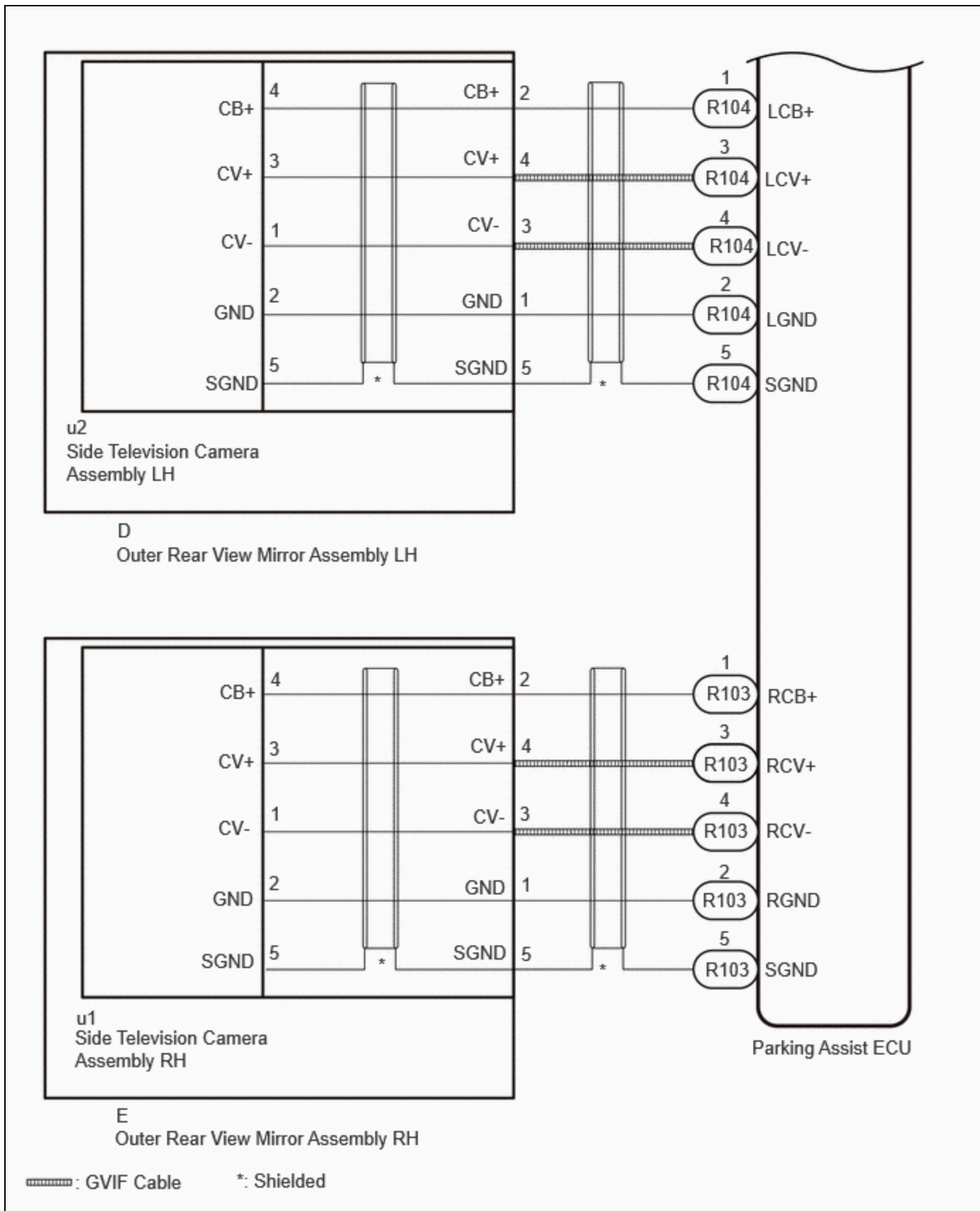
[Image from Camera for Panoramic View Monitor is Abnormal](#)

DESCRIPTION

The display signal from each television camera is transmitted to the radio and display receiver assembly via the parking assist ECU.

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](#) 

HINT:**Images may be unclear even in normal conditions if:**

- Noise may occur in the image when operating the power back door.
- Noise may occur in the image when adjusting the mirror surface of the outer rear view mirror assembly.
- Noise may occur in the image depending on electrical devices used in the vehicle.
- Noise may occur in the image if any aftermarket devices that emit radio waves are installed to the vehicle.
- The display is cold. (The image may have ghosting or may be darker than usual immediately after the ignition switch is turned to ON (IG).)
- A camera lens is covered with foreign matter
- A camera lens is covered with foreign matter, etc.
- A very bright light, such as the sun or headlights of oncoming traffic, is shining directly into a camera.
- The area around a camera is dark (at night, etc.)
- The temperature around a camera is excessively high or low.
- The vehicle or road is on an incline.
- The brightness of the surrounding area is not sufficient
- A camera lens is scratched
- A camera lens has drops of water on it or the humidity is high
- The panoramic view monitor system is used under illumination such as fluorescent lamps, sodium lamps, mercury lamps, etc., when a flicker phenomenon may occur where the lights and the parts illuminated by the lights appear to flicker.

PROCEDURE

1.	CHECK PANORAMIC VIEW MONITOR SYSTEM
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(a) Check if the same malfunction occurs when the panoramic view monitor screen is displayed.

RESULT	PROCEED TO
Rear view screen is not displayed.	A
Front view screen is not displayed.	B
Side monitor screen (LH side) is not displayed.	C
Side monitor screen (RH side) is not displayed.	D
Panoramic view monitor screen is not displayed.	E
Multiple camera images are not displayed or are distorted.	F

B  **GO TO STEP 5**

C  **GO TO STEP 9**

D  **GO TO STEP 14**

E  **GO TO STEP 19****F**  **GO TO STEP 23****A****2. CHECK HARNESS AND CONNECTOR (PARKING ASSIST ECU - REAR TELEVISION CAMERA ASSEMBLY)**

- (a) Disconnect the R102 parking assist ECU connector.
- (b) Disconnect the V5 rear television camera assembly connector.
- (c) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

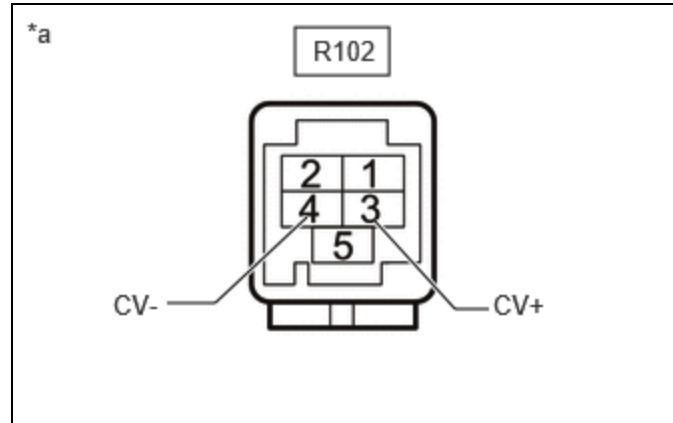
[Click Location & Routing\(R102,V5\).](#)[Click Connector\(R102\).](#)[Click Connector\(V5\).](#)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
R102-1 (CB+) - V5-2 (CB+)	Always	Below 1 Ω
R102-3 (CV+) - V5-4 (CV+)	Always	Below 1 Ω
R102-4 (CV-) - V5-3 (CV-)	Always	Below 1 Ω
R102-2 (CGND) - V5-1 (CGND)	Always	Below 1 Ω
R102-5 (SGND) - V5-5 (SGND)	Always	Below 1 Ω
R102-1 (CB+) or V5-2 (CB+) - Body ground	Always	10 k Ω or higher
R102-3 (CV+) or V5-4 (CV+) - Body ground	Always	10 k Ω or higher
R102-4 (CV-) or V5-3 (CV-) - Body ground	Always	10 k Ω or higher
R102-2 (CGND) or V5-1 (CGND) - Body ground	Always	10 k Ω or higher
R102-5 (SGND) - V5-5 (SGND) - Body ground	Always	10 k Ω or higher

NG  **REPAIR OR REPLACE HARNESS OR CONNECTOR****OK**

3. CHECK PARKING ASSIST ECU (CV+, CV-)

(a) Disconnect the R102 parking assist ECU connector.



*a Component without harness connected (Parking Assist ECU)

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

Standard Resistance:



[Click Location & Routing\(R102\)](#)

[Click Connector\(R102\)](#)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
R102-3 (CV+) - Body ground	Always	10 kΩ or higher
R102-4 (CV-) - Body ground	Always	10 kΩ or higher

NG ▶ REPLACE PARKING ASSIST ECU

OK
▼

4. CHECK PARKING ASSIST ECU (CB+, CGND)

(a) Disconnect the rear television camera assembly.

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

Standard Resistance:



[Click Location & Routing\(V5\)](#)

[Click Connector\(V5\)](#)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
V5-1 (CGND) - Body ground	Always	Below 1 Ω

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

Standard Voltage:



[Click Location & Routing\(V5\)](#)

[Click Connector\(V5\)](#)

TESTER CONNECTION	SWITCH CONDITION	SPECIFIED CONDITION
V5-2 (CB+) - V5-1 (CGND)	Ignition switch ON	7.5 to 8.5 V

OK ► REPLACE REAR TELEVISION CAMERA ASSEMBLY

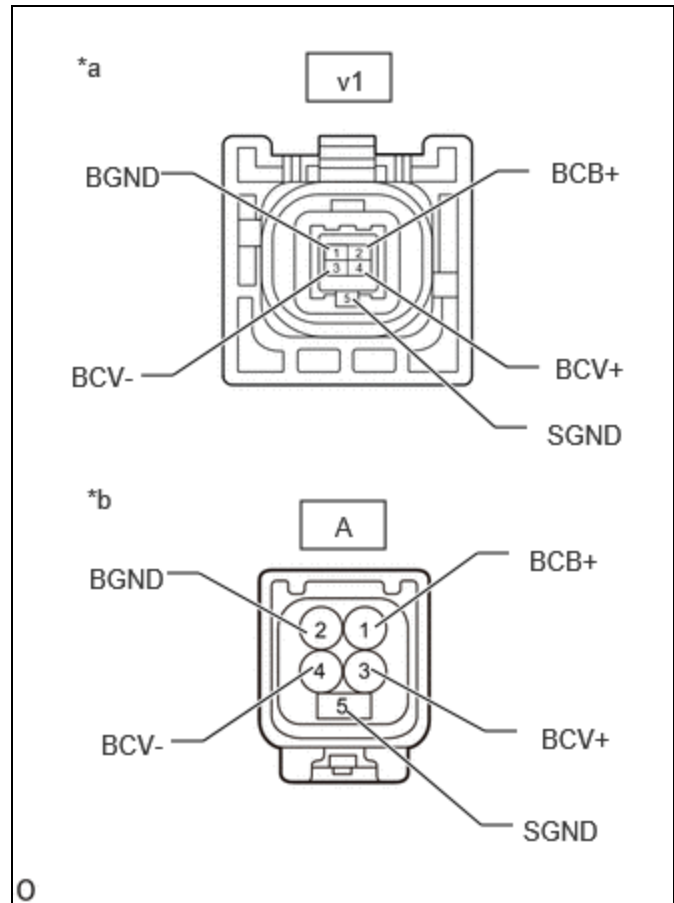
NG ► REPLACE PARKING ASSIST ECU

5.	INSPECT PARKING ASSIST WIRE
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(a) Remove the parking assist wire.

HINT:

Click here



*a	Front view of parking assist wire (to Front Television Camera Assembly)
*b	Front view of parking assist wire (to Vehicle Harness Connector)

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

Standard Resistance:



[Click Location & Routing\(v1\)](#)

[Click Connector\(v1\)](#)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
v1-2 (BCB+) - A-1 (BCB+)	Always	Below 1 Ω
v1-4 (BCV+) - A-3 (BCV+)	Always	Below 1 Ω
v1-3 (BCV-) - A-4 (BCV-)	Always	Below 1 Ω
v1-1 (BGND) - A-2 (BGND)	Always	Below 1 Ω
v1-5 (SGND) - A-5 (SGND)	Always	Below 1 Ω
v1-2 (BCB+) or A-1(BCB+) - Body ground	Always	10 kΩ or higher
v1-4 (BCV+) or A-3(BCV+) - Body ground	Always	10 kΩ or higher

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
v1-3 (BCV-) or A-4(BCV-) - Body ground	Always	10 kΩ or higher
v1-1 (BGND) or A-2(BGND) - Body ground	Always	10 kΩ or higher
v1-5 (SGND) or A-5(SGND) - Body ground	Always	10 kΩ or higher

NG  **REPLACE PARKING ASSIST WIRE**

OK


6.	CHECK HARNESS AND CONNECTOR (PARKING ASSIST ECU - PARKING ASSIST WIRE)
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- (a) Disconnect the R105 parking assist ECU connector.
- (b) Disconnect the A parking assist wire connector.
- (c) Measure the resistance according to the value(s) in the table below.

Standard Resistance:



[Click Location & Routing\(R105\)](#)
[Click Connector\(R105\)](#)

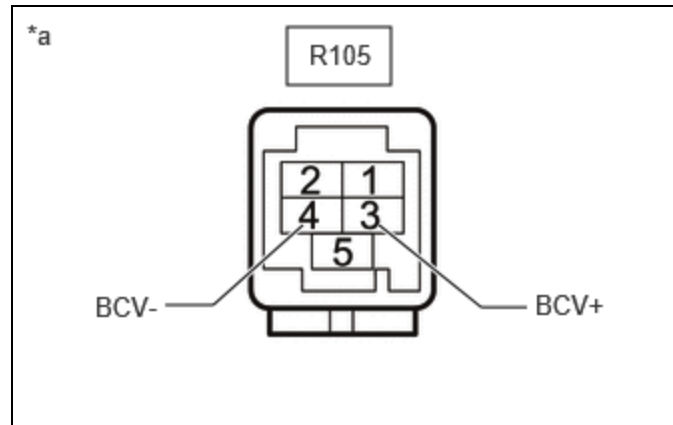
TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
R105-1 (BCB+) - A-1 (BCB+)	Always	Below 1 Ω
R105-3 (BCV+) - A-3 (BCV+)	Always	Below 1 Ω
R105-4 (BCV-) - A-4 (BCV-)	Always	Below 1 Ω
R105-2 (BGND) - A-2 (BGND)	Always	Below 1 Ω
R105-5 (SGND) - A-5 (SGND)	Always	Below 1 Ω
R105-1 (BCB+) or A-1 (BCB+) - Body ground	Always	10 kΩ or higher
R105-3 (BCV+) or A-3 (BCV+) - Body ground	Always	10 kΩ or higher
R105-4 (BCV-) or A-4 (BCV-) - Body ground	Always	10 kΩ or higher
R105-2 (BGND) or A-2 (BGND) - Body ground	Always	10 kΩ or higher
R105-5 (SGND) or A-5 (SGND) - Body ground	Always	10 kΩ or higher

NG  **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK


7. CHECK PARKING ASSIST ECU (BCV+, BCV-)

(a) Disconnect the R105 parking assist ECU connector.



*a Component without harness connected (Parking Assist ECU)

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

Standard Resistance:



[Click Location & Routing\(R105\)](#)

[Click Connector\(R105\)](#)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
R105-3 (BCV+) - Body ground	Always	10 kΩ or higher
R105-4 (BCV-) - Body ground	Always	10 kΩ or higher

NG ▶ REPLACE PARKING ASSIST ECU

OK
▼

8. CHECK PARKING ASSIST ECU (BCB+, BGND)

(a) Disconnect the parking assist wire connector.

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
A-2 (BGND) - Body ground	Always	Below 1 Ω

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

Standard Voltage:

TESTER CONNECTION	SWITCH CONDITION	SPECIFIED CONDITION
A-1 (BCB+) - A-2 (BGND)	Ignition switch ON	7.5 to 8.5 V

OK ► REPLACE FRONT TELEVISION CAMERA ASSEMBLY

NG ► REPLACE PARKING ASSIST ECU

9.	CHECK HARNESS AND CONNECTOR (PARKING ASSIST ECU - OUTER REAR VIEW MIRROR ASSEMBLY LH)
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(a) Disconnect the R104 parking assist ECU connector.

(b) Disconnect the D outer rear view mirror assembly LH connector.

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

Standard Resistance:



[Click Location & Routing\(R104\)](#)

[Click Connector\(R104\)](#)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
R104-1 (LCB+) - D-2 (CB+)	Always	Below 1 Ω
R104-3 (LCV+) - D-4 (CV+)	Always	Below 1 Ω
R104-4 (LCV-) - D-3 (CV-)	Always	Below 1 Ω
R104-2 (LGND) - D-1 (GND)	Always	Below 1 Ω
R104-5 (SGND) - D-5 (SGND)	Always	Below 1 Ω
R104-1 (LCB+) or D-2 (CB+) - Body ground	Always	10 k Ω or higher
R104-3 (LCV+) or D-4 (CV+) - Body ground	Always	10 k Ω or higher
R104-4 (LCV-) or D-3 (CV-) - Body ground	Always	10 k Ω or higher
R104-2 (LGND) or D-1 (GND) - Body ground	Always	10 k Ω or higher
R104-5 (SGND) or D-5 (SGND) - Body ground	Always	10 k Ω or higher

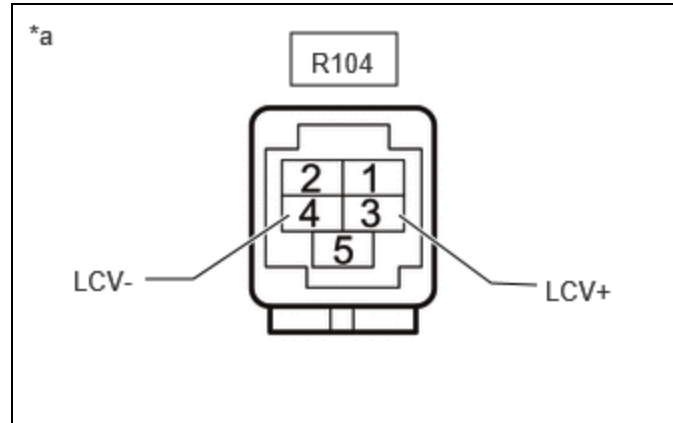
NG ► REPAIR OR REPLACE HARNESS OR CONNECTOR

OK



10. CHECK PARKING ASSIST ECU (LCV+, LCV-)

(a) Disconnect the R104 parking assist ECU connector.



*a Component without harness connected (Parking Assist ECU)

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

Standard Resistance:



[Click Location & Routing\(R104\)](#)
[Click Connector\(R104\)](#)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
R104-3 (LCV+) - Body ground	Always	10 kΩ or higher
R104-4 (LCV-) - Body ground	Always	10 kΩ or higher

NG **REPLACE PARKING ASSIST ECU**

OK



11. CHECK PARKING ASSIST ECU (LCB+, LGND)

(a) Disconnect the outer rear view mirror assembly LH connector.

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
D-1 (GND) - Body ground	Always	Below 1 Ω

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

Standard Voltage:

TESTER CONNECTION	SWITCH CONDITION	SPECIFIED CONDITION
D-2 (CB+) - D-1 (GND)	Ignition switch ON	7.5 to 8.5 V

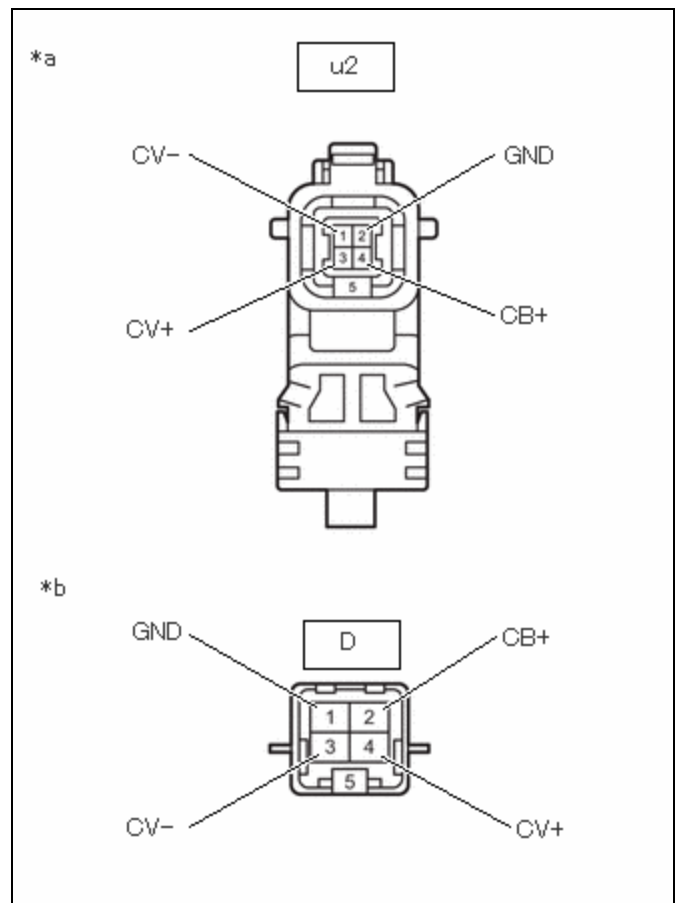
NG ▶ REPLACE PARKING ASSIST ECU

OK



12.	INSPECT OUTER REAR VIEW MIRROR ASSEMBLY LH
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(a) Remove the outer rear view mirror assembly LH.



*a	Front view of wire harness connector (to Side Television Camera Assembly LH)
*b	Component without harness connected (Outer Rear View Mirror Assembly LH)

(b) Remove the side television camera assembly LH from the outer rear view mirror assembly LH.

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

Standard Resistance:



[Click Location & Routing\(u2\).](#)

[Click Connector\(u2\).](#)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
u2-4 (CB+) - D-2 (CB+)	Always	Below 1 Ω
u2-3 (CV+) - D-4 (CV+)	Always	Below 1 Ω
u2-1 (CV-) - D-3 (CV-)	Always	Below 1 Ω
u2-2 (GND) - D-1 (GND)	Always	Below 1 Ω
u2-4 (CB+) or D-2 (CB+) - Body ground	Always	10 kΩ or higher
u2-3 (CV+) or D-4 (CV+) - Body ground	Always	10 kΩ or higher
u2-1 (CV-) or D-3 (CV-) - Body ground	Always	10 kΩ or higher
u2-2 (GND) or D-1 (GND) - Body ground	Always	10 kΩ or higher

NG ► REPLACE OUTER REAR VIEW MIRROR ASSEMBLY LH

OK
▼

13.	CHECK SIDE TELEVISION CAMERA ASSEMBLY LH
------------	---

(a) Replace the side television camera assembly LH with a new or normally functioning one.

Click here [INFO](#)

(b) Check if the same malfunction reoccurs when the side monitor screen is displayed.

OK ► END (SIDE TELEVISION CAMERA ASSEMBLY LH WAS DEFECTIVE)

NG ► REPLACE PARKING ASSIST ECU

14.**CHECK HARNESS AND CONNECTOR (PARKING ASSIST ECU - OUTER REAR VIEW MIRROR ASSEMBLY RH)**

- (a) Disconnect the R103 parking assist ECU connector.
- (b) Disconnect the E outer rear view mirror assembly RH connector.
- (c) Measure the resistance according to the value(s) in the table below.

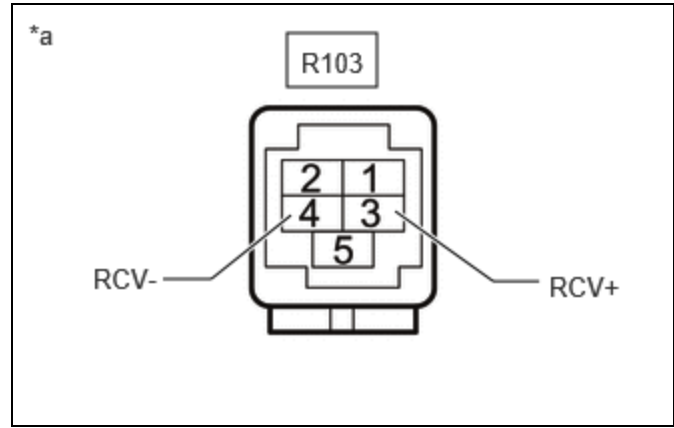
Standard Resistance:


[Click Location & Routing\(R103\)](#)
[Click Connector\(R103\)](#)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
R103-1 (RCB+) - E-2 (CB+)	Always	Below 1 Ω
R103-3 (RCV+) - E-4 (CV+)	Always	Below 1 Ω
R103-4 (RCV-) - E-3 (CV-)	Always	Below 1 Ω
R103-2 (RGND) - E-1 (GND)	Always	Below 1 Ω
R103-5 (SGND) - E-5 (SGND)	Always	Below 1 Ω
R103-1 (RCB+) or E-2 (CB+) - Body ground	Always	10 k Ω or higher
R103-3 (RCV+) or E-4 (CV+) - Body ground	Always	10 k Ω or higher
R103-4 (RCV-) or E-3 (CV-) - Body ground	Always	10 k Ω or higher
R103-2 (RGND) or E-1 (GND) - Body ground	Always	10 k Ω or higher
R103-5 (SGND) or E-5 (SGND) - Body ground	Always	10 k Ω or higher

NG **REPAIR OR REPLACE HARNESS OR CONNECTOR**
OK**15.****CHECK PARKING ASSIST ECU (RCV+, RCV-)**

- (a) Disconnect the R103 parking assist ECU connector.



*a Component without harness connected (Parking Assist ECU)

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

Standard Resistance:



[Click Location & Routing\(R103\)](#)

[Click Connector\(R103\)](#)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
R103-3 (RCV+) - Body ground	Always	10 kΩ or higher
R103-4 (RCV-) - Body ground	Always	10 kΩ or higher

NG ▶ REPLACE PARKING ASSIST ECU

OK



16. CHECK PARKING ASSIST ECU (RCB+, RGND)

(a) Disconnect the outer rear view mirror assembly RH connector.

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
E-1 (GND) - Body ground	Always	Below 1 Ω

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

Standard Voltage:

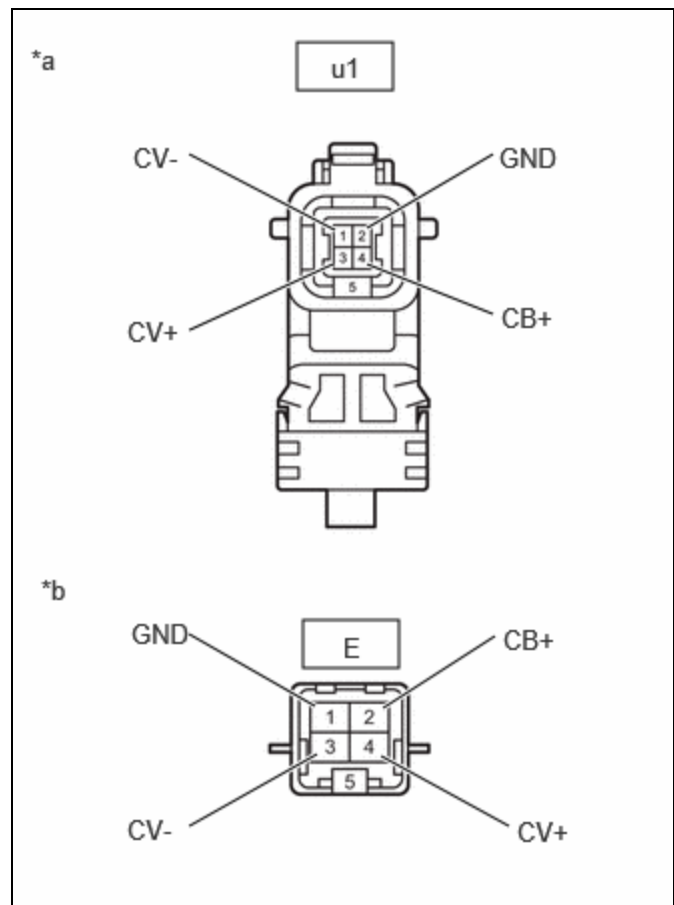
TESTER CONNECTION	SWITCH CONDITION	SPECIFIED CONDITION
E-2 (CB+) - E-1 (GND)	Ignition switch ON	7.5 to 8.5 V

NG  **REPLACE PARKING ASSIST ECU**

OK



17.	INSPECT OUTER REAR VIEW MIRROR ASSEMBLY RH
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(a) Remove the outer rear view mirror assembly RH.

*a	Front view of wire harness connector (to Side Television Camera Assembly RH)
*b	Component without harness connected (Outer Rear View Mirror Assembly RH)

(b) Remove the side television camera assembly RH from the outer rear view mirror assembly RH.

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

Standard Resistance:



[Click Location & Routing\(u1\)](#)

[Click Connector\(u1\)](#)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
u1-4 (CB+) - E-2 (CB+)	Always	Below 1 Ω
u1-3 (CV+) - E-4 (CV+)	Always	Below 1 Ω
u1-1 (CV-) - E-3 (CV-)	Always	Below 1 Ω
u1-2 (GND) - E-1 (GND)	Always	Below 1 Ω
u1-4 (CB+) or E-2 (CB+) - Body ground	Always	10 k Ω or higher
u1-3 (CV+) or E-4 (CV+) - Body ground	Always	10 k Ω or higher
u1-1 (CV-) or E-3 (CV-) - Body ground	Always	10 k Ω or higher
u1-2 (GND) or E-1 (GND) - Body ground	Always	10 k Ω or higher

NG ▶ REPLACE OUTER REAR VIEW MIRROR ASSEMBLY RH

OK



18.	CHECK SIDE TELEVISION CAMERA ASSEMBLY RH
------------	---

(a) Replace the side television camera assembly RH with a new or normally functioning one.

Click here [INFO](#)

(b) Check if the same malfunction reoccurs when the side monitor screen is displayed.

OK ▶ END (SIDE TELEVISION CAMERA ASSEMBLY RH WAS DEFECTIVE)

NG ▶ REPLACE PARKING ASSIST ECU

19.	CHECK HARNESS AND CONNECTOR (PARKING ASSIST ECU - RADIO AND DISPLAY RECEIVER ASSEMBLY)
------------	---

(a) Disconnect the R34 parking assist ECU connector.

(b) Disconnect the K80 radio and display receiver assembly connector.

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

Standard Resistance:



[Click Location & Routing\(R34,K80\).](#)

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

[Click Connector\(K80\).](#)

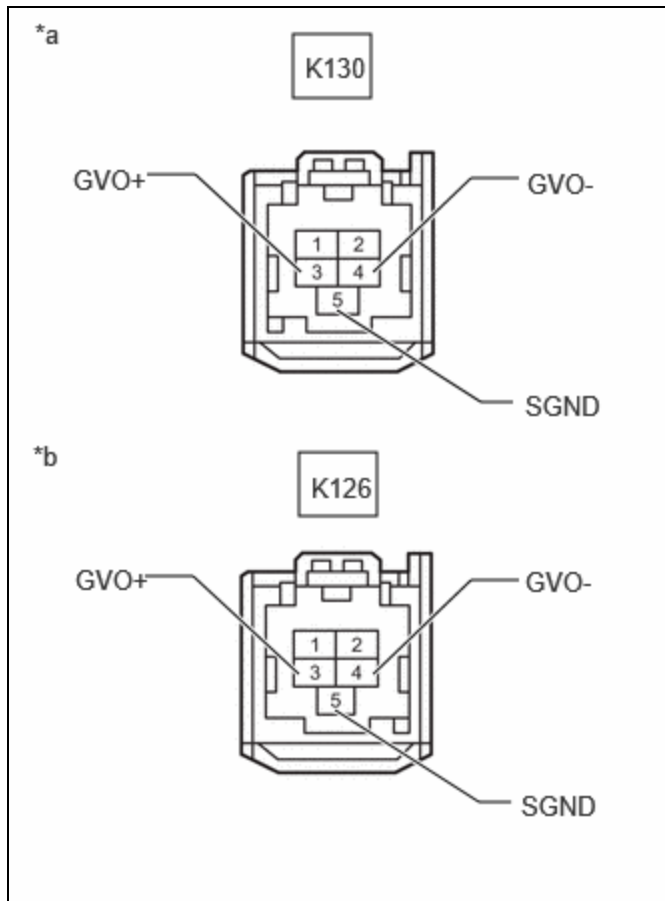
TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
R34-10 (RSW+) - K80-19 (CSW+)	Always	Below 1 Ω
R34-10 (RSW+) or K80-19 (CSW+) - Body ground	Always	10 kΩ or higher

NG **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK



20. CHECK GVIF CABLE (DIGITAL VIDEO SIGNAL LINE)



*a	Front side of GVIF signal line connector (to Parking Assist ECU)
*b	Front side of GVIF signal line connector (to Radio and Display Receiver Assembly)

- (a) Disconnect the K130 parking assist ECU connector.
- (b) Disconnect the K126 radio and display receiver assembly connector.
- (c) Measure the resistance according to the value(s) in the table below.

Standard Resistance:



[Click Location & Routing\(K130,K126\)](#)

[Click Connector\(K130\)](#)

[Click Connector\(K126\)](#)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
K130-3(GVO+) - K126-3(GVO+)	Always	Below 1 Ω
K130-4(GVO-) - K126-4(GVO-)	Always	Below 1 Ω
K130-5(SGND) - K126-5(SGND)	Always	Below 1 Ω
K130-3(GVO+) or K126-3(GVO+) - Body ground	Always	10 k Ω or higher
K130-4(GVO-) or K126-4(GVO-) - Body ground	Always	10 k Ω or higher
K130-5(SGND) or K126-5(SGND) - Body ground	Always	10 k Ω or higher

NG **REPLACE GVIF CABLE (DIGITAL VIDEO SIGNAL LINE)**

OK



21.	REPLACE WIRE HARNESS (PARKING ASSIST ECU - INE BETWEEN RADIO AND DISPLAY RECEIVER ASSEMBLY)
------------	--

- (a) Replace the GVIF signal line with a new or known good one.
- (b) Check if the same malfunction reoccurs when the panoramic view monitor screen is displayed.

Click here

RESULT	PROCEED TO
Display normally	A
Abnormality reproduces	B

HINT:

If the panoramic view monitor screen is displayed normally after exchanging the GVIF signal line between the parking assist computer and the radio and display receiver assembly, it can be determined that the GVIF signal line between the parking assist computer and the radio and display receiver assembly is defective.

A ▶ END (DEFECTIVE GVIF SIGNAL LINE)

B ▼

22. CHECK RADIO AND DISPLAY RECEIVER ASSEMBLY

(a) Replace the radio and display receiver assembly with a new or known good one.

Click here [INFO](#)

(b) Check if the same malfunction reoccurs when the panoramic view monitor screen is displayed.

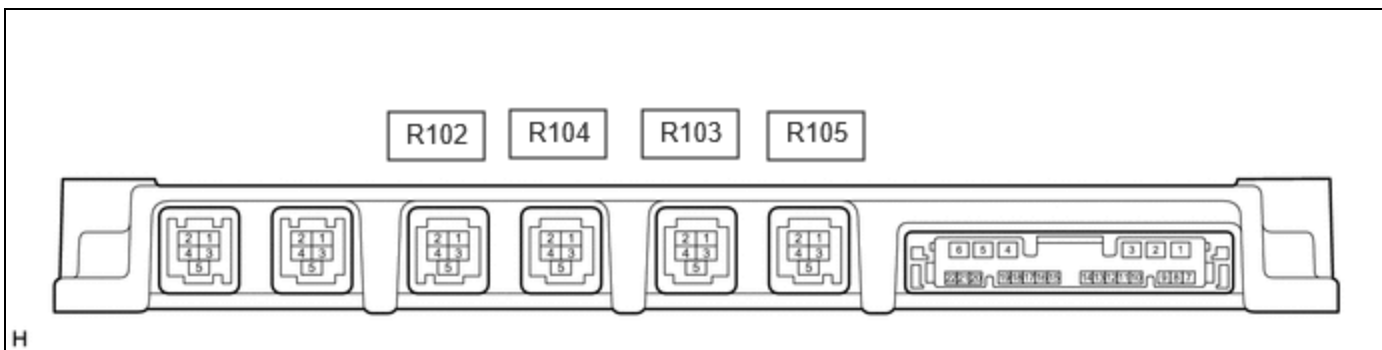
RESULT	PROCEED TO
Display normally	A
Abnormality reproduces	B

A ▶ END (RADIO AND DISPLAY RECEIVER ASSEMBLY DEFECTIVE)

B ▶ REPLACE PARKING ASSIST ECU

23. CAMERA IMAGE CHECK

(a) One by one in order, repeatedly disconnect then reconnect the R102, R104, R103 and R105 parking assist ECU connector. When disconnected, check the camera image for a black screen or distortion.



RESULT	PROCEED TO
When connector R102 is disconnected, only the rear camera image is black or distorte	A

RESULT	PROCEED TO
When connector R105 is disconnected, only the front camera image is black or distorted	B
When connector R104 is disconnected, only the left-side camera image is black or distorted	C
When connector R103 is disconnected, only the right-side camera image is black or distorted	D
Other than above	E

A ► **GO TO STEP 2**

B ► **GO TO STEP 5**

C ► **GO TO STEP 9**

D ► **GO TO STEP 14**

E ► **REPLACE PARKING ASSIST ECU**

