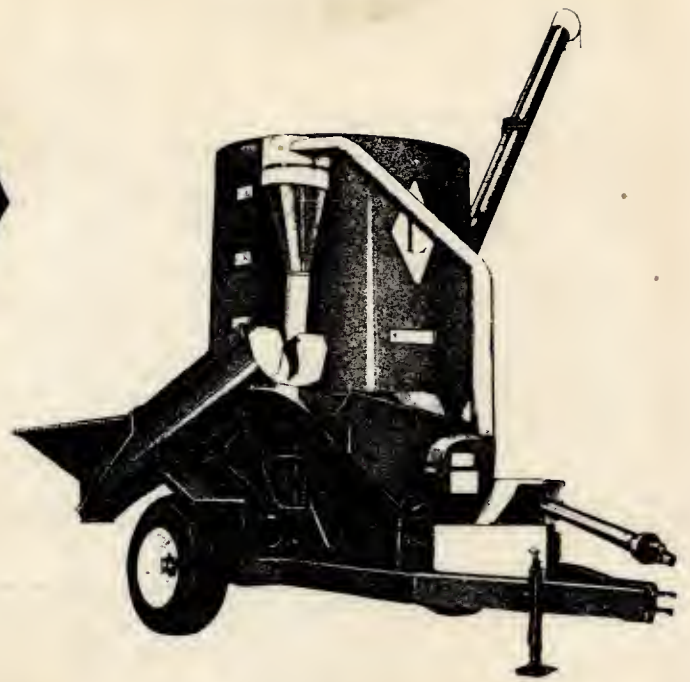
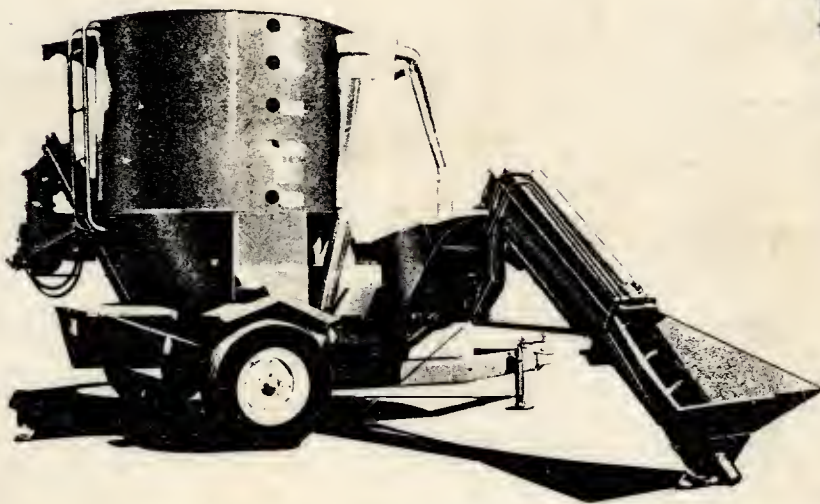
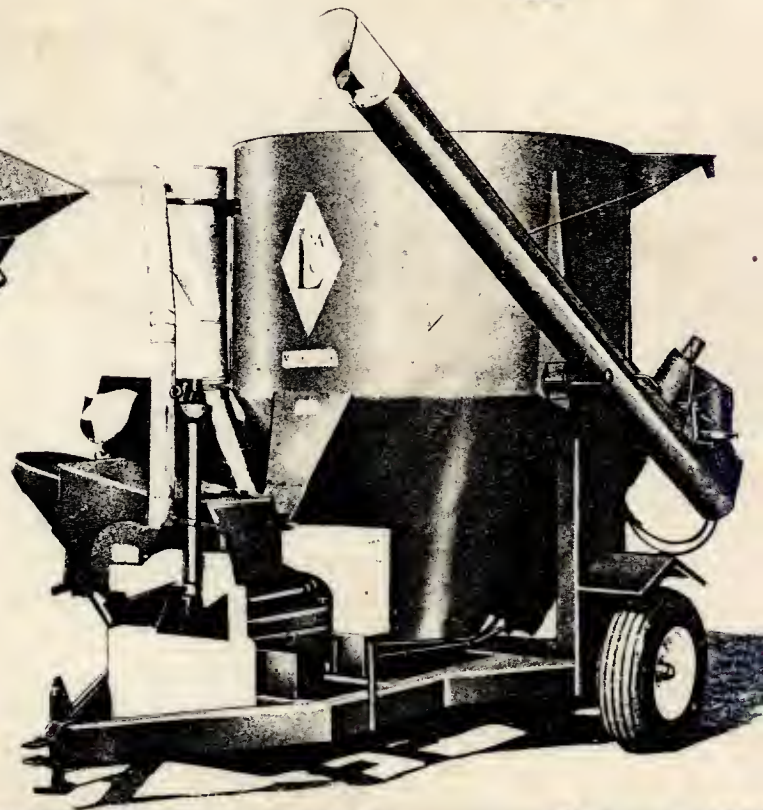




**PORTABLE
GRINDER
MIXERS**



**The Original Hydraulic
Driven Grinder Mixer**



**TAKE THE BIG STEP UP...
LORENZ PORTABLE GRINDER MIXER**

CAUTION

KEEP BELTS ALIGNED CORRECTLY
LOOSEN CHAIN AFTER
TIGHTENING DRIVE BELTS

SET SCREWS ON SPROCKETS AND
BEARINGS MUST BE RETIGHTENED
AFTER THE FIRST FIVE HOURS USE
AND EACH FIFTY HOURS THEREAFTER
THE WARRANTY WILL NOT COVER
SPROCKETS WORN FROM BEING
LOOSE OR MISALIGNED

CAUTION

KEEP DRIVE SHAFT AS
STRAIGHT AS POSSIBLE

CAUTION

KEEP GEARBOX FULL OF GREASE
WARRANTY VOID

IF GEARBOX RUNS DRY

WARNING

- SHIELDS ARE FOR YOUR PROTECTION. KEEP THEM IN PLACE.
- STOP MACHINE TO ADJUST AND GREASE.
- WHEN MACHINE BECOMES CLOGGED, DISCONNECT POWER BEFORE CLEANING.
- KEEP HANDS, FEET, AND CLOTHING AWAY FROM POWER DRIVEN PARTS.
- KEEP OFF IMPLEMENT WHEN RUNNING.
- KEEP OTHERS OFF.
- DO NOT REMOVE WARNING DECALS.

OPERATIONS OF THE LORENZ GRINDER-MIXER

HOOK UP

It is important that the drive shaft be as straight as possible. Any drive shaft with universal joints loses its ability to transmit power when the drive shaft is running at extreme angles.

Be sure that the draw bar on the tractor is in a central position so the mixer drive shaft will allow turns to be made. The correct hook up is important to lengthen the life of the drive shaft.

Make certain the PTO shaft does not bottom out

When engaging the machine, do so gradually. This will limit torque and wear on the tractor power take off clutch and the drive train of the grinder-mixer.

GRINDING

Infeed Auger Operations: The infeed auger on the Lorenz Grinder-Mixer will operate at any angle since the hydraulic hoses give complete flexibility. The auger can be run at any speed suitable to the operator and the power available. The best practice is to set the speed of the auger to feed the mill the desired volume of feed. There is little need to keep adjusting the speed of the auger once it is set.

When grinding hay and roughage, put the infeed auger in the saddle and feed the hay slabs by dropping them into the mill chute. The hammermill is ruggedly constructed and will take a heavy load, but there is no need to abuse it by pushing in big slugs.

Changing The Screens: The top of the hammermill opens so screens can be easily changed. First unhook the infeed auger from the front of the mill and pull the infeed assembly back out of the way. Loosen the latch handle and pull the cover toward the infeed side. The mill cover will pivot forward to allow the screen to be rotated up and out and another slipped into its place. When changing screens, be certain the mill cover catches the ends of the screen to seat the screen and to prevent the hammers from hitting. Be certain the cover is closed and the latch is tight.

Mixing: The Lorenz Grinder-Mixer mixes well and if the concentrates and supplements are added just after grinding has started, the feed will be completely mixed when grinding is completed. There is no need to run the

machine to mix only, unless the feed is of such a nature that it does not have to be ground.

Grind heavy material first and light grains and hay last to insure better mixing.

If bridging occurs, check the lower mixing auger agitators for wear

UNLOADING

Unloading is achieved through the short cross auger to the discharge auger. Feed is emptied by raising the gate at the base of the cross auger. Before the gate slide is raised, start the discharge auger. When the discharge auger is positioned, raise the gate slide to unload the mixer. If the gate slide is loose and tends to close by itself, tighten the lock nut on the gate slide. The gate slide is the basic metering device for unloading.

If the mixer tank should need to be completely emptied, open the clean out door on the bottom of the cross auger and turn the machine over slowly. BE CAREFUL: NEVER TRY TO CLEAN THE MIXER BOTTOM OUT BY HAND IF THE MACHINE IS RUNNING.

LUBRICATION

As with any piece of machinery, proper lubrication is important to retard wear and prolong the life of the machine. Some of the bearings used are sealed bearings and it is not necessary to grease them. However, the mill shaft and jack shaft bearings have zerks installed and should be greased about once a month in normal use. The gearbox generally uses 90 weight transmission grease and should be checked regularly. It is very important to keep the gearbox from running dry. There is bound to be slight leakage around the seals, so don't expect to never add grease. Use a good grade of grease since this lengthens the life of the machine. The drive shaft universal joints should be greased frequently. Oil the discharge swivel and infeed swivel if they start to bind.

PREVENTIVE MAINTENANCE

Belts: The main drive belts are an important part of the Lorenz Grinder-Mixer. Correct alignment and tension are necessary to transmit power to the hammermill. When tightening the belts, the pulley shaft must be kept parallel to the rotor shaft. First remove the shields, next loosen the idler on chain drive, the four bolts that hold the pillow block and.

the locking nuts on the tightening screws. Draw each pillow block back until it requires 4 lbs. pressure to push the belts in 5/8". If the belts are misaligned, they will pull only on one side and cause unnecessary wear. Following the proper belt tightening, reset the chain tightener idler to the proper chain tension. Reinstall the shields.

Hydraulics: The hydraulic system is a closed system so there is very little chance for the oil to become contaminated. The oil used should be 5 or 10 weight in the winter time and 30 or 40 weight in the summer time. Multi-viscosities are also recommended. During the winter months when the temperatures are below zero, if the winter oil hasn't been put in the system, the oil will thicken and will not flow freely until warm. By allowing the machine to run for 5 to 10 minutes, friction in the system will warm the oil and normal operation will result. It is possible, however, to thin summer weight oil with fuel oil, but this should be a second choice. We recommend changing the hydraulic filter element once a year.

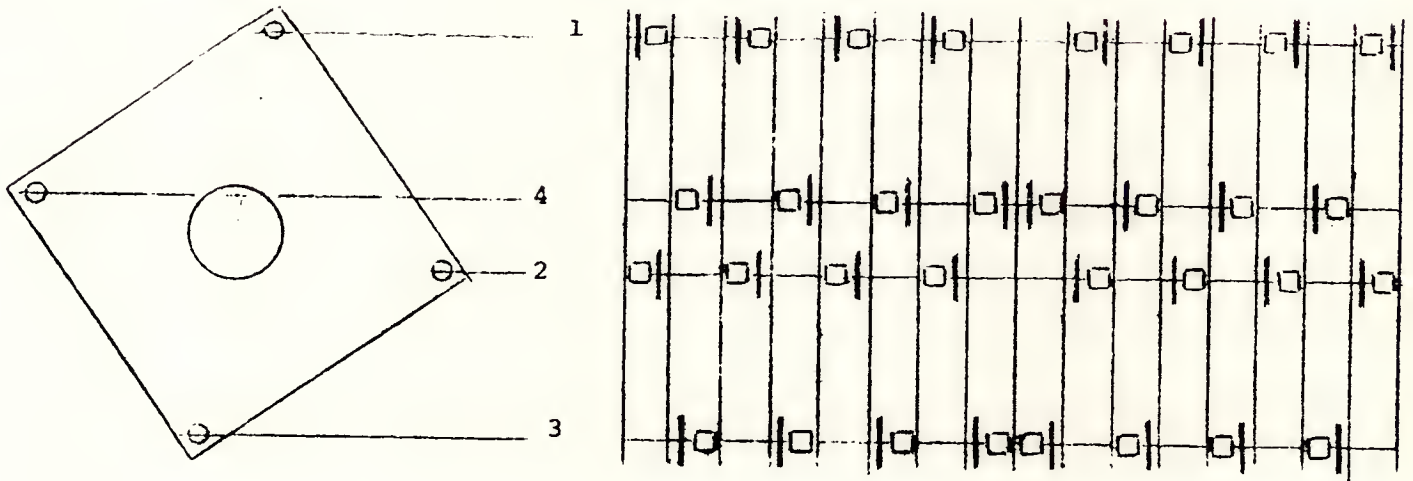
Flow Control Valve on the Infeed Auger: Incorporated on the infeed auger is a flow control valve. This valve divides the flow of oil and enables the infeed auger to run at a variable speed with a constant torque.

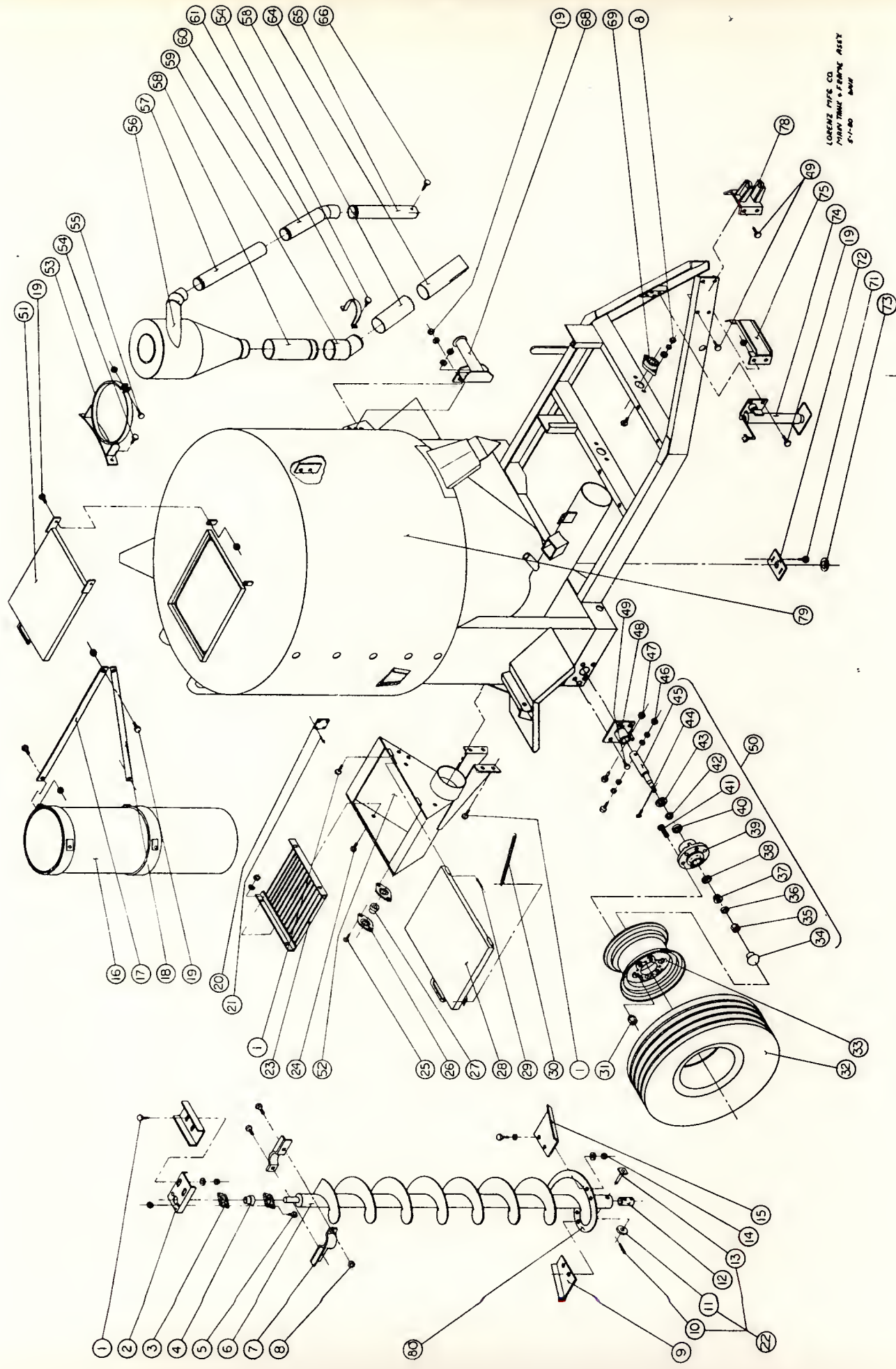
A relief valve is located inside the reservoir. This valve will generally by-pass when the augers are jammed. Should the augers be low on power or run erratic, the valve could need adjustment. Normal operating pressure is 1800 to 2000 lbs.

HAMMER DIAGRAM

Hammers are installed in the rotor with two hammers between a pair of plates. There is a spacer in each opening between plates on the pins. The spacers keep the hammers to the sides so both hammers in the space won't track together.

When facing the mill and rotor, start at the end of the rotor and install the hammers on the pins to match the diagram below.





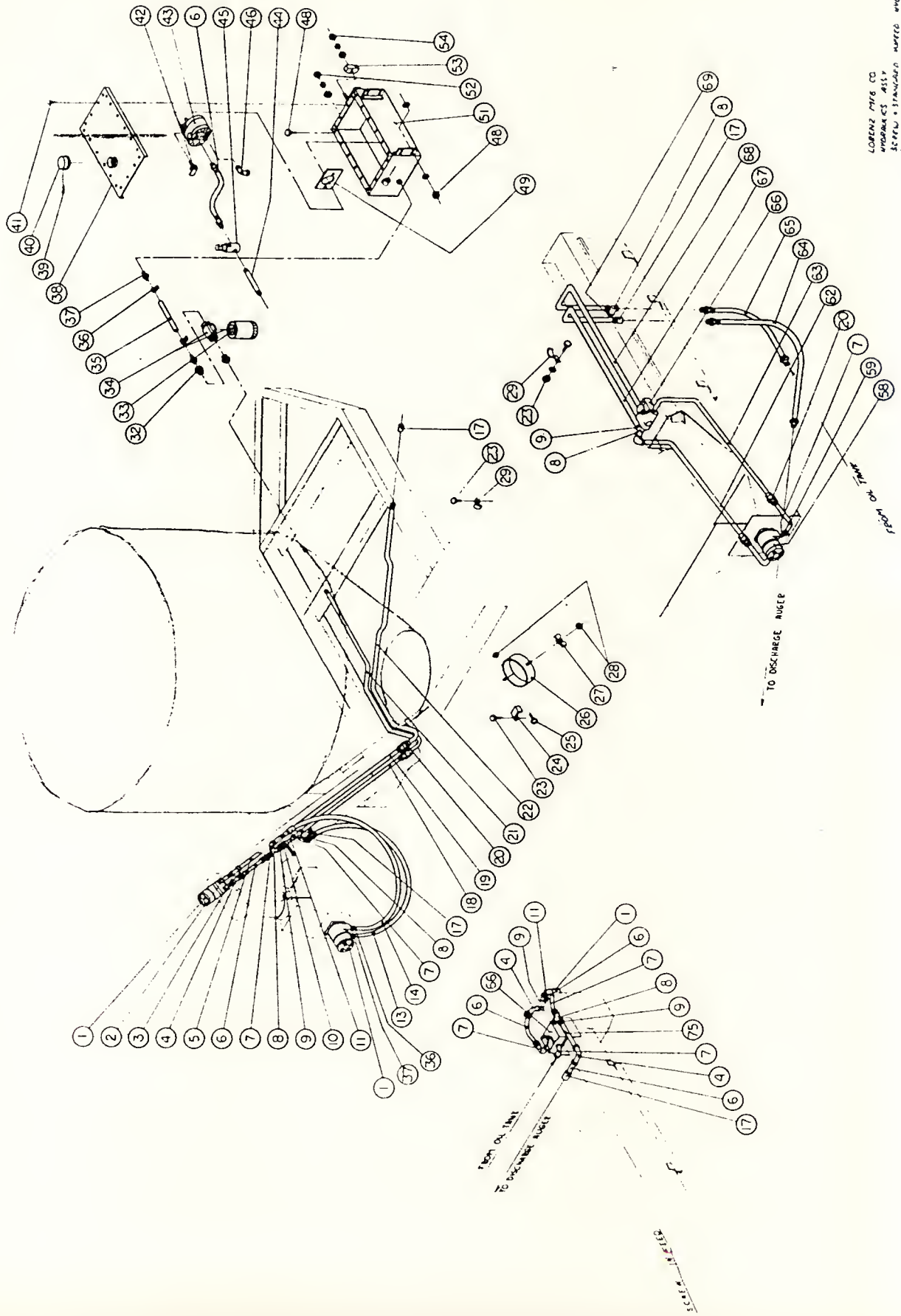
LORENZ OPTIC CO
 PIAN TRUNK & FRAME ASSY
 5-1-80
 4444

TANK AND FRAME

<u>ITEM#</u>	<u>PART#</u>	<u>DESCRIPTION</u>	<u>ITEM#</u>	<u>PART#</u>	<u>DESCRIPTION</u>
1		3/8-16 x 3/4 HHCS	29	101329	Hinge Rod-Conc. Cover
		3/8 Flatwasher	30	010730	Spring 1/2 x 16
		3/8-16 Nut	31	010060	Wheel Nut
		3/8 Lockwasher	32	010629	11L x 15 Tire
		3/8-16 Lock Nut		010530	11L x 15 Inner Tube
2	100790	Bearing Mount-MA	33	010068	15 x 8 Rim
3	010461	1" 2 Hole Flangette	34	010066	Dust Cap
4	010021	1" Bearing Insert	35	010083	3/4-16 Castle Nut
5		5/16-18 x 3/4 Carriage Bolt	36	010064	Spindle Washer
		5/16-18 Lock Nut	37	010063	Outer Cone
6	100767	Mixing Auger-85	38	010062	Outer Cup
	100772	Mixing Auger-100 & 120	39	010059	Hub
7	100754	Agitator Bar-2 Required	40	010058	Inner Cup
8		3/8-16 x 1-1/2 HHCS	41	010061	Wheel Bolt
		3/8 Lockwasher	42	010057	Inner Cone
		3/8-16 Lock Nut	43	010056	Seal
		3/8-16 Hex Nut	44		3/16 x 1-1/4 Cotter Pin
9	101097	Short Flinger	45	101029	Spindle
10		1/4 x 1-1/2 Roll Pin	46		1/2-13 x 3-1/2 HHCS
11	101100	Washer-Gearbox Coupler			1/2 Flatwasher
12	100788	Coupler-MA			1/2-13 Lock Nut
		5/16-18 x 5/16 Allen HD SS	47		3/8-16 x 2 HHCS
13	100789	Coupler Pin			3/8-16 Lock Nut
14		3/8-16 x 1-1/4 HHCS	48	100735	Spindle Clamp
		3/8 Lockwasher	49		1/2-20 x 1 HHCS Grade 5
		3/8 Flatwasher			1/2 Lockwasher
		3/8-16 Lock Nut			1/2-20 Lock Nut
15	101145	Long Flinger			1/2-20 Hex Nut
16	100749	Mixing Auger Tube-85	50	101251	Cpt. Hub & Spindle Assy.
	100751	Mixing Auger Tube-100	51	100674	Tank Cover
	100747	Mixing Auger Tube-120	52	100101	Conc. Hopper Housing
17	100739	Upper Brace-85 & 100	53	100339	Mounting Band
	100740	Upper Brace-120	54		1/4 x 1/2 IND Hex HD Lag Screw
18	100742	Lower Brace-85	55		1/4-20 x 1-3/4 HHCS
	100743	Lower Brace-100 & 120			1/4 Lockwasher
19		3/8-16 x 1-1/2 HHCS			1/4-20 Hex Nut
		3/8-16 Lockwasher	56	010690	Dust Collector
		3/8-16 Flatwasher	57	010689	Upper Pipe-4 x 25
		3/8-16 Hex Nut	58	010694	Upper Pipe-5 x 12-85 & 120
20	100679	Tank Window		010695	Upper pipe 5 x 24-100
	010966	Strip Caulk-1' Per Window	59	010697	5 x 45° Elbow
21		1/8 Alum. Rivet-4 Reqd.	60	010737	Horizontal Pipe w/Elbow
22	100586	Coupler Pin Complete	61	100344	Bottom Support Band
23	100100	Grate-Conc. Hopper	64	010698	Lower Pipe-5 x 27
24		1/4-20 x 1/2 HHCS	65	010691	Lower Pipe 4 x 22-85
		1/4-20 Hex Nut		010693	Lower Pipe 4 x 32-100 & 120
		1/4 Lockwasher	66		#12 x 1/2 Hex Washer HD Screw
25		3/8-16 x 1 Carriage Bolt	68	100239	Cradle-Discharge Auger
		3/8 Lockwasher	69	100406	1-1/4" Heavy 2 Hole Brg. Cpt.
		3/8-16 Hex Nut		100407	1-1/4" 2 Hole Casting Only
26	010592	1-1/4" 2 Hole Flangette		010167	1-1/4" Heavy Bearing Only
27	010417	1-1/4" Bearing Insert			1/4-28 90° Grease Zerk
28	100099	Cover-Conc. Hopper	71		1/4-20 x 1-1/2 HHCS

TANK AND FRAME CONT'D

<u>ITEM#</u>	<u>PART#</u>	<u>DESCRIPTION</u>
71		1/4 Lockwasher 1/4-20 Hex Nut
72	101067	Dust Shield Plate
73	100725	Dust Shield Washer
74	010919	Tongue Jack
75	101180	Frame Reinforcement
78	101334	Mill Hitch
79	101335	Tank & Frame-85
	101336	Tank & Frame-100
	101337	Tank & Frame-120
	010968	Complete Decal Kit-85
	010969	Complete Decal Kit-100
	010970	Complete Decal Kit-120
80	100765	Bottom Flighting Extension

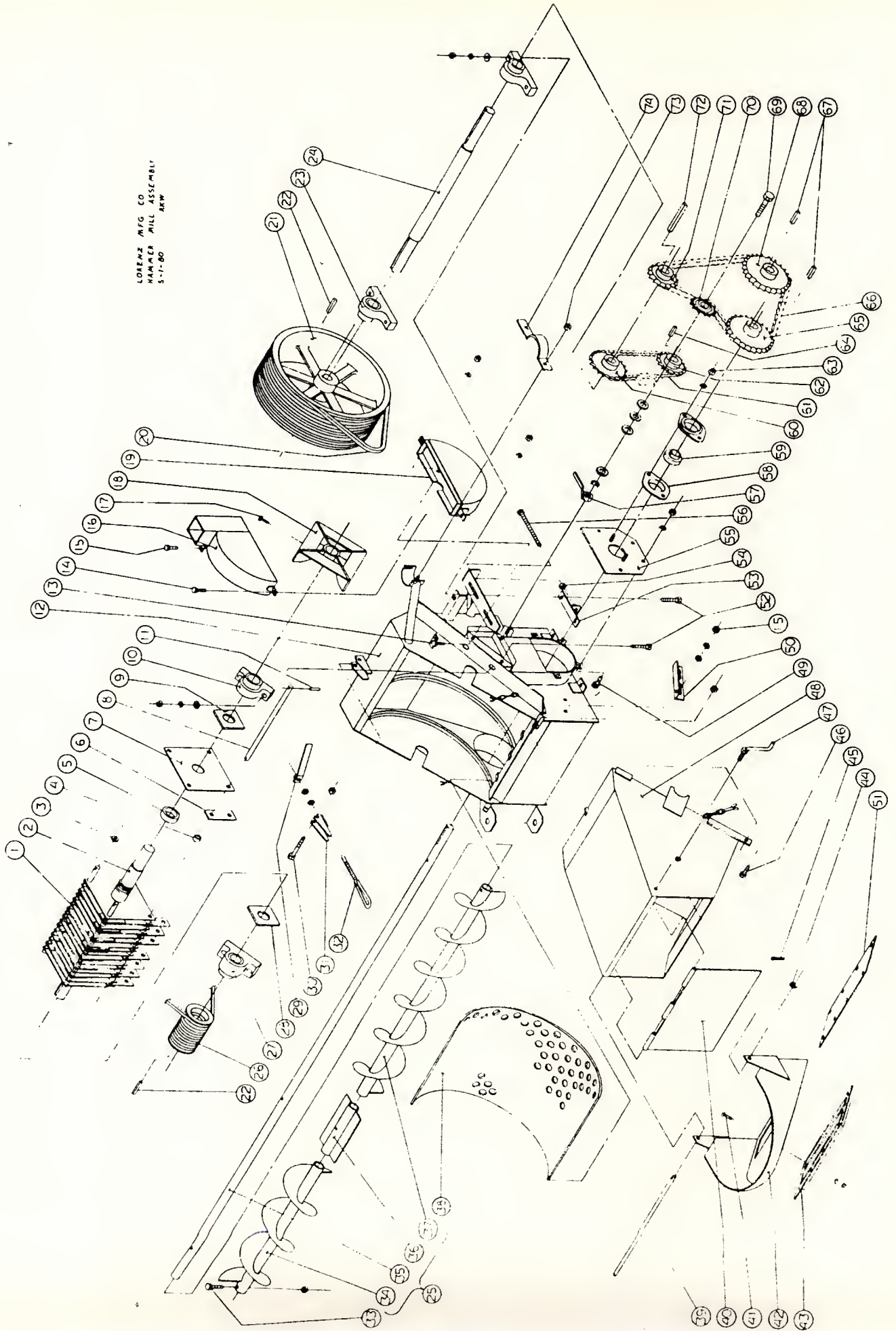


LORENZ MFG CO
 WINDMILLS ASSY
 SCREW + STANWELL WINDMILL WINDMILLS
 1/2 1/2

HYDRAULICS

ITEM#	PART#	DESCRIPTION	ITEM#	PART#	DESCRIPTION
1	010217	Hydraulic Motor	52		3/8-24 Hex Nut
	010024	1/4 x 1 Woodruff Key			3/8 Lockwasher
		3/8-16 x 3/4 HHCS			3/8 Flatwasher
		3/8 Lockwasher	53	100820	Wood Block
	010256	Motor Seal Kit	54		3/8-16 x 2-1/4 Carriage Bolt
2	100072	1/2 NPT x 4 Nipple			3/8 Flatwasher
3	010210	1/2 NPT x 3 Nipple			3/8 Lockwasher
4	010198	1/2 NPT x 90° Elbow			3/8-16 Hex Nut
5	100557	1/2 NPT x 19" Pipe			Hydraulic Motor
6	010710	1/2 NPT x 12" Pressure Hose	58	010216	1/4 x 1 Woodruff Key
7	010202	1/2 NPT x 90° St. Elbow		010024	3/8-16 x 3/4 HHCS
8	010201	1/2 NPT Tee			Motor Seal Kit
9	010207	1/2 NPT x 1-1/2 Nipple		010256	1/2 x 10 Pipe
10	010204	1/2" Ball Valve	59	100528	1/2 x 34-1/2 Return Pipe
11	010245	1/2 NPT x 2-1/2 Nipple	62	100551	1/2 x 38-1/2 Pipe
13	010717	1/2 x 42 Pressure Hose			1/2 x 60 Pressure Hose
14	010718	1/2 x 42 Return Hose	63	100498	1/2 x 72 Pressure Hose
17	010200	1/2 NPT Coupler	64	010672	Flow Control Valve
18	101405	1/2 x 37-1/2" Pipe			1/2 x 54 Pipe-85,100
19	101406	1/2 x 45-1/2" Pipe	65	010722	1/2 x 66 Pipe-120
20	010209	1/2 NPT Union			1/2 x 57 Pipe-85,100
21	101407	1/2 x 43-1/2 Return Pipe	66	010235	1/2 x 69 Pipe-120
22	101408	1/2 x 63 Cross Pipe	67	101412	1/2 NPT Plug
23		1/4-20 x 3/4 HHCS		101413	1/2 NPT x 6 Pipe
		1/4 Lockwasher	68	101414	
		1/4-20 Hex Nut		101415	
24	101373	Pipe Bracket	69	010230	
25		5/16-18 x 1-1/2 HHCS	75	100506	
26	101375	Pipe Bracket Clamp			
27	101377	Pipe Bracket			
28		5/16-18 Lock Nut			
29	101403	Pipe Clamp Bracket			
32	010211	1/2 NPT x 3/4 NPT Bushing			
33	010221	Filter Cartridge			
34	010219	Filter Assembly			
35	010724	1/2 x 12 Return Hose			
36	010225	1/2 Hose Clamp			
37	100829	1/2 Hose Barb			
38	100576	Oil Tank Cover			
39		1/8 x 1 Cotter Pin			
40	100574	Vented Cap			
41		#14 x 1/2 Sheet Metal Screw			
42	101411	Tightener Bolt 3/8-24 x 1-1/2			
43	010223	Hydraulic Pump			
44	100573	1/2 NPT x 6-3/8 Coupler Pipe			
45	010253	Pressure Relief Valve			
46	010215	3/4 NPT x 90° Str. Elbow			
48		3/8-16 x 1 HHCS			
		3/8 Flatwasher			
		3/8-16 Lock Nut			
49	010248	Pump Gasket			
51	100571	Oil Tank			

LORENZ AFG CO
HAMMER MILL ASSEMBLY
5-11-60
RHW

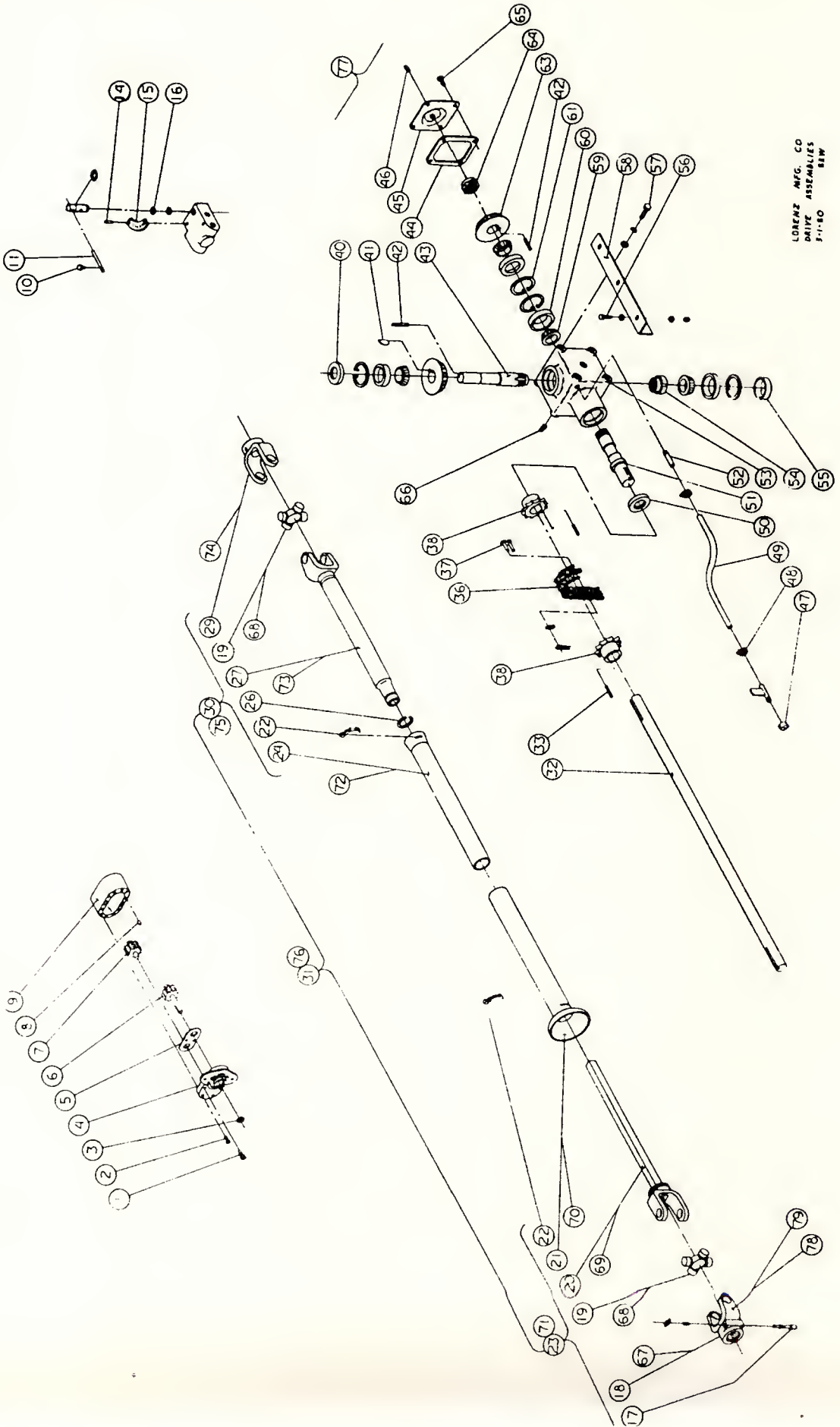


HAMMER MILL

<u>ITEM#</u>	<u>PART#</u>	<u>DESCRIPTION</u>	<u>ITEM#</u>	<u>PART#</u>	<u>DESCRIPTION</u>
1	101311	Hammer Assy.w/Pins,Hammers, Shaft,Nuts,Spacers,Roll Pins, Plates	31	101288	Bolt Guide
			32	100395	Cover Latch Bolt
2	100423	2" Mill Shaft	33		1/2 Flatwasher
3	101327	Balance Washer-Hammer Mill as Required			5/16-18 x 2 HHCS
			34	101312	5/16-18 Lock Nut
4	100270	Hammer Spacer		101315	LH Belly Auger-85 & 100
5	100266	Mill Plate Spacer 7/8"	35	101045	LH Belly Auger-120
	100561	Mill Plate Spacer 15/16"		101050	Belly Auger Shaft-85 & 100
	100563	Mill Plate Spacer 1"	36	101314	Belly Auger Shaft-120
6	100269	Hammer (32 in Set)	37	101313	Center Paddle
7	100262	Mill Plate (17 in Set)		101316	RH Belly Auger-85 & 100
8	100267	Hammer Pin (4 in Set)	38	010654	RH Belly Auger-120
9	100265	RH Mill Nut		010654	3/32" Mill Screen
10	100254	2" Bearing Cpt.		010655	1/8" Mill Screen
	100255	2" Bearing Housing Only		010656	5/32" Mill Screen
	010105	2" Bearing Insert		010657	3/16" Mill Screen
		1/4-28 Str. Grease Zerk		010658	1/4" Mill Screen
11	050014	1/4 x 1-1/4 Roll Pin		010659	5/16" Mill Screen
12	100421	Hammer Mill Base		010660	3/8" Mill Screen
13		1/4-20 x 3/4 HHCS		010661	7/16" Mill Screen
		1/4 Lockwasher		010662	1/2" Mill Screen
		1/4-20 Hex Nut		010663	5/8" Mill Screen
14		1/4-20 x 1 HHCS		010664	3/4" Mill Screen
		1/4 Lockwasher		010665	7/8" Mill Screen
		1/4-20 Hex Nut		010666	1" Mill Screen
15		5/16-18 x 1 HHCS	39	100420	1-1/4" Mill Screen
		5/16 Lockwasher	40	100418	Flapper Hinge Pin
		5/16-18 Hex Nut	41		Mill Flapper
16	100432	Upper Fan Housing			1/4-20 x 5/8 RD HD MS
17		3/8-16 x 1-1/4 SQ HD SS			1/4 Lockwasher
18	100327	Fan	42	100400	1/4-20 Nut
19	100431	Lower Fan Housing	43	010688	Infeed Chute
20	010701	Belt (14 in Set)	44		Magnet
21	100465	Big Pulley-540 RPM	45		1/2 Flatwasher
	100523	Big Pulley-1000 RPM	46		1/8 x 1 Cotter Pin
22	100664	1/2 x 4-1/2 Tapered Key			7/16-14 x 1 HHCS
23	100462	1-5/8" Bearing Cpt.	47	100469	7/16-14 Lock Nut
	100463	1-5/8" Bearing Housing Only	48	100408	Flapper Stop Screw
	010181	1-5/8" Bearing Insert	49		Mill Cover
		1/4-28 45° Grease Zerk			1/4-20 x 1/2 HHCS
24	100461	1-5/8 Jack Shaft			1/4 Lockwasher
25	101202	Cpt. Belly Auger-85 & 100	50	100616	1/4-20 Hex Nut
	101203	Cpt. Belly Auger-120	51	100401	Locking Arm Bracket
26	100260	Small Pulley-540 RPM			Chute Plate (Used In Place of Magnet)
	100524	Small Pulley-1000 RPM	52		1/2-13 x 2 HHCS
27	010683	2" Double Roller Bearing Cpt. 3/8-24 Str. Grease Zerk			1/2 Lockwasher
28	100264	LH Mill Nut	53	100353	1/2-13 Hex Nut
29	100396	Tail Nut	54		Slide Tightener
30		5/16-18 x 2 HHCS	55	100425	5/8-11 Hex Nut
		5/16-18 Lock Nut	56	100354	Butte Plate
					Jack Shaft Tightener Bolt

HAMMER MILL CONT'D

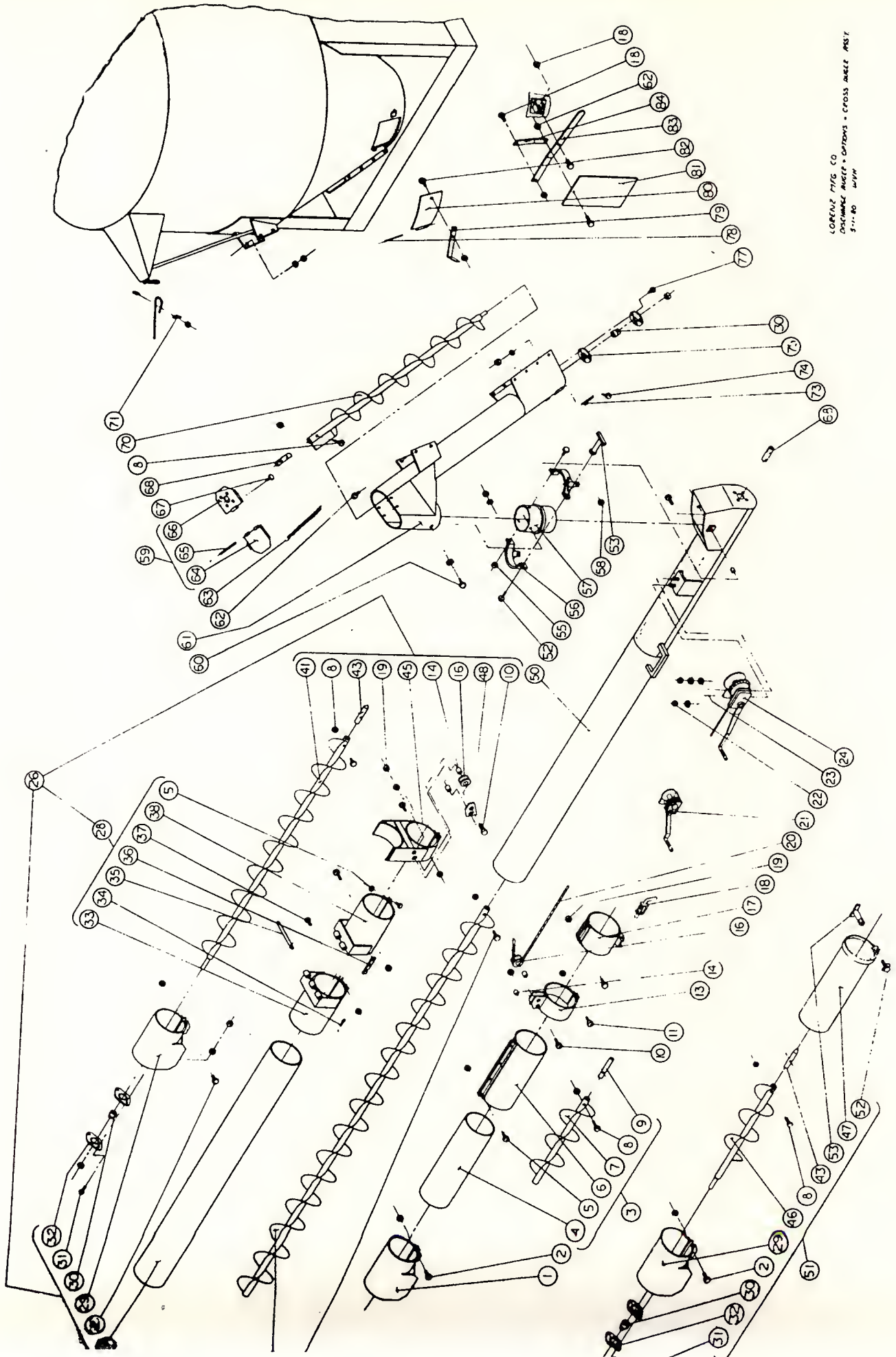
<u>ITEM#</u>	<u>PART#</u>	<u>DESCRIPTION</u>
57	101328	Tightener Nut-Chain Idler
58	010592	1-1/4" 2 Hole Flangette
59	010417	1-1/4" Bearing Insert
60	101234	40-32 x 1-5/8" Srpocket-540 RPM
	100277	40-24 x 1-5/8" Sprocket-1000 RPM
61	010716	#40 Drive Chain-70 Pitch
62	100501	40-20 x 3/4" Sprocket
63		1/4-20 Hex Nut
		1/4 Lockwasher
64	100582	3/16 x 1-1/8 Key-Hyd. Pump
65	100453	60-26 x 1-1/4" Sprocket
66	010736	#60 Drive Chain-92 Pitch-540 RPM
	010965	#60 Drive Chain-108 Pitch-1000 RPM
67	100659	1/4 Sq. x 1-1/2 Key
68	100290	60-30 x 1-1/4" Sprocket-540 RPM
	100522	60-48 x 1-1/4" Sprocket-1000 RPM
69		5/8-11 x 2-1/2 HHCS
		5/8 Flatwasher
		5/8 Lockwasher
70	010196	#60 Chain Idler
71	100281	60-15 x 1-5/8" Sprocket
72	100282	3/8 x 5-1/4 Key
73		5/16-18 Lock Nut
74	100428	Handle-PTO Holder



LORENZ MFG. CO
 DRIVE ASSEMBLIES
 3-1-60

DRIVE ASSEMBLIES

ITEM #	PART#	DESCRIPTION	ITEM#	PART#	DESCRIPTION
1	050224	3/8-16 x 1-1/2 Socket Head Cap Screw	47	101220	3/8-18 NPT Cap-Fill
	050209	5/16-18 x 1-1/4 Socket Head Cap Screw	48	010225	1/2 Hose Clamp-2 Reqd.
3	010964	Shaft Seal-7443 CR	49	100468	Gearbox Fill Tube
4	010643	Cover Plate	50	010362	Seal K-25
5	010641	Rotor Plate	51	010958	Input Shaft-B 4118
6	010644	Drive Shaft Rotor	52	100863	Gearbox Oil Connection
7	010645	Idle Shaft Rotor	53	010891	Gearbox Housing Only
8	010640	Alignment Pin	54	010900	Stake Nut-D105
9	010954	Rotor Housing	55	010897	Cap K-155
	010953	Seal Kit	56	050073	3/8-16 x 1-1/4 HHCS
10	010236	Thumb Screw		050087	3/8 Flatwasher
11	010237	Handle	57	050084	3/8-16 Nut
14	050290	Roll Pin 3/16 x 7/8		050110	1/2-13 x 1-1/4 HHCS
15	010238	Dial Plate		050126	1/2 Lockwasher
16	010240	O'Ring	58	050119	1/2 Flatwasher
17	010126	Lock Pin Ass'y	59	100890	Gearbox Mounting Bkt.
18	010124	Tractor Yoke-100 HP	60	010363	Cone-14137A-4 Reqd.
19	010128	Cross Kit-100 HP	61	010364	Cup-14276-4 Reqd.
20	010134	Yoke & Sq. Tractor End 100 HP	63	010361	Snap Ring-4 Reqd.
	010715	Yoke & Sq.-100HP for Ser. 9305- 9311 and After 9315	64	010898	17 Tooth Bevel Gear 2 Reqd.
			65	010902	Stake Nut-D106
21	010132	Outer Shield-100 HP	66	050057	5/16-18 x 5/8 HHCS
	010731	Outer Shield-100 Ser. 9305- 9311 and After 9315	67	010892	Drain Plug
			68	010123	Tractor Yoke-73 HP
22	010129	Nylon Tube Lock	69	010127	Cross Kit-73 HP
	010732	Nylon Lock-Ser 9305-9311 and After 9315		010133	Yoke & Sq. Tractor End-73 HP
			70	010131	Outer Shield-73 HP
23	010118	PTO Tractor Half-100 HP	71	010117	Tractor PTO Half-73HP
24	010166	Inner Shield-100 HP	72	010165	Inner Shield-73 HP
	010733	Inner Shield-100 HP Ser. 9305- 9311 and After 9315	73	010135	Yoke & Tube Imp. End 73 HP
26	010130	Nylon Bearing	74	010142	Implement Yoke-73 HP
27	010136	Yoke & Tube Imp. End -100 HP		050089	3/8-16 x 1/2 Allen Set Screw
	010773	Yoke & Tube-100 HP Ser. 9305- 9311 and After 9315	75	010114	Mill PTO Half-73 HP
			76	010111	Complete PTO-73 HP
29	010143	Implement Yoke - 100 HP	77	010866	Compleat Durst Gearbox
	050089	3/8-16 x 1/2 Allen Set Screw	78	010125	1000 RPM Yoke-73 HP
30	010116	Mill PTO Half-100HP	79	010138	1000 RPM Yoke-100 HP
31	010113	Complete PTO-100 HP			
	010713	CPT. 100 PTO Ser. 9305-9311 And After 9315			
32	100732	Drive Shaft-85 & 100			
	100733	Drive Shaft-120			
33	100659	1/4 x 1-1/2 Key			
36	010286	Coupler Chain			
37	010284	Complete Connecting Link			
38	100286	Chain Coupler Sprocket			
40	010369	Seal K-18			
41	010899	Woodruff Key-Hard 2 Reqd.			
42	010901	3/8 Sq. x 1-3/8 Long-Hard Key 2 Reqd.			
43	010959	Output Shaft-B 4119			
44	010903	Cover Gasket			
45	010904	Cover			
46	010960	Plug 3/8-18 NPT-Sq. Head			



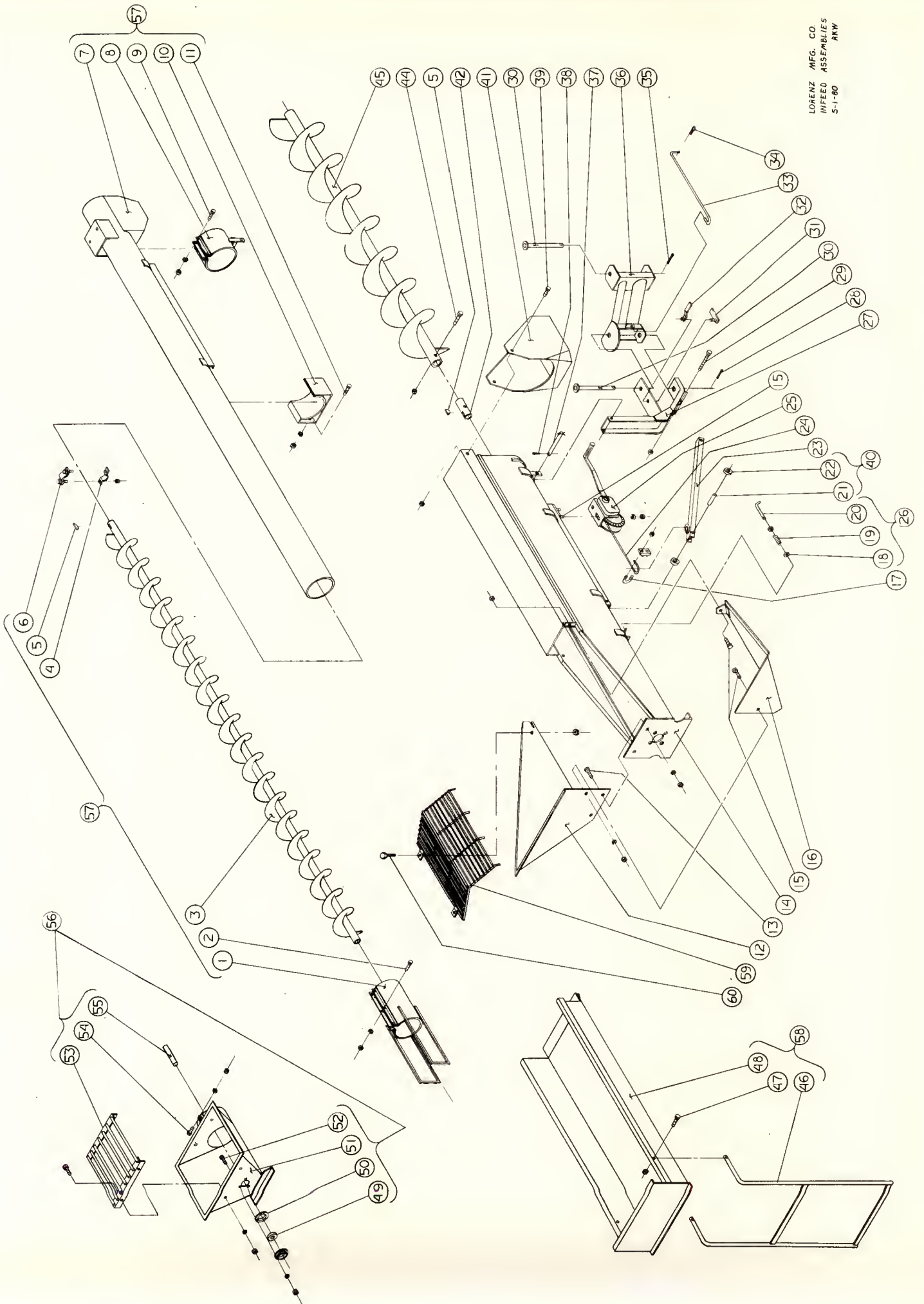
LORENZ MFG CO
 DRAWING NO. 1000 - OPTIONS - CROSS HOLE MSZ
 3-11-80
 WJW

DISCHARGE AND CROSS AUGERS

ITEM#	PART#	DESCRIPTION	ITEM#	PART#	DESCRIPTION
1	100119	Wind Hood	20	100123	16' Cable (12' Auger)
2		5/16-18 x 1-3/4 HHCS		100120	18' Cable (14' Auger)
		5/16-18 Lock Nut	21	010025	Standard Winch
3	100178	Complete 2' Ext.,Optional	22		3/8-16 Hex Nut
	100179	Complete 3' Ext.,Optional			3/8 Lockwasher
	100180	Complete 4' Ext.,Optional	23		3/8 Flatwasher
	100181	Complete 5' Ext.,Optional	24	010026	Heavy Winch (Optional)
	100182	Complete 6' Ext.,Optional	25	100124	10' Discharge Auger-85
	100183	Complete 7' Ext.,Optional		100129	12' Discharge Auger-100,120
	100184	Complete 8' Ext.,Optional		101367	14' Discharge Auger-Option
4	100162	2' Extension Auger Tube	26	101368	Cpt. 4' Folding Ext.-Option
	100163	3' Extension Auger Tube		100191	Cpt. 6' Folding Ext.-Option
	100164	4' Extension Auger Tube		101369	Cpt. 8' Folding Ext.-Option
	100165	5' Extension Auger Tube	27	101370	4' Folding Ext. Tube
	100166	6' Extension Auger Tube		100193	6' Folding Ext. Tube
	100167	7' Extension Auger Tube		101372	8' Folding Ext. Tube
	100168	8' Extension Auger Tube	28	100195	4' & 6' Folding Clamp
5		1/4-20 x 1-1/2 HHCS Grade 5			Cpt. w/Hdwe.
		1/4 Lockwasher		101013	8' Folding Clamp Cpt.
		1/4-20 Hex Nut			w/Hdwe.
6	100170	2' & 3' Auger Ext. Clamp	29	100192	Wind Hood-Folding Ext. &
		(12" Clamp)			Quick Detach Ext.
	101350	4' Auger Ext. Clamp (18")	30	010021	1" Bearing Insert
	101351	5' Auger Ext. Clamp (24")	31		5/16-18 x 3/4 Carriage
	101352	6' Auger Ext. Clamp (30")			Bolt
	101353	7' & 8' Auger Ext. Clamp			5/16 Lockwasher
		(36")			5/16-18 Hex Nut
7	100148	2' Extension Auger	32	010019	1" 3 Hole Flangette
	100149	3' Extension Auger	33	101378	4' & 6' Folding Clamp
	100150	4' Extension Auger			Top Half
	100151	5' Extension Auger		101380	8' Folding Clamp Top Half
	100152	6' Extension Auger	34		1/8 x 1 Cotter Pin
	100153	7' Extension Auger	35	101188	Hinge Pin
	100154	8' Extension Auger	36	101122	Latch
8		3/8-16 x 2 HHCS	37		3/8-16 x 1-1/2 HHCS Gr. 5
		3/8-16 Lock Nut			3/8-16 Locknut
9	101354	Stub Pipe, Extension	38	101379	4' & 6' Folding Clamp
10		3/8-16 x 1-1/2 HHCS			Bottom Half
		3/8 Lockwasher		101381	8' Folding Clamp Bottom
		3/8-16 Hex Nut			Half
11		5/16-18 x 1-1/4 HHCS	41	101383	4' Folding Ext. Auger
		5/16-18 Lock Nut		100194	6' Folding Ext. Auger
13	101355	Roller Holder Clamp		101385	8' Folding Ext. Auger
14	101356	Spacer Pipe	43	100912	Stub Shaft
16	100107	Cable Roller	45	100196	Cradle-Folding Ext.
17	100234	Cradle Band	46	101451	2' Quick Detach Ext. Auger
18		5/16-18 x 1-1/4 HHCS		101452	3' Quick Detach Ext. Auger
		5/16-18 Lock Nut		101453	4' Quick Detach Ext. Auger
		5/16 Flatwasher		101454	5' Quick Detach Ext. Auger
19		3/8-16 x 1 HHCS		101455	6' Quick Detach Ext. Auger
		3/8-16 Lock Nut		101456	7' Quick Detach Ext. Auger
20	100121	12' Cable (10' Auger)		101457	8' Quick Detach Ext. Auger
			47	101458	2' quick Detach Ext. Tube
					w/Clamp

DISCHARGE AND CROSS AUGERS CONT'D

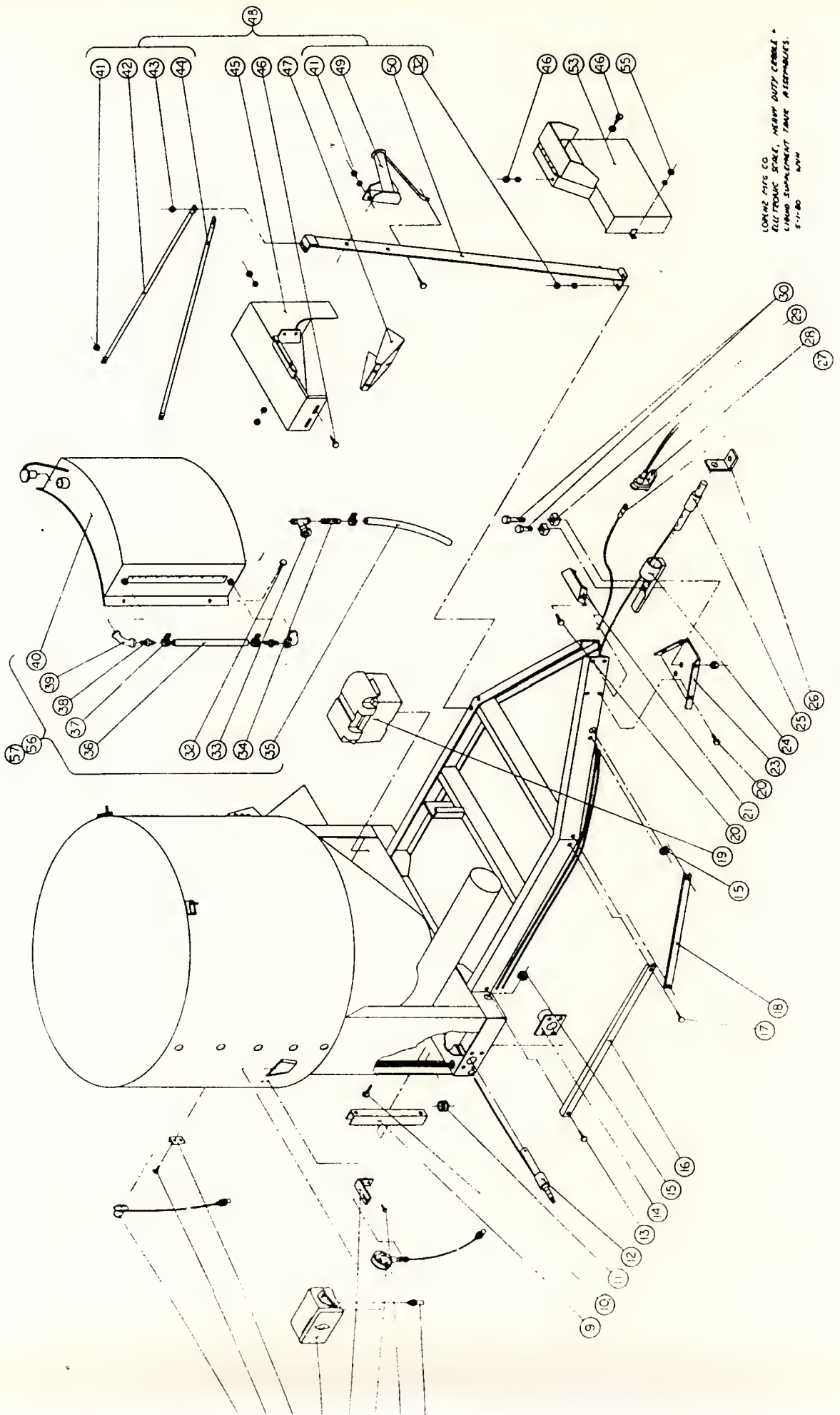
<u>ITEM#</u>	<u>PART #</u>	<u>DESCRIPTION</u>	<u>ITEM #</u>	<u>PART #</u>	<u>DESCRIPTION</u>
	100194	6' Folding Ext Auger		050086	3/8 Lockwasher
	101385	8' Folding Ext Auger		050084	3/8-16 Nut
43	100912	Stub Shaft	61	100064	CA Tube After Ser. 7441
45	100196	Cradle-Folding Ext		050070	3/8-16 x 3/4 HHCS
46	101451	2' Quick Detach Ext Auger		050086	3/8 Lockwasher
	101452	3' Quick Detach Ext Auger		050084	3/8-16 Hexnut
	101453	4' Quick Detach Ext Auger	63	010023	Spring
	101454	5' Quick Detach Ext Auger	64	101397	CA Cover
	101455	6' Quick Detach Ext Auger	65	101398	Hinge Pin
	101456	7' Quick Detach Ext Auger	66	101399	CA Motor Mount Cover
	101457	8' Quick Detach Ext Auger	67	050163	# 14x1/2 Sheet Metal Screw
47	101458	2' Quick Detach Ext Tube W/ Clamp	68	100828	Motor Coupler
	101459	3' Quick Detach Ext Tube W/ Clamp	70	100054	Cross Auger
	101460	4' Quick Detach Ext Tube W/ Clamp	71	010279	3/16" Cable Clamp
	101461	5' Quick Detach Ext Tube W/ Clamp	73	101401	CA Clean Out Door
	101462	6' Quick Detach Ext Tube W/ Clamp	74	050163	#14x1/2 Sheet Metal Screw
	101463	7' Quick Detach Ext Tube W/ Clamp	75	010019	3 Hole Flangette
	101464	8' Quick Detach Ext Tube W/ Clamp	77	050041	5/16-18 x 3/4 HHCS
48	100952	Roller Holder		050058	5/16 Lockwasher
50	100110	10' DA Tube-85 Std.		050052	5/16-18 Nut
	100115	12' DA Tube 100 & 120 Std. 85 Opt.	78	101382	Hinge Pin
	101387	14' DA Tube Option	79	101151	Handle
51	101388	2' Quick Detach Ext Opt.	80	101402	Door
	101389	3' Quick Detach Ext Opt.	81	101085	CA Door
	101390	4' Quick Detach Ext Opt.	82	050041	5/16-18 x 3/4 HHCS
	101391	5' Quick Detach Ext Opt.		050050	5/16-18 Locknut
	101392	6' Quick Detach Ext Opt.	83	100345	Arm
	101393	7' Quick Detach Ext Opt.	84	100552	Linkage Arm
	101394	8' Quick Detach Ext Opt.			
52	101395	Tightener Bolt			
53	100063	Friction Screw			
55	050226	3/8-24 x 1-1/2 HHCS Gr 5			
	050228	3/8-24 Locknut			
56	100062	Swivel Clamp 2 Req'd.			
57	100061	Drop Tube			
58	050111	1/2-13 x 1-1/2 HHCS			
	101396	Pipe Spacer			
	050121	1/2-13 Locknut			
59	100041	Cross Auger Cover Cpt.			
60	050072	3/8-16 x 1 HHCS			
	050087	3/8 Flatwasher			



7

INFEEED

<u>ITEM#</u>	<u>PART#</u>	<u>DESCRIPTION</u>	<u>ITEM#</u>	<u>PART#</u>	<u>DESCRIPTION</u>
1	101309	Auger Shield Clamp Screw Infeed	36	100605	Swivel Arm
2	050004	1/4-20 x 1-1/2 HHCS	37	100600	Trough Pivot Pin
	050034	1/4 Lockwasher	38	050025	1/8 x 1 Cotter Pin
	050016	1/4-20 Nut	39	050001	1/4-20 x 3/4 HHCS
3	101304	Screw Infeed-Auger	40	050016	1/4-20 Nut
4	101305	Clamp Half	41	100642	Winch Roller Assy Cpt
5	010024	Woodruff Key-1/4 x 1	42	100648	Wind Hood
6	101306	Bolt Clamp Half	44	100828	Auger Stub Shaft
	050052	5/16-18 Nut	45	050056	5/16-18 x 2 HHCS
7	101307	Screw Infeed Tube		050050	5/16-18 Locknut
8	101308	Swivel Mount Tube Clamp	45	100598	Infeed Auger-96"-120
9	050073	3/8-16 x 1-1/4 HHCS		100595	Infeed Auger-84"-85 And 100
	050086	3/8 Lockwasher	46	100859	Support Leg-Hay Table
	050084	3/8-16 Nut	47	050006	1/4-20 x 2-1/2 HHCS
10	101310	Screw Infeed-Cradle		050036	1/4-20 Locknut
11	050072	3/8-16 x 1 HHCS	48	100854	Hay Table Only
	050086	3/8 Lockwasher	49	010021	1" Bearing Insert
	050084	3/8-16 Nut	50	010019	3 Hole Flangette-1" Bearing
12	100584	Left Half-Hopper Side	51	100028	Screw Infeed Hopper
13	050010	1/4-20 x 5/8 Rnd. Hd. M. S.	52	050041	5/16-18 x 3/4 HHCS
	050034	1/4 Lockwasher		050058	5/16 Lockwasher
	050016	1/4-20 Nut		050052	5/16-18 Nut
14	100588	Infeed Auger Trough-96"-120	53	100026	Grate-Screw Infeed Hopper
	100581	Infeed Auger Trough-84"-85 and 100	54	050074	3/8-16 x 1-1/2 HHCS
15	050070	3/8-16 x 3/4 HHCS		050086	3/8 Lockwasher
	050085	3/8-16 Locknut		050084	3/8-16 Nut
16	100585	Right Half-Hopper Side	55	100042	Stub Shaft
17	010279	3/16 Cable Clamp	56	100592	Screw Infeed Hopper Complete
18	050087	3/8 Flatwasher-Infeed Lock	57	100591	Screw Infeed Auger Cpt.
19	010586	Spring-Infeed Lock	58	100853	Hay Table-Complete
20	100201	Pin-Infeed Lock			
	050025	1/8 x 1 Cotter Pin			
21	101056	Shaft-Winch Roller Assy			
22	101055	Roller-Winch Roller Assy			
23	100643	Winch Support Channel			
24	100644	3/16 x 44 Winch Cable			
25	010026	Heavy Duty Winch			
26	100499	Complete Infeed Lock Assy			
27	100601	Infeed Support Elbow			
28	050013	1/4 x 2 Cotter Pin			
29	050080	3/8-16 x 3-1/2 HHCS			
	050085	3/8-16 Hex Locknut			
30	100620	Hinge Pin			
31	100634	Tightener Plate-Swivel			
32	100632	Handle-Swivel Tightener			
33	100618	Brace Rod			
34	050024	1/8 Hair Pin Clip			
35	050013	1/4 x 2 Cotter Pin			



LOUIS RYAN CO.
 ELECTRIC SCALE, HEAVY DUTY CARRIAGE
 CARRIAGE SUPPORT TANK ASSEMBLY
 5-11-80
 6/11

OPTIONS

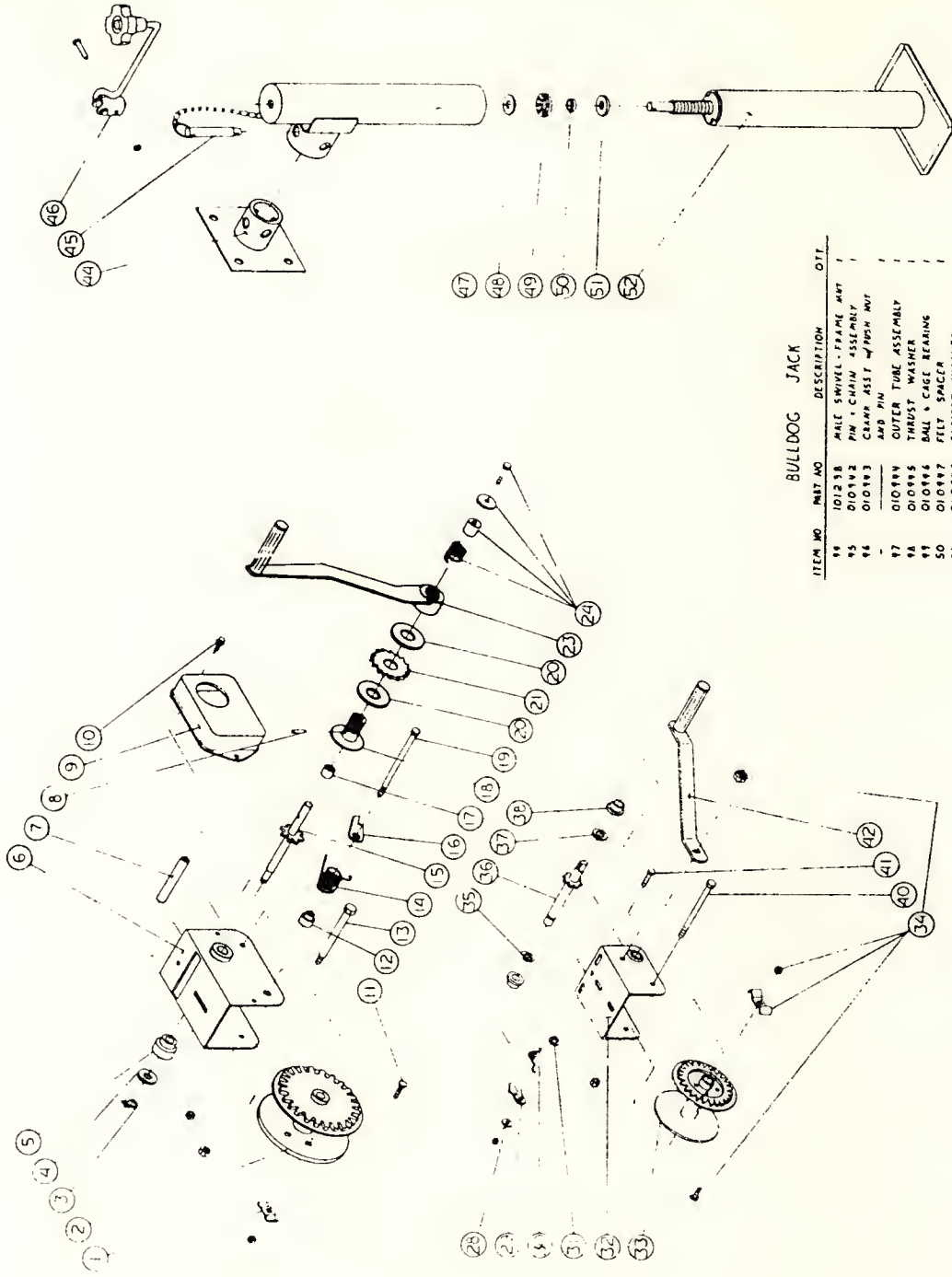
<u>ITEM#</u>	<u>PART#</u>	<u>DESCRIPTION</u>	<u>ITEM#</u>	<u>PART#</u>	<u>DESCRIPTION</u>
	010668	Complete Analog Scale Kit	36	100797	Sight Tube
	010669	Complete Digital Scale Kit	37	010225	1/2 Hose Clamp
1	010885	Horn-Analog Scale	38	100829	1/2 Hose Barb
	010648	Horn-Digital Scale	39	010198	1/2 NPT x 90° Elbow
2	050163	#14 x 1/2 Sheet Metal Screw	40	100796	Liquid Supplement Tank Only 85 & 100
3	010972	Horn Bracket-Scale			
4	010306	Analog Scale Indicator		100800	Liquid Supplement Tank Only 120
	010677	Digital Scale Indicator			
5	100824	Warning Light Bracket	41	050070	3/8-16 x 3/4 HHCS
6	101338	Warning Light-Analog Scale		050085	3/8-16 Locknut
	101339	Warning Light-Digital Scale	42	101076	Short Brace Pipe
8	010302	Adapter-Analog Scale	43	050072	3/8-16 x 1 HHCS
9	101121	Cable Cover-Scale		050085	3/8-16 Locknut
10	050186	1/4-20 x 3 HHCS	44	101077	Long Brace Pipe
	050006	1/4-20 x 2-1/2 HHCS	45	100448	Big Pulley Shield (std)
	050034	1/4 Lockwasher	46	050041	5/16-18 x 3/4 HHCS
	050016	1/4-20 Nut		050058	5/16 Lockwasher
11	010880	LG. Grommet		050059	5/16 Flatwasher
12	010300	Scale Spindle		050052	5/16-18 Nut
13	050171	1/4-20 x 2 HHCS	47	101347	Small Pulley Shield (std)
	050187	1/4-20 Locknut			
14	101340	Scale Spindle Clamp	49	101348	HDDA Cradle Support
15	010278	Small Grommet 2 Req'd.	48	101165	HDDA Cradle Assy Cpt.
16	101342	Wire Shield-85 & 100 Scale	50	101349	Cradle Support Leg
	101343	Wire Shield 120 Scale	53	100470	Chain Shield (std)
17	050043	5/16-18 x 1-1/4 HHCS	55	050003	1/4-20 x 1-1/4 HHCS
	050058	5/16 Lockwasher		055034	1/4 Lockwasher
	050052	5/16-18 Nut		050016	1/4-20 Hexnut
18	101341	Wire Shield		010971	Liquid Supplement Tank Decal Kit
19	010879	Battery Box Holder			
20	050254	1/4-20 x 1 HHCS GR 5	56	100745	Cpt. Liquid Tank Assy. 85 & 100
	050250	1/2-20 Locknut			
21	101179	Tie Plate	57	100746	Cpt. Liquid Tank Assy. 120
23	101016	Mount-Weigh Bar			
24	010298	Mounting Pad & Shield			
25	010304	Hitch Weigh Bar			
26	010299	Hitch Clevis			
27	010305	Power Cord-Analog			
	010676	Power Cord-Digital			
28	010303	Tractor Connector			
29	010297	Shoulder Pad			
30	050280	3/4-10 x 4 HHCS			
	050153	3/4-10 Nut			
32	050110	1/2-13x1-1/4 HHCS			
	050126	1/2 Lockwasher			
	050119	1/2 Flatwasher			
	050120	1/2-13 Nut			
33	010316	1" Gate Valve			
34	010317	1" PVC Hose Barb			
35	100798	Plastic Drop Tube			

HEAVY DUTY WINCH

ITEM NO	PART NO	DESCRIPTION	QTY
1	010932	CABLE CLAMP	1
2	010933	CABLE REEL HUB	1
3	010039	RETAINING RING	1
4	010039	SPACER WASHER	1
5	010037	OLLITE BEARING	1
6	010922	HEAVY DUTY WINCH BASE	1
7	010923	SPACER SLEEVE	1
8	010035	BOLL PIN	1
9	010924	GEAR COVER	1
10	010931	SELF-TAPPING SCREW	2
11	050176	1/2-20 X 1/2 CARRIAGE BOLT	1
12	050016	1/2-20 HEX NUT	1
13	010036	RATCHET SPACER BUSHING	1
14	010925	REEL BOLT	1
15	050106	1/4" LOCK NUT	1
16	010040	RATCHET PAWL SPRING	1
17	010038	DRIVE SHAFT	1
18	010042	RATCHET PAWL	1
19	010040	WEEDELE BEARING	1
20	010034	WINCH HUB	1
21	050048	1/4-20 X 1/2 PAWL BOLT	1
22	050045	1/4-20 LOCK NUT	1
23	010037	MALE PRESSURE PLATE	1
24	010038	RATCHET WHEEL	1
25	010043	WINCH HANDLE	1
26	010044	RATCHET ADAPTER BIT	1
27	010045	COMPLETE HEAVY WINCH	1

STANDARD WINCH

ITEM NO	PART NO	DESCRIPTION	QTY
28	050011	FLATWASHER	1
29	010046	RATCHET PAWL	1
30	010047	RATCHET PAWL SPRING	1
31	010032	RATCHET SPACER BUSHING	1
32	010034	STANDARD WINCH BASE	1
33	010035	CABLE REEL HUB	1
34	010048	HANDLE - CABLE ATTACH -	1
35	010049	WENT BIT	1
36	010049	RETAINING RING	1
37	010049	DRIVE SHAFT	1
38	010048	SPACER WASHER	1
39	010048	OLLITE BEARING	1
40	050001	1/4-20 X 1/2 REEL BOLT	1
41	050001	1/4-20 HEX LOCK NUT	1
42	050001	1/4-20 X 1/2 PAWL BOLT	1
43	010046	WINCH HANDLE	1
44	010046	COMPLETE STD WINCH	1



BULLDOG JACK

ITEM NO	PART NO	DESCRIPTION	QTY
47	101278	MALE SWIVEL - FRAME MNT	1
48	010192	PIN - CHAIN ASSEMBLY	1
49	010193	CRAMP ASST W/FRSH MNT	1
50	010194	AMP PIN	1
51	010195	OUTER TUBE ASSEMBLY	1
52	010196	THRUST WASHER	1
53	010197	BALL & RACE BEARING	1
54	010198	FELT SPACER	1
55	010199	SUPPORT WASHER	1
56	010200	INNER TUBE - SCREW ASSY	1
57	010201	COMPLETE JACK ASSY	1

LORENZ MFG CO.
JACK & WINCH ASSEMBLIES
5-1-80