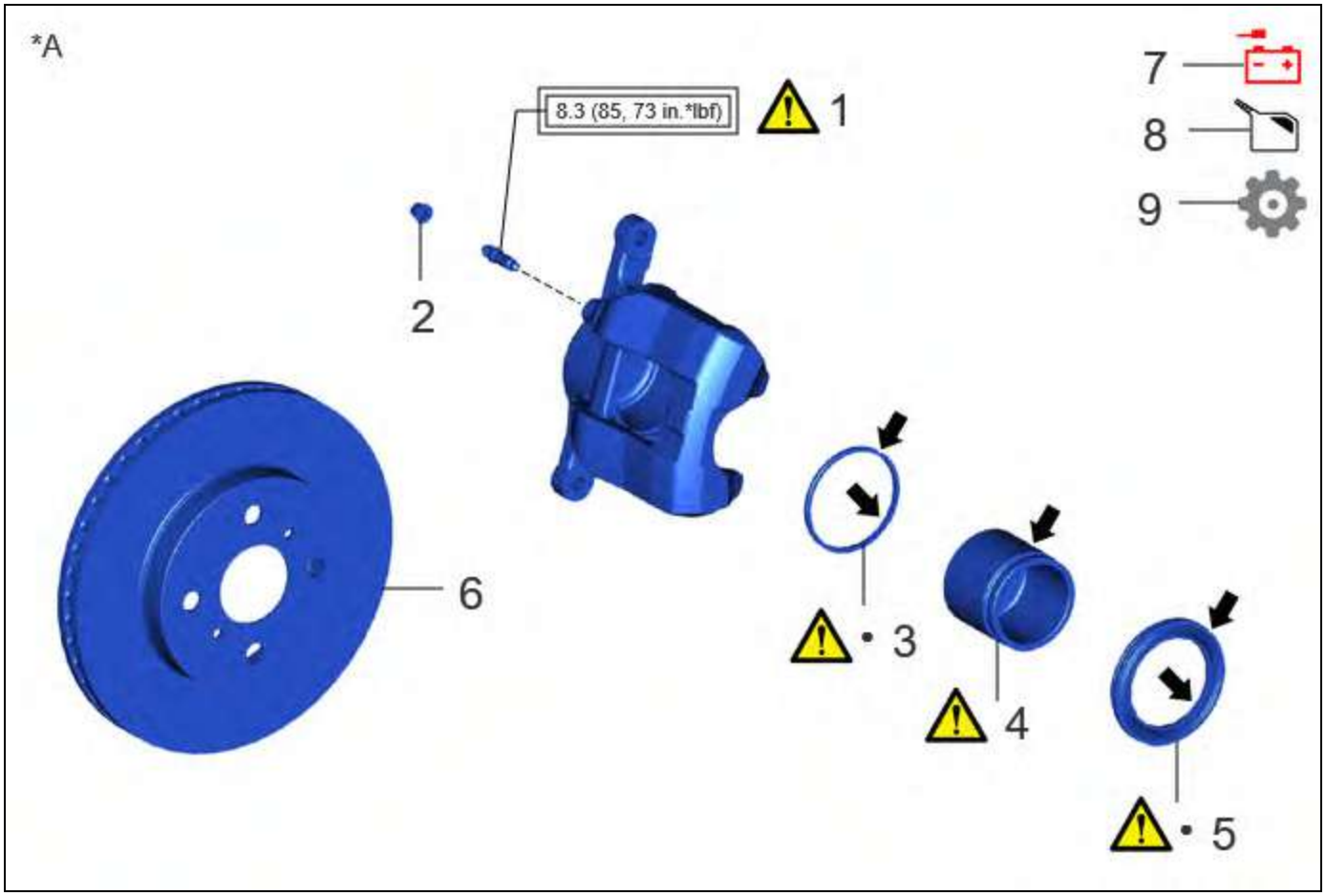


	PROCEDURE	PART NAME CODE	⚠		⚙
1	FRONT DISC BRAKE BLEEDER PLUG	-	(Link)	-	-
2	FRONT DISC BRAKE BLEEDER PLUG CAP	-	-	-	-
3	PISTON SEAL	-	(Link)	-	-
4	FRONT DISC BRAKE PISTON	-	(Link)	-	-
5	CYLINDER BOOT	-	(Link)	-	-
6	FRONT DISC	43512	-	-	-
7	CONNECT CABLE TO NEGATIVE AUXILIARY BATTERY TERMINAL	-	-	-	-
8	ADD BRAKE FLUID	-	-	(Link)	-
9	PERFORM INITIALIZATION	-	-	-	(Link)

*A	Example	-	-
▭	Tightening torque for "Major areas involving basic vehicle performance such as moving/turning/stopping": N*m (kgf*cm, ft.*lbf)	▭	N*m (kgf*cm, ft.*lbf): Specified torque
•	Non-reusable part	➡	Lithium soap base glycol grease

1. The items in the following table are noted in the component illustrations.

GTS DISPLAY	DESCRIPTION
RL Wheel Speed	↑
Yaw Rate Value	↑
Hybrid/EV Control Current	↑
Hybrid/EV Control Total Voltage	↑
LIN4 Communication Control Permission	↑
Fuel Lid Interlock Switch	Refer to DATA LIST / ACTIVE TEST (FC CONTROL SYSTEM) INFO
Smoothed Value of BATT Voltage	Refer to DATA LIST / ACTIVE TEST INFO
Total Distance Traveled	↑
Total Distance Traveled - Unit	↑
Ready Signal	↑
HV/EV Activate Condition	↑
DSS Control Status	↑
Generate Torque (Request from DSS)	↑
Primary Driving Force Adjustment Result	↑
SMRG Status	↑
SMRG Control Status	↑
SMRB Status	↑
SMRB Control Status	↑
SMRP Status	↑
SMRP Control Status	↑
WIN Control Limit Power	↑
WOUT Control Limit Power	↑
A/C Consumption Power	↑
Inter Lock Switch	↑
Airbag Status (Collision)	↑
Airbag Status (Normal)	↑
Motor Revolution	↑
Target Motor Torque	↑
Request Motor Regenerative Brake Torque	↑
Motor Regenerate Brake Execution Torque	↑
Motor Temperature	↑
Motor Inverter Temperature	↑
Boosting Converter Operation Request	↑
Motor Carrier Frequency	↑
Motor Control Mode	↑
Boosting Converter Carrier Frequency	↑

performed on the high voltage systems.

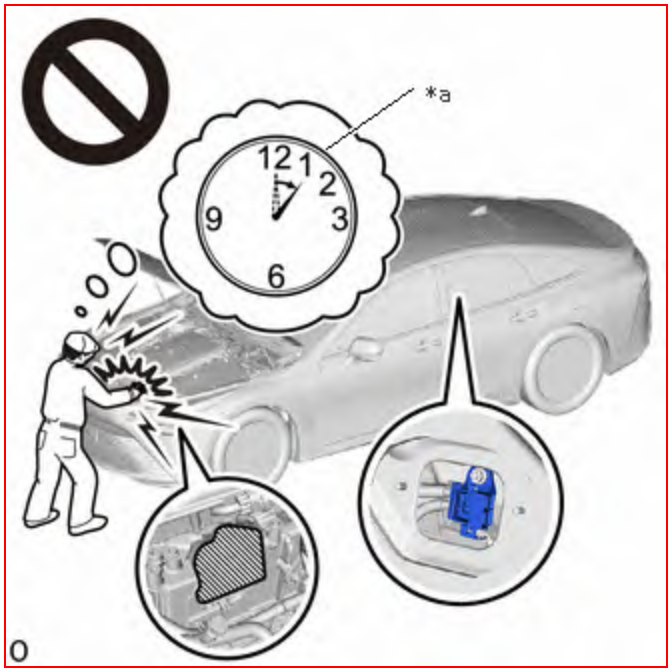
- The technician performing the work should put the EV battery service plug grip in their pocket and carry it with them.
- Remove the FC converter power outlet cable on FC converter side with a "HIGH-VOLTAGE, DO NOT TOUCH" caution tag attached to it for other technicians.

- After removing the EV battery service plug grip and FC converter power outlet cable on FC converter side, wait for at least 10 minutes before touching any of the high-voltage connectors or terminals. After waiting for 10 minutes, check the voltage at the terminals in the inspection point in the inverter with converter assembly. The voltage should be 0 V before beginning work.

  Click here INFO

  HINT:

  Waiting for at least 10 minutes is required to discharge the high-voltage capacitor inside the inverter with converter assembly and the electric vehicle charger assembly.



*a	Without waiting for 10 minutes

- Make sure to insulate the high-voltage connectors and terminals of the EV supply battery assembly with insulating tape after removing it.

  If the EV supply battery assembly stored without insulating the connectors and terminals, electric shock or fire may result.

NOTICE:

- After turning the ignition switch off, there may be a waiting time before disconnecting the auxiliary negative (-) battery terminal.

  Click here INFO

- When disconnecting and reconnecting the auxiliary battery.

  HINT:

TESTER DISPLAY
Transaxle Oil Temperature

Result	PROCEED TO
The value of Transaxle Oil Temperature is -40 °C	A
The value of Transaxle Oil Temperature is 215 °C	B
None of the above conditions are met	C

HINT:

-40°C = -40°F

215°C = 419°F

Post-procedure1

(c) Turn the ignition switch off.

B ▶ **GO TO STEP 8**

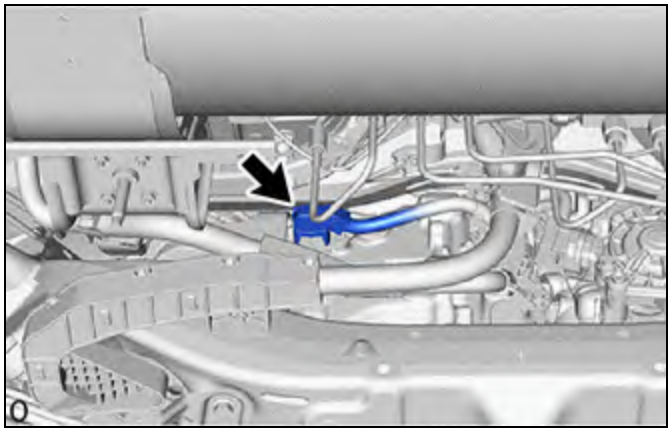
C ▶ **REPAIR OR REPLACE HARNESS OR CONNECTOR**

A ▼

6.	INSPECT FCV WITH MOTOR TRANSAXLE ASSEMBLY (TRANSAXLE FLUID TEMPERATURE SENSOR)

Pre-procedure1

(a) Disconnect the G154 transaxle fluid temperature sensor connector.



Procedure1

Click here INFO

OK ▶ **REPLACE BATTERY ECU ASSEMBLY**

NG

▼

6.	**CHECK HARNESS AND CONNECTOR (BATTERY ECU ASSEMBLY - NO. 1 EV SUPPLY STACK SUB-ASSEMBLY)**

Click here INFO

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

OK

▼

7.	**CHECK TOTAL DISTANCE DRIVEN**

(a) Check the recorded total distance traveled of the vehicle.

<table>
<tr><th colspan="2">RESULT</th><th>PROCEED TO</th></tr>
<tr><td colspan="2">Total distance driven is less than 200000 km (124280 mile)</td><td rowspan="2">A</td></tr>
<tr><td rowspan="2">Total distance driven is 200000 km (124280 mile) or more</td><td>Current total distance driven - total distance driven when EV battery terminal block replaced = less than 200000 km (124280 mile)*1</td></tr>
<tr><td>Other than above</td><td>B</td></tr>
</table>

HINT:

*1: If the EV battery terminal block has been replaced, use the total distance driven since it was replaced.

A ▶ **REPLACE NO. 1 EV SUPPLY STACK SUB-ASSEMBLY**

B

▼

8.	**REPLACE NO. 1 EV SUPPLY STACK SUB-ASSEMBLY**

HINT:

Click here INFO

NEXT ▶ **REPLACE EV BATTERY TERMINAL BLOCK**

NG ▶ REPAIR OR REPLACE HARNESS OR CONNECTOR

OK ▼

3.	**CHECK HARNESS AND CONNECTOR (BATTERY ECU ASSEMBLY - NO. 2 EV BATTERY PACK WIRE CONNECTOR)**

CAUTION:

Be sure to wear insulated gloves and protective goggles.

(a) Check that the service plug grip and FC converter power outlet cable are not installed.

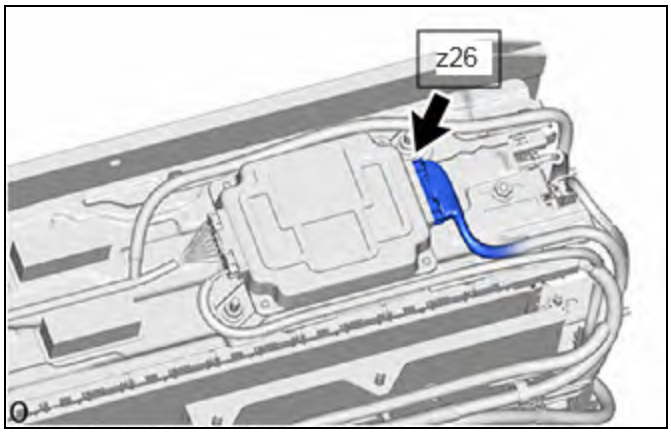
NOTICE:

After removing the service plug grip and FC converter power outlet cable, do not turn the ignition switch to ON (READY), unless instructed by the repair manual because this may cause a malfunction.

(b) Remove the upper No. 1 EV battery cover sub-assembly.

Click here INFO INFO

(c) Disconnect the z26 battery ECU assembly connector.



NOTICE:

- Before disconnecting the connector, check that it is not loose or disconnected.
- Check the terminals of the connector for deformation and corrosion.

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

Standard Resistance:

EWD INFO

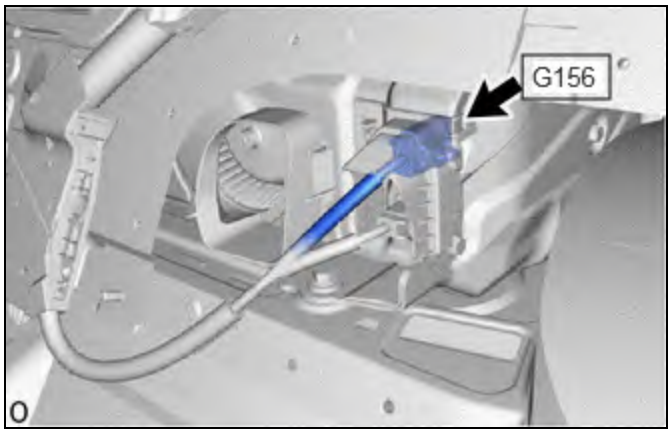
Click Location & Routing(z26,G156)
Click Connector(z26)
Click Connector(G156)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
z26-40 (IGCT) - G156-14 (IGCT)	Always	Below 1 Ω
z26-11 (GND) - G156-1 (GND)	Always	Below 1 Ω
z26-31 (GND1) - G156-10 (GND1)	Always	Below 1 Ω

After removing the service plug grip and FC converter power outlet cable, do not turn the ignition switch to ON (READY), unless instructed by the repair manual because this may cause a malfunction.

(b) Remove the center No. 2 floor to brace extension.

Click here INFO INFO



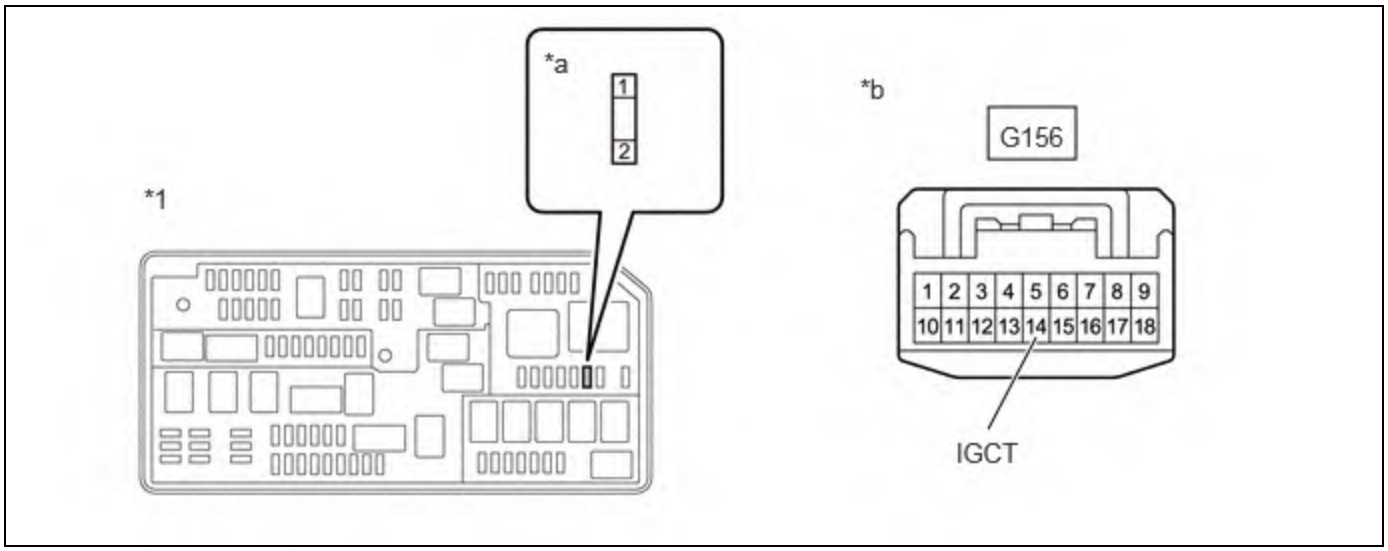
(c) Disconnect the G156 No. 2 EV battery pack wire connector.

NOTICE:

Before disconnecting the connector, check that it is not loose or disconnected.

(d) Remove the IGCT NO. 6 fuse from the luggage room relay block assembly.

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



*1	Luggage Room Relay Block Assembly	-	-
*a	IGCT NO. 6 Fuse Holder	*b	Front view of wire harness connector (No. 2 EV Battery Pack Wire Connector)

Standard Resistance:

EWD INFO

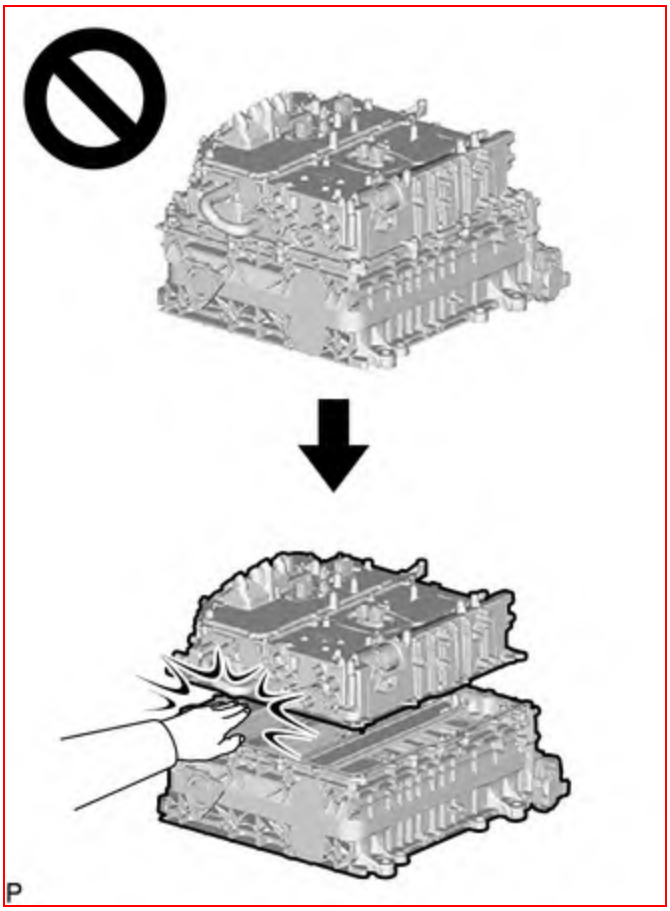
Click Location & Routing(G156)
Click Connector(G156)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
G156-14 (IGCT) or 2 (IGCT NO. 6 fuse holder) - Body ground and other terminals	Always	10 kΩ or higher

(f) Install the IGCT NO. 6 fuse to the luggage room relay block assembly.

(g) Reconnect the G156 No. 2 EV battery pack wire connector.

electrical charge discharge (forced electrical charge discharge or electrical charge self-discharge), because doing so is



dangerous.

Click here INFO

- Removing and installing the FC stack assembly without first discharging the electrical charge may result in an electric shock due to the high voltage circuit.

NOTICE:

- When reinstalling the service plug grip to the EV supply battery assembly, after lowering the EV supply battery assembly service plug grip 90°, securely slide it until a "click" sound is heard.

Click here INFO

- This vehicle performs FC system shutdown process after turning the ignition switch off from ON (READY). Therefore, after the ignition switch is turned off from ON (READY), do not perform any work on the electrical system for at least 10 minutes including removing connectors or disconnecting the negative (-) auxiliary battery terminal.
- When the EV control ECU determines that the temperature of FC system components is below 0°C (32°F) when the vehicle is parked with the ignition switch off, it operates the FC air compressor, hydrogen pump and FC cooling water pump for a maximum of 180 seconds to drain the FC stack assembly. When performing inspection or repairs with the ignition switch off (not ON or ON (READY)), disconnect the cable from the negative (-) auxiliary battery terminal before performing work. (If the auxiliary battery voltage is needed to conduct inspection, perform the inspection in an environment with an ambient temperature of 10°C (50°F) or higher.)

HINT:

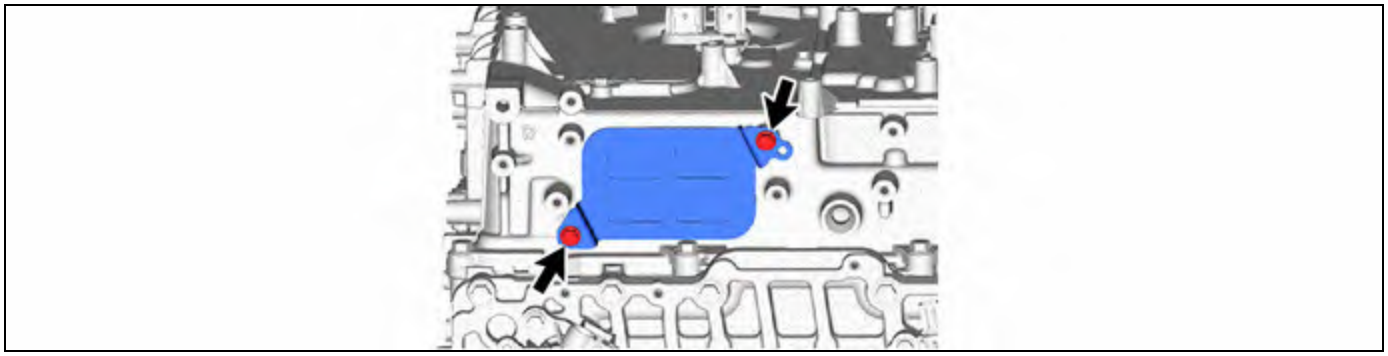
After the repair, clear the DTCs and perform the following procedure to check that DTCs are not output.

1. Turn the ignition switch to ON.
2. Enter the following menus: Powertrain / EV / Data List / FC Work Mode, FC Intermittent Operation.
3. Put the state in park (P), turn the ignition switch to ON (READY) and wait until the FC system is activated (Waiting for at least 2 minutes is required after turning the ignition switch to ON (READY)).
   FC system is activated: Data List shows that "FC Work Mode" is "Working" and "FC Intermittent Operation" is "OFF".
4. Wait at least 15 seconds with the FC system activated.
5. Drive the vehicle forward with the shift state in drive (D) for 5 m (16 ft.) or more.
6. Drive the vehicle backward with the shift state in reverse (R) for 5 m (16 ft.) or more.

PROCEDURE

1.	**CHECK DTC OUTPUT (FCDC)**

172. REMOVE FC CONVERTER VENT COVER



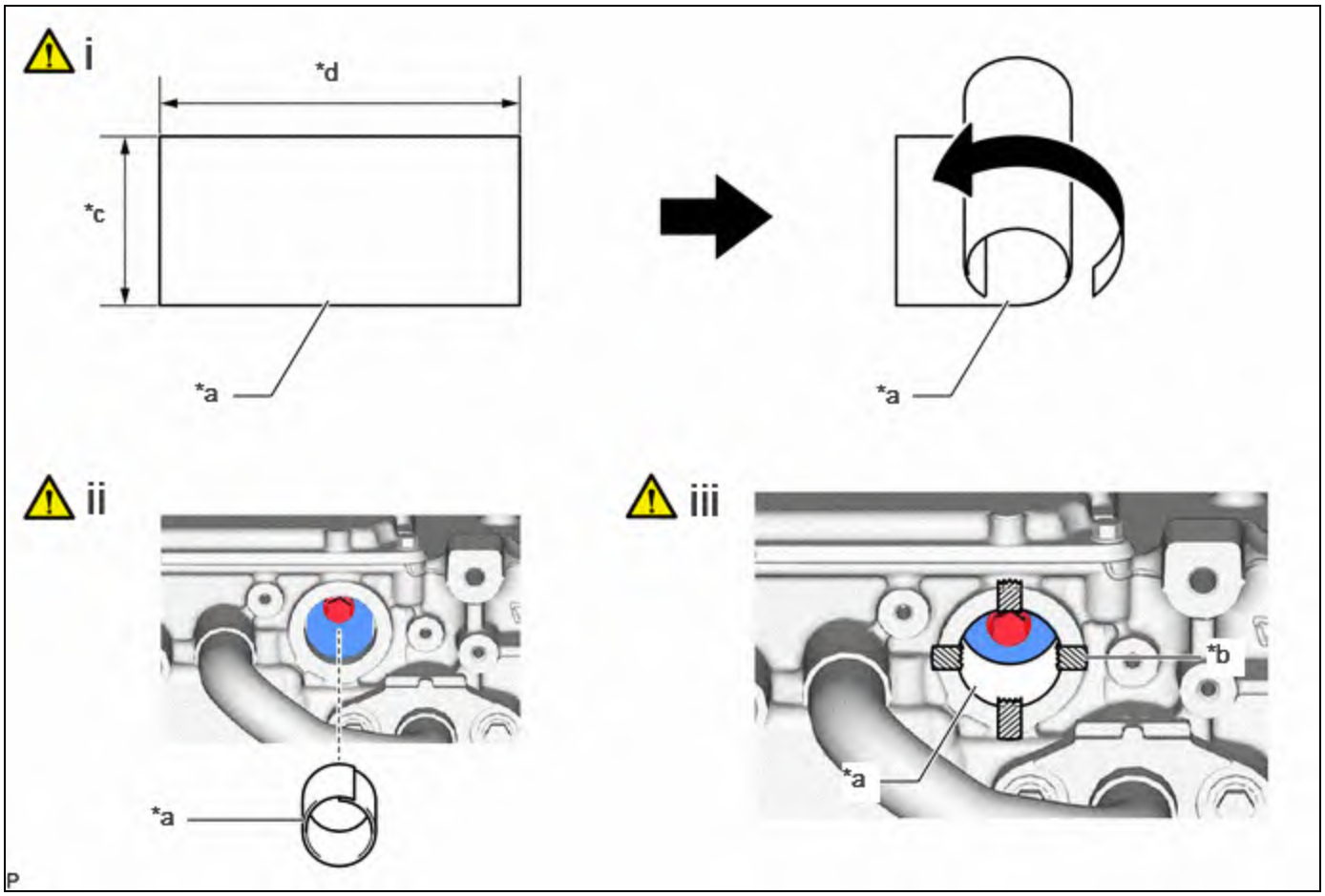
173. CLEAN FC CONVERTER WITH FC STACK ASSEMBLY

(a) Using a cloth, remove dirt and dust from the FC stack assembly with FC converter surface and around the bolts.

174. BOLT FALLING PREVENTION WORK (FRONT SIDE (POSITIVE TERMINAL))

NOTICE:

Be sure to perform this work, because it may not be possible to retrieve the bolt if it falls inside the FC stack assembly.



*a	Paper	*b	Tape
*c	Approximately 33 mm	*d	Approximately 110 mm

(1) Prepare paper of the size shown in the illustration, and roll up the paper so that it overlaps.

(2) Insert the rolled up paper into the FC converter assembly.

(3) Firmly secure the inserted paper to the FC converter assembly with tape.

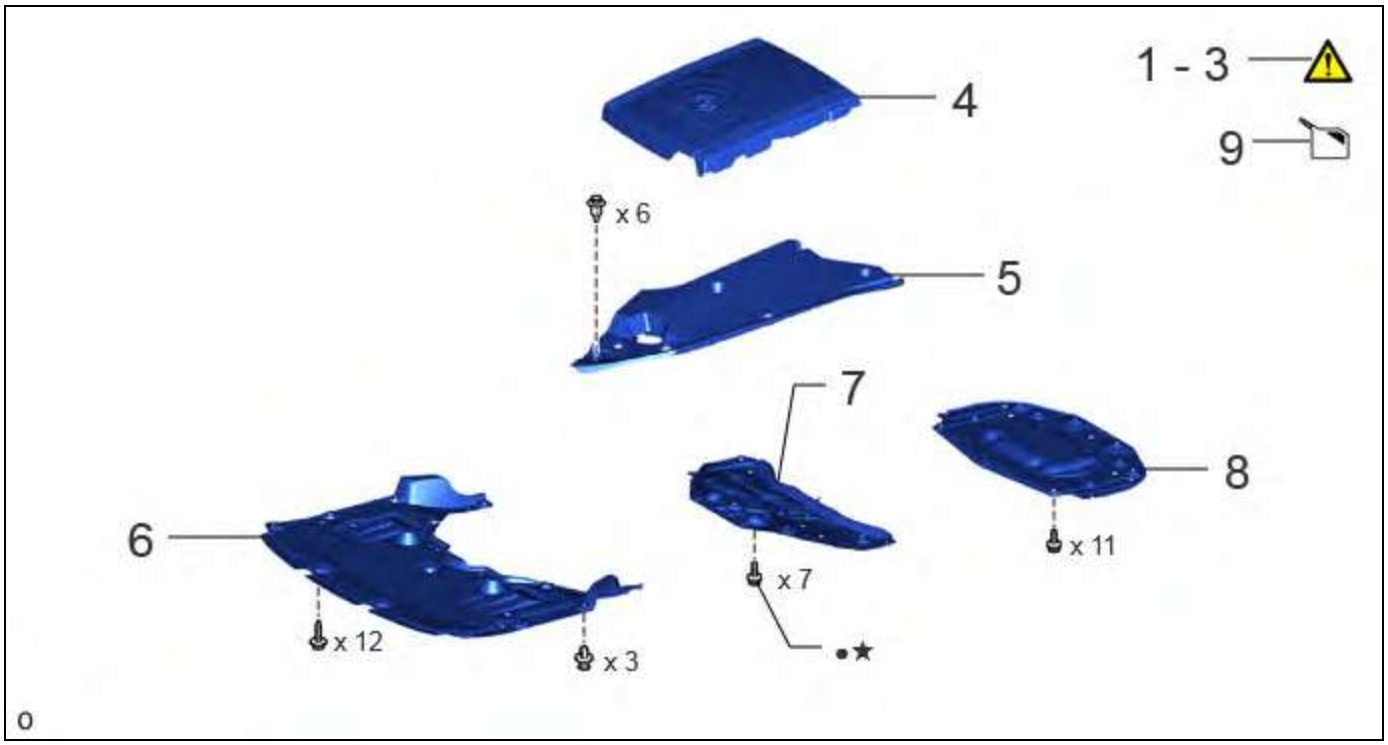
NOTICE:

Last Modified: 11-21-2024	6.11:8.1.0	**Doc ID:** RM1000000028SPC
Model Year Start: 2023	**Model:** Mirai	**Prod Date Range:** [12/2022 - 12/2023]
Title: COOLING: WATER PUMP: REMOVAL; 2023 MY Mirai [12/2022 - 12/2023]		

REMOVAL

CAUTION / NOTICE / HINT

COMPONENTS (REMOVAL)



	PROCEDURE	PART NAME CODE			
1	CAUTIONS FOR HIGH VOLTAGE SYSTEM COMPONENTS	-	INFO	-	-
2	CAUTIONS FOR COOLANT (TOYOTA GENUINE FC STACK COOLANT (Pre-mixed))	-	INFO	-	-
3	PRECAUTION	-	INFO	-	-
4	FC STACK COVER SUB-ASSEMBLY	1A906	-	-	-
5	UPPER RADIATOR SUPPORT SEAL	53292A	-	-	-
6	FRONT COMPARTMENT UNDER COVER	51441N	-	-	-
7	FRONT LOWER SUSPENSION MEMBER PROTECTOR	51219	-	-	-
8	FRONT COMPARTMENT UNDER COVER ASSEMBLY	51420A	-	-	-
9	DRAIN COOLANT (TOYOTA GENUINE FC STACK COOLANT (Pre-mixed))	-	-	INFO	-

•	Non-reusable part	★	Precoated part

	PROCEDURE	PART NAME CODE			
6	SHIFT CONTROL SUPPLY	894D1	INFO	-	-

The necessary procedures (adjustment, calibration, initialization or registration) that must be performed after parts are removed and installed, or replaced during shift control supply removal/installation are shown below.

REPLACED PART OR PERFORMED PROCEDURE	NECESSARY PROCEDURE	EFFECT/INOPERATIVE FUNCTION WHEN NECESSARY PROCEDURE NOT PERFORMED	LINK
Auxiliary battery terminal is disconnected/reconnected	Memorize steering angle neutral point	Parking assist monitor system	INFO
		Panoramic view monitor system	INFO

HINT:

When the cable is disconnected/reconnected to the auxiliary battery terminal, systems temporarily stop operating. However, each system has a function that completes learning the first time the system is used.

- Learning completes when vehicle is driven

EFFECT/INOPERATIVE FUNCTION WHEN NECESSARY PROCEDURES ARE NOT PERFORMED	NECESSARY PROCEDURES	LINK
Lane tracing assist system (for Stereo camera type)	Drive the vehicle straight ahead at 35 km/h (22 mph) or more for 5 seconds or more.	for Stereo Camera Type: - for Mono Camera Type: INFO
Lane tracing assist system (for Mono camera type)		
Pre-collision system (for Stereo camera type)		
Pre-collision system (for Mono camera type)		
Lighting system (EXT)		
Advanced drive system	Drive the vehicle straight ahead at a vehicle speed of 35 km/h or higher for 30 seconds* or more.	-
*: This can be completed by doing this for 30 seconds continuously or for a total of 30 seconds intermittently.		

- Learning completes when vehicle is operated normally

EFFECT/INOPERATIVE FUNCTION WHEN NECESSARY PROCEDURES ARE NOT PERFORMED	NECESSARY PROCEDURES	LINK
Air conditioning system	After the ignition switch is turned to ON, the servo motor and expansion valve standard position is recognized.	-

PROCEDURE

1. PRECAUTION

NOTICE:

After turning the ignition switch is turned off, there may be a waiting time before disconnecting the negative (-) auxiliary battery terminal.

Click here INFO

2. DISCONNECT CABLE FROM NEGATIVE AUXILIARY BATTERY TERMINAL

Click here INFO

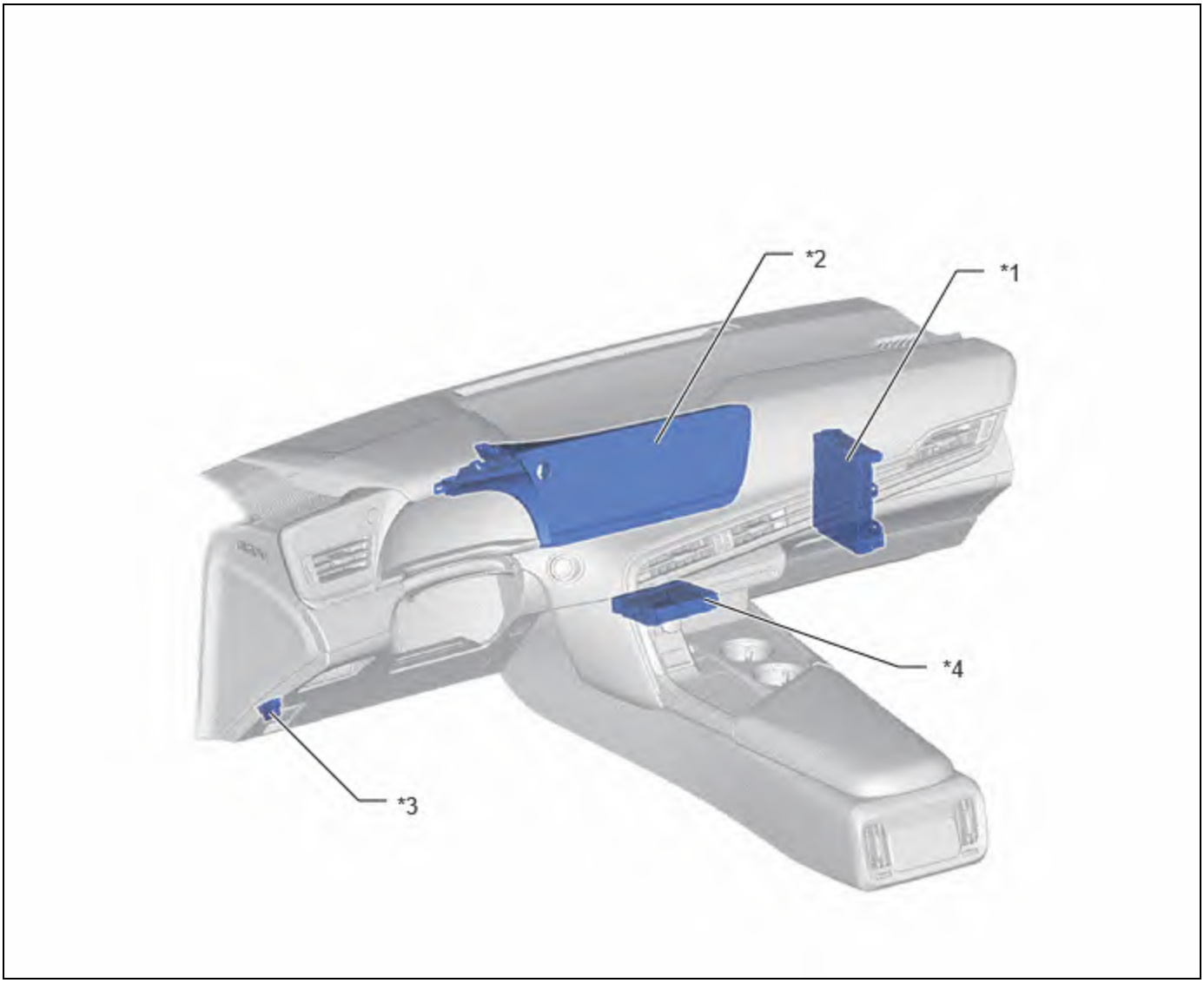
3. REMOVE GLOVE COMPARTMENT DOOR ASSEMBLY

Click here INFO

Last Modified: 11-21-2024	6.11:8.1.0	**Doc ID:** RM1000000028PEY
Model Year Start: 2023	**Model:** Mirai	**Prod Date Range:** [12/2022 - 11/2024]
Title: AUDIO / VIDEO: ASC SYSTEM: PARTS LOCATION; 2023 - 2024 MY Mirai [12/2022 - 11/2024]		

PARTS LOCATION

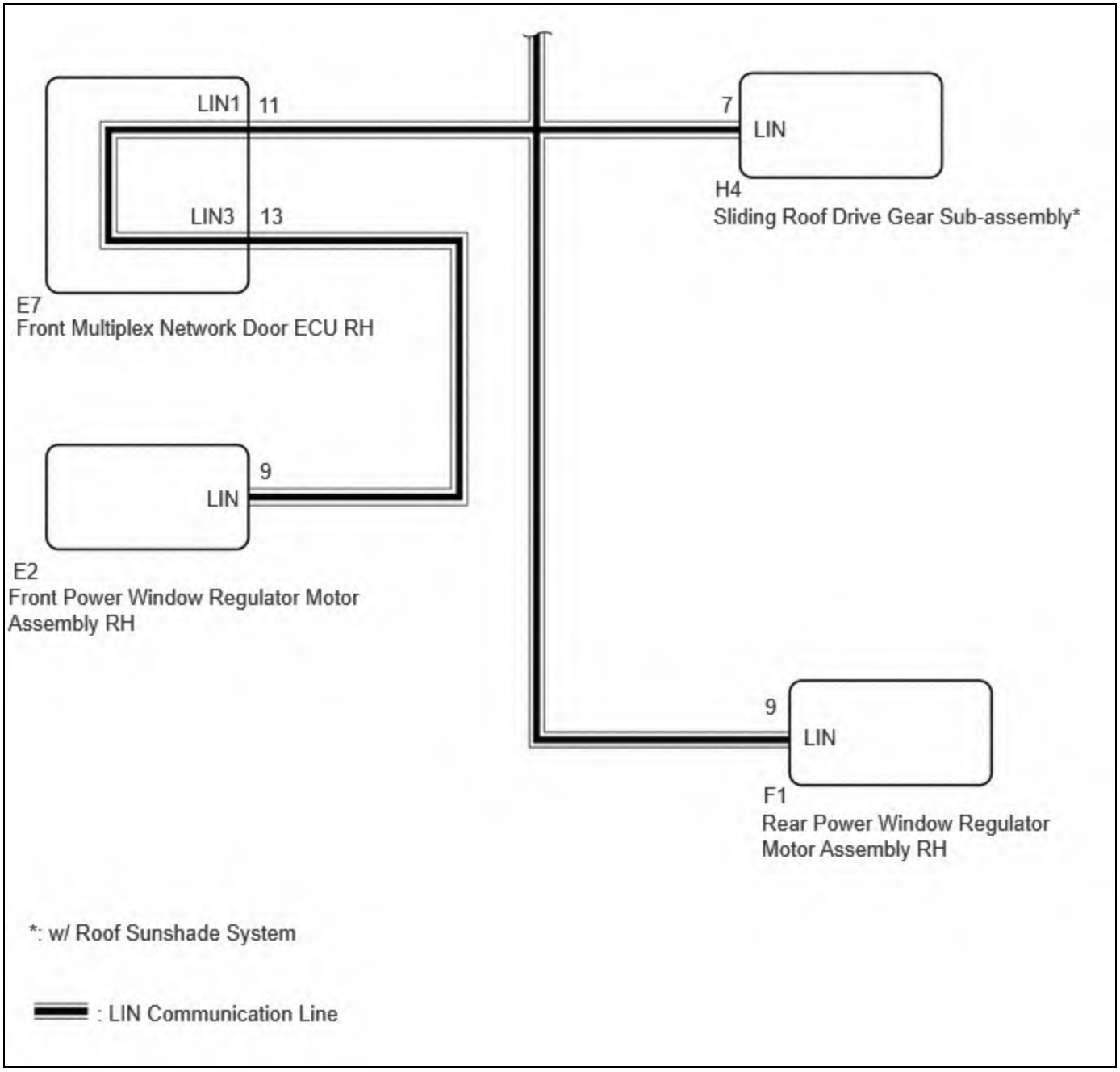
ILLUSTRATION



*1	PASSENGER SIDE JUNCTION BLOCK ASSEMBLY - MPX-B P NO.1 FUSE	*2	RADIO AND DISPLAY RECEIVER ASSEMBLY
*3	DLC3	*4	DCM (TELEMATICS TRANSCEIVER)

ILLUSTRATION

MULTI-INFORMATION DISPLAY	CODE	TESTER DISPLAY	MEASUREMENT ITEM	NOTES	VEHICLE CONTROL HISTORY DATA
					• Ultrasonic sensor frozen/dirty • Foreign matter stuck on ultrasonic sensor • Foreign matter stuck on ultrasonic sensor (thrown up) • Ultrasonic sensor parameter malfunction • Ultrasonic sensor continuous flowing water • Trip counter • Time counter/master synchronization information • GMT time information
Parking Support Brake Unavailable Clean Parking Assist Sensor*1 Parking Assist Unavailable*2	X20CC	Ultrasonic Sensor (Front Right Side) Temporarily Unavailable - Environmental Factor	Output when the front side ultrasonic sensor (FRS sensor) is temporarily unavailable	INFO	The following data items are stored • Total Distance Traveled - Unit • Total distance traveled • Shift position • Vehicle speed • Same RoB code occurrence count travel distance unit • Ultrasonic sensor open circuit • Ultrasonic sensor frozen/dirty • Foreign matter stuck on ultrasonic sensor • Foreign matter stuck on ultrasonic sensor (thrown up) • Ultrasonic sensor parameter malfunction • Ultrasonic sensor continuous flowing water • Trip counter • Time counter/master synchronization information



CAUTION / NOTICE / HINT

NOTICE:

- When using the GTS with the ignition switch off to troubleshoot:

  Connect the GTS to the vehicle and turn a courtesy light switch on and off at intervals of 1.5 seconds until communication between the GTS and vehicle begins.
- When the front power window regulator motor assembly LH is removed and reinstalled or replaced, the front power window regulator motor assembly LH must be initialized.

PROCEDURE

1.	**CHECK FOR DTC**

Pre-procedure1

(a) Clear the DTCs.

Body Electrical > Main Body > Clear DTCs

Last Modified: 11-21-2024	6.11:8.1.0	**Doc ID:** RM1000000028G44
Model Year Start: 2023	**Model:** Mirai	**Prod Date Range:** [12/2022 - 12/2023]
Title: THEFT DETERRENT / KEYLESS ENTRY: SMART KEY SYSTEM (for Start Function): B2782; Power Source Control ECU Malfunction; 2023 MY Mirai [12/2022 - 12/2023]		

DTC	**B2782**	**Power Source Control ECU Malfunction**

DESCRIPTION

As this DTC is not normally output, it may be due to noise in the LIN communication system, etc.

DTC NO.	DETECTION ITEM	DTC DETECTION CONDITION	TROUBLE AREA	DTC OUTPUT FROM	PRIORITY	NOTE
B2782	Power Source Control ECU Malfunction	One of the following conditions is met (1-trip detection logic (Only output while a malfunction is present and the power switch is on (IG).)): Noise in the LIN communication system, etc.	ID code box (immobiliser code ECU)	Smart Key	A	**DTC Output Confirmation Operation:** Any time

Vehicle Condition and Fail-safe Function when Malfunction Detected

VEHICLE CONDITION WHEN MALFUNCTION DETECTED	FAIL-SAFE FUNCTION WHEN MALFUNCTION DETECTED
Hybrid control system cannot be started.	Prohibits the hybrid control system from being started.

Related Data List and Active Test Items

DTC NO.	DATA LIST AND ACTIVE TEST
B2782	-

CAUTION / NOTICE / HINT

NOTICE:

- When using the GTS with the ignition switch off, connect the GTS to the DLC3 and turn a courtesy light switch on and off at intervals of 1.5 seconds or less until communication between the GTS and the vehicle begins. Then select Model Code "KEY REGIST" under manual mode and enter the following menus: Body Electrical / Smart Key. While using the GTS, periodically turn a courtesy light switch on and off at intervals of 1.5 seconds or less to maintain communication between the GTS and the vehicle.
- The smart key system (for Start Function) uses the LIN communication system and CAN communication system. Inspect the communication function by following How to Proceed with Troubleshooting. Troubleshoot the smart key system (for Start Function) after confirming that the communication systems are functioning properly.

  Click here INFO
- Before replacing the ID code box (immobiliser code ECU), refer to the Registration.

  Click here INFO
- After repair, confirm that no DTCs are output by performing "DTC Output Confirmation Operation".
- When disconnecting the cable from the negative (-) auxiliary battery terminal, some systems need to be initialized after the cable is reconnected.

  Click here INFO