

Service

Category Vehicle Interior

Section	Heating/Air Conditioning	Market USA	Lexus Supports ASE Certification
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Applicability

YEAR(S)	MODEL(S)	ADDITIONAL INFORMATION
2016 - 2017	LX570	

Introduction

Some 2016 – 2017 model year LX 570 vehicles may exhibit one or more of the following HVAC conditions:

- Uneven temperature or air flow between the vents.
- Little or no air flow from the vent(s).
- Improper MODE control function.

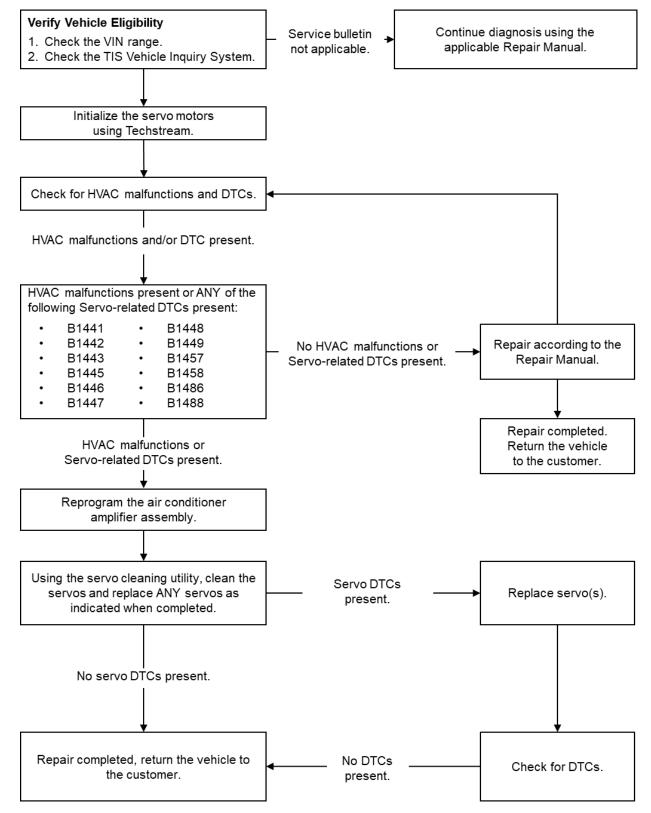
Additionally, some vehicles may store one or more of the following HVAC servo Diagnostic Trouble Codes (DTCs):

- B1441 Air Mix Damper Control Servo Motor Circuit (Passenger Side).
- B1442 Air Inlet Damper Control Servo Motor Circuit.
- B1443 Air Outlet Damper Control Servo Motor Circuit.
- B1445 Passenger Side Cool Air Bypass Damper Control.
- B1446 Air Mix Damper Control Servo Motor Circuit (Driver Side).
- B1447 Rear Air Mix Damper Control Servo Motor Circuit (Driver Side).
- B1448 Passenger Side Face Servo Motor Circuit.
- B1449 Rear Air Outlet Damper Control Servo Motor Circuit.
- B1457 Driver Side Air Outlet Damper Control Servo Motor Circuit.
- B1458 Passenger Side Air Outlet Damper Control Servo Motor Circuit.
- B1486 Driver Side Air Outlet Damper Control Servo Motor Circuit.
- B1488 Rear Air Mix Damper Control Servo Motor Circuit (Front Passenger).

Follow the procedures in this bulletin to address these conditions.



Operation Flowchart



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Production Change Information

This bulletin applies to 2016 – 2017 LX 570 vehicles produced **BEFORE** the Production Change Effective VIN shown below.

MODEL	PLANT	DRIVETRAIN	PRODUCTION CHANGE EFFECTIVE VIN
LX570	ТАВ	4WD	JTJHY7AX#H4249886

Warranty Information

Table 1. Reprogram and Redistribute Grease

OP CODE	DESCRIPTION	TIME	OFP	T1	T2
AC1923	Reprogram and Redistribute Grease Only	0.6	88650-#####*	72	41

*Warranty claim MUST be submitted with the correct ten-digit OFP for the vehicle being repaired by searching Air Conditioning, Amplifier (88650) and Servo Sub-assy, Damper (87106) in the Electronic Parts Catalog using the VIN filter.

Table 2. Reprogram, Redistribute Grease, and Servo Replacement

OP CODE	DESCRIPTION	TIME	OFP	T1	T2
AC1924	Reprogram and Redistribute Grease, and R & R IP and One Front Servo/Module	5.1			
AC1925	Reprogram and Redistribute Grease, and R & R IP and Two Front Servos/Modules	5.2			
AC1926	Reprogram and Redistribute Grease, and R & R Rear Trim Panels and One Rear Servo/Module	1.3			
AC1927	Reprogram and Redistribute Grease, and R & R Rear Trim Panels and Two Rear Servos/Modules	1.4			
AC1928	Reprogram and Redistribute Grease, R & R IP and One Front Servo/Module, and R & R Rear Trim Panels and One Rear Servo/Module	5.8	87106-#####*	72	41
AC1929	Reprogram and Redistribute Grease, R & R IP and One Front Servo/Module, and R & R Rear Trim Panels and Two Rear Servos/Modules	5.9			
AC1930	Reprogram and Redistribute Grease, R & R IP and Two Front Servos/Modules, and R & R Rear Trim Panels and One Rear Servo/Module	5.9			

Warranty Information (continued)

Table 2. Reprogram, Redistribute Grease, and Servo Replacement (continued)

OP CODE	DESCRIPTION	TIME	OFP	T1	T2
AC1931	Reprogram and Redistribute Grease, R & R IP and Two Front Servos/Modules, and R & R Rear Trim Panels and Two Rear Servos/Modules	6.0			
AC1932	Reprogram and Redistribute Grease, and R & R Front HVAC Box and One Front Servo/Module	6.4			
AC1933	Reprogram and Redistribute Grease, and R & R Front HVAC Box and Two Front Servos/Modules	6.5			
AC1934	Reprogram and Redistribute Grease, and R & R Front HVAC Box and Three Front Servos/Modules	6.6			
AC1935	Reprogram and Redistribute Grease, and R & R Front HVAC Box and Four Front Servos/Modules	6.7			
AC1936	Reprogram and Redistribute Grease, and R & R Front HVAC Box and Five Front Servos/Modules	6.8	87106-#####*	72	41
AC1937	Reprogram and Redistribute Grease, and R & R Rear HVAC Box and One Rear Servo/Module	3.1			
AC1938	Reprogram and Redistribute Grease, and R & R Rear HVAC Box and Two Rear Servos/Modules	3.2			
AC1939	Reprogram and Redistribute Grease, and R & R Rear HVAC Box and Three Rear Servos/Modules	3.3			
AC1940	Reprogram and Redistribute Grease, R & R IP and One Front Servo/Module, and R & R Rear HVAC Box and One Rear Servo/Module	7.6			
AC1941	Reprogram and Redistribute Grease, R & R IP and One Front Servo/Module, and R & R Rear HVAC Box and Two Rear Servos/Modules	7.7			

Warranty Information (continued)

Table 2. Reprogram, Redistribute Grease, and Servo Replacement (continued)

OP CODE	DESCRIPTION	TIME	OFP	T1	T2
AC1942	Reprogram and Redistribute Grease, R & R IP and One Front Servo/Module, and R & R Rear HVAC Box, and Three Rear Servos/Modules	7.8			
AC1943	Reprogram and Redistribute Grease, R & R IP and Two Front Servos/Modules, and R & R Rear HVAC Box and One Rear Servo/Module	7.7			
AC1944	Reprogram and Redistribute Grease, R & R IP and Two Front Servos/Modules, and Rear HVAC Box, and Two Rear Servos/Modules	7.8			
AC1945	Reprogram and Redistribute Grease, R & R IP and Two Front Servos/Modules, and R & R Rear HVAC Box, and Three Rear Servos/Modules	7.9			
AC1946	Reprogram and Redistribute Grease, R & R Front HVAC Box and One Front Servo/Module, and R & R Rear Trim Panels and One Rear Servo/Module	7.1	07100 #####*	72	41
AC1947	Reprogram and Redistribute Grease, R & R Front HVAC Box and One Front Servo/Module, and R & R Rear Trim Panels and Two Rear Servos/Modules	7.2	87106-####*	12	41
AC1948	Reprogram and Redistribute Grease, R & R Front HVAC Box and One Front Servo/Module, and R & R Rear HVAC Box and One Rear Servo/Module	8.9			
AC1949	Reprogram and Redistribute Grease, R & R Front HVAC Box and One Front Servo/Module, and R & R Rear HVAC Box and Two Rear Servos/Modules	9.0			
AC1950	Reprogram and Redistribute Grease, R & R Front HVAC Box and One Front Servo/Module, and R & R Rear HVAC Box and Three Rear Servos/Modules	9.1			
AC1951	Reprogram and Redistribute Grease, R & R Front HVAC Box and Two Front Servos/Modules, and R & R Rear Trim Panels and One Rear Servo/Module	7.2			

Warranty Information (continued)

Table 2. Reprogram, Redistribute Grease, and Servo Replacement (continued)

OP CODE	DESCRIPTION	TIME	OFP	T1	T2
AC1952	Reprogram and Redistribute Grease, R & R Front HVAC Box and Two Front Servos/Modules, and R & R Rear Trim Panels and Two Rear Servos/Modules	7.3			
AC1953	Reprogram and Redistribute Grease, R & R Front HVAC Box and Two Front Servos/Modules, and R & R Rear HVAC Box and One Rear Servo/Module	9.0			
AC1954	Reprogram and Redistribute Grease, R & R Front HVAC Box and Two Front Servos/Modules, and R & R Rear HVAC Box and Two Rear Servos/Modules	9.1			
AC1955	Reprogram and Redistribute Grease, R & R Front HVAC Box and Two Front Servos/Modules, and R & R Rear HVAC Box and Three Rear Servos/Modules	9.2			
AC1956	Reprogram and Redistribute Grease, R & R Front HVAC Box and Three Front Servos/Modules, and R & R Rear Trim Panels and One Rear Servo/Module	7.3	07106 ######*	72	41
AC1957	Reprogram and Redistribute Grease, R & R Front HVAC Box and Three Front Servos/Modules, and R & R Rear Trim Panels and Two Rear Servos/Modules	7.4	87106-#####*	12	41
AC1958	Reprogram and Redistribute Grease, R & R Front HVAC Box and Three Front Servos/Modules, and R & R Rear HVAC Box and One Rear Servo/Module	9.1			
AC1959	Reprogram and Redistribute Grease, R & R Front HVAC Box and Three Front Servos/Modules, and R & R Rear HVAC Box and Two Rear Servos/Modules	9.2			
AC1960	Reprogram and Redistribute Grease, R & R Front HVAC Box and Three Front Servos/Modules, and R & R Rear HVAC Box and Three Rear Servos/Modules	9.3			
AC1961	Reprogram and Redistribute Grease, R & R Front HVAC Box and Four Front Servos/Modules, and R & R Rear Trim Panels and One Rear Servo/Module	7.4			

Warranty Information (continued)

Table 2. Reprogram, Redistribute Grease, and Servo Replacement (continued)

OP CODE	DESCRIPTION	TIME	OFP	T1	T2
AC1962	Reprogram and Redistribute Grease, R & R Front HVAC Box and Four Front Servos/Modules, and R & R Rear Trim Panels and Two Rear Servos/Modules	7.5			
AC1963	Reprogram and Redistribute Grease, R & R Front HVAC Box and Four Front Servos/Modules, and R & R Rear HVAC Box and One Rear Servo/Module	9.2			
AC1964	Reprogram and Redistribute Grease, R & R Front HVAC Box and Four Front Servos/Modules, and R & R Rear HVAC Box and Two Rear Servos/Modules	9.3			
AC1965	Reprogram and Redistribute Grease, R & R Front HVAC Box and Four Front Servos/Modules, and R & R Rear HVAC Box and Three Rear Servos/Modules	9.4			
AC1966	Reprogram and Redistribute Grease, R & R Front HVAC Box and Five Front Servos/Modules, and R & R Rear Trim Panels and One Rear Servo/Module	7.5	87106-#####*	72	41
AC1967	Reprogram and Redistribute Grease, R & R Front HVAC Box and Five Front Servos/Modules, and R & R Rear Trim Panels and Two Rear Servos/Modules	7.6			
AC1968	Reprogram and Redistribute Grease, R & R Front HVAC Box and Five Front Servos/Modules, and R & R Rear HVAC Box and One Rear Servo/Module	9.3			
AC1969	Reprogram and Redistribute Grease, R & R Front HVAC Box and Five Front Servos/Modules, and R & R Rear HVAC Box and Two Rear Servos/Modules	9.4			
AC1970	Reprogram and Redistribute Grease, R & R Front HVAC Box and Five Front Servos/Modules, and R & R Rear HVAC Box and Three Rear Servos/Modules	9.5			

*Warranty claim MUST be submitted with the correct ten-digit OFP for the vehicle being repaired by searching Air Conditioning, Amplifier (88650) and Servo Sub-assy, Damper (87106) in the Electronic Parts Catalog using the VIN filter.

APPLICABLE WARRANTY

- This repair is covered under the Lexus Comprehensive 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

SERVO NAME / DTC	PART NUMBER	PART DESCRIPTION	QTY	NOTES
	87106-60290	Damper Servo Sub-assembly (Driver Side Upper Damper Servo Sub-assembly Includes: [1] Air Mix Servo and [3] Air Outlet Servo)	1	
	16418-15520	Packing (for Radiator Drain Cock)	1	W/Cool Box
	90068-14011	O-ring (External Dimension: ~10.3 mm (0.406 in.))	1	
	90069-08007	O-ring (External Dimension: ~15.6 mm (0.614 in.))	sion:	
[1] Air Mix Servo	88840-60180	Air Conditioner Accessory Assembly*	1	
(D) / B1446		Packing (for EVA Joint)	1	
[3] Air Outlet Servo (D) / B1443	_	Packing (for Ejector)	1	
(D) / B1443	90068-14011	O-ring (External Dimension: ~10.3 mm (0.406 in.))	3	
	90069-08007	O-ring (External Dimension: ~15.6 mm (0.614 in.))	1	*The Air
	90068-14010	O-ring (External Dimension: ~18.2 mm (0.717 in.))	2	Conditioner Accessory Assembly Kit
		Plug (for Quick Joint)	1	Includes These Parts
		Plug (for Connector, Dia. 0.5 in.)	1	
	-	Plug (for Connector, Dia. 0.625 in.)	1	
		Plug (for Ejector Connector)	1	
		Plug (for EVA)	1	



Parts Information (continued)

SERVO NAME / DTC	PART NUMBER	PART DESCRIPTION	QTY	NOTES
	87106-60310	Damper Servo Sub-assembly (P) Includes: [2] Air Mix Servo (P), [5] Cool Air Bypass Servo, and [7] Air Outlet Servo (P)	1	_
[2] Air Mix Servo (P) / B1441	16418-15520	Packing (for Radiator Drain Cock)	1	
[5] Cool Air Bypass Servo / B1445	90068-14011	O-ring (External Dimension: ~10.3 mm (0.406 in.))	1	W/O Cool Box
[7] Air Outlet Servo	90000-14011	O-ring (External Dimension: ~10.3 mm (0.406 in.))	4	W/Cool Box
(P) / B1448	90069-08007	O-ring (External Dimension: ~15.6 mm (0.614 in.))	1	W/COOI BOX
	90099-14121	O-ring (External Dimension: ~18.2 mm (0.717 in.))	1	
	87106-60330	Damper Servo Sub-assembly (D) Includes: [8] Air Mix Servo (F & R D) and [10] Air Outlet Servo (F & R D)	1	_
[8] Air Mix Servo	16418-15520	Packing (for Radiator Drain Cock)	1	
(F & R D) / B1457	90068-14011	O-ring (External Dimension: ~10.3 mm (0.406 in.))	1	W/O Cooler Box
[10] Air Outlet Servo (F & R D) / B1486	90000-14011	O-ring (External Dimension: ~10.3 mm (0.406 in.))	4	W/Cooler Box
	90069-08007	O-ring (External Dimension: ~15.6 mm (0.614 in.))	1	
	90099-14121	O-ring (External Dimension: ~18.2 mm (0.717 in.))	1	

Parts Information (continued)

SERVO NAME / DTC	PART NUMBER	PART DESCRIPTION	QTY	NOTES	
	87106-60350	Damper Servo Sub-assembly (Blower Damper Servo Sub-assembly)	1	_	
	16418-15520	16418-15520 Packing (for Radiator Drain Cock)			
[4] Air Inlet Damper Servo	90068-14011	O-ring (External Dimension: ~10.3 mm (0.406 in.))	1	W/O Cooler Box	
	90068-14011	O-ring (External Dimension: ~10.3 mm (0.406 in.))	4		
	90069-08007	O-ring (External Dimension: ~15.6 mm (0.614 in.))	1	W/Cooler Box	
	90099-14121	O-ring (External Dimension: ~18.2 mm (0.717 in.))	1		
[6] Rear Air Mix Servo	87106-28170	Damper Servo Sub-assembly (For Rear Air Mix)	1		
	16418-15520	Packing (for Radiator Drain Cock)	1		
	90068-14011	O-ring (External Dimension: ~10.3 mm (0.406 in.))	1		
	90069-08007	O-ring (External Dimension: ~15.6 mm (0.614 in.))	1		
	90189-06065	Grommet	2		
	87106-60340	Damper Servo Sub-assembly (P)	1		
[9] Air Mix Servo (F & R P)	90068-14011	O-ring (External Dimension: ~10.3 mm (0.406 in.))		W/Cooler Dev	
	90069-08007	O-ring (External Dimension: ~15.6 mm (0.614 in.))	1	W/Cooler Box	
[11] Air Outlet Servo (Rr D)	Rr D) 87106-58030 Damper Servo Sub-assembly (for Rear Mode)		1		
[12] Rear Air Mix Servo (P)	87106-60280	Damper Servo Sub-assembly (for Rear Air Mix No. 2)	1		



Required Tools & Equipment

SPECIAL SERVICE TOOLS (SST)	PART NUMBER	QTY
Plastic Pry Tool Kit*	00002-06020-02	1
DCA-8000 Battery Diagnostic Tool*	DCA-8000P T	1

*Essential SST.

NOTE

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

REQUIRED EQUIPMENT	SUPPLIER	PART NUMBER	QTY	
Techstream ADVi*		TSADVUNIT		
Techstream 2.0		TS2UNIT	4	
Techstream Lite	ADE	TSLITEPDLR01		
Techstream Lite (Green Cable)		TSLP2DLR01		

*Essential SST.

NOTE

- Only ONE of the Techstream units listed above is required.
- Software version 15.30.027 or later is required.
- Additional Techstream units may be ordered by calling Approved Dealer Equipment (ADE) at 1-800-368-6787.

Calibration Information

MODEL	MODEL YEAR	CALIBRATION ID				
MODEL	MODEL TEAR	PREVIOUS	NEW			
LX570	2016	8865060Q2002	<u>8865060V8001</u>			
		8865060Q2201				
	2017	8865060Q1001	8865060W0001			
		8865060Q2101				

Confirmation Procedure

- 1. Confirm one or more of the following conditions is present:
 - Uneven temperature or air flow between the vents.
 - Little or no air flow from the vent(s).
 - Improper MODE control function.

Does the vehicle exhibit ANY of the conditions listed above?

- YES Go to the Flash Reprogramming Procedure.
- NO Continue to step 2.
- 2. Using Techstream, check for the following stored DTCs:
 - B1441 Air Mix Damper Control Servo Motor Circuit (Passenger Side).
 - B1442 Air Inlet Damper Control Servo Motor Circuit.
 - B1443 Air Outlet Damper Control Servo Motor Circuit.
 - B1445 Passenger Side Cool Air Bypass Damper Control.
 - B1446 Air Mix Damper Control Servo Motor Circuit (Driver Side).
 - B1447 Rear Air Mix Damper Control Servo Motor Circuit (Driver Side).
 - B1448 Passenger Side Face Servo Motor Circuit.
 - B1449 Rear Air Outlet Damper Control Servo Motor Circuit.
 - B1457 Driver Side Air Outlet Damper Control Servo Motor Circuit.
 - B1458 Passenger Side Air Outlet Damper Control Servo Motor Circuit.
 - B1486 Driver Side Air Outlet Damper Control Servo Motor Circuit.
 - B1488 Rear Air Mix Damper Control Servo Motor Circuit (Front Passenger).
- 3. Are ANY of the DTCs listed above present?
 - YES Continue to the Flash Reprogramming Procedure.
 - NO This bulletin does NOT apply. Continue diagnosis using the applicable Repair Manual.



Flash Reprogramming Procedure

1. Flash Reprogram the air conditioning amplifier assembly.

NOTE

The air conditioning amplifier flash reprogram is only performed one time if the air conditioning amplifier has NOT been flash reprogrammed previously.

Follow the procedure outlined in Service Bulletin <u>L-SB-0001-18</u>, *Techstream ECU Flash Reprogramming Procedure,* and flash reprogram the air conditioning amplifier with the NEW calibration file update.

NOTE

The battery diagnostic tool MUST be used in Power Supply Mode to maintain battery voltage above 11.4V while flash reprogramming the air conditioning amplifier.

NOTICE

- Damage to the air conditioning amplifier may occur if the correct battery charge mode setting is NOT used.
- Power Supply Mode is used to maintain battery voltage at 13.5V while flash reprogramming.
- For details on how to use the battery diagnostic tool, refer to the <u>DCA-8000 Battery Diagnostic Tool Instruction Manual</u> located on TIS - Diagnostics – Tools & Equipment – Battery Diagnostics.



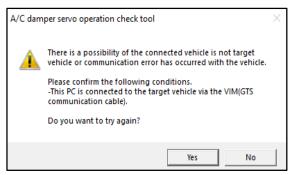
Servo Cleaning Operation Procedure

- 1. Clean the servos using the AC damper servo operation check tool.
 - A. Continue with the battery diagnostic tool connected using the "Power Supply Mode" ONLY.
 - B. Confirm flash reprograming of the air conditioning amplifier is complete, otherwise the AC damper servo operation check tool will show the corresponding error message.

NOTE

The AC damper servo operation check tool will ONLY function correctly with the NEW calibration file update.

Figure 1.



- C. BEFORE using the AC damper servo operation check tool, manually set the front and rear air conditioning to the following settings:
 - MODE Face
 - Temperature Max Cold
 - Air Inlet Fresh
- D. Download the AC damper servo operation check tool onto the Techstream desktop.
 - (1) Select the following link to download the AC damper servo operation check tool to Techstream:

AC damper servo operation check tool download.

NOTE

Depending on browser and settings used, the file may not automatically save to the Techstream desktop. If this is the case, locate the downloaded file and save it to the Techstream desktop.

- E. Confirm the ignition is in the IG-ON position and the Techstream unit is connected to the DLC3 connector.
- F. Confirm NO other programs on the Techstream unit are currently communicating with the vehicle.
- G. Double-click on the AC damper servo operation check tool from the Techstream desktop.

Servo Cleaning Operation Procedure (continued)

H. Click on NEXT to start the AC damper servo operation check tool and the progress bar will show. It will take between 8 – 14 minutes to complete the cleaning process depending on the condition of the servos. The completion rate of the progress bar will show between 50% – 100%.

NOTE

If the connection between Techstream and the vehicle is interrupted during the cleaning process, the error message in Figure 2 will also display. To reconnect, turn OFF the Techstream unit and disconnect it from the DLC3 connector, reconnect Techstream and confirm connections, and turn ON the Techstream unit and restart the cleaning process.

	to the shead to	AC surger server considers class and
This tool performs grease smoothing and find out which A/C damper servo require Please confirm the following conditions.		This tool performs grease smoothing and pulse check to find out which A/C damper servo requires replacement. Please confirm the following conditions.
 A battery charger has connected to th according to the TUTSB 2. Reprogram and DTG clear has perform the TUTSB 3. GTS(Global Tech Stream) is not runnin 4. This PO is connected to the target ve VM(GTS communication cable). Press "Next" to start Grease smoothing 	ned according to ing on this PC. thicle via the	Teste bolimmin the closery contactions 1. A batter of the IV/TSE according to the IV/TSE accordin
		A/C damper sensi operation check tool
	Y	Grease smoothing and Pulse check are underway. It takes about 14 minutes to complete. Please wait
Next	Exit	
A/C damper serv	o operation check too	× lo
A There i		onnected vehicle is not target ror has occurred with the vehicle.
vehicle Please -This P	confirm the following C is connected to the 1 unication cable).	r conditions. target vehicle via the VIM(GTS
Please -This P commu	C is connected to the I	

I. When the cleaning process is complete, the DTC check result screen shown on the next page will be displayed. If ANY DTC is output, the servo related to it will require replacement. (Reference the <u>Servo Location Guide (page 19)</u> for the servo motor location.)

Figure 2.

NOTE

If DTCs B1497 or B149A are output, this bulletin does NOT apply. The communication from the air conditioning amplifier to each servo has an error or a communication interruption. Complete substeps I and J, and continue diagnosis using the applicable Repair Manual.

HVAC Servo Motor Malfunction

Servo Cleaning Operation Procedure (continued)

Are ANY DTCs output?

- YES Check DTC and Servo Location Guide and replace the appropriate servo according to the displayed DTC (Figure 3).
- NO Complete substeps J K to complete the repair and return the vehicle to the customer (Figure 4).

Figure 3.

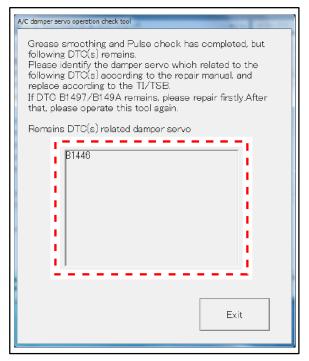


Figure 4.

A/C damper servo operation check tool
Grease smoothing and pulse check has completed successfully. It is not necessary to replace any damper servo.
Exit



Servo Cleaning Operation Procedure (continued)

J. Take a screen shot of the VIN displayed on the Techstream System Selection Menu overlaid with the AC damper servo operation check tool results showing the DTCs. Retain the screen shot as per Toyota Warranty Policies and Procedures with the repair order.

Figure 5.

System Select Store		A/C damper servo operation check tool
2020 IS300 2GR-FKS 006734 mile JTHG81F20L5040459 Health Check	System Selection Menu Select desired system and then press the arrow button to System Yellow = ECU status unknown. System White = ECU communication OK. "System White w/Asterisk = ECU not supported or "System Light Blue w/Asterisk = ECU communicati All ECUs Powertrain Chassis	Grease smoothing and Pulse check has completed, bu following DTC(s) remains. Please identify the damper servo which related to the following DTC(s) according to the repair manual, and replace according to the TI/TSB.
Customize Setting ECU Reprogramming CAN Bus Check TIS Function Read Data Function .ECU Security Key	An ECOS Powertrain Chassis Dody Electrics Radar Cruise ABS/VSC/TRAC Tire Pressure Monitor Advanced Parking Guidance/Parking Assist Monitor LKA/LDA Air Conditioner Pre-Collision 2 Accessory Gateway D-Door Motor RL-Door Motor Driver Seat Stiding Roof	Remains DTC(s) related damper servo; B1446
TIS Search Print Main Menu	Combination Meter	Exit

- K. The Servo Cleaning Operation is complete. Cycle the ignition to the IG-OFF position and select Exit.
- L. Turn OFF and disconnect the battery diagnostic tool.



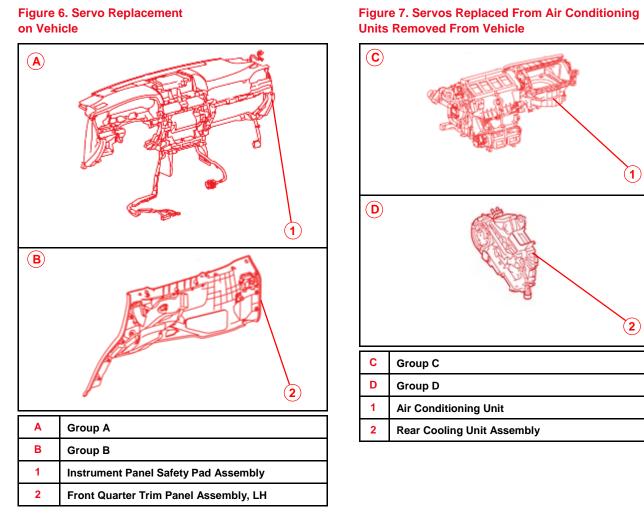
Damper Servo Sub-assembly Replacement Procedure

NOTE

The servo replacement procedure (and surrounding parts to remove) varies depending on the servo being replaced. Perform the replacement work according to the Servo Location Guide.

Servo Location Guide

Required Removal Work for Replacement of Each Servo



- Groups A and B servo replacement: Servo replacement takes place on the vehicle.
- Groups C and D servo replacement: To access the servos, servo replacement requires removal of the air conditioning unit and the rear cooling unit assembly from the vehicle. If multiple servos need to be replaced that require groups C or D procedures, performing

If multiple servos need to be replaced that require groups C or D procedures, performing procedures for groups A and B will NOT be necessary.

Damper Servo Sub-assembly Replacement Procedure (continued)

Servo Location Guide (continued)

NO.	DTC	PART NO.	DESCRIPTION	GROUP			PG.	
NO.	DIC	PART NO.	DESCRIPTION	Α	В	С	D	PG.
[1]	B1446	87106-60290	Air Mix Servo (D)	● *1	-	• *2	-	22, 42
[3]	B1443	87100-00290	Air Outlet Servo (D)	• *1	-	• *2	-	22, 42
[2]	B1441		Air Mix Servo (P)	-	-	•	-	51
[5]	B1445	87106-60310	Cool Air Bypass Servo	-	-	•	-	51
[7]	B1448		Air Outlet Servo (P)	-	-	•	-	51
[8]	B1457	87106-60330	Air Mix Servo (F & R D)	-	-	•	-	59
[10]	B1486	87100-00330	Air Outlet Servo (F & R D)	-	-	•	-	59
[4]	B1442	87106-50550 Air Inlet Damper Servo		-	-	•	-	57
[6]	B1447	87106-28170	Rear Air Mix Servo	-	-	-	•	62
[9]	B1458	87106-50550	Air Mix Servo (F & R P)	• *3	-	-	-	31
[11]	B1449	87106-58030	Air Outlet Servo (Rr D)	_	•	_	_	33
[12]	B1488	87106-60280	Rear Air Mix Servo (P)	-	•	_	-	39

*1 W/O cool box.

*2 W/cool box.

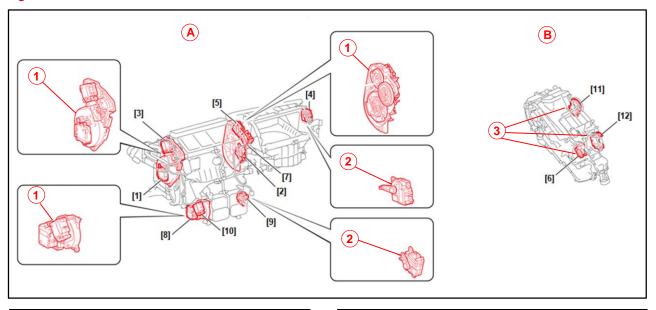
*3 Cool box equipped vehicles need to recover the refrigerant.



Damper Servo Sub-assembly Replacement Procedure (continued)

Servo Location Guide (continued)

On the front air conditioning unit assembly, there are several damper servo sub-assemblies equipped with multiple servos. If a servo requiring replacement is on a damper servo sub-assembly, the entire damper servo sub-assembly MUST be replaced and NOT the servo itself. If the entire damper servo sub-assembly is NOT replaced, the servo can NOT be reinstalled as the there is NO ability to align the servo at the installation location. Stand-alone servos can be replaced individually. **Figure 8.**



Α	Front Air Conditioning Unit Assembly		В	Rear Air Conditioning Unit Assembly
1	Damper Servo Sub-assembly Replacement		3	Individual Servo Replacement
2	Individual Servo Replacement			

NOTE

ALL rear servos can be replaced individually. Replacement of servo [6] requires removal of the rear air conditioning unit assembly.



Damper Servo Sub-assembly Replacement Procedure (continued)

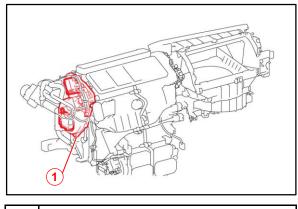
Replacement Procedure Group A (Servo Replacement on the Vehicle)

NOTE

If there are currently servos requiring replacement that are BOTH in group A and in group C, perform the air conditioning unit removal steps from <u>group C (page 42)</u> first, then follow the servo replacement steps from group A to replace the group A servo. Replace ALL group A servos BEFORE reinstalling the air conditioning unit.

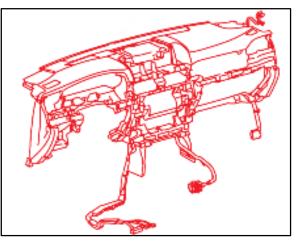
- [1] Replace Air Mix Servo (D) (W/O Cool Box) [3] Replace Air Outlet Servo (D) (W/O Cool Box)
- [9] Replace Air Mix Servo (F & R P)
- Remove the driver side upper damper servo sub-assembly to replace both the [1] air mix servo (D) (w/o cool box) and the [3] air outlet servo (D) (w/o cool box) as they MUST be replaced together.





1 Replace Together

Figure 10.



A. Remove the instrument panel safety pad assembly.

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

• 2016 – 2017 LX 570:

Vehicle Interior – Interior Panels/Trim – "Interior Panels / Trim: Instrument Panel Safety Pad: Removal"



Damper Servo Sub-assembly Replacement Procedure (continued)

Replacement Procedure Group A (Servo Replacement on the Vehicle) (continued)

B. Remove the center heater to resistor duct.

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

- 2016 2017 LX 570: Vehicle Interior – Heating/Air Conditioning – "<u>Heating /</u> <u>Air Conditioning: Front Air</u> <u>Conditioning Unit: Removal</u>"
- C. Remove the No. 1 heater to resistor duct sub-assembly.

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

• 2016 – 2017 LX 570:

Vehicle Interior – Heating/Air Conditioning – "<u>Heating /</u> <u>Air Conditioning: Front Air</u> Conditioning Unit: Removal"

- D. Remove the meter mirror subassembly (w/headup display).
 Refer to TIS, applicable model and model year Repair Manual:
 - 2016 2017 LX 570: Vehicle Interior – Meter/Gauge/Display – "Meter / Gauge / Display: Headup Display: Removal"

Figure 11.

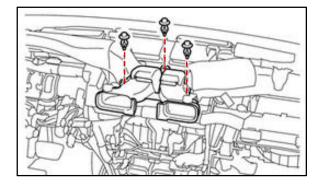
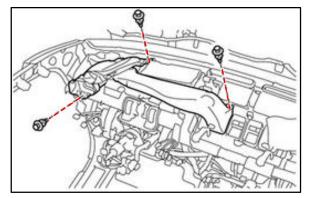
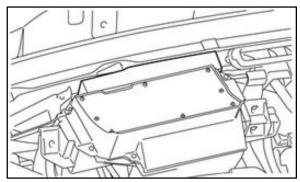


Figure 12.









Damper Servo Sub-assembly Replacement Procedure (continued)

Replacement Procedure Group A (Servo Replacement on the Vehicle) (continued)

E. Remove the heater to resistor duct assembly.

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

- 2016 2017 LX 570: Vehicle Interior – Heating/Air Conditioning – "<u>Heating /</u> <u>Air Conditioning: Front Air</u> <u>Conditioning Unit: Removal</u>"
- F. Remove the No. 3 air duct sub-assembly.

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

• 2016 – 2017 LX 570:

Vehicle Interior – Heating/Air Conditioning – "<u>Heating /</u> <u>Air Conditioning: Front Air</u> Conditioning Unit: Removal"

G. Remove the No. 2 air duct sub-assembly.

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

 2016 – 2017 LX 570: Vehicle Interior – Heating/Air Conditioning – "<u>Heating /</u> <u>Air Conditioning: Front Air</u> <u>Conditioning Unit: Removal</u>"

Figure 14.

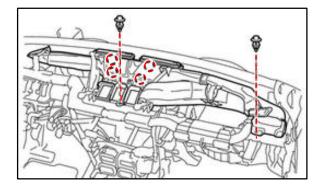


Figure 15.

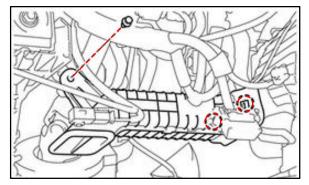
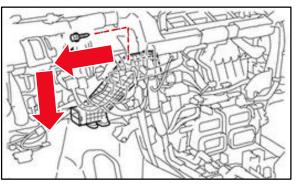


Figure 16.





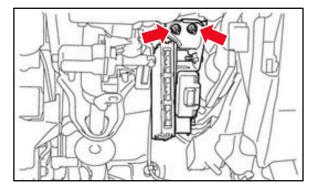
Damper Servo Sub-assembly Replacement Procedure (continued)

Replacement Procedure Group A (Servo Replacement on the Vehicle) (continued)

H. Remove the certification ECU (smart key ECU assembly).

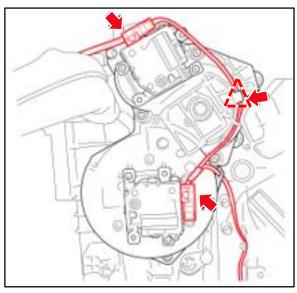
Refer to TIS, applicable model and model year Repair Manual:

 2016 – 2017 LX 570: Vehicle Interior – Interior Panels/Trim – "<u>Theft Deterrent /</u> <u>Keyless Entry: Certification</u> <u>ECU: Removal</u>" Figure 17.



I. Disconnect the two connectors and clamp.







Damper Servo Sub-assembly Replacement Procedure (continued)

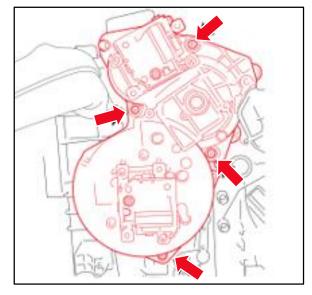
Replacement Procedure Group A (Servo Replacement on the Vehicle) (continued)

J. Remove the four screws and the damper servo sub-assembly.

Figure 19.

NOTE

Do NOT remove the screws installed on the servo body.



K. Mark and store the removed servo in a separate container to avoid reinstalling it in error.

NOTE

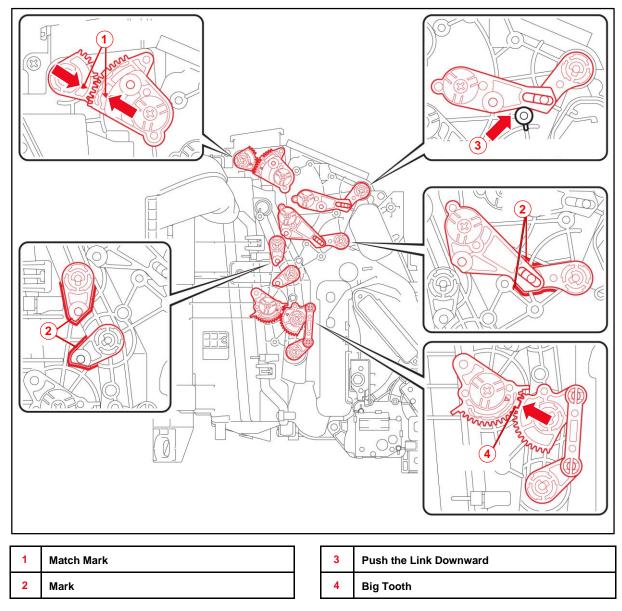
Reuse the attaching screws. If a screw is lost, order the following: 90099-00968.

Damper Servo Sub-assembly Replacement Procedure (continued)

Replacement Procedure Group A (Servo Replacement on the Vehicle) (continued)

L. Install the NEW driver side upper damper servo sub-assembly for air mix servo (D) and air outlet servo (D) (w/o cool box) by aligning each lever with the corresponding alignment marks stamped on the air conditioning unit.

Figure 20.



Damper Servo Sub-assembly Replacement Procedure (continued)

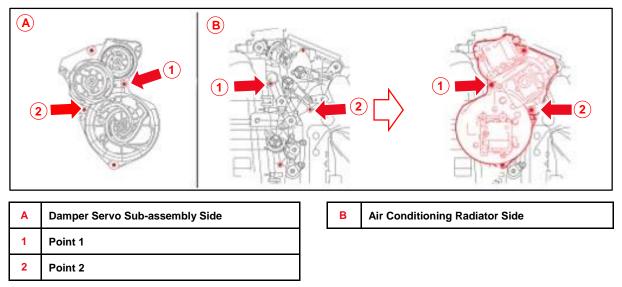
Replacement Procedure Group A (Servo Replacement on the Vehicle) (continued)

M. Temporarily install the NEW damper servo sub-assembly by engaging the screw installing holes of the damper servo sub-assembly side to the air conditioning radiator side in the order of point 1 then point 2.

NOTE

Be careful NOT to move the levers on the air conditioning radiator side. If a link was moved, reset the position of the link.

Figure 21.



N. Confirm each link pin is inserted into each corresponding link groove.

CAUTION The link pins will be misaligned if the damper servo sub-assembly is installed using force.

- O. Install the damper servo sub-assembly with the four screws.
- P. Reconnect the clamp and the two connectors.

Damper Servo Sub-assembly Replacement Procedure (continued)

Replacement Procedure Group A (Servo Replacement on the Vehicle) (continued)

- Q. Reinstall the Certification ECU (smart key ECU assembly).
 Refer to TIS, applicable model and model year Repair Manual:
 - 2016 2017 LX 570: Vehicle Interior – Theft Deterrent/Keyless Entry – "<u>Theft Deterrent / Keyless Entry: Certification ECU: Installation</u>"
- R. Reinstall the No. 2 air duct sub-assembly.Refer to TIS, applicable model and model year Repair Manual:
 - 2016 2017 LX 570:
 Vehicle Interior Heating/Air Conditioning –
 "Heating / Air Conditioning: Front Air Conditioning Unit: Installation"
- S. Reinstall the No. 3 air duct sub-assembly. Refer to TIS, applicable model and model year Repair Manual:
 - 2016 2017 LX 570: Vehicle Interior – Heating/Air Conditioning – "<u>Heating / Air Conditioning: Front Air Conditioning Unit: Installation</u>"
- Reinstall the heater to resistor duct assembly.
 Refer to TIS, applicable model and model year Repair Manual:
 - 2016 2017 LX 570: Vehicle Interior – Heating/Air Conditioning – "<u>Heating / Air Conditioning: Front Air Conditioning Unit: Installation</u>"
- U. Reinstall the meter mirror sub-assembly (w/headup display). Refer to TIS, applicable model and model year Repair Manual:
 - 2016 2017 LX 570:
 Vehicle Interior Meter/Gauge/Display "Meter / Gauge / Display: Headup Display: Installation"

Damper Servo Sub-assembly Replacement Procedure (continued)

Replacement Procedure Group A (Servo Replacement on the Vehicle) (continued)

- V. Reinstall the No. 1 heater to resistor duct sub-assembly. Refer to TIS, applicable model and model year Repair Manual:
 - 2016 2017 LX 570: Vehicle Interior – Heating/Air Conditioning – "Heating / Air Conditioning: Front Air Conditioning Unit: Installation"
- W. Reinstall the center heater to resistor duct.

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

- 2016 2017 LX 570: Vehicle Interior – Heating/Air Conditioning – "Heating / Air Conditioning: Front Air Conditioning Unit: Installation"
- X. Is this the last servo being replaced?
 - YES Go to the appropriate completion procedure.
 - NO <u>Go to the next servo replacement procedure</u>.



Damper Servo Sub-assembly Replacement Procedure (continued)

Replacement Procedure Group A (Servo Replacement on the Vehicle) (continued)

2. Remove the passenger side lower [9] Air Mix Servo (F & R P).

A. Remove the instrument panel safety pad assembly.

> model year Repair Manual: 2016 - 2017 LX 570:

> > Pad: Removal"

Refer to TIS, applicable model and

Vehicle Interior – Interior

Panels/Trim – "Interior Panels / Trim: Instrument Panel Safety

Figure 22.

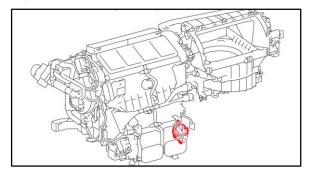
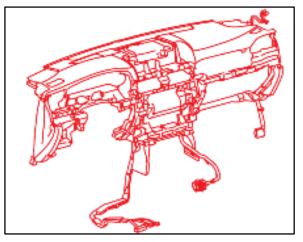


Figure 23.



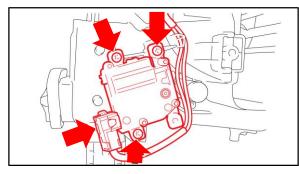
B. Disconnect the connector, remove the three screws and the air mix servo.

NOTE

•

Reuse the attaching screws. If a screw is lost, order the following: 90099-00968.







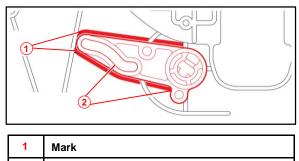
Damper Servo Sub-assembly Replacement Procedure (continued)

Replacement Procedure Group A (Servo Replacement on the Vehicle) (continued)

- C. Mark and store the removed air mix servo in a separate container to avoid reinstalling it in error.
- D. Install the NEW passenger side lower air mix servo (F & R P) by aligning the lever with the mark on the air conditioning radiator side.

Do NOT wipe off the grease in

Figure 25.



- 2 Do Not Wipe the Grease
- E. Install the NEW passenger side lower air mix servo (F & R P) three screws and reconnect the connector.

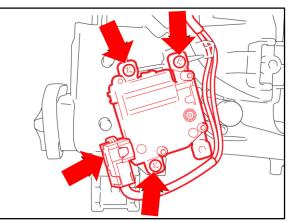
STOP

NOTE

the groove.

Confirm the link pin is inserted into the link groove.

Figure 26.



- F. Is this the last servo being replaced?
 - YES Go to the appropriate completion procedure.
 - NO Go to the next servo replacement procedure.

Damper Servo Sub-assembly Replacement Procedure (continued)

Replacement Procedure Group B (Servo Replacement on the Vehicle)

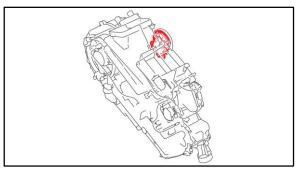
[11] Replace Air Outlet Servo (Rr D) [12] Replace Rear Air Mix Servo (P)

NOTE

If there are currently servos requiring replacement that are BOTH in group B and in group D, perform the rear cooling unit removal steps from <u>group D (page 62)</u> first, then follow the servo replacement steps from group B to replace the group B servo. Replace ALL group B servos BEFORE reinstalling the rear cooling unit.

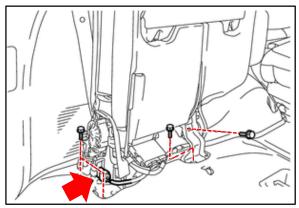
1. Remove the [11] air outlet servo (Rr D).





- Remove the rear No. 2 seat assembly LH.
 Refer to TIS, applicable model and model year Repair Manual:
 - 2016 2017 LX 570:
 Vehicle Interior Seat –
 "Seat: Rear No. 2 Seat Assembly: Removal"

Figure 28.





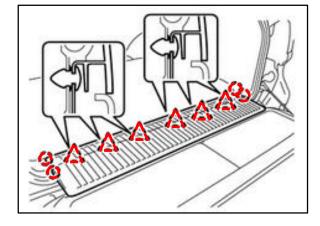
Damper Servo Sub-assembly Replacement Procedure (continued)

Replacement Procedure Group B (Servo Replacement on the Vehicle) (continued)

B. Remove the rear floor mat rear support plate.

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

 2016 – 2017 LX 570: Vehicle Interior – Interior Panels/Trim – "<u>Interior Panels /</u> <u>Trim: Roof Headlining: Removal</u>" Figure 29.



C. Remove the rear step cover.

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

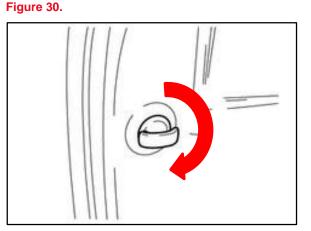
- 2016 2017 LX 570: Vehicle Interior – Interior Panels/Trim – "Interior Panels / Trim: Roof Headlining: Removal"
- D. Remove the rear door scuff plate LH.

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

- 2016 2017 LX 570: Vehicle Interior – Interior Panels / Trim – "Interior Panels / Trim: Roof Headlining: Removal"
- E. Remove the No. 1 luggage compartment trim hook.

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

 2016 – 2017 LX 570: Vehicle Interior – Interior Panels/Trim – "Interior Panels / <u>Trim: Roof Headlining: Removal</u>"





Damper Servo Sub-assembly Replacement Procedure (continued)

Replacement Procedure Group B (Servo Replacement on the Vehicle) (continued)

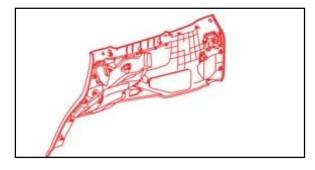
F. Remove the front quarter trim panel assembly LH.

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

- 2016 2017 LX 570: Vehicle Interior – Interior Panels/Trim – "Interior Panels / <u>Trim: Roof Headlining: Removal</u>"
- G. Remove the two screws and plate cover from the air outlet servo (Rr D).

NOTE

Reuse the attaching screws. If a screw is lost, order the following: 90099-00968. Figure 31.





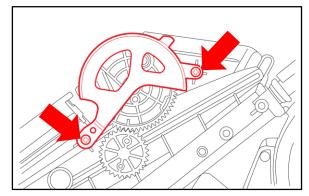
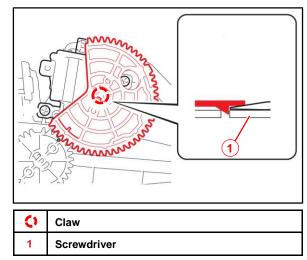


Figure 33.



H. Disengage the claw and remove the plate.

CAUTION

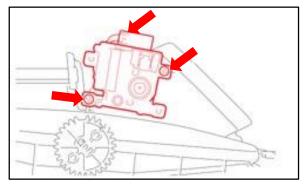
Do NOT raise the claws too much to avoid breaking them. ONLY raise them enough to disengage.

Damper Servo Sub-assembly Replacement Procedure (continued)

Replacement Procedure Group B (Servo Replacement on Vehicle) (continued)

- I. Mark and store the removed plate in a separate container so as not to reinstall it in error.
- J. Disconnect the connector, remove the two screws and servo.

NOTE Reuse the attaching screws. If a screw is lost, order the following: 90099-00968. Figure 34.



- K. Mark and store the removed air mix servo in a separate container to avoid reinstalling it in error.
- L. BEFORE you install the NEW air outlet (Rr D), turn the gear on the rear cooling unit side clockwise fully.

CAUTION

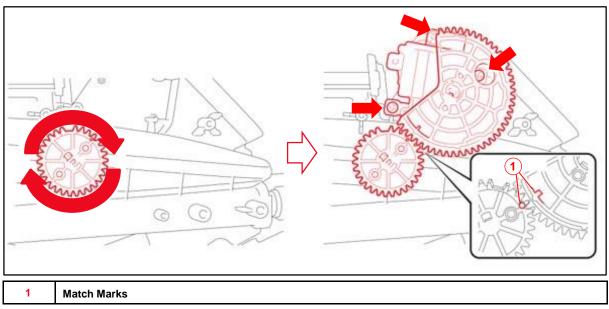
If the servo is installed with the gear turned counterclockwise fully, the servo malfunctions and it will be required to remove and install the servo again. Make sure to install the servo after turning the gear clockwise fully.

Damper Servo Sub-assembly Replacement Procedure (continued)

Replacement Procedure Group B (Servo Replacement on the Vehicle) (continued)

M. Align the NEW servo as show in the illustration.

Figure 35.



N. Install the two screws and reconnect the connector.

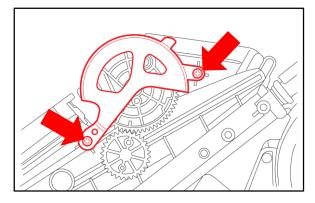


Damper Servo Sub-assembly Replacement Procedure (continued)

Replacement Procedure Group B (Servo Replacement on the Vehicle) (continued)

O. Reinstall the plate cover with the two screws.

Figure 36.



- P. Is this the last servo being replaced?
 - YES Go to the appropriate completion procedure.
 - NO Go to the next servo replacement procedure.

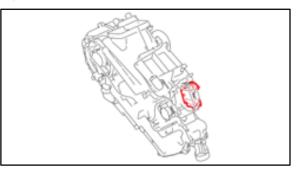
Damper Servo Sub-assembly Replacement Procedure (continued)

Replacement Procedure Group B (Servo Replacement on the Vehicle) (continued)

2. Remove the [12] rear air mix servo (P).

Figure 37.

Figure 38.



A. Remove the rear No. 2 seat assembly LH.

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

- 2016 2017 LX 570: Vehicle Interior – Seat – "Seat: Rear No. 2 Seat Assembly: Removal"
- B. Remove the rear floor mat rear support plate.

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

 2016 – 2017 LX 570: Vehicle Interior – Interior Panels/Trim – "Interior Panels / Trim: Roof Headlining: Removal"

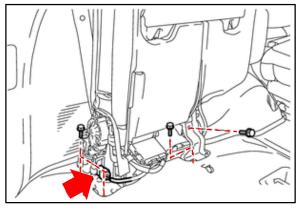
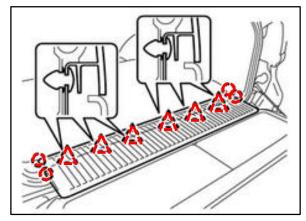


Figure 39.



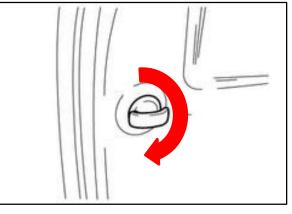
Damper Servo Sub-assembly Replacement Procedure (continued)

Replacement Procedure Group B (Servo Replacement on the Vehicle) (continued)

C. Remove the rear step cover.

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

- 2016 2017 LX 570: Vehicle Interior – Interior Panels/Trim – "Interior Panels / Trim: Roof Headlining: Removal"
- Remove the rear door scuff plate LH.
 Refer to TIS, applicable model and model year Repair Manual:
 - 2016 2017 LX 570: Vehicle Interior – Interior Panels/Trim – "Interior Panels / Trim: Roof Headlining: Removal"
- E. Remove the rear door scuff plate LH. Refer to TIS, applicable model and model year Repair Manual:
 - 2016 2017 LX 570: Vehicle Interior – Interior Panels/Trim – "Interior Panels / Trim: Roof Headlining: Removal"

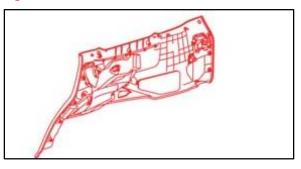


F. Remove the front quarter trim panel assembly LH.

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

 2016 – 2017 LX 570: Vehicle Interior – Interior Panels/Trim – "Interior Panels / Trim: Roof Headlining: Removal" Figure 41.

Figure 40.





Damper Servo Sub-assembly Replacement Procedure (continued)

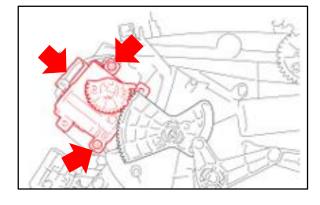
Replacement Procedure Group B (Servo Replacement on the Vehicle) (continued)

G. Disconnect the connector, remove the two screws and the servo.

NOTE

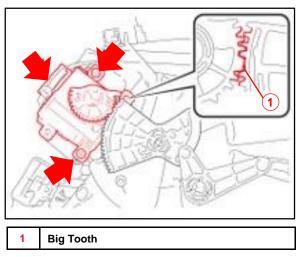
- If it is difficult to remove the servo and gear together, remove the servo after disconnecting the gear.
- Reuse the attaching screws. If a screw is lost, order the following: 90099-00968.

Figure 42.



- H. Mark and store the removed servo in a separate container to avoid reinstalling it in error.
- Install the NEW rear air mix servo (P) by aligning the servo as shown in the illustration, installing the two screws and reconnect the connector.

Figure 43.



- J. Is this the last servo being replaced?
 - YES Go to the appropriate completion procedure.
 - NO Go to the next servo replacement procedure.

Damper Servo Sub-assembly Replacement Procedure (continued)

Replacement Procedure Group C (Servo Replaced From the A/C Unit Removed From the Vehicle)

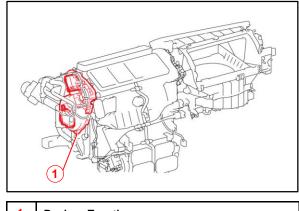
- [1] Replace Air Mix Servo (D) (W/Cool Box)
- [2] Replace Air Mix Servo (P)
- [3] Replace Air Outlet Servo (D) (W/Cool Box)
- [4] Replace Air Inlet Damper Servo
- [5] Replace Cool Air Bypass Servo
- [7] Replace Air Outlet Servo (P)
- [8] Replace Air Mix Servo (F & R D)

[10] Replace Air Outlet Servo (F & R D)

 Remove the driver side upper damper servo sub-assembly for replacing both

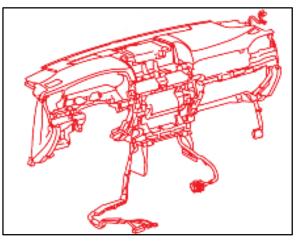
 air mix servo (D) (w/cool box) and
 air outlet servo (D) (w/cool box) as they MUST be replaced together.

Figure 44.



1 Replace Together

Figure 45.



A. Remove the front air conditioning unit assembly.

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

 2016 – 2017 LX 570: Vehicle Interior – Heating/Air Conditioning – "<u>Heating / Air</u> <u>Conditioning: Front Air</u> <u>Conditioning Unit: Removal</u>"

NOTE

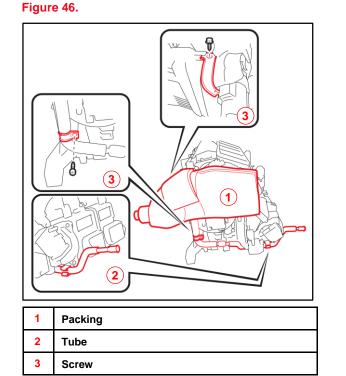
Replace the packing for the radiator drain cock even though the repair manual states to reuse.



Damper Servo Sub-assembly Replacement Procedure (continued)

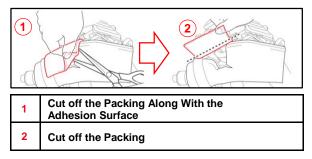
Replacement Procedure Group C (Servo Replaced From the A/C Unit Removed From the Vehicle) (continued)

B. Remove the air conditioner tube and accessory assembly by removing the two screws and disconnecting the tube.



C. Using scissors, remove and cut off the packing (black) along with the adhesive surface.

Figure 47.

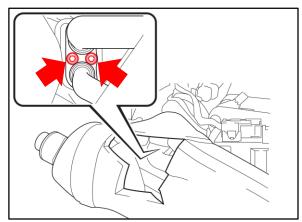




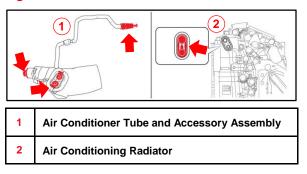
Damper Servo Sub-assembly Replacement Procedure (continued)

Replacement Procedure Group C (Servo Replaced From the A/C Unit Removed From the Vehicle) (continued)

D. Using a 4-mm hexagon wrench, remove the two hexagon bolts and air conditioner tube and accessory assembly. Figure 48.



E. Cover the open ends of the air conditioner tube and accessory assembly and the cool evaporator No. 1 with caps (kit parts) to prevent foreign debris and moisture from entering. Figure 49.





Damper Servo Sub-assembly Replacement Procedure (continued)

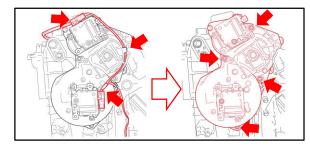
Replacement Procedure Group C (Servo Replaced From the A/C Unit Removed From the Vehicle) (continued)

F. Disconnect the two connectors and the clamp and remove the four screws and damper servo sub-assembly.

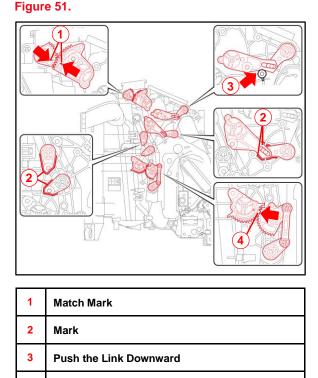
NOTE

- Do NOT remove the screws installed on the servo body.
- Reuse the attaching screws. If a screw is lost, order the following: 90099-00968.

Figure 50.



- G. Mark and store the removed damper servo sub-assembly in a separate container to avoid reinstalling it in error.
- H. Install the NEW driver side upper damper servo sub-assembly for air mix servo (D) and air outlet servo (D) (w/cool box) by aligning each lever with the corresponding alignment marks stamped on the air conditioning unit.



4 Big Tooth

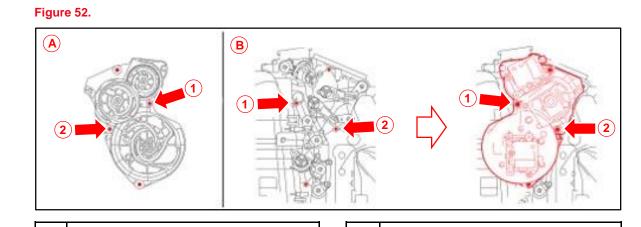
Damper Servo Sub-assembly Replacement Procedure (continued)

Replacement Procedure Group C (Servo Replaced From the A/C Unit Removed From the Vehicle) (continued)

I. Temporarily install the NEW damper servo sub-assembly by engaging the screw installing holes of the damper servo sub-assembly side to the air conditioning radiator side in the order of point 1 then point 2.

NOTE

Be careful NOT to move the levers on the air conditioning radiator side. If a link was moved, reset the position of the link again.



в

Α	Damper Servo Sub-assembly Side
1	Point 1
2	Point 2

Air Conditioning Radiator Side

J. Confirm each link pin is inserted into each corresponding link groove.

CAUTION The link pins will be misaligned if damper servo sub-assembly is installed using force.

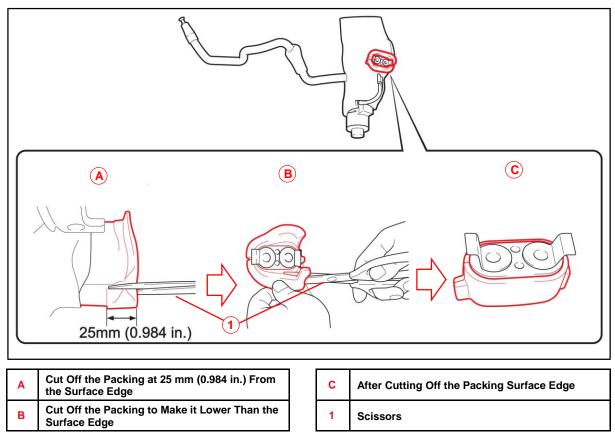
K. Install the damper servo sub-assembly with the four screws and reconnect the clamp and the two connectors.

Damper Servo Sub-assembly Replacement Procedure (continued)

Replacement Procedure Group C (Servo Replaced From the A/C Unit Removed From the Vehicle) (continued)

L. Reinstall the air conditioner tube and accessory assembly by cutting off the packing (gray) mating surface (ear portion) at 25 mm (0.984 in.) from the surface edge. Cut off the packing (gray) so that it is lower than the joint surface edge.

Figure 53.

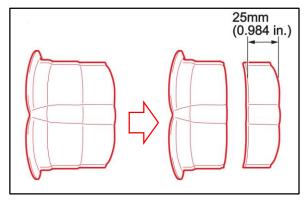




Damper Servo Sub-assembly Replacement Procedure (continued)

Replacement Procedure Group C (Servo Replaced From the A/C Unit Removed From the Vehicle) (continued)

 M. Cut off the NEW packing (gray) at 25 mm (0.984 in.) from the bottom edge. Figure 54.

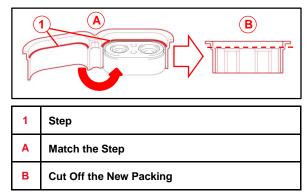


N. Attach the NEW packing (gray) by matching the step to the joint surface edge.

NOTE

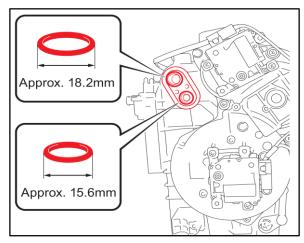
Make sure to thoroughly remove ANY packing (gray) adhesive, dust, sand, or dirt from the joint portion of the case.

Figure 55.



O. Remove the two O-rings from the cooler evaporator No. 1 and mark and store the removed O-rings in a separate container to avoid reinstalling them in error.

Figure 56.



Damper Servo Sub-assembly Replacement Procedure (continued)

Replacement Procedure Group C (Servo Replaced From the A/C Unit Removed From the Vehicle) (continued)

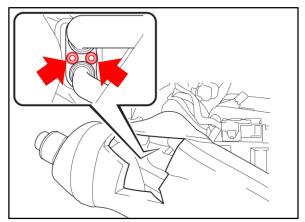
- P. Apply compressor oil (ND-Oil 8) to the two NEW O-rings and install them onto the cooler evaporator No. 1.
- Q. Install the air conditioner tube and accessory assembly to the cooler evaporator No. 1.

NOTE

Perform the installation with the packing (gray) edge surface spread to ensure the packing (gray) does not get caught in between the joint.

Use clean hands during the installation otherwise sealing failure will occur.

 R. Reinstall the two hexagon bolts using the 4-mm hexagon wrench.
 Torque: 3.5 N*m (36 kgf*cm, 31 in*lbf) Figure 57.

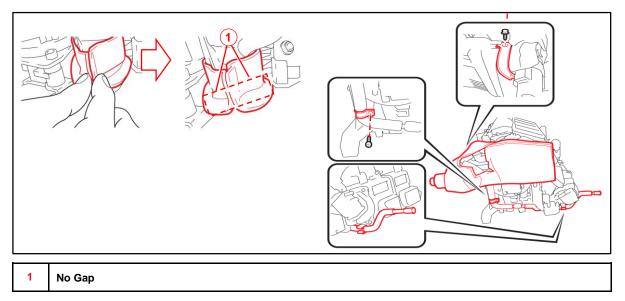


Damper Servo Sub-assembly Replacement Procedure (continued)

Replacement Procedure Group C (Servo Replaced From the A/C Unit Removed From the Vehicle) (continued)

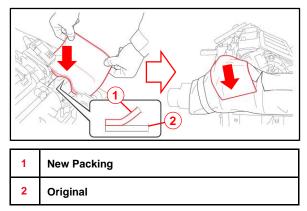
S. Firmly attach the packing (gray) to the edge surface so there are no gaps and reconnect the tube and two screws.

Figure 58.



T. Attach the NEW packing (black) to match the outer shape of the residual packing (black) and cover the piping.

Figure 59.



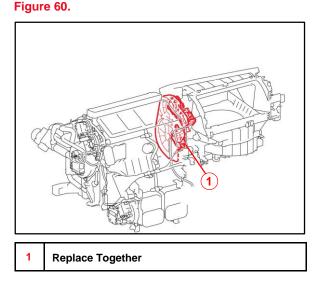
- U. Is this the last servo being replaced?
 - YES Go to the appropriate completion procedure.
 - NO Go to the next servo replacement procedure.



Damper Servo Sub-assembly Replacement Procedure (continued)

Replacement Procedure Group C (Servo Replaced From the A/C Unit Removed From the Vehicle) (continued)

 Remove the passenger side upper damper servo sub-assembly for [2] air mix servo (P), [5] cool air bypass servo, and [7] air outlet servo (P) as they MUST be replaced together.



A. Remove the front air conditioning unit assembly.

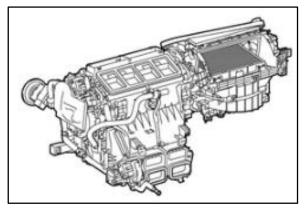
Refer to TIS, applicable model and model year Repair Manual:

 2016 – 2017 LX 570: Vehicle Interior – Heating/Air Conditioning – "<u>Heating /</u> <u>Air Conditioning: Front Air</u> <u>Conditioning Unit: Removal</u>"

NOTE

Replace the packing for the radiator drain cock even though the repair manual states to reuse.

Figure 61.



Damper Servo Sub-assembly Replacement Procedure (continued)

Replacement Procedure Group C (Servo Replaced From the A/C Unit Removed From the Vehicle) (continued)

B. Remove the air conditioning harness.

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

- 2016 2017 LX 570: Vehicle Interior – Heating/Air Conditioning – "Heating / Air Conditioning: Front Air Conditioning Unit: Disassembly"
- C. Remove the blower assembly from the evaporator case.

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

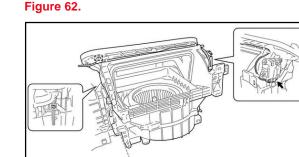
- 2016 2017 LX 570: Vehicle Interior – Heating/Air Conditioning – "Heating / <u>Air Conditioning: Blower</u> <u>Unit: Removal</u>"
- D. Remove the air conditioning radiator assembly.

STOP

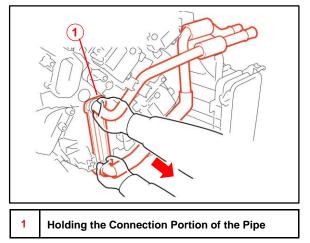
When you remove the air conditioning radiator, make sure to pull it out by holding the connecting portion of the pipe. Otherwise, the coolant may leak out from the connecting portion due to pipe deformation. NEVER hold the pipe when you carry the air conditioning radiator.

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

 2016 – 2017 LX 570: Vehicle Interior – Heating/Air Conditioning – "<u>Heating /</u> <u>Air Conditioning: Front Air</u> <u>Conditioning Unit: Disassembly</u>"









Damper Servo Sub-assembly Replacement Procedure (continued)

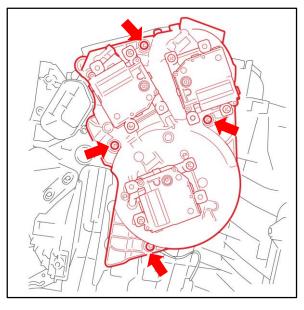
Replacement Procedure Group C (Servo Replaced From the A/C Unit Removed From the Vehicle) (continued)

E. Remove the four screws and remove the damper servo sub-assembly.

NOTE

- Do NOT remove the screws installed on the servo body.
- Reuse the attaching screws. If a screw is lost, order the following: 90099-00968.

Figure 64.



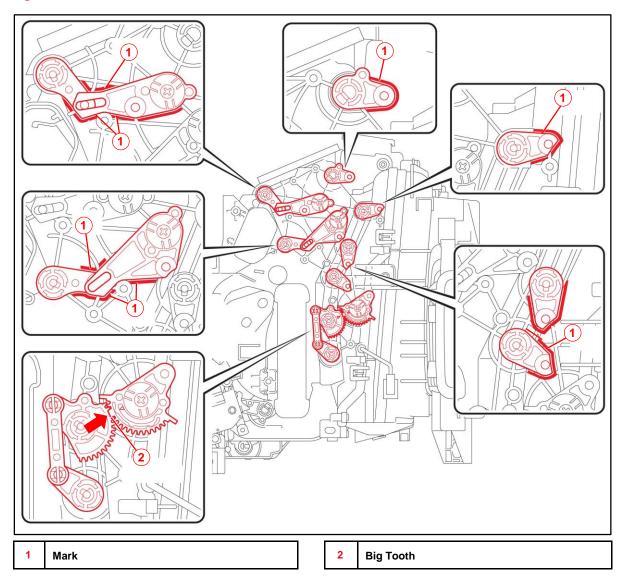
F. Mark and store the removed damper servo sub-assembly in a separate container to avoid reinstalling it in error.

Damper Servo Sub-assembly Replacement Procedure (continued)

Replacement Procedure Group C (Servo Replaced From the A/C Unit Removed From the Vehicle) (continued)

G. Install the NEW passenger side upper damper servo sub-assembly [2] air mix servo (P),
 [5] cool air bypass servo, and [7] air outlet servo (P) by aligning each lever with the corresponding alignment marks stamped on the air conditioning unit.

Figure 65.



Damper Servo Sub-assembly Replacement Procedure (continued)

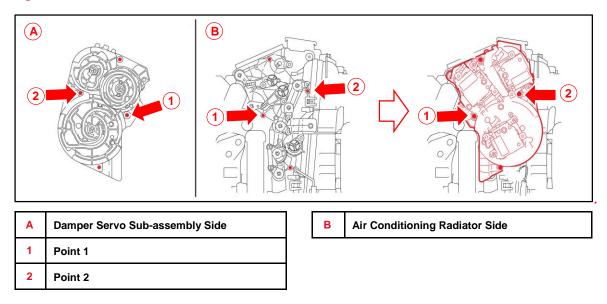
Replacement Procedure Group C (Servo Replaced From the A/C Unit Removed From the Vehicle) (continued)

H. Temporarily install the NEW damper servo sub-assembly by engaging the screw installing holes of the damper servo sub-assembly side to the air conditioning radiator side in the order of point 1 then point 2.

NOTE

Be careful NOT to move the levers on the air conditioning radiator side. If a link was moved, reset the link position.

Figure 66.



I. Confirm each link pin is inserted into its corresponding link groove.

CAUTION

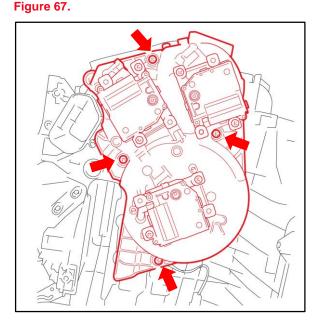
The link pins will be misaligned if the damper servo sub-assembly is installed using force.



Damper Servo Sub-assembly Replacement Procedure (continued)

Replacement Procedure Group C (Servo Replaced From the A/C Unit Removed From the Vehicle) (continued)

J. Install the damper servo sub-assembly with the four screws.



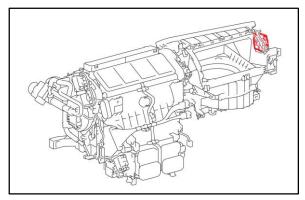
- K. Is this the last servo being replaced?
 - YES Go to the appropriate completion procedure.
 - NO Go to the next servo replacement procedure.



Damper Servo Sub-assembly Replacement Procedure (continued)

Replacement Procedure Group C (Servo Replaced From the A/C Unit Removed From the Vehicle) (continued)

 Remove the blower damper servo sub-assembly for the [4] air inlet damper servo. Figure 68.



A. Remove the front air conditioning unit assembly.

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

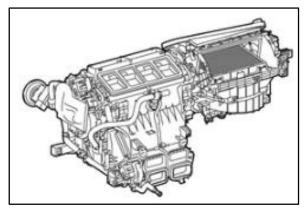
 2016 – 2017 LX 570: Vehicle Interior – Heating/Air Conditioning – "<u>Heating /</u> <u>Air Conditioning: Front Air</u> <u>Conditioning Unit: Removal</u>"

NOTE

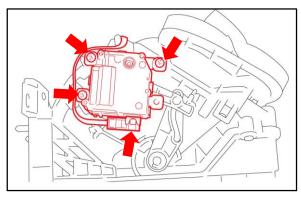
Replace the packing for the radiator drain cock even though the repair manual states to reuse.

B. Disconnect the connect, remove the three screws and the damper servo sub-assembly.

Figure 69.







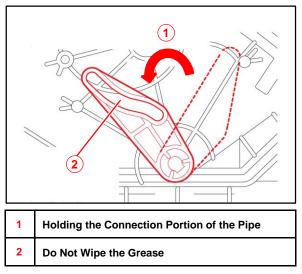


Damper Servo Sub-assembly Replacement Procedure (continued)

Replacement Procedure Group C (Servo Replaced From the A/C Unit Removed From the Vehicle) (continued)

- C. Mark and store the removed damper servo sub-assembly in a separate container to avoid reinstalling it in error.
- D. Install the NEW blower damper servo sub-assembly for the air inlet damper servo confirming the lever is in the fresh air position.

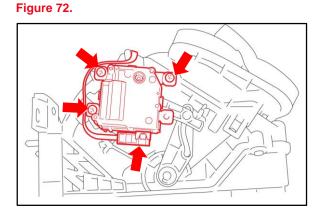
Figure 71.



E. Install the NEW damper servo subassembly with the three screws and install the connector.

STOP

Check that the link pin is inserted into the link groove.



- F. Is this the last servo being replaced?
 - YES Go to the appropriate completion procedure.
 - NO <u>Go to the next servo replacement procedure</u>.

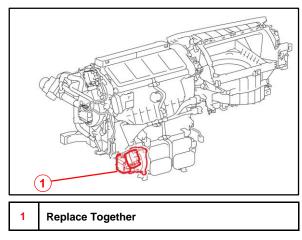


Damper Servo Sub-assembly Replacement Procedure (continued)

Replacement Procedure Group C (Servo Replaced From the A/C Unit Removed From the Vehicle) (continued)

 Remove the driver side lower damper sub-assembly for [8] air mix servo (F & R D) and [10] air outlet servo (F & R D) as they MUST be replaced together.





A. Remove the front air conditioning unit assembly.

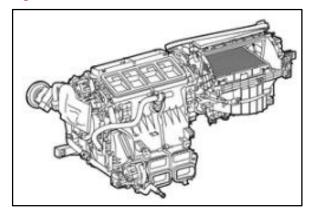
Refer to TIS, applicable model and model year Repair Manual:

 2016 – 2017 LX 570: Vehicle Interior – Heating/Air Conditioning – <u>"Heating /</u> <u>Air Conditioning: Front Air</u> <u>Conditioning Unit: Removal</u>"

NOTE

Replace the packing for the radiator drain cock even though the repair manual states to reuse.

Figure 74.



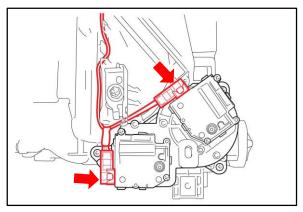


Damper Servo Sub-assembly Replacement Procedure (continued)

Replacement Procedure Group C (Servo Replaced From the A/C Unit Removed From the Vehicle) (continued)

B. Disconnect the two connectors.

Figure 75.

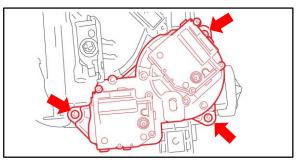


C. Remove the three screws and damper servo sub-assembly.

NOTE

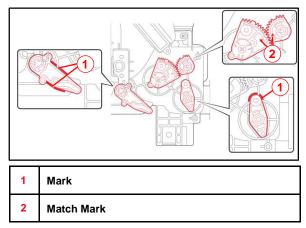
Do NOT remove the screws installed on the servo body.

Reuse the attaching screws. If a screw is lost, order the following: 90099-00968. Figure 76.



- D. Mark and store the removed damper servo sub-assembly in a separate container to avoid reinstalling it in error.
- E. Install the NEW driver side lower damper servo sub-assembly for air mix servo (F & R D) and air outlet servo (F & R D) by aligning each lever with the corresponding alignment marks stamped on the air conditioning unit.

Figure 77.





Damper Servo Sub-assembly Replacement Procedure (continued)

Replacement Procedure Group C (Servo Replaced From the A/C Unit Removed From the Vehicle) (continued)

F. Temporarily install the NEW damper servo sub-assembly confirming that the position of the link pins and the link groove on the plate side are aligned.

CAUTION

two connectors.

Be careful NOT to move the levers on the air conditioning radiator side. If a link was moved, reset the position of the link again. The link pins will be misaligned if damper servo subassembly is installed using force.

G. Install the damper servo sub-assembly with the three screws and connect the

Figure 78.

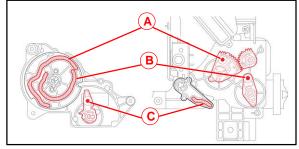
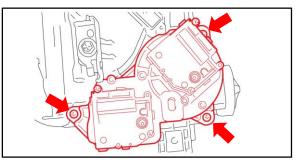


Figure 79.



- H. Is this the last servo being replaced?
 - YES Go to the appropriate completion procedure.
 - NO Go to the next servo replacement procedure.



Damper Servo Sub-assembly Replacement Procedure (continued)

Replacement Procedure Group D (Servo Requiring Rear A/C Unit Removal from the Vehicle)

[6] Rear Air Mix Servo

- Remove the rear cooling unit assembly. Refer to TIS, applicable model and model year Repair Manual:
 - 2016 2017 LX 570: Vehicle Interior – Heating/Air Conditioning – "<u>Heating /</u> <u>Air Conditioning: Rear Air</u> <u>Conditioning Unit: Removal</u>"

NOTE

Replace the packing for the radiator drain cock even though the repair manual states to reuse. The replacement of the rear air mix servo can be performed without removing the rear bumper.

CAUTION

Make sure to hold the air conditioner tube and accessory securely using a tool wrapped in protective tape when loosening the nut, since the tube on the rear cooling unit side may turn together when disconnecting the air conditioner tube and accessory and may result in damage of the rear cooling unit.

2. Remove the rear quarter panel mudguard LH by removing the five T30 "TORX" screws and removing the two clips.

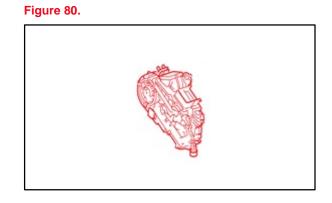
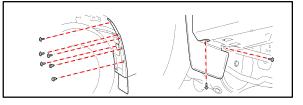


Figure 81.



- A Hold Air Conditioner Tube and Accessory Firmly
- 1 Convex Portion
- 2 Protective Tape

Figure 82.

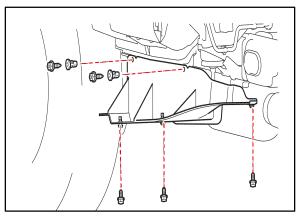




Damper Servo Sub-assembly Replacement Procedure (continued)

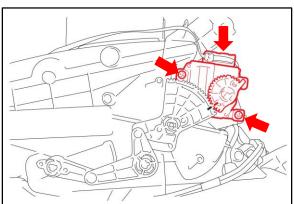
Replacement Procedure Group D (Servo Requiring Rear A/C Unit Removal from the Vehicle) (continued)

A. Remove the No. 2 luggage compartment side cover protector by removing the five screws and two grommets. Figure 83.



- B. Mark and store the removed grommets in a separate container to avoid reinstalling them in error.
- C. Remove the rear air mix servo by disconnecting the connector and removing the two screws.

Figure 84.

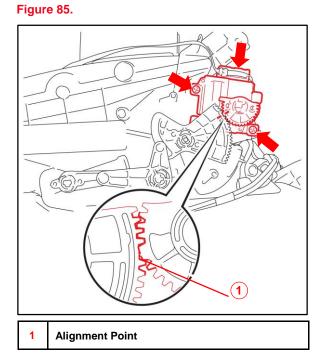




Damper Servo Sub-assembly Replacement Procedure (continued)

Replacement Procedure Group D (Servo Requiring Rear A/C Unit Removal from the Vehicle) (continued)

D. Install the NEW air mix servo by aligning the servo as shown in the illustration and install it with the two screws and reconnect the connector.



- E. Is this the last servo being replaced?
 - YES Go to the appropriate completion procedure.
 - NO Go to the next servo replacement procedure.

Damper Servo Sub-assembly Replacement Procedure (continued)

Completion Procedure – Group A

1. Reassemble the vehicle in the following order by servo replacement:

Group A servos:

NUMBER	DTC CODE	PART NUMBER	DESCRIPTION
[1]	B1446	87106-60290	Air Mix Servo (D)
[3]	B1443	87106-60290	Air Outlet Servo (D)
[9]	B1458	87106-50550	Air Mix Servo (F & R P)

Figure 86.

- Reinstall the instrument panel safety pad assembly.
 Refer to TIS, applicable model and model year Repair Manual:
 - 2016 2017 LX 570: Vehicle Interior – Interior Panels / Trim – "Interior Panels / Trim: Instrument Panel Safety Pad: Installation"

3. Initialize the servo(s).

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

- 2016 2017 LX 570: Vehicle Interior – Heating/Air Conditioning – "Heating / Air Conditioning: Air Conditioning System: Initialization"
- 4. Check for DTCs.

Damper Servo Sub-assembly Replacement Procedure (continued)

Completion Procedure – Group B

1. Reassemble the vehicle in the following order by servo replacement:

Group B servos:

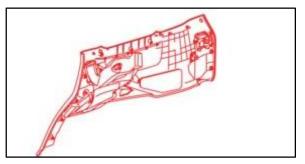
NUMBER	DTC CODE	PART NUMBER	DESCRIPTION
[11]	B1449	87106-58030	Air Outlet Servo (Rr D)
[12]	B1488	87106-60280	Rear Air Mix Servo (P)

2. Reinstall the front quarter trim panel assembly LH.

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

 2016 – 2017 LX 570: Vehicle Interior – Interior Panels/Trim – "Interior Panels / Trim: Roof Headlining: Installation"

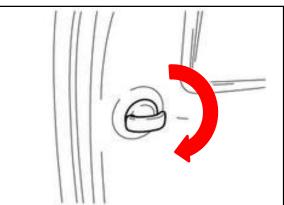
Figure 87.



 Reinstall the No. 1 luggage compartment trim hook.

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

 2016 – 2017 LX 570: Vehicle Interior – Interior Panels/Trim – "Interior Panels / Trim: Roof Headlining: Installation" Figure 88.



- Reinstall the rear door scuff plate LH. Refer to TIS, applicable model and model year Repair Manual:
 - 2016 2017 LX 570: Vehicle Interior – Interior Panels/Trim – "Interior Panels / Trim: Roof Headlining: Installation"

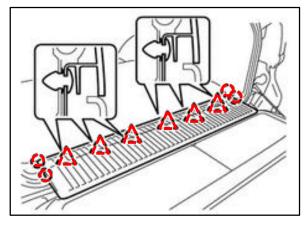


Damper Servo Sub-assembly Replacement Procedure (continued)

Completion Procedure – Group B (continued)

- 5. Reinstall the rear door scuff plate LH. Refer to TIS, applicable model and model year Repair Manual:
 - 2016 2017 LX 570: • Vehicle Interior – Interior Panels/Trim – "Interior Panels / Trim: Roof Headlining: Installation"
- 6. Reinstall the rear door scuff plate LH. Refer to TIS, applicable model and model year Repair Manual:
 - 2016 2017 LX 570: Vehicle Interior – Interior Panels/Trim – "Interior Panels / Trim: Roof Headlining: Installation"
- 7. Reinstall the rear floor mat rear support plate. Refer to TIS, applicable model and model year Repair Manual:
 - 2016 2017 LX 570: Vehicle Interior – Interior Panels/Trim – "Interior Panels / Trim: Roof Headlining: Installation"

Figure 89.



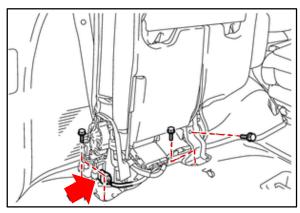
8. Reinstall the rear No. 2 seat

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

assembly LH.

2016 - 2017 LX 570: Vehicle Interior – Seat – "Seat: Rear No. 2 Seat Assembly: Installation"

Figure 90.





Damper Servo Sub-assembly Replacement Procedure (continued)

Completion Procedure – Group B (continued)

- Initialize the servo(s).
 Refer to TIS, applicable model and model year Repair Manual:
 - 2016 2017 LX 570: Vehicle Interior – Heating/Air Conditioning – "Heating / Air Conditioning: Air Conditioning System: Initialization"
- 10. Check for DTCs.

Completion Procedure – Group C

1. Reassemble the vehicle in the following order by servo replacement:

Group C servos:

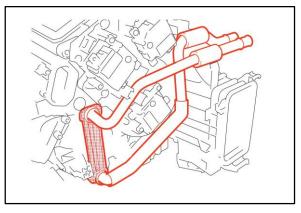
NUMBER	DTC CODE	PART NUMBER	DESCRIPTION
[1]	B1446	07400 00000	Air Mix Servo (D)
[3]	B1443	87106-60290	Air Outlet Servo (D)
[2]	B1441		Air Mix Servo (P)
[5]	B1445	87106-60310	Cool Air Bypass Servo
[7]	B1448		Air Outlet Servo (P)
[8]	B1457	97106 60220	Air Mix Servo (F & R D)
[10]	B1486	87106-60330	Air Outlet Servo (F & R D)
[4]	B1442	87106-50550	Air Inlet Damper Servo

2. Reinstall the air conditioning radiator assembly.

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

 2016 – 2017 LX 570: Vehicle Interior – Heating/Air Conditioning – "<u>Heating /</u> <u>Air Conditioning: Front Air</u> <u>Conditioning Unit: Reassembly</u>"





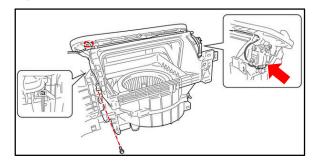


Damper Servo Sub-assembly Replacement Procedure (continued)

Completion Procedure – Group C (continued)

- Reinstall the air conditioner harness.
 Refer to TIS, applicable model and model year Repair Manual:
 - 2016 2017 LX 570: Vehicle Interior – Heating/Air Conditioning – "<u>Heating / Air Conditioning: Front Air Conditioning Unit: Reassembly</u>"
- Reinstall the blower assembly. Refer to TIS, applicable model and model year Repair Manual:
 - 2016 2017 LX 570: Vehicle Interior – Heating/Air Conditioning – "<u>Heating /</u> <u>Air Conditioning: Blower</u> <u>Unit: Installation</u>"

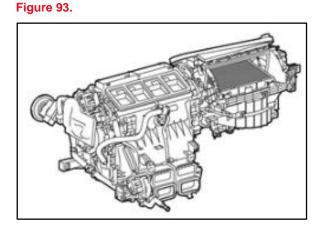
Figure 92.



5. Reinstall the front air conditioning unit assembly.

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

 2016 – 2017 LX 570: Vehicle Interior – Heating/Air Conditioning – "<u>Heating /</u> <u>Air Conditioning: Front Air</u> <u>Conditioning Unit: Installation</u>"



6. Initialize the servo(s).

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

- 2016 2017 LX 570: Vehicle Interior – Heating/Air Conditioning – "Heating / Air Conditioning: Air Conditioning System: Initialization"
- 7. Check for DTCs.

Damper Servo Sub-assembly Replacement Procedure (continued)

Completion Procedure – Group D

1. Reassemble the vehicle in the following order by servo replacement:

Group D servos:

NUMBER	DTC CODE	PART NUMBER	DESCRIPTION
[6]	B11447	87106-28170	Rear Air Mix Servo

- Reinstall the rear cooling unit assembly. Refer to TIS, applicable model and model year Repair Manual:
 - 2016 2017 LX 570: Vehicle Interior – Heating/Air Conditioning – "<u>Heating /</u> <u>Air Conditioning: Rear Air</u> <u>Conditioning Unit: Installation</u>"
- 3. Reinstall the No. 2 luggage compartment side cover protector with the two NEW grommets and install the five screws.

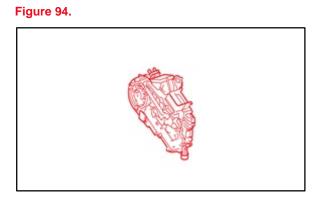
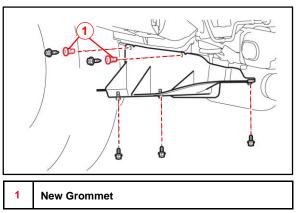
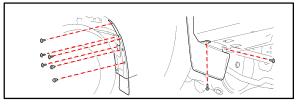


Figure 95.



4. Reinstall the rear quarter panel mudguard LH with the two clips and installi the five T30 "TORX" screws.

Figure 96.





Damper Servo Sub-assembly Replacement Procedure (continued)

Completion Procedure – Group D (continued)

- Initialize the servo(s).
 Refer to TIS, applicable model and model year Repair Manual:
 - 2016 2017 LX 570: Vehicle Interior – Heating/Air Conditioning – "Heating / Air Conditioning: Air Conditioning System: Initialization"
- 6. Check for DTCs.