

Cold Start Idle Vibration

Service Category Engine/Hybrid System

Section Engine Control

Market USA

Lexus Supports
ASE Certification 

Applicability

YEAR(S)	MODEL(S)	ADDITIONAL INFORMATION
2018	LS500	VDS(s): B51FF, B5LFF, C51FF, C5LFF

Introduction

Some 2018 model year LS500 vehicles may exhibit a vibration due to a rough idle after cold soak. This condition is only present when the vehicle is first started after cold soak. The check engine light will not be present with this condition. Follow the Repair Procedure in this bulletin to address this condition.

Warranty Information

OP CODE	DESCRIPTION	DRIVETRAIN	TIME	OFF	T1	T2
EG1901	R & R Engine Mounts and Install Bumper Reinforcement Washers	2WD	10.2	12361-70250	02	99
Combo A	Reprogram ECU		0.5			
EG1903	R & R Engine Mounts	AWD	9.7	12361-70260		
Combo A	Reprogram ECU		0.5			

APPLICABLE WARRANTY

- This repair is covered under the Lexus Powertrain Warranty. This warranty is in effect for 72 months or 70,000 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

DRIVETRAIN	PART NUMBER		PART NAME	QTY
	PREVIOUS	NEW		
2WD	N/A	94613-40800	Washer, Plate	16
	12361-70250	12361-70270	Insulator, Engine Mounting, FR	2
AWD	12361-70260	12361-70280		2
–	00451-00001-LBL		Authorized Modifications Labels	1

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*.

Required Tools & Equipment

REQUIRED EQUIPMENT	SUPPLIER	PART NUMBER	QTY
Techstream 2.0*	ADE	TS2UNIT	1
Techstream Lite		TSLITEPDLR01	
Techstream Lite (Green Cable)		TSLP2DLR01	

*Essential SST.

NOTE

- Only ONE of the Techstream units listed above is required.
- Software version 14.00.019 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*	00002-MCGR8	1

*Essential SST.

NOTE

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

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Calibration Information

MODEL	DRIVETRAIN	ECU TYPE	CALIBRATION ID	
			PREVIOUS	NEW
LS500	2WD	Main	8966350K6000	8966350K6200
			8966350K6100	
		Sub	896655065000	896655065200
			896655065100	
		ECT	8966A5005000	8966A5005200
			8966A5005100	
	AWD	Main	8966350L2000	8966350L2200
			8966350L2100	
		Sub	896655071000	896655071200
			896655071100	
		ECT	8966A5011000	8966A5011200
			8966A5011100	

Repair Procedure

1. Confirm the condition exists.
 - A. Is the check engine light ON?
 - **YES** — This bulletin does NOT apply. Continue diagnosis using the applicable Repair Manual.
 - **NO** — Continue to substep B.
 - B. Does the vehicle exhibit a vibration while idling AFTER cold soak?

NOTE

- The vibration will be noticeable when the engine rpms are over 1,000.
- Once the catalyst warms up, the idle will drop below 1,000 rpm.

- **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)

2. Remove the engine mounts.

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

- 2018 LS500:
Engine/Hybrid System – Engine Mechanical – [“V35A-FTS \(Engine Mechanical\):
Engine Assembly: Removal”](#)

3. Install the NEW engine mounts.

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

- 2018 LS500:
Engine/Hybrid System – Engine Mechanical – [“V35A-FTS \(Engine Mechanical\):
Engine Assembly: Installation”](#)

4. Confirm the vehicle drivetrain.

Is the vehicle 2WD?

- **YES** — Complete steps 5 – 9.
- **NO** — Go to step 10.

5. Remove the rear bumper.

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

- 2018 LS500:
Vehicle Exterior – Exterior Panels/Trim – [“Exterior Panels / Trim: Rear Bumper: Removal”](#)

6. Remove the rear bumper reinforcement sub-assembly.

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

- 2018 LS500:
Vehicle Exterior – Exterior Panels/Trim – [“Exterior Panels / Trim:
Rear Bumper: Disassembly”](#)

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Repair Procedure (continued)

7. Install two washers on each of the eight bolts removed from the rear bumper reinforcement sub-assembly.

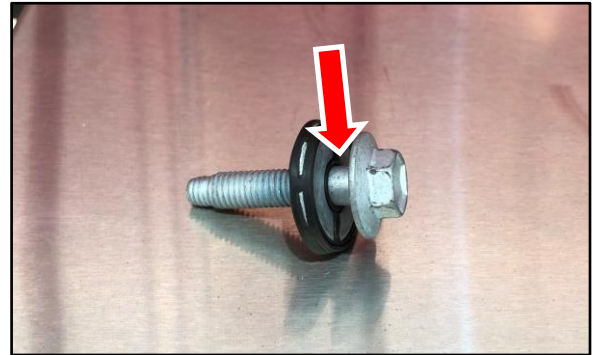
NOTE

- Do NOT discard the rubber coated washer shown in Figure 2.
- Remove the rubber-coated washer from the bolt, install two metal washers, and reinstall the rubber-coated washer.

Figure 1. Location of Eight Bolts



Figure 2. Washer Installation Location



8. Install the rear bumper reinforcement sub-assembly.
Refer to TIS, applicable model and model year Repair Manual:
 - 2018 LS500:
Vehicle Exterior – Exterior Panels/Trim – [“Exterior Panels / Trim: Rear Bumper: Reassembly”](#)

9. Install the rear bumper.
Refer to TIS, applicable model and model year Repair Manual:
 - 2018 LS500:
Vehicle Exterior – Exterior Panels/Trim – [“Exterior Panels / Trim: Rear Bumper: Installation”](#)

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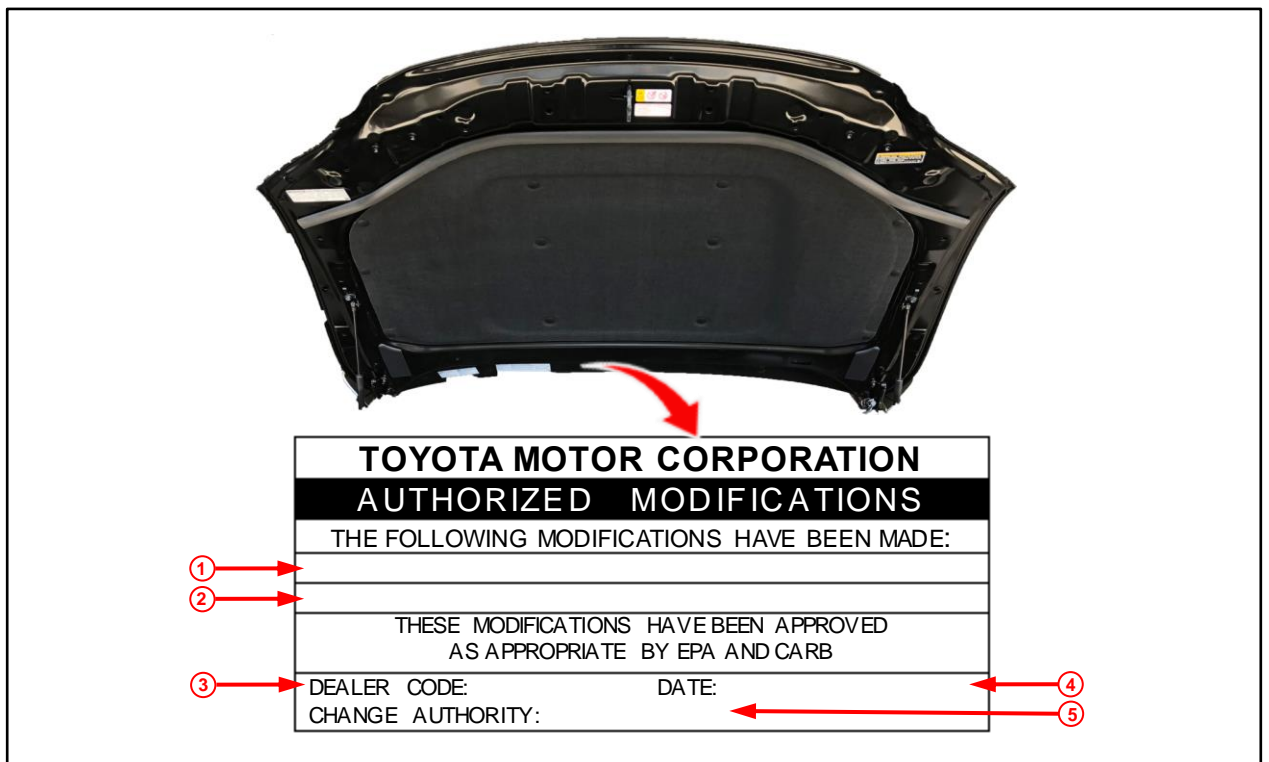
Repair Procedure (continued)

10. 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** — The calibration is already installed. Go to step 13.
- **NO** — Continue to step 11.

Figure 3. Location of Authorized Modifications Label on 2018 LS500



1	Replacement ECM (PCM) Part Number (e.g., 12361-70270)
2	New Calibration ID (e.g., 8966350K6200)
3	Dealer Code

4	Date Completed
5	This SB Number

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Repair Procedure (continued)

11. Flash reprogram the ECM (PCM).

NOTE

- The GR8 battery diagnostic station **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 GR8 battery diagnostic station, refer to the [GR8 Instruction Manual](#) located at TIS – *Diagnostics – Tools & Equipment – Battery Diagnostics*.

Follow the procedures outlined in Service Bulletin [L-SB-0001-18](#), *Techstream ECU Flash Reprogramming Procedure*, and flash the ECM (PCM) with the NEW calibration file update.

12. 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 3. The Authorized Modifications Label is available through the MDC, P/N 00451-00001-LBL.

13. Confirm the vehicle vibration is reduced after a cold soak.