

8. Round off the calculated shim pack dimension to one decimal point.

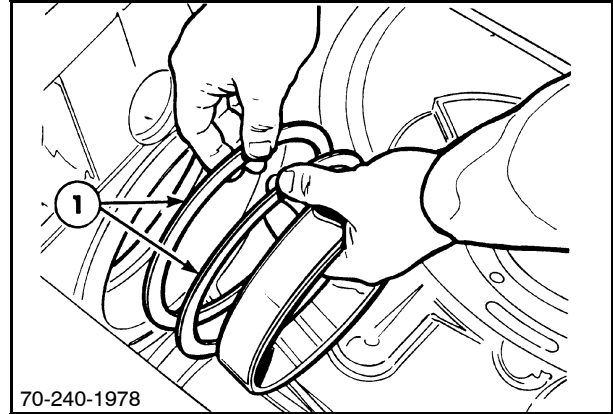
EXAMPLE:

1.338 mm = 1.3 mm

9. Select shims, 1, required to equal the rounded off shim pack dimension.

NOTE: Shims are available in the following thicknesses: 0.50 mm, 0.60 mm, 0.70 mm, 0.80 mm, 0.90 mm.

10. Measure shims with a micrometer to verify thickness.
11. Proceed to step 2 in the "Reassembly" portion of the "Pinion Assembly Overhaul" section in this chapter.



PINION BEARING PRELOAD ADJUSTMENT - ALL MODELS

The preload adjustment procedure is the same for all models.

NOTE: Check preload anytime the pinion assembly is disassembled.

Tools Required:

Assorted hand tools

Torque wrenches

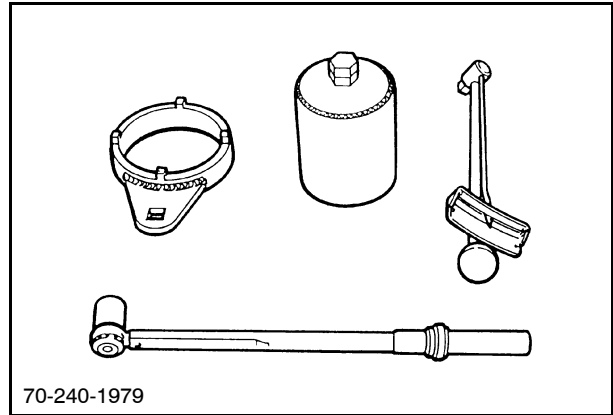
- 135 N·m (100 ft lbs)

- 1 N·m (100 in. lbs.)

Rear axle pinion nut tool - FNH00547

Dealer-constructed tool (see "Special Tools" heading in this chapter for details.)

- Pinion rotating tool - #70S005



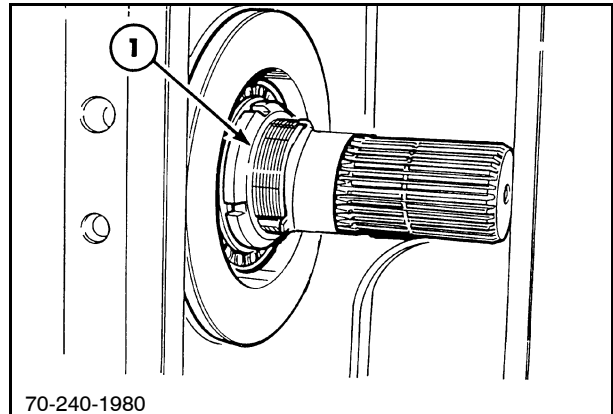
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PRELOAD ADJUSTMENT

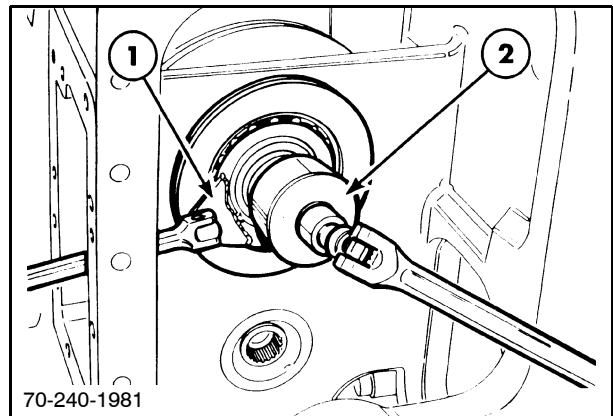
IMPORTANT: Check preload with pinion bearings lubricated with specified rear axle assembly oil.

IMPORTANT: Rotate pinion shaft 15 revolutions before rolling torque is measured. Measure rolling torque while pinion shaft is rotating. Correct preload is 1.1 N·m - 2.2 N·m (10 in. lbs. - 20 in. lbs.) of rolling torque.

1. Check to make sure adjusting nut, 1, is installed with flat side contacting the bearing.
2. Install FNH00547 special tool, 1, on nut and #70S005 dealer-made pinion rotating tool, 2, on pinion shaft.
3. Tighten nut until slight rolling resistance is obtained.

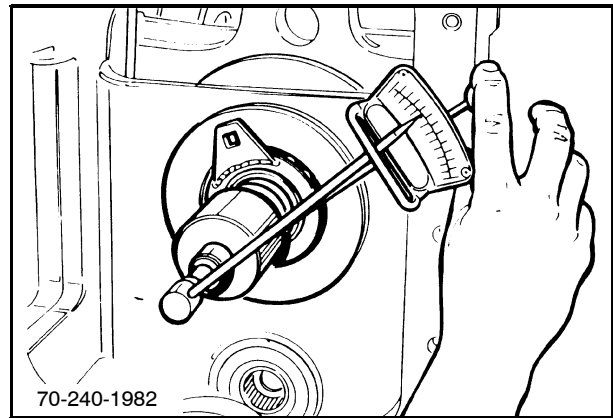


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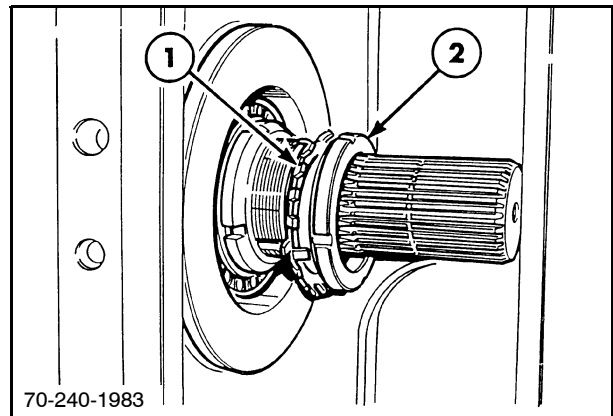
4. Measure rolling torque after rotating pinion shaft 15 revolutions.
5. Continue to adjust nut and measure rolling torque until the correct preload of 1.1 N·m - 2.2 N·m (10 in. lbs. - 20 in. lbs.) of rolling torque is obtained.



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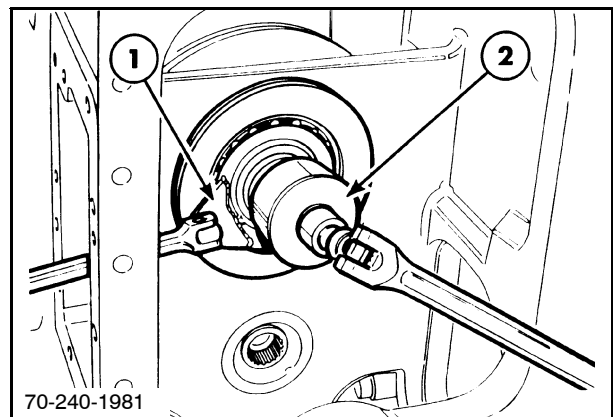
6. Install lock washer, 1, and jam nut, 2.

NOTE: Install jam nut with tapered side facing the adjusting nut.



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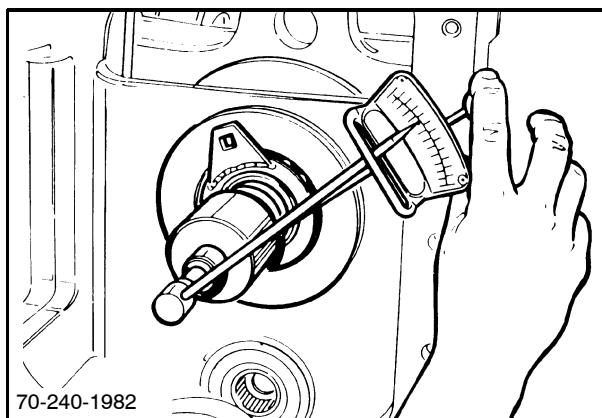
7. Install FNH00547 special tool, 1, on nut and #70S005 dealer-made pinion rotating tool, 2, on pinion shaft.
8. Torque jam nut to 128 N·m (95 ft lbs).



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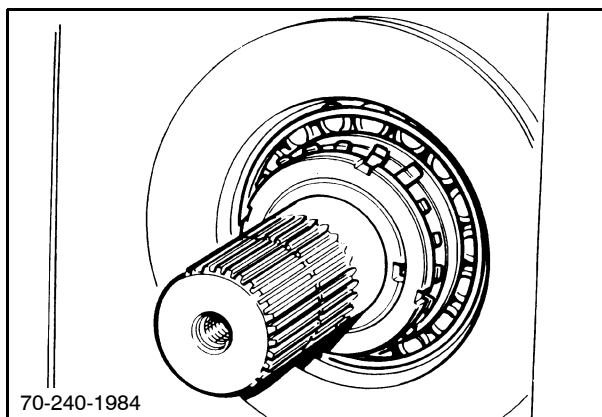
9. Check for proper rolling torque.

IMPORTANT: Adjust preload if not to specification.



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10. Seat lock washer tabs in a slot on each nut.



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DIFFERENTIAL SUPPORT BEARINGS PRELOAD ADJUSTMENT - ALL MODELS

The preload adjustment procedure is the same for all models.

NOTE: Check preload anytime the differential assembly is removed or end caps are removed. Preload must be within specifications before pinion backlash is checked or adjusted.

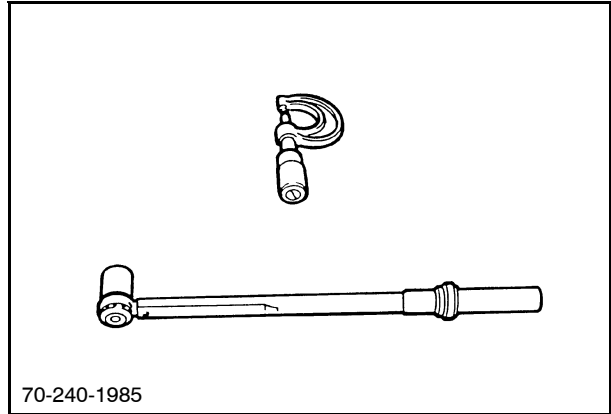
Tools Required:

Assorted hand tools

Torque wrench - 135 N·m (100 ft lbs)

Micrometer - 0 to 25 mm (0 to 1")

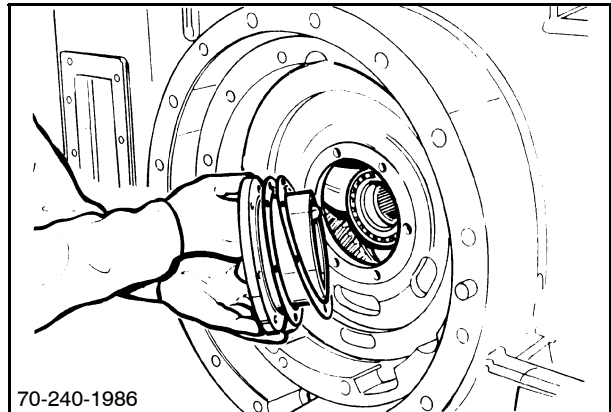
Feeler gauge



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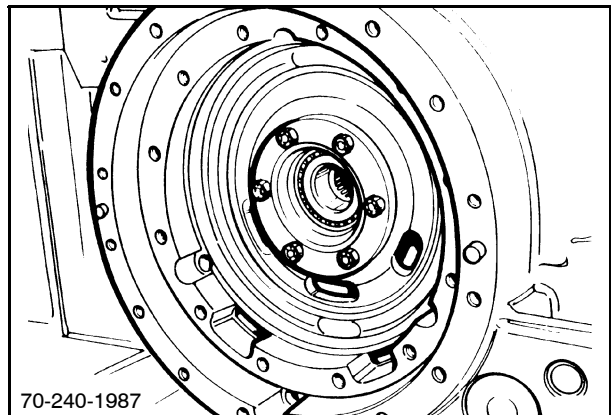
PRELOAD ADJUSTMENT

1. Install the left-hand support using the original shims removed, or new shims of the same thickness.



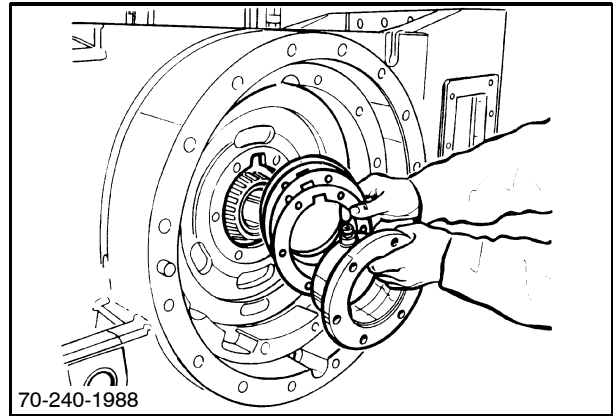
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2. Tighten six retaining bolts to 108 N·m (80 ft lbs).



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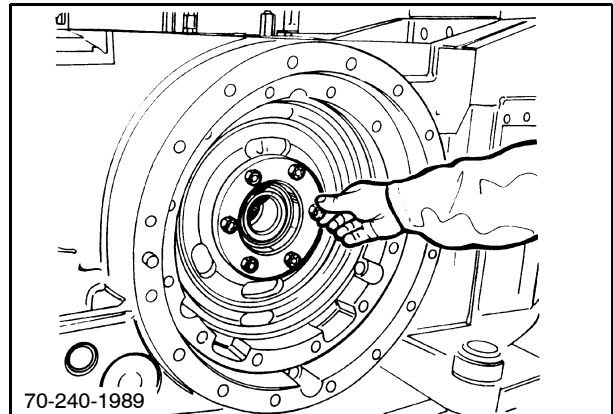
3. Install the right-hand support using the original shims removed, or new shims of the same thickness.



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4. Tighten right-hand retaining bolts hand tight.

IMPORTANT: Ensure there is backlash between the ring and pinion gears before proceeding. Remove shims from left support and add shims to right support to increase backlash.

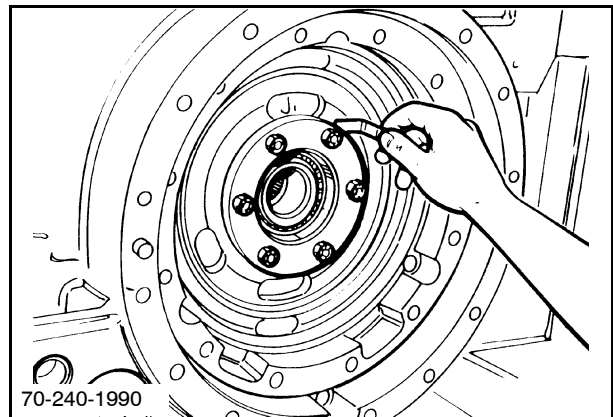


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5. Use a feeler gauge to measure the gap between the right-hand shims and center housing. Measure at four different locations 90° apart.

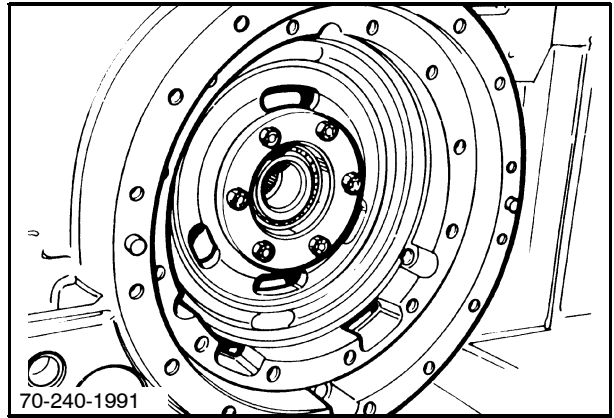
Proceed to the indicated step based on measurement results:

- Feeler gauge measurement is 0.025 mm - 0.152 mm (0.001" - 0.006"). Bearing preload is correct, proceed to step 8.
 - Feeler gauge measurement is below 0.025 mm (0.001"), proceed to step 6.
 - Feeler gauge measurement is over 0.152 mm (0.006"), proceed to step 7.
6. If measurement is below 0.025 mm (0.001"), remove shims from the right-hand side and repeat step 5.
 7. If measurement is over 0.152 mm (0.006"), add shims to the right-hand side and repeat step 5.



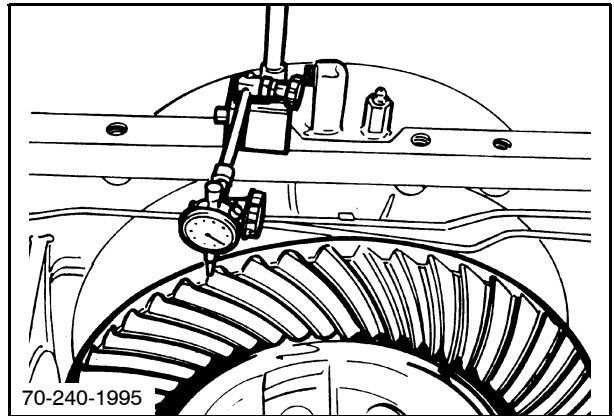
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8. Torque the right side hardware to 108 N·m (80 ft lbs).



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9. Check "Pinion Backlash," as described in the "Adjustment" heading of this chapter, before proceeding to reassemble the rear axle.



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