



**Technical Service
Information Bulletin**

October 1, 1999

Title:

TILT/TELESCOPIC STEERING NOISE/ SMOOTHNESS IMPROVEMENT

Models:

'99 LS 400

STEERING
ST003-99

Introduction Production countermeasures have been implemented to reduce noise and improve smoothness of operation of the Tilt/Telescopic Steering Column Assembly.

- Problem Description**
1. Power Tilt/Telescopic Smoothness of Operation.
 - A. Power Tilt/Telescopic Auto Return at engine start.
 - B. Auto Return and Auto Away with key placed in ignition cylinder without starting engine.
 - C. Power adjust — manual operation.
 2. Squeak noise and/or Vibration (Groan) when operating the Power Telescopic Function.
 3. Squeak noise and/or Vibration (Groan) when operating the Power Tilt Function.

Production Change Information • 1999 LS 400 vehicles starting with the following VINs:

STARTING VIN	PRODUCTION CHANGE
JT8BH28F * W0145000	Tilt Motor Set Bolts changed to improve Tilt Motor alignment.
JT8BH28F * X0166329	Tilt Motor, Telescopic Motor & Tilt Stopper Spring have been changed.

Parts Information

PREVIOUS P/N	CURRENT P/N	PART NAME	QTY
45855-60010	Same	Bolt, Tilt Motor	2
89231-50041	89231-50042	Motor, Power Tilt	1
89232-50040	89232-50041	Motor, Power Telescopic	1
90501-14159	90504-14007	Spring, Stopper, with Damper	1
90523-06019	Same (Non-reusable Part)	E-Ring, Tilt Motor Shaft Upper	1
90523-08001	Same (Non-reusable Part)	E-Ring, Tilt Motor Shaft Lower	1
90389-08124	Same (Non-reusable Part)	Bush, Tilt Steering Support Bolt	2

Warranty Information

OP CODE	DESCRIPTION	TIME	OPN	T1	T2
ST9006	R & R Tilt Motor, Telescopic Motor & Tilt Stopper Spring	1.1	89231-50040	91	99

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 correction of a problem based upon a customer's specific complaint.

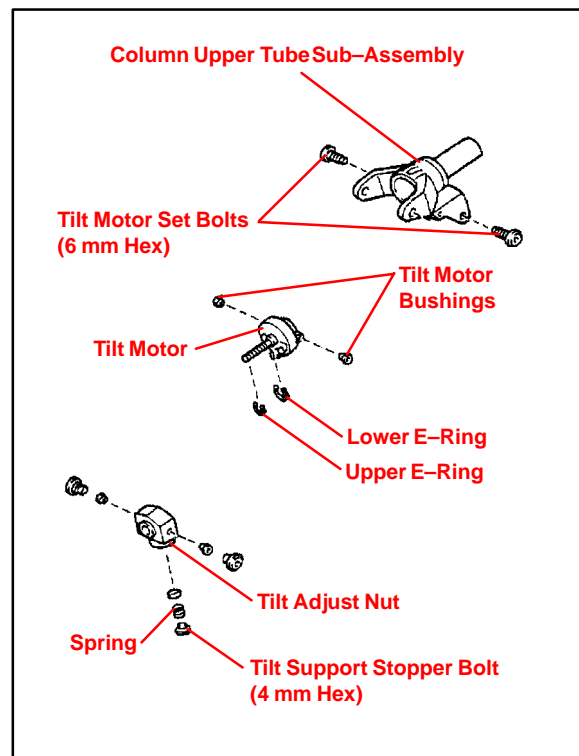


Required Tools & Materials

- Molybdenum disulfide lithium based grease (P/N 08887–02007, Sta-Lube® – P/N SL3174 or equivalent)
- Torque wrench with N•m or ft•lbf scale.
- Torque wrench with N•m or in•lbf scale.

Repair Procedure**1. Tilt Motor Replacement**

- With the ignition key in the “ON” position, record the customer’s Radio Presets and press Seat Memory Switch “1”.
- Disconnect the battery negative terminal.
- Disconnect the Tilt Motor Electrical Connector.
- Remove the 2 Tilt Motor Set Bolts.
- Move the Tilt Motor downward to remove it from the Column Upper Tube Sub-Assembly.
- Loosen the Tilt Stopper Support Bolt.
- Remove the Upper E-Ring at the end of the Tilt Motor Shaft.
- Tilt the Column Upper Tube Sub-Assembly upward and carefully unthread the Tilt Motor from the Tilt Adjust Nut.
- Install a new Lower E-Ring on the new Tilt Motor and lubricate the Tilt Motor Shaft with molybdenum disulfide lithium grease.
- Thread the new Tilt Motor into the Tilt Adjust Nut and install a new Upper E-Ring on the end of the Tilt Motor Shaft.
- Install 2 new Tilt Motor Bushings in the new Tilt Motor Housing and align Column Upper Tube Sub-Assembly with the Tilt Motor Housing bolt holes.
- Carefully insert 2 Tilt Motor Set Bolts into the Tilt Motor. Tighten the Tilt Motor Set Bolts evenly in 2-turn



**Repair
Procedure**
(Continued)

increments until snug. Torque the Tilt Motor Set Bolts to 20 N•m (210 kgf•cm, 15 ft•lbf).

- m. Remove the Tilt Support Stopper Bolt and the Stopper Spring.
- n. Carefully install the new Stopper Spring (with plastic insert).

HINT:

Make sure plastic insert does not fall out of new Stopper Spring.

- o. Reinstall Support Stopper Bolt. Be careful not to overtighten Support Stopper Bolt.

2. Telescopic Motor Replacement

- a. Disconnect the Telescopic Motor Electrical connector.
- b. Remove the 2 bolts securing the Telescopic Motor to the Column Tube. Remove the Telescopic Motor and Telescopic Cable.
- c. Install the new Telescopic Motor. Torque the 2 Telescopic Motor Bolts to 9 N•m (90 kgf•cm, 78 in•lbf).

HINT:

Apply a small amount of Molybdenum disulfide lithium based grease to both ends of the Telescopic Cable prior to installation.

- d. Reconnect the Electrical Connector and the negative battery terminal.
- e. Test Steering Column Operation.
- f. Reset the Radio Presets, the Clock and Seat Memory Switch "1".

