

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

**Service Category** Vehicle Interior

**Market** USA and Mexico

**Section** Meter/Gauge/Display

Toyota Supports  
ASE Certification 

## Applicability

| YEAR(S)     | MODEL(S)                   | ADDITIONAL INFORMATION |
|-------------|----------------------------|------------------------|
| 2019 - 2022 | Avalon HV                  |                        |
| 2018 - 2023 | Camry HV                   |                        |
| 2022        | Corolla HV                 |                        |
| 2023        | Crown, Sequoia HV          |                        |
| 2020 - 2023 | Highlander HV              |                        |
| 2021 - 2023 | Mirai, Sienna HV, Venza HV |                        |
| 2017 - 2022 | Prius Prime                |                        |
| 2016 - 2022 | Prius                      |                        |
| 2019 - 2023 | RAV4 HV                    |                        |
| 2021 - 2022 | RAV4 Prime                 |                        |
| 2022 - 2023 | Tundra HV                  |                        |

## Introduction

Some 2016 – 2023 model year Toyota 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.

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

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

### 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 |
|---------------|---------------|------------|--------------|---------------------------------|
| Avalon HV     | TMMK          | 2WD        | Li-ion       | 4T1AA1AB#NU015644               |
|               |               |            |              | 4T1EA1AB#NU015935               |
|               |               |            |              | 4T1#A1AB#NU015937               |
| Camry HV      | TMMK (line 1) |            |              | 4T1#31AK#PU059520               |
|               | TMMK (Line 2) |            |              | 4T1#31AK#PU619648               |
|               | TMMK          | 2WD        | Ni-MH        | 4T1B21HK#PU020276               |
| Corolla HV    | Takaoka       | 2WD        | Li-ion       | JTDEAMDE8NJ040666               |
|               |               |            |              | JTDBARDE2NJ040680               |
|               |               |            |              | JTDBAMDE1NJ040690               |
| Crown         | Tsutsumi      | AWD        | Ni-MH        | JTDAAAAF#P3002952               |
|               |               |            |              | JTDAFAAF#P3001216               |
| Highlander HV | TMMI (Line 1) | 2WD        |              | 5TD#ARAH#PS021955               |
|               |               | AWD        |              | 5TD#BRCH#PS130283               |
|               | TMMI (Line 2) | 2WD        |              | 5TD#ARAH#PS527352               |
|               |               | AWD        |              | 5TD#BRCH#PS593492               |
| Mirai         | Motomachi     | 2WD        | Li-ion       | JTDAAAAA#PA310008               |
| Prius         | Tsutsumi      |            |              | JTDKA#FU#N3167037               |
|               |               |            | AWD          | Ni-MH                           |
| Prius Prime   |               | 2WD        | Li-ion       | JTDKA#FP#N3208831               |

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

## Production Change Information (continued)

| MODEL   | PLANT          | DRIVETRAIN | BATTERY TYPE | PRODUCTION CHANGE EFFECTIVE VIN |                   |
|---------|----------------|------------|--------------|---------------------------------|-------------------|
| RAV4 HV | TMMK           | AWD        | Ni-MH        | 4T3#WRFV#PU101497               |                   |
|         |                |            | Li-ion       | 4T3#6RFV#PU130419               |                   |
|         | TMMC           |            | Ni-MH        | 2T3#WRFV#PW169155               |                   |
|         |                |            |              | JTMRWRFV6PJ056266               |                   |
|         | Takaoka        |            | Li-ion       | JTMD6RFV4PJ026838               |                   |
|         |                |            |              | JTMB6RFV1PJ026836               |                   |
|         |                |            |              | JTME6RFV3PJ026625               |                   |
|         |                |            |              | JTM16RFV2PJ026842               |                   |
|         | TICO (Line 26) |            | Ni-MH        | JTMRWRFV5PD573895               |                   |
|         |                |            |              | JTMLWRFV0PD573891               |                   |
|         |                |            |              | JTMMWRFV0PD573930               |                   |
|         |                |            | Li-ion       | JTMD6RFV1PD540659               |                   |
|         |                |            |              | JTMB6RFVXPD540635               |                   |
|         |                |            |              | JTME6RFV8PD540632               |                   |
|         |                |            |              | JTM16RFV0PD540638               |                   |
|         | TICO (Line 27) |            | Ni-MH        | JTMRWRFV6PD176888               |                   |
|         |                |            |              | JTMLWRFV8PD177112               |                   |
|         |                |            |              | JTMMWRFV1PD176971               |                   |
|         | RAV4 Prime     |            | TICO         | Li-ion                          | JTMD6RFV3PD089458 |
|         |                |            |              |                                 | JTMB6RFV9PD089343 |
|         |                |            |              |                                 | JTM16RFV0PD089324 |
|         |                |            |              |                                 | JTMCB3FV2ND080784 |
|         |                |            |              |                                 | JTMAB3FV6ND080620 |
|         |                |            |              |                                 | JTMEB3FV3ND080625 |
|         |                |            |              |                                 | JTMFB3FV0ND083258 |
|         |                |            |              |                                 | JTMGB3FV9ND080654 |
|         |                |            |              |                                 | JTMGB3FV1ND083273 |

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

### Production Change Information (continued)

| MODEL      | PLANT   | DRIVETRAIN | BATTERY TYPE | PRODUCTION CHANGE EFFECTIVE VIN |
|------------|---------|------------|--------------|---------------------------------|
| Sequoia HV | TMMTX   | 2WD        | Ni-MH        | 7SVAAAAA#PX002136               |
|            |         | 4WD        |              | 7SVAAAABA#PX016087              |
| Sienna HV  | TMMI    | 2WD        |              | 5TD#RKEC#PS164578               |
|            |         | AWD        |              | 5TD#SKFC#PS092709               |
| Tundra HV  | TMMTX   | 2WD        |              | 5TF#C5AB#PX002697               |
|            |         |            |              | 5TF#C5BC#PX001180               |
|            |         | 4WD        |              | 5TF#C5DB#PX034074               |
|            |         |            |              | 5TF#C5EC#PX003943               |
| Venza HV   | Takaoka | AWD        | Li-ion       | JTEAAAAH4PJ126924               |
|            |         |            |              | JTEAAAAH5PJ126866               |
|            |         |            |              | JTEAAAAH6PJ126861               |
|            |         |            |              | JTEAAAAH5PJ127144               |
|            |         |            |              | JTEAAAAH0PJ126905               |
|            |         |            |              | JTEAAAAH1PJ126993               |

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

### Warranty Information

#### For USA Market

| OP CODE | DESCRIPTION                         | MODEL                       | TIME | OFP         | T1 | T2 |
|---------|-------------------------------------|-----------------------------|------|-------------|----|----|
| EL2309  | R & R Hybrid Vehicle Relay Assembly | Avalon Hybrid               | 0.9  | G92Z0-####* | 8A | 02 |
|         |                                     | Camry Hybrid                | 0.9  |             |    |    |
|         |                                     | Corolla Hybrid              | 1.0  |             |    |    |
|         |                                     | Mirai                       | 3.1  |             |    |    |
|         |                                     | Prius                       | 1.5  |             |    |    |
|         |                                     | Prius Prime                 | 2.0  |             |    |    |
|         |                                     | RAV4 Hybrid w/<br>VDS #6RFV | 0.8  |             |    |    |
|         |                                     | RAV4 Hybrid w/<br>VDS #WRFV | 1.0  |             |    |    |
|         |                                     | Venza Hybrid                | 0.8  |             |    |    |

\*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 Toyota Basic Warranty. This warranty is in effect for 36 months or 36,000 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 2018 – 2019 model year Camry Hybrid 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 Short-Term Defect Warranty is in effect for 3 years or 50,000 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)
- For 2019 – 2022 model year Avalon Hybrid, 2020 – 2023 model year Camry Hybrid, 2022 model year Corolla Hybrid, 2019 – 2023 model year RAV4 Hybrid, and 2021 – 2023 model year Venza Hybrid 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)
- For 2016 – 2017 model year Prius and 2017 – 2022 model year Prius Prime 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 POL14-09, Warranty Policy 4.7, and/or the Owner's Warranty & Maintenance Guide for additional information)

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

### Warranty Information (continued)

#### For USA Market (continued)

| OP CODE | DESCRIPTION                         | MODEL                 | TIME | OFF                        | T1 | T2 |
|---------|-------------------------------------|-----------------------|------|----------------------------|----|----|
| EL2311  | R & R Hybrid Vehicle Relay Assembly | Crown w/<br>VDS AAAAF | 1.0  | G3850-*****<br>G3860-***** | 8A | 02 |
|         |                                     | Crown w/<br>VDS AFAAF | 1.1  |                            |    |    |
|         |                                     | Highlander Hybrid     | 1.0  |                            |    |    |
|         |                                     | RAV4 Prime            | 3.5  |                            |    |    |
|         |                                     | Sequoia Hybrid        | 2.5  |                            |    |    |
|         |                                     | Sienna Hybrid         | 1.4  |                            |    |    |
|         |                                     | Tundra Hybrid         | 1.4  |                            |    |    |

\*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 Toyota Basic Warranty. This warranty is in effect for 60 months or 60,000 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 Highlander HV, 2023 model year Sequoia HV, and 2022 – 2023 model year Tundra HV 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)
- For 2021 – 2022 model year RAV4 Prime\* 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 POL14-09, Warranty Policy 4.7, and/or the Owner's Warranty & Maintenance Guide for additional information)

\*For 2021 – 2022 RAV4 Prime, PZEV coverage only applies if the MIL is illuminated.

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

### Warranty Information (continued)

#### For Mexico Market

| OP CODE | DESCRIPTION                         | MODEL                    | TIME | OFP                        | T1 | T2 |
|---------|-------------------------------------|--------------------------|------|----------------------------|----|----|
| EL2309  | R & R Hybrid Vehicle Relay Assembly | Avalon Hybrid            | 0.9  | G92Z0-*****                | 8A | 02 |
|         |                                     | Camry Hybrid             | 0.9  |                            |    |    |
|         |                                     | Corolla Hybrid           | 1.0  |                            |    |    |
|         |                                     | Mirai                    | 3.1  |                            |    |    |
|         |                                     | Prius                    | 1.5  |                            |    |    |
|         |                                     | Prius Prime              | 2.0  |                            |    |    |
|         |                                     | RAV4 Hybrid w/ VDS #6RFV | 0.8  |                            |    |    |
|         |                                     | RAV4 Hybrid w/ VDS #WRFV | 1.0  |                            |    |    |
|         |                                     | Venza Hybrid             | 0.8  |                            |    |    |
| EL2311  | R & R Hybrid Vehicle Relay Assembly | Crown w/ VDS AAAAF       | 1.0  | G3850-*****<br>G3860-***** | 8A | 02 |
|         |                                     | Crown w/ VDS AFAAF       | 1.1  |                            |    |    |
|         |                                     | Highlander Hybrid        | 1.0  |                            |    |    |
|         |                                     | RAV4 Prime               | 3.5  |                            |    |    |
|         |                                     | Sequoia Hybrid           | 2.5  |                            |    |    |
|         |                                     | Sienna Hybrid            | 1.4  |                            |    |    |
|         |                                     | Tundra Hybrid            | 1.4  |                            |    |    |

\*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 Toyota Basic Warranty. This warranty is in effect for 36 months or 60,000 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.



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

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### 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   |

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

### Required Tools & Equipment

| SPECIAL SERVICE TOOLS (SST)                          | PART NUMBER                               | QTY |
|--|---|-----|
| Battery Diagnostic Tool*                             | <a href="#">DCA-8000P T</a>               | 1   |
| Insulated Glove Set, Rubber With Leather Protectors* | <a href="#">01413-00072</a> (Medium)      |     |
|  | <a href="#">01413-00073</a> (Large)       |     |
|  | <a href="#">01413-00074</a> (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 (USA) or 01-55-50103041 (Mexico).
- Use Techstream or an approved J2534 interface to perform flash reprogramming updates. Visit [techinfo.toyota.com](https://techinfo.toyota.com) for more information regarding J2534 reprogramming.

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

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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 – 2020](#) Avalon HV:  
*Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: HV Relay Assembly (for Nickel Metal Hydride Battery): Removal”*
- [2021](#) / [2022](#) Avalon HV:  
*Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: HV Relay Assembly (for Lithium-ion Battery): Removal”*
- [2018 – 2020](#) / [2021 – 2023](#) Camry HV:  
*Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: HV Relay Assembly (for Nickel Metal Hydride Battery): Removal”*
- [2018 – 2020](#) / [2021 – 2023](#) Camry HV:  
*Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: HV Relay Assembly (for Lithium-ion Battery): Removal”*
- [2022](#) Corolla HV:  
*Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: HV Relay Assembly (for Nickel Metal Hydride Battery): Removal”*
- [2022](#) Corolla HV:  
*Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: HV Relay Assembly (for Lithium-ion Battery): Removal”*

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

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### **Repair Procedure (continued)**

- [2023](#) Crown:  
*Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: HV Relay Assembly (for A25A-FXS): Removal”*
- [2023](#) Crown:  
*Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: HV Relay Assembly (for T24A-FTS): Removal”*
- [2020 – 2023](#) Highlander HV:  
*Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: HV°Relay Assembly: Removal”*
- [2021](#) / [2022](#) / [2023](#) Mirai:  
*Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: HV°Relay Assembly: Removal”*
- [2016 – 2018](#) / [2019 – 2020](#) / [2021 – 2022](#) Prius:  
*Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: HV Relay Assembly (for Nickel Metal Hydride Battery): Removal”*
- [2016 – 2018](#) / [2019 – 2020](#) / [2021 – 2022](#) Prius:  
*Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: HV Relay Assembly (for Lithium-ion Battery): Removal”*
- [2017 – 2019](#) / [2020](#) / [2021 – 2022](#) Prius Prime:  
*Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: HV Relay Assembly: Removal”*
- [2019 \(11/2018 – 02/2019\)](#) RAV4 HV:  
*Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: HV Relay Assembly (for Nickel Metal Hydride Battery): Removal”*
- [2019 \(02/2019 – 10/2019\)](#) RAV4 HV:  
*Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: HV Relay Assembly (for Nickel Metal Hydride Battery): Removal”*
- [2020 \(10/2019 – 06/2020\)](#) RAV4 HV:  
*Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: HV Relay Assembly (for Nickel Metal Hydride Battery): Removal”*
- [2020 \(06/2020 – 08/2020\)](#) RAV4 HV:  
*Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: HV Relay Assembly (for Nickel Metal Hydride Battery): Removal”*
- [2021](#) RAV4 HV:  
*Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: HV Relay Assembly (for Nickel Metal Hydride Battery): Removal”*

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

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### **Repair Procedure (continued)**

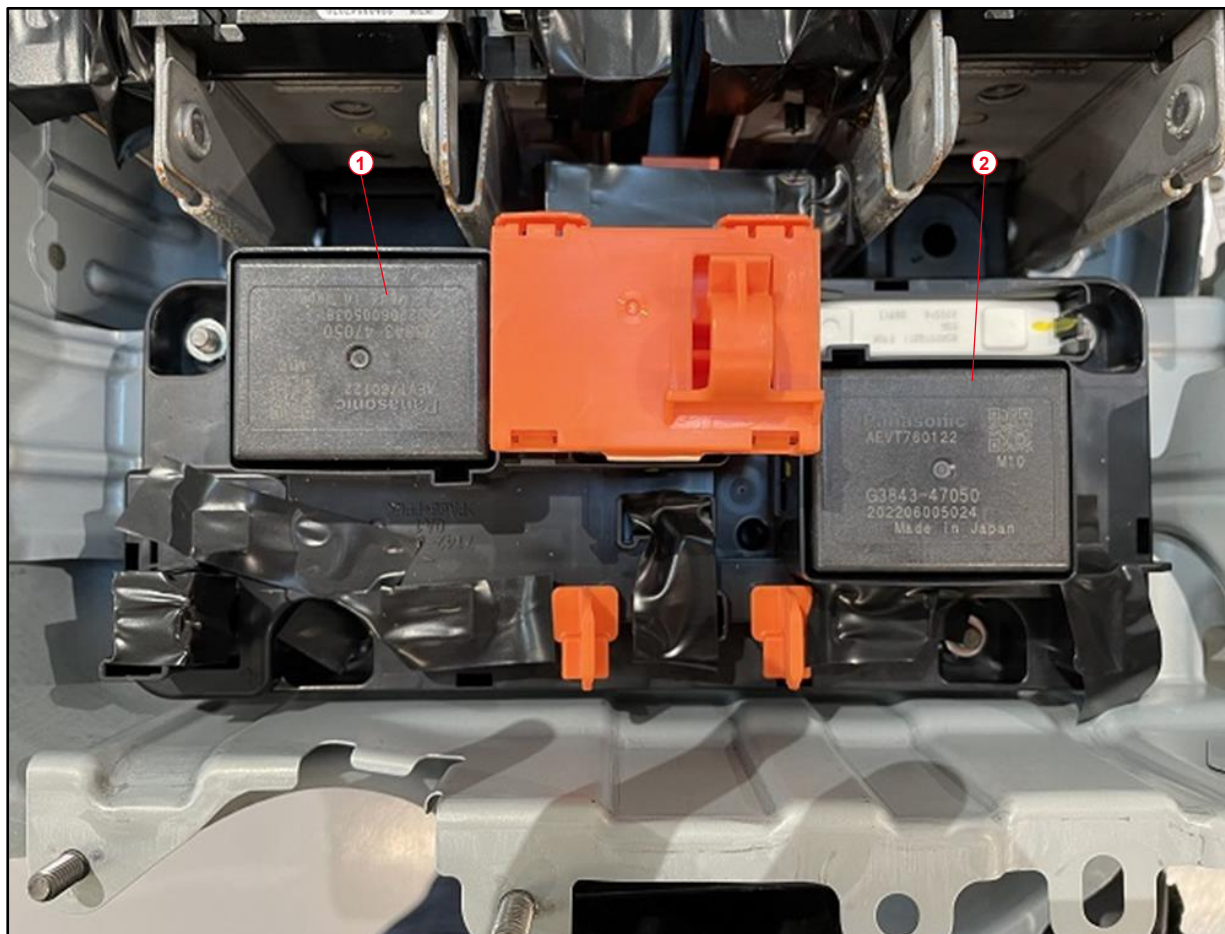
- [2022](#) RAV4 HV:  
*Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: HV Relay Assembly (for Nickel Metal Hydride Battery): Removal”*
- [2023](#) RAV4 HV:  
*Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: HV Relay Assembly (for Nickel Metal Hydride Battery): Removal”*
- [2020 \(06/2020 – 08/2020\)](#) RAV4 HV:  
*Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: HV Relay Assembly (for Lithium-ion Battery): Removal”*
- [2021](#) RAV4 HV:  
*Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: HV Relay Assembly (for Lithium-ion Battery): Removal”*
- [2022](#) RAV4 HV:  
*Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: HV Relay Assembly (for Lithium-ion Battery): Removal”*
- [2023](#) RAV4 HV:  
*Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: HV Relay Assembly (for Lithium-ion Battery): Removal”*
- [2021](#) / [2022](#) RAV4 Prime:  
*Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: HV Relay Assembly: Removal”*
- [2023](#) Sequoia HV:  
*Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: HV Relay Assembly: Removal”*
- [2021 – 2023](#) Sienna HV:  
*Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: HV Relay Assembly: Removal”*
- [2022 – 2023](#) Tundra HV:  
*Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: HV Relay Assembly: Removal”*
- [2021 – 2022](#) / [2023](#) Venza HV:  
*Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: HV Relay Assembly: Removal”*

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

### Repair Procedure (continued)

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

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



|          |                   |
|----------|-------------------|
| <b>1</b> | <b>SMRB Relay</b> |
| <b>2</b> | <b>SMRG Relay</b> |

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


### 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   |

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


### 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    |



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

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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 – 2020](#) Avalon HV:  
*Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: HV Relay Assembly (for Nickel Metal Hydride Battery): Installation”*
- [2021 – 2022](#) Avalon HV:  
*Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: HV Relay Assembly (for Lithium-ion Battery): Installation”*
- [2018 – 2023](#) Camry HV:  
*Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: HV Relay Assembly (for Nickel Metal Hydride Battery): Installation”*
- [2018 – 2023](#) Camry HV:  
*Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: HV Relay Assembly (for Lithium-ion Battery): Installation”*
- [2022](#) Corolla HV:  
*Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: HV Relay Assembly (for Nickel Metal Hydride Battery): Installation”*
- [2022](#) Corolla HV:  
*Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: HV Relay Assembly (for Lithium-ion Battery): Installation”*
- [2023](#) Crown:  
*Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: HV Relay Assembly (for A25A-FXS): Installation”*
- [2023](#) Crown:  
*Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: HV Relay Assembly (for T24A-FTS): Installation”*
- [2020 – 2023](#) Highlander HV:  
*Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: HV°Relay Assembly: Installation”*
- [2021 – 2023](#) Mirai:  
*Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: HV°Relay Assembly: Installation”*

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

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### **Repair Procedure (continued)**

- [2016 – 2018](#) / [2019 – 2022](#) Prius:  
*Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: HV Relay Assembly (for Nickel Metal Hydride Battery): Installation”*
- [2016 – 2022](#) Prius:  
*Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: HV Relay Assembly (for Lithium-ion Battery): Installation”*
- [2017 – 2019](#) / [2020](#) / [2021 – 2022](#) Prius Prime:  
*Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: HV Relay Assembly: Installation”*
- [2019 – 2023](#) RAV4 HV:  
*Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: HV Relay Assembly (for Nickel Metal Hydride Battery): Installation”*
- [2020 – 2023](#) RAV4 HV:  
*Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: HV Relay Assembly (for Lithium-ion Battery): Installation”*
- [2021 – 2022](#) RAV4 Prime:  
*Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: HV Relay Assembly: Installation”*
- [2023](#) Sequoia HV:  
*Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: HV Relay Assembly: Installation”*
- [2021 – 2023](#) Sienna HV:  
*Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: HV Relay Assembly: Installation”*
- [2022 – 2023](#) Tundra HV:  
*Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: HV Relay Assembly: Installation”*
- [2021 – 2023](#) Venza HV:  
*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.