

Vehicle Bucking on 1 - 2 and/or 2 - 3 Upshifts and Surge Between 0 - 46 mph

Service Category Engine/Hybrid System

Section Engine Control

Market USA

Lexus Supports
ASE Certification 

Applicability

YEAR(S)	MODEL(S)	ADDITIONAL INFORMATION
2016 - 2019	RX350	

Introduction

Some 2016 – 2019 model year RX350 and RX350L vehicles may exhibit one or both of the following conditions:

- A bucking feeling (back and forth jerking that comes right after a shift but then dissipates quickly after 1 – 2 and/or 2 – 3 upshifts)
- A surge feeling (back and forth rocking that is not associated with transmission shifts) when the vehicle is traveling between 0 – 46 mph, transmission is in 3rd – 8th gear, and torque converter is in full lock-up

The Engine Control Module/ECM (SAE Term: Powertrain Control Module/PCM) logic has been modified to reduce the possibility of these conditions. Follow the Repair Procedure in this bulletin to address these conditions.

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Warranty Information

OP CODE	DESCRIPTION	TIME	MODEL NAME	MODEL YEAR	WMI	DRIVETRAIN	OFF	T1	T2
800269 (FRM)	Engine ECU Reprogramming (per FRM)	0.7	RX350	2016 - 2017	2T2	2WD Non F-Sport	89661-0E76#	03	74
						2WD F-Sport	89661-0EA4#		
						4WD Non F-Sport	89661-0E81#		
						4WD F-Sport	89661-0E77#		
				2016	JTJ	4WD Non F-Sport	89661-48N7# 89661-0E814		
				2018 - 2019	2T2	2WD Non F-Sport	89661-0EE8#		
						2WD F-Sport	89661-0EF0#		
						4WD Non F-Sport	89661-0EE9#		
			4WD F-Sport			89661-0EF1#			
			JTJ		4WD Non F-Sport	89661-48X0#			
					2WD	89661-48X1#			
			RX350L		4WD	89661-48X2#			

APPLICABLE WARRANTY

- This repair is covered under the Lexus Federal Emissions Warranty. This warranty is in effect for 96 months or 80,000 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

MODEL NAME	MODEL YEAR	WMI	DRIVETRAIN	PART NUMBER		PART NAME	QTY
				PREVIOUS	NEW		
RX350	2016 – 2017	2T2	2WD Non F-Sport	89661-0E76#	89661-0E765	Computer, Engine Control (ECM)	-
			2WD F-Sport	89661-0EA4#	89661-0EA44		
			4WD Non F-Sport	89661-0E81#	89661-0E815		
			4WD F-Sport	89661-0E77#	89661-0E775		
	2016	JTJ	4WD Non F-Sport	89661-48N7# 89661-0E814	89661-0E815		
	2018 – 2019	2T2	2WD Non F-Sport	89661-0EE8#	89661-0EE82		
			2WD F-Sport	89661-0EF0#	89661-0EF02		
			4WD Non F-Sport	89661-0EE9#	89661-0EE92		
			4WD F-Sport	89661-0EF1#	89661-0EF12		
		JTJ	4WD Non F-Sport	89661-48X0#	89661-48X02		
2WD			89661-48X1#	89661-48X12			
RX350L		JTJ	4WD	89661-48X2#	89661-48X22	Computer, Engine Control (ECM)	-
-	-	-	-	00451-00001-LBL		Authorized Modifications Labels	1

NOTE

- The ECM (PCM) should NOT be replaced as part of the Repair Procedure.
- 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 14.10.028 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
GR8 Battery Diagnostic Station* or Battery Diagnostic Tool*	00002-MCGR8 or DCA-8000P T	1

*Essential SST.

NOTE

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

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Calibration Information

MODEL	MODEL YEAR	WMI	DRIVETRAIN	CALIBRATION ID	
				PREVIOUS	NEW
RX350	2016 – 2017	2T2	2WD Non F-Sport	896630E36100	896630E36600 / 896650E05400
				896630E36200	
				896630E36300	
				896630E36400	
				896630E36500	
				896650E05100	
			896650E05200		
			896650E05300		
			2WD F-Sport	896630E54000	896630E54400 / 896650E05400
				896630E54100	
				896630E54200	
				896630E54300	
896650E05200					
896650E05300					
896650E05100					
4WD Non F-Sport	896630E41000	896630E41500 / 896650E05400			
	896630E41100				
	896630E41200				
	896630E41300				
	896630E41400				
	896650E05100				
896650E05200					
896650E05300					
4WD F-Sport	896630E37100	896630E37600 / 896650E05400			
	896630E37200				
	896630E37300				
	896630E37400				
	896630E37500				
	896650E05100				
896650E05200					
896650E05300					

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Calibration Information (continued)

MODEL	MODEL YEAR	WMI	DRIVETRAIN	CALIBRATION ID		
				PREVIOUS	NEW	
RX350	2016	JTJ	4WD Non F-Sport	896630E41000	896630E41500 / 896650E05400	
				896630E41100		
				896630E41200		
				896630E41300		
				896630E41400		
				896650E05100		
	896650E05200					
	896650E05300					
	2018 – 2019	2T2	2WD Non F-Sport	896630E58000		896630EA3200 / 896650E48200
				896630EA3000		
				896630EA3100		
				896650E24000		
896650E48000						
896650E48100						
2WD F-Sport			896630E59000	896630EA5200 / 896650E48200		
			896630EA5000			
896630EA5100						
896650E24000						
896650E48000						
896650E48100						
4WD Non F-Sport	896630E60000	896630EA4200 / 896650E48200				
	896630EA4000					
896630EA4100						
896650E24000						
896650E48000						
896650E48100						
4WD F-Sport	896630E61000	896630EA6200 / 896650E48200				
	896630EA6000					
896630EA6100						
896650E24000						
896650E48000						
896650E48100						

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Calibration Information (continued)

MODEL	MODEL YEAR	WMI	DRIVETRAIN	CALIBRATION ID	
				PREVIOUS	NEW
RX350	2018 – 2019	JTJ	4WD Non F-Sport	896630E60000 896630EA4000 896630EA4100	896630EA4200 / 896650E48200
				896650E24000 896650E48000 896650E48100	
RX350L			2WD	8966348S6000 8966348W1000 8966348W1100	8966348W1200 / 896654852200
				896654843000 896654852000 896654852100	
4WD	8966348S7000 8966348W2000 8966348W2100	8966348W2200 / 896654852200			
	896654843000 896654852000 896654852100				

Repair Procedure

1. Confirm the condition exists.
 - A. Is there a bucking feeling following 1 – 2 and/or 2 – 3 upshifts?
 - **YES** — Go to step 2.
 - **NO** — Continue to substep B.
 - B. Is there a surge feeling?
 - **YES** — Continue to substep C.
 - **NO** — This bulletin does NOT apply. Continue diagnosis using the applicable Repair Manual.
 - C. Using Techstream, does the surge feeling occur while meeting ALL the following criteria?
 - Vehicle is traveling between 0 – 46 mph
 - Transmission is in 3rd – 8th gear
 - Torque converter in full lock-up
 - **YES** — Continue to step 2.
 - **NO** — This bulletin does NOT apply. Continue diagnosis using the applicable Repair Manual.

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Repair Procedure (continued)

- Use Techstream to confirm if the ECM (PCM) 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 ECM (PCM) calibration?

- YES** — This bulletin does NOT apply. Continue diagnosis using the applicable Repair Manual.
- NO** — Continue to step 3.

Figure 1. Location of Authorized Modifications Label on 2016 – 2019 RX350



1	Replacement ECM (PCM) Part Number (e.g., 89661-0E765)
2	New Calibration ID (e.g., 896630E36600)
3	Dealer Code

4	Date Completed
5	This SB Number

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Repair Procedure (continued)

3. Flash reprogram the ECM (PCM).

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 [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 ECM (PCM) 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:

- ECM (PCM) 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.

5. Test-drive the vehicle to confirm proper operation.