

STEERING—STEERING GEAR SQUEAK WHEN TURNING THE STEERING WHEEL DURING LOW SPEED PARKING MANEUVERS

Article No.
04-10-1

FORD: 2003-2004 THUNDERBIRD

LINCOLN: 2003-2004 LS, AVIATOR

ISSUE

Some vehicles may exhibit steering gear squeak when turning the steering wheel, especially during low speed parking maneuvers. The noise may sound like it is coming from the steering column area and may be felt as a roughness in the steering wheel, while turning.

ACTION

To service, combine Motorcraft Additive Friction Modifier (XL-3), with Motorcraft Mercon ATF (XT-2-QDX) as described, and add to the power steering reservoir. Refer to the following Service Procedure.

SERVICE PROCEDURE

NOTE

USE ONLY THE FLUID AND ADDITIVE SPECIFIED IN THIS ARTICLE. USING ANY OTHER FLUIDS OR ADDITIVES MAY RESULT IN SEAL DETERIORATION AND LEAKS.

1. Open the hood and remove the power steering reservoir cap.
2. Raise the vehicle on a hoist. Refer to Workshop Manual, Section 100-00.
3. With engine off, drain power steering fluid by disconnecting steering lines and clamp plate from steering gear. Refer to Steering Gear Removal and Installation procedure in Workshop Manual, Section 211-00, FOLLOW ONLY THE STEPS REQUIRED TO DISCONNECT THE STEERING LINES.
4. Turn steering wheel lock to lock to drain fluid completely.
5. Reconnect steering lines and clamp plate to steering gear. Torque retainer to 15 N•m (11 lb-ft) for Lincoln LS and Thunderbird, torque to 25 N•m (18 lb-ft) for Aviator

6. Lower vehicle.
7. In a clean container Mix 50 ml (10 teaspoons or 1.7 oz.) of Motorcraft Additive Friction Modifier part number XL-3, with 50 ml of Motorcraft Mercon ATF, part number XT-2-QDX.

NOTE

DO NOT PERFORM STEPS 8 AND 9 ON A HOT VEHICLE.

8. Pour the above mixture into the power steering reservoir.
9. Top off (fill) the power steering system with Motorcraft Mercon ATF, part number XT-2-QDX and reinstall the power steering reservoir cap.
10. Raise vehicle on hoist enough so the front wheels are off the ground and can be turned from lock to lock.
11. Start the engine and keep it at idle. Remain inside of the vehicle.
12. Slowly cycle the steering wheel from lock to lock for two (2) minutes.
13. Quickly and forcefully turn the steering wheel in one direction to full lock (either side). Bounce the steering wheel on/off of full lock twenty (20) times forcefully.

NOTE

IT IS CRITICAL THAT THE STEERING WHEEL IS TURNED QUICKLY AND FORCEFULLY IN ORDER TO CREATE A PRESSURE SPIKE IN THE POWER STEERING SYSTEM.

14. Repeat Step 13 in the other direction. Return the steering wheel to on center position.

NOTE: The information in Technical Service Bulletins is intended for use by trained, professional technicians with the knowledge, tools, and equipment to do the job properly and safely. It informs these technicians of conditions that may occur on some vehicles, or provides information that could assist in proper vehicle service. The procedures should not be performed by "do-it-yourselfers". Do not assume that a condition described affects your car or truck. Contact a Ford, Lincoln, or Mercury dealership to determine whether the Bulletin applies to your vehicle. Warranty Policy and Extended Service Plan documentation determine Warranty and/or Extended Service Plan coverage unless stated otherwise in the TSB article. The information in this Technical Service Bulletin (TSB) was current at the time of printing. Ford Motor Company reserves the right to supersede this information with updates. The most recent information is available through Ford Motor Company's on-line technical resources.

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15. Slowly turn steering wheel to full lock in one direction (either direction) to achieve maximum pump pressure. Hold at full lock for one (1) second, then turn the steering wheel back 90 degrees as quickly as possible. Repeat this procedure twenty (20) times.

NOTE

DO NOT HOLD THE STEERING WHEEL AGAINST THE STOPS FOR MORE THAN THREE TO FIVE (3-5) SECONDS AT A TIME. DAMAGE TO THE POWER STEERING PUMP MAY OCCUR.

16. Repeat Step 15 in the other direction.
17. Cycle the steering wheel slowly for one (1) minute to confirm that the squeak is corrected and return vehicle to the customer.

NOTE

IF THE SQUEAK CONTINUES, REPEAT STEPS 13-16 ONE ADDITIONAL TIME. IF THE SQUEAK IS STILL NOT CORRECTED PROCEED TO STEP 18.

18. If the squeak is still present after performing step 17, replace the steering gear with part number. Refer to Workshop Manual, Section 211-00 for removal and installation procedures.

PART NUMBER	PART NAME
XL-3	Motorcraft Additive Friction Modifier
XT-2-QDX	Motorcraft Mercon ATF
4W4Z-3504-AA	Steering Gear (LS)
4W6Z-3504-AA	Steering Gear (Thunderbird)
3C5Z-3504-AA	Steering Gear (Aviator)

OTHER APPLICABLE ARTICLES: NONE
WARRANTY STATUS: Eligible Under Provisions Of New Vehicle Limited Warranty Coverage

DEALER CODING

BASIC PART NO.	CONDITION
3504	CODE
	42

LABOR OPERATION CLAIMING CHART			
Operation	Labor Description	Application	Time
041001A	Drain And Refill Power Steering System Following Service Procedure (Includes Time To Repeat Steps 13-16 If Necessary)	Thunderbird	0.8 Hr.
		Lincoln LS	0.8 Hr.
		Aviator 4X2	0.8 Hr.
		Aviator 4X4	0.8 Hr.
041001B	Drain And Refill Power Steering System Following Service Procedure (Includes Time To Repeat Steps 13-16 If Necessary) And Replace Steering Gear (Includes Time To Perform Fill Procedure And To Check And Correct Toe)	Thunderbird	2.2 Hrs.
		Lincoln LS	2.2 Hrs.
		Aviator 4X2	2.2 Hrs.
		Aviator 4X4	2.3 Hrs.