

SECTION 5-D
REPAIRS REQUIRING REMOVAL OF REAR AXLE ASSEMBLY

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SERVICE BULLETIN REFERENCE

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5-26 REMOVAL OF REAR AXLE ASSEMBLY

The rear axle assembly must be removed from car for replacement of rear axle housing, third member housing, or strut rods.

On *Dynaflow Drive* cars, rear axle assembly must be removed from car whenever the propeller shaft is to be removed. The propeller shaft spline oil seal (fig. 5-33) cannot be properly installed with third member housing connected to torque ball.

1. Place car stands solidly under frame so that rear end of car is high enough to permit working underneath.
2. Disconnect parking brake cable at rear brake cable sheave and at bracket on front end of torque tube. Disconnect brake hose from pipe at frame x member and remove retainer. Plug hose and brake pipe openings to prevent entrance of dirt.
3. Disconnect torque tube from torque ball by removing bolts at flange.
4. Disconnect links from shock absorber arms and disconnect radius rod at right end.
5. Disconnect lower ends of rear springs (left hand threaded bolts) and hoist rear end of car high enough to roll rear axle assembly out from under car.

5-27 INSTALLATION OF REAR AXLE ASSEMBLY

1. Check universal joint torque ball for evidence of oil leakage past the packing and for

wear of universal joint bushing. Note whether torque ball has end play or is excessively tight. Make any corrections indicated, following procedure given in paragraph 4-28.

2. Cement a new gasket in recess in front end of torque tube.
3. Roll rear axle assembly under car, then rest car solidly on stands placed under frame, with rear end of car high enough to permit working underneath.

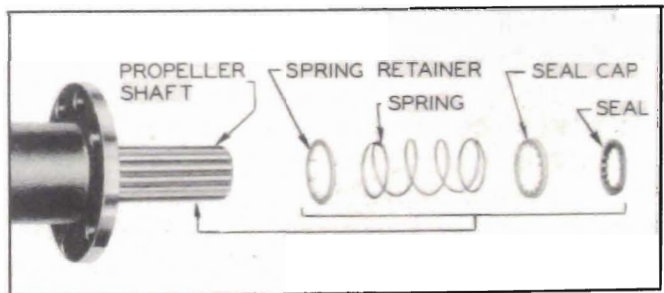


Figure 5-33—Propeller Shaft Spline Oil Seal

4. On *Dynaflow Drive* cars, place propeller shaft spline oil seal parts on front end of propeller shaft in the following order: spring retainer, spring, seal cap, oil seal. See figure 5-33. **NOTE:** Install these parts just before connecting torque tube to torque ball. Do not install parts before rolling axle assembly under car.
5. Connect torque tube to universal joint torque ball with bolts and lock washers.
6. Connect rear springs to rear axle assembly (left hand threaded bolts) and connect links to shock absorber arms.
7. Connect brake hose to brake pipe at frame

X member and lock in place with retainer. Connect parking brake cable to bracket on front end of torque tube and to brake cable sheave. Bleed rear wheel cylinders and adjust parking brake as described in paragraphs 8-9 and 8-13.

8. Connect radius rod to rear axle. **NOTE:** *Normal weight of car must be on rear springs when tightening radius rod pin nuts so that rubber bushings in rod will be clamped in neutral position.*

5-28 REPLACEMENT OF THIRD MEMBER HOUSING

The third member housing consists of the torque tube and differential carrier which are flanged and bolted together. The bolted construction is for manufacturing purposes only; torque tube and carrier are not furnished separately for service.

The torque tube and carrier are matched and aligned during manufacture and always must be kept in their original assembly. The tube and carrier should never be disassembled unless it is necessary to install a new gasket to correct an oil leak. The gasket is of special material and substitute material should not be used.

When removing a third member housing, after removal of rear axle assembly from car, drill through the heads of strut rod attaching rivets with a $\frac{7}{16}$ " drill. If rivet heads are cut off with hammer and chisel without drilling, the holes in strut rods and brackets will be distorted.

Third member housings furnished for service replacement are not drilled for rivets in the strut rod bracket. The holes must be drilled after the rear axle housing, third member housing, and strut rods are assembled together. With strut rods in normal position and without up or down strain, drill bracket to match holes in strut rods with $\frac{1}{2}$ " drill. Drill through strut rods and bracket with a $\frac{9}{16}$ " drill, then install bolts No. 1312923 with $\frac{1}{8}$ " lock washers and thin nuts.

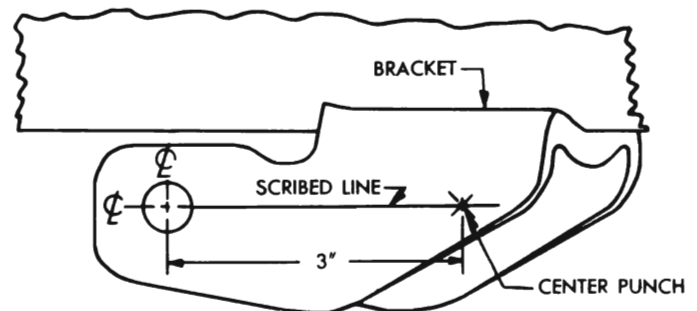
5-29 REPLACEMENT OF REAR AXLE STRUT RODS

The front ends of the two strut rods are riveted to a bracket welded to front end of torque tube. *On Series 40, and 1949 Series 50-70, three bolts are used to attach the rear end of each strut rod to a spring seat welded to outer end of axle housing. On 1948 Series 50-70, a U-*

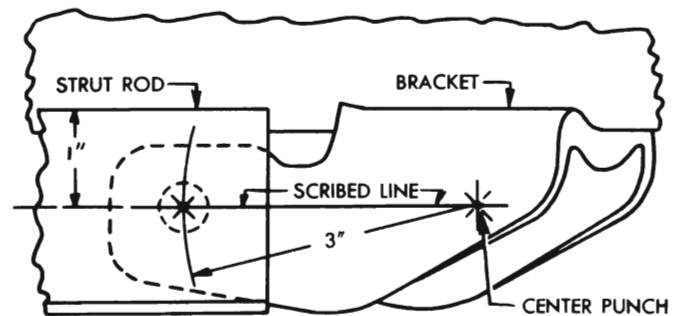
shaped clip placed around the housing anchors strut rod securely.

a. Removal

When removing a strut rod, after removal of rear axle assembly from car, drill through the head of rivet with a $\frac{7}{16}$ " drill. The rivet head has a centering depression for this drilling operation. If rivet head is cut off without drilling the holes in strut rod and bracket will be distorted.



VIEW A. CENTERLINE OF HOLE MARKED ON BRACKET



VIEW B. LOCATING CENTER OF HOLE ON STRUT ROD

Figure 5-34—Locating Rivet Hole in Strut Rod

b. Installation

Strut rods supplied for service replacement are not drilled at front end for the attaching rivet; therefore, the holes must be drilled after installation of the rod. The holes can be located and drilled in alignment with hole in bracket on torque tube as follows:

1. Before installation of strut rod, scribe a line on bracket in line with the center of rivet hole. Using a pair of dividers set at 3 inches, locate a center-punch mark on the scribed line exactly 3 inches from center of rivet hole. See figure 5-34 view "A."

2. Install strut rod in normal position without up or down strain at the bracket on torque tube. The top edge of strut rod should be approximately one inch from scribed line in bracket. See figure 5-33, view "B." *On Series 40 and 1949 Series 50-70, it may be necessary*

to place a shim washer around front bolt between rod and bracket on axle housing to align front end of rod with bracket on torque tube.

3. Using a flexible straight edge, scribe a line on strut rod in line with scribed line on bracket. With dividers set at 3 inches and one leg set in center punch mark on bracket, scribe an arc across the line on strut rod. Center

punch at intersection of line and arc. See figure 5-35, view "B."

4. At center-punch mark on rod drill a $\frac{1}{4}$ inch hole through rod. Follow up with a $\frac{1}{2}$ inch and finally a $\frac{9}{16}$ inch drill. This will insure alignment of holes in rod and bracket.

5. Attach strut rod to bracket with bolt No. 1312923, $\frac{1}{8}$ inch lock washer and a thin nut.