

AWD Warning Light ON With DTC C13F800

Service Category Drivetrain

Section Transfer/4wd/Awd

Market USA

Toyota Supports
ASE Certification 

Applicability

YEAR(S)	MODEL(S)	ADDITIONAL INFORMATION
2019 - 2020	RAV4	

REVISION NOTICE

September 29, 2020 Rev2:

- The Applicability has been updated to include 2020 model year RAV4 vehicles.
- The entire bulletin has been updated.

December 23, 2019 Rev1:

- The Parts Information and Repair Procedure sections have been updated.
- Any previous printed versions of this bulletin should be discarded.

Introduction

Some 2019 – 2020 model year RAV4 vehicles may exhibit an AWD Warning Light ON condition with Diagnostic Trouble Code (DTC) C13F800 (4WD/AWD Rear Disconnect System Performance) present. Follow the Repair Procedure in this bulletin to address this condition.

NOTE

This Service Bulletin ONLY applies to 2019 – 2020 model year RAV4 Limited and Adventure grade vehicles with torque vectoring AWD system.

Warranty Information

OP CODE	DESCRIPTION	TIME	OFP	T1	T2
TC1903	R & R Differential Carrier Assembly for Torque Vectoring Differential	5.0	41110-42050	8C	41
Combo A	Reprogram 4WD ECU	0.4			
TC1904	Reprogram 4WD ECU Only	0.4	89630-42130 89630-42150	8A	74

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Warranty Information (continued)

APPLICABLE WARRANTY

- For op code TC1903, this repair is covered under the Toyota Powertrain Warranty. This warranty is in effect for 60 months or 60,000 miles, whichever occurs first, from the vehicle's in-service date.
- For op code TC1904, this repair is covered under 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.

Parts Information

PART NUMBER		PART NAME	QTY
PREVIOUS	NEW		
41110-42050	41110-42052	Carrier Assy, Differential	1
41110-42051			
90119-12453		Bolt, W/Washer*	2
90119-12455			2
90119-14186			1
90105-14210		Bolt, Flange*	3
90179-A0005		Nut*	2
08885-02606		LX GL-5 75W-85 Gear Oil	1
00451-00001-LBL		Authorized Modifications Labels	1
89630-42130 89630-42140	89630-42160	Computer Assy, 4WD	—
89630-42150			

*Nonreusable parts.

NOTICE

The 4WD ECU should NOT be replaced as part of the Repair Procedure.

NOTE

Authorized Modifications Labels may be ordered in packages of 25 from the Materials Distribution Center (MDC) through *Dealer Daily – Parts – Dealer Support Materials Orders*.

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Required Tools & Equipment

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 15.20.016 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.

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

*Essential SST.

NOTE

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

Calibration Information

MODEL YEAR	GRADE	ECU	CALIBRATION ID	
			PREVIOUS	NEW
2019	Adventure	4WD	F15364212000	F15364212100
	Limited		F15364210000 F15364209200	
2020	Adventure		F15364211000	F15364211100
	Limited			

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Repair Procedure

1. Confirm the condition exists.

Does the vehicle exhibit an AWD Warning Light ON with DTC C13F800 present?

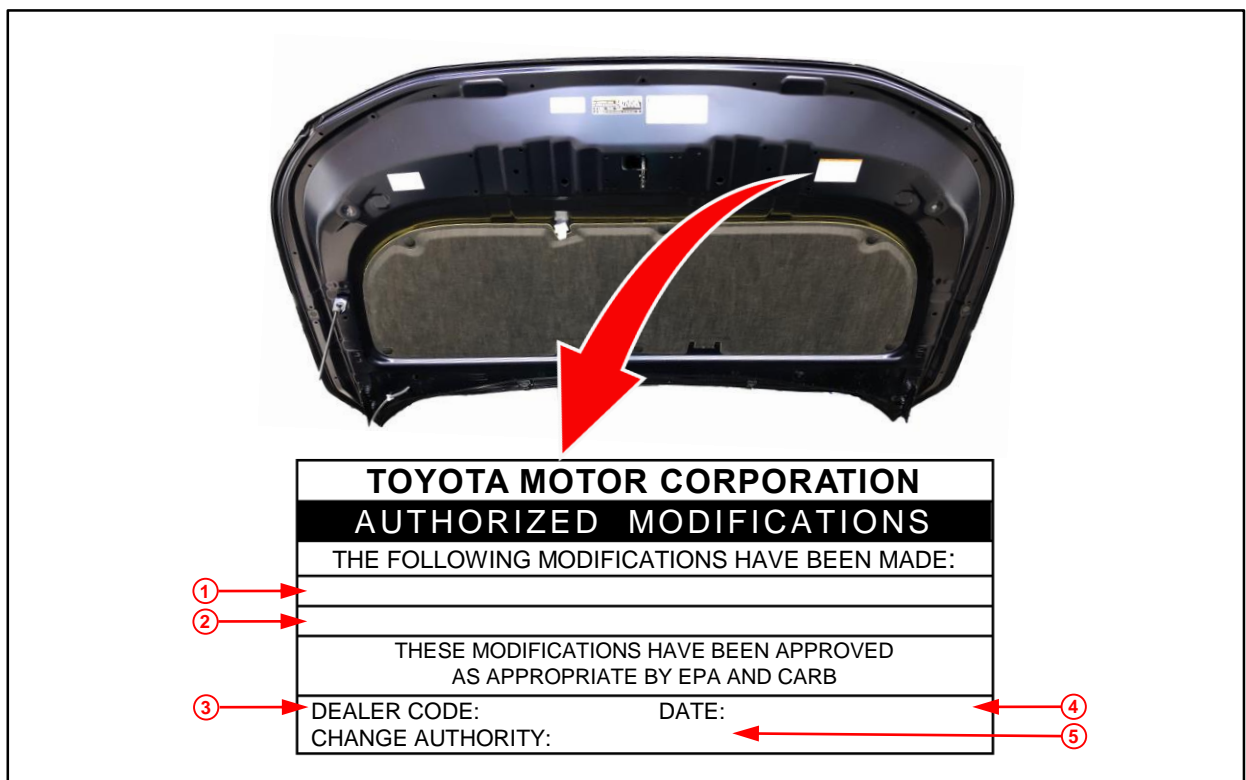
- **YES** — Continue to step 2.
- **NO** — This bulletin does NOT apply. Continue diagnosis using the applicable Repair Manual.

2. Use Techstream to confirm if the 4WD ECU calibration has been updated and check for the Authorized Modifications Label affixed to the vehicle in the location shown below.

Is the calibration ID listed in Techstream and on the label the latest 4WD ECU calibration?

- **YES** — Go to step 5 to confirm if rear differential replacement is necessary.
- **NO** — Continue to step 3.

Figure 1. Location of Authorized Modifications Label on 2019 – 2020 RAV4



1	Replacement ECM (PCM) Part Number (e.g., 89630-42150)
2	New Calibration ID (e.g., F15364211100)
3	Dealer Code

4	Date Completed
5	This SB Number

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Repair Procedure (continued)

3. Flash reprogram the 4WD ECU.

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 station, refer to the [DCA-8000 Instruction Manual](#) located at *TIS – Diagnostics – Tools & Equipment – Battery Diagnostics*.

Follow the procedures outlined in Service Bulletin [T-SB-0134-16](#), *Techstream ECU Flash Reprogramming Procedure*, and flash the 4WD ECU with the NEW calibration file update.

4. Prepare and install the Authorized Modifications Label.
 - A. Using a permanent marker, enter the following information on the label:
 - 4WD ECU part number [Refer to the **Parts Information** section for the **NEW PART NUMBER**].
 - Calibration ID(s) [Refer to the **Calibration Information** section for the **NEW CALIBRATION ID**].
 - Dealer Code.
 - Repair Date.
 - Change Authority [**This bulletin number**].
 - B. Install the Authorized Modifications Label onto the vehicle at the location shown in Figure 1. The Authorized Modifications Label is available through the MDC, P/N 00451-00001-LBL.

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Repair Procedure (continued)

5. Confirm the rear differential production date (serial number).

Is the rear differential production date on or before September 17, 2019?

- **YES** — Continue to step 6.
- **NO** — Rear differential replacement is NOT necessary. Go to step 7.

Figure 2. Rear Differential Serial Number Location

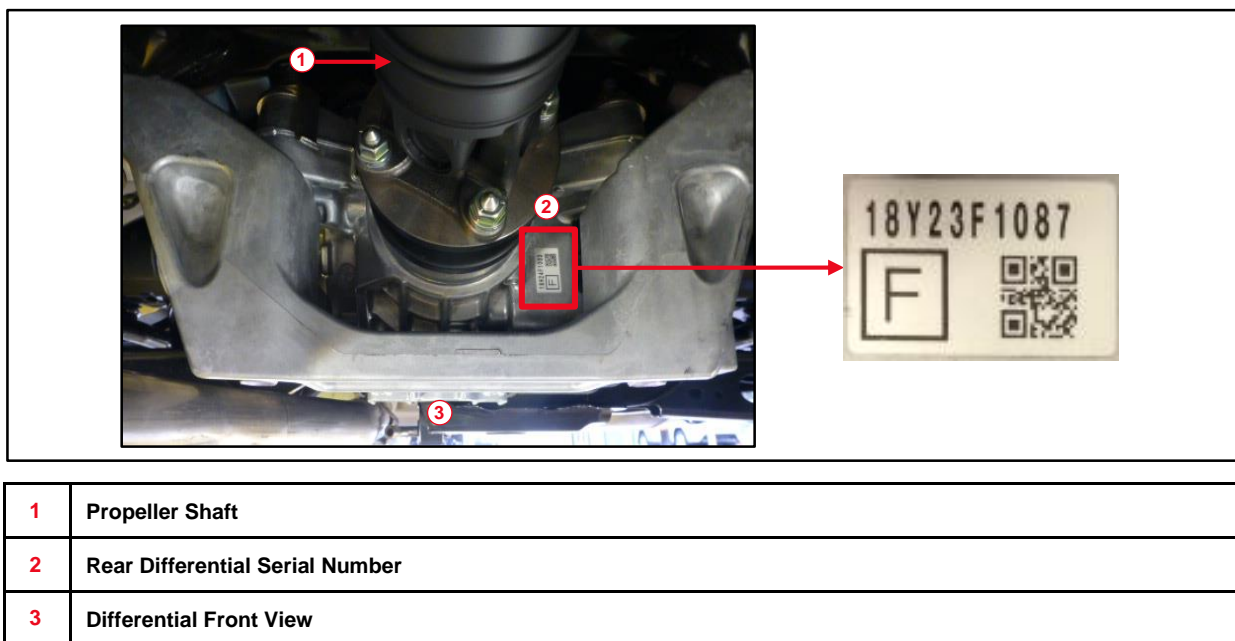


Figure 3. Rear Differential Serial Number Breakdown

Ex.: 18Y23F1087 → Produced November 23, 2018

Year (YY) / Month (M) / Day (DD)

Production Month

- A: Jan
- B: Feb
- C: Mar
- D: Apr
- E: May
- F: Jun
- G: Jul
- H: Aug
- I: Sep
- X: Oct
- Y: Nov
- Z: Dec

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Repair Procedure (continued)

6. Replace the rear differential carrier assembly.

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

- 2019 RAV4:

Drivetrain – Axle/Differential – “Axle and Differential: Rear Differential Carrier Assembly (for Torque Vectoring Differential): [Removal](#) / [Installation](#)”

NOTE

For calibration of the replacement unit after installation, refer to TIS, applicable model and model year Repair Manual:

- 2019 RAV4:

Drivetrain – Transfer/4WD/AWD – “[GF2A \(Transfer / 4WD / AWD\): Dynamic Torque Vectoring AWD System: Calibration](#)”

7. Clear ANY DTCs and test-drive the vehicle to confirm the condition is no longer present.