

Technical Service Information Bulletin May 31, 2007

Title: **"ROCKING" FEELING AT HIGHWAY SPEED (AROUND 70 MPH)** Models:

'06 – '07 RX 400h

TSIB REVISION NOTICE:

• July 24, 2007: The T1 code in the Warranty Information table has been updated. Previous versions of this TSIB should be discarded.

Introduction Under certain circumstances, 2006 – 2007 model year RX 400h owners may experience a back and forth "rocking" feeling while maintaining the vehicle at a constant highway speed around 70 mph. The Hybrid Vehicle (HV) ECU logic has been updated to help improve this condition.

NOTE:

For 2006 model year vehicles where the owner is experiencing a back and forth "rocking" feeling at a constant speed around 40 mph but NOT at highway speed around 70 mph, perform TSIB No. EG020–06, *"Rocking' Feeling Around 40 MPH"* instead of this bulletin. The calibration update in this bulletin addresses BOTH issues for vehicles exhibiting the "rocking" feeling around 40 and 70 mph.

Applicable Vehicles

- 2006 model year RX 400h vehicles.
- **2007** model year **RX 400h** vehicles produced **BEFORE** the Production Change Effective VINs shown below.

Production Change Information	MODEL	DRIVETRAIN	PRODUCTION CHANGE EFFECTIVE VIN
	DV 400h	2WD	JTJGW31U#72003519
	RX 400h	4WD	JTJHW31U#72020196

Warranty Information	OP CODE DESCRIPTION		TIME	OFP	T1	T2
	EG7022	Reprogram HV ECU and ECM (PCM)	0.8	89981-#####	99	99

Applicable Warranty*:

This repair is covered under the Lexus Hybrid Vehicle Component 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 correction of a problem based upon a customer's specific complaint.



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Information

Parts

MODEL YEAR	DRIVE- TRAIN	OIL COOLER	PREVIOUS PART NUMBER	CURRENT PART NUMBER	PARTNAME	QTY
_	Ι	_	N/A	00451-00001-LBL	Authorized Modification Label	1
	2WD	With	89981–48013	89981–48014		N/A
2006		Without	89981–48023	89981–48024		N/A
	4WD	With	89981–48033	89981–48034		N/A
		Without	89981–48043	89981–48044	Computer, Hybrid	N/A
	2WD	With	89981–48161	89981–48162	Vehicle Control	N/A
2007		Without	89981–48181	89981–48182		N/A
	4WD	With	89981–48191	89981–48192		N/A
		Without	89981–48201	89981–48202		N/A

NOTE:

• The HV ECU should <u>NOT</u> be replaced as part of this repair procedure.

• Authorized Modification Labels may be ordered in packages of 25 from the Materials Distribution Center (MDC) through the Dealer Daily Dealer Support Materials System, or by calling the MDC at 1–800–622–2033.

Required	REQUIRED EQUIPMENT	SUPPLIER	PART NUMBER	QTY	
Equipment	TIS Techstream* NOTE: Software version 2.00.008 or later is required.		ADE	TSUNT	1
	GR8 Battery Diagnostic Station*		SPX/OTC	00002-MCGR8	1

Essential SSTs.

NOTE:

- Additional Techstream units may be ordered by calling Approved Dealer Equipment (ADE) at 1–800–368–6787.
- The Lexus Diagnostic Tester and CAN Interface Module may also be used to perform the service procedures listed in this bulletin.
- The GR8 Battery Diagnostic Station (P/N 00002–MCGR8) supersedes the Automatic Trickle Charger (P/N 00002–YA122–01) and Fast Battery Chargers (Associated P/N ASE6003 and Christie P/N CAPPDQ). P/N 00002–YA122–01, ASE6003, and CAPPDQ are now obsolete.



Essential SSTs.

* Drawer number in SST Storage System.

NOTE:

- The Digital Battery System Analyzer (P/N 00002–V8150–KIT) supersedes the Midtronics MICROPRO 815 Digital Battery Tester (P/N 0002–MP815–T).
 P/N 0002–MP815–T is now obsolete.
- Additional SSTs may be ordered by calling SPX/OTC at 1-800-933-8335.

Calibration ID Information

NOTE:

There are different calibration files for vehicles with and without transaxle oil coolers. In order to determine the configuration of your vehicle, shine a flashlight into the left front bumper cover vent. If the vehicle is equipped with a cooler, it will be easily visible.



Calibration Identification	MODEL YEAR	ECU	DRIVETRAIN	OIL COOLER	CURRENT CALIBRATION ID	NEW CALIBRATION ID
Chart	2006	Engine ECM (PCM)	2WD & 4WD	N/A	34827000 34827100	34827100
		HV ECU	2WD	With	899834801000 899834801100 899834801200 899834801300	899834801400
				Without	899834802000 899834802100 899834802200 899834802300	899834802400
			4WD	With	899834803000 899834803100 899834803200 899834803300	899834803400
				Without	899834804000 899834804100 899834804200 899834804300	899834804400
		Engine ECM (PCM)	2WD & 4WD	N/A	348A0000 348A0100	348A0100
				With	899834813000	899834813100
	2007		2000	Without	899834814000	899834814100
		4W		With	899834815000	899834815100
			400	Without	899834816000	899834816100

Repair Procedure 1. Check for the Authorized Modifications Label affixed to the vehicle in the location shown in Figure 1. Confirm if the HV ECU and ECM (PCM) calibrations have been updated. If the calibration IDs are NOT the latest calibrations — go to step 2.



2. Flash Reprogram the HV ECU and the ECM (PCM).

NOTE:

- The GR8 Battery charger MUST be used in Power Supply Mode to maintain battery voltage at 13.5 volts while flash reprogramming the vehicle.
- For details on how to use the GR8 Battery charger please refer to the GR8 Instructions Manual located on the Technical Information System (TIS), *Diagnostics Battery*.

Follow the procedures outlined in TSIB No. SS002–07, *"Techstream ECU Flash Reprogramming Procedure,"* and flash the ECM (PCM) with the NEW calibration file update.

NOTE:

- Anytime the HV ECU is reprogrammed, the engine ECM (PCM) <u>MUST</u> also be reprogrammed, even if the engine ECM (PCM) has the "New Calibration ID".
- If <u>ONLY</u> the engine ECM (PCM) Calibration ID matches the "Current Calibration ID" shown in the Calibration Identification Chart in this TSB, proceed with flash reprogramming.
- If <u>BOTH</u> the engine ECM (PCM) <u>and</u> HV ECU Calibration IDs match the "New" calibration IDs shown in the Calibration Identification Chart, this vehicle has already been reprogrammed. Refer to TIS for diagnostic procedures applicable to any stored DTCs.

Repair 3. Start the engine and warm it up to normal operating temperature before test-driving.

Procedure

- (Continued) 4. Test-drive the vehicle to confirm proper vehicle operation (and proper laser cruise control operation, if equipped).
 - 5. 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 **CURRENT PART NUMBER**]
 - Calibration ID(s): [Refer to the Calibration Identification Chart for the NEW CALIBRATION ID]
 - Dealer Code
 - Repair Date
 - Change Authority (this TSIB number): *EG013-07*
 - B. Affix the Authorized Modifications Label to the vehicle at the location shown in Figure 1. The Authorized Modifications Label is available through the MDC, P/N 00451–00001–LBL.
 - 6. Calibration update is complete.

NOTE:

The effect of the new calibration may become more apparent after several days of driving as the ECM (PCM) "learned values" are re–established from the customer's driving.