

MIL ON With DTCs P0A7A and/or P0A78

Service Category Engine/Hybrid System

Section Hybrid/Battery Control System

Market USA

Toyota Supports
ASE Certification 

Applicability

YEAR(S)	MODEL(S)	ADDITIONAL INFORMATION
2012 - 2017	Prius V	
2010 - 2015	Prius	

Introduction

Some 2010 – 2015 model year Prius and 2012 – 2017 model year Prius V vehicles may exhibit a MIL ON condition with Diagnostic Trouble Codes (DTCs) P0A7A and/or P0A78, indicating a malfunction has occurred in the inverter assembly with converter. Follow the Repair Procedure in this bulletin to identify the specific components within the inverter assembly with converter that need to be replaced and address this condition.

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Warranty Information

OP CODE	DESCRIPTION	MODEL	TIME	OFF	T1	T2
EL9079	Replace IPM Transistor	Prius	2.9	G9200-#####*	8A	73
		Prius V	2.9			
EL9080	Replace IPM Transistor and MG ECU	Prius	2.9			
		Prius V	2.9			
EL9081	Replace IPM Transistor, MG ECU, and Inverter Current Sensor	Prius	3.0			
		Prius V	3.2			
EL9082	Replace IPM Transistor, MG ECU, Inverter Current Sensor, and Wire Sub Assy	Prius	3.0			
		Prius V	3.2			
EL9083	Replace Inverter Assembly	Prius	2.0			
		Prius V	1.6			

*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 Hybrid Warranty. This warranty is in effect for 96 months or 100,000 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 2010 – 2015 model year Prius 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) Partial Zero Emission Vehicle (PZEV) Emission Warranty Coverage does not apply to Prius V.
- For vehicles outside of Toyota Hybrid System Warranty or Partial Zero Emission (PZEV) Emission Warranty Coverage, please check for any additional coverage under CSP programs.

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Parts Information

PART NUMBER*1	PART NAME	QTY
G9200-##### (Order by VIN)	Inverter Assy, W/Converter	1*2
G920H-##### (Order by VIN)	Computer Sub-assy, MG Control W/Bracket	1*2
G920J-52010	Sensor Sub-assy, Inverter Current	1*2
G9208-47090	Wire Sub-assy, Inverter	1*2
04899-47070	Transistor Kit, Power Module Intelligent (IPM)	1*2, *7
08826-00100	Seal Packing or Equivalent	1*2
00272-SLLC2	Super Long Life Coolant	1*3
04899-47060	Plug Kit, Inverter Drain	1*3
90430-18008	Gasket	1*3
G922L-47010	Cover, Inverter Signal Connector	1*4
91551-80618	Bolt, Flange	15*4
091X1-47020	Seal, Masking, No. 1	1*5
08887-02809	Toyota Thermal Grease X-23-7884-4	2*6

- *1 Part numbers are subject to change. Order the correct part number by inputting the VIN in the EPC.
- *2 Refer to step 3 in this Service Bulletin to determine if the part is required.
- *3 Required for ANY Repair Procedure in this Service Bulletin.
- *4 NOT required. Available in case of breakage.
- *5 Included in IPM Kit. Available if spare is needed.
- *6 Used ONLY for IPM replacement. Part has shelf life of one year. Do NOT use if stored past one year.
- *7 The appearance of the replacement IPM may be different than the original part.

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Required Tools & Equipment

SPECIAL SERVICE TOOLS (SST)	PART NUMBER	QTY
Anti-static Mat*	09890-47010-01	1
Squeegee*	09891-47010-1A	1
Torque Wrench Adapter*	09961-00950	1
Inverter Case Separator*	09891-47020-01	1
Electrical Insulating Gloves*	01413-00072 (Medium)	1
	01413-00073 (Large)	
	01413-00074 (Extra Large)	

*Essential SST.

CAUTION

ALWAYS inspect electrical insulating 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

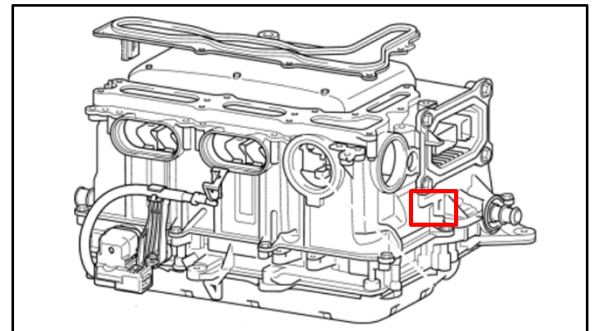
- Only ONE of the Techstream units listed above is required.
- Software version 17.30.011 or later is required.
- Additional Techstream units may be ordered by calling Approved Dealer Equipment (ADE) at 1-800-368-6787.

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Repair Procedure

1. Confirm the condition exists.
 - A. Are DTCs P0A7A and/or P0A78 stored?
 - **YES** — Continue to substep B.
 - **NO** — Continue to substep C.
 - B. Does the vehicle exhibit thermal damage to the inverter assembly with converter in the location shown?
 - **YES** — Continue to step 2.
 - **NO** — Go to step 3.
 - C. Does the vehicle exhibit thermal damage to the inverter assembly with converter in the location shown?
 - **YES** — Continue to step 2.
 - **NO** — This bulletin does NOT apply.
Continue diagnosis using the applicable Repair Manual.

Figure 1.



2. Replace the inverter assembly with converter.

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

- 2010 Prius:
Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: Inverter With Converter: [Removal](#) / [Installation](#)”
- 2011 Prius:
Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: Inverter With Converter: [Removal](#) / [Installation](#)”
- 2012 Prius:
Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: Inverter With Converter: [Removal](#) / [Installation](#)”
- 2013 Prius:
Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: Inverter With Converter: [Removal](#) / [Installation](#)”
- 2014 Prius:
Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: Inverter With Converter: [Removal](#) / [Installation](#)”
- 2015 Prius:
Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: Inverter With Converter: [Removal](#) / [Installation](#)”

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Repair Procedure (continued)

- 2012 Prius V:
Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: Inverter With Converter: [Removal](#) / [Installation](#)”
- 2013 Prius V:
Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: Inverter With Converter: [Removal](#) / [Installation](#)”
- 2014 Prius V:
Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: Inverter With Converter: [Removal](#) / [Installation](#)”
- 2015 Prius V:
Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: Inverter With Converter: [Removal](#) / [Installation](#)”
- 2016 – 2017 Prius V:
Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: Inverter With Converter: [Removal](#) / [Installation](#)”

A. The repair is now complete. Clear ANY DTCs and confirm the condition is no longer present.

3. Follow the Repair Manual diagnostic procedure to determine the correct components to replace.

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

- [2010](#) / [2011](#) / [2012](#) / [2013](#) / [2014](#) / [2015](#) Prius:
Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: Hybrid Control System: DTC Check / Clear”
- [2012](#) / [2013](#) / [2014](#) / [2015](#) / [2016](#) / [2017](#) Prius V:
Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: Hybrid Control System: DTC Check / Clear”

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Repair Procedure (continued)

4. Repair the inverter assembly with converter.

NOTE

- ALL repairs in this Service Bulletin require super long life coolant, an inverter drain plug kit, and a gasket.
- Toyota thermal grease is ONLY used for IPM replacement. This part has a shelf life of one year. Do NOT use if stored past one year.
- Reference the [Quick Training Guide](#) for best practices for 2010 – 2015 model year Prius and 2012 – 2017 model year Prius V vehicles.

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

- 2010 Prius:
Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: Power Module Intelligent Transistor: [Removal](#) / [Installation](#)”
- 2011 Prius:
Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: Power Module Intelligent Transistor: [Removal](#) / [Installation](#)”
- 2012 Prius:
Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: Power Module Intelligent Transistor: [Removal](#) / [Installation](#)”
- 2013 Prius:
Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: Power Module Intelligent Transistor: [Removal](#) / [Installation](#)”
- 2014 Prius:
Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: Power Module Intelligent Transistor: [Removal](#) / [Installation](#)”
- 2015 Prius:
Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: Power Module Intelligent Transistor: [Removal](#) / [Installation](#)”
- 2012 Prius V:
Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: Power Module Intelligent Transistor: [Disassembly](#) / [Reassembly](#)”
- 2013 Prius V:
Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: Power Module Intelligent Transistor: [Disassembly](#) / [Reassembly](#)”
- 2014 Prius V:
Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: Power Module Intelligent Transistor: [Disassembly](#) / [Reassembly](#)”

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Repair Procedure (continued)

- 2015 Prius V:
Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: Power Module Intelligent Transistor: [Disassembly](#) / [Reassembly](#)”
- 2016 – 2017 Prius V:
Engine/Hybrid System – Hybrid/Battery Control System – “Hybrid / Battery Control: Power Module Intelligent Transistor: [Disassembly](#) / [Reassembly](#)”

5. Clear ANY DTCs and confirm the condition is no longer present.