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Climate Control System Not Heating, MIL ON With DTC(s) P15017A, P1B8314, and/or P05347A, and/or Humming/Buzzing Noise Upon Startup (Ready On)

Service Category Vehicle Interior

2021

Section	Heating/Air Conditioning	I	Market USA	Toyota Supports
Applicabilit	y			
	YEAR(S)	MODEL(S)	ADDITIONAL INFORMATION	

REVISION NOTICE

December 14, 2022 Rev1:

• The Introduction, Warranty Information, Parts Information, and Repair Procedure sections have been updated.

Any previous printed versions of this bulletin should be discarded.

RAV4 Prime

Introduction

Some 2021 model year RAV4 Prime vehicles may exhibit one or more of the following conditions:

- The climate control system is NOT cooling or heating.
- MIL ON with one or more of the following Diagnostic Trouble Code(s) (DTC[s]):
 - P15017A Hybrid/EV battery cooling refrigerant gas fluid leak or seal failure.
 - P1B8314 Hybrid/EV battery pack refrigerant pressure sensor "a" circuit high circuit short to auxiliary battery.
 - P05347A Refrigerant gas fluid leak or seal failure.
- Humming/buzzing noise upon startup (Ready ON) with the compressor on.

Follow the Repair Procedure in this bulletin to address these conditions.

Warranty Information

OP CODE	DESCRIPTION	TIME	OFP	T1	T2
Combo A	R & R Discharge Hose Sub-assy	2.7	000E0 40 444 *	91	00
AC2047	Reprogram Air Conditioning Amplifier	0.4	88650-42###*		99

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

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.
- All RAV4 Prime vehicles that are registered and normally operated in California, Arizona (2012 model year only), Connecticut (starting with 2005 model year), Maine (starting with 2004 model year), Maryland (starting with 2011 model year), Massachusetts (starting with 2004 model year), New Hampshire (2005 2009 model year only), New Jersey (starting with 2005 model year), New Mexico (2010 2011 model year only), New York (beginning with 2004 model year with Zero Emissions (ZE) models only; all models starting with 2016 model year), Oregon (starting with 2008 model year), Rhode Island (starting with 2005 model year), & Vermont (starting with 2004 model year) 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 for additional information)
- Four additional states (Delaware [beginning with 2014 model year], Colorado [starting 2022 model year] Pennsylvania [beginning with 2008 model year], Washington [beginning with 2009 model year]) have adopted the California Emission Warranty, however, in these states performance and long-term defect warranty coverage is 7 years or 70,000 miles, whichever occurs first.

Parts Information

PART NUMBER		DADTNAME	QTY
PREVIOUS	NEW	PART NAME	
88703-42260		Discharge Hose Sub-assy	1
88650-42862 88650-42863		Amplifier Assy, Air Conditioner	1

NOTE

The air conditioner amplifier assembly should NOT be replaced as part of the Repair Procedure.

Required Tools & Equipment

SPECIAL SERVICE TOOLS (SST)	PART NUMBER	QTY
Battery Diagnostic Tool*	<u>DCA-8000P T</u>	1

*Essential SST.

NOTE

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

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

*Essential SST.

NOTE

- Only ONE of the Techstream units listed above is required.
- Software version 17.20.013 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 <u>techinfo.toyota.com</u> for more information regarding J2534 reprogramming.

Calibration Information

MODEL	PART	CALIBRATION ID		
MODEL		PREVIOUS	NEW	
RAV4 Prime	Air Conditioner Amplifier Assembly	8865F4204003 8865F4204004 8865F4204005 8865F4204006	<u>8865F4204008</u>	

Repair Procedure

1. Turn the vehicle ON (Ready ON).

Confirm one or more of the following condition(s) is(are) present:

- The climate control system is NOT cooling or heating.
- MIL ON with one or more of the following DTC(s):
 - P15017A Hybrid/EV battery cooling refrigerant gas fluid leak or seal failure.
 - P1B8314 Hybrid/EV battery pack refrigerant pressure sensor "a" circuit high circuit short to auxiliary battery.
 - P05347A Refrigerant gas fluid leak or seal failure.

Does the vehicle exhibit ANY of the conditions listed above?

- **YES** Continue to step 2.
- **NO** Go to step 6.
- 2. Check if the refrigerant level is low by evacuating the system.

Is the refrigerant level low?

- **YES** Continue to step 3.
- NO Continue diagnosis and repair the present condition(s) listed above using the applicable Repair Manual BEFORE proceeding to step 6.

NOTE

The condition(s) listed above (is)are NOT covered by this Service Bulletin if the refrigerant level is NOT low. AFTER the condition(s) listed above has(have) been repaired, go to step 6.

3. Inspect the discharge hose sub-assembly for ANY leaks.

If there is no refrigerant in the system, add a minimum refrigerant charge and use soapy water to spray the discharge hose sub-assembly at the compressor fitting area and check for bubbles.

Are bubbles present at the discharge hose sub-assembly compressor fitting area?

- **YES** Continue to step 4.
- NO Continue diagnosis and repair the refrigerant leak using the applicable Repair Manual BEFORE proceeding to step 6.

NOTE

Refrigerant leaks other than discharge hose leaks are NOT covered by this Service Bulletin. AFTER the refrigerant leak has been repaired, go to step 6.

Repair Procedure (continued)

- Replace the discharge hose sub-assembly. Refer to TIS, applicable model and model year Repair Manual:
 - 2021 RAV4 Prime: Vehicle Interior – Heating/Air Conditioning – Compressor – "Heating / Air Conditioning: Compressor: <u>Removal</u> / <u>Installation</u>"
- 5. Go to step 7.
- Turn the vehicle ON (Ready ON) and ensure the compressor is ON. Is there a humming/buzzing noise present? Refer to the link for an example of the humming/buzzing noise.

Humming/Buzzing noise example

- YES Continue to step 7.
- NO This bulletin does NOT apply. Continue diagnosis using the applicable Repair Manual.
- Use Techstream to confirm the calibration ID for the air conditioning amplifier assembly. Is the air conditioning amplifier assembly calibration ID 8865F4204003, 8865F4204004, 8865F4204005, or 8865F4204006?
 - **YES** Continue to step 8.
 - NO This bulletin does NOT apply. Continue diagnosis using the applicable Repair Manual.
- 8. Reflash the air conditioning amplifier assembly to calibration ID 8865F4204008.

NOTE

- The battery diagnostic tool MUST be used in Power Supply Mode to maintain battery voltage at 13.5V while flash reprogramming the vehicle.
- For details on how to use the battery diagnostic tool, refer to the <u>DCA-8000 Instruction Manual</u> located at TIS Diagnostics Tools & Equipment Battery Diagnostics.

Follow the procedures outlined in <u>T-SB-0134-16</u>, *Techstream ECU Flash Reprogramming Procedure*, and flash the air conditioning amplifier assembly with the NEW calibration file update.

- 9. Using Techstream, perform Health Check and clear ANY stored DTCs.
- 10. Confirm air conditioning compressor humming/buzzing noise is no longer present.