OWNER'S MANUAL

KUBOTA

Model 1200 LOADER

FOR TRACTOR MODELS:

L-175, L-185, L-185DT, L-225, L-225DT, L-245, L-245DT, L-285

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DEALER

F-1583-1-77

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INTRODUCTION

This manual provides operation, service, and lubrication instructions for your Farm Loader.

Your loader has been designed to give many years of satisfactory service. Successful operation and long life of the loader depends, of course, on proper operation and the care given it. Please read this manual carefully and follow the instructions. Correct operation and maintenance will save much time and expense. If additional information is needed, see your dealer.

Before you forget, fill in the information below.

Date Purchased _____ 19 ____
Loader Serial No. K-7640

SAFETY PRECAUTIONS

Most farm equipment accidents can be avoided by following simple safety precautions. These safety precautions, if followed at all times, will help you operate your loader safely.

1. Improper use of a loader can cause serious injury or death.

2. Do not lift or carry anybody on the loader or in bucket or attachment.

3. Do not walk or work under a raised loader or bucket or attachment unless it is securely blocked or held in position.

4. If the machine is equipped with a Roll Over Protective System (ROPS), fasten seat belt prior to starting the engine.

5. Operate the loader from the "Operator's Seat Only".

6. Add recommended wheel ballast or rear weight for stability.

7. Move wheels to widest recommended settings to increase stability.

8. For better stability, use tractor with wide front axle rather than tricycle front wheels.

9. Move and turn tractor at low speeds.

10. Carry loader arms at a low position during transport.

11. Avoid loose fill, rocks, and holes, they can be dangerous for loader operation or movement.

12. Be extra careful when working on inclines.

13. Avoid overhead wires and/or obstacles when loader is raised.

14. Allow for the loader length when making turns.

15. Stop the loader arms gradually when lowering or lifting.

16. Use caution when handling loose or shiftable loads.

17. Lower loader arms when parking or servicing.

18. Make sure all parked loaders on stands are on a hard, level surface. Engage all safety devices.

19. Visually check for hydraulic leaks and broken, missing, or malfunctioning parts and make necessary repairs.

20. Escaping hydraulic oil under pressure can have sufficient force to penetrate the skin, causing serious personal injury. If injured by escaping fluid, obtain medical treatment immediately.

21. Before disconnecting hydraulic lines, relieve all hydraulic pressure.

22. It is the loader owner's responsibility to be certain anyone operating the loader is aware of the safe way of operating the loader.

RECOMMENDED LOADER OPERATION

GENERAL

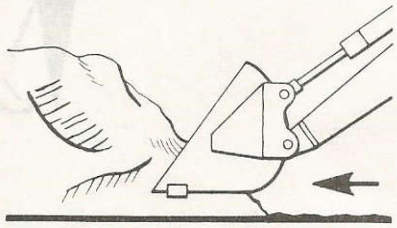
When operating in temperatures below 30° F. (-1.1° C), run the tractor engine below 1200 rpm until the oil temperature exceeds 30° F. (-1.1° C).

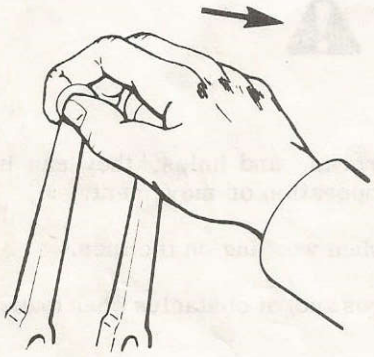
The following illustrations offer suggested operating techniques for your consideration.

FILLING THE BUCKET

Approach and enter the pile with a level bucket.

Come in level.

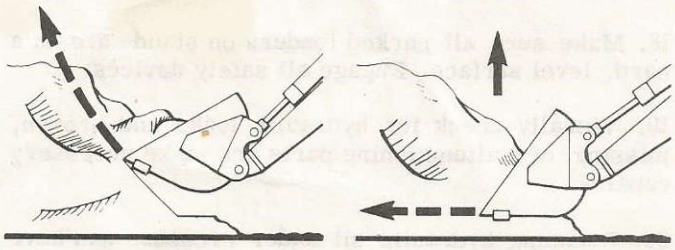




Work both levers back to direct pressure to both cylinders.

Combined action of the lift and bucket cylinders increase loading efficiency.

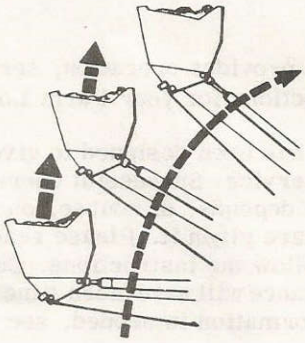
THIS! NOT THIS!



A level bucket throughout the lifting cycle resists bucket lift and increase breakaway effort.

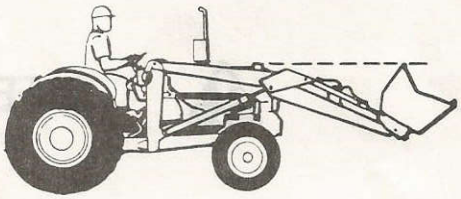
LIFTING THE LOAD

When lifting the load, keep the bucket positioned so as to avoid spillage.

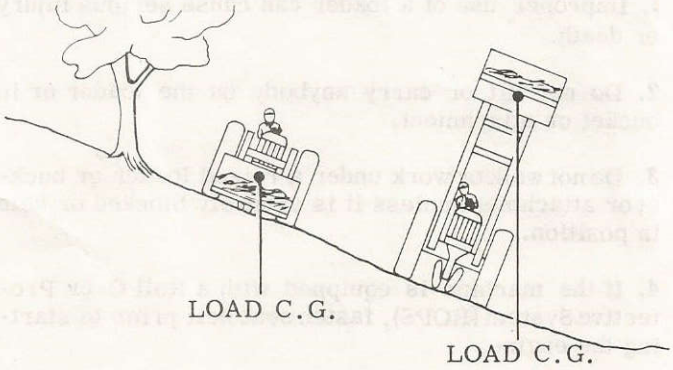


CARRYING THE LOAD

Position the bucket just below the level of the tractor hood, for maximum stability and visibility, whether the bucket is loaded or empty.



When operating the loader on a hill or slope, keep the bucket as low as possible. This keeps the bucket center of gravity as low as possible and will result in maximum tractor stability.



When transporting the load, keep the bucket as low as possible to avoid tipping, in case a wheel drops in a rut.

DUMPING THE BUCKET

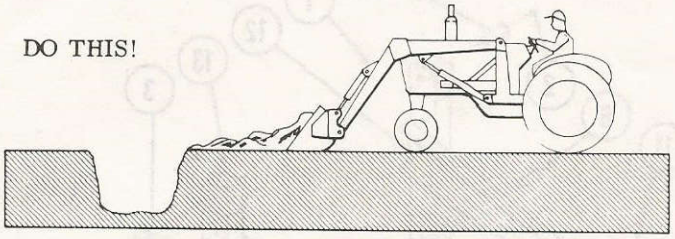
Lift the bucket high enough to clear the side of the vehicle. Move the tractor in as close to the side of the vehicle as possible, then dump the bucket.

LOWERING THE BUCKET

After the bucket is dumped, back away from the vehicle while lowering and leveling the bucket.

BACKFILLING

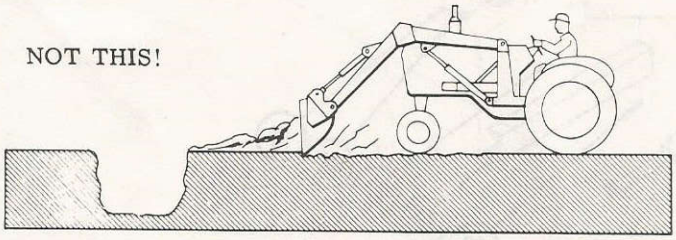
DO THIS!



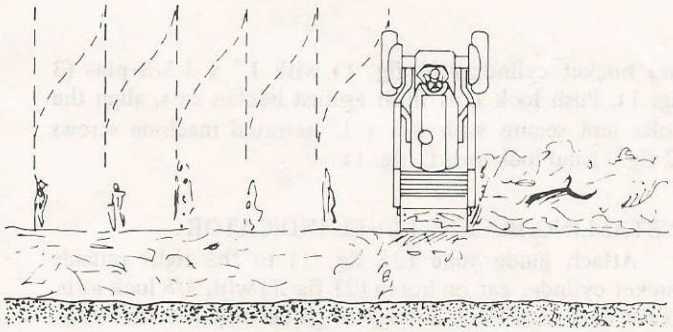
Approach the pile with a flat bucket.

Leave dirt in the bucket. Dumping on each pass wastes time.

NOT THIS!

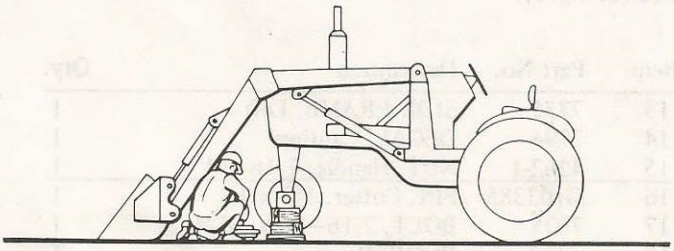


Do not use the bucket in the dumped position for bulldozing. This will only impose severe shock loadings on the bucket cylinders and make it more difficult to maintain a level grade.



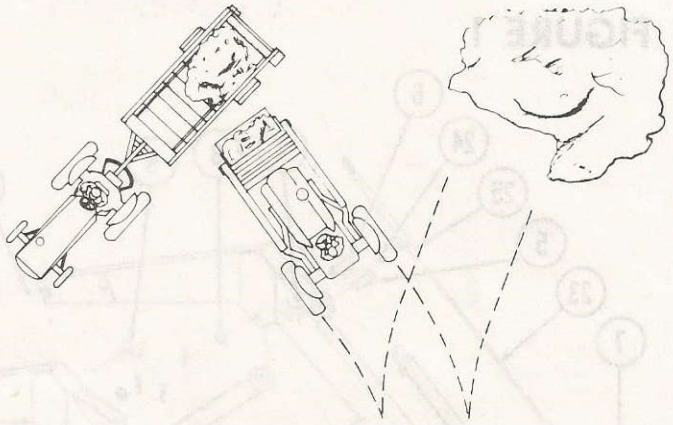
Leave dirt which drifts over the side of the bucket for final clean-up.

DOUBLE-ACTING CYLINDERS

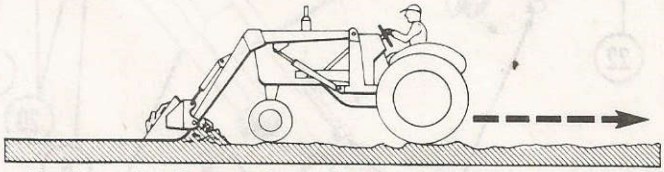


When a loader is equipped with double-acting lift cylinders, use caution when lowering the bucket. Do not operate the tractor with the front wheels off the ground. Do not attempt to lower the bucket with the tractor engine not running. If the lift cylinders are used to raise the front wheels of the tractor for service, place blocks under the tractor before working around the front end.

LOADING FROM A PILE



To increase loading efficiency, minimize the angle of turn and length of run between pile and spreader.

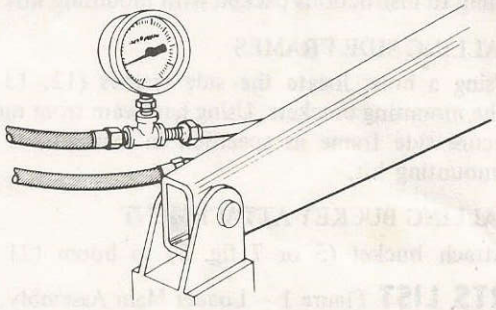


Backgrade the work surface with a loaded bucket. Release all pressure on the lift cylinders so the full weight of the bucket is scraping the ground. Use the heel of the bucket.

HYDRAULIC SYSTEM PRESSURE CHECK

WHENEVER THE LOADER OPERATES SLUGGISHLY, CHECK TRACTOR'S HYDRAULIC PUMP PRESSURE.

1. Determine what the correct system pressure should be. Refer to the tractor's instruction book.
2. Obtain a pressure gauge that registers higher than the specified pressure.

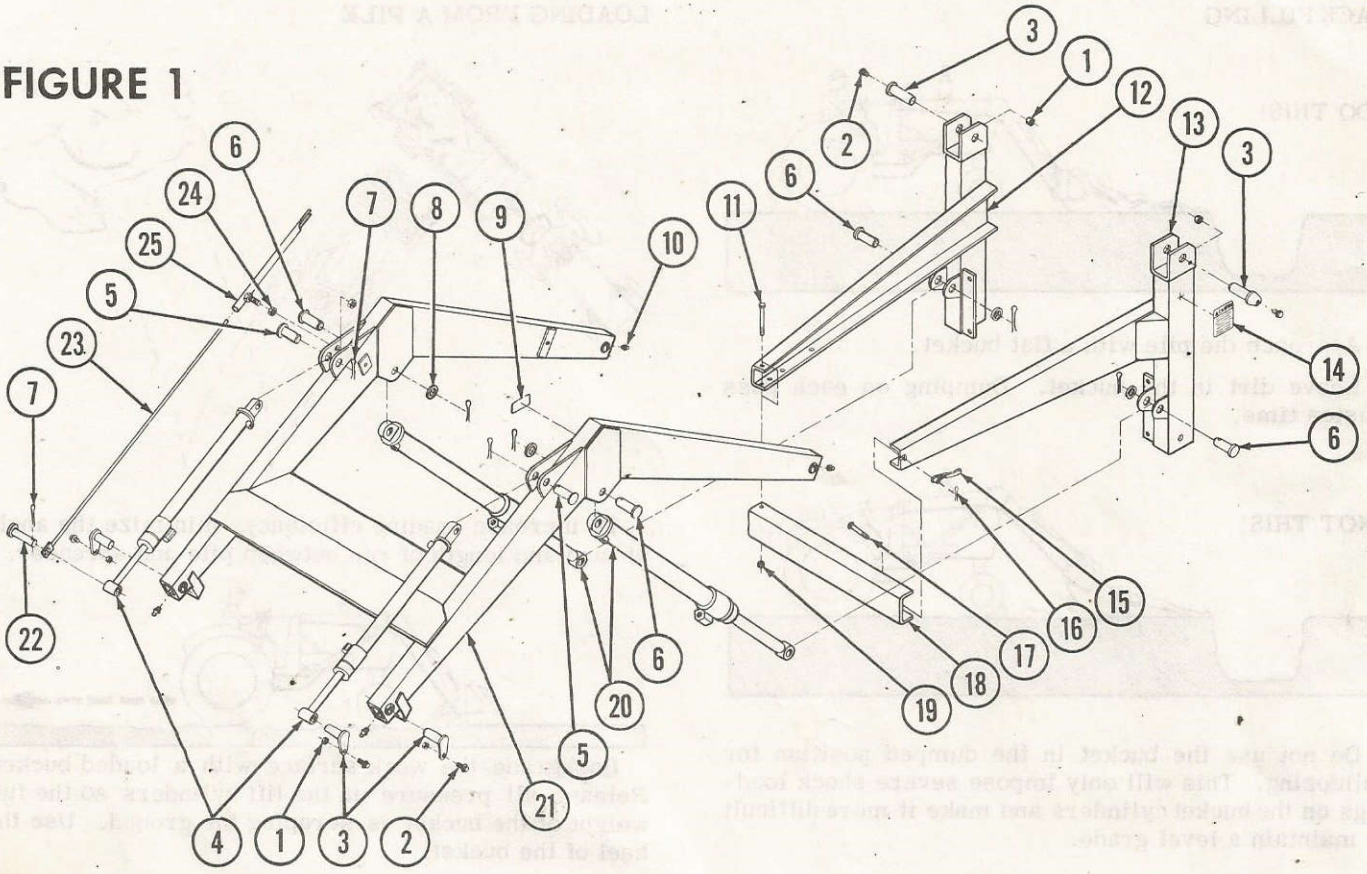


3. Install the gauge as illustrated, in any fitting between the pump and the loader.
4. Test operate the loader. Hold it at full height and full throttle to get the pressure reading on the gauge.
5. Make any adjustment or repair noted in the tractor's instruction book to bring the reading up to the specified minimum.

IF PROPER PRESSURE IS REGISTERED and operation is still unsatisfactory, check the loader's oil lines, fittings and cylinders for leaks.

IF CYLINDER LEAKS ARE FOUND, refer to the cylinder repair instructions in this manual.

FIGURE 1



ASSEMBLY INSTRUCTIONS

References to left hand, right hand, front and rear are as viewed from the tractor seat. Pin lengths are measured from center of cotter pin hole to end of pin, or from shoulder to end of pin.

INSTALLING MOUNTINGS AND HOSES

Install mounting brackets and hoses on the tractor according to instructions packed with mounting kits.

INSTALLING SIDE FRAMES

Using a hoist locate the side frames (12, 13 fig. 1) over the mounting brackets. Using hardware from mounting kit secure side frame as specified in instructions packed with mounting kit.

INSTALLING BUCKET ATTACHMENT

Attach bucket (5 or 7 fig. 3) to boom (21 fig. 1) and bucket cylinders (4 fig. 1) with 1" x 3-3/8 pins (3 fig. 1). Push lock taps flush against bucket ears, align the holes and secure with 3/8 x 1" serrated machine screws (2 fig. 1) and lock nuts (1 fig. 1).

INSTALLING BUCKET LEVEL INDICATOR

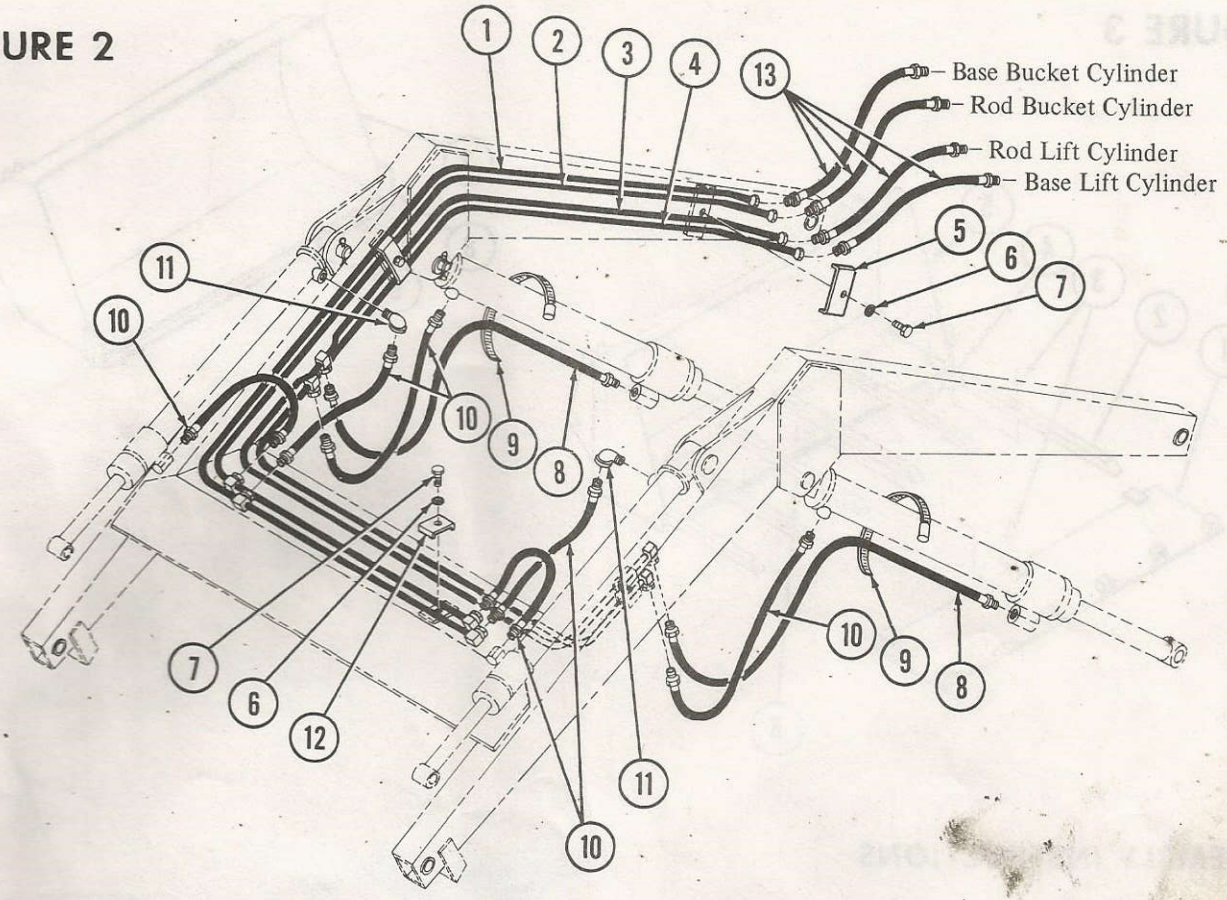
Attach guide tube (25 fig. 1) to the right outside bucket cylinder ear on boom (21 fig. 1) with 3/8 lock nuts. Leave lock nuts loose enough so guide tube rotates freely. Slide rod (23 fig. 1) into guide tube. Pin rod (23 fig. 1) to bucket and bucket cylinder with pin (22 fig. 1) and 1/4 x 1-1/2 cotter pin.

Locate tractor and loader on a level surface. Level the bottom of bucket on the level surface and with bucket level cut off the excess rod (23 fig. 1) flush with the end of guide tube (25 fig. 1).

PARTS LIST Figure 1 – Loader Main Assembly.

Item	Part No.	Description	Qty.
1	G9413534	NUT, Lock 3/8–16	6
2	G9431552	SCREW, Serrated Machine, 3/8–16 x 1"	6
3	7702	PIN, 1" x 3-3/8	6
4	4361	CYLINDER, Bucket	2
5	13909	PIN, 1" x 2-1/8	2
6	13812	PIN, 1" x 2-7/8	4
7	G103420	PIN, Cotter, 1/4 x 1-1/2	6
8	6120-4	BUSHING, Washer	4
9	15467	DECAL, Serial Number	1
10	6075-4	FITTING, Grease, 1/4–28	4
11	G189314	SCREW, Cap 1/2–13 x 4-3/4	1
12	7743	SIDE FRAME, Right	1
13	7735	SIDE FRAME, Left	1
14	7794	DECAL, Caution	1
15	4262-1	NUT, Handle, 7/16–14	1
16	G103385	PIN, Cotter, 1/8 x 1"	1
17	7825	BOLT, 7/16–14 x 3-1/4	1
18	7722	BUMPER	1
19	G9414074	NUT, Lock 1/2–13	1
20	7713	CYLINDER, Lift	2
21	7746	BOOM	1
22	9880	PIN 1" x 3-5/8	1
23	21503	ROD, Bucket Indicator	1
24	6130-10	NUT, Lock, 3/8-16	2
25	21505	GUIDE TUBE, Bucket Indicator	1

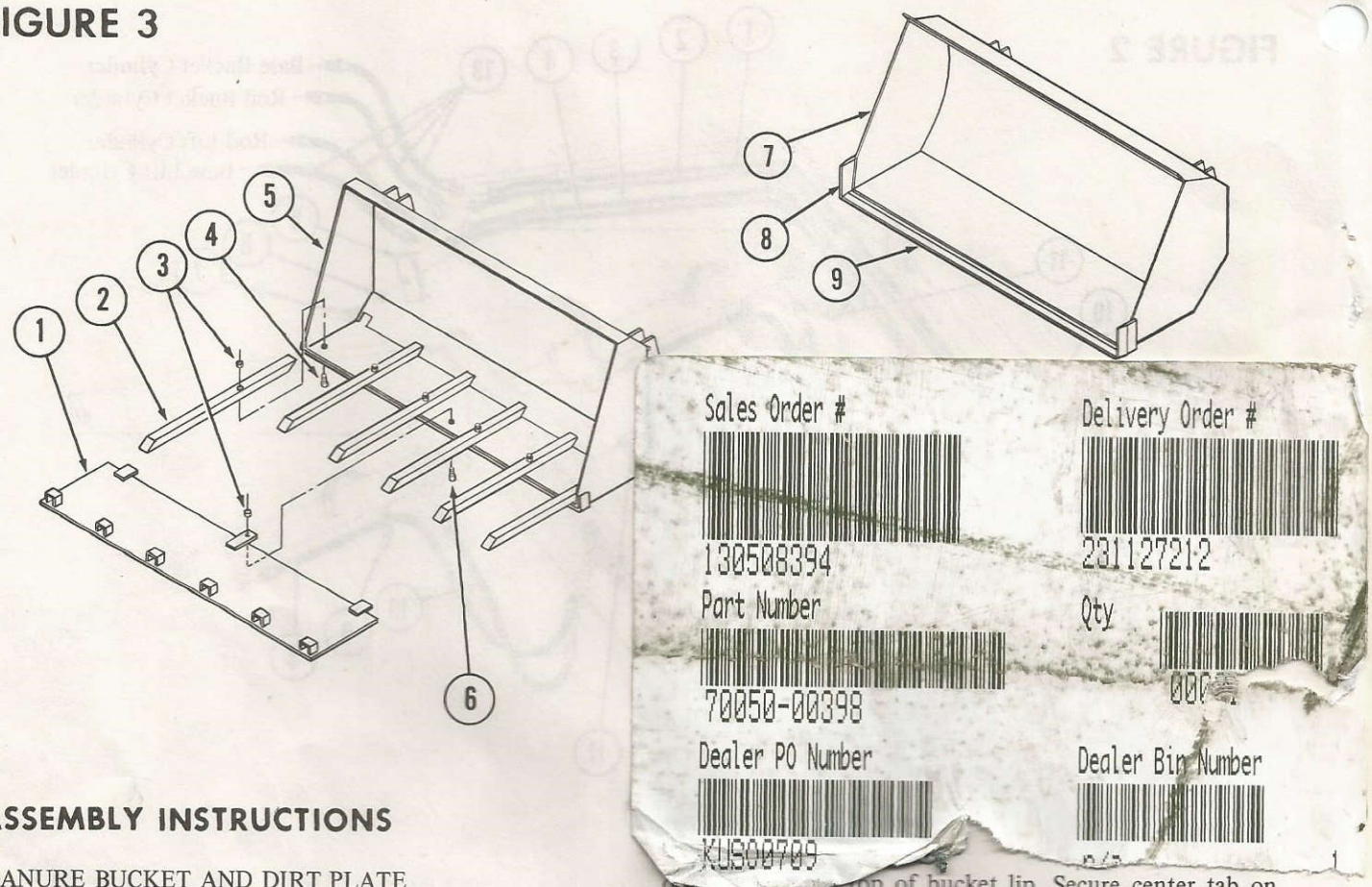
FIGURE 2



PARTS LIST Figure 2 – Hydraulic System.

Item	Part No.	Description	Qty.
1	24456	OIL LINE (BBC)	1
2	24457	OIL LINE (RBC)	1
3	24458	OIL LINE (RLC)	1
4	24459	OIL LINE (BLC)	1
5	15470	CLAMP, Tube	2
6	G120382	WASHER, Lock 3/8	4
7	G181637	SCREW, Cap, 3/8–24 x 1"	4
8	6012-27	HOSE, 3/8 x 38	2
9	6076-6	CLAMP, Hose	2
10	6012-2	HOSE, 3/8 x 19	6
11	G120063	ELBOW, Street, 3/8 x 90°	2
12	13722	CLAMP, Tube	2
13	6012-4	HOSE, 3/8 x 30	4

FIGURE 3



ASSEMBLY INSTRUCTIONS

MANURE BUCKET AND DIRT PLATE

To assemble manure bucket, slide tines (2 fig. 3) into manure bucket (5 fig. 2) cut outs, as shown. Secure tines to the bucket with 3/8" x 1-1/2" cap screws (4 fig. 2) and lock nuts (3 fig. 3). Install cap screws from bottom of bucket.

DIRT PLATE

Slide the dirt plate (1 fig. 3) onto tines and align tabs [illegible] top of bucket lip. Secure center tab on dirt plate to bucket with 3/8" x 3/4" cap screw (6 fig. 3) and lock nut. Install cap screw from bottom of bucket.

BUCKET ATTACHMENT

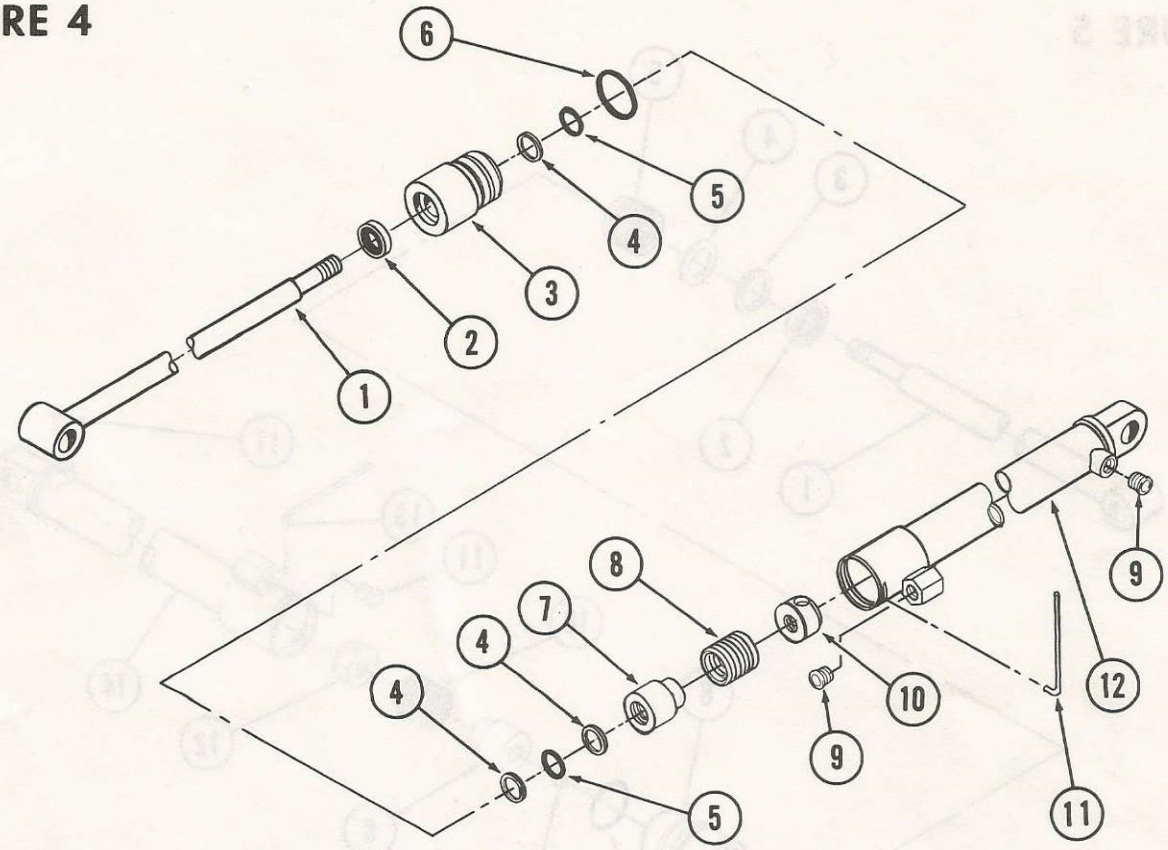
Attach bucket (5 or 7 fig. 3) to boom (21 fig. 1) and bucket cylinders (4 fig. 1) with 1" x 3-3/8 pins (3 fig. 1). Push lock tap flush against bucket ears, align the holes and secure with 3/8" x 1" serrated machine screws (2 fig. 1) and lock nuts (1 fig. 1).

PARTS LIST Figure 3 – Manure Bucket, Dirt Plate, 48" Material Bucket and 60" Snow Bucket.

Item	Part No.	Description	Qty.
1	7771	DIRT PLATE	1
2	7787	TINE	6
3	G9413534	NUT, Lock 3/8–16	7
4	G180126	SCREW, Cap 3/8–16 x 1-1/2	6
5	7761	MANURE BUCKET	1
6	G180120	SCREW, Cap, 3/8–16 x 3/4	1
7	22569	MATERIAL BUCKET, 48"	1
	22570	SNOW BUCKET, 60"	1
8	*22538	CUTTING EDGE, Side	2
9	*22541-2	CUTTING EDGE, Bottom, 48"	1
	*22541-3	CUTTING EDGE, Bottom, 60"	1

*Cutting edges can be replaced by cutting worn cutting edge off and welding new cutting edge on.

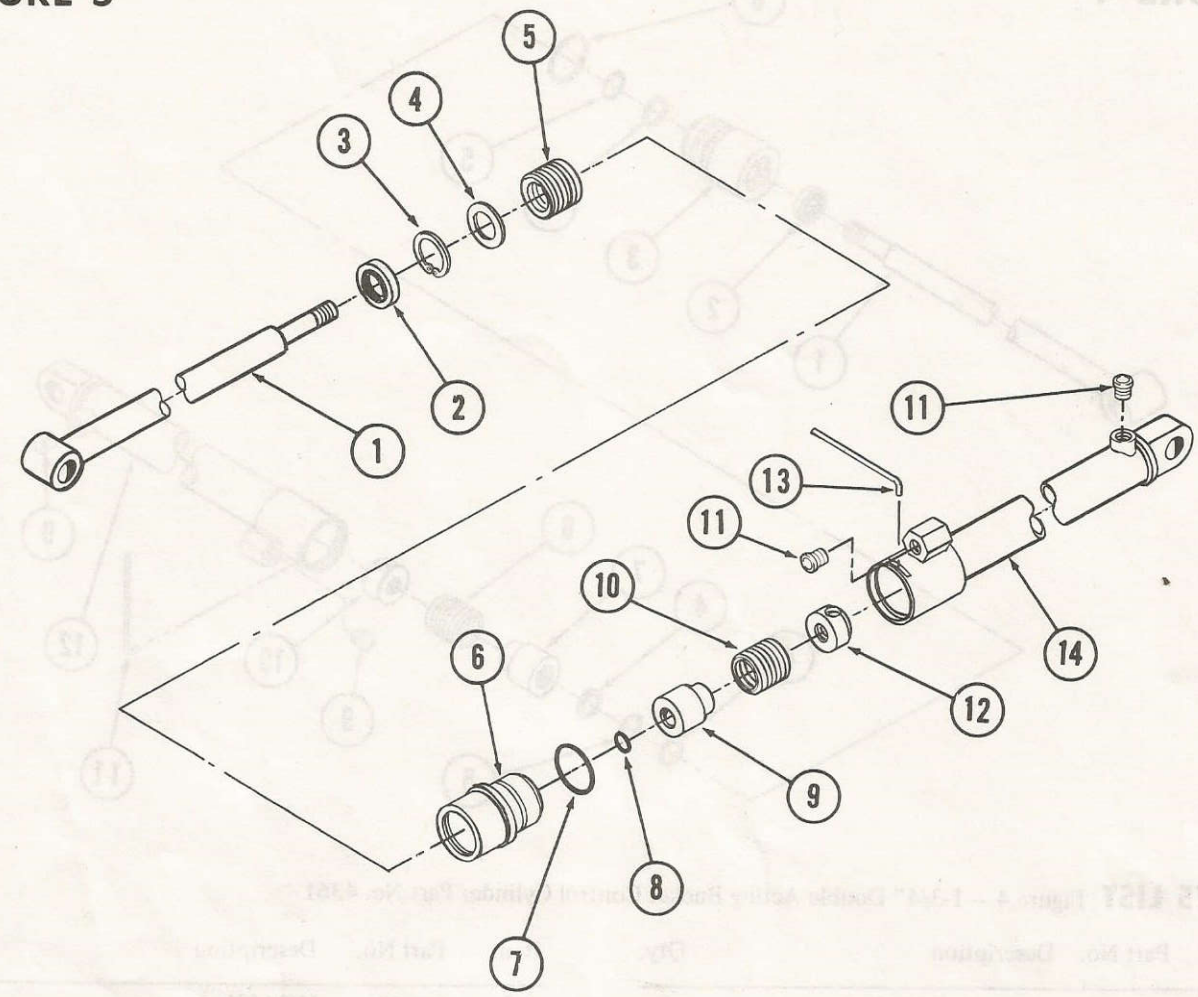
FIGURE 4



PARTS LIST Figure 4 – 1-3/4" Double Acting Bucket Control Cylinder Part No. 4361

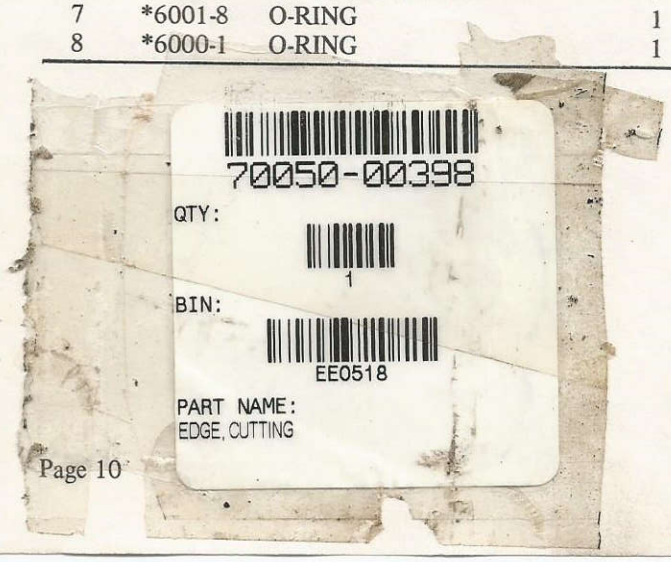
Item	Part No.	Description	Qty.
1	4368	SHAFT ASSEMBLY	1
2	*6022-3	WIPER SEAL	1
3	4367	CYLINDER HEAD	1
4	*22526-1	BACK-UP WASHER	3
5	*6000-12	O-RING	2
6	*6001-8	O-RING	1
7	4366	PISTON	1
8	*6050	V-PACK	1
9	6139-5	CAPLUG	2
10	13560	COMPRESSION NUT	1
11	*13720-2	WIRE RETAINING RING	1
12	4362	CYLINDER TUBE	1
	2-2857	CYLINDER REPAIR KIT (Contains items indicated by*)	1

FIGURE 5



PARTS LIST Figure 5 – 1-3/4" Double Acting Lift Cylinder Part No. 7713

Item	Part No.	Description	Qty.
1	7717	CYLINDER SHAFT	1
2	*6022-8	WIPER SEAL	1
3	6018-10	SNAP RING	1
4	*13711	REINFORCEMENT WASHER	1
5	*6049	V-PACK	1
6	3525	CYLINDER HEAD	1
7	*6001-8	O-RING	1
8	*6000-1	O-RING	1
9	13559	PISTON	1
10	*6050	V-PACK	1
11	6139-5	CAPLUG	2
12	13560	PISTON COMPRESSION NUT	1
13	*13720-2	WIRE RETAINING RING	1
14	7714	CYLINDER TUBE	1
	2-2859	CYLINDER REPAIR KIT (Contains items indicated by *)	1



HYDRAULIC CYLINDER REPAIR

The following outline of recommended disassembly and repair procedures covers the three different types of cylinders that are available for the loader.

1 3/4" Double Acting Bucket Control Cylinder (Part No. 4361) – Figure 5

1-3/4" Double Acting Lift Cylinder (Part No. 7713) – Figure 7.

Recommended procedure for disassembly of cylinder part no. 4361.

a. Figure 6 illustrates the lock wire retaining ring in the cylinder head. To remove the retaining ring:

(1) Hold the cylinder tube stationary and turn the cylinder head until the beveled end of the retaining ring is visible in the slot in the cylinder tube.

(2) Turn the cylinder head in the proper direction to cause the beveled end of the retaining ring to catch the slot edge, and thread out through the slot. (NOTE: If necessary, use a pipe wrench on the cylinder head.)

NOTE

If the piston assembly is removed intact from the double acting bucket cylinders, the V-packing on the piston will probably be damaged by the retaining ring groove in the cylinder tube. Step b. is the recommended procedure for removing the piston rod assembly from the 1 3/4" double acting bucket cylinder (part no. 4361) without damaging the V-packings on the piston.

b. To relieve compression on the V-packings of the double acting cylinder to prevent damaging them:

(1) With the piston rod pushed all the way in, rotate the rod end until the hole in the compression nut is visible through the cylinder port.

(2) Insert a metal shaft (bolt or pin punch) through the oil port and into the hole as shown in Figure 7.

(3) With the compression nut held stationary by the metal shaft, turn the piston rod out approximately four turns, to relieve compression on the piston V-packing. Remove the metal shaft and pull rod assembly out until piston strikes the cylinder head.

(4) Slide the cylinder head out of the cylinder tube.

(5) Carefully pull the piston assembly to a position where the rear edge of the piston just protrudes from the cylinder tube.

(6) Turn the piston rod to thread it completely out of the compression nut, and pull the rod out. If the V-packing is to be replaced, the whole assembly can be removed at one time.

(7) Carefully remove the piston. Leave the V-packing and the compression nut in the cylinder.

(8) Carefully remove the V-packings, one at a time.

c. Completely disassembly the piston and cylinder head. Remove all internal seals and packings, and clean all the parts in a suitable solvent. Discard and replace all damaged or worn parts. Inspect the cylinder tube for score marks or rust. If the tube is scored and the score mark cannot be removed with light buffing with honing paper, the tube must be replaced.

FIGURE 6

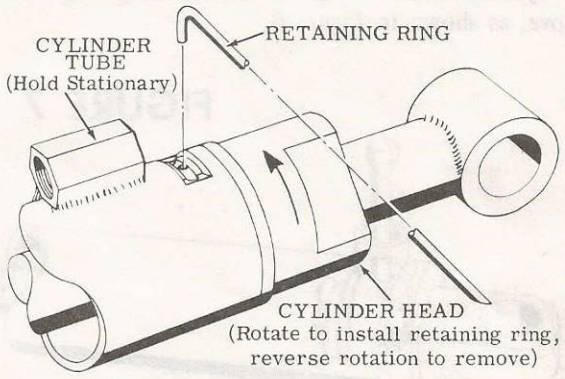


Figure 6 – Cylinder Head Retaining Ring

Recommended procedure for installing repair parts in cylinder part no. 4361. (Item numbers refer to fig. 4 parts drawing.)

a. Install wiper seal (2), back-up washer (4) and o-rings (5) into cylinder head (3). Install o-ring (6) on outside of head.

b. Remove the sharp edge on the outside diameter of the piston end of the piston rod (A fig. 8). Lubricate the wiper seal, leather washer and o-ring in the cylinder head with hydraulic oil and carefully slide the cylinder head onto the piston rod.

c. The piston V-packing set (8) must be installed on piston (7) so that the lips of the packing face toward the rod end of the cylinder.

(1) Lubricate the V-packing with hydraulic oil and slide them onto the piston.

(2) Lubricate the o-ring and the leather washers (4 and 5) and insert one leather washer and one o-ring into the piston (7). Carefully slide the piston onto the cylinder rod.

(3) Thread the compression nut (10) onto the end of the piston rod. Do not tighten the nut.

(4) Lubricate the V-packing on the piston and the large o-ring on the cylinder head with hydraulic oil and slide the piston rod assembly all the way into the cylinder tube.

(5) Insert a metal shaft through the oil port in the cylinder tube and into the hole in the compression nut, as shown in Figure 7. Turn the piston rod tightly into the compression nut.

d. Turn the cylinder head so that the hole in the retaining ring groove appears in the slot in the cylinder tube. Insert the hook-end of the retaining ring into the hole and turn the cylinder head to thread the retaining ring into the groove, as shown in Figure 6.

FIGURE 7

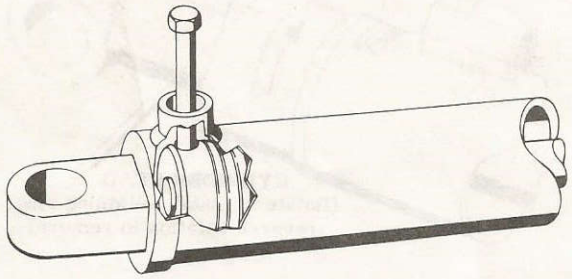


Figure 7 – Piston Compression Nut

Recommended procedure for disassembly of cylinder part no. 7713.

a. Figure 6 illustrates the lock wire retaining ring in the cylinder head. To remove the retaining ring:

(1) Hold the cylinder tube stationary and turn the cylinder head until the beveled end of the retaining ring is visible in the slot in the cylinder tube.

(2) Turn the cylinder head in the proper direction to cause the beveled end of the retaining ring to catch the slot edge and thread out through the slot. (NOTE: If necessary, use a pipe wrench on the cylinder head.)

b. To relieve compression on the V-packings of the double acting cylinder to prevent damaging them:

(1) With the piston rod pushed all the way in, rotate the rod end until the hole in the compression nut is visible through the cylinder port.

(2) Insert a metal shaft (bolt or pin punch) through the oil port and into the hole, as shown in Figure 7.

(3) With the compression nut held stationary by the metal shaft, turn the piston rod out approximately four turns, to relieve compression on the piston V-packing. Remove the metal shaft and pull rod assembly out until piston strikes the cylinder head.

(4) Slide the cylinder head out of the cylinder tube.

(5) Carefully pull the piston assembly to a position where the rear edge of the piston just protrudes from the cylinder tube.

(6) Turn the piston rod to thread it completely out of the compression nut, and pull the rod out. If the V-packing is to be replaced, the whole assembly can be removed at one time.

(7) Carefully remove the piston. Leave the V-packing and the compression nut in the cylinder.

(8) Carefully remove the V-packings, one at a time.

c. Completely disassemble the piston and cylinder head. Remove all internal seals and packings, and clean all the parts in a suitable solvent. Discard and replace all damaged or worn parts. Inspect the cylinder tube for score marks or rust. If the tube is scored and the score mark cannot be removed with light buffing with honing paper, the tube must be replaced.

FIGURE 8

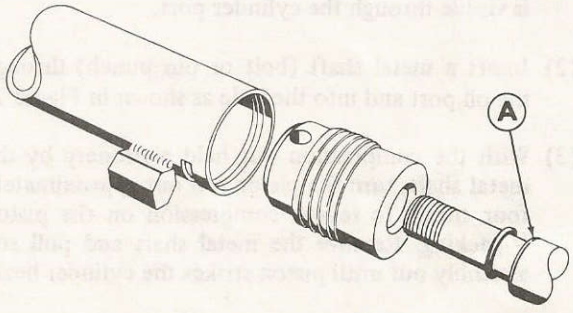


Figure 8 – Bucket Cylinder Assembly

Recommended procedure for installing repair parts in cylinder part no. 7713. (Item numbers refer to Figure 5 parts drawing.)

a. Remove the sharp edge on the outside diameter of the piston end of the piston rod (A fig. 8).

(1) Place a new V-packing set (5) in the cylinder head (6) with the lips on the packing facing inward, as shown in Figure 5.

(2) Place the reinforcement washer (4) on the V-packing, and force down firmly, below snap ring groove.

(3) Install the snap ring (3), with the rounded outer edge facing down, in the groove. Make sure that it is firmly seated.

(4) Install the new wiper seal (2) on the snap ring with the lip of the seal facing out, and flush with the edge of the cylinder head, as shown in Figure 5.

(5) Place a new o-ring (7) in the groove around the outside of the cylinder head.

(6) Lubricate the V-packing and wiper seal and carefully slide the cylinder head onto the piston rod.

b. The V-packing set must be installed so the lips of the packing face toward the rod end of the cylinder when installed on the piston.

(1) Lubricate the V-packing (10) with hydraulic oil and slide them onto the piston (9).

(2) Lubricate the small o-ring (8) with hydraulic oil and carefully slide it over the threaded end of the piston rod. Place the piston on the rod against the small o-ring.

(3) Thread the compression nut (12) onto the end of the piston rod (1). Do not tighten the nut.

(4) Lubricate the cylinder head and o-ring (6 and 7) and the piston and V-packing (9 and 10) and slide the assembly all the way into the cylinder tube.

(5) Insert a metal shaft through the oil port in the cylinder tube and into the hole in compression nut, as shown in Figure 7. Turn the piston rod tightly into the compression nut.

c. Turn the cylinder head so that the hole in the retaining ring groove appears in the slot in the cylinder tube. Insert the hook-end of the retaining ring into the hole and turn the cylinder head to thread the retaining ring into the groove, as shown in Figure 6.

NUMERICAL PART NUMBER INDEX

Valve -

23 FA TS 3RKX1

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Kubota Tractor Corporation warrants all of its products for a period of one year from the date of sale to the customer by an authorized Kubota agent or dealer.

This warranty provides that the equipment shall be free of defective material or workmanship, or we will replace or repair at our factory any parts that our inspection shows to be defective.

Any parts returned must be returned freight prepaid through an authorized Kubota dealer or agent unless written authorization is given to the contrary by the service manager.

This warranty is not applicable to purchased products such as valves, pumps, motors and hoses not manufactured by Kubota Tractor Corporation, as they are subject to the warranties of their respective manufacturers.

This warranty shall be void if any part or parts not manufactured or supplied by Kubota Tractor Corporation are used either in maintaining or servicing of the product covered by this warranty. No warranty whatsoever is made on used, second hand, altered, or rebuilt machinery.

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