

SUSPENSION—VEHICLE LEAN LEFT—ALL MODELS EXCEPT LIMOUSINE

Article No.
91-22-2

LINCOLN: 1991 TOWN CAR

ISSUE

A lean left condition may be present on some 1991 Town Cars. This does not include limousine units. The lean may be caused by vehicle weight side-to-side differences from component packaging, body shell and frame tolerances.

ACTION

If service is required, use the following procedure to check and, if necessary, to install body mount shims to level the vehicle.

CHECKING PROCEDURE

To restore the vehicle to a level condition at the fender wheel lip openings, use the following procedure to check and correct service leans with differences in excess of 0.5" (12.7mm) side-to-side.

1. Confirm that the vehicle is assembled with the proper front spring codes. Refer to the following Front Spring Chart.

FRONT SPRING CHART		
BUILD DATES	LEFT SPRING PART NO.	RIGHT SPRING PART NO.
8/90 - 5/22/91	D9AC-5310-RA (RIM)	D9AC-5310-NA (NAT)
5/23/91 And Beyond	D9AC-5310-SA (SAP)	D9AC-5310-NA (NAT)

2. Place the vehicle on a level surface and check tire pressures to ensure that the left front/right front and left rear/right rear are identical.
3. With the engine OFF, but the ignition in the ON position and the driver's door open, proceed as follows:
 - a. Load the rear bumper until the air suspension compressor cycles for at least 30 seconds.
 - b. Close the driver's door and let the vehicle vent to the "Top of Trim" position (approximately 10 seconds).
 - c. If the air suspension does not function properly, perform service diagnostics as outlined in the 1991 Lincoln Town Car Shop Manual, Section 14-40.

4. Equalize the suspension by shaking the vehicle side-to-side from the "B" pillar joint before taking wheel lip measurements, Figure 1.
5. Determine the difference in the front and rear wheel lip measurements by subtracting the left side measurement from the right hand side at both the front and rear locations.

NOTE

THE FENDER WHEEL LIP MEASUREMENT IS THE VERTICAL DISTANCE FROM THE FENDER WHEEL LIP TO THE GROUND WHILE PASSING THROUGH THE CENTER OF THE WHEEL, FIGURE 1.

6. Use the following Spring Selection Chart to select the correct spring three letter code and/or shim combination.

SPRING SELECTION CHART			
SPRINGS ON VEHICLE (L.F./R.F.)	SPRINGS REQ. FOR 0.5" TO 1.5" DIF. - LEFT FRONT	SPRINGS REQ. FOR 0.5" TO 1.0" DIF. - RIGHT FRONT	SPRINGS REQ. FOR 1.1" TO 1.5" DIF. - RIGHT FRONT
RIM/NAT	RIM+2 Shims or SAP	NAT	VIX
SAP/NAT	SAP+2 Shims	NAT	VIX

The following Front Spring Load Chart provides information about the 410 lbs/in rate springs which are specifically released for the 1991 Lincoln Town Car.

CAUTION

DO NOT USE ANY OTHER SPRINGS THAN THOSE SPECIFIED.

FRONT SPRING LOAD CHART			
SPRING TAG CODE	ENGINEERING PART NUMBER	SERVICE PART NUMBER	LOAD/RATE (LBS.-LBS./IN.)
VIX	D9AC-5310-VA	D9AZ-5310-V	2038/410
NAT	D9AC-5310-NA	D9AZ-5310-N	2138/410
RIM	D9AC-5310-RA	D9AZ-5310-R	2239/410
SAP	D9AC-5310-SA	D9AZ-5310-S	2239/410
SHIM		MB-5355-B	0.125" each

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7. Install the appropriate shim pack and/or spring combination per the Shop Manual procedures. Eliminate the potential of suspension noise by taping the shims and spring insulator to the flat end of the front spring. On reinstallation of the spring(s), ensure that...
 - a. There is proper orientation of the spring tail in the lower control arm assembly.
 - b. All disrupted fasteners are returned to the recommended torque settings.
8. Test drive the vehicle about two miles over a moderate road surface to settle the suspension before re-evaluating it for body lean. Revent the air suspension prior to making lean measurements.

NOTE

WHEEL LIP AND BUMPER SHOULD NOT EXCEED 29.5" (749.3MM) AND 16.0" (406.4MM) RESPECTIVELY AFTER CORRECTIVE ACTIONS HAVE BEEN COMPLETED.

9. If this procedure does not reduce the lean to acceptable levels of 0.5" (12.7mm), the following body/frame shimming procedure should be performed to further reduce the vehicle lean condition.

BODY/FRAME SHIMMING PROCEDURE

1. Remove fan shroud screws to loosen shroud for accessibility.
2. Remove low side "F" mount nut and washer.
3. Raise vehicle on hoist.
4. Position adjustable jack stands or equivalent under body flange on low side of vehicle.
5. Remove and discard body mount bolts from seven body mounts on low side only. Do not remove bolts from high side.
6. Raise adjustable jack stands to lift body off mounts approximately 1/2" (12.7mm).

7. Install new bolts (N807292/3-S2) with shims (385127-S2) on all seven body locations, Figure 3. Use torque wrench to tighten to proper torque specification 40-54 N•m, Figure 2.
8. Position the adjustable jack stands out of the way and lower the vehicle.
9. Adjust the low side "F" mount shim by turning clockwise with deep socket 3/4" (19.05mm) until there is no gap between the radiator support and the adjustable shim, Figure 3.
10. Install both "F" mount washer and nut. Tighten nut to 47-63 N•m.
11. Install fan shroud screws and tighten to 21.7-5.4 N•m.

SPECIAL WARRANTY CODE

The unique warranty code account number established to handle lean related claims is: Special Warranty Code R1P.

PART NUMBER	PART NAME
385127-S2	Shim
N807292-S2	Bolt
N807293-S2	Bolt

NOTE

ONE SHIM MAXIMUM (4.8MM THICK) ALLOWED AT EACH BODY MOUNT LOCATION.

OTHER APPLICABLE ARTICLES: NONE

WARRANTY STATUS: Eligible Under Bumper To Bumper Warranty Coverage

OPERATION	DESCRIPTION	TIME
912202A	Install Body Mount Shims	1.0 Hr.

DEALER CODING

BASIC PART NO.
5310

OASIS CODES: 304000

CONDITION
CODE
12

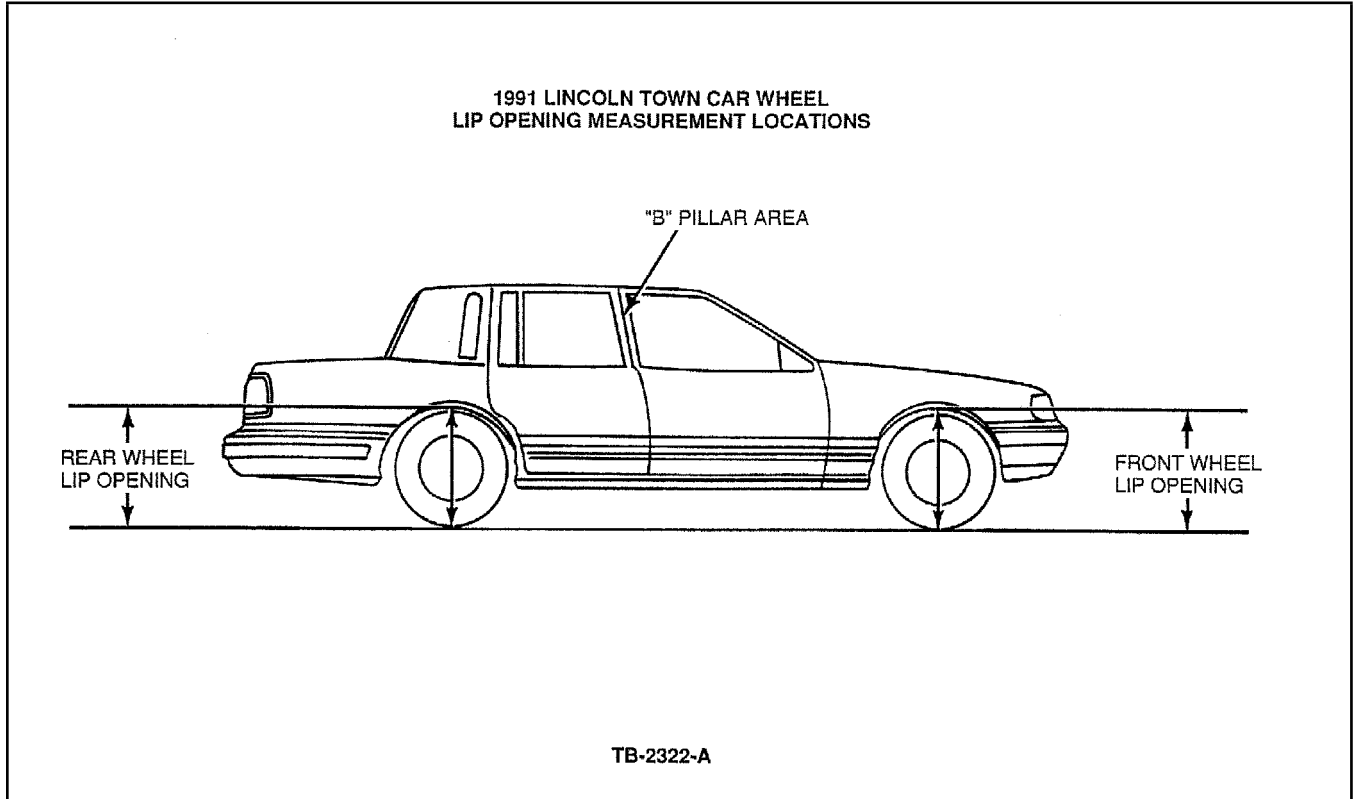


Figure 1 - Article 91-22-2

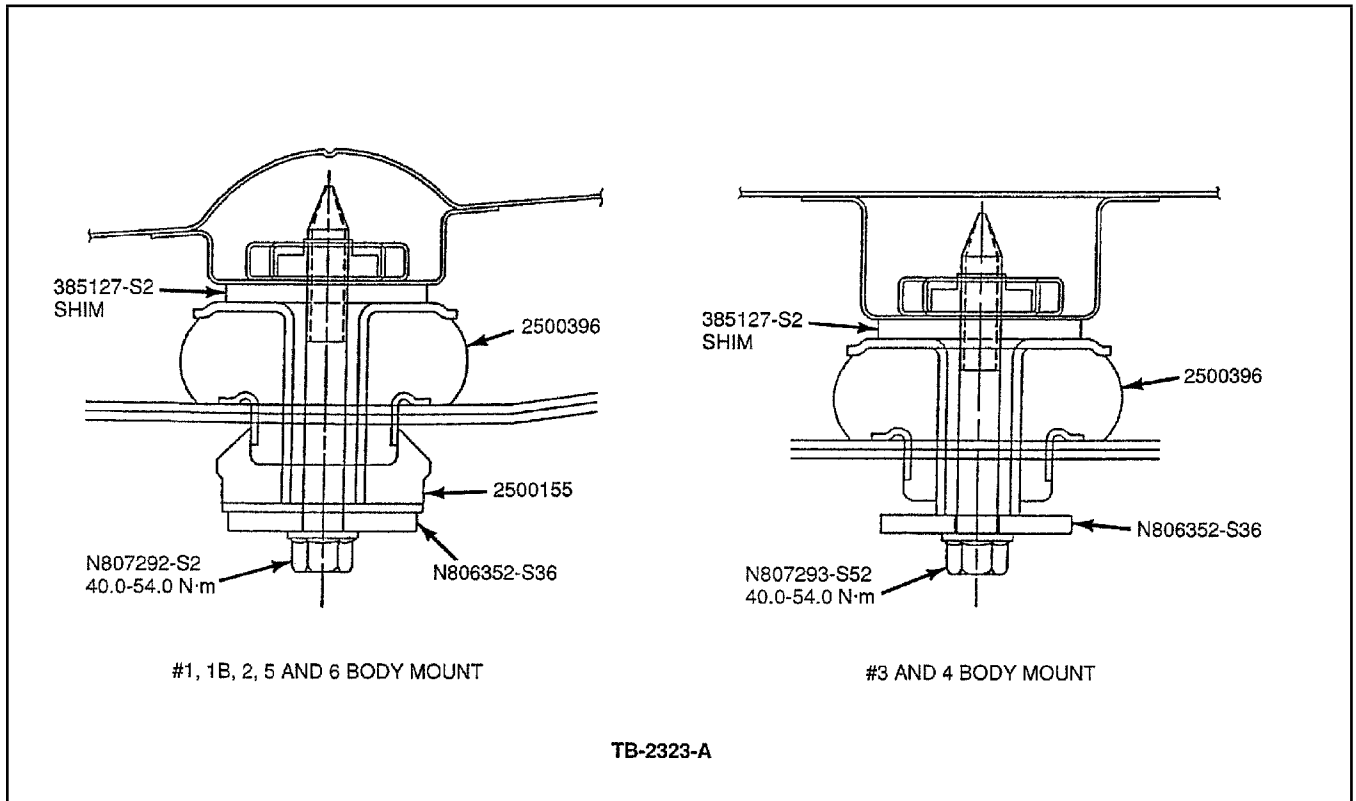


Figure 2 - Article 91-22-2

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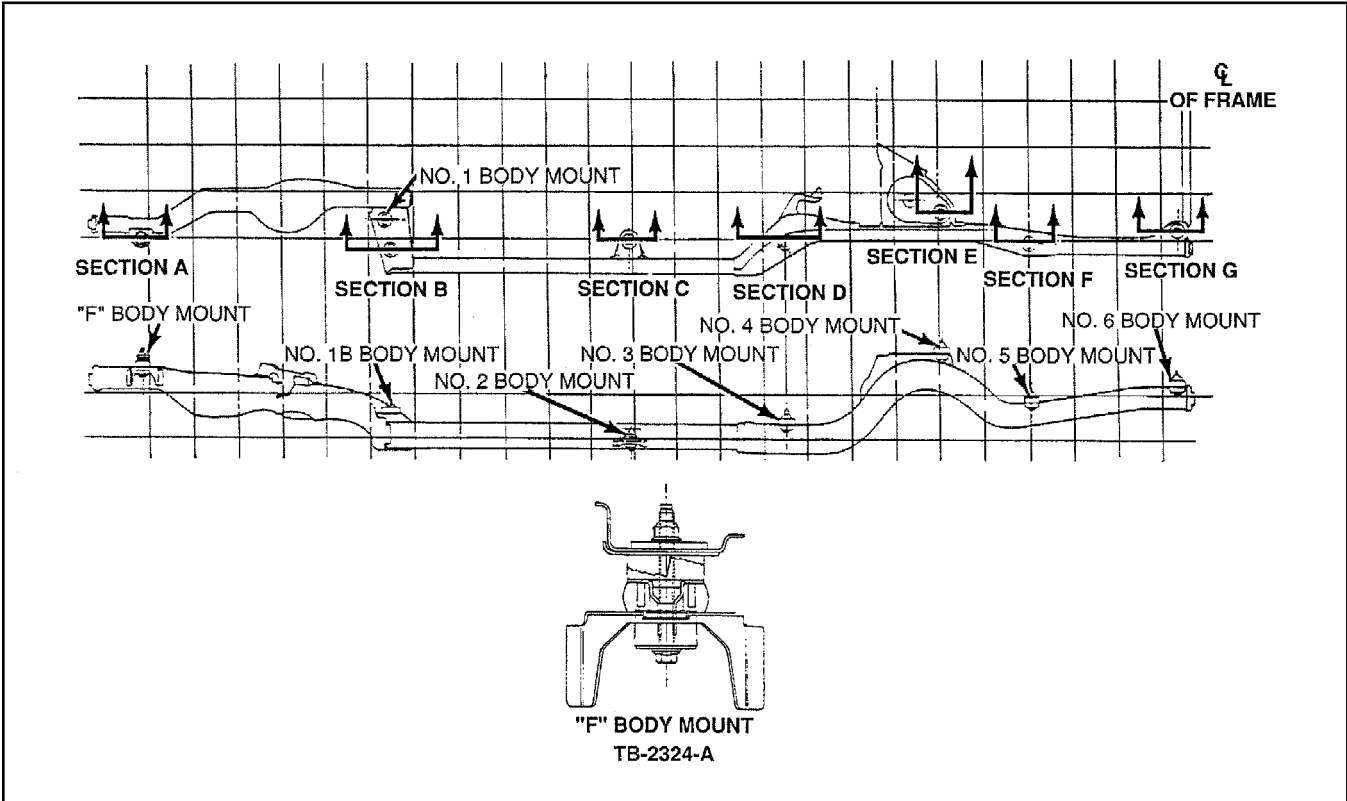


Figure 3 - Article 91-22-2