

WORK SAFELY – FOLLOW THESE RULES



This symbol is used to call your attention to instructions concerning your personal safety. Be sure to observe and follow these instructions.

A Careful Operator is the Best Insurance Against an Accident.

Backhoes, if not used properly, can be dangerous. The operator, therefore, should develop safe working habits and also be aware of hazardous conditions. In this way he will protect himself, other personnel, and the backhoe. Safe backhoe operation, for the most part, is the responsibility of the operator.

Check engine oil levels, and perform any other necessary services, before starting the engine.

To prevent upsets, be careful when swinging a loaded bucket on a hillside.

Clean the machine thoroughly and drain the fuel before storing to reduce the fire hazard.

Be courteous, have consideration for other traffic using the road.

Do not allow anyone to move the hydraulic control levers, or other controls while the unit is being greased or worked on.

Before starting engine make sure helpers or observers stand clear of equipment.

When fueling an engine, keep any type of open flame away. **Do Not Smoke!** Wait for the engine to cool before refueling it.

Know the controls and what they do.

Use warning devices (i.e. flags, S.M.V. emblem, lights, etc.) which are approved for use by your local government agencies, when moving equipment on public roads. Keep these devices clean and in good working condition.

Check and straighten twisted hoses. Do not attempt to repair or tighten hoses when under pressure, when the boom is raised, or with the engine running.

Hydraulic fluid escaping under pressure can have enough force to penetrate the skin. Hydraulic fluid may also infect a minor cut or opening in the skin. **If injured by escaping fluid, see a doctor at once. Serious infection or reaction can result if medical treatment is not given immediately.** Make sure all connections are tight and that hoses and lines are in good condition before applying pressure to the system. Relieve all pressure before disconnecting the lines or performing other work on the hydraulic system. To find a leak under pressure use a small piece of cardboard or wood. Never use hands.

KUBOTA TRACTOR
K650 BACKHOE
Figure: 2 - WORK SAFELY - FOLLOW THESE RULES (CONT.)

WORK SAFELY—FOLLOW THESE RULES

Avoid . . . sudden starts, excessive speed, and sudden stops . . . when operating on hillside, rough ground, and most off-the-road operations.

Always carry a "Charged" fire extinguisher and a first aid kit.

Avoid loose-fitting clothing, which could catch on moving parts.

Operate the engine only in well ventilated areas.

Use extreme care when working close to fences, ditches, or on hillsides.

Wait for tractor to "STOP" before dismounting.

Check clearance carefully before driving under electric lines, bridges, or entering or leaving buildings.

Shut off engine and remove ignition key.

If it is necessary to raise the boom to work on the side, or front of the machine, support the backhoe boom securely.

Mounting assist handles and steps are provided for your safety. Use them when getting on or off the tractor.

Put all controls in neutral position before starting the engine.

Clean dirt, trash, and grease from operator's platform, pedals, and steps.

Keep others, especially children, from riding on steps, fenders, or drawbar, and away from tractor and backhoe equipment.

Reduce speed when traveling on rough roads.

Stop the engine before lubricating, cleaning, or adjusting.

Do not shut engine off in drive position.

Avoid operating sideways on a steep slope whenever possible.

Never leave the machine unattended with the engine running or with the bucket in the raised position. Rest the bucket on the ground and remove the ignition key before leaving the tractor.

Block the wheels securely, and lower the backhoe to the ground if the machine is parked on a hillside.

Carefully supervise inexperienced operators.

Do not permit anyone except the operator on the machine.

MAINTENANCE

ALL CAP SCREWS AND NUTS

Check all cap screws after every 8 hours of operation. Tighten if necessary. Loose cap screws cause unsatisfactory operation, excessive wear, and strain on the backhoe.

UPPER SWING SUPPORT AND SWING ASSEMBLY

Before operating a new machine and after each 40 hours of operation thereafter, tighten the swing shaft stop nut to a torque of 800-880 foot-pounds. Tighten the upper swing support cap screws to a torque of 65-75 foot-pounds.

PINS AND PIN RETAINERS

After every 8 hours of operation, check all retaining pins, and tighten if loose. All pins are replaceable and should be replaced if the fit becomes noticeably loose.

SWING CHAIN ASSEMBLY

Tighten nuts on adjustment rods until all slack is out of chains. Caution: Do not over tighten: this will cause excessive load on swing chains.

HOSES AND FITTINGS

Straighten any hoses which are kinked or chafing. Any indication of a hydraulic fluid leak should be corrected immediately by replacing the hose or tightening the fittings. After the first 10 to 40 hours of operation, tighten all hydraulic fittings to prevent leaks.

HYDRAULIC FLUID LEVEL

The proper hydraulic fluid level should be maintained at all times to prevent costly repairs.

HYDRAULIC SYSTEM FILTER

Replace filter after the first 20 hours of operation and every 200 hours thereafter. In extremely dusty or dirty conditions more frequent changes may be necessary. Change the hydraulic fluid after every 200 hours of operation or at the beginning of each season.

CONTROL LEVERS

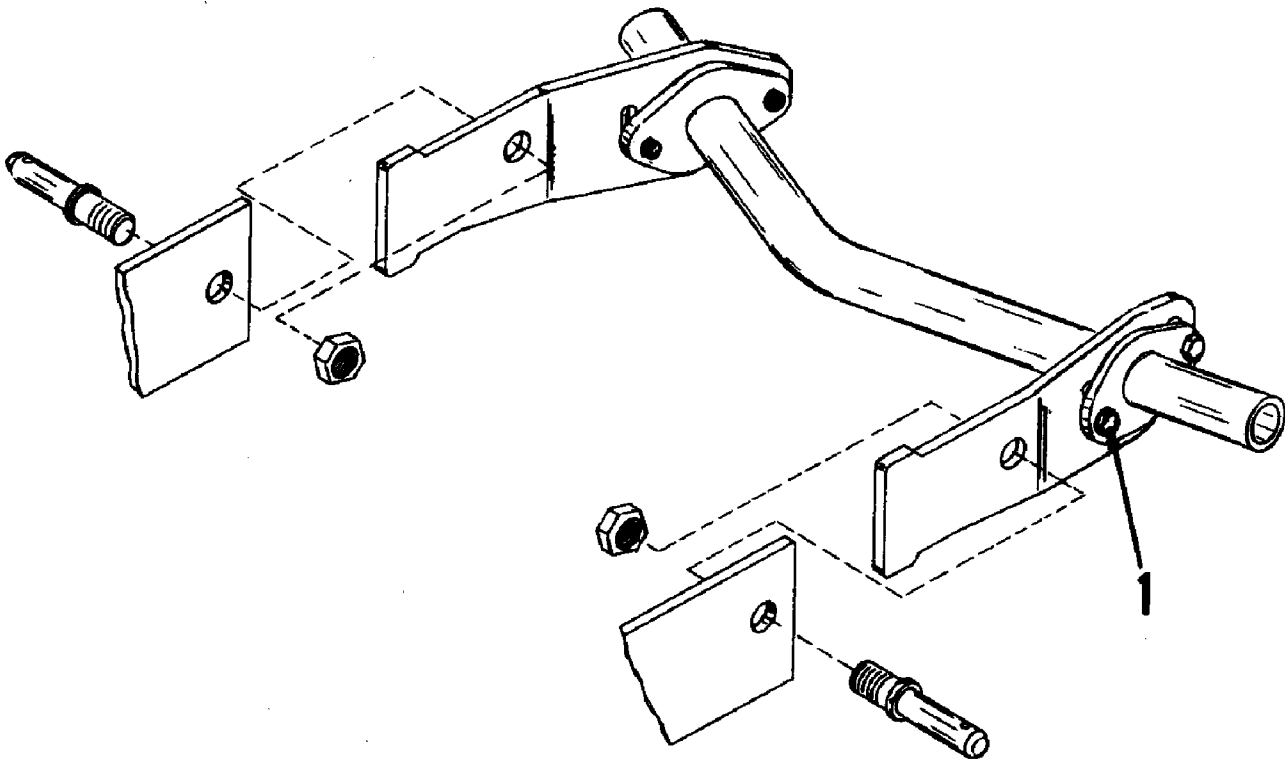
Daily or after every 8 hours of operation for the first week, and periodically thereafter, lubricate the pivot points with light oil.

GREASE FITTINGS

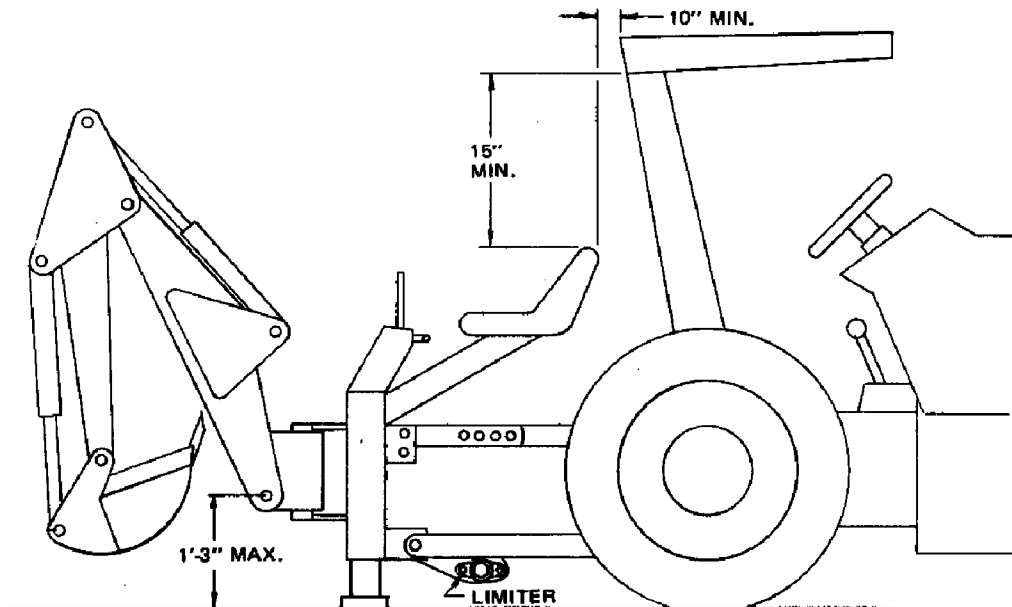
Lubricate all grease fittings daily or every 8 hours of operation. In extremely wet or dry conditions lubricate all fittings every 4 hours.

KUBOTA TRACTOR
K650 BACKHOE
Figure: 4 - ASSEMBLY INSTRUCTIONS

ASSEMBLY INSTRUCTIONS



MECHANICAL 3-POINT LIMITER



BACKHOE WITH ROPS ILLUSTRATION

ASSEMBLY INSTRUCTIONS

MECHANICAL 3-POINT HITCH LIMITER INSTRUCTIONS

The three point hitch limiter is designed to limit the upward movement of the three point hitch linkage during backhoe operation. This device **MUST** be installed on all backhoes that are mounted on tractors equipped with a (ROPS) Rollover Protective Structure. See "BACKHOE WITH ROPS ILLUSTRATION".

ADJUSTMENT

- (1) Attach Backhoe to tractor using the new UPPER LINK ASSEMBLY.
- (2) Raise 3-Point Hitch until backhoe will not raise any more.
- (3) Measure distance from lower boom pivot pin to the ground.
- (4) Loosen the four capscrews (Fig. 1) enough to adjust the limiter so the pin centerline is 1'-3" (maximum) off the ground. Tighten the four capscrews previously loosened.



CAUTION: If the backhoe is mounted on a tractor equipped with ROPS, adjust the 3-point hitch limiter so the backhoe seat is no closer than shown in "BACKHOE WITH ROPS ILLUSTRATION".

OPERATION

- (1) Place the 3-point hitch control to float position.
- (2) Place tractor transmission in neutral.
- (3) Set tractor brakes.
- (4) If the tractor is equipped with a front loader, lower bucket to ground and place loader controls to float.
- (5) Engage P.T.O. (540 rpm) and PURGE the backhoe hydraulic system as described on page eight.
- (6) Lower the stabilizers and slowly raise the backhoe until the 3-point limiter touches the underside of the lower draft links.



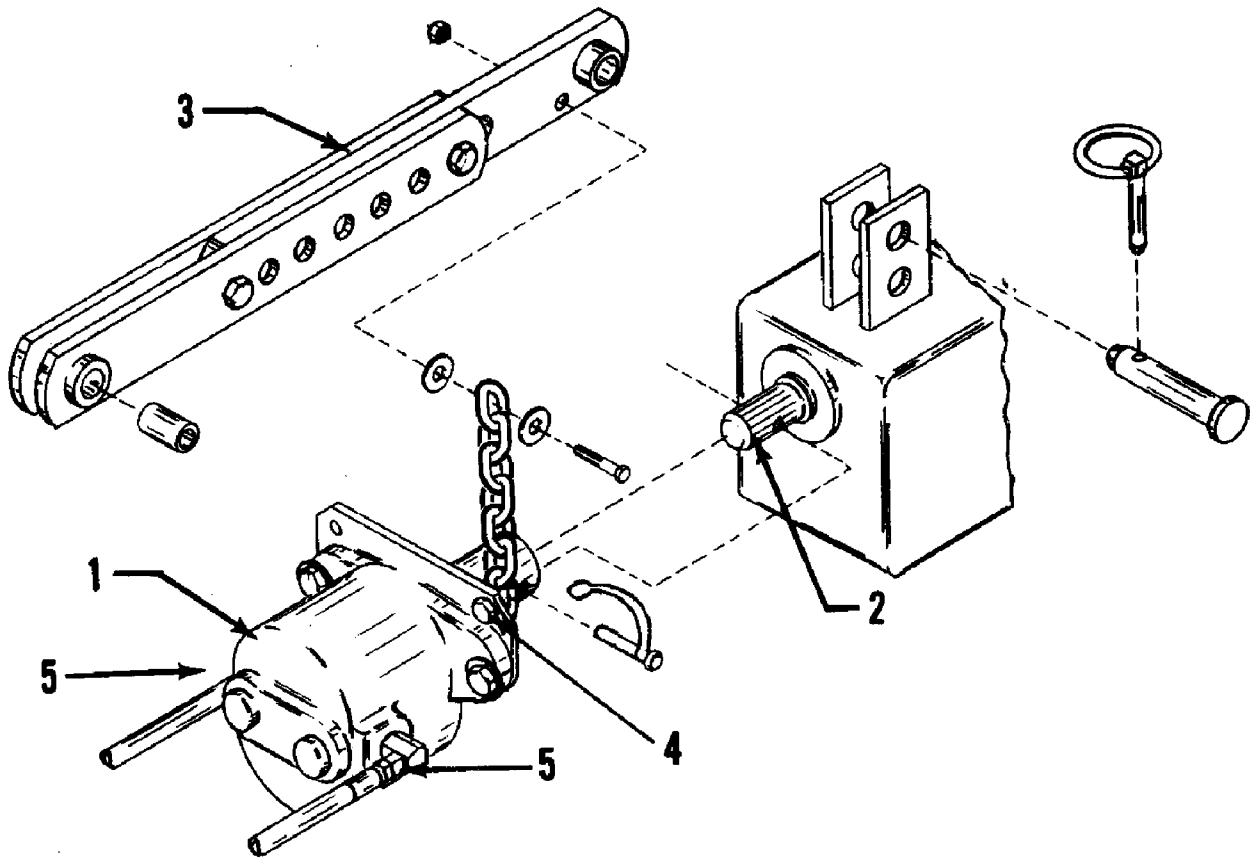
CAUTION: Do not raise the tractor wheels off the ground. The backhoe should be raised only enough to be stabilized.

- (7) The backhoe is now ready for operation. The stabilizers will need to be extended as the stabilizer pads sink into the ground.
- (8) Read your backhoe operator's manual for digging tips and safe operation.
- (9) Tighten all bolts daily. Make sure all hitch and connecting pins are the proper size for tractor hitch and are not showing signs of excessive wear.



CAUTION: NEVER USE BOLTS FOR HITCH PINS.

ASSEMBLY INSTRUCTIONS



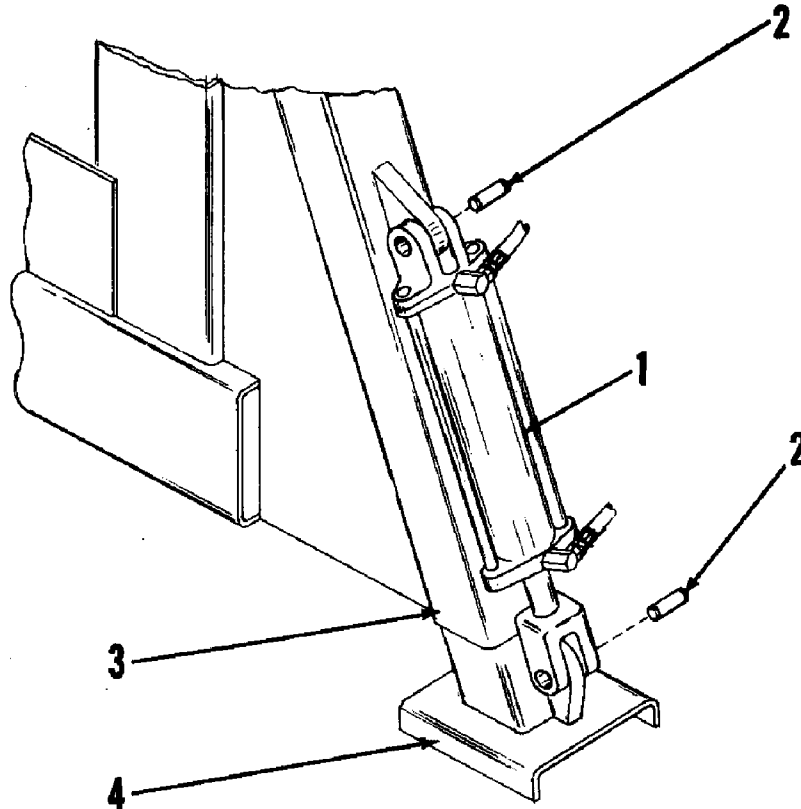
HYDRAULIC PUMP MOUNTING

Position Hydraulic Pump Assembly (Fig. 1) onto the tractor P.T.O. splined shaft (Fig. 2). Make certain the hole in coupling and P.T.O. line up. Retain in place using the retaining pin.

Connect the chain to the pump as shown. Secure with one 5/16 x 1 1/4 hex capscrew, flat washer and hex top lock nut. Connect the opposite end to the Top Link Assembly (Fig 3) as shown. Secure in place using one 5/16 x 1 1/4 hex capscrew, two flat washers and one hex top lock nut.

When the Pump Assembly has been installed, check to make certain the hydraulic fittings (Fig. 5) and pump coupling set screws are tight.

ASSEMBLY INSTRUCTIONS



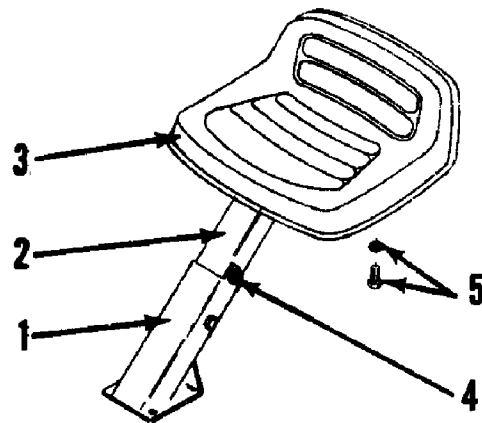
STABILIZER MOUNTING

Insert Stabilizer W.A. (Fig. 4) into Mounting Frame W.A. (Fig. 3) as shown. Position Hydraulic Cylinder (Fig. 1) as shown. Secure to Stabilizer W.A. and Mounting Frame W.A. with two Pin Assemblies (Fig. 2). Mounting of the other stabilizer and cylinder is identical. When both cylinders have been properly mounted, check to make certain hydraulic fittings are tight.

SEAT MOUNTING

The Lower Channel W.A. (Fig. 1) is factory assembled to the Backhoe Mounting Frame.

Position Upper Channel W.A. (Fig. 2) into lower channel. Secure using one 1/2 x 3 hex capscrew and locknut (Fig. 4).



The seat (Fig. 3) is mounted to the upper channel (Fig. 2) using four 5/16 x 1/2 hex capscrews and lock washers (Fig. 5).

KUBOTA TRACTOR
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Figure: 8 - PURGING HYDRAULIC SYSTEM

PURGING HYDRAULIC SYSTEM

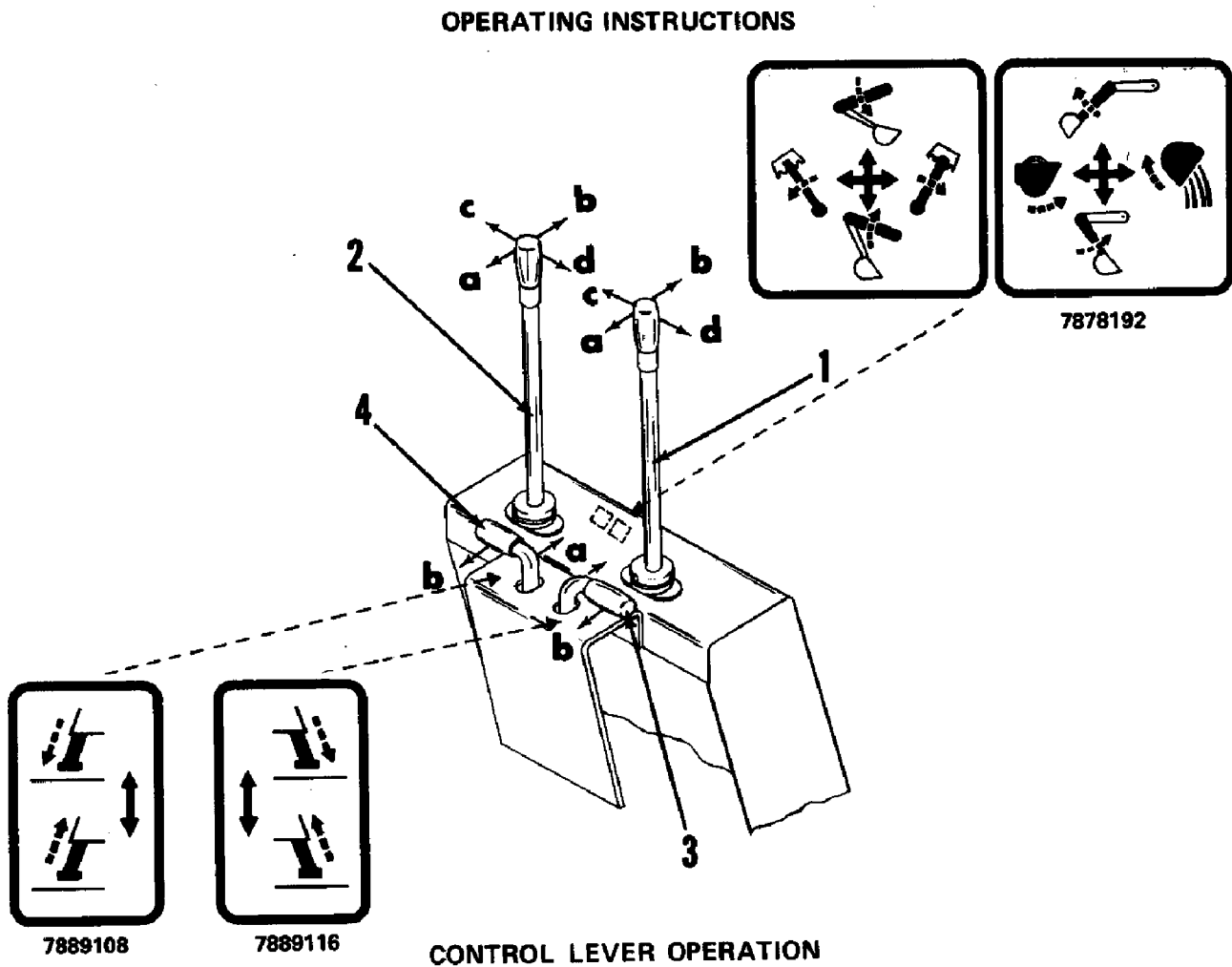
Fill the hydraulic reservoir with approximately 5.5 gallons of HY-TRAN hydraulic fluid.

The backhoe hydraulic system must be purged of all air before putting the unit into actual field operation.

Purge the system by carefully extending and retracting each hydraulic cylinder until all the cylinders move smoothly.

Retract all cylinders, check and fill the hydraulic reservoir to within 1 inch of the top of the hydraulic reservoir.

Figure: 9 - OPERATING INSTRUCTIONS



Note: Unless otherwise noted, "right-hand" and "left-hand" are determined by sitting in the backhoe operator's seat facing the backhoe bucket. Forward is toward the backhoe bucket and rearward is toward the operator.

- (1) Control of crowd (dipperstick) and bucket (right hand lever)
 - (a) Pull lever back to make the crowd move down and towards the operator.
 - (b) Push lever forward to make the crowd move up and away from the operator.
 - (c) Move the lever to the left to make the bucket curl.
 - (d) Move the lever to the right to make the bucket extend.
- (2) Control of Boom & Swing (left hand lever)
 - (a) Pull lever back to make the boom move up and towards the operator.
 - (b) Push lever forward to make the boom move down and away from the operator.
- (3) Right Hand Stabilizer
 - (a) Push lever forward to lower stabilizer.
 - (b) Pull Lever back to raise stabilizer.
- (4) Left Hand Stabilizer
 - (a) Push lever forward to lower stabilizer.
 - (b) Pull lever back to raise stabilizer.

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Figure: 10 - OPERATING POINTERS

OPERATING POINTERS



WARNING: Do not operate backhoe on a tractor equipped with a ROPS (roll over protective structure) unless a three point hitch limiting device has been installed.

Operate the backhoe control levers to become familiar with their speed and movements. The engine speed and the size of the hydraulic system will determine the speed of cylinder operation.

Swing the boom several times to practice controlling the speed of swing. Do not operate the swing more than 45 degrees each way for the first few times; then gradually increase the arc.

IMPORTANT: To avoid damage to the backhoe, do not slam the swing post into rubber bumper pads.

Smooth, light handling of the controls will result in the most efficient machine operation.

It is not difficult to become an efficient operator. A control lever operating decal is located in front of the control levers. Study this decal; it will assist you in becoming familiar with the controls.

Best results are obtained by digging near the center of the swing so material can be dumped on either side.

When opening a trench, maneuver the dipperstick into a vertical position; then move it forward ap-

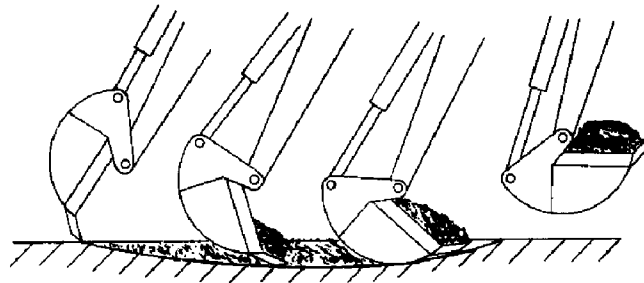
proximately two more feet. The bucket should be positioned to skin 3 to 4 inches of top soil off the surface without dragging the heel of the bucket. On succeeding passes, lower the boom 4 to 6 inches and proceed as before.

When dirt begins to pile too high, utilize the crowd and bucket cylinder to move dirt away from the hole.

As you become familiar with the operation of the backhoe, it will become common practice to operate two controls at one time. For example, with the bucket extended and the dipperstick extended, the lift control and the crowd control can be operated together to bring the bucket toward you with downward pressure on it. As the dipperstick approaches you, the crowd and bucket controls can be operated to move the bucket up and away from you to save time in clearing the excavation.

The dual operation of controls will hasten and simplify the digging operation. Normally, the two or more movements will not be equal or even simultaneous, but as the pressure within a cylinder changes and the resistance on an operating member of the hoe lessens, it will begin to move. It is the balancing of the force of one member against the other. Actuating the crowd and bucket simultaneously will insure full buckets and prevent lost motion and time.

DIGGING TECHNIQUES



CORRECT DIGGING

Two different digging techniques, bucket digging and crowd digging, can be used. Ground conditions and type of bucket being used will determine the best method to use.



CAUTION: To avoid possible bodily injury or damage to a buried cable, check for underground obstructions before digging. To avoid possible bodily injury or damage to other machinery, a barricade should be positioned around the swing area before digging with the backhoe.

BUCKET DIGGING

Lower the bucket to the digging area and, using downward pressure on the bucket bottom, force the bucket into the ground.

It is important for the bucket to be in the proper position when starting to dig. Never attempt to dig with the bucket in the wrong position — to far forward or too far backward as shown.

With the bucket in the ground, simultaneously retract the dipperstick and roll the bucket until the bucket is full.

If the bucket stalls, raise the boom slightly and continue to dig until the bucket is full.

Raise the bucket to the top of the trench and dump it on the spoil pile. With a little practice, raising, swing, and dumping can be accomplished in one smooth operation.

When loading continue rolling the bucket as it is being raised to prevent spilling its contents.

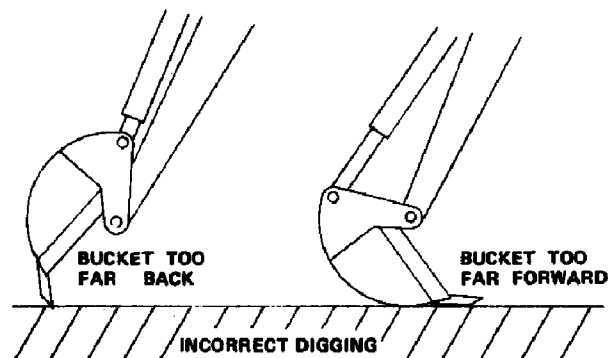
CROWD DIGGING

Lower the bucket into the ground the same as in bucket digging; then roll the bucket until the cutting edge teeth are flat on the ground.

Using only the crowd cylinder, retract the dipperstick — dragging the bucket through the trench until it is approximately half full. Begin to roll the bucket while you continue to retract the dipperstick until the bucket is completely full.

Raise the bucket and swing the boom until the bucket can be dumped in the spoil area.

When operating on hillsides, dump the spoil on the uphill side of the trench. The unit will be in a more stable position and backfilling will be easier.



KUBOTA TRACTOR
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Figure: 12 - HYDRAULIC TANK AND PUMP

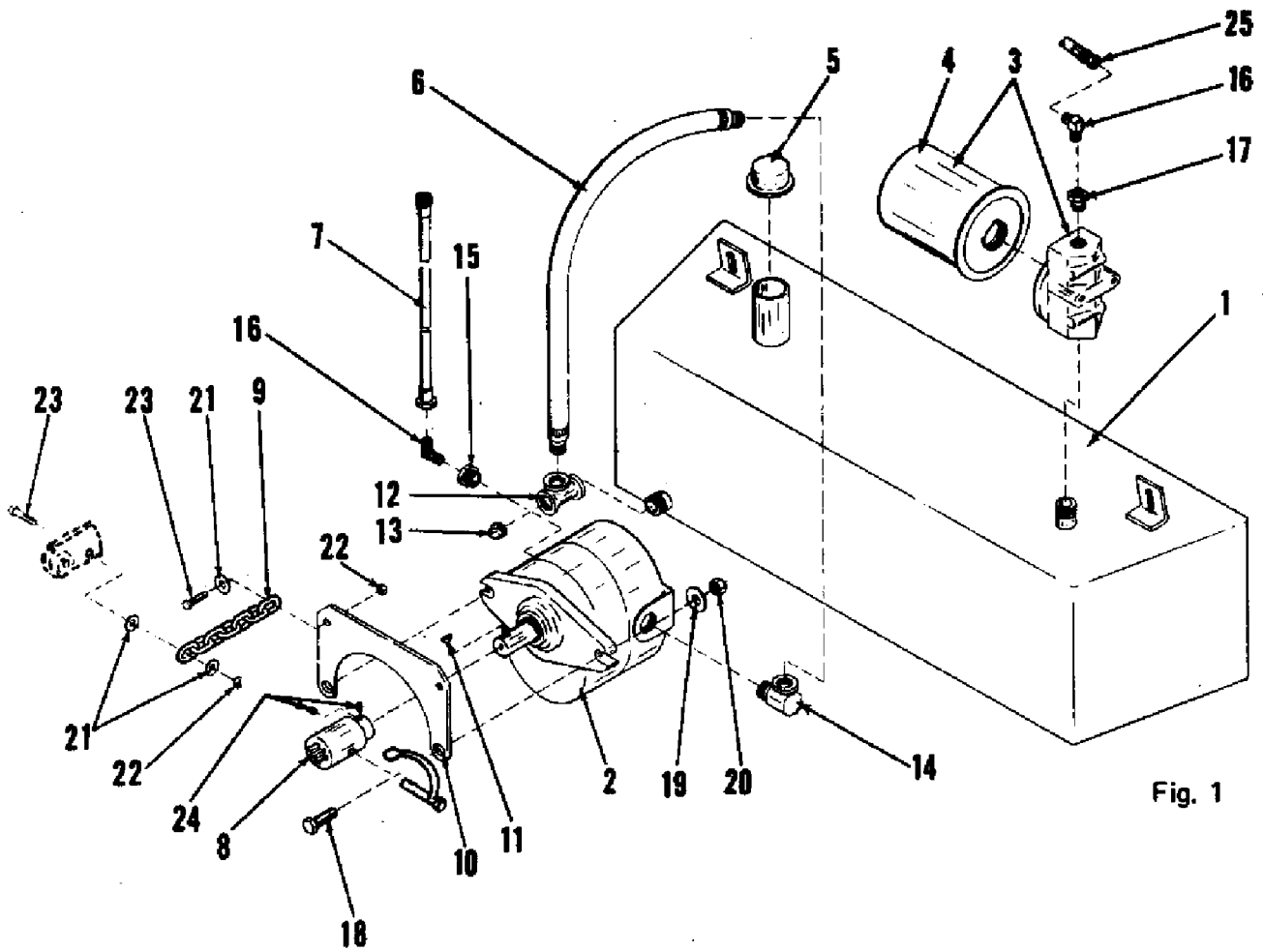


Figure: 12 - HYDRAULIC TANK AND PUMP

Ref	Part Number	Qty	Description
1	6672505	1	HYDRAULIC TANK W.A.
2	8842403	1	HYDRAULIC PUMP
3	8842395	1	FILTER & HOUSING ASM
4	7039332	1	FILTER ELEMENT
5	7895840	1	BREATHER, TANK AIR
6	8842437	1	HYDRAULIC HOSE-SUCTION
7	8842411	1	HYDRAULIC HOSE-40
8	7895832	1	COUPLING-SHAFT
9	6672596	1	CHAIN PUMP 5/0 x 7 LINKS
10	6672612	1	PUMP PLATE
11	0761999	1	WOODRUFF KEY-NO. 505
12	0846766	1	TEE-3/4 NPT
13	0046417	1	PIPE PLUG - 3/4 NPT
14	8046807	1	ELBOW 90° - 1 1/16 O-Rx 3/4 NPT FSW
15	8046815	1	BUSHING-1 1/16 O-R x 1/2 NPT
16		2	ELBOW 90° - 1/2 NPT x 9/16 37°
17	0746230	1	BUSHING 3/4 NPT x 1/2 NPT
18	7702202	2	HCS 7/16 x 1 1/4
19	0705731	2	FW 7/16
20	0074617	2	HNTL 7/16
21	0705525	3	FW 5/16
22	0704726	1	HNTL 5/16
23	7701568	2	HCS 5/16 x 1 1/4
24	0063951	2	CPHSSS 5/16 x 3/8
25	8842429		HYDRAULIC HOSE-17.75 (REF.)

KUBOTA TRACTOR
K650 BACKHOE
Figure: 13 - MOUNTING FRAME

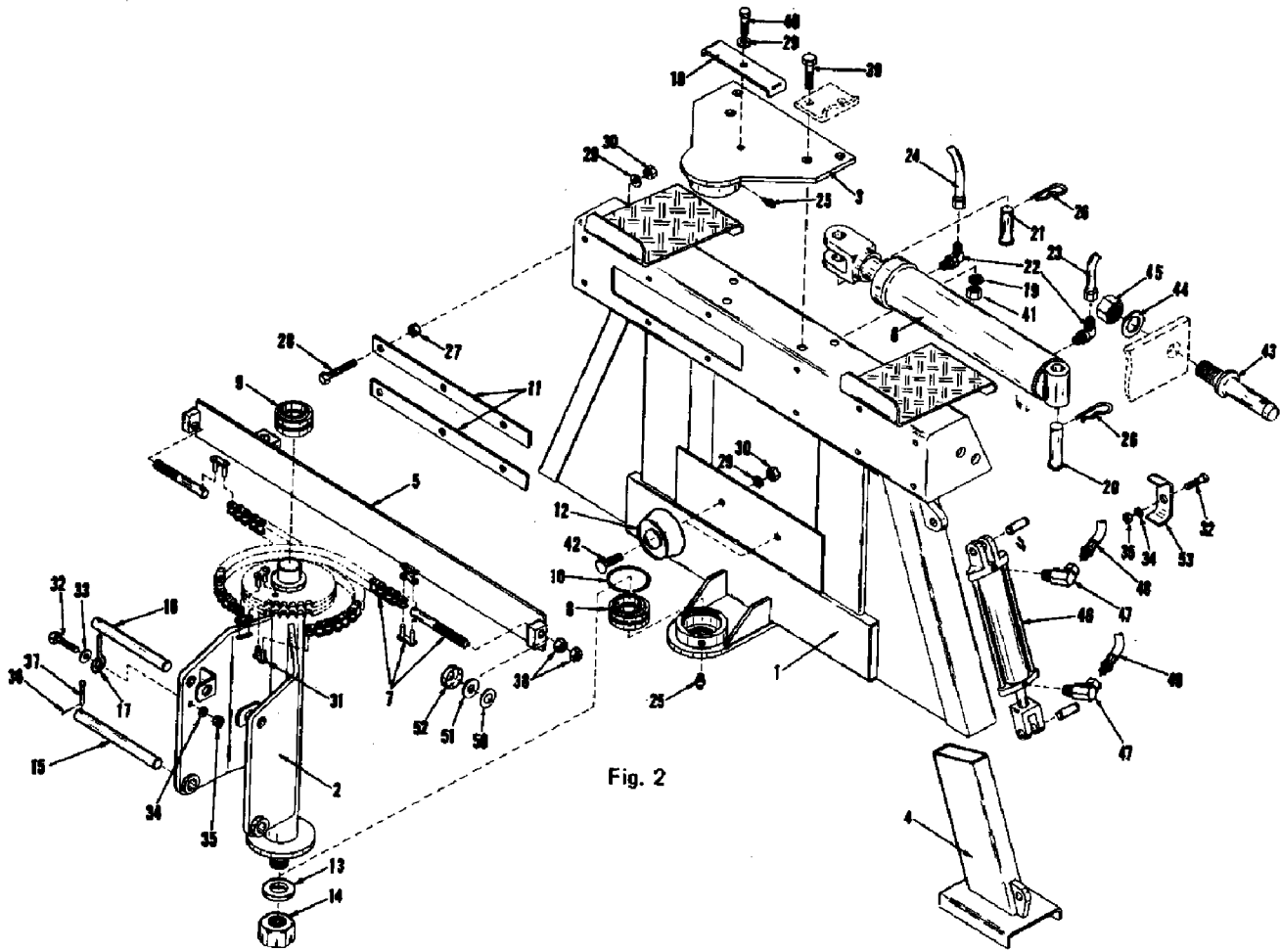


Fig. 2

KUBOTA TRACTOR
K650 BACKHOE
Figure: 13 - MOUNTING FRAME

Ref	Part Number	Qty	Description
1	6659122	1	MOUNTING FRAME W.A.
2	6636898	1	KINGPOST W.A.
3	6637003	1	UPPER SUPPORT W.A.
4	6672810	2	STABILIZER W.A.
5	6636831	1	SLIDE BAR W.A.
6	7873151	1	SWING CYLINDER
7	6637045	2	SWING CHAIN ASM
8	7710262	1	BALL BUSHING 1 1/2 IN.
9	7711567	1	BALL BUSHING 1 3/8 IN.
10	0840686	1	SNAP RING
11	6636872	2	SLIDE BAR STRIP
12	6626493	2	BUMPER PAD
13	6636997	1	WASHER-SPEC.
14	6627160	1	LOCKNUT
15	6637615	1	BOOM PIVOT PIN
16	6637631	1	CYLINDER PIVOT PIN
17	6637417	1	PIN RETAINER
18	6637656	1	HOSE CLAMP
19	0705046	4	LOCK WASHER 1/2
20	0763243	1	CLEVIS PIN 1 x 4
21	0863134	1	CLEVIS PIN 1 x 2 5/8
22	7746555	2	ADJUSTABLE ELBOW-90 DEG-O/R
23	7872872	1	HYDRAULIC HOSE ASM
24	0795559	1	HYDRAULIC HOSE ASM
25	0077065	2	GREASE FITTING
26	0062349	4	HAIR PIN-NO. 3
27	6636880	12	SPACER
28	7701055	12	CAPSCREW-3/8 x 1 3/4 GR 5
29	0705038	15	LOCKWASHER-3/8
30	0704023	14	HEX NUT-3/8
31	0851238	2	CONNECTING LINK
32	7703838	3	CAPSCREW-5/16 x 1 3/4
33	0705525	1	FLAT WASHER-5/16
34	0705020	3	LOCKWASHER-5/16
35	0704015	3	HEX NUT-5/16
36	0062356	1	COTTER PIN 3/32 x 1/2
37	0863126	1	CLEVIS PIN-1/4 x 1 3/4
38	0704130	4	HEX NUT-5/8
39	0701276	4	CAPSCREW-1/2 x 1 1/2 NF GR 5
40	0701060	1	CAPSCREW-3/8 x 1 1/4
41	0704148	4	HEX NUT 1/2 NF
42	0700047	2	CARRIAGE BOLT 3/8 x 1 GR 5
43	7753726	2	LINK PIN
44	0705152	2	LOCK WASHER-7/8
45	0704932	2	HEX NUT-7/8 NF
46	7892599	2	HYDRAULIC CYLINDER W/PINS
47	7746431	4	SWIVEL ADAPTER
48	7892607	2	HYDRAULIC HOSE-36
49	7892615	2	HYDRAULIC HOSE-45
50	6647168	2	WASHER-SPEC.
51	6647184	2	RUBBER WASHER
52	6647176	2	CUP
53	6659718	2	HOSE CLAMP

KUBOTA TRACTOR
K650 BACKHOE
Figure: 14 - VALVE & MOUNT ASSEMBLY

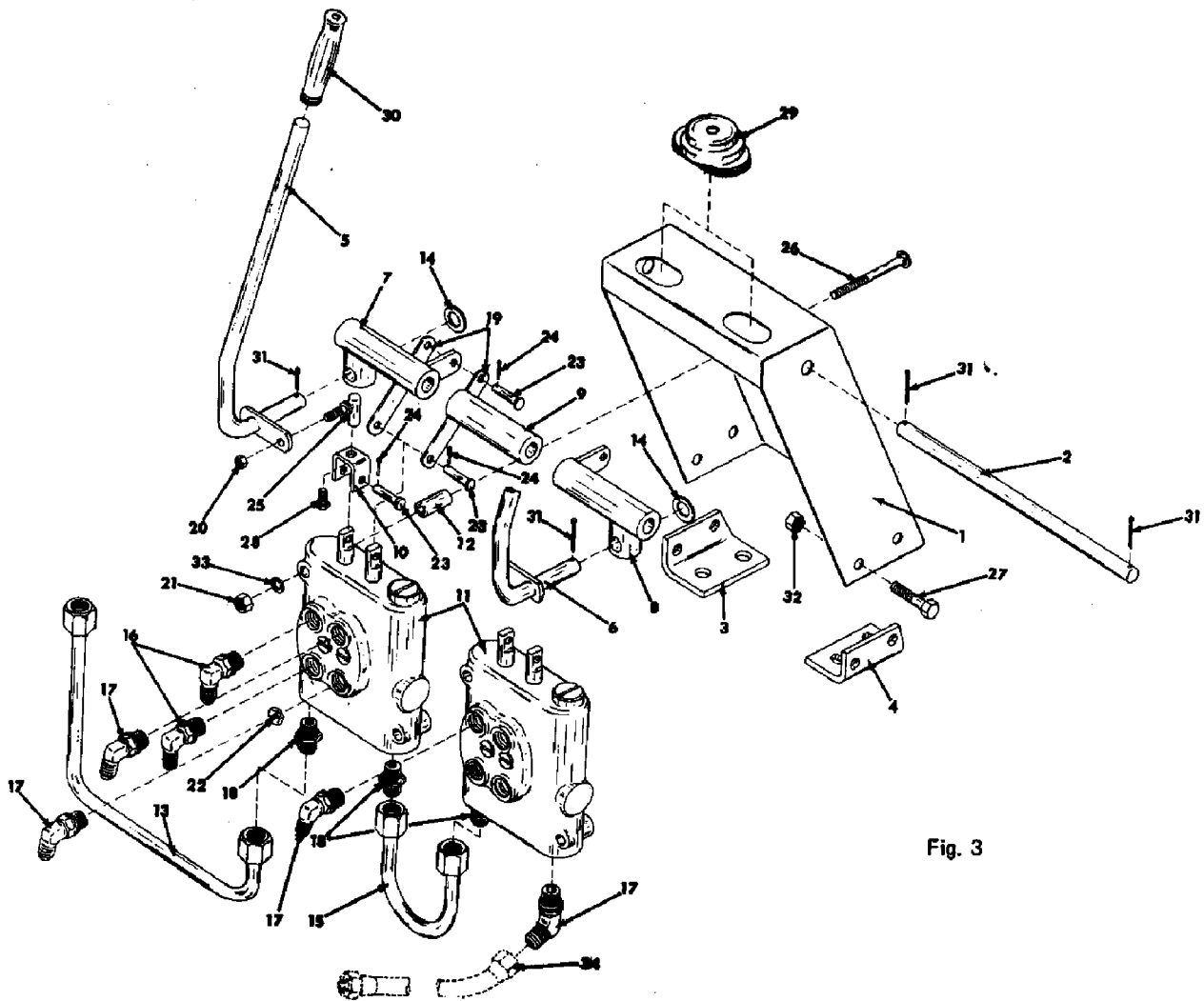


Fig. 3

Figure: 14 - VALVE & MOUNT ASSEMBLY

Ref	Part Number	Qty	Description
1	6638225	1	VALVE BRACKET W.A.
2	6638308	1	ROD
3	6638217	1	PIVOT BRACKET LH
4	6638191	1	PIVOT BRACKET RH
5	6638332	1	VALVE HANDLE W.A. LH
6	6638324	1	VALVE HANDLE W.A. RH
7	6638282	1	PIVOT BUSHING W.A. LH
8	6638241	1	PIVOT BUSHING W.A. RH
9	6638233	1	BUSHING
10	6638365	2	CLIP
11	7873177	2	VALVE
12	6637110	4	SPACER
13	7892623	1	HYDRAULIC TUBE ASM
14	0705541	2	WASHER 1/2 FLAT
15	7873128	1	HYDRAULIC TUBE ASM
16	7746555	2	ADJUSTABLE ELBOW-90 DEG.
17	0792150	7	ADJUSTABLE ELBOW-45 DEG.
18	0846634	3	STRAIGHT TUBE CONNECTER
19	6638316	4	LINK
20	0704668	2	HEX NUT-1/4 NF
21	0704007	4	HEX NUT-1/4
22	7732357	1	ORIFICE PLATE
23	0863241	6	CLEVIS PIN
24	0062018	6	COTTER PIN-1/16 x 1/2
25	7711591	2	BALL JOINT
26	0700104	4	CARRIAGE BOLT-1/4 x 2 1/2
27	0701045	4	CAPSCREW-3/8 x 3/4
28	7772239	2	CAPSCREW-1/4 x 1/2 NF
29	0794321	2	BOOT-CONTROL LEVER
30	7727332	2	HANDLE GRIP
31	0062083	4	COTTER PIN-1/8 x 1
32	0704635	4	LOCKNUT-3/8
33	0705012	4	LOCKWASHER-1/4
34	8842411		HYDRAULIC HOSE-40 IN. (REF.)

KUBOTA TRACTOR
K650 BACKHOE
Figure: 15 - BOOM SUB-ASM.

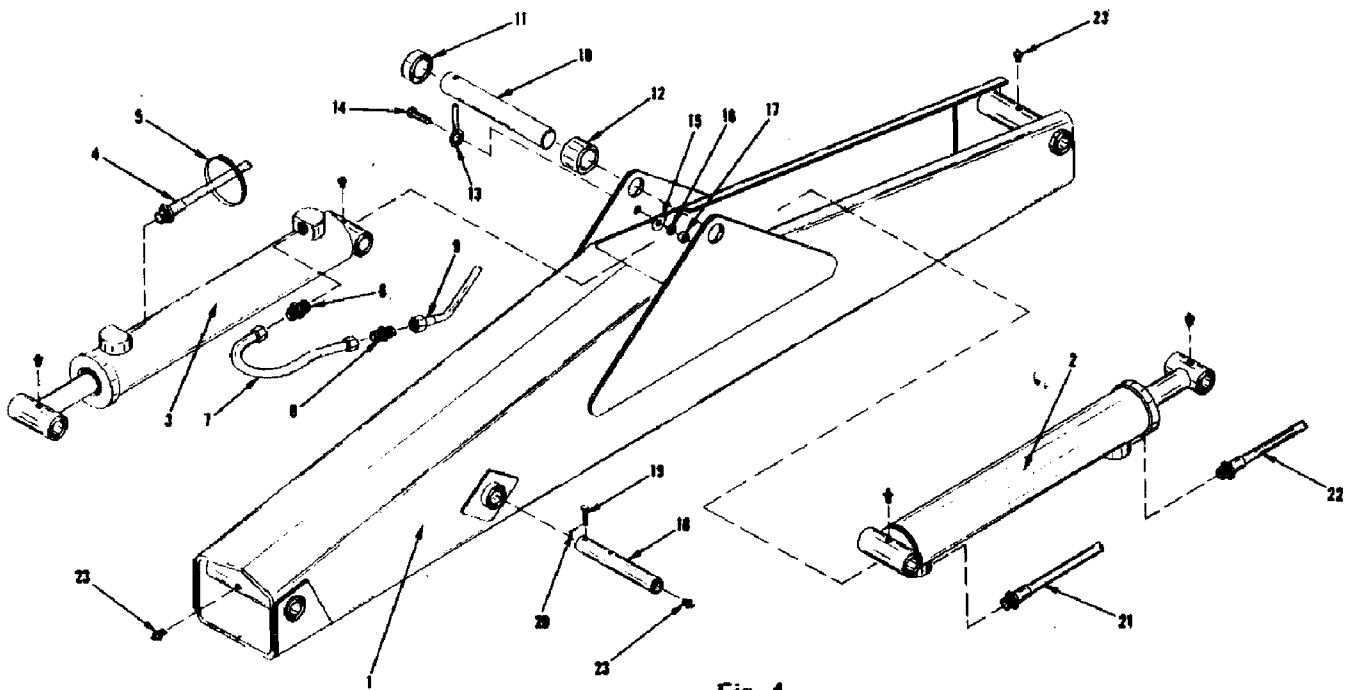


Fig. 4

KUBOTA TRACTOR
K650 BACKHOE
Figure: 15 - BOOM SUB-ASM.

Ref	Part Number	Qty	Description
1	6637250	1	BOOM W.A.
2	7873144	1	HYDRAULIC CYLINDER-LIFT
3	7873136	1	HYDRAULIC CYLINDER-CROWD
4	7873029	1	HYDRAULIC HOSE
5	0797746	1	HOSE CLAMP
6	0846634	1	STR. TUBE CONNECTOR
7	7873110	1	HYD. TUBE ASM.
8	0792267	1	STR. TUBE UNION
9	7873037	1	HYDRAULIC HOSE
10	6637391	1	CYLINDER PIN
11	6637425	1	CYLINDER SPACER
12	6637433	1	CYLINDER SPACER
13	6637417	1	PIN RETAINER
14	0701029	1	CAPSCREW-5/16 x 1
15	0705525	1	FLAT WASHER-5/16
16	0705020	1	LOCK WASHER-5/16
17	0704015	1	HEX NUT-5/16
18	6637383	1	LIFT CYLINDER PIN
19	0863126	1	CLEVIS PIN-1/4 x 1/34
20	0062356	1	COTTER PIN-3/32 x 1/2
21	7873045	1	HYDRAULIC HOSE
22	7873052	1	HYDRAULIC HOSE
23	0077065	3	GREASE FITTING

KUBOTA TRACTOR
K650 BACKHOE
Figure: 16 - DIPPERSTICK SUB-ASM.

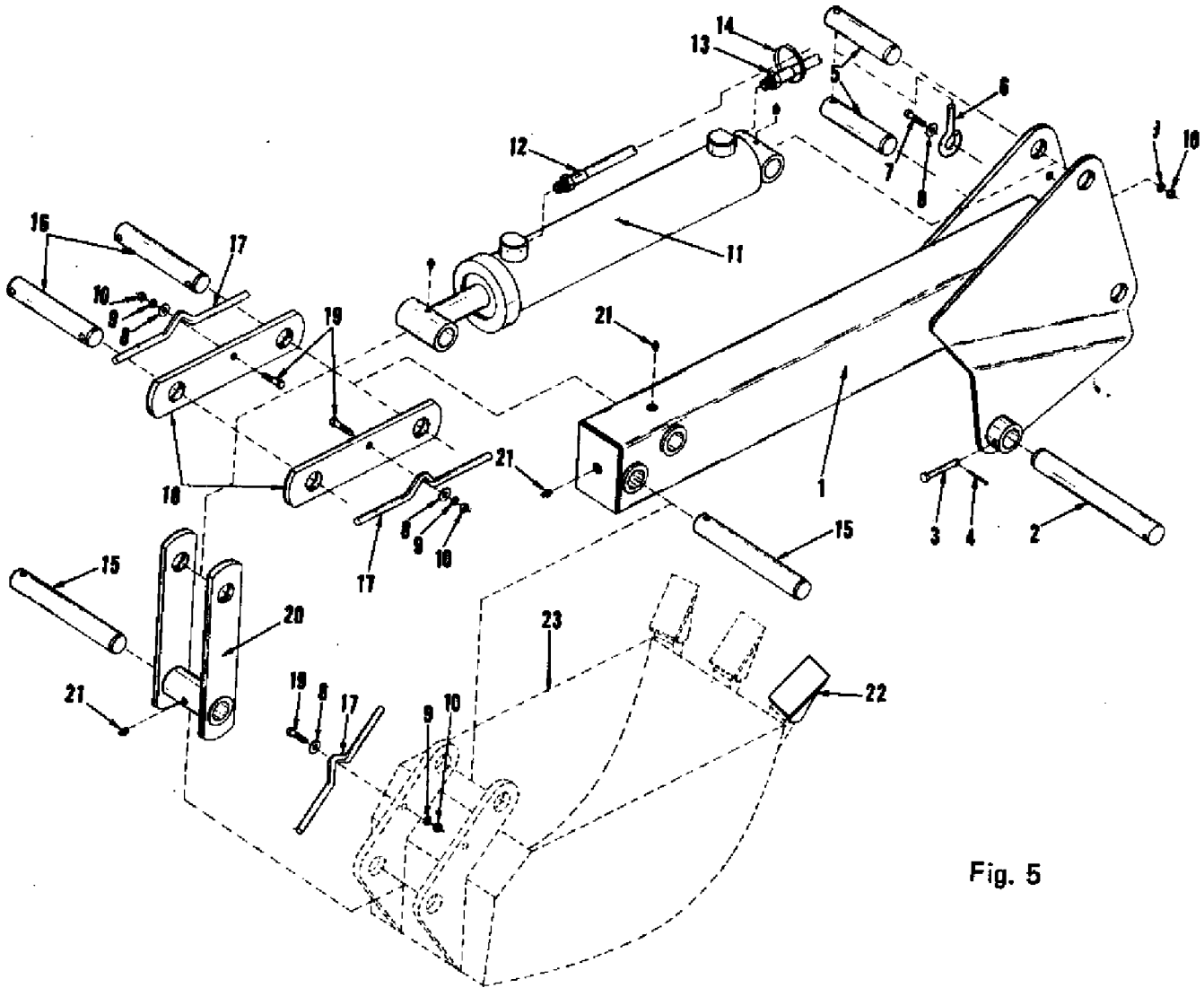


Fig. 5

KUBOTA TRACTOR
K650 BACKHOE
Figure: 16 - DIPPERSTICK SUB-ASM.

Ref	Part Number	Qty	Description
1	6663975	1	DIPPRSTICK W.A.
2	6637623	1	BOOM PIVOT PIN
3	0863126	1	CLEVIS PIN-1/4 x 1 3/4
4	0062356	1	COTTER PIN 3/32 x 1/2
5	6637557	2	PIVOT PIN
6	6637417	2	PIN RETAINER
7	0701029	2	CAPSCREW-5/16 x 1
8	0705525	5	FLAT WASHER-5/16
9	0705020	5	LOCK WASHER-5/16
10	0704015	5	HEX NUT 5/16
11	7873169	1	HYDRAULIC CYLINDER-BUCKET
12	7873102	1	HYDRAULIC HOSE
13	7873086	1	HYDRAULIC HOSE
14	7022411	1	HOSE CLAMP
15	6637706	2	PIVOT PIN
16	6637599	2	PIVOT PIN
17	6637607	3	PIN RETAINER
18	6637565	2	SIDE BAR
19	0701037	3	CAPSCREW-5/16 x 1 1/4
20	6637573	1	PIVOT BRACKET W.A.
21	0077065	3	GREASE FITTING-1/8 STR.
22	7793037		TOOTH POINT
23	9921677	1	BUCKET-16 IN.
23	9921206	1	BUCKET-12 IN.
23	9921198	1	BUCKET-10 IN.

KUBOTA TRACTOR
K650 BACKHOE
Figure: 17 - STABILIZER VALVE ASSEMBLY

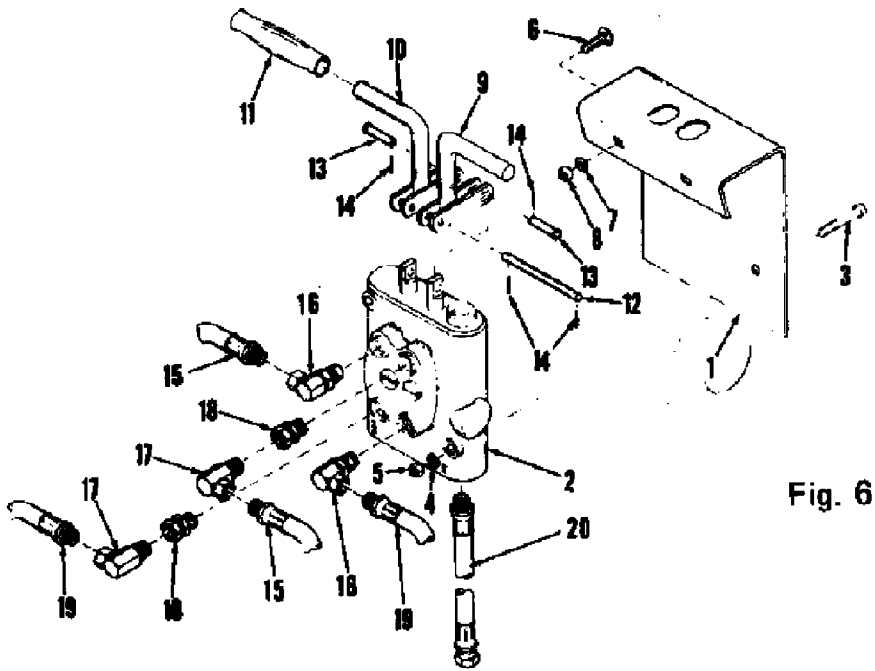


Fig. 6

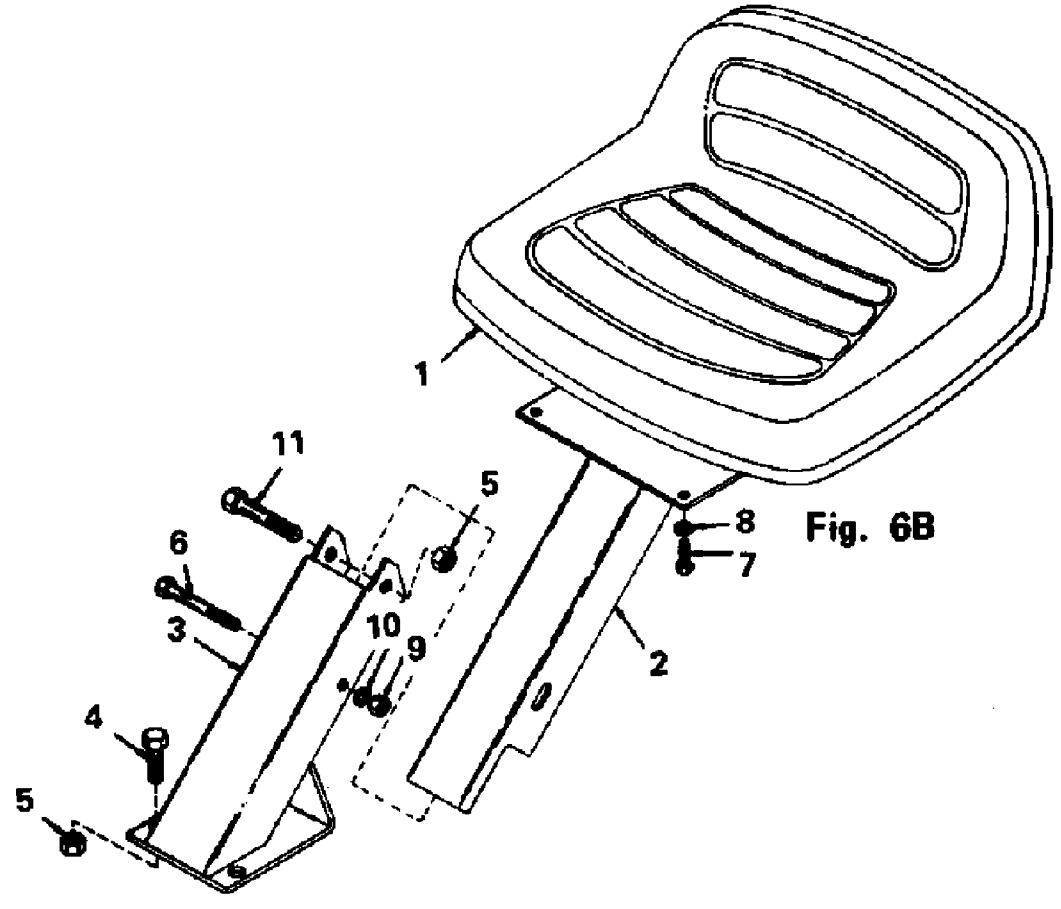


Fig. 6B

Figure: 17 - STABILIZER VALVE ASSEMBLY

Ref	Part Number	Qty	Description
1	6658967	1	STABILIZER VALVE BRKT
2	7873177	1	VALVE
3	0703546	2	CAPSCREW-1/4 x 2
4	0705012	2	LOCKWASHER-1/4
5	0704007	2	HEX NUT-1/4
6	7700339	2	CB-5/16 x 3/4
7	0705020	2	LOCKWASHER-5/16
8	0704015	2	HEX NUT-5/16
9	6659163	1	VALVE HANDLE W.A.-LH
10	6659155	1	VALVE HANDLE W.A.-RH
11	7727332	2	HANDLE GRIP
12	6659700	1	PIVOT PIN
13	0863241	2	PIN
14	0062018	4	CT-PIN 1/16 x 1/2
15	7892615	2	HYDRAULIC HOSE-45
16	0846675	2	ADJUSTABLE FEM. PIPE SWIVEL 90 DEG.
17	7746431	2	SWIVEL ADAPTER 90 DEG.
18	7792989	2	FEMALE PIPE SWIVEL
19	7892607	2	HYDRAULIC HOSE-36
20	8842429	1	HYDRAULIC HOSE-17 3/4

SEAT ASSEMBLY

1	0793794	1	SEAT
2	6639256	1	UPPER CHANNEL W.A.
3	6639264	1	LOWER CHANNEL W.A.
4	0701235	2	CAPSCREW - 1/2 x 1 1/2 GR 5
5	7704125	3	LOCKNUT - 1/2
6	0701821	1	CAPSCREW-3/8 x 3 1/2
7	0701003	4	CAPSCREW - 5/16 x 1/2
8	0705020	4	LOCKWASHER - 5/16
9	0704023	1	HEX NUT - 3/8
10	0705038	1	LOCK WASHER - 3/8
11	0773374	1	CAPSCREW - 1/2 x 3 1/2

KUBOTA TRACTOR
K650 BACKHOE
Figure: 18 - TOP LINK ASSEMBLY

Replace upper link with new Top Link Assembly. Item (Fig. 2), Single Link W.A. is assembled to tractor using the Clevis Pin and Klik Pin supplied with the tractor.

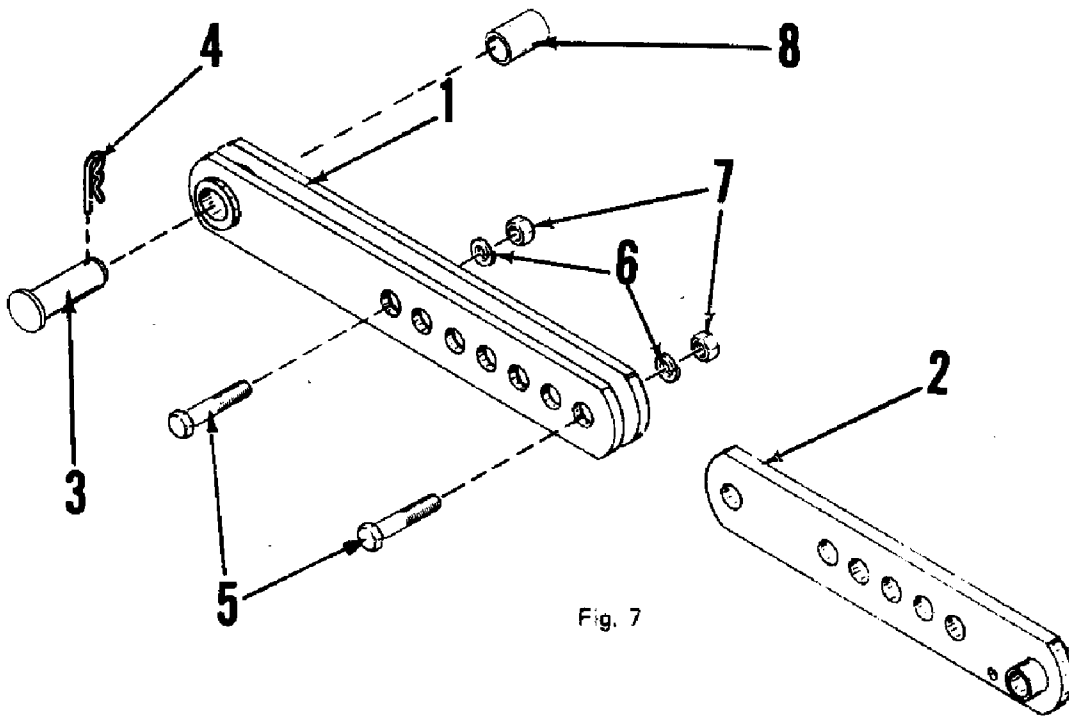


Fig. 7

KUBOTA TRACTOR
K650 BACKHOE
Figure: 18 - TOP LINK ASSEMBLY

Ref	Part Number	Qty	Description
1	6672661	1	DOUBLE LINK W.A.
2	6672687	1	SINGLE LINK W.A.
3	0763086	1	CLEVIS PIN 3/4 x 3
4	0062349	1	HPC-NO. 3
5	7702145	2	HCS 3/4 x 2 1/2
6	0705111	2	HSLW 3/4
7	0704528	2	HN 3/4
8	6641435	1	BUSHING

KUBOTA TRACTOR
K650 BACKHOE
Figure: 19 - HYDRAULIC CYLINDERS

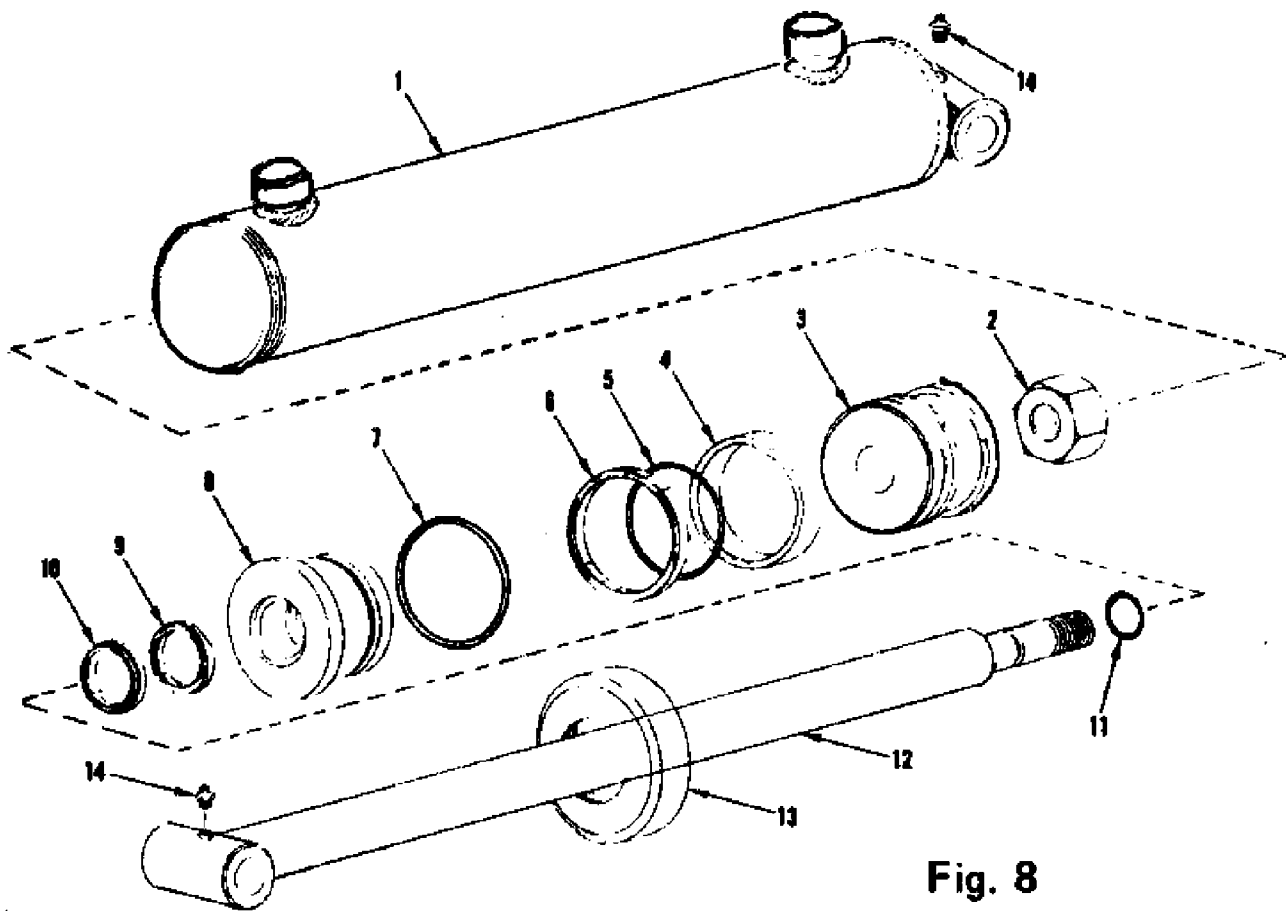


Fig. 8

KUBOTA TRACTOR
K650 BACKHOE
Figure: 19 - HYDRAULIC CYLINDERS

Ref	Part Number	Qty	Description
			SWING
	7873151		HYDRAULIC CYL. COMP.
1	7732472		BARREL ASSEMBLY
2	7732696		LOCKNUT
3	7732480		PISTON
4	7732647		WEAR RING
5	7732654		PISTON SEAL
6	7732662		SLIPPER SEAL
7	7732597		GLAND STATIC SEAL
8	7732431		GLAND
9	7732613		ROD SEAL
10	7732621		ROD WIPER
11	7732639		ROD STATIC SEAL
12	7732498		ROD ASSEMBLY
13	7732456		COLLAR
	7732506		SEAL REPAIR KIT
			LIFT
	7873144		HYDRAULIC CYL. COMP.
1	7732530		BARREL ASSEMBLY
2	7732696		LOCKNUT
3	7732548		PISTON
4	7732704		WEAR RING
5	7732670		PISTON SEAL
6	7732688		SLIPPER SEAL
7	7732605		GLAND STATIC SEAL
8	7732449		GLAND
9	7732613		ROD SEAL
10	7732621		ROD WIPER
11	7732639		ROD STATIC SEAL
12	7732555		ROD ASSEMBLY
13	7732464		COLLAR
14	0077016		GREASE FITTING
	7732563		SEAL REPAIR KIT
			CROWD
	7873136		HYDRAULIC CYL. COMP.
1	7732514		BARREL ASSEMBLY
2	7732696		LOCKNUT
3	7732480		PISTON
4	7732647		WEAR RING
5	7732654		PISTON SEAL
6	7732662		SLIPPER SEAL
7	7732597		GLAND STATIC SEAL
8	7732431		GLAND
9	7732613		ROD SEAL
10	7732621		ROD WIPER
11	7732639		ROD STATIC SEAL
12	7732522		ROD ASSEMBLY
13	7732456		COLLAR

KUBOTA TRACTOR
K650 BACKHOE
Figure: 19 - HYDRAULIC CYLINDERS

Ref	Part Number	Qty	Description
14	0077016		GREASE FITTING
	7732506		SEAL REPAIR KIT
			BUCKET
	7873169		HYDRAULIC CYL. COMP.
1	7732571		BARREL ASSEMBLY
2	7732696		LOCKNUT
3	7732548		
4	7732704		WEAR RING
5	7732670		PISTON SEAL
6	7732688		SLIPPER SEAL
7	7732605		GLAND STATIC SEAL
8	7732449		GLAND
9	7732613		ROD SEAL
10	7732621		ROD WIPER
11	7732639		ROD STATIC SEAL
12	7732589		ROD ASSEMBLY
13	7732464		COLLAR
14	0077016		GREASE FITTING
	7732563		SEAL REPAIR KIT

KUBOTA TRACTOR
K650 BACKHOE
Figure: 20 - HYDRAULIC VALVE

Fig. 9

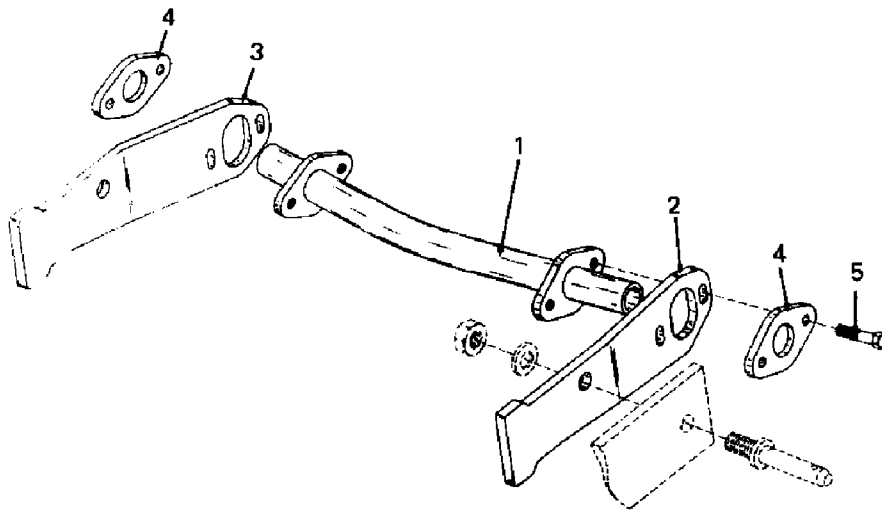
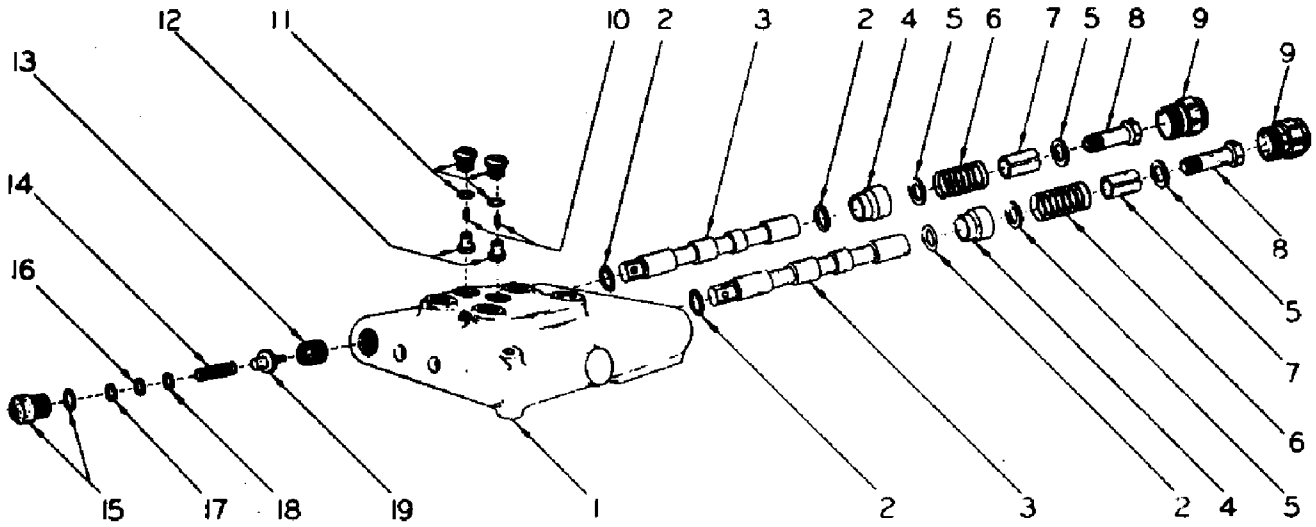
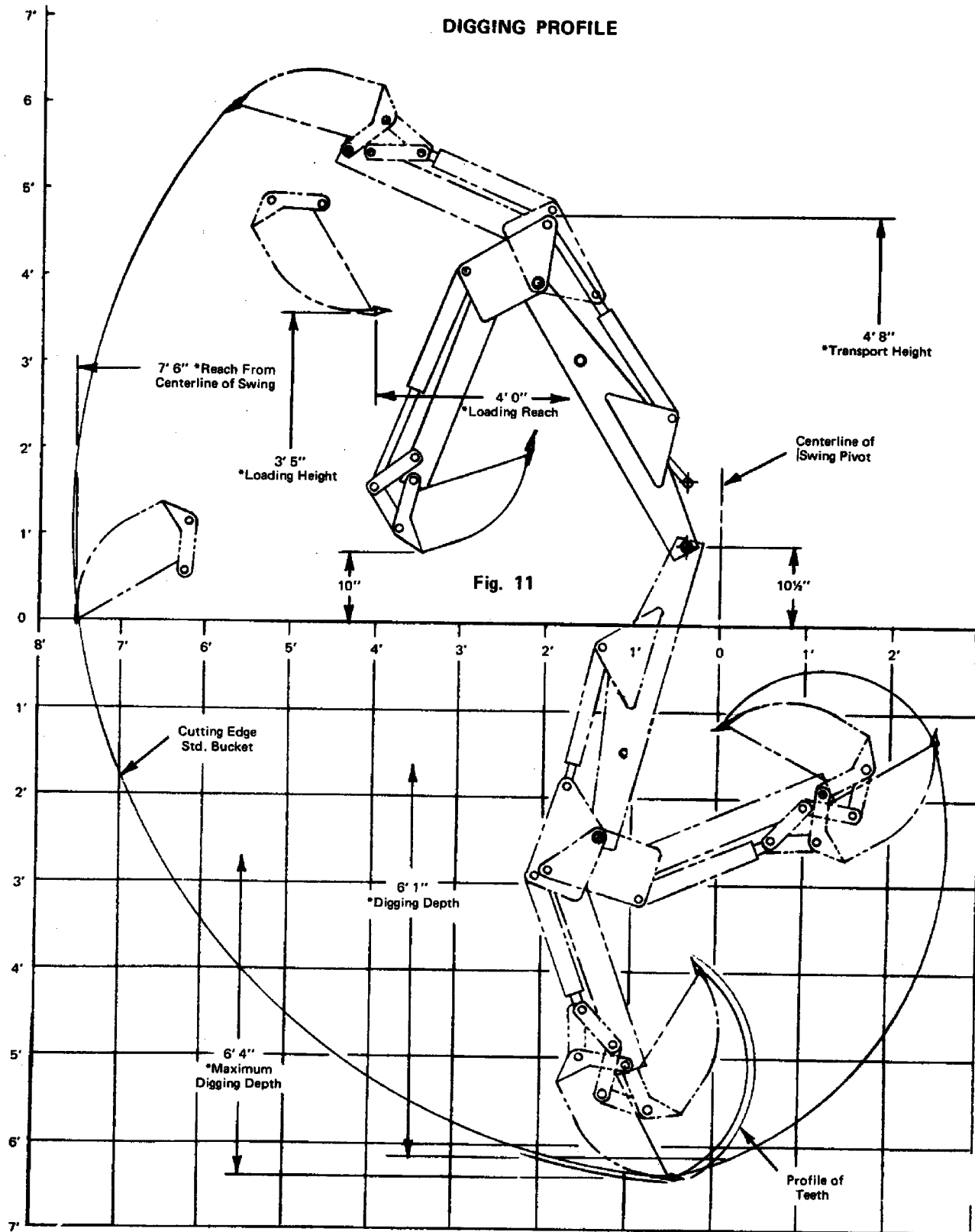


Fig. 10

KUBOTA TRACTOR
K650 BACKHOE
Figure: 20 - HYDRAULIC VALVE

Ref	Part Number	Qty	Description
	7873177	2	HYDRAULIC VALVE COMPLETE
1	7732407	1	BODY
2	7732373	4	O-RING
3	7732399	2	SPOOL D.A. STD.
4	0738369	2	BUSHING
5	7035256	4	WASHER-MISC. STEEL .625 O.D.
6	0738336	2	SPRING-SPOOL CTR.
7	0738351	2	SPACER-SPOOL
8	0738344	2	SCREW-SPOOL
9	0738377	2	CAP ASSEMBLY
10	0738328	2	SPRING-LIFT CHECK
11	0738419	2	PLUG ASSEMBLY-LIFT CHECK
12	0738310	2	PLUNGER-LIFT CHECK
13	7732423	1	SEAT
14	0737916	1	SPRING-ORANGE
15	7732381	1	PLUG ASSEMBLY
16	0732651	AR	SHIM-.015 THICK
17	0730820	AR	SHIM-.010 THICK
18	0737031	AR	SHIM-.035 THICK
19	7030794	1	POPPET
	7732415	1	SEAL REPAIR KIT
3 PT. LIMITER MTG. ASSEMBLY			
1	6672711	1	LIMITER W.A.
2	6672489	1	PLATE-LH
3	6672471	1	PLATE-RH
4	6672463	2	PLATE-MTG.
5	7701758	4	HCS-5/8 x 1 1/2

KUBOTA TRACTOR
 K650 BACKHOE
 Figure: 22 - DIGGING PROFILE



*Per I.C.E.D. Definition as found in "A dictionary of terms and definitions of industrial tractors & construction Equipment."

Specifications

REACH BELOW GRADE (STANDARD BUCKET)

Maximum	6' 4"	1030
With two-foot flat-bottom trench*	6' 1"	1854

LOADING HEIGHT*	3' 5"	1041
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REACH

From center of swing mast pivot point*	7' 6"	1981
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BUCKET ARC	118°
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SWING WORKING ARC	180°
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OPERATING PRESSURE

Digging*	1,000 psi	6.9 MPa
Swing*	1,000 psi	6.9 MPa

STABILIZER SPREAD	42"-48"	1067 - 1219
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LIFT CYLINDER

Bore	2.5"	63.5
Stroke	16.12"	409.5

DIPPERSTICK CYLINDER

Bore	2.0"	50.8
Stroke	11.87"	301.5
Digging Force*	521 lbs.	

BUCKET CYLINDER

Bore	2.5"	63.5
Stroke	12.25"	311.2
Digging Force*	2064 lbs.	

SWING CYLINDER

Bore	2.0"	50.8
Stroke	9.0"	228.6

BUCKET CAPACITY

10 inches6 ft ³	.016 m ³
12 inches7 ft ³	.020 m ³
16 inches9 ft ³	.025 m ³

*Per I.C.E.D. Definition as found in "A dictionary of terms and definitions of industrial tractors & construction Equipment"

Old Manufacture Number to Kubota Part Number

Old Number	Kubota Part Number			
0046417				
0062018	70020-00131			
0062083	70020-00002			
0062349	70020-00003			
0062356	70020-00202			
0063951				
0074617				
0077016	70030-00325			
0077065	70020-00004			
0700047	70020-00005			
0700104	70020-00006			
0701003	70020-00366			
0701029				
0701037	70020-00204			
0701045				
0701060				
0701235	70080-00838			
0701276				
0701821				
0703546				
0704007	70030-00470			
0704015				
0704023				
0704130				
0704148				
0704528	70080-00827			
0704635				
0704668				
0704726				
0704932	70080-00823			
0705012				
0705020				
0705038	70080-00799			
0705046	70080-00795			
0705111	70080-00840			
0705152	70080-00822			
0705525				
0705541	70080-00819			
0705731				
0730820	70020-00154			
0732651	70020-00134			
0737031	70020-00135			
0737916	70020-00402			
0738310	70020-00149			
0738328	70020-00151			

Old Number	Kubota Part Number			
0738336	70020-00138			
0738344	70020-00137			
0738351	70020-00152			
0738369	70020-00153			
0738377	70020-00148			
0738419	70020-00150			
0746230				
0761999	70020-00161			
0763086	70030-00337			
0763243	70020-00008			
0773374	70080-00818			
0792150	70020-00012			
0792267	70020-00013			
0793794	70020-00015			
0794321				
0795559	70020-00018			
0797746	70020-00132			
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0846634	70020-00023			
0846675	70020-00024			
0846766				
0851238	70020-00158			
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6637599	70020-00045			
6637607	70020-00046			

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6637706	70020-00051			
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6647184	70020-00070			
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6663975	70020-00192			
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6672687	70020-00190			
6672711	70020-00179			
6672810	70020-00163			
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7030794	70020-00401			
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7701758	70020-00183			
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7704125	70030-00406			
7710262	70020-00076			
7711567	70020-00077			
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7727332	70020-00079			
7732357	70020-00147			
7732373	70020-00144			
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7732605	70020-00283			
7732613	70020-00284			
7732621	70020-00285			
7732639	70020-00286			
7732647	70020-00411			
7732654				
7732662	70020-00404			
7732670	70020-00287			
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7732704	70020-00290			
7746431	70020-00100			
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7753726	70020-00157			
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7792989	70020-00102			
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7872872	70020-00105			
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