

Hybrid Regenerative Brake Transition Feeling Improvement

Service
Category Brake

Section Brake System

Market USA

Toyota Supports
ASE Certification 

Applicability

YEAR(S)	MODEL(S)	ADDITIONAL INFORMATION
2021 - 2024	Sienna HV	

Introduction

Some drivers of 2021 – 2024 model year Sienna Hybrid vehicles may be sensitive to the momentary transition from regenerative braking to hydraulic braking under certain driving conditions, such as while driving downhill, or turning with light brake pedal application. The brake actuator control module can be updated to improve brake feeling for this condition. Follow the Repair Procedure in this bulletin to address this condition.

Warranty Information

OP CODE	DESCRIPTION	TIME	OFP	T1	T2
BR2402	Reprogram the Brake Actuator Assembly Control Module	0.8	44050-#####*	38	99

*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.

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Parts Information

PART NUMBER	PART NAME	QTY
44050-#####	Actuator Assy, Brake	–

NOTE

The brake actuator assembly control module ECU should NOT be replaced as part of the Repair Procedure.

Required Tools & Equipment

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

*Essential SST.

NOTE

Additional SSTs may be ordered by calling 1-800-933-8335 or by visiting *Home – Service Resources – Toyota Special Service Tools (SSTs)*.

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 2024.01.002.02 or later is required.
- Additional Techstream units may be ordered by calling Approved Dealer Equipment (ADE) at 1-800-368-6787 or by visiting *TIS – Diagnostics – Tools & Equipment – Techstream Order Portal*.
- 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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Calibration Information

MODEL	MODEL YEAR	ENGINE	CALIBRATION ID	
			PREVIOUS	NEW
Sienna HV	2021	A25A-FXS	F15264501300 F15260815100 F15264505000 F15260815000	F15260824000
			F15264505000 F15260815100 F15260815000	
	2023		F15260815200 F15260815300	F15260825000
			2024	F15260816000
				F15260815300

Repair Procedure

1. Confirm there are NO pre-existing conditions related to the brake system or hybrid systems.
 - A. Are there ANY brake or hybrid related DTCs?
 - **YES** — This bulletin does NOT apply. Continue diagnosis using the applicable Repair Manual.
 - **NO** — Continue to sub step B.
 - B. Are the brake and hybrid systems operating to factory conditions?
 - **YES** — Continue to step 2.
 - **NO** — This bulletin does NOT apply. Continue diagnosis using the applicable Repair Manual.
2. Does the driver sensation match the description of the momentary transition from regenerative braking to hydraulic braking under certain driving conditions, such as while driving downhill, or turning with light brake pedal application?
 - **YES** — Continue to step 3.
 - **NO** — This bulletin does NOT apply. Continue diagnosis using the applicable Repair Manual.

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Repair Procedure (continued)

3. Use GTS+ to confirm if the brake actuator assembly control module calibration has been updated.

Is the calibration ID the latest brake actuator assembly calibration?

- **YES** — This bulletin does NOT apply. Continue diagnosis using the applicable Repair Manual.
- **NO** — Continue to step 4.

4. Flash reprogram the brake actuator assembly control module.

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 [T-SB-0107-20](#) *GTS+ ECU Flash Reprogramming With Security Signature*, and flash reprogram the brake actuator assembly control module with the NEW calibration file update.

5. Using GTS+, clear ANY DTCs and test-drive the vehicle to confirm the condition has improved.