Introduction

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

Problem Description

   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:**

<table>
<thead>
<tr>
<th>STARTING VIN</th>
<th>PRODUCTION CHANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>JT8BH28F * W0145000</td>
<td>Tilt Motor Set Bolts changed to improve Tilt Motor alignment.</td>
</tr>
<tr>
<td>JT8BH28F * X0166329</td>
<td>Tilt Motor, Telescopic Motor &amp; Tilt Stopper Spring have been changed.</td>
</tr>
</tbody>
</table>

Parts Information

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

Warranty Information

<table>
<thead>
<tr>
<th>OP CODE</th>
<th>DESCRIPTION</th>
<th>TIME</th>
<th>OPN</th>
<th>T1</th>
<th>T2</th>
</tr>
</thead>
<tbody>
<tr>
<td>ST9006</td>
<td>R &amp; R Tilt Motor, Telescopic Motor &amp; Tilt Stopper Spring</td>
<td>1.1</td>
<td>89231–50040</td>
<td>91</td>
<td>99</td>
</tr>
</tbody>
</table>

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.
1. **Tilt Motor Replacement**

   a. With the ignition key in the “ON” position, record the customer’s Radio Presets and press Seat Memory Switch “1”.
   
   b. Disconnect the battery negative terminal.
   
   c. Disconnect the Tilt Motor Electrical Connector.
   
   d. Remove the 2 Tilt Motor Set Bolts.
   
   e. Move the Tilt Motor downward to remove it from the Column Upper Tube Sub–Assembly.
   
   f. Loosen the Tilt Stopper Support Bolt.
   
   g. Remove the Upper E–Ring at the end of the Tilt Motor Shaft.
   
   h. Tilt the Column Upper Tube Sub–Assembly upward and carefully unthread the Tilt Motor from the Tilt Adjust Nut.
   
   i. Install a new Lower E–Ring on the new Tilt Motor and lubricate the Tilt Motor Shaft with molybdenum disulfide lithium grease.
   
   j. 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.
   
   k. 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.
   
   l. Carefully insert 2 Tilt Motor Set Bolts into the Tilt Motor. Tighten the Tilt Motor Set Bolts evenly in 2–turn.
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”.