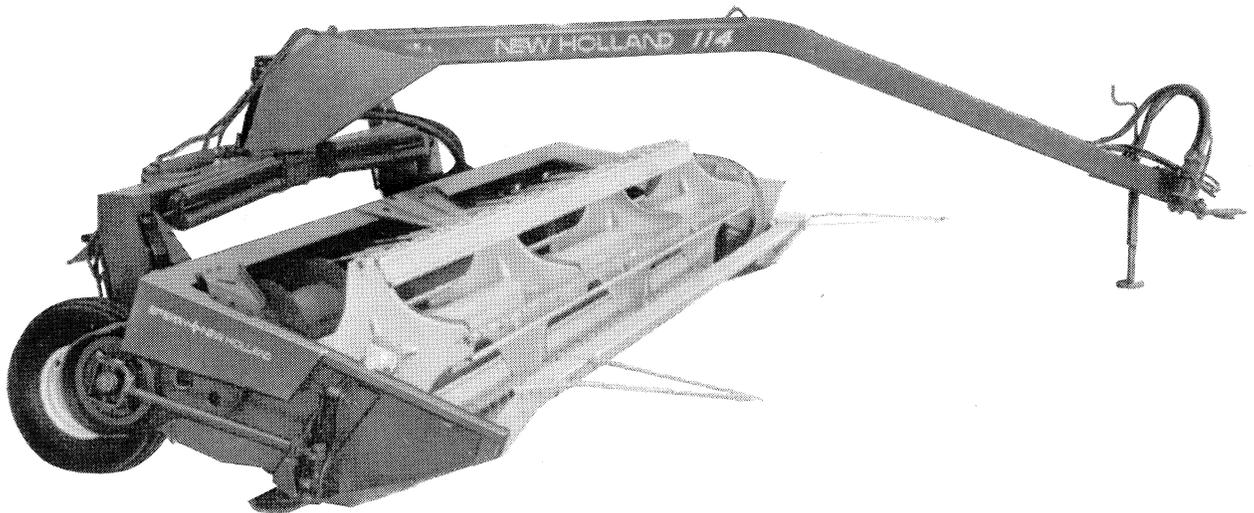


Product: New Holland Windrower Pivot Tongue 114 Service Information Manual
Full Download: <https://www.arepairmanual.com/downloads/new-holland-windrower-pivot-tongue-114-service-information-manual/>

SERVICE MANUAL WINDROWER PIVOT TONGUE 114 40011410

SPERRY  NEW HOLLAND



Sample of manual. Download All 24 pages at:

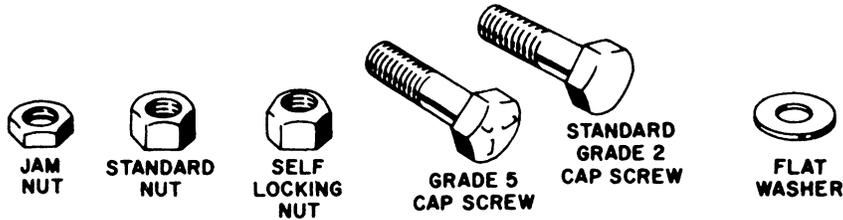
<https://www.arepairmanual.com/downloads/new-holland-windrower-pivot-tongue-114-service-information-manual/>

Reprinted

GENERAL INFORMATION

“Left” and “right” are determined from a position facing in the direction of travel of the unit during operation.

Install a lock washer on all bolts unless a jam nut or self-locking nut is specified. Install a flat washer on all slotted holes except under the heads of carriage and truss head bolts.



SPERRY  NEW HOLLAND					
MINIMUM HARDWARE TIGHTENING TORQUES IN FOOT POUNDS					
FOR NORMAL ASSEMBLY APPLICATIONS					
	GRADE 2 SAE 	 GRADE 5 SAE 	GRADE 8 SAE 		
BOLT SIZE	UNPLATED OR PLATED	UNPLATED	PLATED	UNPLATED	PLATED
1/4"	5	8	7	12	10
5/16"	10	18	15	26	21
3/8"	18	31	25	48	39
7/16"	31	53	43	75	60
1/2"	45	82	66	115	92
5/8"	82	170	140	235	190
3/4"	155	290	230	415	330
7/8"	165	430	340	600	480
1"	250	640	510	900	720

CONTENTS

GENERAL INFORMATION 2

INTRODUCTION 3

TROUBLESHOOTING HYDROSTATIC SYSTEM 3

HYDROSTATIC PUMP AND GEARBOX 6

INDEX 22

INTRODUCTON

This manual provides, in condensed form, service and maintenance information which will serve as a guide when repairing or rebuilding a Sperry New Holland Model 114 Pivot Tongue Windrower.

The first section details a step-by-step procedure to trouble-shoot the hydrostatic system. Each component must be tested separately to isolate a problem. Detailed information to rebuild each component is outlined separately.

The operator's manual issued with each machine should be used in conjunction with this manual as much of the information contained herein is condensed or supplementary in nature.

TROUBLESHOOTING HYDROSTATIC SYSTEM

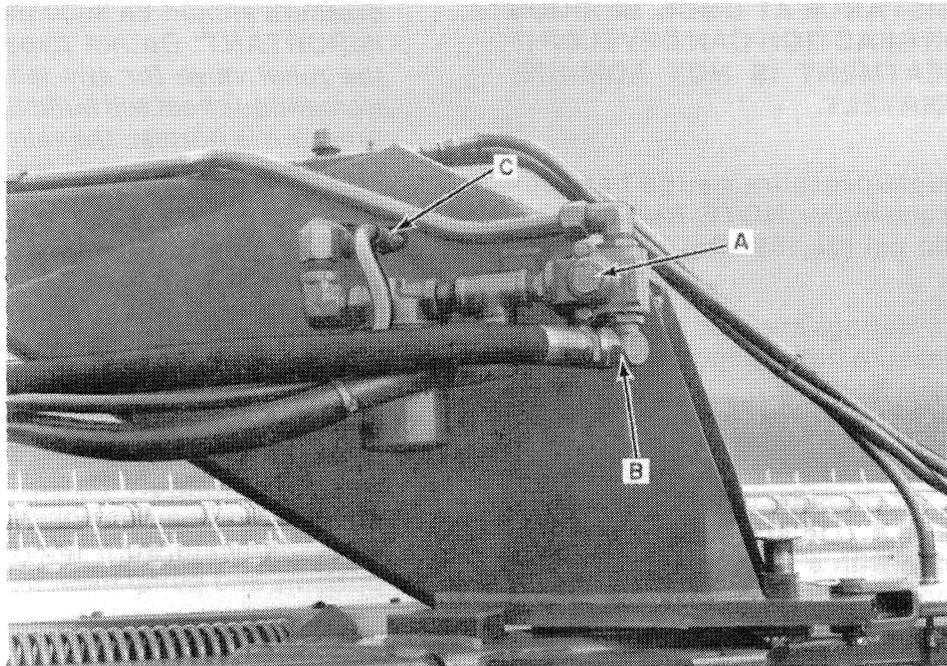


FIGURE 1

The hydrostatic system consists of a pump and gearbox assembly, relief valve, motor, and filter. The high pressure oil from the pump goes through the pressure relief valve and then to the motor. Return oil is filtered between the motor and the tongue reservoir.

If a unit loses hydraulic power, use the following procedure to troubleshoot the system.

1. Check the hydrostatic oil level in the tongue as outlined in the operator's manual.
2. Change the oil filter.
3. Remove the relief valve, A, Figure 1, from the housing. Clean the valve and inspect for wear or contamination. Inspect O-rings for possible wear and replace if worn or damaged. Reinstall valve or replace and then test machine.

HYDRAULIC SYSTEM



WARNING: GAUGES, GAUGE FITTINGS, AND HOSES MUST HAVE OPERATING PRESSURE RATINGS OF AT LEAST 25 PERCENT HIGHER THAN HIGHEST PRESSURES OF THE SYSTEM.

NEVER ADJUST RELIEF VALVES TO HIGHER PRESSURE THAN THOSE SPECIFIED BY THE EQUIPMENT MANUFACTURER.

WARNING: ALWAYS PROTECT THE SKIN AND EYES FROM ESCAPING FLUID UNDER PRESSURE. FLUID UNDER PRESSURE CAN HAVE SUFFICIENT FORCE TO PENETRATE THE SKIN, CAUSING SERIOUS PERSONAL INJURY.

BEFORE DISCONNECTING LINES OR FITTINGS, BE SURE TO RELIEVE ALL PRESSURE. BEFORE APPLYING PRESSURE TO THE SYSTEM, BE SURE ALL CONNECTIONS ARE TIGHT AND THAT LINES, PIPES, AND HOSES ARE NOT DAMAGED.

IF INJURED BY ESCAPING FLUID, OBTAIN MEDICAL ASSISTANCE AT ONCE. SERIOUS INFECTION OR REACTION CAN DEVELOP IF MEDICAL TREATMENT IS NOT ADMINISTERED IMMEDIATELY.

4. Install a high-pressure gauge between relief valve and motor. **NOTE: Relief valve is set for 3500 psi (24,133 kPa) and is non-adjustable.**

JIC - 1-5/16" fittings are used at B, Figure 1, on high pressure hose to motor and elbow on relief valve housing.

Later units have a 1/4" pipe plug at A, Figure 1A. Remove plug and install pressure gauge. **NOTE: On older units elbow can be removed and a 7/16" hole can be drilled and threaded with a 1/4" pipe tap if fittings are not readily available to install pressure gauge in line.**

5. Block the left telescoping PTO assembly attached to the upper roll to drive the sickle. A large wrench can be used on the square part of the PTO assembly. Turn machine by hand until wrench is blocked against frame.



WARNING: MAKE SURE THAT WRENCH IS PROPERLY SECURED BEFORE STARTING TRACTOR TO CHECK PRESSURE.

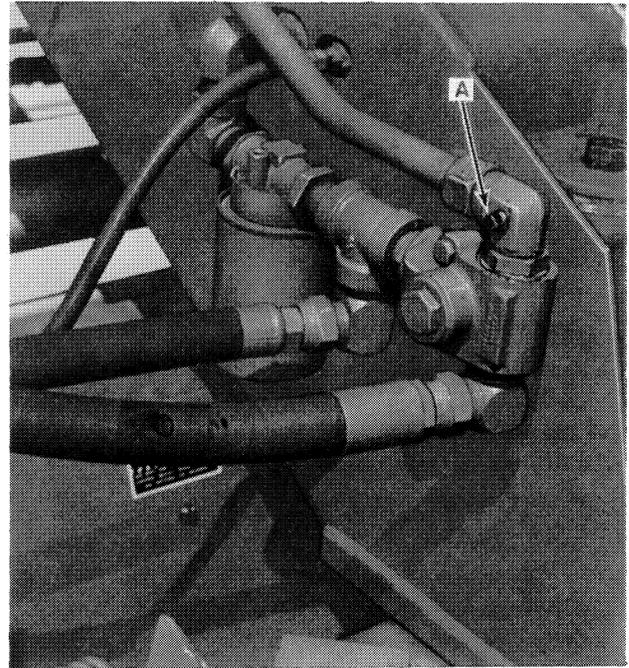


FIGURE 1A

Start the tractor and engage the PTO. The pressure should be 3500 psi (24,133 kPa). **IMPORTANT: Do not bypass oil through the relief valve for any length of time as tremendous heat will build up in the valve. If pressure is normal, the relief valve is functioning properly and leakage must be checked at pump and motor.**

6. If a flow meter is not available to check case drain oil volume at pump, oil can be collected in a measurable container. Disconnect case drain return line, A, Figure 2, and install a 3/8" pipe plug in tongue.
7. Start the tractor and time a certain volume of oil collected. Normally the flow should be approximately 1 1/2 gallons (5.5 l) per minute. Any amount over 2 gallons (7 l) would indicate worn internal pump components and pump must be rebuilt.
8. If pump oil volume is normal, check volume at motor case return line. Remove line at C, Figure 1.

Normal flow should be approximately 1 1/2 gallons (5.5 l) per minute. Any amount over 2 gallons (7 l) would indicate worn internal motor components and motor must be rebuilt.

HYDROSTATIC OIL

The hydrostatic oil must be kept free of dirt, dust, water, rust etc. or severe damage could occur to the hydrostatic components. If a catastrophic failure occurs with a pump or motor, the system must be drained.

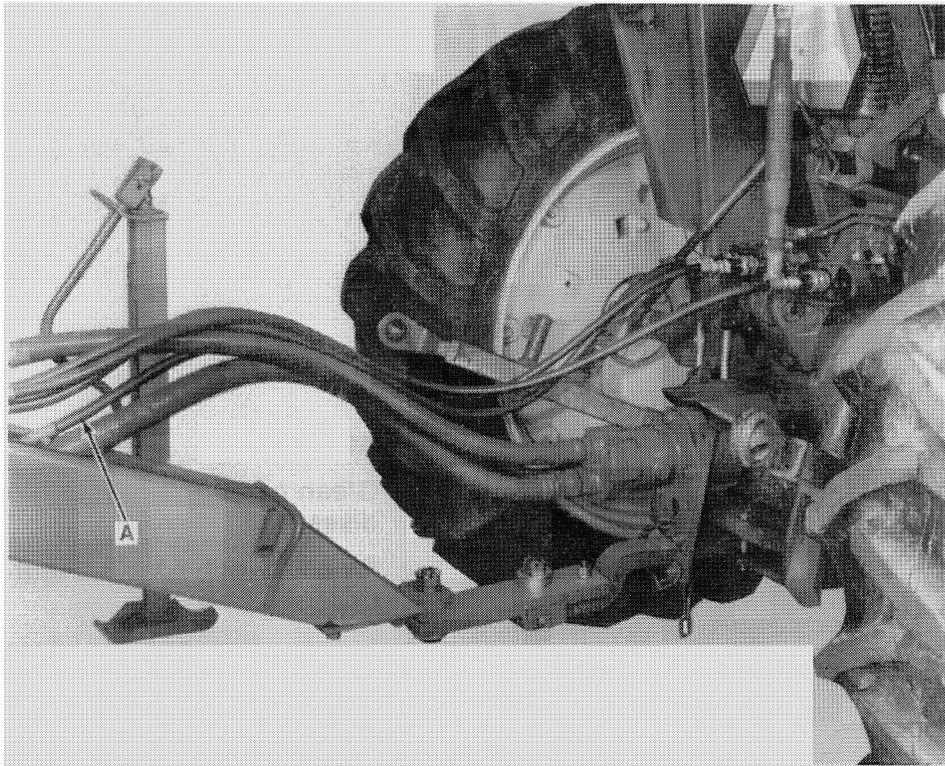


FIGURE 2

Drain oil again and add Dexron II to dipstick marking shown at A, Figure 4. Make sure tongue is level when checking oil. It will require approximately 20 gallons (75.7 l) of oil to fill reservoir to recommended level.

Install a new oil filter after the system has been cleaned and again after 50 hours of operation.

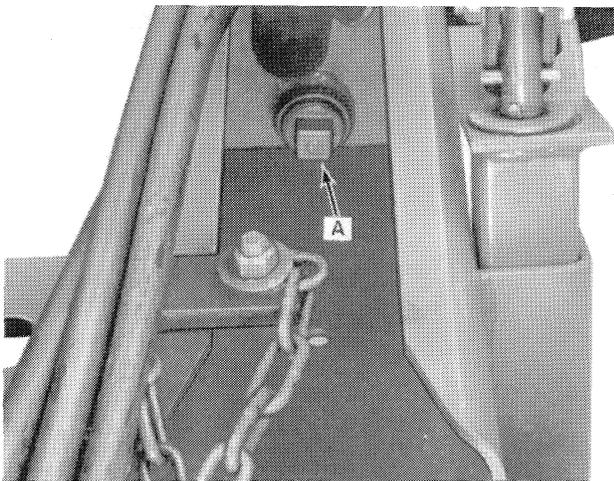


FIGURE 3

To drain the oil, lower the front of the tongue as low as possible. Remove drain plug, A, Figure 3. Remove lines from pump and motor and clean hoses and tubing with air and solvent.

Flush tongue by spraying solvent under pressure into rear of tongue so metal chips, etc. will be moved to front of tongue. Clean chips and foreign material from front of tongue through drain port.

Install pump, motor, hose, tubing and drain plug. Install new filter and add five gallons (19 l) of hydraulic oil marked Dexron II.

Start tractor and run at about $\frac{1}{2}$ throttle to allow full flow through filter. This procedure will help clean system if any contamination was left in system.

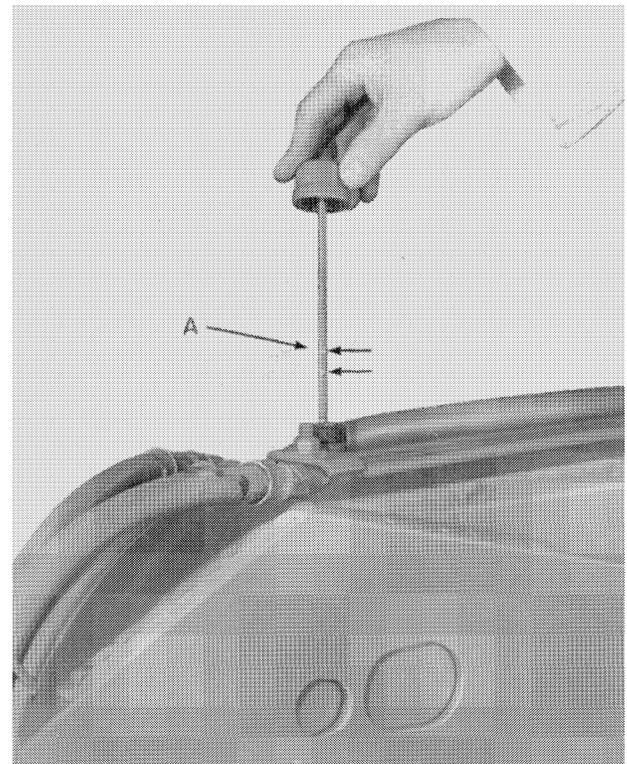


FIGURE 4

HYDROSTATIC PUMP AND GEARBOX

1. Remove the three hydraulic oil lines, A and B, Figure 5.
2. Remove the torque arm and bracket from the pump. The bracket is secured with two bolts, A, Figure 6, that secure the gearbox to the pump.

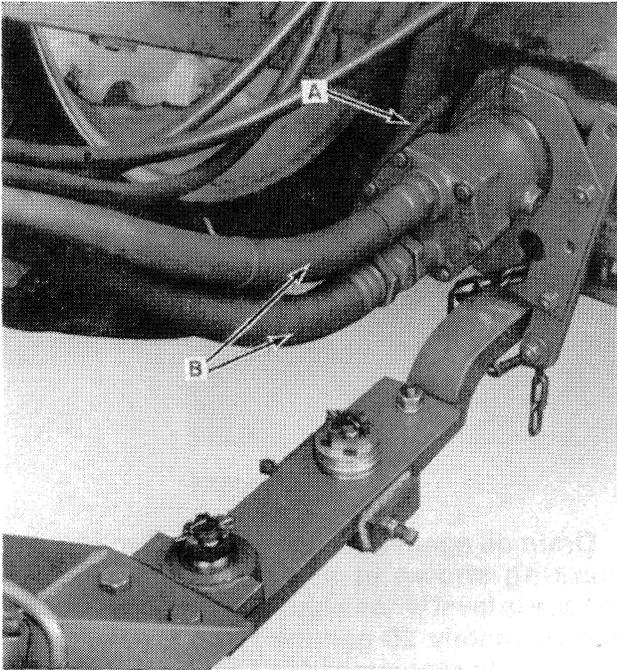


FIGURE 5

DISASSEMBLY

1. Clean outside of pump thoroughly before disassembling pump.
2. Remove snap ring, A, Figure 7, and remove gear, B.
3. Remove rear snap ring after gear is removed.
4. Remove six cap screws to remove back plate, A, Figure 8, from housing assembly, B. Use a soft hammer to loosen back plate and then pull back plate straight out.
5. Remove O-ring, C, Figure 8.

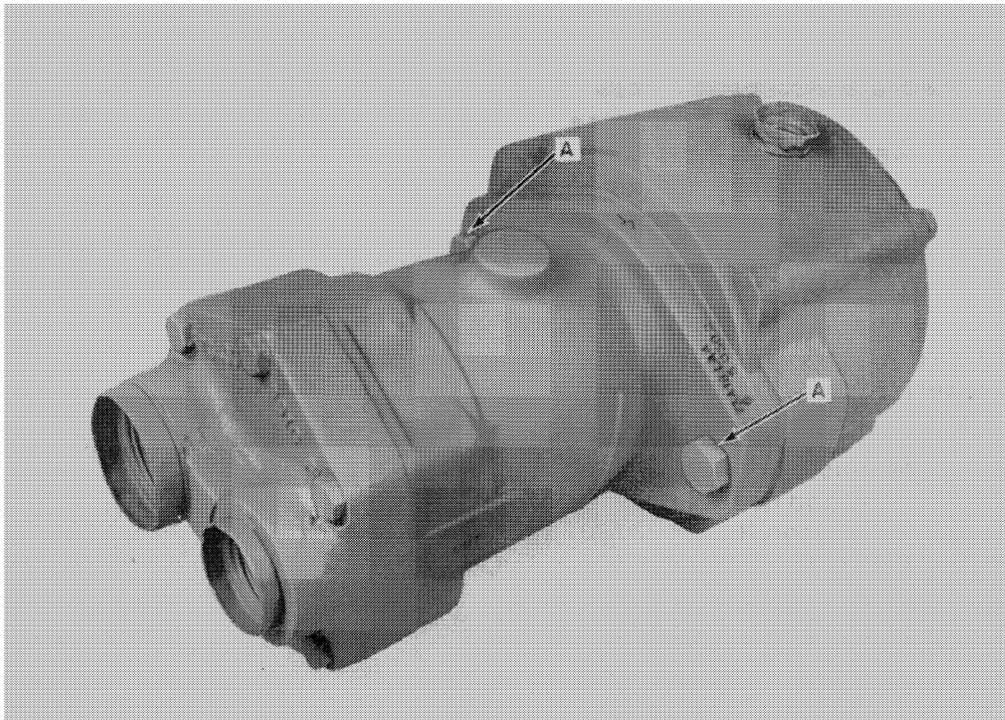


FIGURE 6

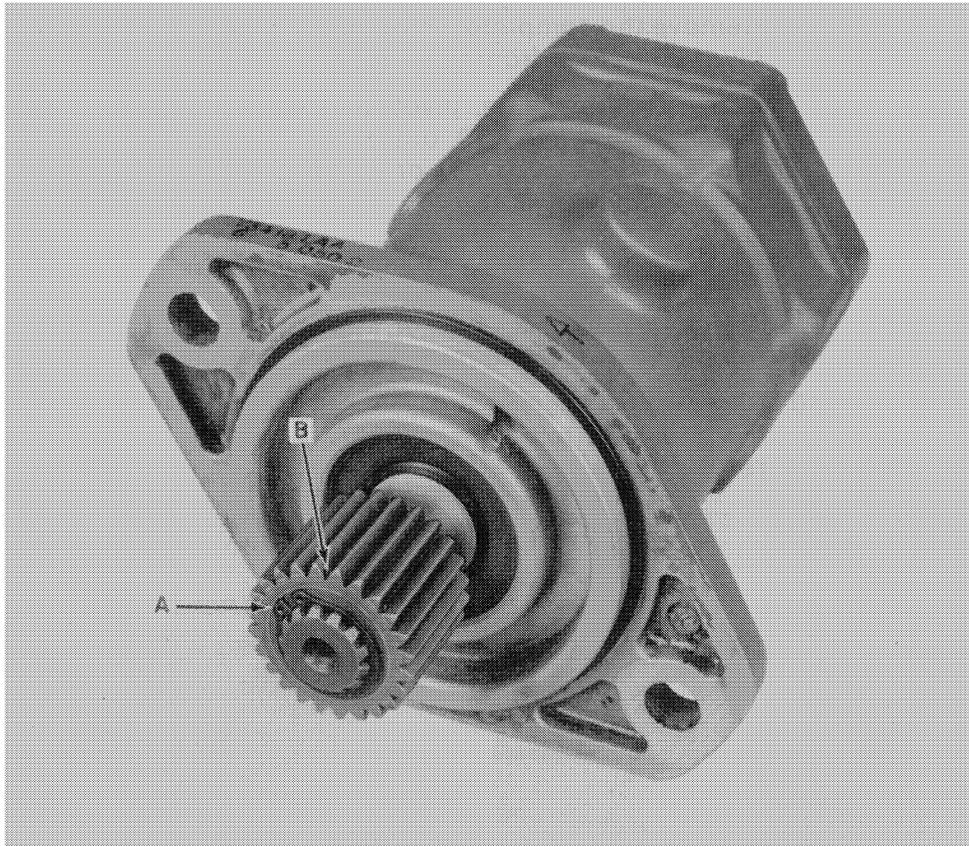


FIGURE 7

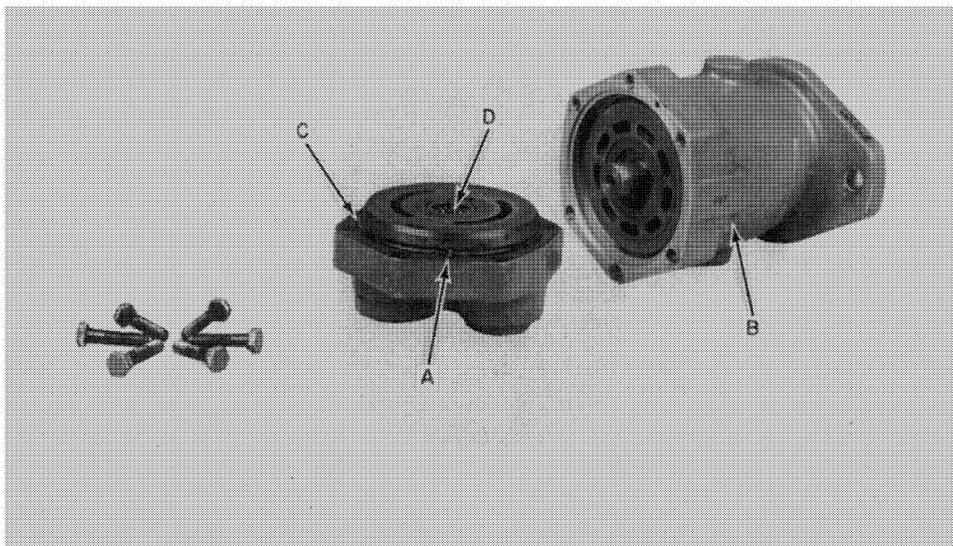


FIGURE 8

6. Remove the complete piston block assembly, A, Figure 9, from the housing.
7. Lift the piston plate, pivot, and shoe assemblies, B, Figure 10, out of the rotating block. Lay these parts on cardboard to avoid damage.
8. Remove cam plate, B, Figure 9, and lay on cardboard.
9. To remove the drive shaft, A, Figure 11, first remove the retaining ring, B.
10. Remove the shaft seal, C, Figure 12, from the housing. Remove washer, D, and then remove drive shaft from housing.

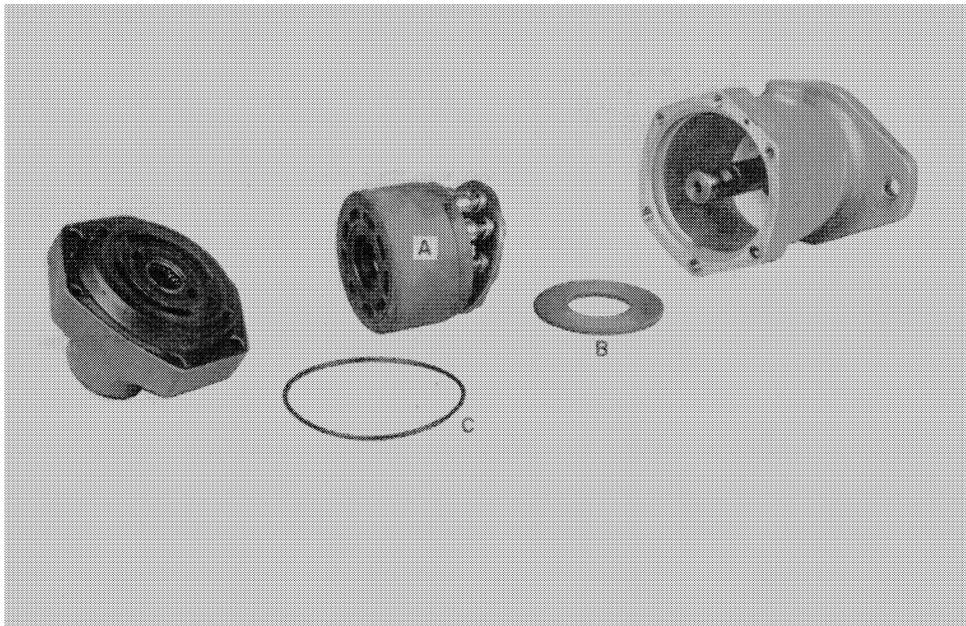


FIGURE 9



FIGURE 10

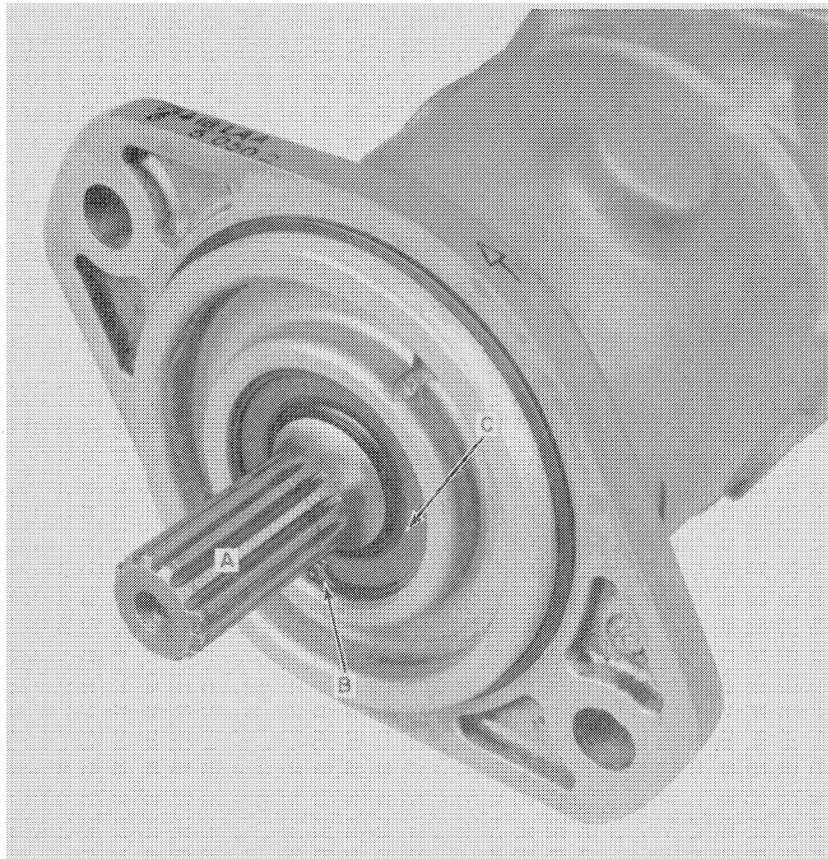


FIGURE 11

11. Remove snap rings, thrust washers, and thrust bearing at E, Figure 12.
12. Remove the needle bearing, D, Figure 8, and A, Figure 13, if they show wear or excessive play.

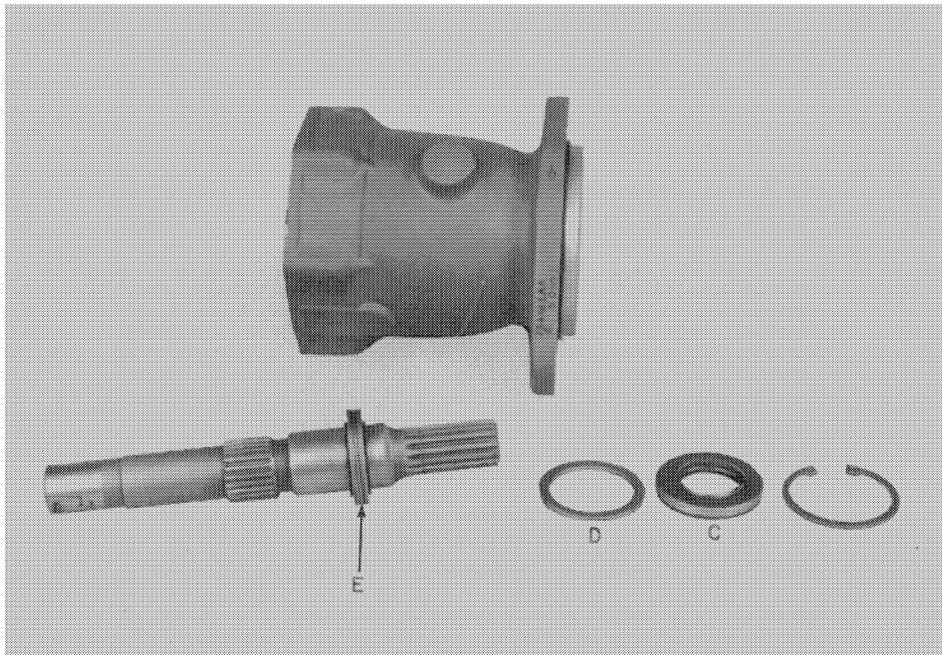


FIGURE 12

INSPECTION

1. Wash all parts thoroughly in a cleaning solvent.
2. Examine all parts for wear or fretting. The shoe assemblies should be smooth and free of scoring. They should fit snugly in the rotating block. The face of the shoes should be flat and free of scoring and flaking. Do not lap shoes.

NOTE: Rotating group is only serviceable as a complete kit. Refer to Service Parts Catalog.

ASSEMBLY

1. Lubricate all moving parts with STP before assembly.
2. Install snap rings, thrust bearing, and thrust washers, E, Figure 12, on drive shaft.
3. Install drive shaft in housing and install washer, D, Figure 12.
4. Lubricate inside (ID) of oil seal and install as shown at C, Figure 11. Install retaining ring, B.
5. Make sure the pivot and shoe assemblies are installed in the rotating block as shown in Figure 10.
6. Lubricate cam plate, B, Figure 9, and install in housing.
7. Install the piston block assembly, A, Figure 9, in housing assembly. The shoe assemblies must contact the cam plate.

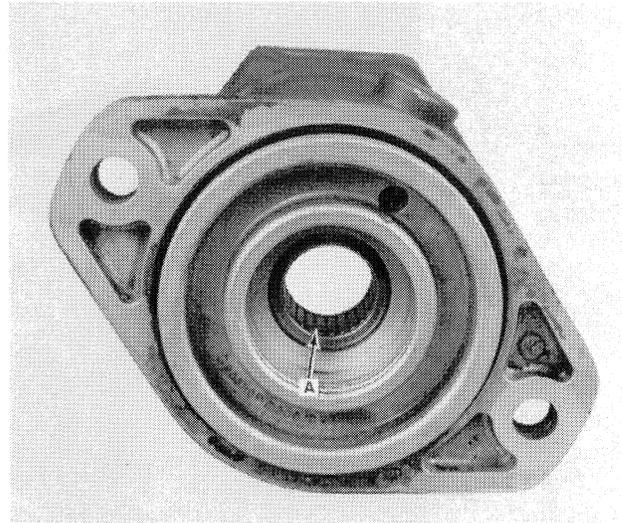


FIGURE 13

8. Install new O-ring, C, Figure 9, on back plate.
9. Install back plate, A, Figure 8. Align roll pin in hole in housing. Install cap screws and tighten to 15 to 18 ft. lbs. (20 to 24 N·m) torque.
10. Install rear snap ring, gear, B, Figure 7, and front snap ring, A, on drive shaft.

GEARBOX

Disassembly

1. Remove adaptor plate, A, Figure 14, from housing. Remove O-ring from adapter plate.
2. Remove four cap screws and remove front plate and planetary gear assembly, B, Figure 14, from housing. Remove O-ring from front plate.

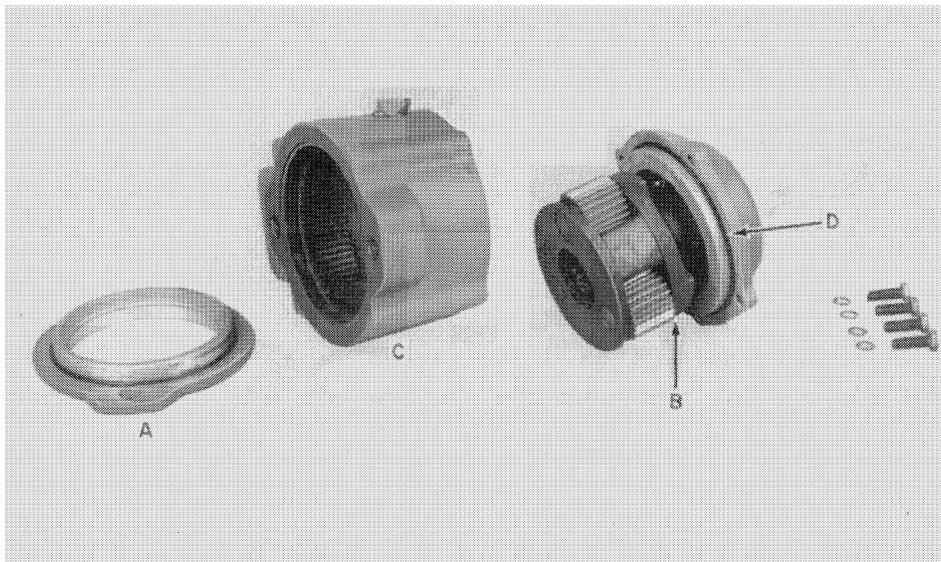


FIGURE 14

3. Remove retaining ring, C, Figure 15.
4. Remove shaft seal, D, Figure 16. **NOTE: Seal will be destroyed and must be replaced.**
5. Remove retaining ring, A, Figure 17.
6. Remove carrier and gear assembly, B, Figure 17, from front plate, C. The carrier shaft is a light press fit in bearing, D.
7. Remove bearing retaining ring, E, Figure 18. Remove bearing, F.
8. To remove gears, B, Figure 19, press pin shafts, A, from carrier, C.

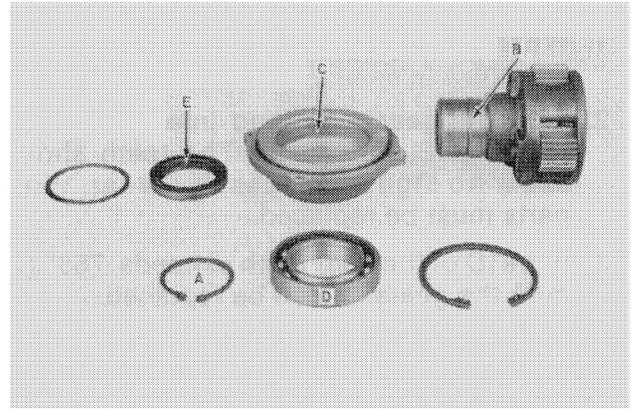


FIGURE 17

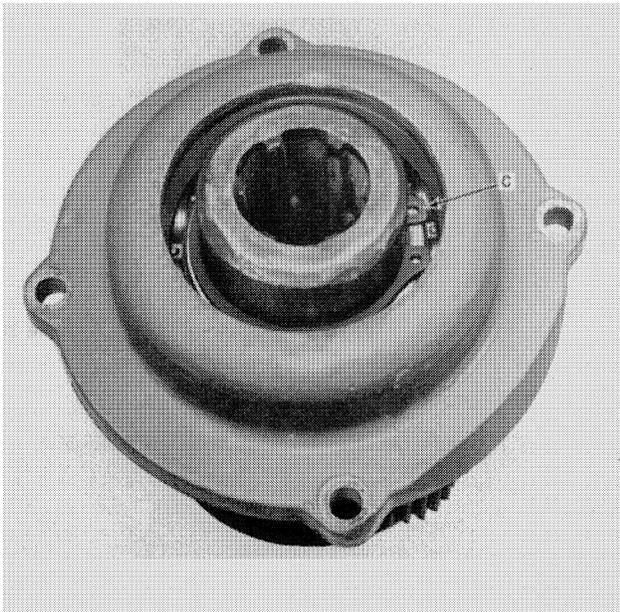


FIGURE 15



FIGURE 18

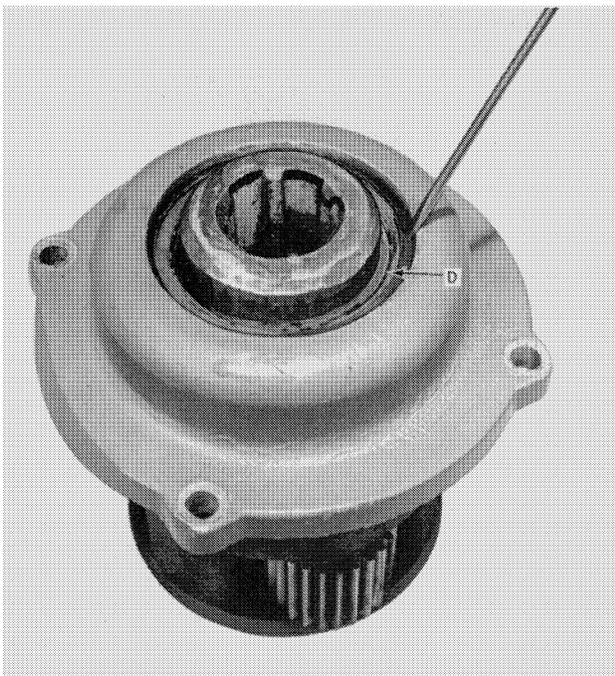


FIGURE 16

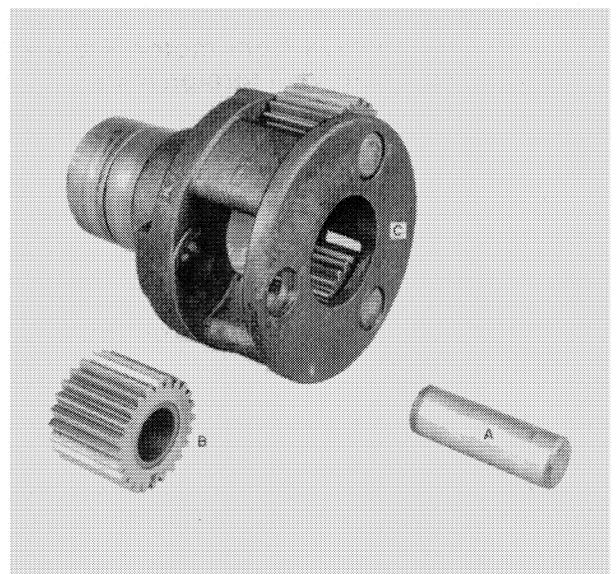


FIGURE 19

Inspection

1. Wash all parts thoroughly in a cleaning solvent.
2. Examine gear teeth and internal teeth in housing, C, Figure 14. The teeth should show no signs of excessive wear. Worn parts must be replaced.
3. If the ID of the gear teeth exceeds .755" (20 mm) the gears should be replaced.
4. Inspect the splines inside the carrier for wear. Replace carrier if splines are worn.

Assembly

1. Install bearing, F, and retaining ring, E, Figure 18, in front plate.
2. Install gears in carrier and press pin shafts, A, Figure 19, in until they are flush.
3. Press carrier assembly, B, through bearing in front plate and install retaining ring, A, Figure 17.
4. Press shaft seal, E, Figure 17, in front plate and install retaining ring as shown in Figure 15.
5. Install new O-ring on face of front plate at D, Figure 14, and install assembly into housing. Secure with four cap screws and washers and tighten to 15-18 ft. lbs. (20-24 N·m) torque.
6. Install new O-ring on face of adapter plate, A, Figure 14, and install on housing assembly. Secure plate with two cap screws and tighten to 55-60 ft. lbs. (74-81 N·m) torque.

HYDROSTATIC MOTOR

Removal

1. Disconnect hoses from motor, Figure 20. Cap hoses to prevent foreign material from entering system.
2. Remove set screw, A, in motor flange.
3. Remove mounting bolts and slide motor out of flange.

Disassembly

1. Clean outside of motor thoroughly before disassembling motor.
2. Remove retaining ring from housing assembly, A, Figure 21.
3. Remove the cap screws from back plate assembly, B.

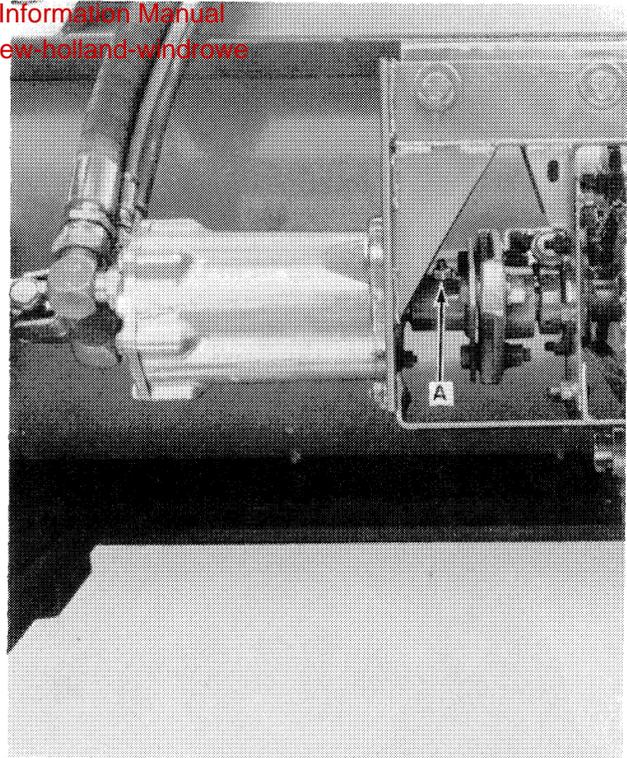


FIGURE 20

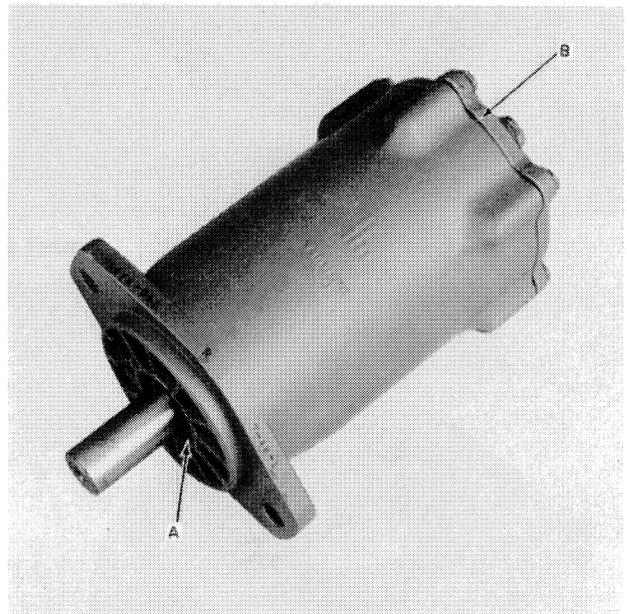


FIGURE 21

4. Use a soft hammer and tap on bolt hole lugs while rotating housing either direction to loosen back plate. Then tap on underside of lugs to remove back plate.

Sample of manual. Download All 24 pages at:

<https://www.arepairmanual.com/downloads/new-holland-windrower-pivot-tongue-114-service-information-manual/>