

# Technical Service Bulletin



**SUBJECT:**  
Steering Wander

**NO:** 19-10-97  
**GROUP:** Steering

**DATE:** Aug. 15, 1997

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## **MODELS:**

1994 - 1998 (BR) Ram Truck

## **SYMPTOM/CONDITION:**

Vehicle operators may complain that when driving on a straight road, a higher than normal steering wheel movement (perceived as excessive play) is required to keep the vehicle going straight or may describe of having to over compensating the steering to keep the vehicle from wandering.

**NOTE: THIS SYMPTOM SHOULD NOT BE CONFUSED WITH VEHICLE  
WANDERING DUE TO SLOW OR POOR STEERING RETURNABILITY.**

## **DIAGNOSIS:**

1. Drive the vehicle on a smooth straight road to verify that the vehicle does require higher than average amount of steering wheel movement to be able to keep the vehicle from wandering.
2. If the vehicle responds to normal steering wheel input (steering wheel can be held steady to keep the vehicle going straight), however the vehicle still drifts/wanders, see Technical Service Bulletin 05-03-97, dated March 17, 1997 for information regarding Chassis Dynamics Diagnosis.

**NOTE: IT IS IMPORTANT TO THOROUGHLY PERFORM THE STEERING AND  
SUSPENSION INSPECTION PROCEDURE OF TECHNICAL SERVICE  
BULLETIN 05-03-97 FOR VEHICLES THAT EXHIBIT A DRIFT/WANDER BUT  
RESPOND TO NORMAL STEERING WHEEL INPUT.**

If a higher than normal steering wheel movement is required to keep the vehicle from wandering (vehicle **slow** to respond to normal steering wheel input), then perform the Over-Center Adjustment Repair Procedure

## **PART REQUIRED:**

AR (1) 06504926AA Bolt, Intermediate Shaft, Pinch

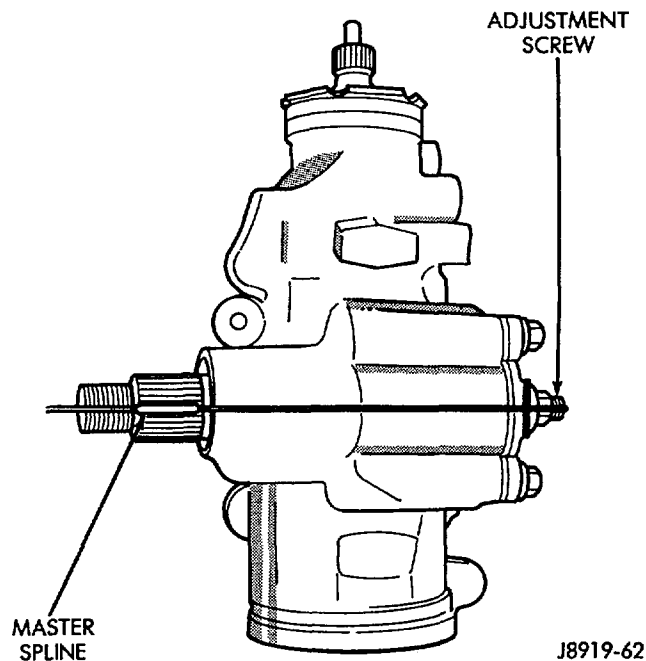
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**REPAIR PROCEDURE:**

This bulletin involves performing the over-center and if necessary, the worm thrust bearing preload adjustments on the steering gear.

**OVER-CENTER ADJUSTMENT**

1. Find the center of the steering gear travel by rotating the steering wheel completely to the left then, rotate the steering wheel to the right while counting the numbers of turns required to reach the end of travel.
2. Rotate the steering wheel to the left  $\frac{1}{2}$  the number of turns counted in the previous step. This position should be the center of the steering gear travel.
3. Loosen the locknut on the pitman shaft adjuster screw (Figure 1). Make sure the adjuster screw is held and does not turn with the locknut.



**FIGURE 1 - Over-Center Adjuster Screw**

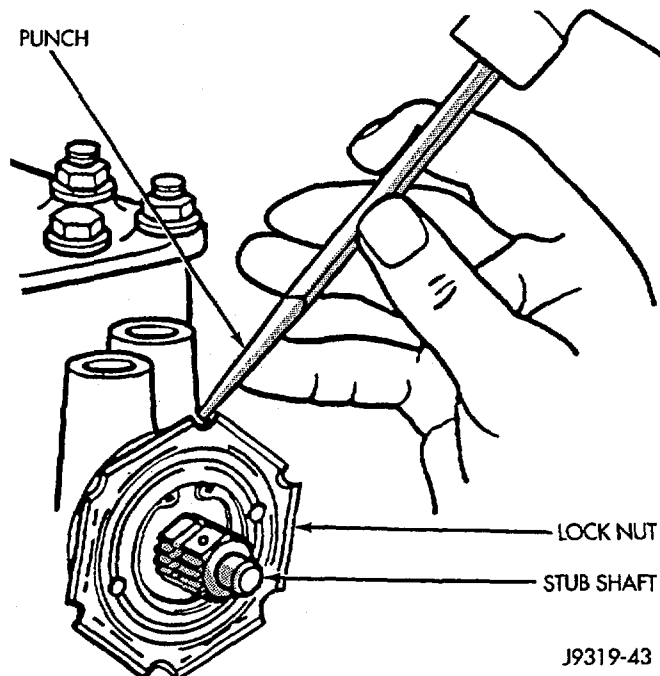
4. Turn the adjuster screw in approximately  $\frac{1}{8}$  of a turn. While holding the adjuster screw, tighten the adjuster screw locknut.
5. Road test the vehicle to determine if the over-center adjustment has corrected vehicle wander. If vehicle wander still occurs, repeat steps 1-5.

**NOTE: SOME IMPROVEMENT SHOULD BE SHOWN AFTER 1/8 TO 1/4 TURN. IF WANDER STILL OCCURS AFTER TURNING THE ADJUSTER SCREW UP TO 1/2 TURN, PROCEED TO THE BEARING PRELOAD ADJUSTMENT PROCEDURE.**

**CAUTION: IF THE OVER-CENTER ADJUSTMENT SCREW IS TURNED TOO FAR, CUSTOMERS MAY COMPLAIN OF VEHICLE WANDERING DUE TO POOR STEERING RETURNABILITY AND/OR STICKY STEERING.**

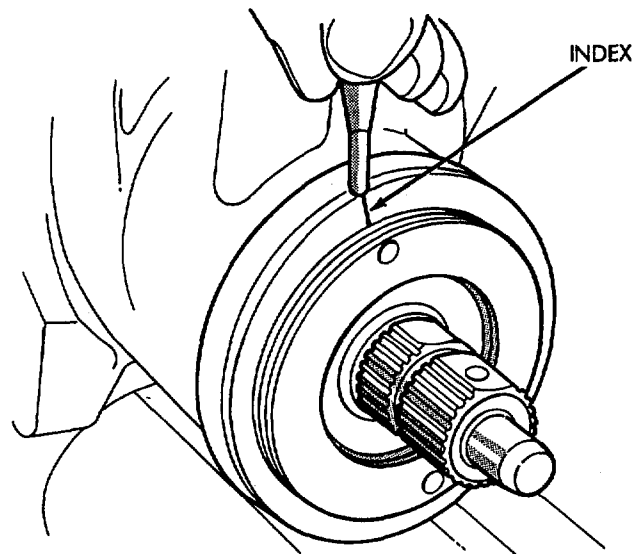
### **BEARING PRELOAD ADJUSTMENT**

1. Position the front wheels straight ahead, then turn the steering wheel slightly to the left (eleven o'clock position). Place a steering wheel holder, Snap-On tool # WA96A or equivalent, between the steering wheel and the driver's seat to secure the wheel.
2. Remove the pinch bolt securing the lower end of the intermediate shaft to the steering gear.
3. Compress the intermediate shaft and disconnect it from the steering gear.
4. Remove the adjuster plug locknut (Figure 2).



**FIGURE 2 - Loosening The Adjuster Plug Locknut**

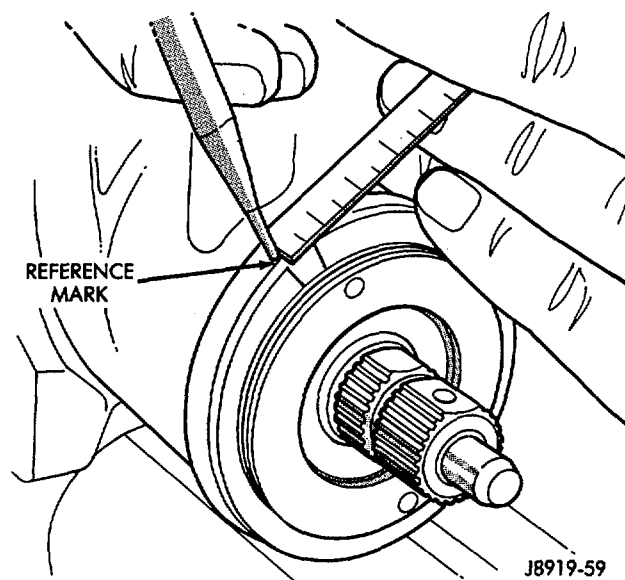
5. Turn the adjuster in/out with spanner wrench C-4381. The adjuster is properly positioned when the plug and thrust bearing in the housing is firmly bottomed in housing.
6. Place an index mark on the housing even with one of the holes in the adjuster plug (Figure 3).



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**FIGURE 3 - Alignment Marking On Housing**

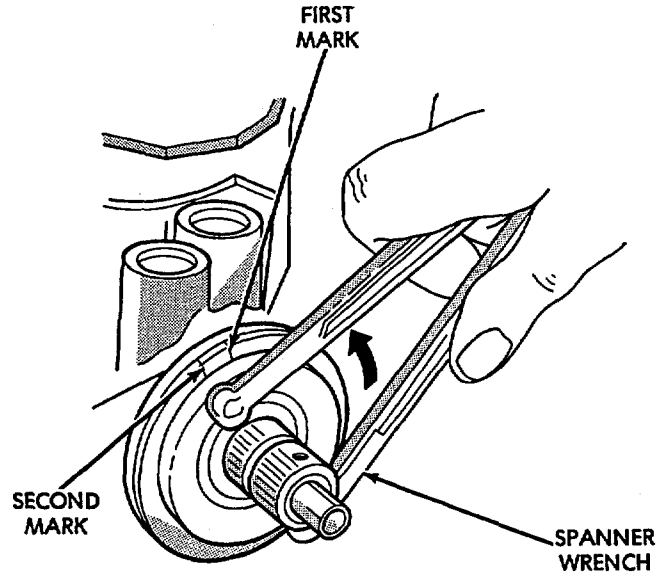
7. Measure back (counterclockwise) 9 mm (0.350 in.) and mark housing (Figure 4).



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**FIGURE 4 - Remarking The Housing**

- 8. Rotate adjustment cap back (counterclockwise) with spanner wrench until hole is aligned with the second mark (Figure 5).



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**FIGURE 5 - Aligning To The Second Mark**

- 9. Install and tighten the locknut to 108 Nm (80 ft. lbs.). Be sure adjustment cap does not turn while tightening the locknut.
- 10. Install the intermediate shaft onto the shaft splines of the steering gear. Install new pinch bolt, p/n 06504926AA, on the intermediate shaft and torque to 49 Nm (36 ft. lbs.).
- 11. Remove the steering wheel holder.

**POLICY:** Reimbursable within the provisions of the warranty.

**TIME ALLOWANCE:**

Labor Operation No:

19-00-01-91 Perform Over-Center Adjustment .....	0.7 Hrs.
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19-00-01-92 Perform Over-Center And Bearing Preload Adjustment .....	1.0 Hrs.
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**FAILURE CODE:** XX - Service Adjustment