

Product: TRACK LOADER

Model: 941 TRACK LOADER 70H

Configuration: 941 TRAXCAVATOR 70H04264-UP (MACHINE) POWERED BY 3304 ENGINE

## **Disassembly and Assembly 941 & 951 TRACTOR POWER TRAIN**

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REG009570006

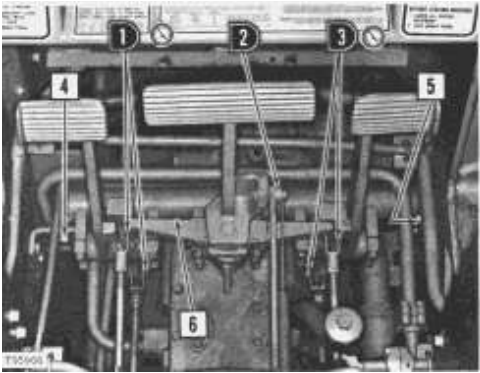
# **Steering Clutch And Brake Controls - (Pedal Steer Machines)**

SMCS - 1253-15; 1253-16

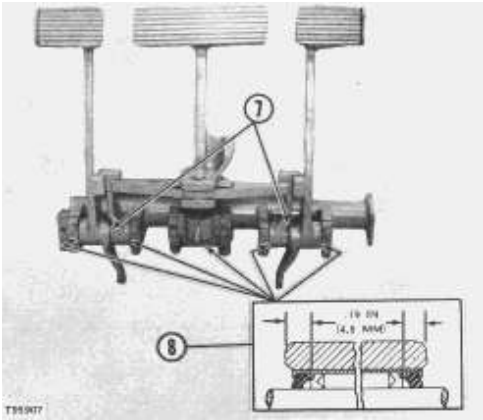
# **Steering Clutch And Brake Controls - (Pedal Steer Machines)**

## **Control Pedals Removal**

Remove the floor plates.

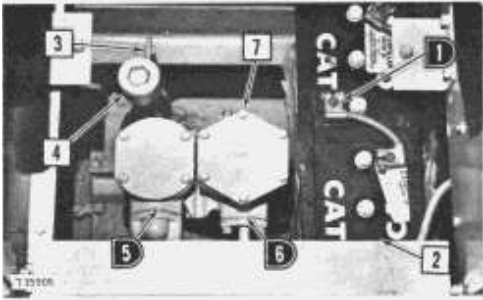


1-Left steering clutch and clutch brake control rods. 2-Ratchet and spring. 3-Right steering clutch and clutch brake control rods. 4-Bolts (two). 5-Bolts (two). 6-Bracket assembly and pedals.

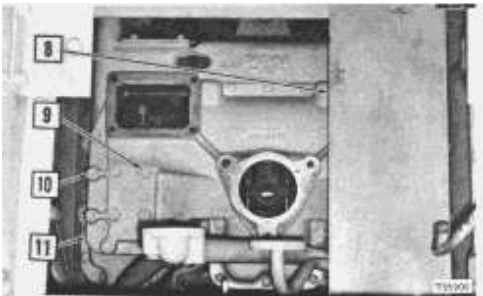


7-Shims necessary to provide clearance between the levers and pedals. 8-Pedal seals installation.

## Steering Clutch Release Hydraulic Control Removal

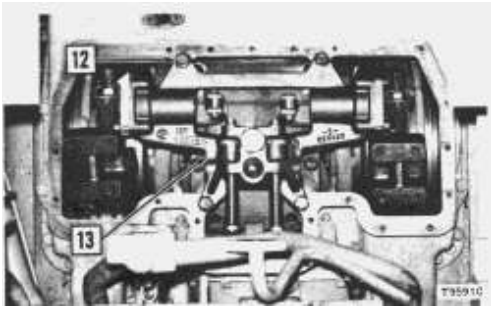


The seat cushion has been removed. Parts identified are: 1-Battery cables (three). 2-Batteries (two). 3-Oil level gauge and tube assembly. 4-Oil filler assembly. 5-Oil tube from the steering clutch case. 6-Oil tube from the steering clutch hydraulic pump. 7-Oil filter and strainer assembly.



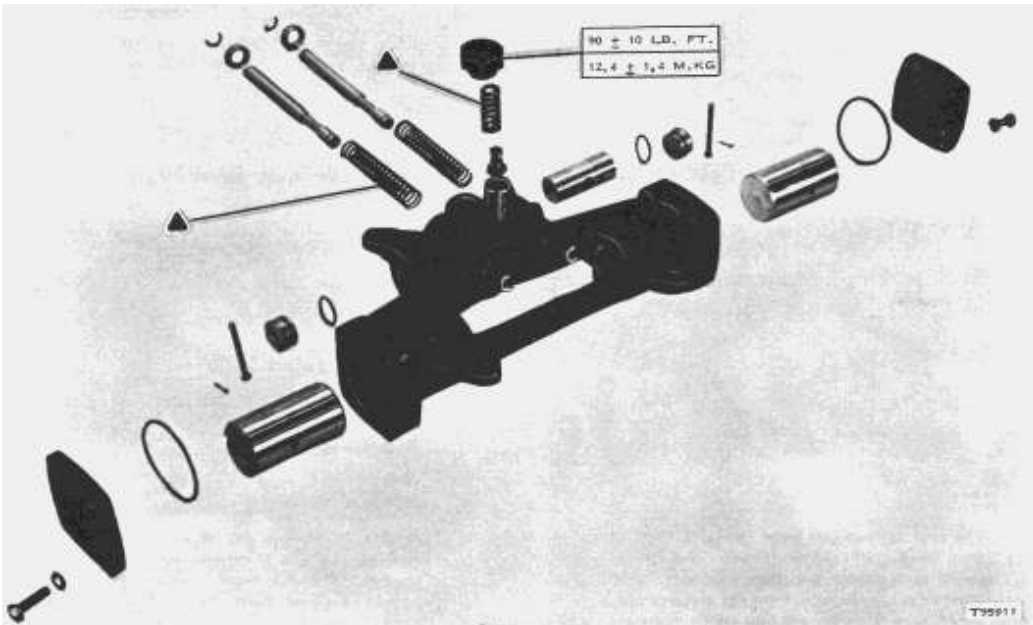
Preparing to remove the steering clutch hydraulic control cover. Parts to remove are: 8-Battery tray assembly. 9-Brake band anchor mounting bolts (eight). 10-Cover bolts (twenty-two). 11-Cover.

**NOTE:** When installing the cover it may be necessary to disconnect both brake lever control rods to attach the brake band anchors to the inside of the cover.



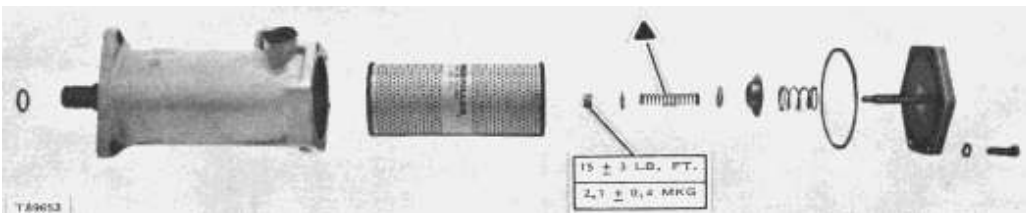
12-Bolts (four). 13-Steering clutch release hydraulic control.

## Steering Clutch Release Hydraulic Control Disassembly

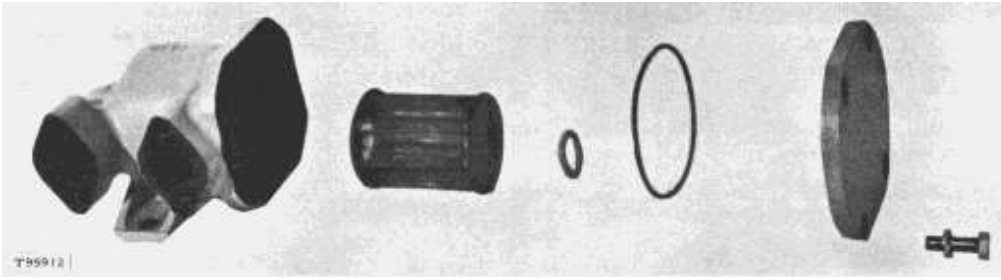


**NOTE:** The steering clutch release hydraulic pump removal and disassembly is covered in the TRANSMISSION LUBRICATION SYSTEM COMPONENTS group.

## Steering Clutch Oil Filter Disassembly

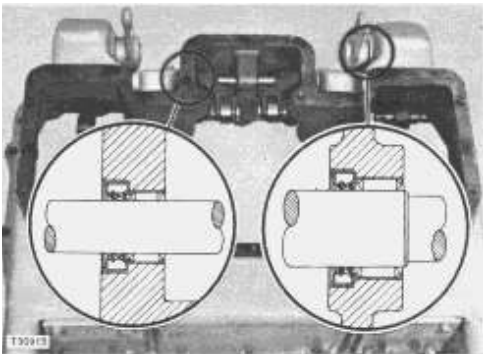
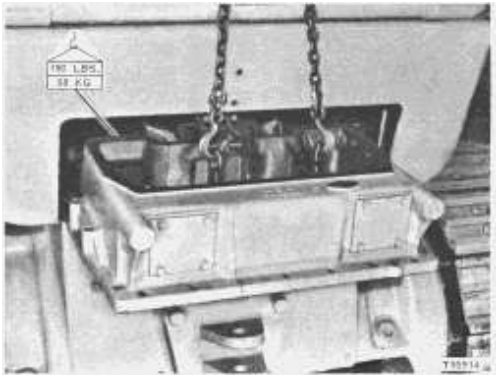


## Steering Clutch Oil Strainer Disassembly



## Steering Clutch And Bevel Gear Case Cover Removal

Remove seat cushion, steering clutch release hydraulic control cover, hydraulic control, both brake band anchors and disconnect the brake and steering clutch linkage rods.



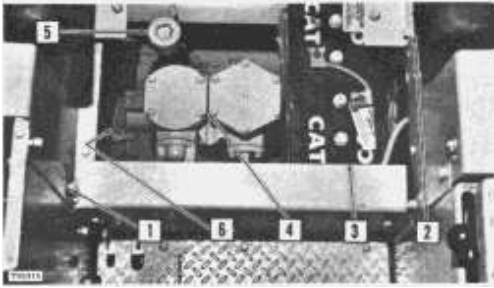
The lip of the seal faces out.

**NOTE:** When installing a roller bearing, push on the lettered end of the bearing.

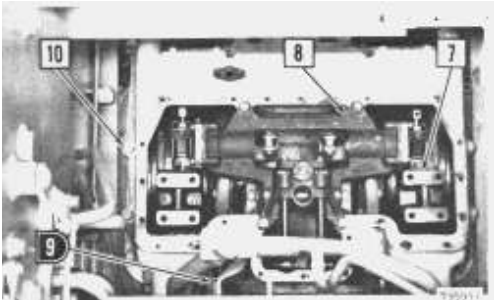
## Steering Clutch Case Cover Removal

Refer to **SERVICE GUIDE** for Preliminary Information.

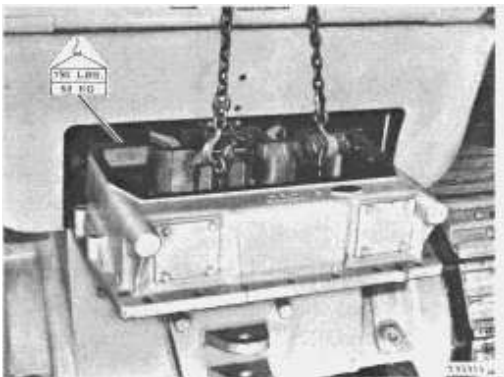
Remove the seat cushion.



Preparing to remove the steering clutch case cover as viewed from the operators compartment. 1-Hydraulic tank cover. 2-Left arm rest and seat support. 3-Batteries and battery shelf. 4-Oil filter and strainer. 5-Oil filler and oil level gauge tube. 6-Thirty two cover bolts and the cover.

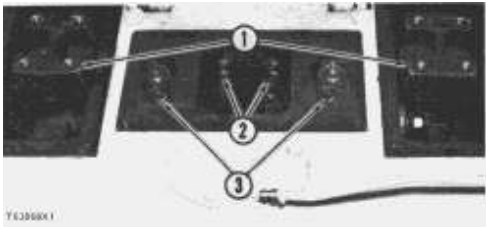


7-Anchors (two). 8-Steering clutch release hydraulic control. 9-Clutch and brake control rods (four). 10-Cover bolts (twenty-two).



## **Steering Clutch Case Cover Removal - (Lever Steer Machines)**

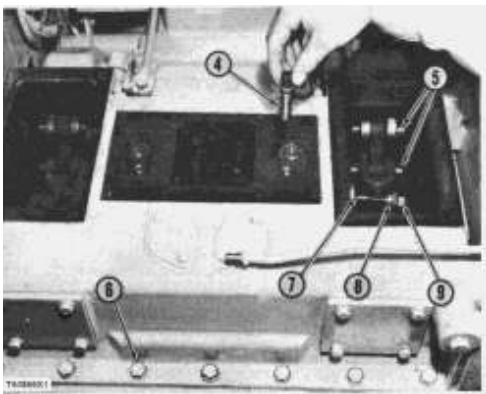
1. Remove seat cushion.
2. Disconnect steering clutch control rods and brake control rods from levers.
3. Remove covers from top of steering clutch case cover.
4. Remove brake anchors (1) by lifting up and rotating them toward the front.
5. Remove steering clutch control lever stops (2) and bellcrank pin screws (3).



#### DISCONNECTING STEERING CLUTCH LINKAGE

1-Brake anchors. 2-Steering clutch control lever stops. 3-Bellcrank pin screws.

6. Use a 3/8"-16 NC bolt to remove the bellcrank pin (4).
7. Remove brake anchor pins (5), rod end (7), adjusting nut (8) and locknut (9).
8. Remove bolts (6), install two 3/8"-16 NC forged eyebolts (1P7405) in top of cover and remove top cover. (Cover weighs approximately 200 lbs. (90,72 mkg)).

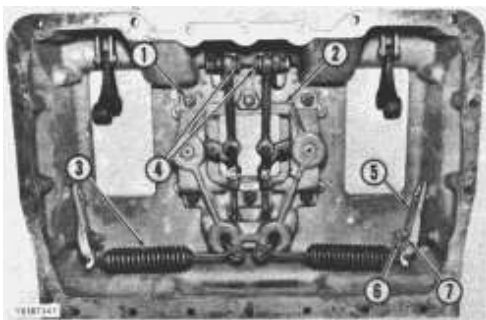


#### REMOVING PINS

4-Bellcrank pins (two). 5-Brake anchor pins (four). 6-Bolts. 7-Rod end. 8-Adjusting nut. 9-Locknut.

## Steering Clutch Control Mechanism - (Lever Steer Machines)

### Disassembly And Assembly

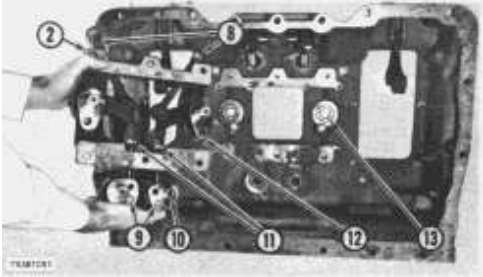


#### PREPARING TO REMOVE STEERING CLUTCH CONTROL MECHANISM

1-Bolts (six). 2-Support. 3-Springs (two). 4-Bolts. 5-Anchors (two). 6-Locknuts (two). 7-Adjusting nuts (two).

1. Remove the steering clutch case cover assembly as outlined in the covering topic.
2. Remove locknuts (6), adjusting nuts (7), anchors (5), springs (3), bolts (4), bolts (1) and support (2).

3. Remove bearings (13) from the steering clutch case cover and corresponding bearings from support (2).
4. Remove rods (8) and (11), shafts (10) and bellcranks (12). Remove pins (9) and bearings (13).
5. Inspect the bearings, bearing races, ends of the shafts (10) and bellcranks (12).
6. Prior to assembly, pack all bearings with ball and roller bearing lubricant.

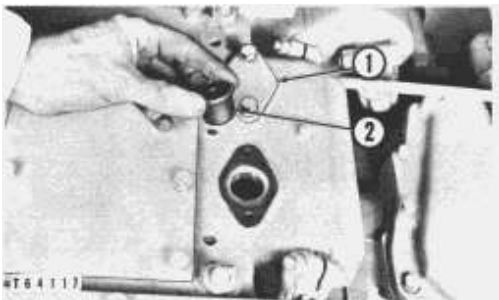


DISASSEMBLY OF STEERING CLUTCH CONTROL MECHANISM Lever Steered Machines Only  
 2-Support. 8-Rods. 9-Pins. 10-Shafts (two). 11-Rods. 12-Bellcranks (two). 13-Bearings (four).

7. Assemble in reverse order of disassembly and see the topic, STEERING CLUTCH CONTROL ADJUSTMENTS.

### **Steering Clutch Lever Bumper Stops**

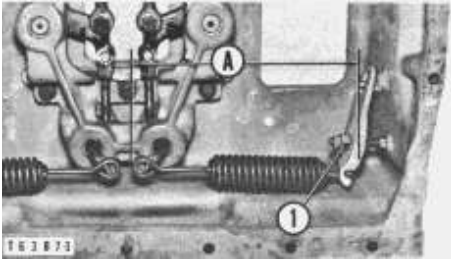
The rubber stop (2) absorbs the shock when a steering clutch control lever is released suddenly. Remove covers (1) to remove stops.



STEERING CLUTCH LEVER BUMPER STOP  
 1-Cover. 2-Stop.

### **Steering Clutch Control Adjustments**

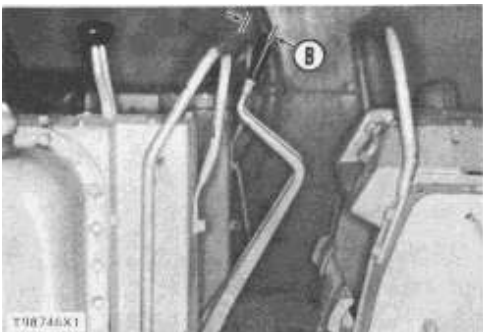
When assembling the steering clutch control, adjust adjusting nuts (1) so the booster spring length, dimension (A), is  $10.86 \pm .06$  in. ( $275,84 \pm 1,5$  mm). Make this adjustment with the steering clutch in the ENGAGED position.



#### BOOSTER SPRING ADJUSTMENT

1-Adjusting nut. A-Adjustment dimension.

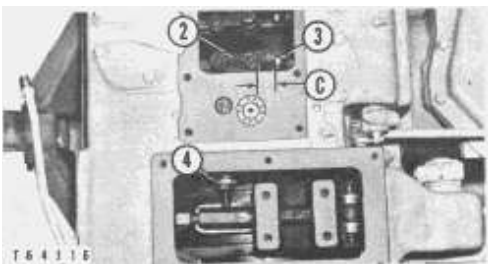
Position adjusting nut (4) so there will be the correct amount of free movement (B) (measured at the top of the lever without the handle) measured between the free forward position of the control lever and the position of the control lever when the steering clutch starts to disengage. The dimension (B) must be 3 in. (79 mm).



#### STEERING CLUTCH ADJUSTMENT

B-Adjustment dimension.

After the steering clutch case cover is installed and all linkage connected, engage the clutch, and adjust stop bolt (3) so the dimension (C) between the stop bolt and the front edge of bellcrank (2) is .90-.98 in. (22,9-24,9 mm).



#### ADJUSTING STEERING CLUTCH

2-Bellcrank. 3-Stop bolt. 4-Adjusting nut. C-Adjustment dimension.

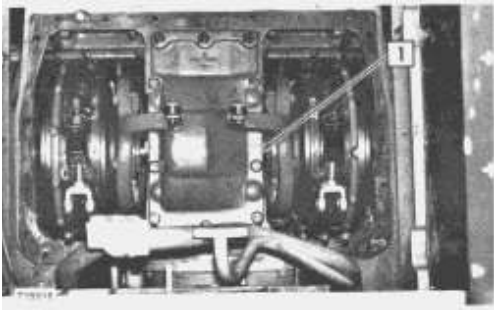
## **Steering Clutch And Bevel Gear Shaft Removal - (Pedal Steer Machines)**

**Refer to SERVICE GUIDE for Preliminary Information.**

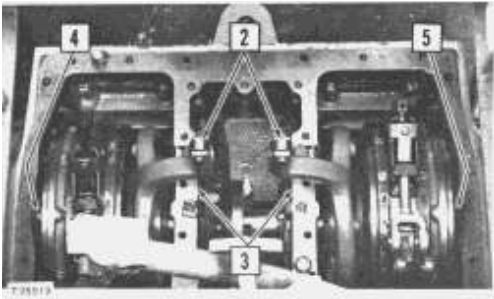
FT522 Bracket FT618 Lifting Bracket.

Remove the covers from the steering clutch and bevel gear case.



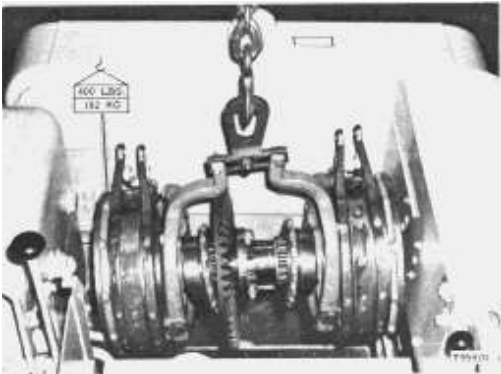


1-Pinion and bevel gear cover.



2-Rollers. 3-Bearing cage caps. The caps are marked L and R and should be installed on the correct side of the case. 4 and 5-Final drive pinion flange bolts (twenty).

**NOTE:** It is necessary either to raise the machine on blocks high enough to rotate the sprockets or to move the machine far enough to remove all of the bolts from the final drive pinion flanges.

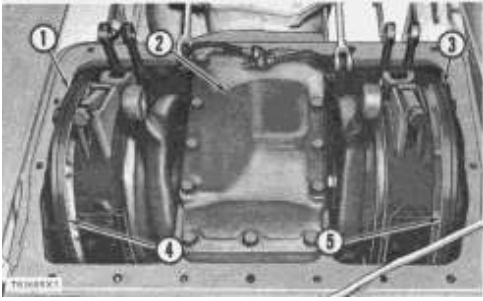


Steering clutch and bevel gear shaft lifting bracket made by combining FT522 Bracket and FT618 Lifting Bracket with an S1626 Bolt, 4B4283 Washer and 1B4331 Nut.

## **Steering Clutch And Bevel Gear Shaft Removal - (Lever Steer Machines)**

Refer to SERVICE GUIDE for Preliminary Information.

1. Remove the bolts which secure brake drums (4) and (5) to final drive pinion flanges (1) and (3).
2. Slide drums (4) and (5) toward center of machine.
3. Remove bevel gear cover (2).

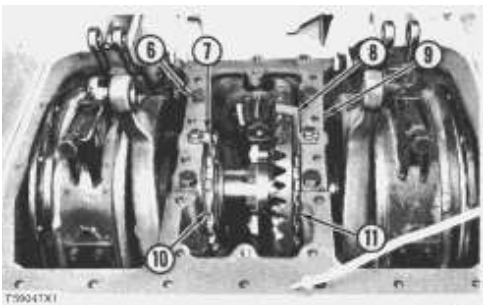


#### PREPARING TO REMOVE STEERING CLUTCHES

1-Final drive pinion flange. 2-Bevel gear cover. 3-Final drive pinion flange. 4-Brake drum. 5-Brake drum.

4. Remove lock (7) and oil deflector (8). Loosen adjusting nuts (10) and (11).

5. Remove caps (6) and (9).



#### PREPARING TO REMOVE STEERING CLUTCHES

6-Cap. 7-Lock. 8-Oil deflector. 9-Cap. 10-Adjusting nut. 11-Adjusting nut.

**NOTE:** Mark caps (6) and (9) so they will be installed in the same position.

6. Position steering clutch yokes in a vertical position and place a pipe spacer approximately 12 inches (304,8 mm) between yokes.

7. Install a bar through the spacer and the arms of the yokes and attach a hoist to the bar.

8. Remove the steering clutches. The steering clutches weigh approximately 550 lbs. (249 kg).

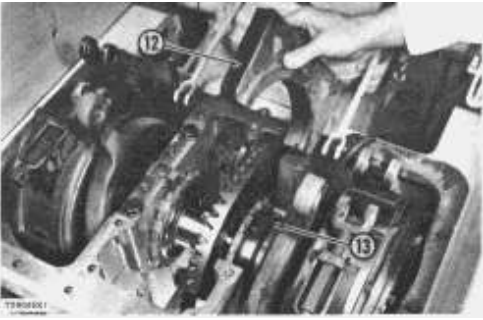
9. Install steering clutches in the reverse order of removal. Be sure the notch in each bearing cage is facing upward and balls on lower end of steering clutch yokes recess in their respective sockets.

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### NOTICE

**Carefully position the bevel gear in relation to the bevel pinion. Do not damage seal (13) when installing the steering clutches in the steering clutch case.**

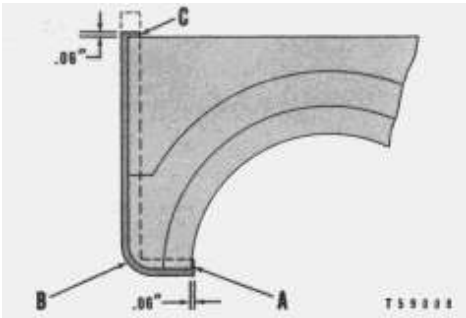
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## SEALS

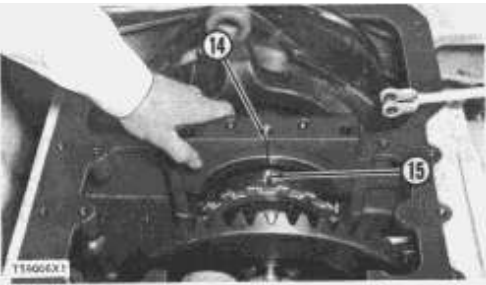
12-Seal. 13-Seal.

**10.** Install new seals (12) on caps. Apply 5H2571 Cement to the seal and groove in the cap. Install the seal, starting at (A) and forming around corner at (B). Do not stretch seal.



## INSTALLING SEAL

**11.** Install caps in case. Make a mark (14) on cap in line with the dowel in the cap. Align notch (15) in bevel gear shaft bearing cage with the mark (14). Use liquid soap on seals (12) and keep seals compressed during installation to prevent damaging. Trim ends of seal at (C) after tightening cap bolts.



## INSTALLING CAP

14-Mark. 15-Notch.

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## NOTICE

**If the dowel and notch (15) are not aligned when tightening the bearing cap, the dowel will be forced into the cap.**

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**12.** Adjust the bevel gear bearing preload as outlined in the topic, BEVEL AND PINION SETTING.

13. Adjust the tooth contact pattern and backlash as outlined in the topic, BEVEL GEAR AND PINION SETTINGS.

14. Install the bolts which retain the brake drums (4 and 5) to the flanges (1 and 3).

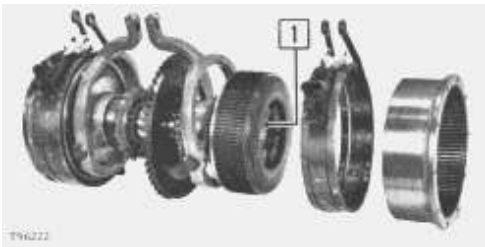
15. Install bevel gear cover using a new gasket.

16. Install steering clutch cover.

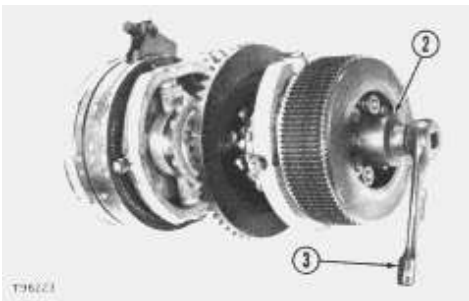
## **Steering Clutch Disassembly And Assembly - (Pedal Steer Machine Illustrated)**

5S6079 Socket. 5S6088 Sledge Wrench. 8B7548 Push Puller. 8B7550 Legs (two). 8B7560 Step Plate. 8B7561 Step Plate. 8H684 Ratchet Box Wrench. 8B7563 Handle. 8B7556 Adapter (two). 7S843 1 Compressor Plate. 6F25 or 3S6224 Pump Group. 1S4233 Hydraulic Puller. 1S6561 Adapter. 8M9008 Spacer. 2H3738 Bolt. 13/64" Drill [.203 in. (5,16 mm) dia.] 1/4"-20 Tap.

Remove the steering clutches and bevel gear shaft from the machine.



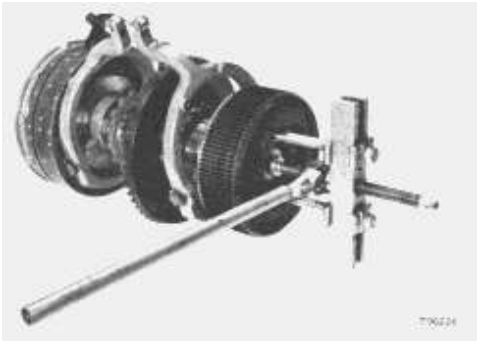
1-Bolt, lockwasher and clutch retaining nut lock.



Loosen the steering clutch retaining nut. Tools required are from 5S6093 Socket Tool Group. 2-5S6079 Socket. 3-5S6088 Sledge Wrench.

Remove the hollow head setscrews (4) from the parting line of nut (5) and plate assembly (7), then remove the nut.

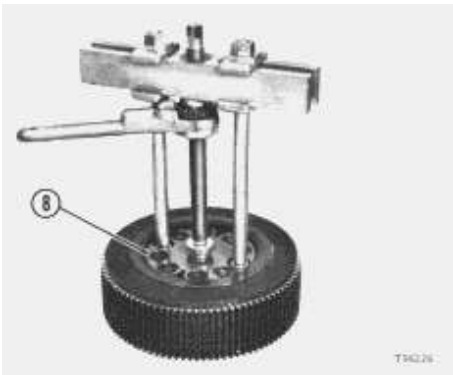
**NOTE:** Install thrust bearing (6) in the bearing cage with the widest side of the bearing inner race toward the nut. After nut (5) is installed and tightened, drill and tap two diametrical opposed 1/4"-20 thread holes .25 in. (6,3 mm) deep in the parting line of the nut and plate assembly (7). Install hollow head setscrews (4) in the two 1/4"-20 thread holes. Peen the nut and plate assembly around the setscrews to lock the parts together.



Loosen the clutch inner drum retaining nut one turn and remove the clutch from the bevel gear shaft by using tools: 8B7548 Push Puller, 8B7550 Legs (two), 8B7556 Adapter (two), 8B7560 Step Plate, 8H684 Ratchet Box Wrench and 8B7563 Handle.

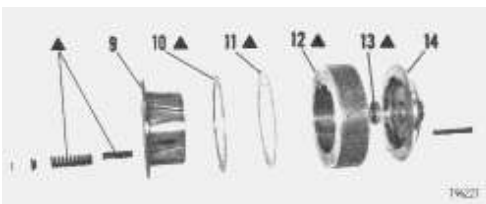


Steering clutch release bearing assembly disassembled. 4-1/4"-20 hollow head setscrew (two). 5-Nut. 6-Thrust bearing. 7-Plate assembly.



To remove or install sixteen locks (8) use an 8B7548 Push Puller, 8B7556 Adapters (two), 7S8431 Spring Compressor Plate, 8B7561 Step Plate and 8H684 Ratchet Box Wrench.

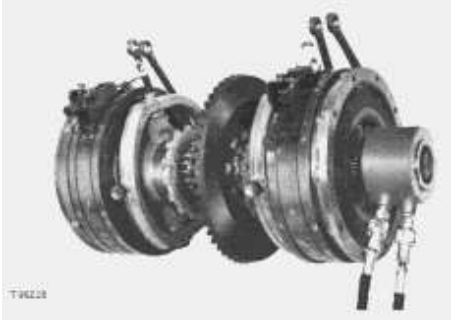
**NOTE:** Remove the disc assemblies (10) and the discs (11) from inner drum, numbering the discs and disc assemblies as they are removed. If the same discs are installed, they must be replaced on the inner drum with the same face up, but better wear distribution can be obtained if they are switched from the top to the bottom of the stack. If new discs are installed, no precaution is necessary as to which face is up.



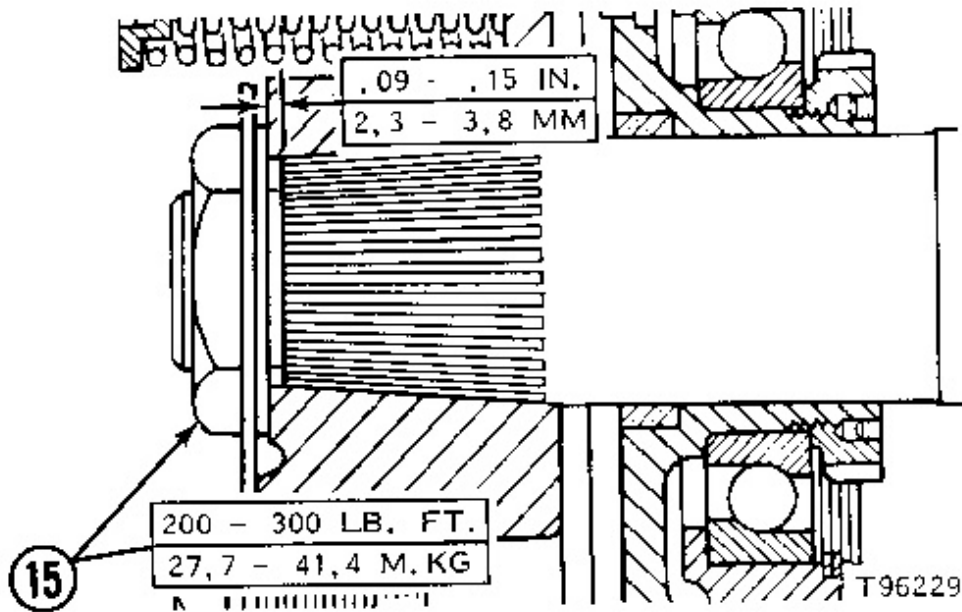
9-Drum. 10-Metallic faced disc assembly. 11-Metal disc (fifteen). 12-Friction material faced disc assembly (fifteen). 13-Pressure plate bearing. 14-Pressure plate.

**NOTE:** Metallic faced disc assembly (10) (pedal steer machines only) must be installed next to drum (9). A friction material faced disc assembly (12) is next to the pressure plate (14). A metal disc (11) is between each of the faced disc assemblies.

Assemble the thrust bearing assembly on the clutch pressure plate and install the clutch on the bevel gear shaft.



The clutch drum must be pressed on the bevel gear shaft with a pressure of 15-20 tons (13,6-18,1 M. tons). The tools are: 1S4233 Hydraulic Puller and 3S6224 Pump Group, 1S6561 Adapter, 8M9008 Spacer and a 2H3758 Bolt.



15-Clutch retaining nut.

**NOTE:** When the drum has been pressed on the bevel gear shaft, the dimension between the face of the drum and the splined shoulder on the shaft must be .09-.15 in. (2,3-3,8 mm).

Install the clutch retaining nut lock and lock bolt.

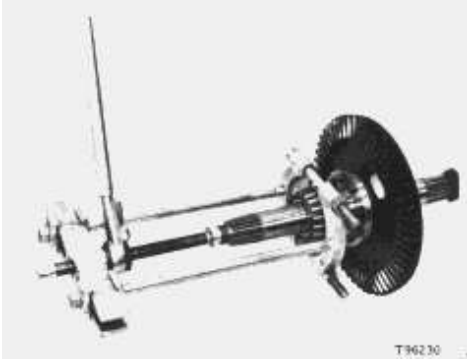
## **Bevel Gear Shaft Bearings And Bevel Gear Removal**

Refer to SERVICE GUIDE for Preliminary Information.

8B7548 Push Puller.8B7549 Legs (two).8B7551 Bearing Pulling Attachment.8B7560 Step Plate.8H684 Ratchet Box Wrench.8B7563 Handle.6F25 or 3S6224 Pump Group.7F9831 Cylinder Group.7F5283 Head.5F9885 Adapter.5F9888 Adapter Coupling.5F9892 Pin.1S6645 Sleeve Assembly.FT627 Spacer.

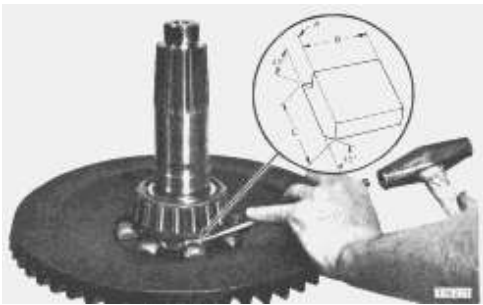
1. Remove the steering clutches and bevel gear shaft from the machine.
2. Remove the steering clutches from the bevel gear shaft.
3. Remove bearing cages from bevel gear shaft.

**NOTE:** Lever steer machines have a lip-type oil seal in each cage, the lip of the seal faces the bevel gear. Between the cage and bearing is an oil thrower. Note position of thrower before removing.

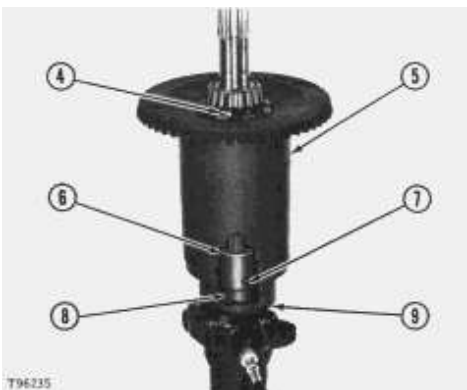


The tools to remove one of the bevel gear shaft bearings are: 8B7548 Push Puller, 8B7549 Legs (two), 8B7551 Bearing Pulling Attachment, 8B7560 Step Plate, 8H684 Ratchet Box Wrench and 8B7563 Handle.

4. Remove the nut and locks from the bolts which secure the bevel gear to the shaft.



Fabricate four FT627 Steel Spacers and drive them between four of the bolt heads and the bearing race as shown. A-.188 in. (4,78 mm). B-.75 in. (19,05 mm). C-.62 in. (15,75 mm).



The tools to remove the other bearing from the bevel gear shaft are. 4-Four fabricated spacers. 5-1S6645 Sleeve Assembly. 6-5F9888 Adapter Coupling. 7-5F9892 Pin. 8-5F9885 Adapter. 9-7F5283 Head, 7F9831 Cylinder Group and either 6F25 or 3S6224 Pump Group.

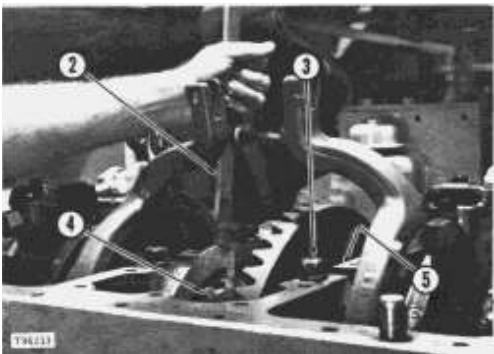
## **Bevel Gear And Pinion Setting - (Pedal Steer Machine Illustrated)**

8S8303 Spanner Wrench. 8S2328 Dial Indicator Group or; 7H1942 Indicator. 7H1945 Holding Rod. 7H1948 Snug. 8S2327 Post. 8S2329 Base.

### **Bevel Gear Shaft Bearing Preload**

The bevel gear and pinion must be located to obtain the correct tooth contact. The pinion can be moved toward or away from the centerline of the bevel gear and bevel gear shaft with shims located between the pinion shaft bearing cage and the transfer gear case. Adjusting nuts, on each bevel gear shaft bearing cage, permit moving the bevel gear toward or away from the centerline of the bevel pinion shaft. Moving either the bevel gear or the pinion affects both backlash and tooth contact so the two must be adjusted at the same time.

1. Position the bevel gear with the approximate backlash. On earlier machines the backlash is etched on the bevel gear. The bevel gear in later machines is not etched. If either the bevel gear or bevel pinion is new, the correct backlash is .005-.011 in. (0,13-0,28 mm).



2-8S8303 Spanner Wrench. Use to preload the bevel gear shaft bearings. 3-Bearing cap bolts (four). 4-Left bearing cage nut. 5-Right bearing cage nut.

2. Tighten bearing cap bolts (3) to a torque of  $150 \pm 10$  ft. lbs. ( $20,8 \pm 1,4$  mkg), then loosen each bolt two turns.

3. Rotate the bevel gear shaft while tightening left bearing cage nut. (4). Tighten the nut to a torque of 150-200 lb. ft. ( $20,8-27,6$  mkg), then loosen the nut. Retighten the nut until it is snug (no end play in bevel gear shaft). Further tighten the nut one notch to line up with the lock.

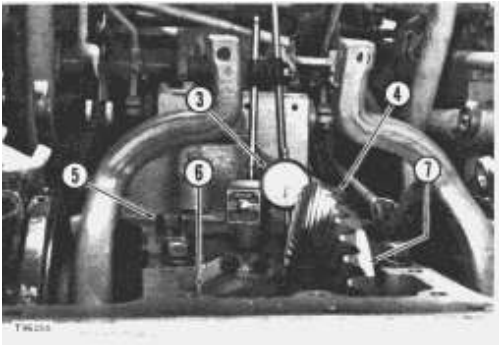
4. Tighten the bearing cap bolts and check the backlash between the pinion and bevel gears. Adjust if necessary.

### **Backlash Adjustment**

The amount of backlash between each bevel gear and pinion set on original installation, is determined and set at the factory. On a replacement gear or pinion, adjust the backlash to .005-.011 in. (0,13-0,28 mm).



1. Lock the bevel pinion so it cannot rotate.
2. Position the dial indicator (3) on a bevel gear (4) tooth.



Use 8S2328 Dial Indicator Group (3) to check the backlash of bevel gear (4). 5-Bearing cap bolts (four). 6-Left bearing cage nut. 7-Right bearing cage nut.

**NOTE:** Either 8S2328 Indicator Group or 7H1942 Indicator, 7H1945 Holding Rod, 7H1948 Snug, 8S2327 Post and 8S2329 Base can be used to check the bevel gear backlash.

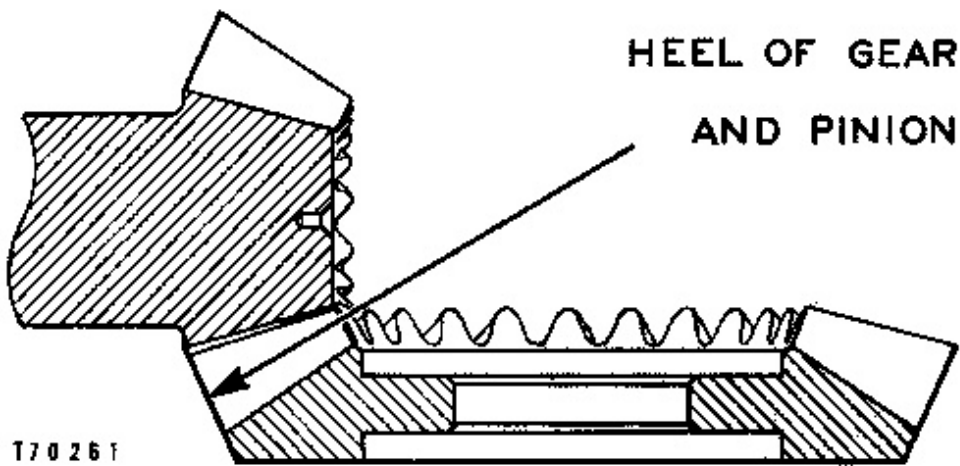
3. Loosen bearing cap bolts (5) two turns.
4. Rock the bevel gear back and forth.
5. The amount of backlash is the difference in readings on the dial indicator.
6. Check the backlash at four different locations on the bevel gear, taking the lowest reading as the position to check the backlash.
7. If the reading is too great, decrease the backlash by loosening the left adjusting nut (6) and tightening the right adjusting nut (7) an equal amount.
8. To increase backlash, loosen the right adjusting nut (7) and tighten the left adjusting nut (6) an equal amount.

**NOTE:** Bevel gear shaft bearing preload will be maintained only if the bearing slack caused by loosening one adjusting nut is compensated for by tightening the other adjusting nut an equal amount.

9. Install the locks on the bearing cage nuts [tighten the cage nut (if necessary) to install the nut lock]. Tighten the bearing cap bolts to  $150 \pm 10$  lb. ft. ( $20,8 \pm 1,4$  mkg). Recheck the backlash and if correct check the bevel pinion location.

### **Bevel Pinion Location**

If the same pinion shaft is reinstalled in the same bevel gear case, use the same shims between the pinion shaft bearing cage and the transfer gear case that were removed. The pinion can be located by observing the tooth contact pattern made by the pinion gear teeth on the bevel gear teeth. This can be done in the following manner.

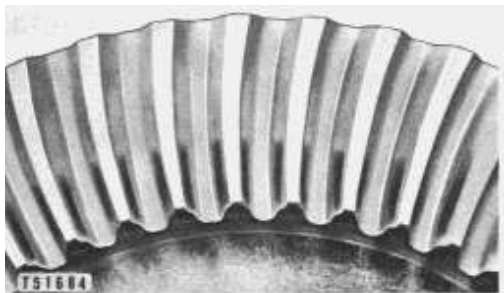


This illustrates aligning the bevel gear and pinion.

Use sufficient shims between the pinion shaft bearing cage and the bevel gear case to align the heel ends of the bevel gear and pinion gear teeth. This will place the pinion in nearly the correct relationship with the bevel gear.

Adjust the bevel gear backlash as described in the topic, BACKLASH ADJUSTMENT. This should give a very close adjustment.

To further check the adjustment, chalk the bevel gear teeth (discolor). Rotate the pinion and bevel gear to produce a tooth contact pattern on the bevel gear teeth. Correct tooth contact starts near the toe and extends approximately 30 per cent of the length of a bevel gear tooth.



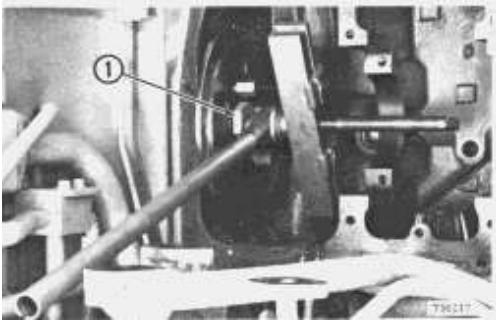
If tooth contact is more on one side of a tooth or is near the heel of a tooth, the location of the pinion shaft must be readjusted. Add or remove shims to relocate the pinion shaft. Readjust the bevel gear backlash. Produce another tooth contact pattern. It may be necessary to make several pinion and bevel gear adjustments to obtain both correct tooth contact and backlash.

## **Final Drive Pinion Removal And Installation**

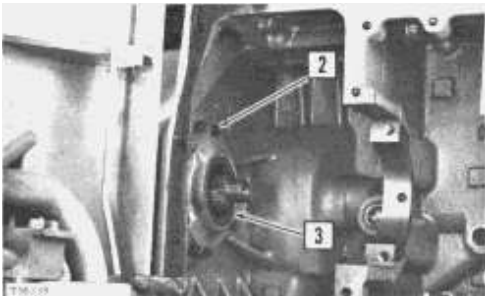
8B7548 Push Puller.8B7556 Adapters (two).8B7561 Step Plate.8H684 Ratchet Box Wrench.8B7563 Handle.6F25 or 3S6224 Pump Group.1S6561 Adapter.8M9008 Spacer.2H3758 Bolt.1S4233 Hydraulic Puller.

Remove the steering clutches and bevel gear shaft from the machine.

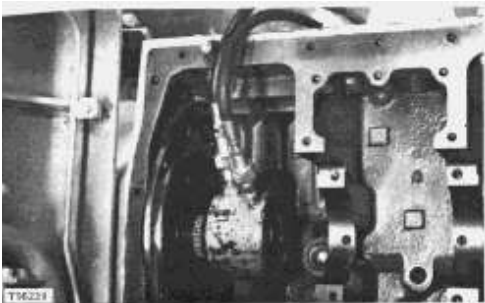
Remove the bolt and lock from the pinion flange retaining nut.



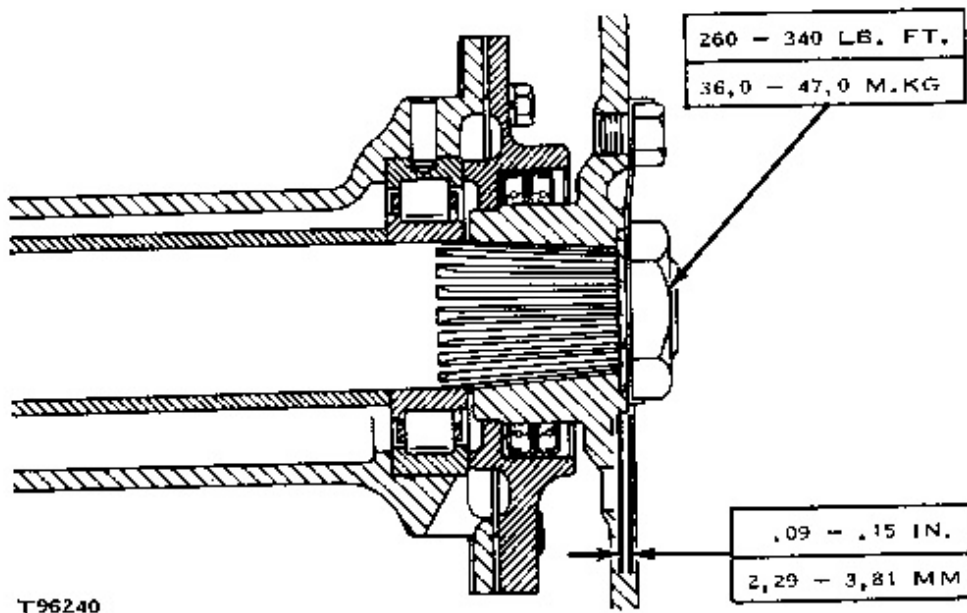
To remove the final drive pinion flange from the pinion, loosen retaining nut (1) one turn and use tools: 8B7548 Push Puller (no legs), 8B7556 Adapters (two), 8B7561 Step Plate, 8H684 Ratchet Box Wrench, 8B7563 Handle and two 5/8"-18 bolts, 5 in. (127,0 mm) long.



2-Bolts and lockwashers (six each). 3-Bearing cage and pinion.

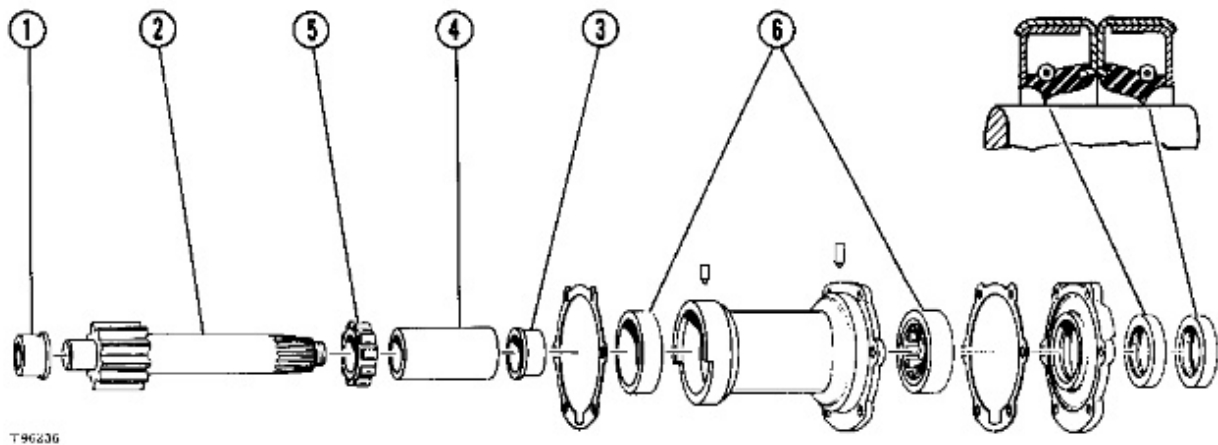


The final drive pinion flange must be pressed onto the pinion shaft with a pressure of 15-20 tons (13,6-18,1 M tons). The tools required are: 1S4233 Hydraulic Puller, 6F25 or 3S6224 Pump Group, 1S6561 Adapter, 8M9008 Spacer and a 1 1/4"-7 bolt 4 in. (101,6 mm) long (2H3758 Bolt).



## Final Drive Pinion And Bearing Cage Disassembly

8B7548 Push Puller.8B7550 Legs (two).8B7549 Legs (two).8H684 Ratchet.8B7563 Handle.8B7560 Step Plate.8H663 Bearing Pulling Attachment.



1,2 Remove bearing inner race from pinion. Tools required are: 8B7548 Push Puller, 8B7550 Legs (two), 8H684 Ratchet Box Wrench, 8B7563 Handle 8H663 Bearing Pulling Attachment, 8B7560 Step Plate. Refer to the GENERAL INSTRUCTIONS.

2,3,4 Remove bearing inner race from pinion. Tools required are: 8B7548 Push Puller, 8H684 Ratchet Box Wrench, 8B7563 Handle, 8H663 Bearing Pulling Attachment, 8B7560 Step Plate. Refer to the GENERAL INSTRUCTIONS.

2,5 Remove roller bearing from pinion. Tools required are: 8B7548 Push Puller, 8B7549 Legs (two), 8H684 Ratchet Box Wrench, 8B7563 Handle, 8H663 Bearing Pulling Attachment, 8B7560 Step Plate. Refer to the GENERAL INSTRUCTIONS.

6 If bearing races are to be replaced, remove the dowels and drive the bearing outer races from the bearing cage. The end of each dowel is threaded for a 1/4" - 20 bolt.

# Final Drive Removal And Installation

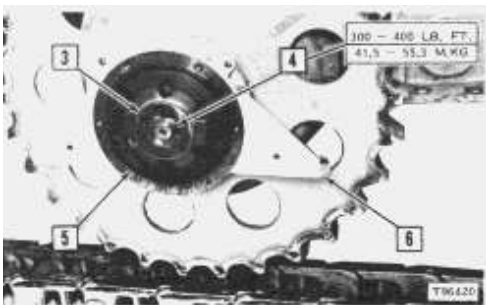
Refer to **SERVICE GUIDE** for Preliminary Information.

8H705 Puller.8B7560 Step Plate.FT664 Washer.

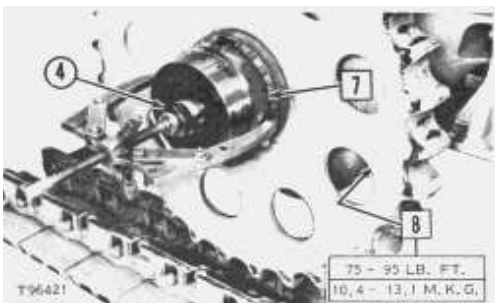
## Removing Final Drive as a Unit



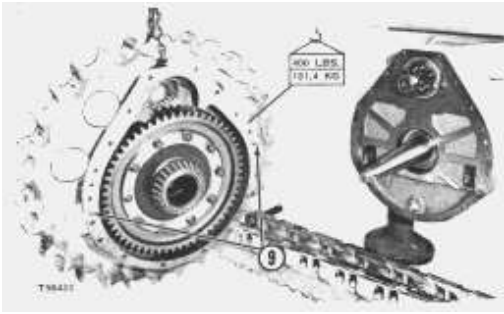
1-Bolts (six). 2-Cover.



3-Lock. 4-Nut. 5-Retainer assembly. 6-Support assembly.

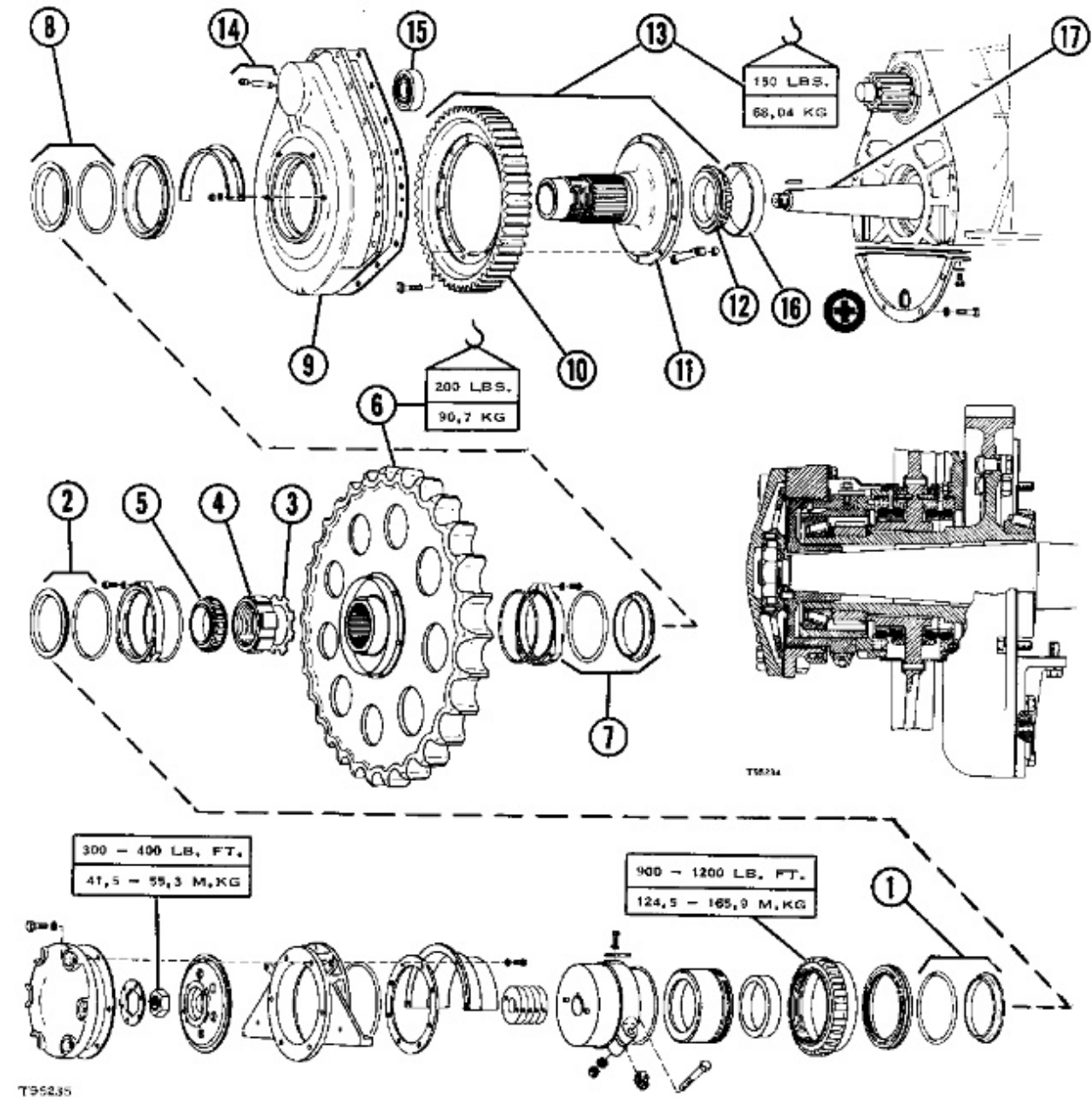


Install nut (4) flush with the end of the sprocket shaft before using the 8H705 Puller, FT664 Washer and 8B7560 Step Plate to remove holder assembly (7). 8-Bolts (eighteen).



Use 3/8"-16 forcing screws (9) to separate the final drive cover from the steering clutch case.

## Final Drive Disassembly



1S8966 Seal Installer. 7F9306 Spanner Wrench. 6F25 or 3S6224 Pump Group. 7F9831 Cylinder Group. 5F9306 Arms (three). 5H9909 Pins (three). 7M8199 Adapter (three). 2H6024 Spacer. 2B4207

Yoke.2H6024 Spacer.5F9888 Coupling Adapter.5F9884 Adapter.5F9890 Sprocket Shaft Puller Group.Spacer 3-3.5 in. (76-89 mm) diameter, 5 in. (127 mm) long.

1,2,7,8 Use 1S8966 Seal Installer to remove or install Duo-Cone Seals. Refer to the GENERAL INSTRUCTIONS.



3,4,5,11 Bend nut lock (3) and use 7F9306 Spanner Wrench to turn nut (4) and force bearing (5) off hub (11).



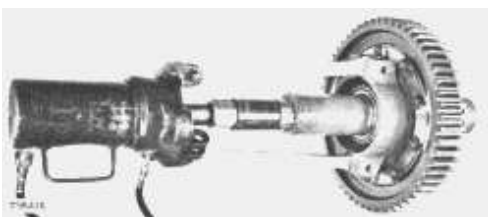
4,6,11 To remove sprocket (6) from hub (11), install nut (4) .25 in. (6,3 mm) from the sprocket and use these tools: 6F25 or 3S6224 Pump Group, 7F9831 Cylinder Group, 5F9306 Arms (three), 5H9909 Pin (three), 7M8199 Adapter (three), 2H6024 Spacer.



9 Use two 3/8"-16 forcing screws to separate cover (9) from the steering clutch case.

13 Gear (10), hub (11) and bearing (12) are removed as a unit.

11, 12 Remove bearing (12) from hub (11). Tools required are: 6F25 or 3S6224 Pump Group, 7F9831 Cylinder Group, 5F9306 Arms (two), 2B4207 Yoke, 2H6024 Spacer, and a spacer 3-3.5 in. (76-89 mm) diameter, 5 in. (127 mm) long.



14, 15 Remove plug and dowel (14) from cover (9) and remove bearing (15). The end of the dowel is threaded for a 6-40 thread puller screw.

16 The hub bearing cup (16) can be removed from the steering clutch case by arc welding a bead around the inside diameter of the cup. As the welded bead cools the bearing cup shrinks.

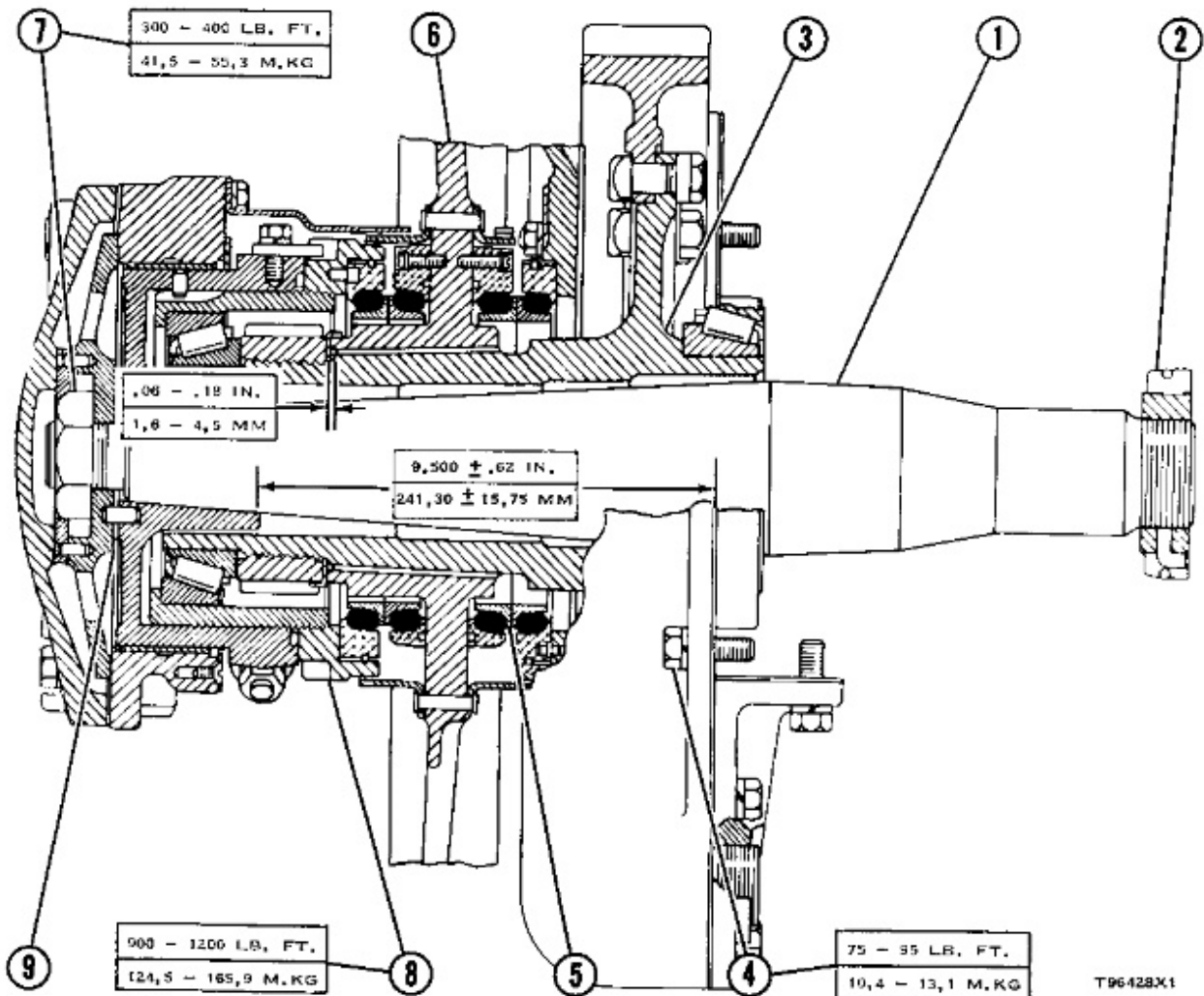
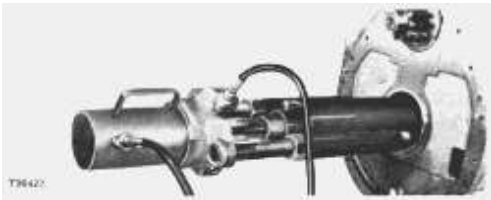
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## NOTICE

An improper arc welder ground can cause arcing which will damage bearings in the machine. Make certain the ground lead is firmly attached to a bare metal surface on the steering clutch case.

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17 Sprocket shaft (17), is pressed into the steering clutch case and is retained in position with a nut. To remove the sprocket shaft, remove the retaining ring and pin from the nut and loosen the nut three turns. After the puller tools have been used to loosen the shaft, remove the retainer nut as the shaft is removed from the case. The puller tools to use are: 6F25 or 3S6224 Pump Group, 7F9831 Cylinder Group, 5F9888 Coupling Adapter, 5F9884 Adapter, 5F9890 Sprocket Shaft Puller Group.



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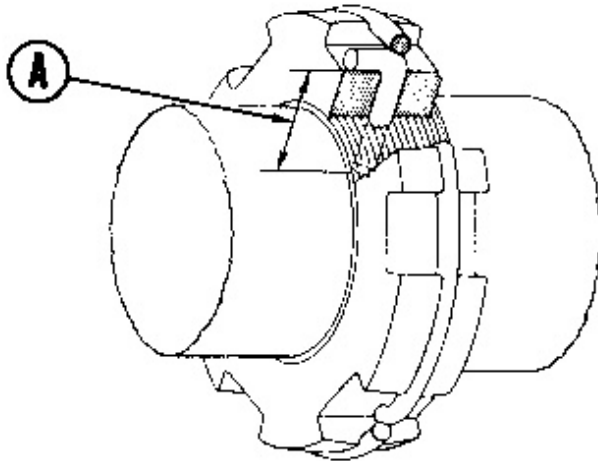


5F9884 Adapter.5F9889 Plug.5F9892 Coupling Pin.5F9888 Coupling Adapter.7F5288 Pusher Group.1S8966 Seal Installer.7F9306 Spanner Wrench.7F9831 Cylinder Group.6525 or 3S6224 Pump Group.

1, 2 Insert sprocket shaft (1), with the key way up, into the steering clutch case far enough to install retainer nut (2). Use a 5F9884 Adapter, screwed up against the shoulder of the shaft, with a 5F9892 Coupling Pin to hold 5F9889 Plug in place. Drive the shaft into the case until the distance between the face of the holder assembly (hand held in place on the shaft) and the parting line between the final drive cover and the case is  $9.500 \pm .062$  in. ( $241,30 \pm 15,75$  mm).



2 After retaining nut (2) is tightened, drill a 5/16in. hole in one of the notches of the nut and into the shaft to a total depth of 1.19 in. (30,2 mm), dimension (A). Place the lock pin in the hole and install in the ring to hold the pin in place.



T92299

A-1.19 in. (30,2 mm) dimension.

3, 4 Install final drive gear and hub (3) on the shaft and install the final drive cover. Cover bolt (4) torque is 75-95 lb. ft. (10,4-13,1 mkg).

5 Install Duo-Cone seal (5) with a 1S8966 Seal Installer.

6, 3 Sprocket (6) installing pressure is 20-25 tons (18,2-22,7 M. tons). Tools to use are: 6F25 or 3S6224 Pump Group, 7F9831 Cylinder Group, 7F5288 Pusher Group, 5F9888 Coupling Adapter (10), 5F9884 Adapter (11), 5F9892 Coupling Pin (12). The distance between the face of the sprocket hub and the shoulder of the spline on hub (3) should be .06-.18 in. (1,6-4,5 mm).

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