

Technical Service Information Bulletin October 18, 2006

Title: **"ROCKING" FEELING AROUND 40 MPH** Models:

'06 RX 400h

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TSIB REVISION NOTICE:

- July 24, 2007: The T1 code in the Warranty Information table has been updated.
- December 15, 2006: Part numbers for the HV ECU have been updated in the Parts Information table. The Calibration IDs in Figure 2 have been updated. The Note below Figure 2 has been updated.

Previous versions of this TSIB should be discarded.

- Introduction Under certain circumstances, 2006 model year RX 400h owners may experience a back and forth "rocking" feeling while attempting to maintain the vehicle at a constant speed around 40 mph. The Hybrid Vehicle (HV) ECU logic has been updated to help improve this condition.
 - Applicable 2006 model year RX 400h vehicles produced BEFORE the Production Change Vehicles Effective VINs shown below.

Production	MODEL	DRIVETRAIN	PRODUCTION CHANGE EFFECTIVE VIN		
Information	RX 400h	4x4	JTJHW31U#60046581		
		4x2	JTJGW31U#60004542		

Warranty	
Information	

OP CODE	DESCRIPTION	TIME	OFP	T1	T2
EG5042	Reprogram HV ECU and ECM (PCM)	0.8	89981–48010 89981–48020 89981–48030 89981–48040	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.



Parts Information

SPEC	CIFICATION	PREVIOUS PART NUMBER	CURRENT PART NUMBER	PART NAME	QTY
N/A	N/A	N/A	00451-00001-LBL	Authorized Modification Label	1
4x2 4x4	with Oil Cooler	89981–4801#	89981–48014		N/A
	without Oil Cooler	89981–4802#	89981–48024	Computer, Hybrid	N/A
	with Oil Cooler	89981–4803#	89981–48034	Vehicle Control	N/A
	without Oil Cooler	89981–4804#	89981–48044		N/A

* The HV ECU should **NOT** be replaced as a part of this repair procedure.

NOTE:

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 SSTs

ITEM NO.	SPECIAL SERVICE TOOLS (SSTs)	PARTNUMBER	QTY	DRW**
1	 Lexus Diagnostic Tester Kit* NOTE: All components from this kit/set are required. 12 Megabyte Diagnostic Tester Program Card (P/N 01002593–005) with version 13.4a Software (or later) is required. 	LEX220036	1	8
2	CAN Interface Module Kit* NOTE: • All components from this kit/set are required.	01002744	1	8
3	 Digital Battery System Analyzer* NOTE: All components from this kit/set are required 	00002–V8150–KIT	1	19

* 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 Diagnostic Tester Kits, CAN Interface Modules, Program Cards, or other 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	ECU	DRIVETRAIN	OIL COOLER	CURRENT CALIBRATION ID	NEW CALIBRATION ID
Chart	Engine ECM (PCM)	N/A	N/A	34827000	34827100
		4WD	No	899834804000 899834804100 899834804200	899834804300
		4WD	Yes	899834803000 899834803100 899834803200	899834803300
	HV ECU	2WD	No	899834802000 899834802100 899834802200	899834802300
		2WD	Yes	899834801000 899834801100	899834801300

899834801200

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 listed are NOT the latest calibrations — go to step 2.



- Repair
Procedure
(Continued)2.Connect the Diagnostic Tester to the vehicle and select CURRENT ECU CAL from
the ECU REPROGRAM MAIN MENU. Determine the vehicle's current ECU
calibrations (see Figure 2).
 - The sample screen prints seen below are the 13.4a software version and may differ from subsequent software versions.



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 TSIB, 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 the Technical Information System (TIS) for diagnostic procedures applicable to any stored DTCs.
- 3. If the ECU calibration ID is NOT the same as the "New Calibration ID" listed previously, proceed to Flash Reprogram ECM (PCM).

4. Flash Reprogram HV ECU and ECM (PCM)

NOTE:

A battery charger MUST be connected to the battery and set at a <u>medium</u> charge setting during the Flash Reprogram procedure in order to maintain proper battery voltage and prevent damage to the HV ECU and ECM (PCM).

Follow the procedures outlined in TSIB No. SS001–01, "ECU Flash Reprogramming *Process,*" and flash the ECM (PCM) with the new calibration file update.

NOTE:

If the "Check Engine" light is ON when the ignition is turned back on to begin the reprogramming process, a scan tool cable problem exists. Refer to TSIB No. SS003–01, "ECU Flash Reprogramming Error Message."

Repair Procedure (Continued)

- air 5. Start the engine and warm it up to normal operating temperature before test-driving.
 - 6. Test-drive the vehicle to confirm proper vehicle operation (and proper laser cruise control operation, if so equipped).
 - Enter the required information on the Authorized Modifications Label and affix it to the vehicle at the location shown in Figure 1 (page 4). The Authorized Modifications Label is available through the MDC, P/N 00451–00001–LBL.
 - 8. Calibration update is complete.

NOTE:

- Select premium unleaded gasoline with an Octane Rating of 91 or higher for optimum engine performance.
- 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.