

SECTION XIV—FINAL DRIVES

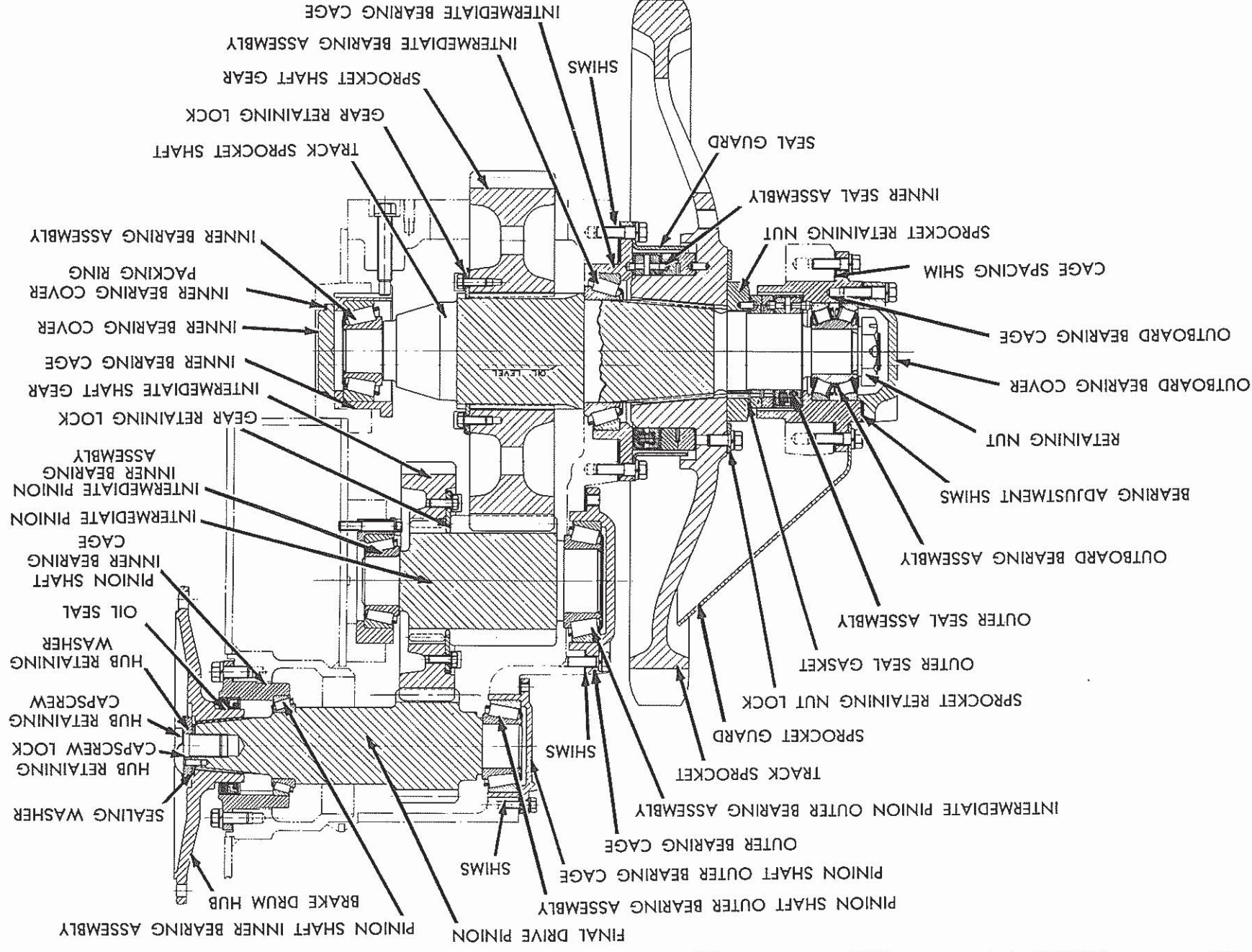


Fig. 1 — Final Drive Assembly

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1. DESCRIPTION

The final drives are of the double reduction type, consisting of a pinion and shaft, intermediate pinion and gear, track sprocket shaft and gear, and their component parts. They are assembled in a combination "one-piece" fabricated steel, steering clutch and final drive housing. The final drive housings are an integral part of the steering clutch housing and misalignment of the bores is eliminated by the use of line boring.

The final drive pinions, intermediate pinions, and track sprocket shafts, are mounted on tapered roller bearings. The bearings on all of the shafts are adjustable by means of shims. The pinion shaft bearings and the intermediate pinion bearings, are lubricated by oil thrown by the gears.

Replaceable type bearing cages are provided for

the bearing cups of the final drive pinion bearings, intermediate pinion bearings, and for the inner and the intermediate bearings of the track sprocket shafts.

The final drive outboard bearings of the track sprocket shafts are located in cages which attach to the truck frames. The outboard bearings absorb thrust in both directions.

The two (2) oil seal assemblies (inner and outer) used in each final drive are of the positive type.

The final drive pinions are driven by the bevel gear through the steering clutches; the pinions drive the intermediate shaft gears; the intermediate pinions drive the sprocket shaft gears, which in turn drive the track sprockets.

2. DISASSEMBLY

NOTE: The disassembly procedure for each final drive is the same.

A. Removal of Track Sprocket Shaft

1. Uncouple the track by removing the track master pin (refer to Section XVII). Move the tractor backward until the top of the track is off the track sprocket.
2. Drain the oil from the final drive compartment.
3. Remove the track sprocket guard, truck frame pivot shaft caps, and the two (2) capscrews attaching the truck frame outboard bearing clamping cap. Remove the three (3) remaining capscrews attaching the final drive outboard bearing cage to the truck frame. Remove the two (2) capscrews attaching the equalizing spring seat to the truck frame.
4. Use a jack and suitable cribbing under the drawbar supporting plate and the equalizing spring and raise the tractor off the truck frame. Raise the tractor high enough so that the track sprocket can be tipped to clear the truck frame when removing.
5. Remove the final drive outboard bearing cover and the bearing adjustment shims; tie the shims to the cover so that they will not be lost. Remove the cotter pin and the outboard bearing retaining nut.

6. Using puller tools similar to the ones shown in Fig. 3, pull the final drive outboard bearing cage and bearing from the track sprocket shaft. Use care in handling and prevent damage to the oil seal rings.

7. Remove the two (2) capscrews attaching the sprocket retaining nut lock to the sprocket and remove the nut lock and the sprocket retaining nut. Use care when removing the sprocket retaining nut and prevent damage to the oil seal ring cemented to the nut. Using puller tools similar to the ones shown in Fig. 4, pull the track sprocket and remove

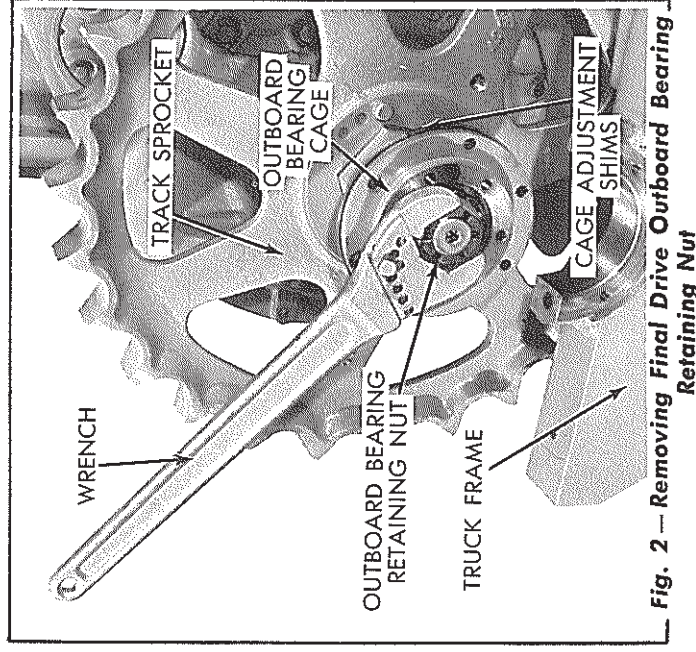


Fig. 2 — Removing Final Drive Outboard Bearing Retaining Nut

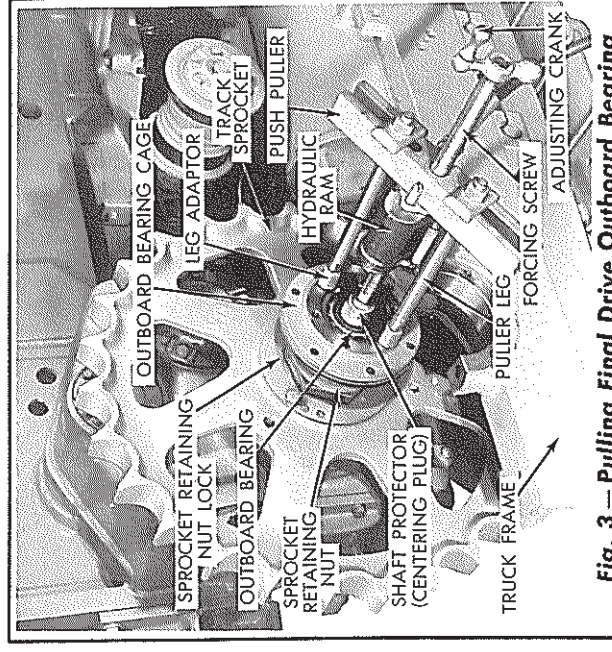


Fig. 3 — Pulling Final Drive Outboard Bearing from Track Sprocket Shaft

it from the track sprocket shaft. Use care and do not damage or scratch the seal ring cemented to the sprocket, and do not damage the threads of the track sprocket shaft.

8. Remove the capscrews attaching the final drive compartment rear cover and remove the cover. Unlock and remove the capscrews from the sprocket shaft gear retaining locks and remove the capscrew locks and the gear retaining locks. **NOTE:** To rotate the track sprocket shaft to the correct position for removal of the gear retaining locks, it is necessary to tie the corresponding steering

lever back in the disengaged position. This will hold the steering clutch in the disengaged position and the sprocket shaft gear may then be rotated to the desired position

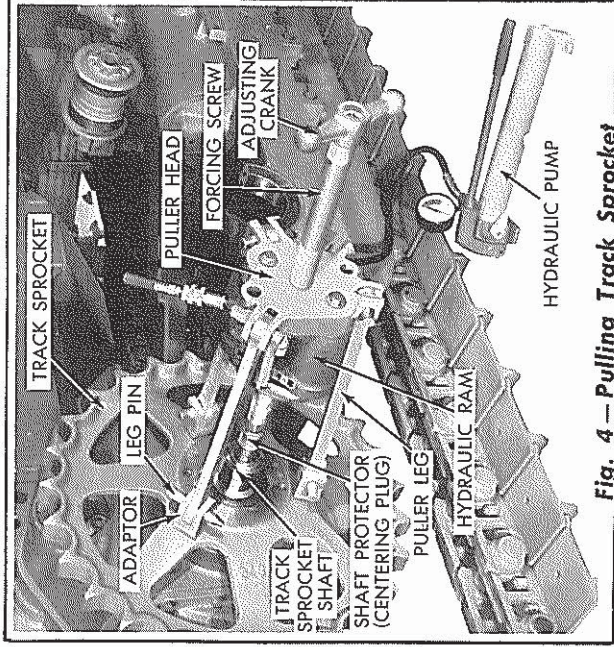


Fig. 4 — Pulling Track Sprocket

for removal of the gear retaining locks.

9. Place suitable blocking under the sprocket shaft gear as shown in Fig. 5, to prevent the gear from dropping when the sprocket shaft intermediate bearing cage is removed.

10. Remove the capscrews attaching the sprocket shaft intermediate bearing cage and the seal guard to the final drive housing, then remove the seal guard, bearing cage, and bearing adjustment shims. Tie the adjustment shims to the intermediate bearing cage so that they will not be lost. Pull the track sprocket shaft from the sprocket shaft gear and remove the gear.

11. If it is necessary to remove the sprocket shaft inner bearing cup, the bearing cup and the inner bearing cage may be removed as a unit using tools similar to the ones shown in Fig. 6. Press (towards the final drive compartment) on the track sprocket shaft inner bearing cover until the inner bearing cage is free of its bore in the housing, then remove the inner bearing cup, inner bearing cage, inner bearing cover, and cover packing ring.

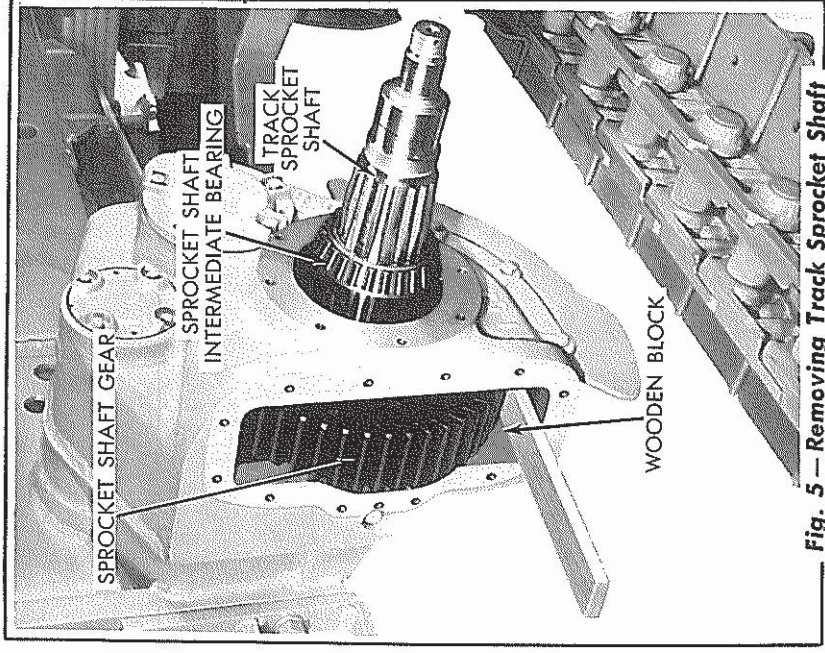


Fig. 5 — Removing Track Sprocket Shaft

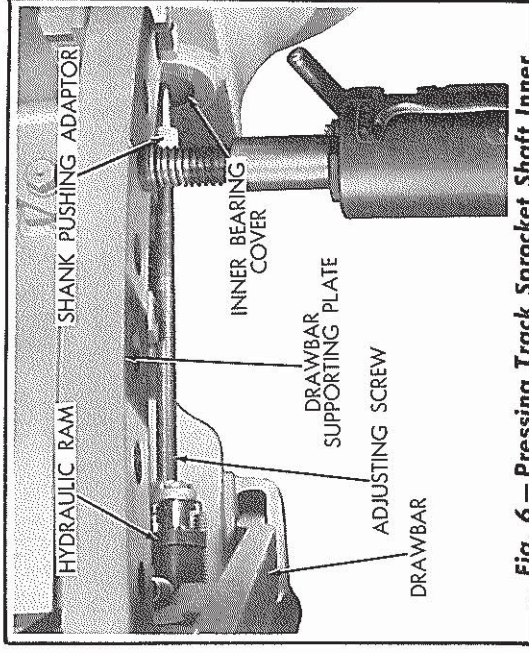


Fig. 6 — Pressing Track Sprocket Shaft Inner Bearing Cage from Housing

B. Removal of Final Drive Intermediate Pinion and Gear

To remove the intermediate shaft gear lock capscrews, it will be necessary to turn the intermediate shaft gear; this is accomplished by tying the corresponding steering clutch lever in the disengaged position as outlined previously under track sprocket shaft removal in this Section.

1. Unlock the capscrews attaching the two (2) intermediate shaft gear retaining locks to the gear. Remove the capscrews and the

capscrew locks. **NOTE:** The intermediate shaft gear retaining locks cannot be removed at this time.

2. Remove the capscrews attaching the intermediate pinion outer bearing cage to the final drive housing. Remove the outer bearing cage by using two (2) $\frac{1}{2}$ " NC pusher screws in the two (2) tapped holes in the bearing cage. Tie the bearing adjustment shims to the outer bearing cage so that they will not be lost.

3. Use a sliding hammer (holding tool), similar to the one shown in Fig. 7, to support and to remove the intermediate pinion. Screw the tool adaptor into the tapped hole in the end of the intermediate pinion and pull the pinion out far enough to remove the intermediate shaft gear retaining locks. Remove the intermediate shaft gear retaining locks. Block the intermediate shaft gear in position and pull the intermediate pinion from the gear and remove the gear from the final drive housing.

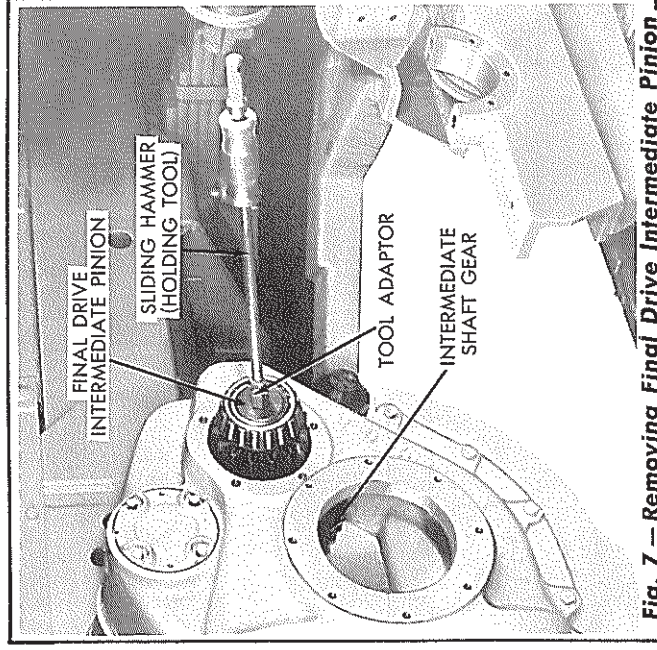


Fig. 7 — Removing Final Drive Intermediate Pinion

4. If it is necessary to remove the intermediate pinion inner bearing cup, unlock and remove the capscrews attaching the intermediate pinion inner bearing cage to the housing. Remove the inner bearing cage and the inner bearing cup as a unit.

C. Removal of Final Drive Pinion

With the track sprocket shaft and gear and the intermediate pinion and intermediate shaft gear removed, the final drive pinion may be removed as follows:

1. Remove the steering clutch from the side on which the final drive is being disassembled (refer to "STEERING CLUTCH REMOVAL," Section XII).
2. Remove the final drive pinion:
 - a. Unlock the brake drum hub retaining capscrew. Remove the retaining capscrew, capscrew lock, and hub retaining washer. Use tools similar to the ones shown in Fig. 8 and pull the brake drum hub from the final drive pinion. Remove the brake drum hub.
 - b. Remove the capscrews attaching the pinion shaft inner bearing cage to the housing. Use three (3) $\frac{1}{2}$ " NC pusher screws in the tapped holes in the bearing cage, and pull the bearing cage from the housing as shown in Fig. 9. Remove the pinion shaft outer bearing cage and

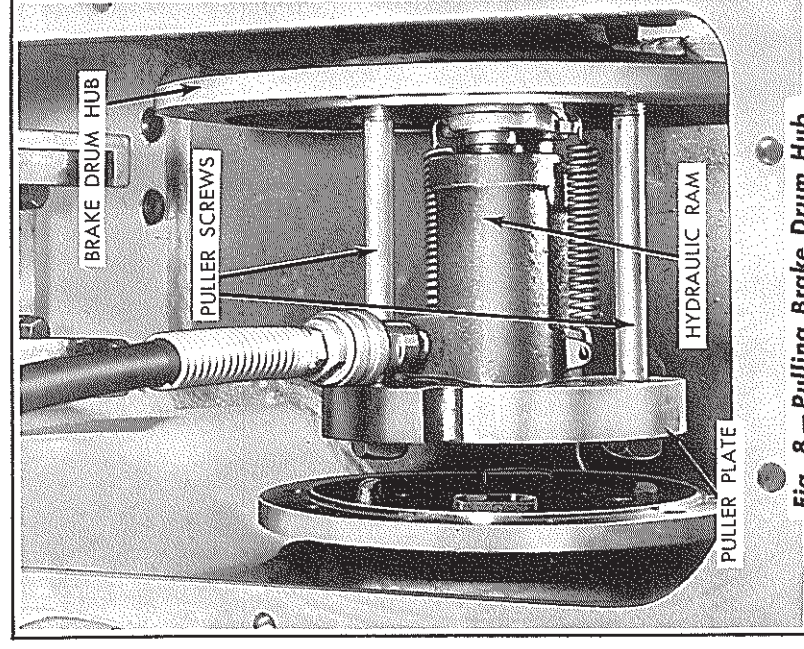
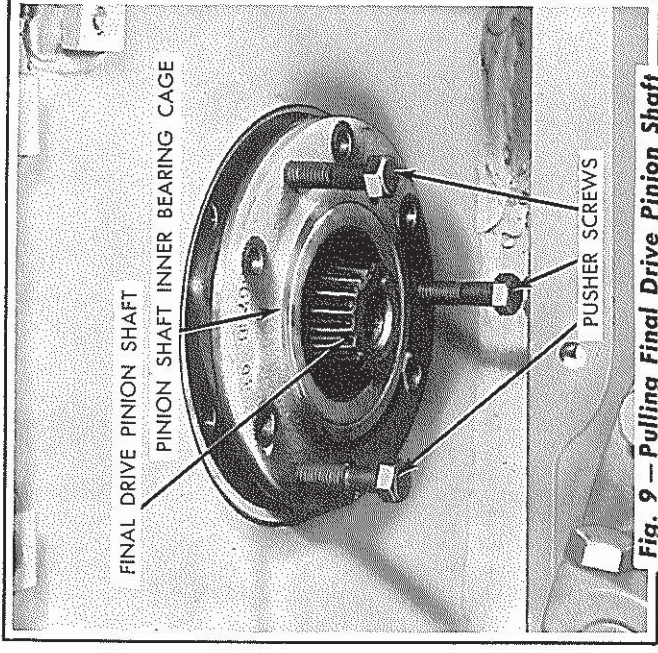


Fig. 8 — Pulling Brake Drum Hub

the bearing adjustment shims. Tie the adjustment shims to the outer bearing cage so that they will not be lost.

- c. Pull the final drive pinion into the steering clutch compartment and remove.



**Fig. 9 — Pulling Final Drive Pinion Shaft
Inner Bearing Cage**

3. CLEANING AND INSPECTION

Clean and inspect all the parts thoroughly as described in pertinent pages in "GENERAL MAINTENANCE INSTRUCTIONS," Section XXI. Replace or recondition any damaged parts before assembling the final drive.

If replacement of the final drive outboard bearing is necessary, use tools similar to the ones shown in Fig. 10 to pull the bearing from the bearing cage.

If replacement of the bearings on the final drive pinion or the intermediate pinion is necessary, use tools similar to the ones shown in Figs. 12 and 13 to remove and install the bearings.

If replacement of the track sprocket shaft inner and intermediate bearings is necessary, use tools similar to the ones shown in Figs. 14 and 15 to remove and install the bearings on the shaft.

If the track sprocket shaft inner bearing cage and cover were removed for replacement of the inner bearing cup, use tools similar to the ones shown in Fig. 11 to install the inner bearing cage and cover in the final drive housing.

IMPORTANT: When installing the final drive bearings on their respective shafts, make certain the bearings are pressed tightly against the shoulders on the shafts.

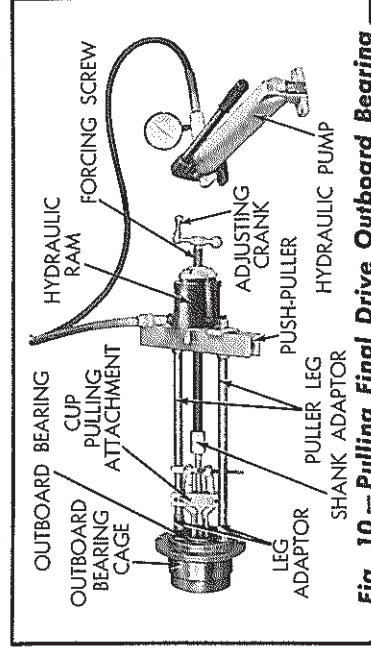


Fig. 10 — Pulling Final Drive Outboard Bearing from Outboard Bearing Cage

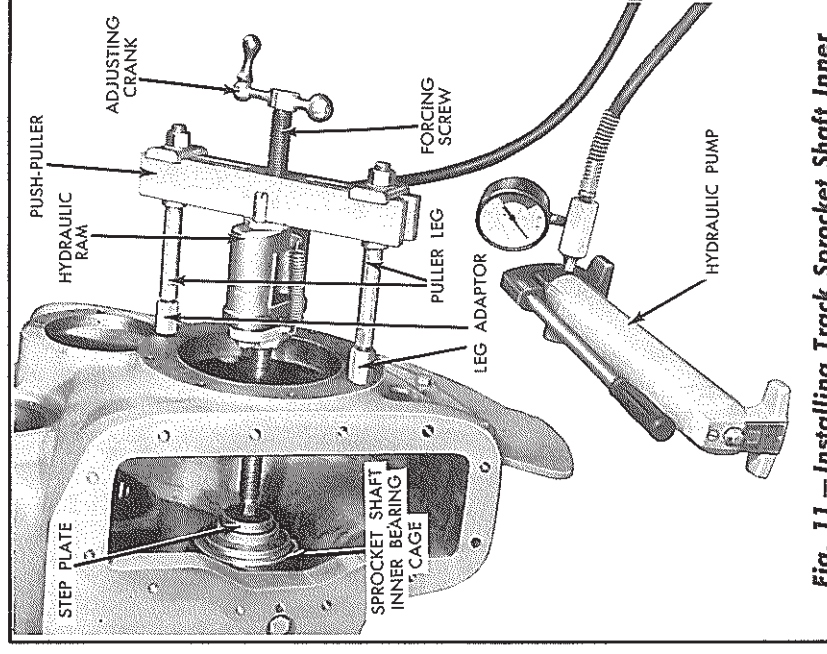


Fig. 11 — Installing Track Sprocket Shaft Inner Bearing Cage and Cover

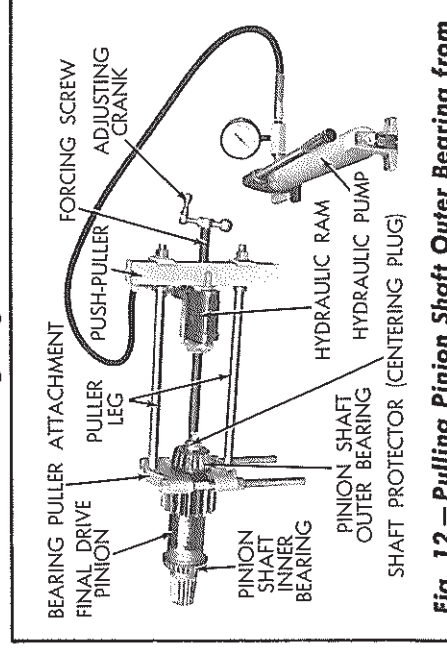
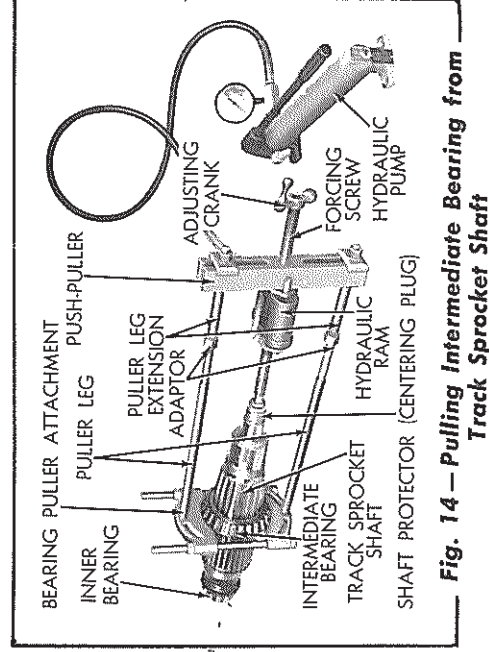
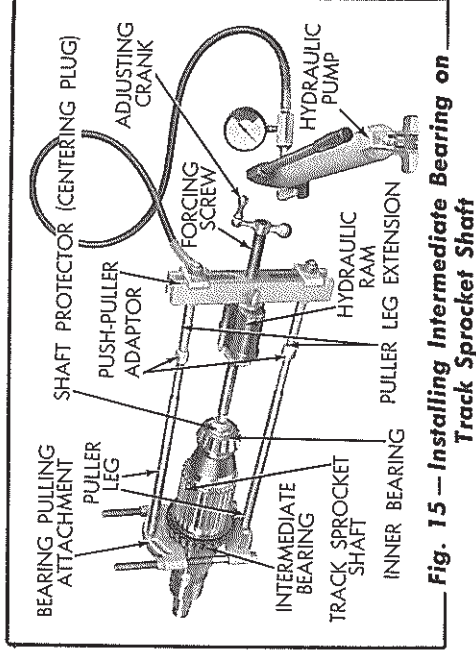
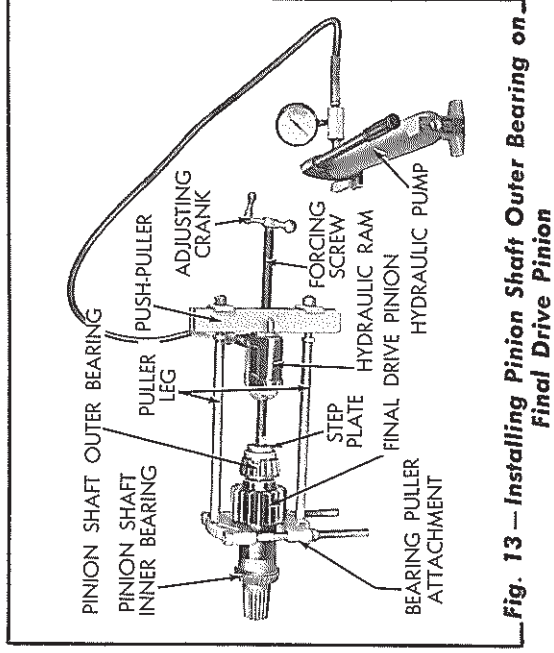


Fig. 12 — Pulling Pinion Shaft Outer Bearing from Final Drive Pinion



4. ASSEMBLY

NOTE: The assembly procedure for each final drive is the same. Refer to Figs. 16, 17, and 18 when assembling the final drive.

Before assembling the final drive, the track sprocket shaft and the intermediate pinion bearings should be adjusted correctly without the gears installed. Proceed as follows:

A. Adjustment of Final Drive Intermediate Pinion Bearing

1. Install the intermediate pinion inner bearing cup in position in the inner bearing cage. Install the inner bearing cage in the housing and install the attaching capscrews and cap-screw locks. Lock the capscrews securely with the capscrew locks.
2. Lubricate the intermediate pinion bearings and insert the intermediate pinion (without the intermediate shaft gear) into position in the housing. Install the outer bearing cup in the outer bearing cage. Install the outer bearing cage in the housing, using the original amount of bearing adjustment shims. Install the outer bearing cage attaching capscrews.

3. The intermediate pinion bearings are correctly adjusted when they have .002" to .004" pre-load. Add or remove bearing adjustment shims until a very slight pre-load (start of pre-load) is noted when turning the intermediate pinion, then substitute the combination of shims to reduce the total shim pack thickness .002" to .004" to obtain the proper pre-load. When adjusting, bump the outer bearing cage to make certain the bearings are properly seated.

4. Remove the outer bearing cage, as described previously in "REMOVAL OF FINAL DRIVE INTERMEDIATE PINION AND GEAR." Keep the bearing adjustment shims with the outer bearing cage. Remove the intermediate pinion using a tool similar to the one shown in Fig. 7. **IMPORTANT:** Keep the bearings clean.

B. Adjustment of Track Sprocket Shaft Bearings

1. Install the inner bearing cover packing ring (Neoprene) in position on the sprocket shaft inner bearing cover. Start the inner bearing cover and packing ring in position in the bore of the final drive housing. Install the inner bearing cup in position in the sprocket shaft inner bearing cage and press the inner bearing cage and cover into position in the final drive housing using tools similar to the ones shown in Fig. 11.
2. Lubricate the track sprocket shaft bearings and insert the track sprocket shaft (without the sprocket shaft gear) into position in the housing. Install the intermediate bearing cup in the sprocket shaft intermediate bearing cage. Install the intermediate bearing cage and cup, using the original amount of bearing adjustment shims. Install the intermediate bearing cage attaching capscrews.
3. The sprocket shaft bearings (inner and intermediate) are correctly adjusted when they have .002" to .003" pre-load. Add or remove bearing adjustment shims until a very slight pre-load (start of pre-load) is noted when turning the track sprocket shaft, then substitute the proper combination of shims to reduce the total shim pack thickness .002" to .003" to obtain the proper pre-load. When adjusting, bump the track sprocket shaft to make certain the bearings are properly seated.
4. Remove the track sprocket shaft intermediate bearing cage and bearing adjustment shims. Keep the bearing adjustment shims with the intermediate bearing cage. **IMPORTANT:** Keep the bearings clean.

C. Installation of Track Sprocket Shaft Seal Assemblies

If the seal assemblies for the track sprocket shaft were removed, the seal assemblies (Figs. 18 and 20) should be installed at this time so that the "NEOPRENE" cement, used for cementing the seal

assemblies in place, will have sufficient time to dry.

1. To Install the Inner Seal Assembly (Fig. 18)

- a. Place the track sprocket shaft intermediate bearing cage on a clean bench, with the flat face of the bearing cage up.
- b. Make certain the inner seal follower assembly, inner seal boot, and the inner seal ring (stationary ring) are clean and dry. Install the inner seal boot on the inner seal follower, lining up the holes in the seal boot with the protruding pins of the follower assembly. Hold each lip of the seal boot out and coat the inside of the lips and the sides of the inner seal follower assembly with "NEOPRENE" cement. Press the boot lips back in place against the inner seal follower assembly.
- c. Coat the outer face of one lip of the inner seal boot and the machined face of the intermediate bearing cage with "NEOPRENE" cement. Immediately place the seal boot and inner seal follower assembly in position on the intermediate bearing cage, inserting the ends of the follower pins into the corresponding holes in the intermediate bearing cage.
- d. Coat the face of the outer lip of the seal boot and the back face of the inner seal ring with "NEOPRENE" cement. Immediately place the inner seal ring on the seal boot and follower assembly, inserting the ends of the follower pins into the corresponding holes in the inner seal ring.
- e. Place a weight on the inner seal ring, using a clean cloth between the weight and the seal ring, and allow the "NEOPRENE" cement to dry and set thoroughly.

NOTE: When coating the above parts with "NEOPRENE" cement, do not use an excessive amount. The "NEOPRENE"

cement and solvent for thinning can be purchased from your nearest "Allis-Chalmers" Dealer.

- f. Clean and dry the inner machined surface of the track sprocket and the other inner seal ring thoroughly. Coat the machined surface of the track sprocket with "NEOPRENE" cement and immediately install the inner seal ring gasket in position on the track sprocket. Coat the outer surface of the inner seal ring gasket with "NEOPRENE" cement and immediately install the inner seal ring (rotating ring) on the track sprocket, inserting the seal driving dowels in the sprocket into the corresponding holes in the inner seal ring. Place a weight on the inner seal ring, using a clean cloth between the weight and the seal ring, and allow the "NEOPRENE" cement to dry and set thoroughly.

2. To Install the Outer Seal Assembly (Fig. 20)

- a. Place the track sprocket shaft outboard bearing cage on a clean bench, with the cap attaching side of the bearing cage down.
- b. Make certain the inner surface of the outboard bearing cage, the outer seal follower assembly, outer seal boot, and the outer seal rings are clean and dry. Install the outer seal boot on the outer seal follower assembly, lining up the holes in the boot with the protruding pins of the follower assembly. Hold each lip of the seal boot out and coat the inside of the lips and the sides of the outer seal follower assembly with "NEOPRENE" cement. Press the boot lips back in place against the outer seal follower assembly.
- c. Coat the outer face of one lip of the outer seal boot and the machined face in the bottom of the counterbore in the outboard bearing cage with "NEOPRENE" cement. Immediately place the seal boot and outer seal follower as-

sembly into position in the outboard bearing cage, inserting the ends of the follower pins into the corresponding holes in the outboard bearing cage.

d. Coat the face of the outer lip of the outer seal boot and the back face of the outer seal ring with "NEOPRENE" cement. Immediately place the outer seal ring on the seal boot and follower assembly, inserting the ends of the follower pins into the corresponding holes in the outer seal ring.

e. Place a weight on the outer seal ring, using a clean cloth between the weight and the seal ring, and allow the "NEOPRENE" cement to dry and set thoroughly.

f. Coat one side of the outer seal ring gasket and the outer face of the sprocket retaining nut with "NEOPRENE" cement. Install the outer seal ring gasket in position on the sprocket retaining nut. Coat the outer side of the outer seal ring gasket and the back face of the other outer seal ring with "NEOPRENE" cement, and place the outer seal ring on the sprocket retaining nut, lining up the holes in the seal ring with the dowels in the nut.

g. Place a weight on the outer seal ring, using a clean cloth between the weight and the seal ring, and allow the "NEOPRENE" cement to dry and set thoroughly.

NOTE: When coating the above parts with "NEOPRENE" cement, do not use an excessive amount.

D. Installation and Bearing Adjustment of Final Drive Pinion

1. Install the pinion shaft outer bearing cup in position in the outer bearing cage. Install the outer bearing cage in the bore of the housing, using the original amount of bearing adjustment shims between the bearing cage and the housing. Do not tighten the outer

bearing cage retaining capscrews at this time.

2. Lubricate the pinion shaft bearings, lower the pinion into the steering clutch compartment, and insert it into position in the final drive housing.

3. Install a brake drum hub oil seal in position in the pinion shaft inner bearing cage, with the sealing lip of the oil seal toward the pinion. Install the pinion shaft inner bearing cup in position in the inner bearing cage.

4. Use a new gasket and install the pinion shaft inner bearing cage in position in the housing and tighten the capscrews for both bearing cages. Bump the outer bearing cage to make certain the bearings are properly seated. Turn the final drive pinion to determine the bearing pre-load.

5. The pinion shaft bearings are correctly adjusted when they have .002" to .003" pre-load. Add or remove bearing adjustment shims until a very slight pre-load (start of pre-load) is noted when turning the pinion, then substitute the combination of shims to reduce the total shim pack thickness .002" to .003" to obtain the proper pre-load.

6. Install the brake drum hub, sealing washer, hub retaining washer, hub retaining capscrew lock, and the hub retaining capscrew. Tighten the retaining capscrew to a torque of 300 lbs. ft. and lock the capscrew securely with the capscrew lock.

7. Install the steering clutch and steering brake (refer to "STEERING CLUTCH INSTALLATION," Section XII).

E. Installation of Final Drive Intermediate Pinion and Gear

1. Place the intermediate shaft gear in the housing, with the gear lock attaching holes in the gear toward the outer side of the housing. Block the gear in place with suitable blockings. Lubricate the intermediate pinion bearings and insert the intermediate pinion into position in the housing and the inter-

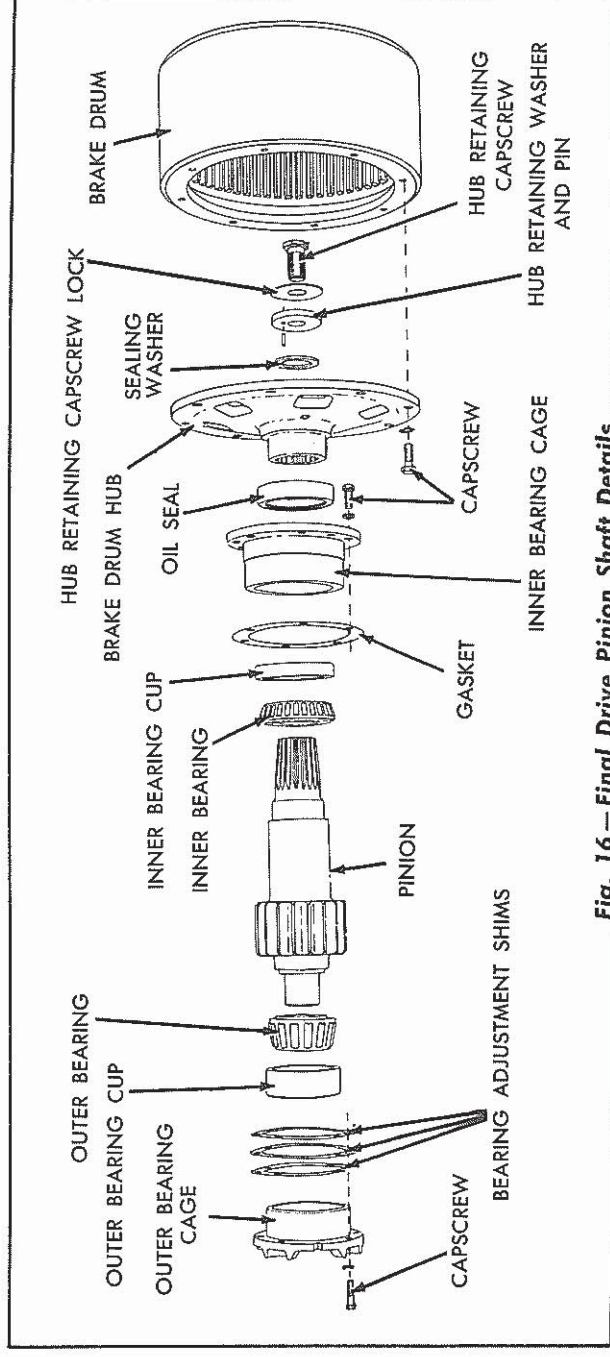


Fig. 16 — Final Drive Pinion Shaft Details

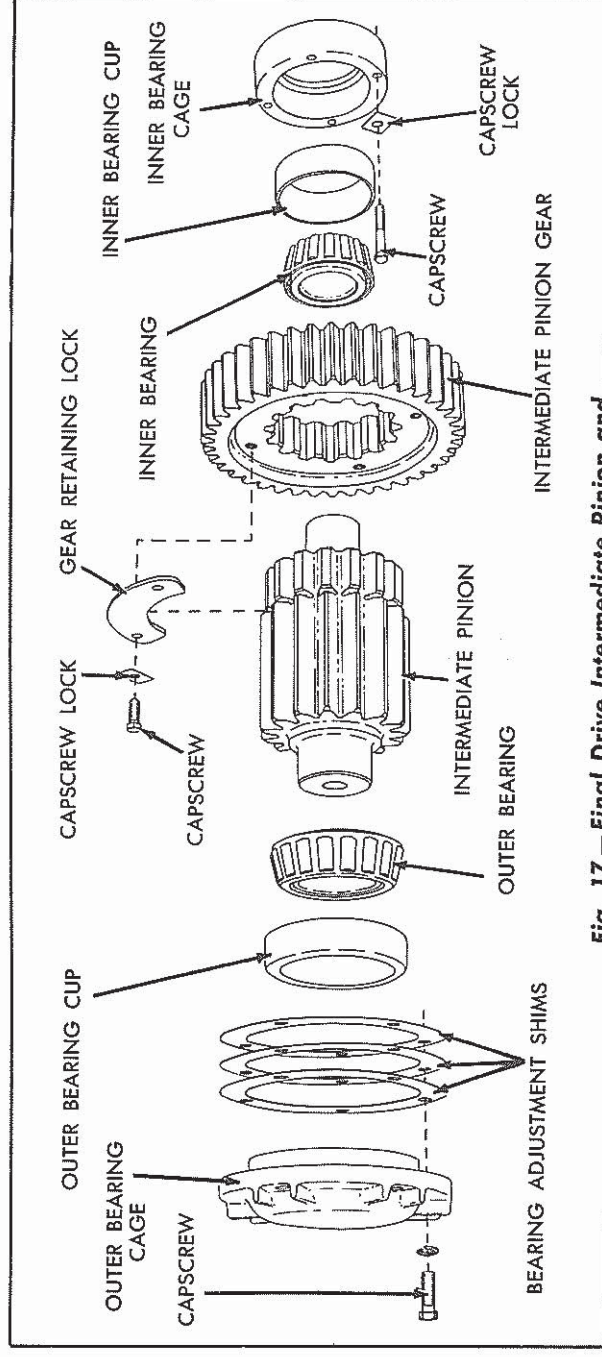


Fig. 17 — Final Drive Intermediate Pinion and Gear Details

mediate shaft gear.

2. Working through the opening in the rear of the final drive housing, use a bar and raise the intermediate pinion and gear so that the outer bearing cage can be installed. Install the outer bearing cage in the housing, using the correct amount of bearing adjustment shims as determined previously in "INTERMEDIATE PINION BEARING ADJUSTMENT." When installing the outer bearing cage, install it in the housing just far enough to start the attaching capscrews. Use a bar and move the intermediate pinion out against the outer bearing cage. Insert the two (2) gear retaining locks in place in the

groove in the pinion, then move the pinion back until the locks are against the gear and install capscrews and capscrew locks to secure the gear retaining locks to the gear. Tighten the capscrews securely and lock the capscrews with the capscrew locks.

3. Tighten the capscrews to secure the outer bearing cage to the housing.

F. Installation of Track Sprocket Shaft

1. Install the sprocket shaft gear (with the tapped holes for the gear retaining lock attaching capscrews toward the inner bear-

ing cup) in the housing and block the gear in position.

2. Lubricate the track sprocket shaft bearings and insert the track sprocket shaft into the bore in the housing and the gear. Push the track sprocket shaft in so that the inner bearing is in position in the inner bearing cup. Install the track sprocket shaft intermediate bearing cage, with the seal assembly attached, and the seal dirt guard in place on the housing, using the correct amount of bearing adjustment shims as determined previously in "TRACK SPROCKET SHAFT BEARING ADJUSTMENT." Tighten the capscrews to secure the intermediate bearing cage to the housing.

3. Position the sprocket shaft gear on the shaft so that the gear retaining locks may be installed. Install the gear retaining locks, capscrews, and capscrew locks. Tighten the capscrews and secure with the capscrew locks. Install the final drive compartment rear cover gasket, cover, and tighten the attaching capscrews.

4. Lubricate the mating surfaces of the oil seal rings of the inner seal assembly, then install the track sprocket (with the seal ring in

place) on the track sprocket shaft. Coat the back face of the sprocket retaining nut (face which contacts the sprocket) with gasket cement or sealing compound. Make certain the oil holes in the track sprocket retaining nut are not obstructed with the gasket cement or sealing compound, then install the nut. Tighten the sprocket retaining nut to a torque of 3500 to 4000 lbs. ft. This may be accomplished by using the reduction of the transmission and final drive when tightening. With the opposite steering clutch lever held in the disengaged position, proceed as follows:

- a. Remove the floor plate.
- b. When tightening the left sprocket retaining nut, place a wrench on the retaining nut and place a block of wood between the wrench handle and the top of the truck frame to hold the wrench in position. When tightening the right sprocket retaining nut, place a wrench on the retaining nut and place a block of wood on the floor (in back of tractor) so that the wrench handle may rest on the block.
- c. Shift the transmission into "LOW" gear. Make certain the engine clutch operat-

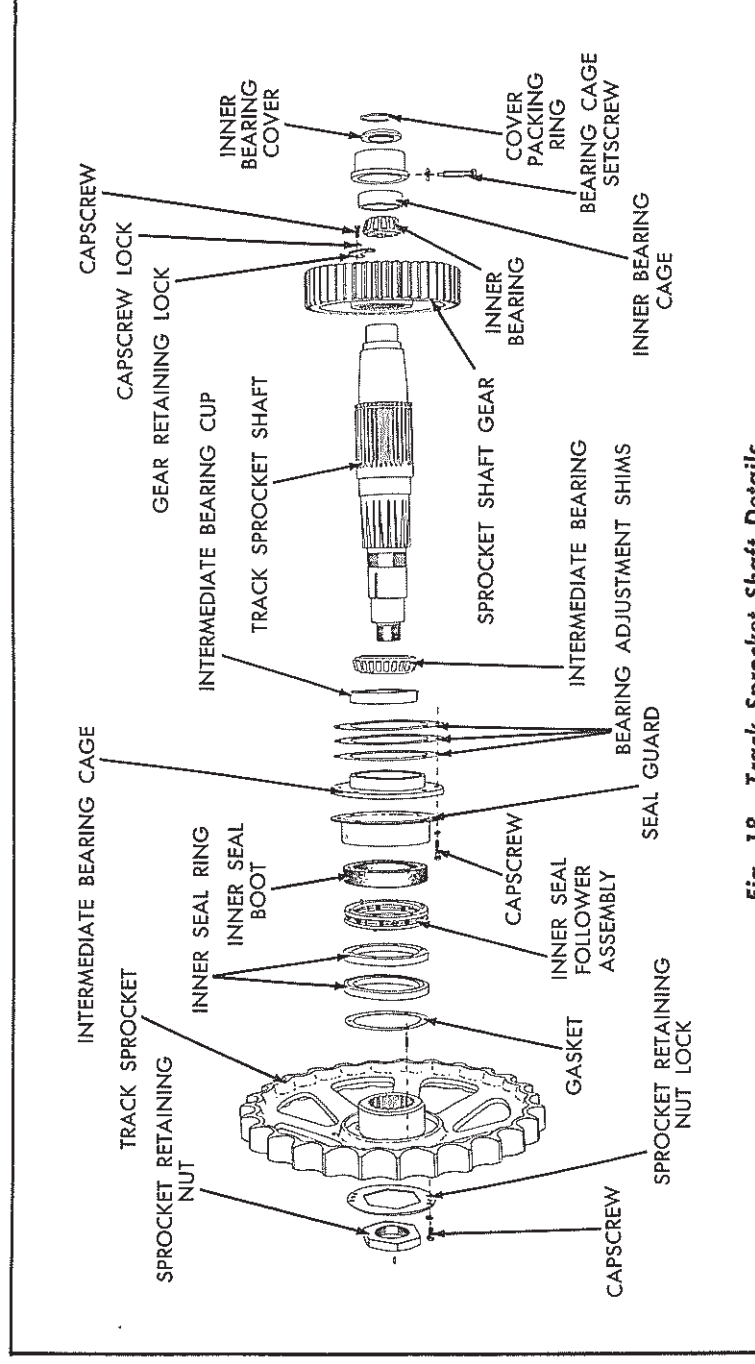


Fig. 18 — Track Sprocket Shaft Details

ing lever is in the disengaged position.

- d. Use a 24-inch pipe wrench, chain drive shaft universal joint assembly, a spring scale attached to the end of the wrench handle, turn the universal joint counter-clockwise (viewed from seat) to tighten the right sprocket retaining nut. Turn the universal joint clockwise (viewed from seat) to tighten the left sprocket retaining nut. Turn the universal joint until a pull of 17 to 19 pounds is indicated on the spring scale attached to the end of the 24-inch pipe wrench as shown in Fig. 19. This will impose a torque of 3500 to 4000 lbs. ft. on the sprocket retaining nut. *NOTE: During this tightening procedure, strike the sprocket, as near to the hub as possible, with a sledge hammer to make certain the sprocket is properly seated on the shaft.*

The following is the approximate pounds pull required on the spring scale when using various length wrenches or bars to turn the universal joint to tighten the sprocket retaining nut.

Wrench-Feet*	Pounds-Pull
1	34-38
1½	25-28
2	17-19

*NOTE: Distance from center of universal joint to point on wrench to which spring

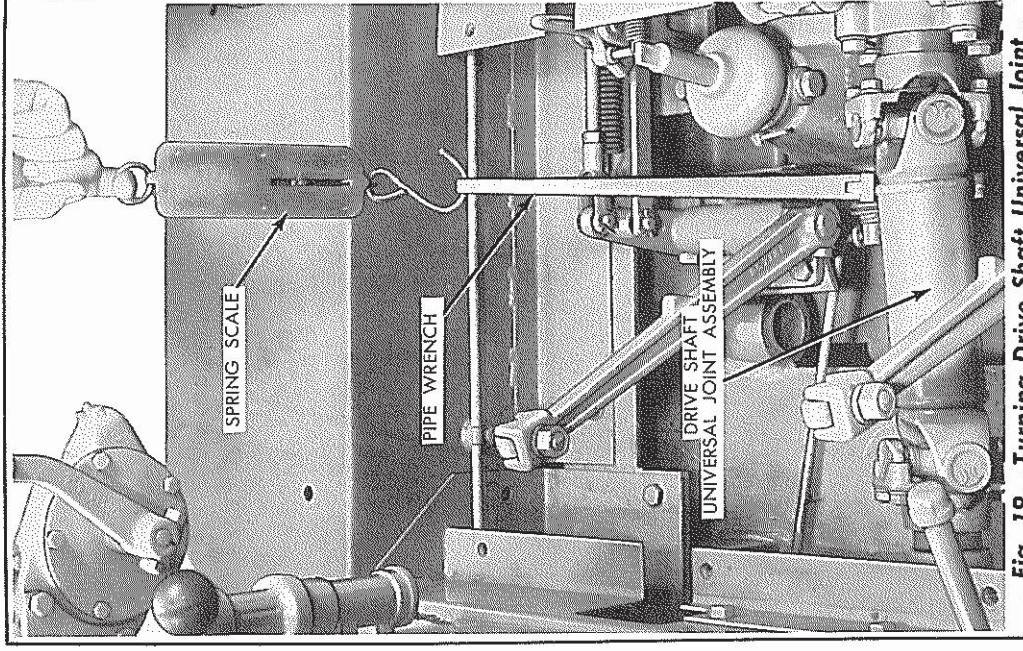


Fig. 19 — Turning Drive Shaft Universal Joint Assembly to Tighten Track Sprocket Retaining Nut

scale is attached.

- e. Install the sprocket retaining nut lock and the lock attaching cap screws.
- f. Install the floor plate.

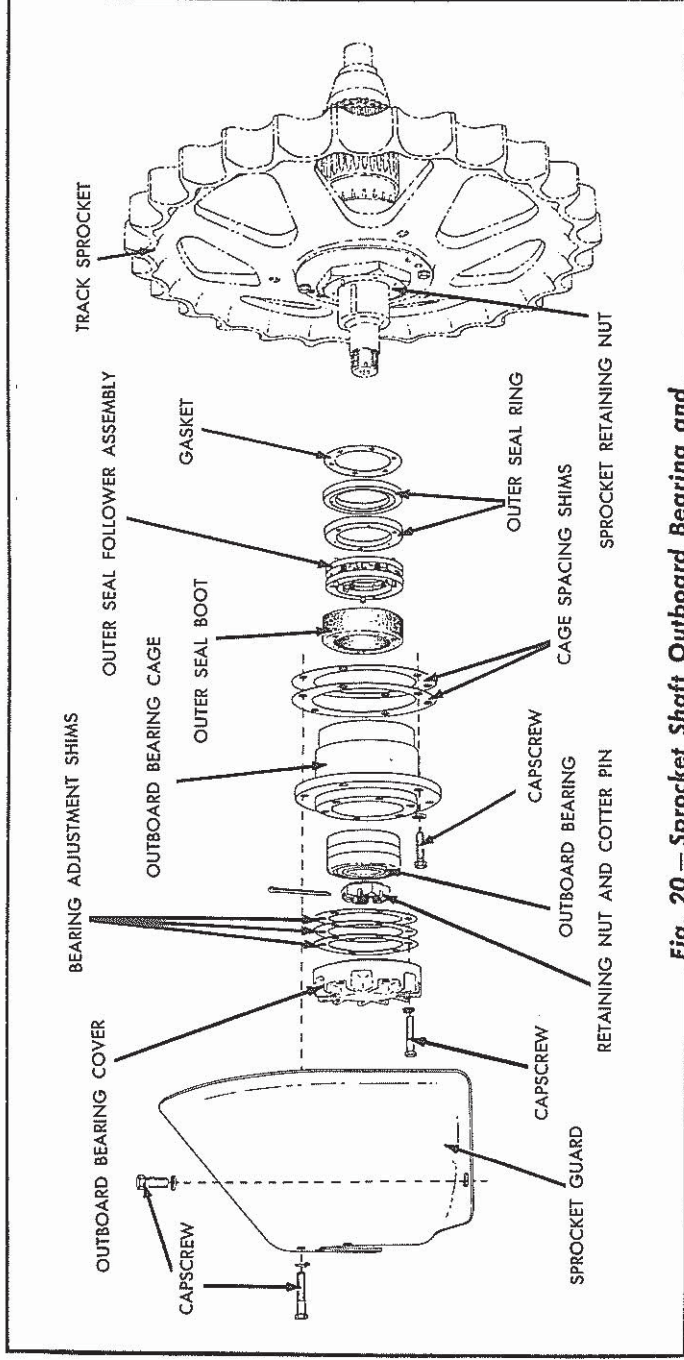


Fig. 20 — Sprocket Shaft Outboard Bearing and Outer Seal Details

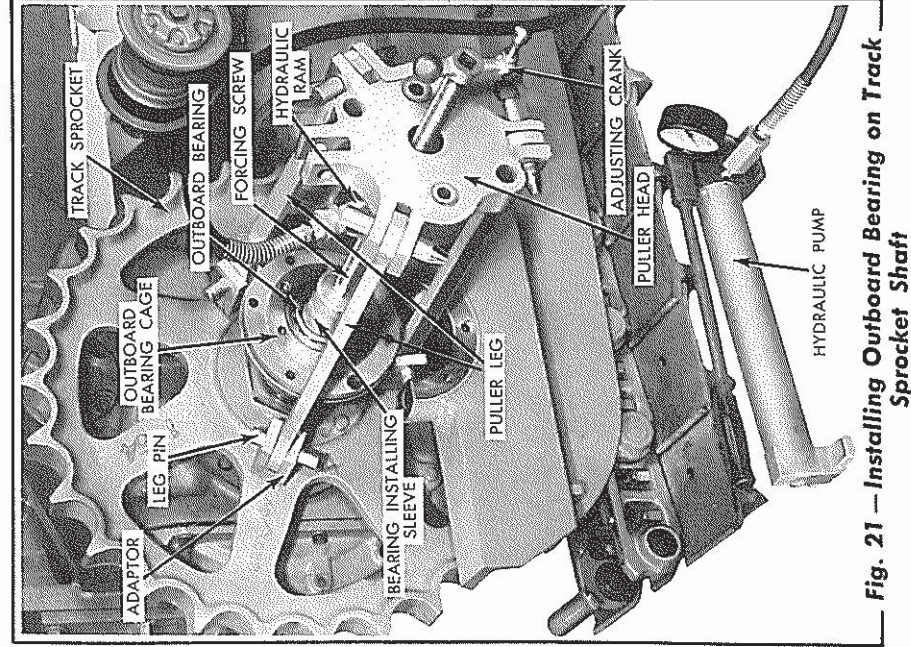


Fig. 21 — Installing Outboard Bearing on Track Sprocket Shaft

the track sprocket shaft using special tools similar to the ones shown in Fig. 21. **NOTE:** The bearing installing sleeve shown in Fig. 21 is machined from a piece of steel tubing to the following dimensions: I.D. 2-1/16", O.D. 2 1/2", length 2 1/2". Press the outboard bearing cage and bearing assembly onto the sprocket shaft to a position allowing .050" to .060" clearance between the two (2) outer oil seal rings. **IMPORTANT: Do not allow the two (2) seal rings to contact, as this will cause a drag between the seal rings, thus a false reading will be obtained when checking the adjustment of the outboard bearing.**

2. Lubricate the outboard bearing with clean oil. Install the outboard bearing cover, using the original amount of bearing adjustment shims.
3. The outboard bearing must be adjusted for a pre-load of 8 to 13 inch pounds. A spring scale may be used to weigh the bearing pre-load, as shown in Fig. 22.
4. To check the outboard bearing pre-load proceed as follows:

- a. Use a length of small rope and wind the rope around the outboard bearing cage several turns. Tie a loop in the free

G. Installation of Sprocket Shaft Outboard Bearing

1. With the outer seal assembly and the outboard bearing in place in the outboard bearing cage, install the bearing cage on

end of the rope and attach the hook of the spring scale in the loop. Pull on the spring scale and note the pounds pull required when revolving the bearing cage. The distance from the center of sprocket shaft to the point of pull on the bearing cage is $3\frac{1}{8}$ ", therefore, to obtain the desired 8 to 13 inch pounds pre-load, a pull of approximately 3 to 4 pounds is required on the spring scale.

- b. Add or remove bearing adjustment shims to obtain the correct bearing pre-load.

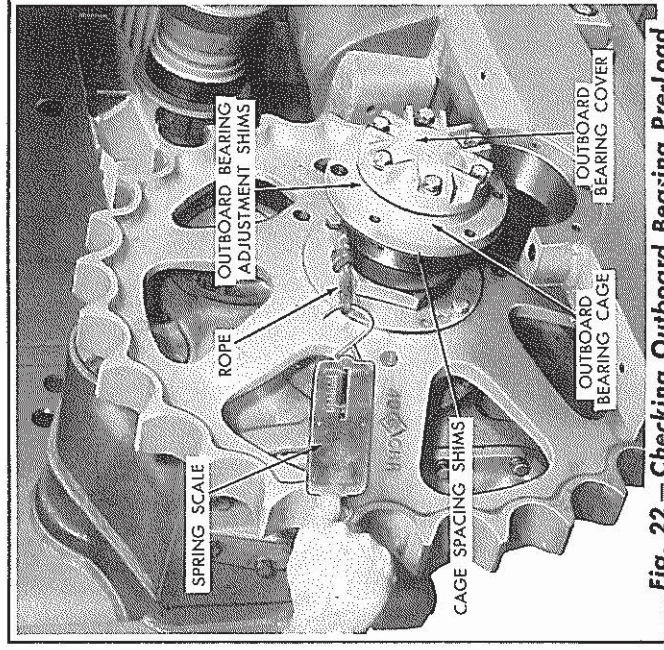


Fig. 22 — Checking Outboard Bearing Pre-Load

5. After the correct amount of bearing adjustment shims has been determined, remove the outboard bearing cover and the adjustment shims. Lubricate the sealing surfaces of the outer seal rings, then install the outboard bearing retaining nut and tighten it securely. When tightening the nut, the outboard bearing cage assembly will be pressed onto the shaft the remaining distance. Secure the retaining nut with the cotter pin.

6. Install the outboard bearing cover and the correct amount of bearing adjustment shims. Tighten the cover attaching capscrews securely.

7. Install the original amount of cage spacing shims, used between the outboard bearing cage and the truck frame, then place the

truck frame outboard bearing upper clamping cap in position on the outboard bearing cage. Start three (3) of the outboard bearing cage attaching capscrews to hold the clamping cap in position on the bearing cage; do not tighten the capscrews at this time. Move the truck frame assembly back into position under the tractor. Remove the blocking and lower the tractor onto the truck frame, making certain that the truck frame is positioned correctly under the tractor so that the hollow dowel for the truck frame pivot shaft enters the hole in the pivot shaft. Also make certain that the sprocket shaft outboard bearing cage seats properly on the truck frame. The truck frame outboard bearing upper clamping cap will serve as a guide to align the holes in the outboard bearing cage with the corresponding holes in the truck frame. Install the capscrews to attach the truck frame to the outboard bearing cage but do not tighten at this time.

8. Start the two outboard bearing upper clamping cap attaching capscrews but do not tighten at this time.
9. The truck frame pivot shaft caps and the pivot shaft brackets (welded to the housing) are center punched on the rear side for identification so that the caps may be reinstalled in their original positions. Install each pivot shaft cap in its original position and tighten the cap attaching capscrews to a torque of 300 lbs. ft.
10. Tighten all capscrews used to attach the outboard bearing cage to the truck frame.
11. Check the clearance between the truck frame pivot arm and the pivot shaft outer cap; a clearance of $1/16$ " should be obtained at this point. If the proper clearance is not obtained at this point, add or remove cage spacing shims, between the outboard bearing cage and the truck frame, to obtain the desired $1/16$ " clearance.
12. Remove the capscrews from the outboard bearing cage so that the sprocket guard may be installed. Install the sprocket guard and tighten the attaching capscrews securely.

13. Install the two (2) capscrews to attach the equalizing spring seat to the truck frame and tighten the capscrews securely.
14. Install the oil drain plug in the final drive housing. Fill the final drive to the proper level with the specified lubricant.

15. Install the fuel tank and connect the fuel lines.
16. Couple the track and adjust (refer to "TRACK INSTALLATION," Section XVII).