

Front Suspension Height Low Due to Air Strut Leak

Service Category Suspension

Section Front Suspension

Market USA

Lexus Supports
ASE Certification 

Applicability

YEAR(S)	MODEL(S)	ADDITIONAL INFORMATION
2018	LS500, LS500H	VDS(s): B51FF, B5LFF, BY1FF, BYLFF, C51FF, C5LFF, CY1FF, CYLFF

Introduction

Some 2018 model year LS500 and LS500h vehicles equipped with air suspension may exhibit an air leak in the shock absorber seal when sitting stationary for long periods of time. This condition may cause a drop in the suspension ride height. Follow the Repair Procedure in this bulletin to address this condition.

Production Change Information

This bulletin applies to vehicles produced **BEFORE** the Production Change Effective VINs shown below.

MODEL	PLANT	DRIVETRAIN	PRODUCTION CHANGE EFFECTIVE VIN
LS500	Tahara	2WD	JTHB5#FF#J5001265
		4WD	JTHC5#FF#J5001139
LS500h		2WD	JTHBY#FF#J5001162
		4WD	JTHCY#FF#J5000897

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Warranty Information

OP CODE	DESCRIPTION	TIME	OFF	T1	T2
430151	R & R Front Shock Absorber (One Side)	See Flat Rate Manual	48010-50390	45	99
Combo A	R & R Front Shock Absorber (Opposite Side)		48010-50400		
			48020-50390		
			48020-50400		
482201	R & R Rear Shock Absorber (One Side)		48080-50430		
Combo A	R & R Rear Shock Absorber (Opposite Side)	48080-50440	48090-50430	48090-50440	
Combo E	Rear Toe Adjustment		48010-50###		
SU1803	All Four Shocks and System Pressurizing	6.8	48020-50###		
			48080-504##		
			48090-504##		

APPLICABLE WARRANTY

- This repair is covered under the Lexus Basic Warranty. This warranty is in effect for 48 months or 50,000 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.

Parts Information

PART NUMBER		PART NAME	QTY
PREVIOUS	NEW		
N/A	48010-50390	Cylinder Assy, Pneumatic, Front RH W/Shock Absorber	1
	48010-50400		1
	48020-50390	Cylinder Assy, Pneumatic, Front LH W/ Shock Absorber	1
	48020-50400		1
	48080-50430	Cylinder Assy, Pneumatic, Rear RH W/ Shock Absorber	1
	48080-50440		1
	48090-50430	Cylinder Assy, Pneumatic, Rear LH W/ Shock Absorber	1
	48090-50440		1

NOTE

This was an issue in production and part numbers were NOT changed since countermeasure ONLY affected assembly process.

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Required Tools & Equipment

SPECIAL SERVICE TOOLS (SST)	PART NUMBER	QTY
Nitrogen Gas Injection Tool*	09761-50010-01	1
Tube Remover*	09730-00020	1
VVT Set Bolt Wrench*	09249-37010-01	1

* Essential SST.

NOTE

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

REQUIRED TOOLS & MATERIAL	QUANTITY
Tape Measure	1
Flat Surface (Drive on Rack) Recommended	1
Soapy Water and Spray Bottle	1

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 13.10.019 or later is required.
- Additional Techstream units may be ordered by calling Approved Dealer Equipment (ADE) at 1-800-368-6787.

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Repair Procedure

1. Does the vehicle exhibit low suspension height in the front or rear when compared to the front or rear with normal height appearance?
 - **YES** — Continue to step 2.
 - **NO** — This bulletin does NOT apply. Continue diagnosis using the applicable Repair Manual.

Figure 1. Good Condition



Figure 2. Bad Condition



2. Using Techstream, check the Air Suspension Data List for Pressure Sensor 1 (Tank). Is Pressure Sensor 1 (Tank) pressure above 1.200MPa, threshold -/0.2MPa?
 - **YES** — Continue to step 3.
 - **NO** — Go to step 5.

3. Was the vehicle recently driven and the height adjustment switch activated?
 - **YES** — Go to step 5.
 - **NO** — Continue to step 4.

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Repair Procedure (continued)

4. Let the vehicle sit overnight.
 - A. Take pre-measurements for height specification in Normal Mode. (Check specification for specific model and drive type.)

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

 - 2018 LS500:
Suspension – Alignment/Handling Diagnosis – "Alignment / Handling Diagnosis: Front Wheel Alignment(for [2WD](#) / [AWD](#)): Adjustment"
 - 2018 LS500h:
Suspension – Alignment/Handling Diagnosis – "Alignment / Handling Diagnosis: Front Wheel Alignment(for [2WD](#) / [AWD](#)): Adjustment"
 - B. AFTER the vehicle sits overnight, repeat substep A to recheck height measurements.
 - C. Using Techstream, check Air Suspension Data List for Pressure Sensor 1 (Tank) to confirm if pressure has changed from the previous measurements.

Was there a drop in Pressure Sensor 1 (Tank) or vehicle height?

- **YES** — Continue to step 5.
- **NO** — This bulletin does NOT apply. Continue diagnosis using the applicable Repair Manual.

5. Take measurements for height specification in Normal Mode. (Check specification for specific model and drive type.)

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

 - 2018 LS500:
Suspension – Alignment/Handling Diagnosis – "Alignment / Handling Diagnosis: Front Wheel Alignment(for [2WD](#) / [AWD](#)): Adjustment"
 - 2018 LS500h:
Suspension – Alignment/Handling Diagnosis – "Alignment / Handling Diagnosis: Front Wheel Alignment(for [2WD](#) / [AWD](#)): Adjustment"

Do the measurements meet specifications?

- **YES** — This bulletin does NOT apply. Continue diagnosis using the applicable Repair Manual.
- **NO** — Continue to step 6.

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Repair Procedure (continued)

6. Check the front struts for air leaks by spraying them with soapy water.
 - A. Spray soapy water on the area shown (360° around the pressed-on ring) and check for bubbles.

Was a leak found?

 - **YES** — Go to step 7.
 - **NO** — Continue to substep B.
 - B. Repeat substep A for the left and right struts.

Was a leak found?

 - **YES** — Go to step 7.
 - **NO** — Repeat substep A for the rear struts, then continue to step 7.

Figure 3.



Figure 4. Example of Results if Leak is Present



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Repair Procedure (continued)

7. Replace the strut.

A. Front Strut Removal:

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

- 2018 LS500:
Suspension – Front Suspension – "Front Suspension: Front Pneumatic Cylinder(for [2WD](#) / [AWD](#)): Removal"
- 2018 LS500h:
Suspension – Front Suspension – "Front Suspension: Front Pneumatic Cylinder(for [2WD](#) / [AWD](#)): Removal"

B. Rear Strut Removal:

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

- 2018 LS500:
Suspension – Rear Suspension – "[Rear Suspension: Rear Pneumatic Cylinder\(for 2WD / AWD\): Removal](#)"
- 2018 LS500h:
Suspension – Rear Suspension – "[Rear Suspension: Rear Pneumatic Cylinder\(for 2WD / AWD\): Removal](#)"

NOTE

The SST is ONLY required for four strut, compressor, or tank replacement. For single or double strut replacement, follow the applicable Repair Manual for the air transfer procedure and to reinitialize system pressure.

C. NEW Front Strut Installation:

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

- 2018 LS500:
Suspension – Front Suspension – "Front Suspension: Front Pneumatic Cylinder(for [2WD](#) / [AWD](#)): Installation"
- 2018 LS500h:
Suspension – Front Suspension – "Front Suspension: Front Pneumatic Cylinder(for [2WD](#) / [AWD](#)): Installation"

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Repair Procedure (continued)

D. NEW Rear Strut Installation:

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

- 2018 LS500:
Suspension – Rear Suspension – ["Rear Suspension: Rear Pneumatic Cylinder: Installation"](#)
- 2018 LS500h:
Suspension – Rear Suspension – ["Rear Suspension: Rear Pneumatic Cylinder: Installation"](#)

8. Confirm the condition is no longer present.