

MIL ON With DTC(s) P1C8449 and/or P300449 in Freezing Temperatures

Service Category Vehicle Interior

Section Meter/Gauge/Display

Market USA and Mexico

Toyota Supports
ASE Certification 

Applicability

YEAR(S)	MODEL(S)	ADDITIONAL INFORMATION
2019 - 2023	ES300H	
2018 - 2023	LC500H, LS500H	
2022 - 2024	NX350H	
2022 - 2023	NX450H+	
2023	RX350H	
2019 - 2023	UX250H	

Introduction

Some 2018 – 2024 model year Lexus vehicles may exhibit a hybrid system warning lamp occurring in below-freezing temperatures (below 32°F or 0°C). After performing a Health Check, one or both of the following Diagnostic Trouble Codes (DTCs) may be present:

- P1C8449 – (High Voltage Power Resource Circuit Short during Ready ON)
- P300449 – (High Voltage Power Resource Circuit Short during Pre-Charge)

Follow the Repair Procedure in this bulletin to address this condition.

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Production Change Information

This bulletin applies to vehicles produced **BEFORE** the Production Change Effective VINs shown below.

MODEL	PLANT	DRIVETRAIN	BATTERY TYPE	PRODUCTION CHANGE EFFECTIVE VIN
ES 300h	TMMK	2WD	Li-ion	58A#A1C1#RU037320
			Ni-MH	58AB21B1#RU014295
LC 500h	Motomachi		Li-ion	JTH#Y5AY#NA002251
LS 500h	Tahara			JTH#Y#FF#N5019661
		AWD	Li-ion	JTH#Y#GF#N5002109
NX 350h	TMMC			2T2#KCEZ#RC018287
	TMK			JTJ#KCEZ#R2016674
NX 450h+				JTJ#KCFZ#N2002674
RX 350h	TMMC			2T2BBMCA#PC014424
UX 250h	TMK	2WD	Ni-MH	JTH#6JBH#P2156736
		AWD	Ni-MH	JTH#9JBH#P2070210

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Warranty Information

For USA Market

OP CODE	DESCRIPTION	MODEL	TIME	OFF	T1	T2
EL2310	R & R Hybrid Vehicle Relay Assembly	ES 300H	1.0	G92Z0-*****	8A	02
		LC 500h	3.1			
		LS 500h	3.3			
		NX 350h	1.0			
		UX 250h	1.1			

*Warranty claim MUST be submitted with the correct 10-digit OFF. Choose the correct OFF for the vehicle being repaired by searching for the parts in the Electronic Parts Catalog using the VIN filter.

APPLICABLE WARRANTY

- This repair is covered under the Lexus Basic Warranty. This warranty is in effect for 48 months or 50,000 miles, whichever occurs first, from the vehicle's in-service date.
- Warranty application is limited to occurrence of the specified condition described in this bulletin.
- 2020 – 2023 model year ES 300h, 2018 – 2023 model year LC 500h, 2018 – 2023 model year LS 500h, 2022 – 2024 model year NX 350h, and 2020 – 2023 model year UX 250h vehicles equipped with a California Certified Emission Control System that are registered and operated in California or any state that adopts California emission warranty — California Emission Long-Term Defect Warranty is in effect for 7 years or 70,000 miles from the vehicle's in-service date, whichever occurs first. (Please reference Policy 4.7, and/or the Owner's Warranty & Maintenance Guide for additional information.)

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Warranty Information (continued)

For USA Market (continued)

OP CODE	DESCRIPTION	MODEL	TIME	OFP	T1	T2
EL2312	R & R Hybrid Vehicle Relay Assembly	NX 450h+	2.4	G3850-*****	8A	02
		RX 350h	0.7	G3860-*****		

*Warranty claim MUST be submitted with the correct 10-digit OFP. Choose the correct OFP for the vehicle being repaired by searching for the part s in the Electronic Parts Catalog using the VIN filter.

APPLICABLE WARRANTY

- This repair is covered under the Lexus Powertrain Warranty. This warranty is in effect for 72 months or 70,000 miles, whichever occurs first, from the vehicle's in-service date.
- Warranty application is limited to occurrence of the specified condition described in this bulletin.
- For 2022 – 2023 NX 450h+* vehicles equipped with a California Certified Emission Control System that are registered and operated in California or any state that adopts California emission warranty - Partial Zero Emission Vehicle (PZEV) Emission Warranty Coverage is in effect for 15 years or 150,000 miles, from the vehicle's in-service date, whichever occurs first. (Please reference Warranty Policy Bulletin POL21-03, Warranty Policy 4.7, and/or the Owner's Warranty & Maintenance Guide for additional information.)

*PZEV coverage only applies if the MIL is illuminated.

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Warranty Information (continued)

For Mexico Market

OP CODE	DESCRIPTION	MODEL	TIME	OFP	T1	T2
EL2310	R & R Hybrid Vehicle Relay Assembly	ES 300h	1.0	G92Z0-*****	8A	02
		LC 500h	3.1			
		LS 500h	3.3			
		NX 350h	1.0			
		UX 250h	1.1			
EL2312		NX 450h+	2.4	G3850-*****		
		RX 350h	0.7	G3860-*****		

*Warranty claim MUST be submitted with the correct 10-digit OFP. Choose the correct OFP for the vehicle being repaired by searching for the parts in the Electronic Parts Catalog using the VIN filter.

APPLICABLE WARRANTY

- This repair is covered under the Lexus Basic Warranty. This warranty is in effect for 48 months or 80,000 kilometers, whichever occurs first, from the vehicle's in-service date.
- Warranty application is limited to occurrence of the specified condition described in this bulletin.

Parts Information

For USA and Mexico Markets

PART NUMBER	PART NAME	QTY
G92Z0-33041 – G92Z0-47100	Block Assy, HV Battery Junction	1
G92Z0-33051 – G92Z0-47110		1
G3850-48010	Box Assy, Traction Battery Device, No. 1	1
G3860-42010	Box Assy, Traction Battery Device, No. 2	1
G92Z0-47050	Block Assy, HV Battery Junction	1

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Required Tools & Equipment

SPECIAL SERVICE TOOLS (SST)	PART NUMBER	QTY
Battery Diagnostic Tool*	DCA-8000P T	1
Insulated Glove Set, Rubber With Leather Protectors*	01413-00072 (Medium)	
	01413-00073 (Large)	
	01413-00074 (Extra Large)	

*Essential SST.

CAUTION

ALWAYS inspect the insulated gloves before use for cracks, ruptures, tears, pinholes, or damage. Do NOT wear if damaged.

NOTE

Additional SSTs may be ordered by calling 1-800-933-8335.

REQUIRED EQUIPMENT	SUPPLIER	PART NUMBER	QTY
Techstream ADVI*	ADE	TSADVUNIT	1
Techstream 2.0		TS2UNIT	
Techstream Lite		TSLITEPDLR01	
Techstream Lite (Green Cable)		TSLP2DLR01	

*Essential SST.

NOTE

- Only ONE of the Techstream units listed above is required.
- GTS+ software version 2023.03.002.02 or later is required.
- Additional Techstream units may be ordered by calling Approved Dealer Equipment (ADE) at 1-800-368-6787.
- Use Techstream or an approved J2534 interface to perform flash reprogramming updates. Visit techinfo.toyota.com for more information regarding J2534 reprogramming.

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Repair Procedure

1. Confirm the condition exists.

Does the vehicle exhibit a hybrid system warning lamp in below-freezing temperatures (below 32°F or 0°C) with DTC(s) P1C8449 and/or DTC P300449 present?

- **YES** — Continue to step 2.
- **NO** — This bulletin does NOT apply. Continue diagnosis using the applicable Repair Manual.

2. Is the VIN BEFORE the one listed in the Production Change Information table?

- **YES** — Continue to step 3.
- **NO** — This bulletin does NOT apply. Continue diagnosis using the applicable Repair Manual.

3. Refer to the appropriate Repair Manual to gain access to the HV battery junction block/traction battery device.

Refer to TIS, applicable model and model year Repair Manual:

- [2019 – 2021](#) / [2022](#) / [2023](#) ES 300h:
Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: HV Relay Assembly: Removal”
- [2021](#) / [2022](#) / [2023](#) ES 300h:
Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: HV Relay Assembly (for Lithium-ion Battery): Removal”
- [2018 – 2023](#) LC 500h:
Engine/Hybrid System – Hybrid/Battery Control System – “8GR-FXS (Hybrid / Battery Control): HV Relay Assembly: Removal”
- [2018](#) / [2019 – 2020](#) / [2021](#) / [2022](#) / [2023](#) LS 500h:
Engine/Hybrid System – Hybrid/Battery Control System – “8GR-FXS (Hybrid / Battery Control): HV Relay Assembly: Removal”
- [2022 – 2024](#) NX 350h:
Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: HV Relay Assembly: Removal”
- [2022 – 2023](#) NX 450h+:
Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: HV Relay Assembly: Removal”
- [2023](#) RX 350h:
Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: HV Relay Assembly (for THS-HEV Model): Removal”

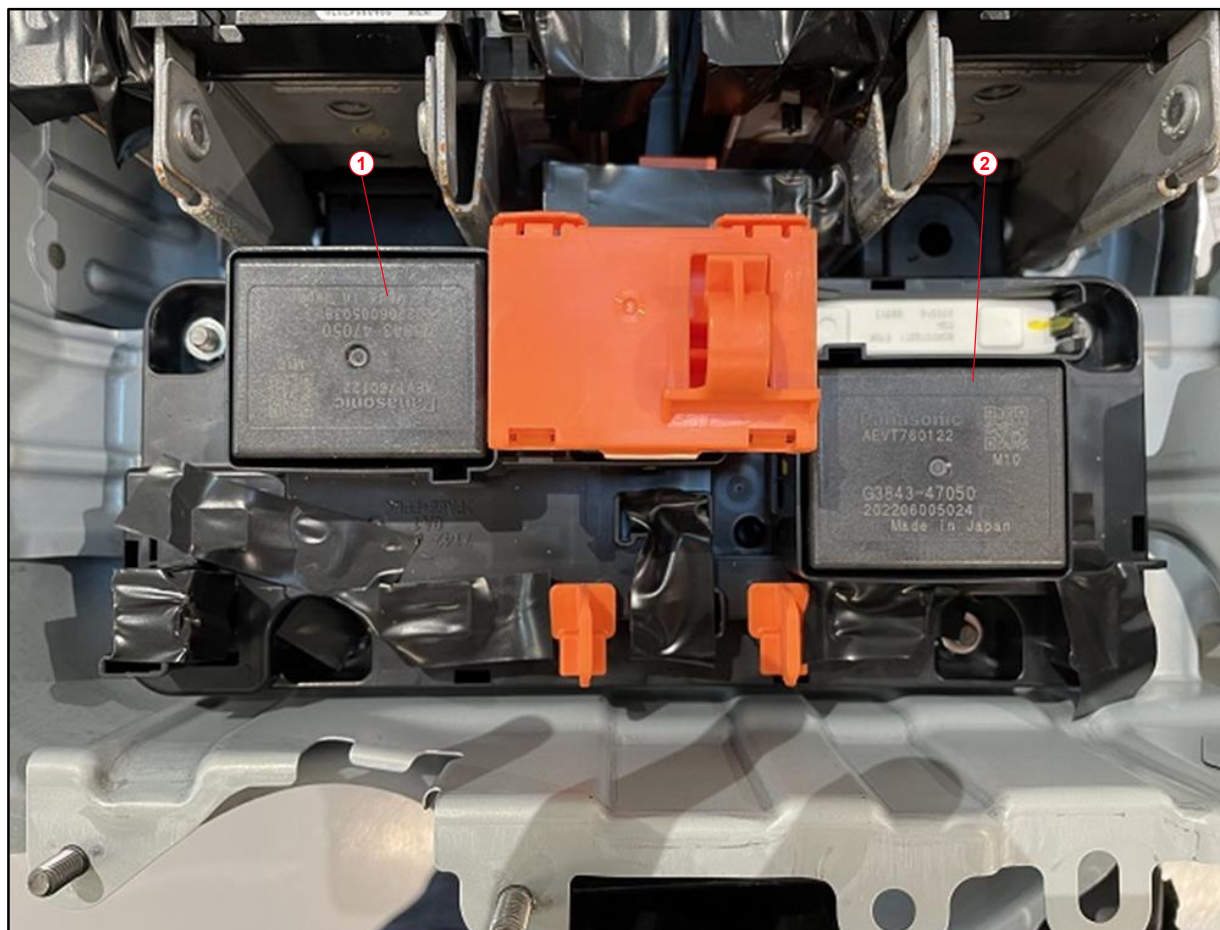
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Repair Procedure (continued)

- [2019 – 2022](#) / [2023](#) UX 250h:
Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control:
HV Relay Assembly: Removal”

4. Perform an inspection of the SMRB and SMRG internal relays.

Figure 1. Example of an HV Battery Junction Block (SMR)



1	SMRB Relay
2	SMRG Relay

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Repair Procedure (continued)

A. Are the relays labeled Panasonic?

See Figure 2 for an example of a relay labeled Panasonic.

- **YES** — Inspect the relay date code for the countermeasure date and go to step 5.
- **NO** — Continue to substep B.

Figure 2. Example of a Panasonic Relay



Panasonic Relay Date Code:
YYYYMM # # # # #
 The countermeasure date for the
 Panasonic relay is **July 2021**.

MONTH	CODE
Jan.	01
Feb	02
Mar	03
Apr	04
May	05
Jun	06
Jul	07
Aug	08
Sep	09
Oct	10
Nov	11
Dec	12

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Repair Procedure (continued)

B. Are the relays labeled Denso?

See Figure 3 for an example of a relay labeled Denso.

- **YES** — Inspect the relay date code for the countermeasure date and continue to step 5.
- **NO** — This bulletin does NOT apply. Continue diagnosis using the applicable Repair Manual.

Figure 3. Example of a Denso Relay



Denso Relay Date Code: **MMYYDD**

The countermeasure date for the Denso relay is **December 23, 2022**.

MONTH	CODE
Jan.	01
Feb	02
Mar	03
Apr	04
May	05
Jun	06
Jul	07
Aug	08
Sep	09
Oct	10
Nov	11
Dec	12

YEAR	CODE
2018	B
2019	C
2020	D
2021	E
2022	F
2023	G

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Repair Procedure (continued)

5. Were the relays produced BEFORE the countermeasure date listed in step 4?
 - **YES** — Continue to step 6.
 - **NO** — This bulletin does NOT apply. Continue diagnosis using the applicable Repair Manual.
6. Install the NEW HV battery junction block/traction battery device.
Refer to TIS, applicable model and model year Repair Manual:
 - [2019 – 2023](#) ES 300h:
Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: HV Relay Assembly: Installation”
 - [2021 – 2023](#) ES 300h:
Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: HV Relay Assembly (for Lithium-ion Battery): Installation”
 - [2018 – 2023](#) LC 500h:
Engine/Hybrid System – Hybrid/Battery Control System – “8GR-FXS (Hybrid / Battery Control): HV Relay Assembly: Installation”
 - [2018 – 2023](#) LS 500h:
Engine/Hybrid System – Hybrid/Battery Control System – “8GR-FXS (Hybrid / Battery Control): HV Relay Assembly: Installation”
 - [2022 – 2024](#) NX 350h:
Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: HV Relay Assembly: Installation”
 - [2022 – 2023](#) NX 450h+:
Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: HV Relay Assembly: Installation”
 - [2023](#) RX 350h:
Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: HV Relay Assembly (for THS-HEV Model): Installation”
 - [2019 – 2023](#) UX 250h:
Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: HV Relay Assembly: Installation”
7. Clear ANY DTCs and test-drive the vehicle to confirm the condition is no longer present.