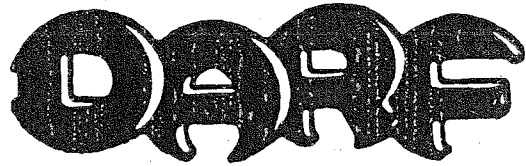
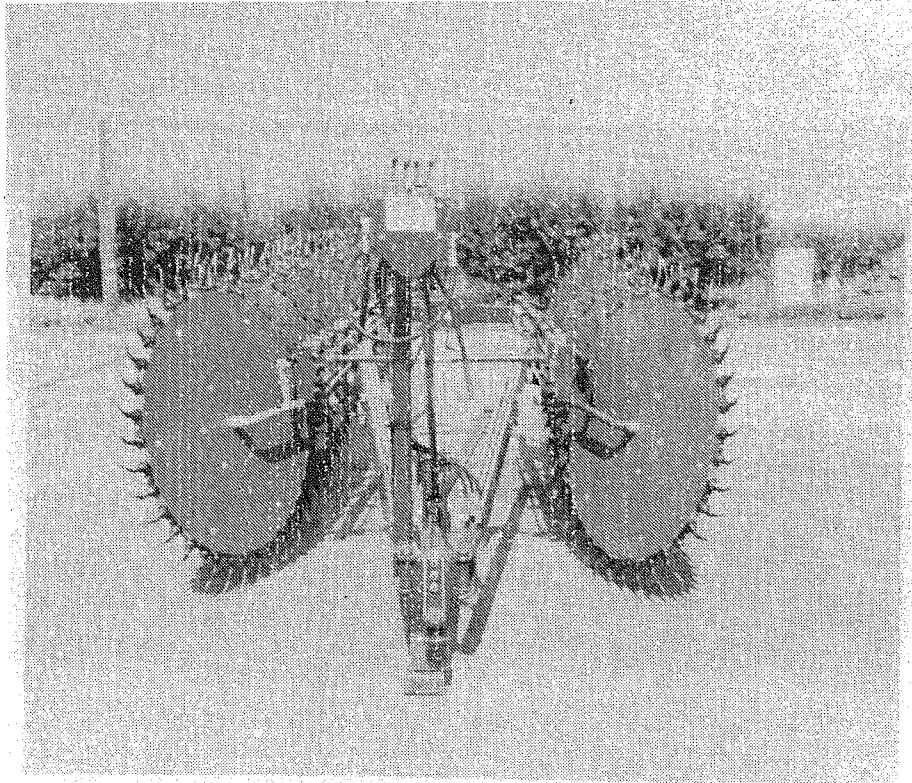


PARTS AND INSTRUCTION MANUAL



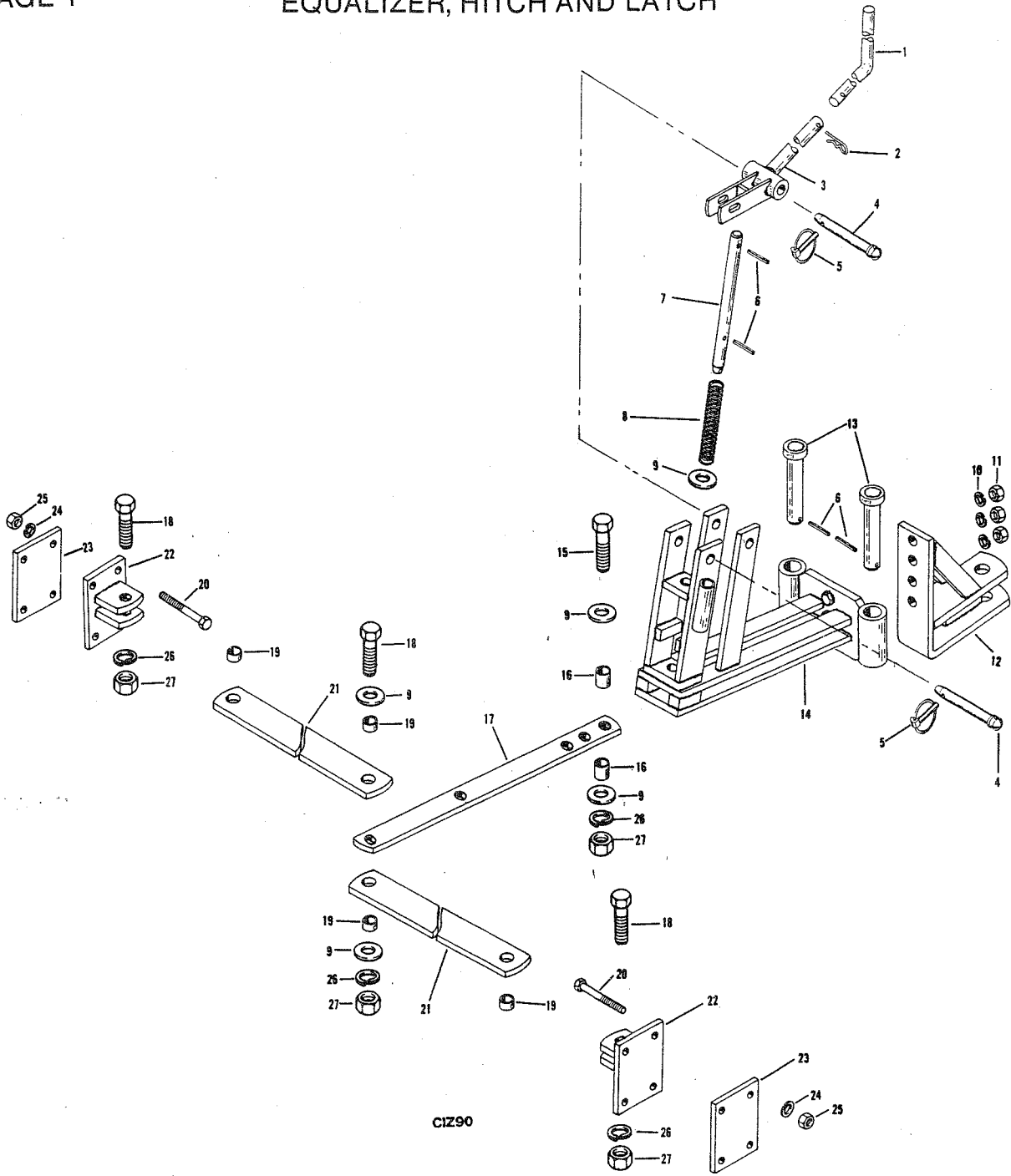
**MODEL 913FD
13 WHEEL HYDRAULIC OPENING AND CLOSING HAY RAKE**



**Manufactured by
NIKKEL IRON WORKS, INC.
SHAFTER, CA 93263**

Use Only Genuine  Parts

EQUALIZER, HITCH AND LATCH

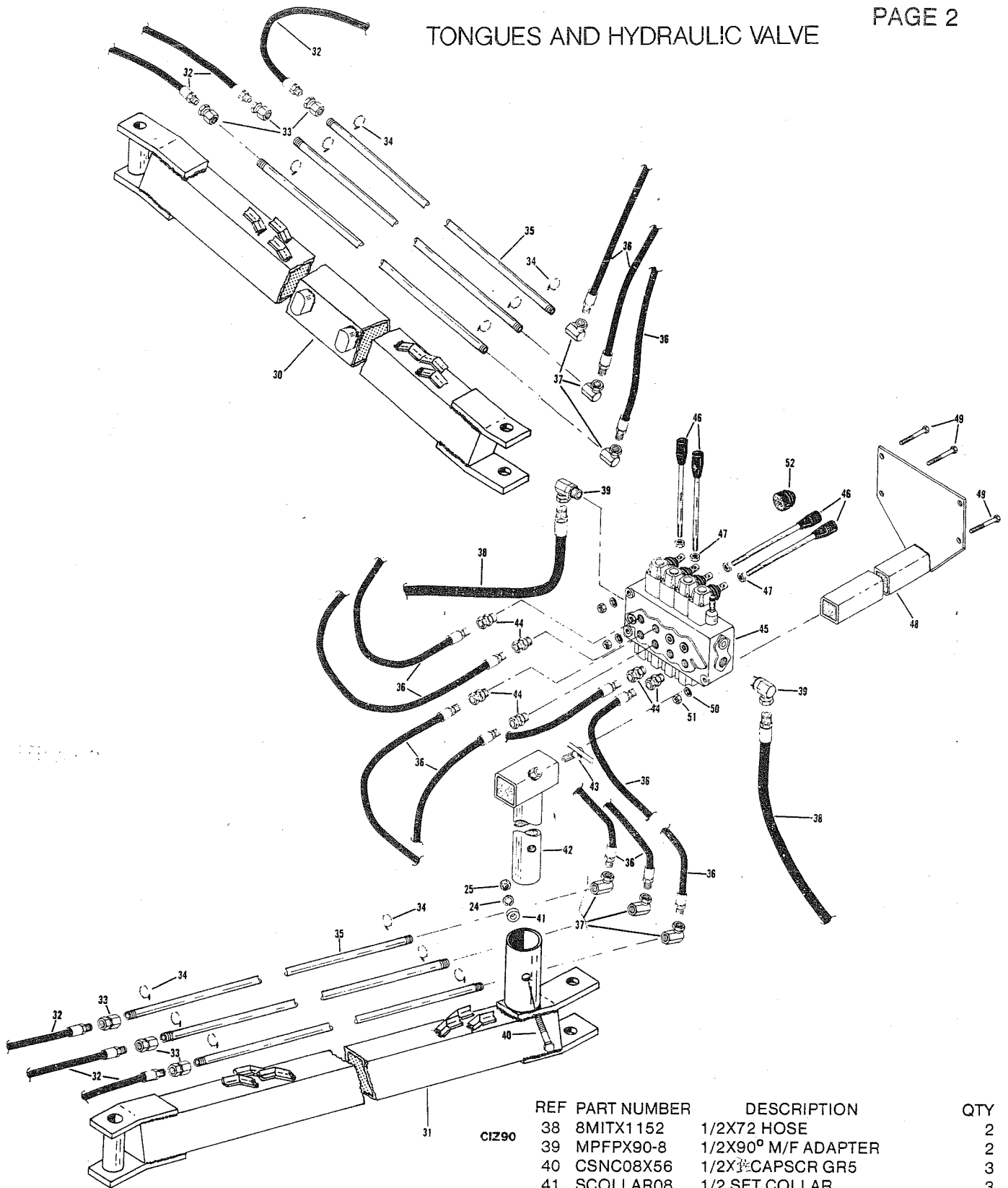


CIZ90

REF PART NUMBER	DESCRIPTION	QTY	REF PART NUMBER	DESCRIPTION	QTY
1 9132	LATCH HANDLE	1	15 CSNC12X72	3/4X4-1/2 CAPSCR GR5	1
2 HAIR12	HAIR PIN	14	16 9136	LONG BUSHING	2
3 9133	LATCH SOCKET	1	17 9137	EQUALIZER, CENTER	1
4 P772	SAFETY PIN	2	18 CSNC12X48	3/4X3 CAPSCR GR5	3
5 2016	LINCH PIN	2	19 9139	SHORT BUSHING	4
6 ROLL04X24	1/4X1-1/2 ROLL PIN	AR	20 CSNC08X72	1/2X4-1/2 CAPSCR GR5	8
7 9134	LATCH PLUNGER	1	21 9138	EQUALIZER, SIDE	2
8 4123	SPRING, PLUNGER	1	22 9140	BRACKET	2
9 FLTWA12	3/4 FLAT WASHER	5	23 9141	PLATE	2
10 LW10SP	5/8 LOCKWASHER	AR	24 LW08SP	1/2 LOCKWASHER	AR
11 NUT10NC	5/8 NC NUT GR5	AR	25 NUT08NC	1/2 NC NUT GR5	AR
12 92108VI	HITCH	1	26 LW12SP	3/4 LOCKWASHER	4
13 92178FD	PIN	2	27 NUT12NC	3/4 NC NUT GR5	4
14 9135	LATCH WELDMENT	1			

Quantities are per rake

TONGUES AND HYDRAULIC VALVE



REF PART NUMBER	DESCRIPTION	QTY	REF PART NUMBER	DESCRIPTION	QTY
24	LW08SP	1/2 LOCKWASHER	38	8MITX1152	1/2X72 HOSE
25	NUT08NC	1/2 NC NUT GR5	39	MPFPX90-8	1/2X90° M/F ADAPTER
30	92145VALFD	LEFT TONGUE	40	CSNC08X56	1/2X3/4 CAPSCR GR5
31	92145VAFD	RIGHT TONGUE	41	SCOLLAR08	1/2 SET COLLAR
32	6MIT360	3/8X60 HOSE	42	92301-13	VALVE STAND, 913FD
33	FPPFX6	3/8 STR F/F ADAPTER	43	92202	TEE BOLT
34	B12H	1-1/4 WORM DRIVE CLAMP	44	MBFP10X6	3/8 STR M/F ADAPTER
35	PIPE06X40	3/8X94 PIPE	45	SD11/4KIT	FOUR SPOOL VALVE
36	6MITX960	3/8X60 HOSE	46	SD11M10	VALVE HANDLE
37	FPPFX90-6	3/8X90° F/F ADAPTER	47	SD11NUT	NUT, VALVE HANDLE
			48	92301-14	VALVE BRACKET, 913FD
			49	CSNC05X48	5/16X3 CAPSCR GR5
			50	LW05SP	5/16 LOCKWASHER
			51	NUT05NC	5/16 NC NUT GR5
			52	SD11BOOT	RUBBER BOOT

Quantities are per rake

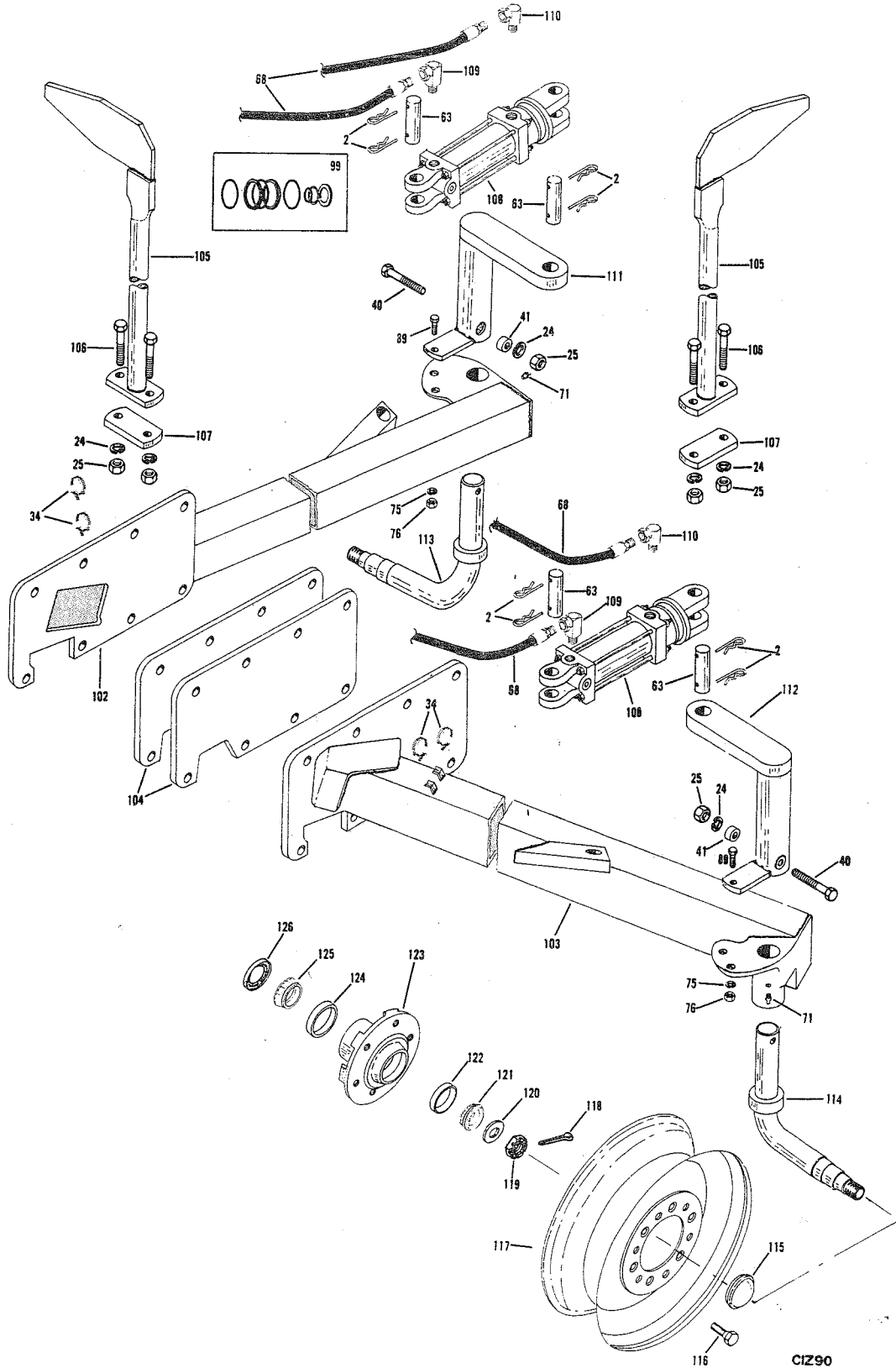
MAIN BEAMS AND LIFT TUBES

STRUTS AND GROUND WHEELS

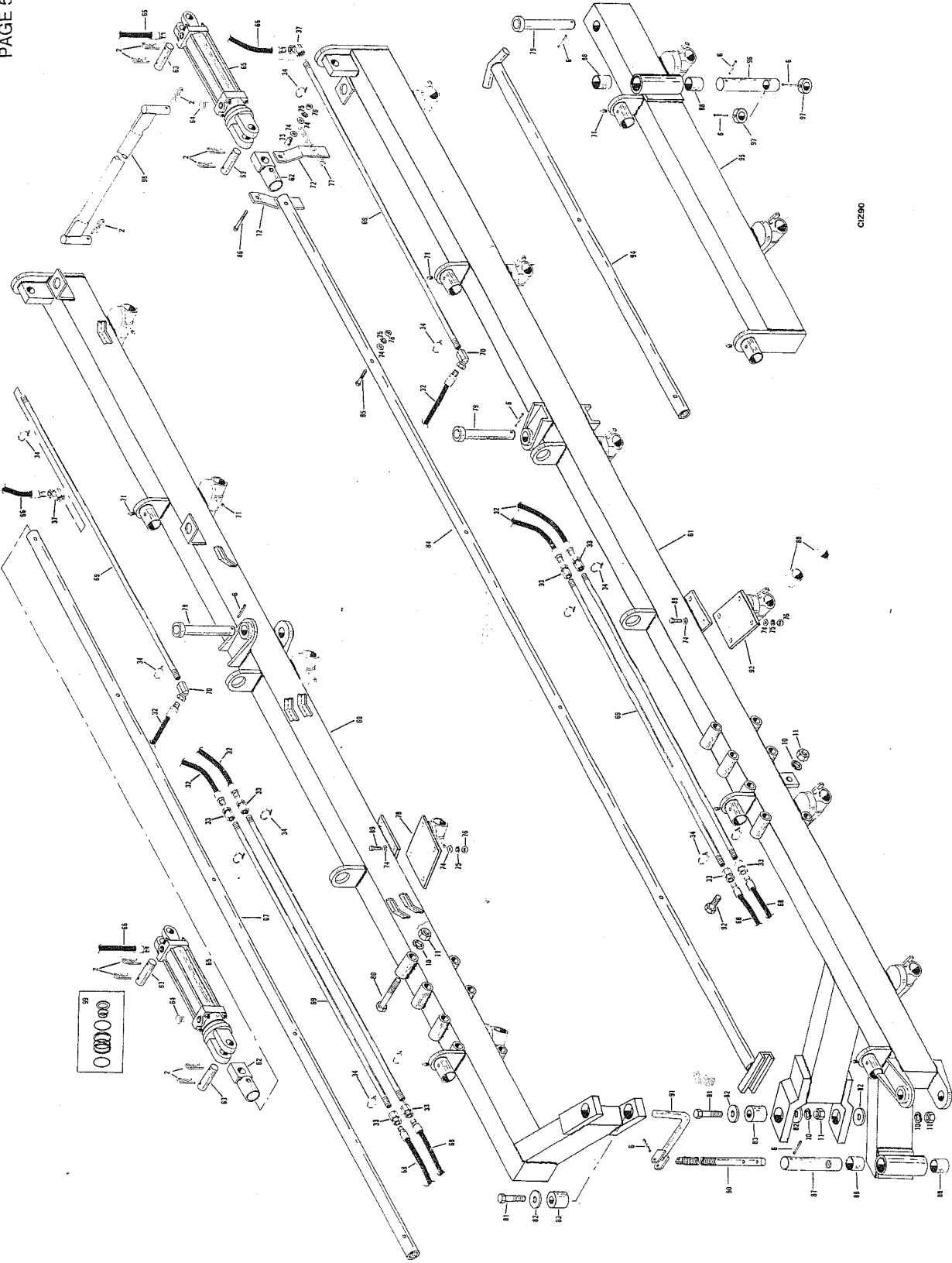
REF	PART NUMBER	DESCRIPTION	QTY	REF	PART NUMBER	DESCRIPTION	QTY
2	HAIR12	1/2 HAIR PIN	14	2	HAIR12	1/2 HAIR PIN	14
6	ROLLP04X24	1/4X1-1/2 ROLL PIN	AR	24	LW08SP	1/2 LOCKWASHER	AR
10	LW10SP	5/8 LOCKWASHER	AR	25	NUT08NC	1/2 NC NUT GR5	AR
11	NUT10NC	5/8 NC NUT GR5	AR	34	B12H	1-1/4 WORM DRIVE CLAMP	28
32	6MIT360	3/8X20 HOSE	6	40	CSNC08X56	1/2X3-1/2 CAPSCR GR5	3
33	FPPPX6	3/8 STR F/F ADAPTER	14	41	SCOLLAR08	1/2 SET COLLAR	3
34	B12H	1-1/4 WORM DRIVE CLAMP	28	63	92RC19	1" CYLINDER PIN	8
37	FPPPX90-6	3/8X90° F/F ADAPTER	8	68	6MITX1152	3/8X72 HOSE	4
60	92109VLFD	MAIN BEAM, LEFT	1	71	B511ZERK	DRIVE IN ZERK	AR
61	92109VRFD	MAIN BEAM, RIGHT	1	75	LW06SP	3/8 LOCKWASHER	AR
62	92193	LIFT ROD END	2	76	NUT06NC	3/8 NC NUT GR5	AR
63	92RC19	1" CYLINDER PIN	8	89	CSNC06X24	3/8X1-1/2 CAPSCR GR5	10
64	BPC375	CYLINDER PLUG	2	99	SKAR12104A	CYL REPAIR KIT	1 PER CYL
65	2008B38RE	LIFT CYL 2X8	2	102	92186FD	STRUT, LEFT	1
66	6MIT288	3/8X18 HOSE	2	103	92185FD	STRUT, RIGHT	1
67	92192	LIFT TUBE, LEFT, 5 WHL	1	104	92185P	BACKING PLATE	2
68	6MIT1152	3/8X72 HOSE	4	105	92202FD	WHEEL LOCATOR	2
69	PIPE06X736	3/8X46 PIPE	6	106	CSNC08X40	1/2X2-1/2 CAPSCR GR5	1
70	FPPPX45-6	3/8X45° F/F ADAPTER	2	107	92203	STRAP, WHEEL LOCATOR	2
71	B511ZERK	DRIVE IN ZERK	AR	108	2004AR	STEERING CYLINDER 2X4	2
72	92196	OFFSET STRAP	2	109	MPPPX90-6	3/8X90° M/F ADAPTER	2
73	2053	PIPE BUSHING	1	110	6RM6UFX90	3/8X90° M/F RESTR ADAPTER	2
74	FLTWA06	3/8 FLAT WASHER	AR	111	92205L	CONTROL ARM, LEFT	1
75	LW06SP	3/8 LOCKWASHER	AR	112	92205R	CONTROL ARM, RIGHT	1
76	NUT06NC	3/8 NC NUT GR5	AR	113	91346A	SPINDLE, LEFT	1
77	92122	CHAIN FOR PLAIN CRANK	13	114	91346B	SPINDLE, RIGHT	1
77	92122A	CHAIN ASSY FOR BRG CRANK	13	115	9041	GREASE CAP	AR
78	92103BL	BOLT ON CRANK BOX, LEFT	1	116	9036	LUG BOLT	12
79	92178	LONG PIN	3	117	92148	GROUND WHEEL	2
80	CSNC10X80	5/8X5 CAPSCR GR5	14	118	COT32P	7/32X1-1/2 COTTER	AR
81	CSNC10X56	5/8X3-1/2 CAPSCR GR5	2	119	92125	7/8 NUT, SLOTTED GR5	AR
82	92225A	RETAINER	AR	120	9043	7/8 FLAT WASHER	AR
83	92198	HINGE PIN BUSHING	2	121	9040	CONE, OUTER (LM67048)	2
84	92195FD	LIFT TUBE, RIGHT, 6 WHL	1	122	9042	CUP, OUTER (LM67010)	2
85	CSNC06X32	3/8X2 CAPSCR GR5	AR	123	9035	HUB, INCL CUPS	2
86	CSNC06X24	3/8X1-1/2 CAPSCR GR5	AR	124	9037	CUP, INNER (JL69310)	2
87	92153A	ADJ SCREW, ACME THREAD	1	125	9039	CONE, INNER (JL69349)	2
88	92115	BUSHING	56	126	9038	GREASE SEAL (16289)	2
89	CSNC06X24	3/8X1-1/2 CAPSCR GR5	10				
90	92151A	ADJ PIN, ACME THREAD	1				
91	92152	ADJ CRANK	1				
92	CSNC10X32	5/8X2 CAPSCR GR5	2				
93	92103BR	BOLT ON CRANK BOX, RIGHT	1				
94	92199	LIFT TUBE, TAIL PC, 2 WHL	1				
95	92200	TAIL PIECE	1				
96	92153A1	ADJ PIN PLAIN	1				
97	92153A	ADJ PIN PLAIN	2				
98	91294	TRANSPORT BAR	1				
99	SKAR12104A	CYL REPAIR KIT	1 PER CYL				

Quantities are per rake unless otherwise stated

STRUTS AND GROUND WHEELS



C1290



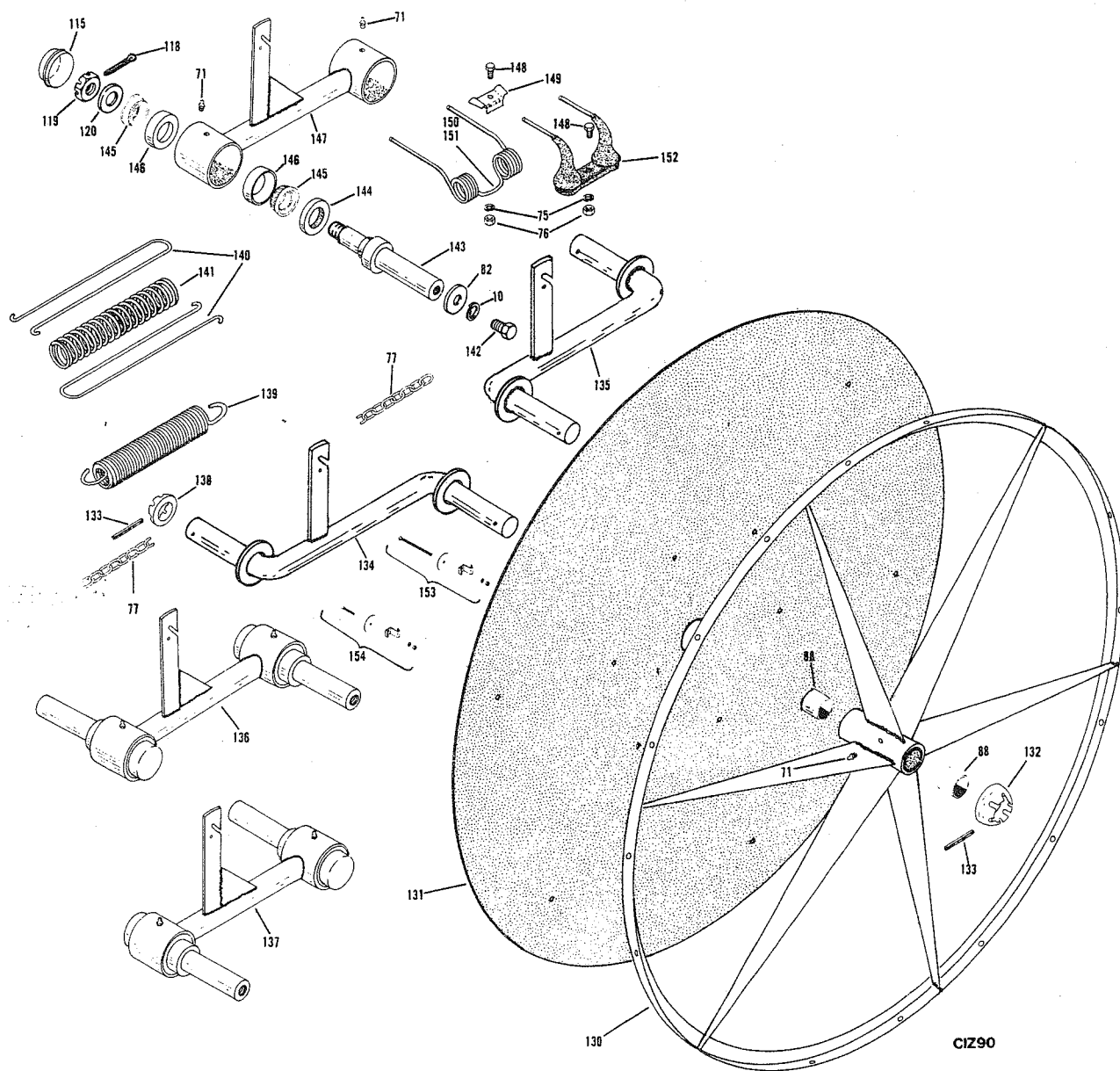
C1290

RAKING WHEEL AND CRANKS

REF	PART NUMBER	DESCRIPTION	QTY
10	LW10SP	5/8 LOCKWASHER	AR
71	B511ZERK	DRIVE IN ZERK	AR
75	LW06SP	3/8 LOCKWASHER	AR
76	NUT06NC	3/8 NC NUT GR5	AR
77	92122	CHAIN FOR PLAIN CRANK, STD	13
77	92122A	CHAIN ASSY FOR BRG CRANK, 2PCS, OPT	13
82	92225A	RETAINER, OPT	AR
88	92115	BUSHING	AR
115	9041	GREASE CAP	AR
118	COT32P	7/32X1-1/2 COTTER	AR
119	92125	7/8 NUT, SLOTTED GR5	AR
120	9043	7/8 FLAT WASHER	AR
130	92114	RAKING WHEEL	13
131	92154B	MASONITE SHIELD	13
132	92107A	WASHER, WHEEL END, RED, 6 SLOTS, STD	13
133	ROLLP04X48	1/4X3 ROLL PIN, STD	AR
134	92119	CRANK, RIGHT, YELLOW, STD	8
135	92119L	CRANK, LEFT, RED, STD	5
136	92219HOO	CRANK, BEARING TYPE, RIGHT, OPT	8
		Includes all parts ready to assemble	
137	92219HOO	CRANK, BEARING TYPE, LEFT, OPT	5
		Includes all parts ready to assemble	
138	92107	WASHER, BEAM END, YELLOW, 4 SLOTS, STD	13
139	92121	SPRING, EXTENSION, STD	13
140	92221A	WIRE FORM, OPT	26
141	92221	SPRING, COMPRESSION, OPT	13
142	CSNC10X32	5/8 X 2 CAPSCR GR5, OPT	AR
143	92219	SPINDLE, OPT	13
144	9222	GREASE SEAL, OPT (471820)	2 PER CRANK
145	9220	CONE, OPT (15123)	4 PER CRANK
146	9221	CUP, OPT (15245)	4 PER CRANK
147	92219H	CRANK SUPPORT SECT W/CUPS, OPT	13
148	CSNC06X16	3/8X1 CAPSCR GR5	18 PER WHEEL
149	92118	CLIP, TOOTH, STD	18 PER WHEEL
150	92117	TOOTH, STEEL, BLK, RIGHT, STD	18 PER WHEEL
151	92117L	TOOTH, STEEL, RED, LEFT, STD	18 PER WHEEL
152	92117RL	TOOTH, RUBBER, R OR L, OPT	18 PER WHEEL
153	92175A	FASTENER ASSY, SHLD, LONG	6 PER WHEEL
154	92175	FASTENER, ASSY, SHLD, SHORT	6 PER WHEEL

Quantities are per rake unless otherwise stated

RAKING WHEEL AND CRANKS



MODEL 913FD DARF RAKE - OPERATING INSTRUCTIONS

Maintain 15 to 18 lbs tire pressure.
Adjust rake spring pressure to allow crop to rotate wheels.
Do not allow rake teeth to run in the ground.
Adjust tractor draw bar so rake frames are approximately level.

WHEN PLUMBING THE HYDRAULIC HOSES TO THE TRACTOR SYSTEM, BE SURE THE OIL FLOW IS CORRECT. PRESSURE SIDE IS THE RIGHT PORT, RETURN OIL IS THE LEFT PORT ON MOST VALVES. LOCK TRACTOR VALVE IN OPEN POSITION TO MAINTAIN CONSTANT FLOW. FOR CLOSED CENTER SYSTEMS, INSTALL THE CLOSED CENTER PLUG PROVIDED WITH RAKE.

Ground wheel hubs and optional bearing cranks are factory packed and should be repacked annually. Grease all zerk fittings at least once per day during operation.

MAKE ALL OPENING & CLOSING OPERATIONS IN LOW GEAR

TO OPEN FROM TRANSPORT POSITION:

1. Remove 2 dealer installed safety bolts on Spindle Tab.
2. Remove safety transport locking bar and store in mount provided.
3. Remove equalizer bar locking plunger safety transport pin and store in socket provided.
The following is performed from the tractor seat for your convenience and SAFETY.
4. Release equalizer bar locking plunger. Hold handle down until plunger clears hole in equalizer bar. Pull forward SLOWLY, allowing the rake to open until locking plunger drops into the equalizer bar.
5. Using the hydraulic valve, move the ground wheel position to straight forward. Use the wheel position indicators for reference.

NOW YOU ARE READY TO RAKE !

TO CLOSE FROM RAKING POSITION TO TRANSPORT POSITION:

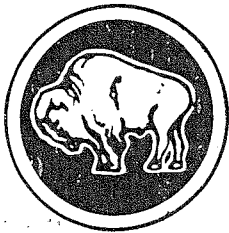
1. Release equalizer bar locking plunger. Hold handle down until plunger clears hole in equalizer bar.
2. Using the hydraulic valve, move the ground wheels to "toe in" at the rear. Use wheel position indicator for reference.
3. Back tractor SLOWLY, adjusting "toe in" with valve to allow rake to close toward transportation position.
4. Use the hydraulic valve to adjust "toe in" to the front. Pull forward SLOWLY until plunger drops in the transport hole on the equalizer bar - continue forward until the safety transport locking bar will mount in transport position.
5. Re-set wheels to straight forward position. Install SAFETY transport locking bar pins and SAFETY transport pin.

YOU ARE READY TO TRANSPORT

THESE ADDITIONAL PRODUCTS ARE AVAILABLE
FROM YOUR LOCAL DEALER

DARE

SINGLE WHEEL RAKES Pull type
DOUBLE VEE WHEEL RAKES, Pull type and 3-Point
WINDROW TURNERS



BUFFALO

DISC RIDGERS 1, 2, 3 and 4 Blade Models
"S" TINE AND SPRINGTINE FIELD CULTIVATORS
BORDER BLOCKERS AND ALFALFA BORDER MACHINERY
SLED CULTIVATORS AND SLED SPIKE HARROWS
TOOL BAR ACCESSORIES: Gauge Wheels, Square and
Rectangular Tool Bars, A-Frames: Cat I, II, III,
Tool Bar Spacers, Individual Rotary Hoes.

Valleytown
Products

PTO DRIVEN VINEYARD DUSTERS