



J2 TECHNICAL ARTICLE

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FITTING CROWN WHEEL AND PINION

INSTRUCTIONS FOR FITTING 'REGENT'

R/CWP. 100, 104, 135a & 139: CROWN WHEEL AND PINION

1. All parts must be thoroughly cleaned, and all grit and fluff from cleaning blown off with air line.
2. All bearings which show any wear or 'shake' must be replaced. It is useless to fit new gears if there is any wear in bearings. The two pinion bearings will almost certainly be worn. The Distance Piece (1) is subject to wear if the pinion nut has been slack.
3. Assemble the pinion bearing and Distance Piece (1) into the Pinion Sleeve (2), the split thrust bearing (4). THIS IS MOST IMPORTANT.

Assemble the pinion into the Bearing (5), Distance Piece (1), Sleeve (2) and Bearing (4). This is best done in a light hand press, but failing this a raw-hide hammer, lead hammer or a piece of hard wood should be used to tap the pinion into the bearings. ON NO ACCOUNT should the pinion be hit with a steel hammer as the pinion would then be ruined beyond further use.

5. Next fit the Driving Flange (6) on the splined end of the pinion and tighten the pinion nut tight and solid. When tightening the pinion nut do not hold the pinion teeth in the vice, but hold by the flange. The pinion should now revolve freely without any end-play. If there is end-play it must be removed by fitting new bearings. If the pinion is tight it is probably due to the Distance Piece (1) being worn and this must be replaced. It is not permissible to

pinion nut slack to relieve the tightness on the pinion bearings; this would ruin the pinion within a few miles.

6. Hold the sheet metal setting gauge into the bearing caps and check the distance between the Setting Gauge and the ground surface of the pinion. This should be 0.002 inches. If this is more remove sufficient shims from (9) until the clearance as above is correct. If the clearance is less fit more shims at (9) until the clearance is correct.
7. The Crown Wheel should now be assembled and in doing so make sure the flange is not damaged and there are no burrs on same to make the crown wheel run out of true. The ball race lock-nuts should now be adjusted until there is 0.005 to 0.007 inches back-lash between the crown wheel and the pinion. THIS IS MOST IMPORTANT.

The bearing lock-outs should be tightened until there is no end-play, then re-check the back-lash. Any slackness in the bearings will ruin the crown wheel and pinion, but the bearings should not be so tight as to make the crown wheel tight to turn.

Now lock the bearing adjusting nuts.
8. We recommend the use of a high-pressure lubricant in the axle.

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