

INSTRUCTIONS

919-107

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'35-'48 FORD REAR GEAR SET

- **PLEASE READ INSTRUCTIONS COMPLETELY BEFORE STARTING YOUR INSTALLATION OF THIS GEAR SET!**

CORRECT INSTALLATION CAN BE THE DIFFERENCE IN A SAFE EXTENDED GEAR LIFE OR PREMATURE FAILURE.

After removing the rear axle assembly from the vehicle, disassemble as follows. Unfasten the torque tube from differential housing and slide the torque tube from the propeller shaft. Drive out the pin which fastens the propeller shaft to the pinion shaft and separate these parts.

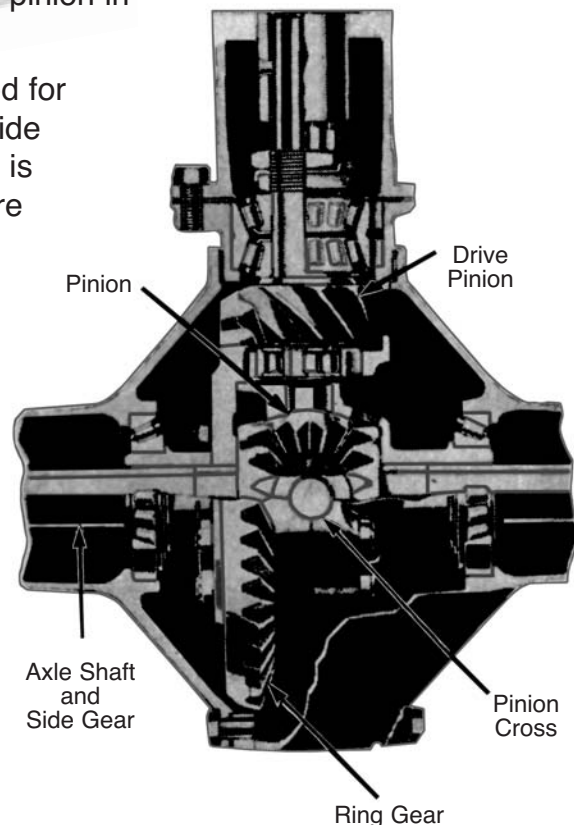
Unfasten the axle housings from the differential housing and slide off the axle housings. Scratch a mark across the joint of the differential so it may be assembled in the same position. Then remove the bolts and separate the case. Pick out the differential cross and pinions and withdraw the axle shafts from inside the differential case.

Mount the differential housing in a vise and pull the drive pinion and bearings from the housing as a unit. Unscrew the nuts from the pinion shaft, mount the pinion in a vise and pull the bearings and sleeve from the shaft.

INSPECTION: The differential case should be examined for wear at the point where the backs of the pinions and slide gears contact both sides of the case. If excessive wear is indicated, install a new case. If the back of the gears are scored or show evidence of excessive wear, they should be discarded. This also applies to the pinion cross.

If the bearing surface of the pinion shaft is worn enough to permit a loose fit of the taper roller bearings, the pinion bearings and sleeve should be replaced.

If the wheel bearing surface of the axle housing (or housings) is scored, badly pitted or worn more than .010 inch undersize, the housing (or housings) should be replaced.



ASSEMBLY: After pressing on the rear pinion bearing so that it bears against the pinion head, install the front bearing against the rear bearing, being sure the taper of both bearing are facing each other. The bearing sleeve may be then be pressed into position. Install the adjusting and lock nuts, with the lock washer between them, and tighten the nuts so that the sleeve turns on the bearing cones with a heavy drag and no end play. Lock the adjustment by bending the tabs on the washer against the side of the nuts.

To install the pinion assembly and outboard bearing, the differential housing must be heated. Before doing so, however, see that the shoulder in the housing is clean and free of burrs. To heat the housing, immerse its neck in boiling water or heated oil for about two minutes. When heated, install the outboard bearing. Then while the housing is still hot, press in the pinion assembly until the bearing sleeve is against the shoulder of the housing. This installation is made easier by coating the outer surface of the sleeve with gear lubricant.

When assembling the differential, first remove any burrs or dirt that would prevent the half's of the differential from joining correctly. Then install the axle shaft in the right half or the case. Slip the pinions on the differential cross and lay the assembly in position in the case. Install the other axle shaft and the other half of the case (with ring gear attached) should then be installed and the whole assembly bolted together securely.

After driving the differential bearings on to the ring gear hub and on the right differential case half, assemble the left axle housing to the differential housing. using the proper gasket (.008 to .010 inch thick) between the two housings. Install the differential in the left axle housing, then, using another gasket of the same thickness, bolt housings together securely.

The differential bearing adjustment may now be checked. Two persons are required for this operation. Each should turn one of the axle shafts in the same direction and at about the same speed. If the adjustment is correct, a heavy drag should be felt. If the shafts turn easily without apparent drag, the gasket at the right axle housing should be replaced with a thinner one, which is .004-.005 inch thick. Check the adjustment in the same manner and if satisfactory, check backlash between ring gear and the pinion.

This adjustment is obtained by increasing or decreasing the gasket thickness at the left axle housing. However, in order that the differential bearing adjustment be preserved, whatever gasket thickness is added to the left housing should be removed from the right housing. Likewise, if the gasket thickness at the left housing is decreased, the amount by which it is decreased should be added to the right housing.

Backlash between the ring gear and the pinion should be .003 to .008 inch, and is checked with a dial indicator mounted so that the movement can be observed at the splined of the spindle of the pinion shaft when the shaft is rocked back and forth. If less than .003 inch, increase the gasket thickness at the left housing. If more than .008 inch, decrease the gasket thickness at the same housing.

Complete the assembly by meshing the propeller shaft with the pinion shaft so that the lock pins line up. Drive in a new pin and rivet the ends securely. Slide the torque tube over the propeller shaft and bolt the torque tube to the differential housing, using a new gasket between these parts. Fill the differential with the correct type of and quantity of lubricant. The axle may now be installed in the chassis.

IMPORTANT

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