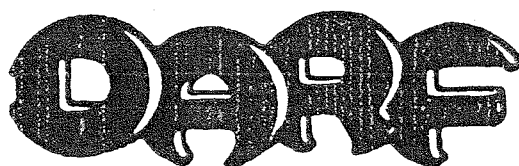
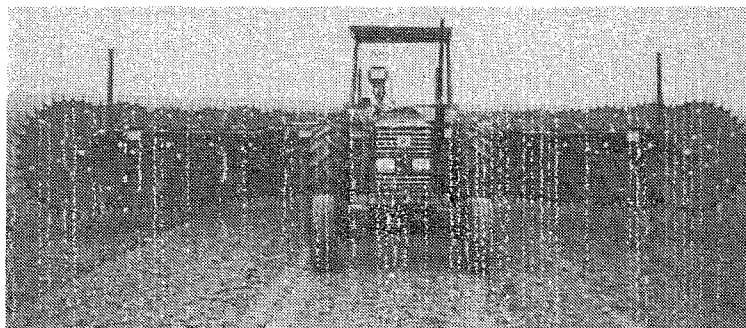


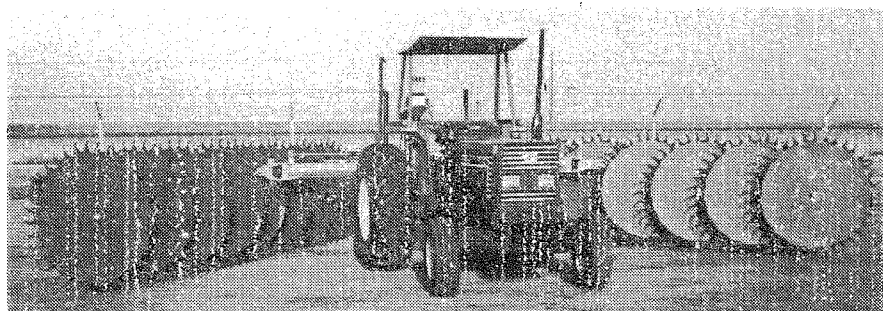
# PARTS AND INSTRUCTION MANUAL



## MODELS 915 LEADING CRANK AND 915TC TRAILING CRANK 15 WHEEL HYDRAULIC OPENING AND CLOSING THREE-POINT HAY RAKE



**MODEL 915 LEADING CRANK**



**MODEL 915TC TRAILING CRANK**

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

Use Only Genuine  Parts

**MODEL 915 AND 915TC DARF RAKE  
OPERATING INSTRUCTIONS**

We recommend a tractor in the 70-80 HP range with rear wheel spacing not to exceed 84" overall width and adequate front weights to stabilize the tractor. Reduce tractor tire pressure to assure a "softer" ride in the field. This reduces rake wheel "bounce" and increases driver comfort.

1. The 915 series rake will attach to CAT II 3-point hitches and to quick couplers.
2. Install suitable hose couplers on the 1/2" hoses from the valve. Insert in tractor couplers. Lock tractor remote handle in position so oil is entering at the correct valve in port. If your tractor is closed center, install the closed center adapter furnished with the rake valve.

**TO OPEN FROM STORAGE POSITION TO RAKING POSITION**

1. Raise the 3-point hitch to clear the raking wheels and set storage stands in the up position.
2. Operate the frame valves, indicated on the valve decal, slowly until the main frame is fully open.
3. Using the hydraulic valves indicated on the valve decal, adjust rake wheel frames to the required raking angle.
4. Level raking frames to the ground by adjusting the top link. Lower 3-point hitch so that the raking frame is approximately 36" off the ground and set stop on the 3-point quadrant.
5. Adjust spring tension to allow crop to rotate raking wheels and to pick up all the crop.
6. DO NOT OPERATE RAKING WHEELS IN THE GROUND.
7. Check hydraulic fluid in your tractor. You will likely need to add approximately 2 gallons for initial start up.

**NOW YOU ARE READY TO RAKE**

**TO CLOSE TO TRANSPORT POSITION FROM RAKING POSITION**

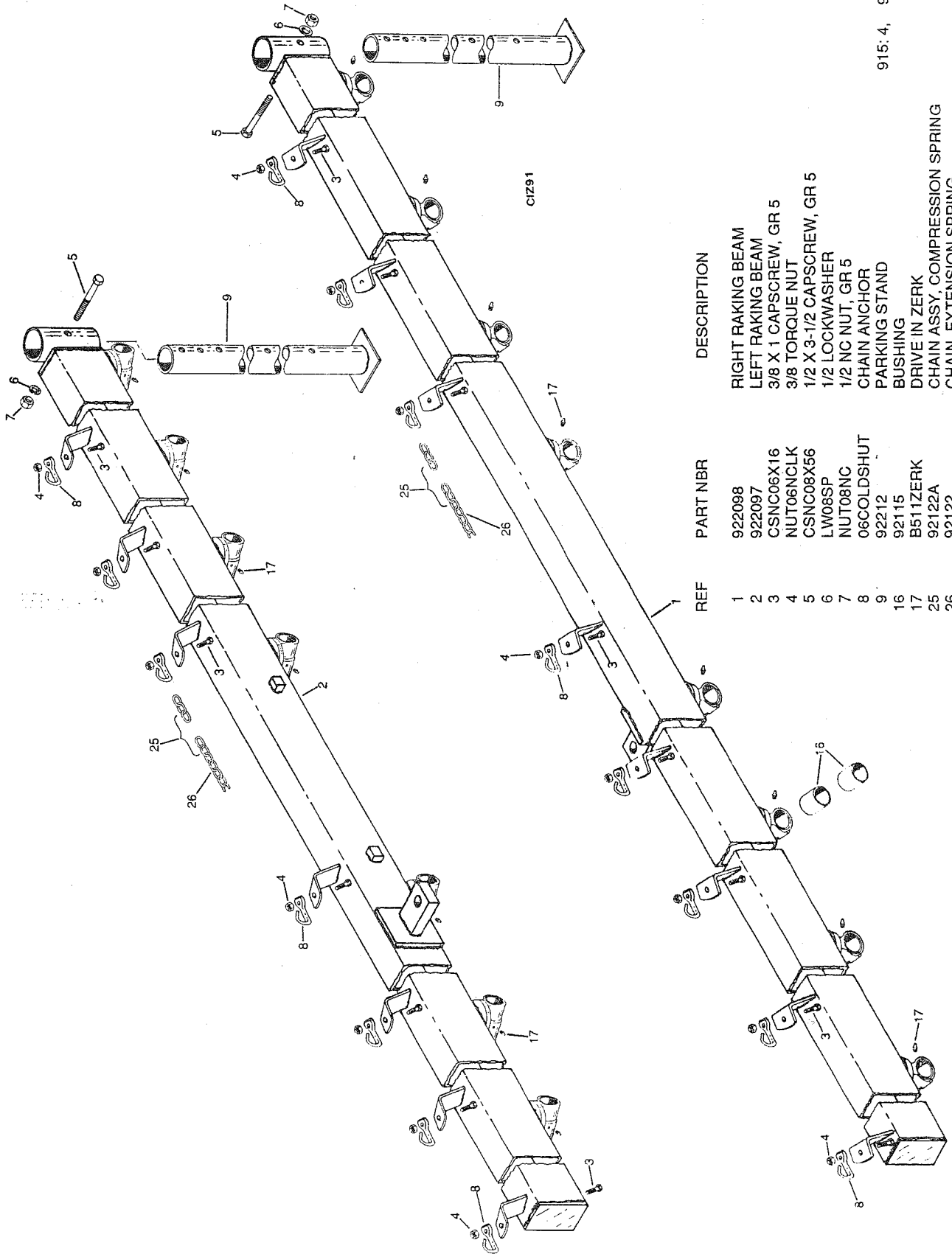
1. Raise 3-point to clear raking wheels.
2. Return raking frames to straight position.
3. Operate the frame valves indicated on the valve decal until the main frame is fully closed.

**NOW YOU ARE READY TO TRANSPORT**

**DRIVE CAUTIOUSLY. GIVE ONCOMING AND PASSING TRAFFIC AMPLE ROOM.**

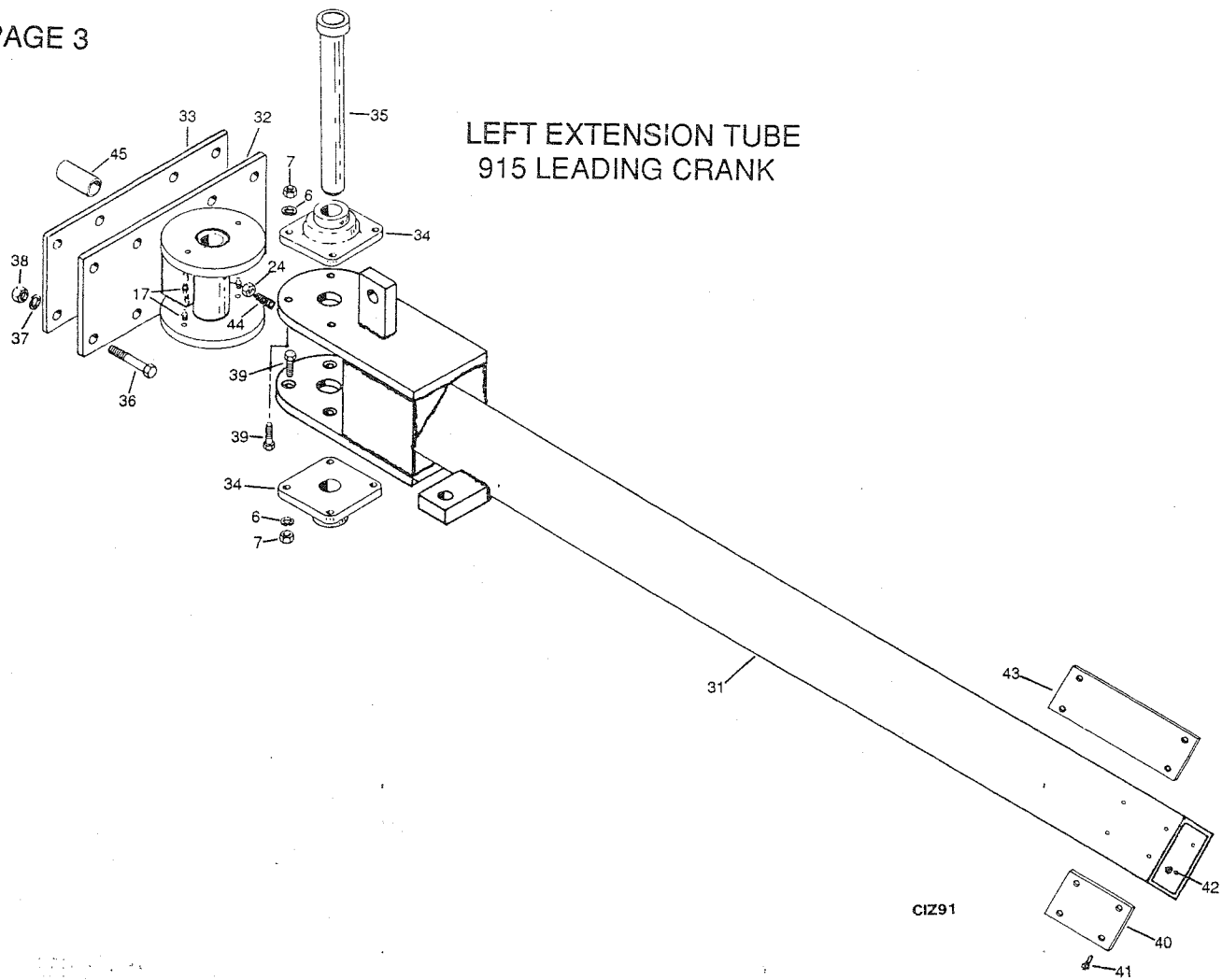
For 915TC models equipped with the optional lift tube kit, you may operate the hydraulic valves indicated on the valve decal to raise the raking wheels to the up position without raising the 3-point hitch for turns and transport.

RAKING FRAMES  
915 LEADING CRANK



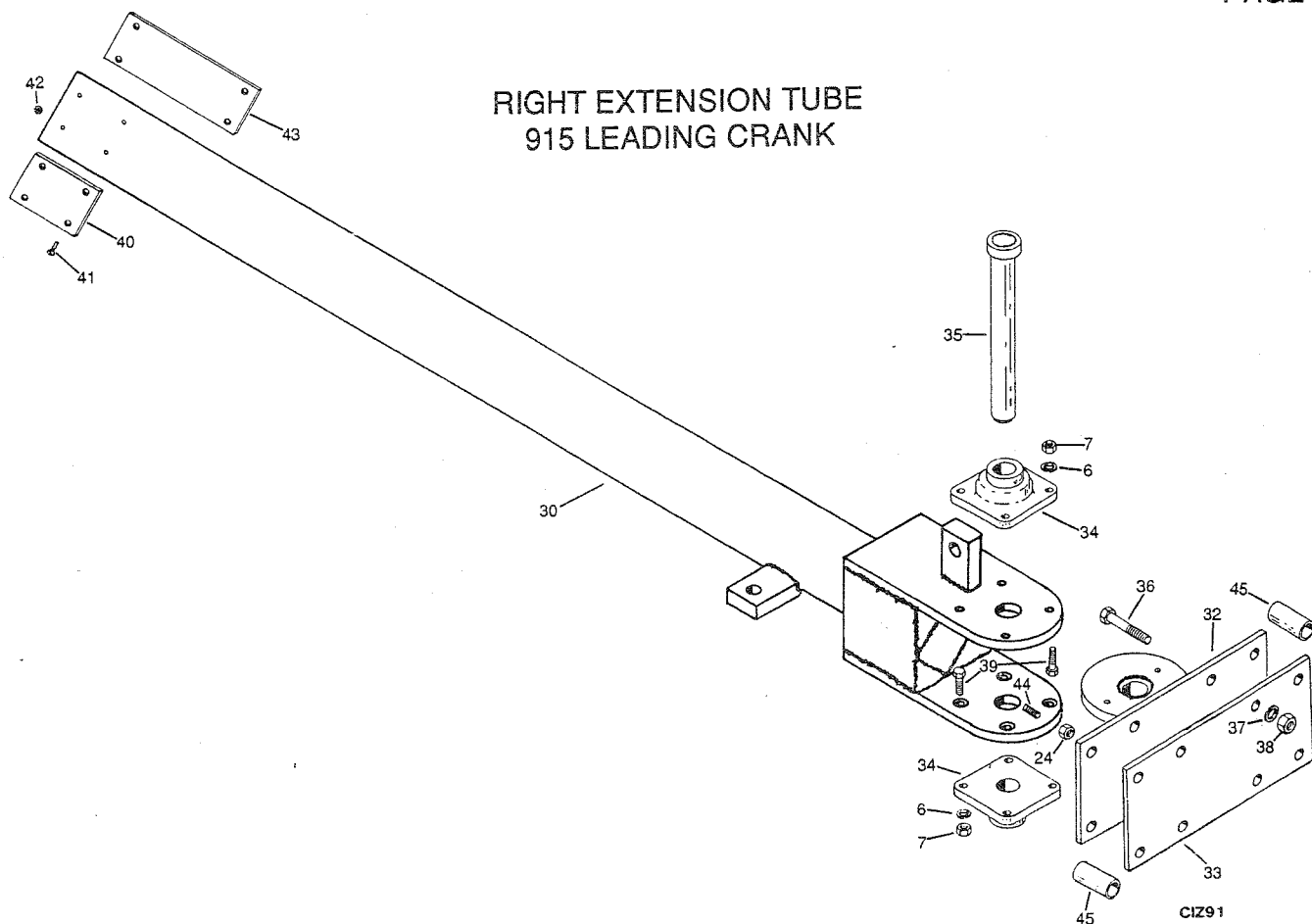
REF	PART NBR	DESCRIPTION	REQ
1	922098	RIGHT RAKING BEAM	1
2	922097	LEFT RAKING BEAM	1
3	CSNC06X16	3/8 X 1 CAPSCREW, GR 5	AR
4	NUT06NCLK	3/8 TORQUE NUT	15
5	CSNC08X56	1/2 X 3-1/2 CAPSCREW, GR 5	AR
6	LW08SP	1/2 LOCKWASHER	AR
7	NUT08NC	1/2 NC NUT, GR 5	AR
8	06COLDSHUT	CHAIN ANCHOR	15
9	92212	PARKING STAND	915: 4, 915TC: 2
16	92115	BUSHING	60
17	B511ZERK	DRIVE IN ZERK	AR
25	92122A	CHAIN ASSY, COMPRESSION SPRING	15
26	92122	CHAIN, EXTENSION SPRING	15

Quantities are per rake



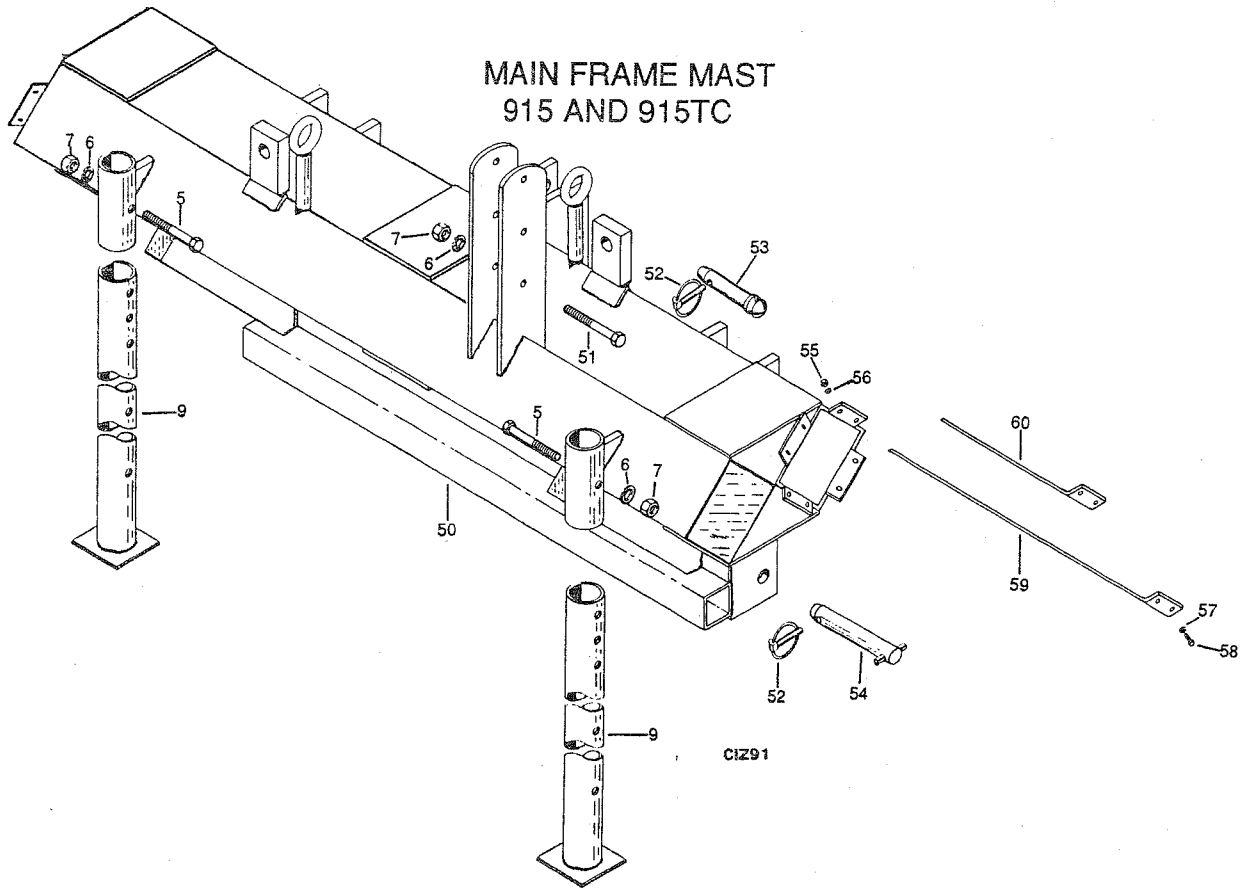
REF	PART NBR	DESCRIPTION	REQ
6	LW08SP	1/2 LOCKWASHER	AR
7	NUT08NC	1/2 NC NUT, GR 5	AR
24	NUT06NC	3/8 NC NUT, GR 5	AR
31	92209L	LEFT EXTENSION TUBE	1
32	92211	SWING SPOOL WELDMENT	2
33	92210	CLAMP PLATE	2
34	92287	FLANGE BEARING	4
35	92277	BEARING PIN	2
36	CSNC10X80	5/8 X 5 CAPSCREW, GR 5	16
37	LW10SP	5/8 LOCKWASHER	16
38	NUT10NC	5/8 NC NUT, GR 5	AR
39	CSNC08X32	1/2 X 2 CAPSCREW, GR 5	AR
40	93100	3/16 UMHW BEARING, 3-1/2 X 6	AR
	Used on S/N 54575 and up		
40	93101	1/4 UMHW BEARING, 3-1/2 X 6	AR
	Used on S/N 54575 and up		
41	PHMS04X16	1/4 X 1 FH MACHINE SCREW	AR
42	NUT04NCLK	1/4 NC NUT, NYLOCK	AR
43	92302	3/16 UMHW BEARING, 3-1/2 X 12	AR
	Used before S/N 54575		
43	92304	1/4 UMHW BEARING, 3-1/2 X 12	AR
	Used before S/N 54575		
44	SHSET06X16	3/8 X 1 SQ HD SET SCREW	2
45	92288	1" PIPE SPACER	4

Quantities are per rake



REF	PART NBR	DESCRIPTION	REQ
6	LW08SP	1/2 LOCKWASHER	AR
7	NUT08NC	1/2 NC NUT, GR 5	AR
24	NUT06NC	3/8 NC NUT, GR 5	AR
30	92209R	RIGHT EXTENSION TUBE	1
32	92211	SWING SPOOL WELDMENT	2
33	92210	CLAMP PLATE	2
34	92287	FLANGE BEARING	4
35	92277	BEARING PIN	2
36	CSNC10X80	5/8 X 5 CAPSCREW, GR 5	16
37	LW10SP	5/8 LOCKWASHER	16
38	NUT10NC	5/8 NC NUT, GR 5	AR
39	CSNC08X32	1/2 X 2 CAPSCREW, GR 5	AR
40	93100	3/16 UMHW BEARING, 3-1/2 X 6	AR
	Used on S/N 54575 and up		
40	93101	1/4 UMHW BEARING, 3-1/2 X 6	AR
	Used on S/N 54575 and up		
41	PHMS04X16	1/4 X 1 FH MACHINE SCREW	AR
42	NUT04NCLK	1/4 NC NUT, NYLOCK	AR
43	92302	3/16 UMHW BEARING, 3-1/2 X 12	AR
	Used before S/N 54575		
43	92304	1/4 UMHW BEARING, 3-1/2 X 12	AR
	Used before S/N 54575		
44	SHSET06X16	3/8 X 1 SQ HD SET SCREW	2
45	92288	1" PIPE SPACER	4

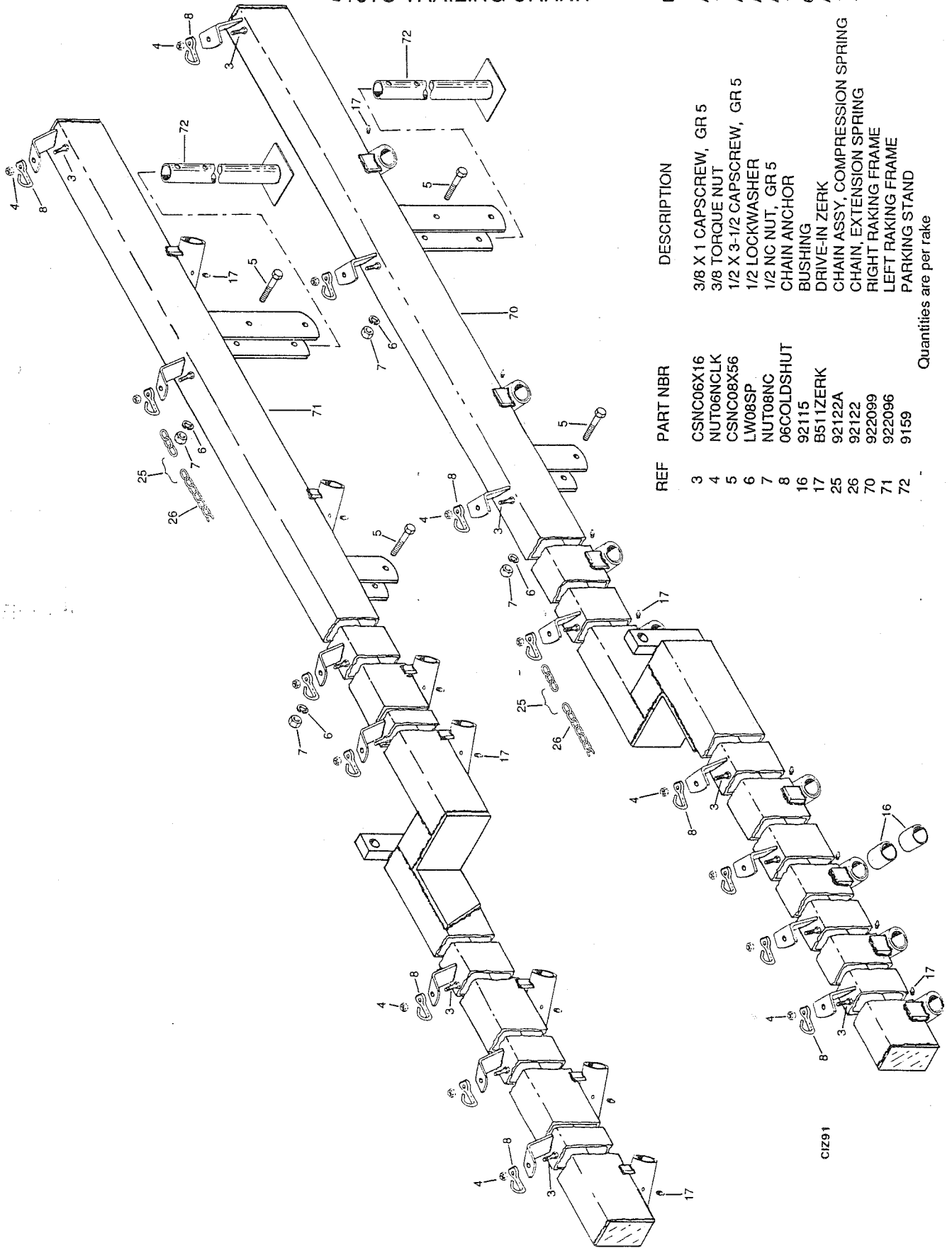
Quantities are per rake



REF	PART NBR	DESCRIPTION	REQ
5	CSNC08X56	1/2 X 3-1/2 CAPSCREW, GR 5	AR
6	LW08SP	1/2 LOCKWASHER	AR
7	NUT08NC	1/2 NC NUT, GR 5	AR
9	92212	PARKING STAND	915: 4, 915TC: 2
50	92209	MAIN FRAME MAST	AR
51	CSNC08X72	1/2 X 4-1/2 CAPSCREW, GR 5	AR
52	2016	LINCH PIN	AR
53	2014	1" TOP LINK PIN	AR
54	2225	1-1/8" LIFT PIN	AR
55	NUT04NC	1/4 NC NUT, GR 5	AR
56	LW04SP	1/4 LOCKWASHER	AR
57	FLTWA04	1/4 FLAT WASHER	AR
58	CSNC04NCX16	1/4 X 1 CAPSCREW, GR 5	AR
59	92284A	3/16 UMHW 23" FORMED BEARING	AR
	Used on S/N 54575 and up		
59	92283A	1/4 UMHW 23" FORMED BEARING	AR
	Used on S/N 54575 and up		
60	92303	3/16 UMHW 12" FORMED BEARING	AR
	Used before S/N 54575		
60	92305	1/4 UMHW 12" FORMED BEARING	AR
	Used before S/N 54575		

Quantities are per rake

RAKING FRAMES  
915TC TRAILING CRANK

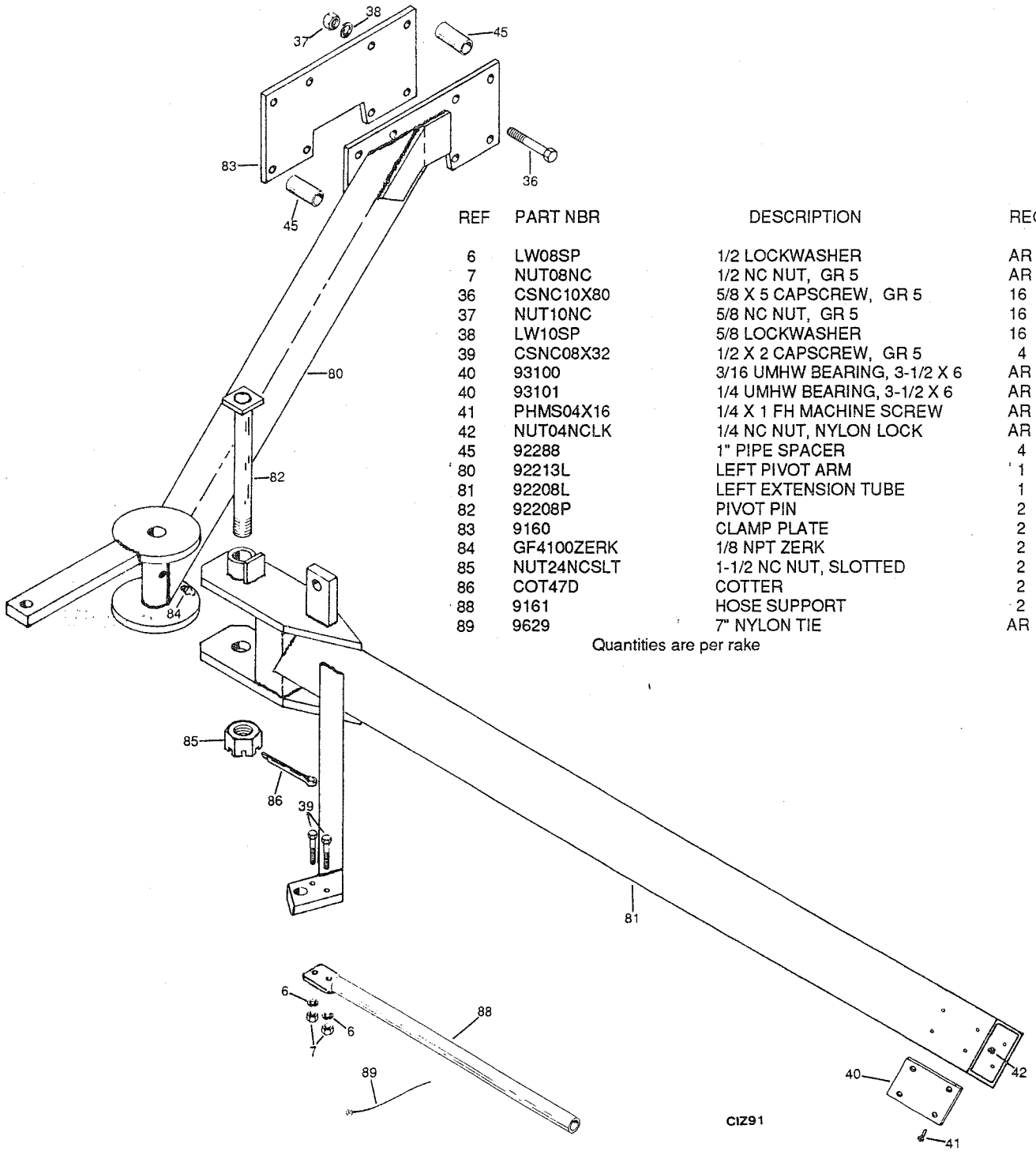


REF	PART NBR	DESCRIPTION	REQ
3	CSNC06X16	3/8 X 1 CAPSCREW, GR 5	AR
4	NUT06NCLK	3/8 TORQUE NUT	15
5	CSNC08X56	1/2 X 3-1/2 CAPSCREW, GR 5	AR
6	LW08SP	1/2 LOCKWASHER	AR
7	NUT08NC	1/2 NC NUT, GR 5	AR
8	06COLDSHUT	CHAIN ANCHOR	15
16	92115	BUSHING	60
17	B511ZERK	DRIVE-IN ZERK	AR
25	92122A	CHAIN ASSY, COMPRESSION SPRING	15
26	92122	CHAIN, EXTENSION SPRING	15
70	922099	RIGHT RAKING FRAME	1
71	922096	LEFT RAKING FRAME	1
72	9159	PARKING STAND	2

Quantities are per rake

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### LEFT EXTENSION TUBE 915TC TRAILING CRANK



REF	PART NBR	DESCRIPTION	REQ
6	LW08SP	1/2 LOCKWASHER	AR
7	NUT08NC	1/2 NC NUT, GR 5	AR
36	CSNC10X80	5/8 X 5 CAPSCREW, GR 5	16
37	NUT10NC	5/8 NC NUT, GR 5	16
38	LW10SP	5/8 LOCKWASHER	16
39	CSNC08X32	1/2 X 2 CAPSCREW, GR 5	4
40	93100	3/16 UMHW BEARING, 3-1/2 X 6	AR
40	93101	1/4 UMHW BEARING, 3-1/2 X 6	AR
41	PHMS04X16	1/4 X 1 FH MACHINE SCREW	AR
42	NUT04NCLK	1/4 NC NUT, NYLON LOCK	AR
45	92288	1" PIPE SPACER	4
80	92213L	LEFT PIVOT ARM	1
81	92208L	LEFT EXTENSION TUBE	1
82	92208P	PIVOT PIN	2
83	9160	CLAMP PLATE	2
84	GF4100ZERK	1/8 NPT ZERK	2
85	NUT24NCSLT	1-1/2 NC NUT, SLOTTED	2
86	COT47D	COTTER	2
88	9161	HOSE SUPPORT	2
89	9629	7" NYLON TIE	AR

Quantities are per rake

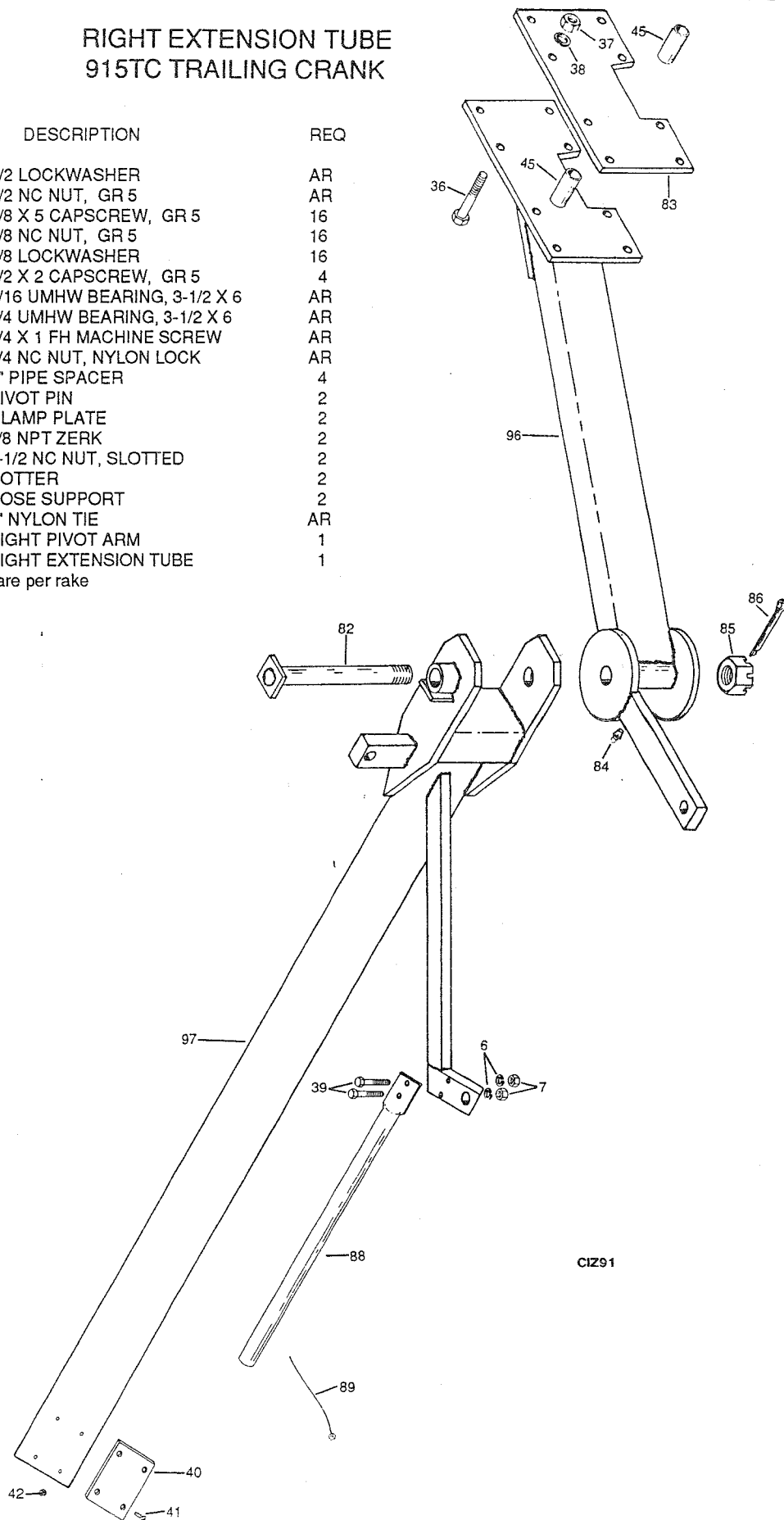
CIZ91



### RIGHT EXTENSION TUBE 915TC TRAILING CRANK

REF	PART NBR	DESCRIPTION	REQ
6	LW08SP	1/2 LOCKWASHER	AR
7	NUT08NC	1/2 NC NUT, GR 5	AR
36	CSNC10X80	5/8 X 5 CAPSCREW, GR 5	16
37	NUT10NC	5/8 NC NUT, GR 5	16
38	LW10SP	5/8 LOCKWASHER	16
39	CSNC08X32	1/2 X 2 CAPSCREW, GR 5	4
40	93100	3/16 UMHW BEARING, 3-1/2 X 6	AR
40	93101	1/4 UMHW BEARING, 3-1/2 X 6	AR
41	PHMS04X16	1/4 X 1 FH MACHINE SCREW	AR
42	NUT04NCLK	1/4 NC NUT, NYLON LOCK	AR
45	92288	1" PIPE SPACER	4
82	92208P	PIVOT PIN	2
83	9160	CLAMP PLATE	2
84	GF4100ZERK	1/8 NPT ZERK	2
85	NUT24NCSLT	1-1/2 NC NUT, SLOTTED	2
86	COT47D	COTTER	2
88	9161	HOSE SUPPORT	2
89	9629	7" NYLON TIE	AR
96	92213R	RIGHT PIVOT ARM	1
97	92208R	RIGHT EXTENSION TUBE	1

Quantities are per rake



CI291

BASIC HYDRAULICS  
915 AND 915TC

Service ports are numbered from left to right.  
Odd numbered ports are in the top row.  
Even numbered ports are in the bottom row.

REF	PART NBR	DESCRIPTION	REQ
89	9629	7" NYLON TIE	AR
90	9623	4" NYLON TIE	AR
100	SD11M10	VALVE HANDLE	4
101	SD11NUT	VALVE HANDLE NUT	4
102	SD11BOOT	RUBBER BOOT	4
103	SD11/4KIT	4 SPOOL VALVE INCL. O RING FITTINGS	1
104	LW05SP	5/16 LOCKWASHER	3
105	NUT05NC	5/16NC NUT, GR 5	3
106	MBFPX90-8	90° SWIVEL ADAPTER	2
107	MBFP10-6	STRAIGHT SWIVEL ADAPTER	8
108	92301-14	VALVE BRACKET	1
109	CSNC05X48	5/16 X 3 CAPSCREW, GR 5	3
110	92202	TEE BOLT	1
111	92301-15	VALVE STAND	1
112	MPFPX90-6	90° SWIVEL ADAPTER	8
113	2024AR	2 X 24 EXTENSION CYLINDER	2
114	2008ASAE	2 X 8 ASAE CYLINDER	2
118	HAIR12	HAIR PIN, #12	4 PER CYL
119	92RC19	1" CYLINDER PIN	2 PER CYL
120	SKAR12104A	2" CYLINDER REPAIR KIT	1 PER CYL
125	08X960	60" HOSE TO TRACTOR, 1/2" HOSE, 1/2" ENDS	2

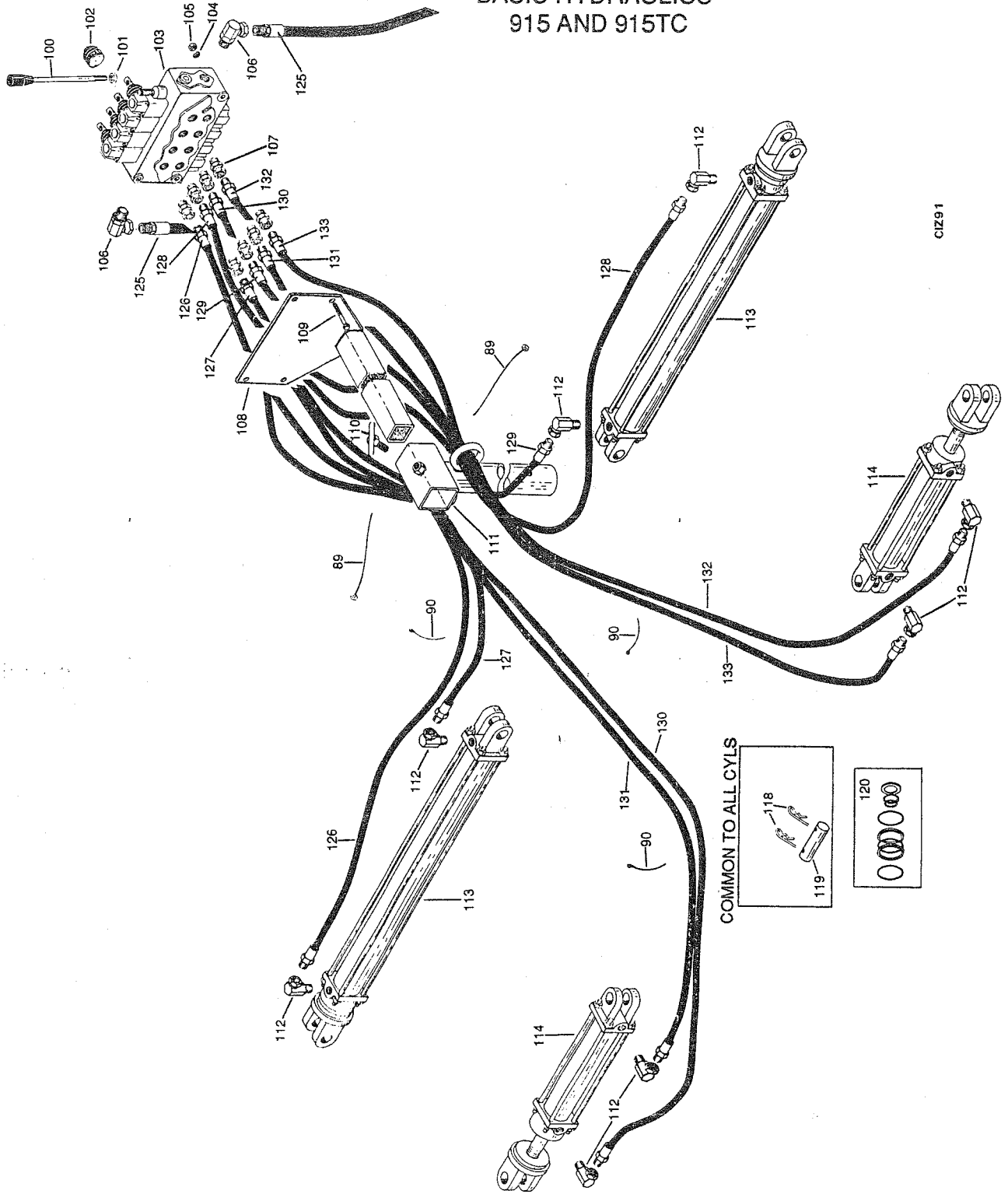
The following hoses are 1/4" with 3/8" male pipe ends:

126	04X1200	75" HOSE, PORT 1 TO LEFT EXT CYL ROD END	1
127	04X864	54" HOSE, PORT 2 TO LEFT EXT CYL PIST END	1
128	04X1248	78" HOSE, PORT 3 TO RIGHT EXT CYL ROD END	1
129	04X768	48" HOSE, PORT 4 TO RIGHT EXT CYL PIST END	1
130	04X2016	126" HOSE, PORT 5 TO LEFT ANG CYL ROD END	1
131	04X1824	114" HOSE, PORT 6 TO LEFT ANG CYL PIST END	1
132	04X1920	120" HOSE, PORT 7 TO RIGHT ANG CYL ROD END	1
133	04X1728	108" HOSE, PORT 8 TO RIGHT ANG CYL PIST END	1

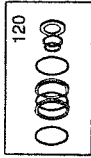
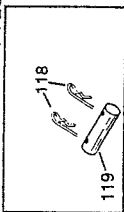
Quantities are per rake unless otherwise stated

3024AR  
N 201028

# BASIC HYDRAULICS 915 AND 915TC



COMMON TO ALL CYLS



CIZ91

LIFT TUBE PACKAGE  
915TC TRAILING CRANK

Service ports are numbered from left to right.  
Odd numbered ports are in the top row.  
Even numbered ports are in the bottom row.

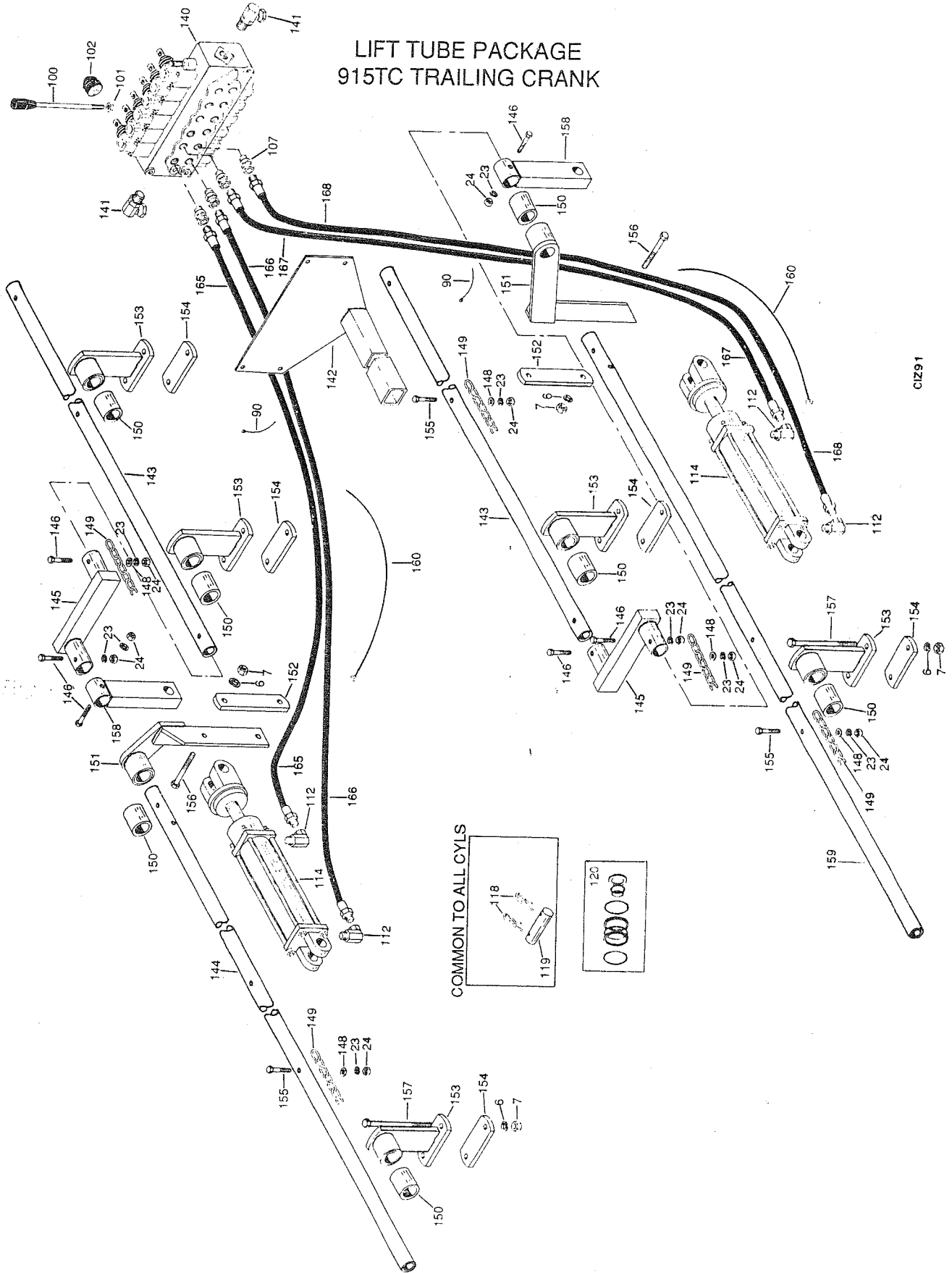
REF	PART NBR	DESCRIPTION	REQ
6	LW08SP	1/2 LOCKWASHER	AR
7	NUT08NC	1/2 NC NUT, GR5	AR
23	LW06SP	3/8 LOCKWASHER	AR
24	NUT06NC	3/8 NC NUT, GR 5	AR
90	9623	4" NYLON TIE	AR
100	SD11M10	VALVE HANDLE	2
101	SD11NUT	VALVE HANDLE NUT	2
102	SD11BOOT	RUBBER BOOT	2
107	MBFP10-6	STRAIGHT SWIVEL ADAPTER	4
112	MPPFX90-6	90° SWIVEL ADAPTER	4
114	2008ASAE	2 X 8 ASAE CYLINDER	2
118	HAIR12	HAIR PIN, #12	4 PER CYL
119	92RC19	1" CYLINDER PIN	2 PER CYL
120	SKAR12104A	2" CYLINDER REPAIR KIT	1 PER CYL
140	SP11/6KIT	6 SPOOL VALVE INCL. O RING FITTINGS	1
141	MBFPX90-12-8	90° SWIVEL ADAPTER	2
142	92301-16	VALVE BRACKET	1
143	9150	FRONT LIFT TUBE	2
144	9151	LEFT REAR LIFT TUBE	1
145	9152	LIFT TUBE CRANK	2
146	CSNC06X40	3/8 X 2-1/2 CAPSCREW, GR 5	6
148	FLTWA06	3/8 FLAT WASHER	AR
149	9158	CHAIN, LIFT TUBE	15
150	9047	UMHW BUSHING	14
151	9153	SUPPORT BRACKET	2
152	9154	CLAMP PLATE	2
153	9155	LIFT TUBE SUPPORT INCL. 9047 UMHW BUSHING	12
154	9156	CLAMP PLATE	12
155	CSNC06X36	3/8 X 2-1/4 CAPSCREW, GR 5	13
156	CSNC08X72	1/2 X 4-1/2 CAPSCREW, GR 5	4
157	CSNC08X112	1/2 X 7 CAPSCREW, GR 5	24
158	9034	CYLINDER MOUNT	2
159	9157	RIGHT REAR LIFT TUBE	1
160	9643	21-1/2" NYLON TIE	2

The following hoses are 1/4" with 3/8" male pipe ends:

165	04X3168	198" HOSE, PORT 1 TO LEFT LIFT CYL ROD END	1
166	04X3360	210" HOSE, PORT 2 TO LEFT LIFT CYL PIST END	1
167	04X3168	198" HOSE, PORT 3 TO RIGHT LIFT CYL ROD END	1
168	04X3360	210" HOSE, PORT 4 TO RIGHT LIFT CYL PIST END	1

Quantities are for this page only. Except for the valve, valve bracket and 90° swivel adapters, quantities are in addition to those on page 9.  
Service ports 5 thru 12 are plumbed the same as ports 1 thru 8 on page 9.

# LIFT TUBE PACKAGE 915TC TRAILING CRANK

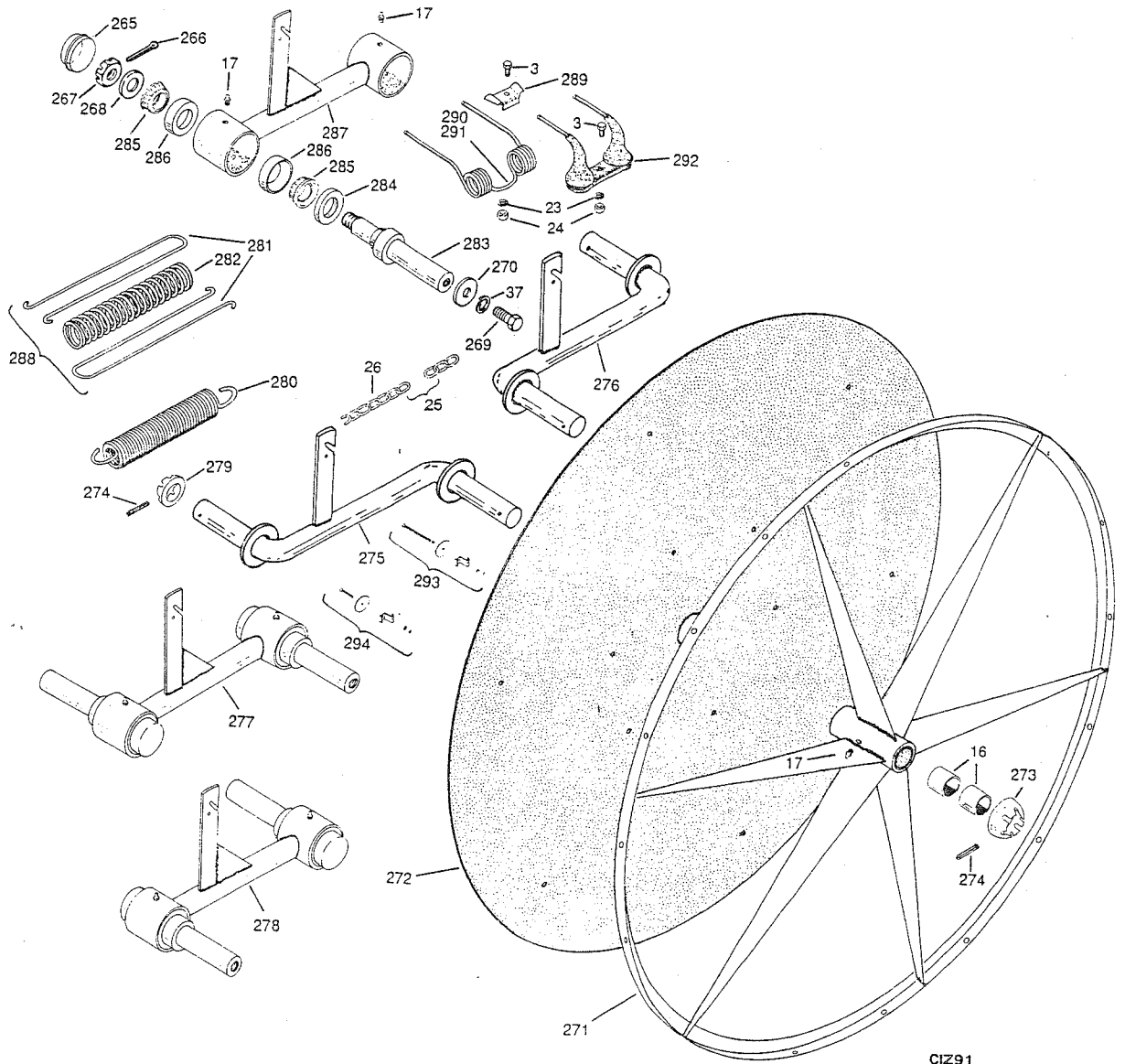


## RAKING WHEEL AND CRANKS

REF	PART NBR	DESCRIPTION	REQ
3	CSNC06X16	3/8 X 1 CAPSCREW, GR 5	AR
16	92115	BUSHING	60
17	B511ZERK	DRIVE-IN ZERK	AR
23	LW06SP	3/8 LOCKWASHER	AR
24	NUT06NC	3/8 NC NUT, GR 5	AR
25	92122A	CHAIN ASSY, COMPRESSION SPRING	15
26	92122	CHAIN, EXTENSION SPRING	15
37	LW10SP	5/8 LOCKWASHER	AR
265	9041	GREASE CAP	2 PER CRANK
266	COT32P	COTTER	2 PER CRANK
267	92225	7/8 NUT, SLOTTED	2 PER CRANK
268	9043	FLAT WASHER	2 PER CRANK
269	CSNC10X32	5/8 X 2 CAPSCREW, GR 5	2 PER CRANK
270	92225A	RETAINER	2 PER CRANK
271	92114	RAKING WHEEL	15
272	92154B	MASONITE SHIELD	15
273	92107A	WASHER, WHEEL END, RED, 6 SLOTS	15
274	ROLLP04X48	1/4 X 3 ROLL PIN	2 PER CRANK
275	92119	CRANK, RIGHT, PLAIN, YELLOW	8
276	92119L	CRANK, LEFT, PLAIN, RED	7
277	92219HOO	CRANK, RIGHT, BEARING TYPE	8
	Includes all parts ready to assemble		
278	92219HOO	CRANK, LEFT, BEARING TYPE	7
	Includes all parts ready to assemble		
279	92107	WASHER, FRAME END, YELLOW, 4 SLOT	15
280	92121	SPRING, EXTENSION, STANDARD	15
281	92221A	WIRE FORM, OPTIONAL	30
282	92221	SPRING, COMPRESSION, OPTIONAL	15
283	92219	SPINDLE FOR BEARING CRANK	2 PER CRANK
284	9222	GREASE SEAL (471280)	2 PER CRANK
285	9220	CONE (15123)	4 PER CRANK
286	9221	CUP (15245)	4 PER CRANK
287	92219H	CRANK SUPPORT	15
288	92121A	SPRING AND WIRE FORM KIT	15
289	92118	CLIP FOR STEEL TOOTH	18 PER WHEEL
290	92117	TOOTH, STEEL, RIGHT, BLACK	18 PER WHEEL
291	92117L	TOOTH, STEEL, LEFT, RED	18 PER WHEEL
292	92117RL	TOOTH, RUBBER, RIGHT OR LEFT	18 PER WHEEL
293	92175A	FASTENER KIT, SHIELD, LONG	6 PER WHEEL
294	92175	FASTENER KIT, SHIELD, SHORT	6 PER WHEEL

Quantities are per rake unless otherwise stated.

# RAKING WHEEL AND CRANKS

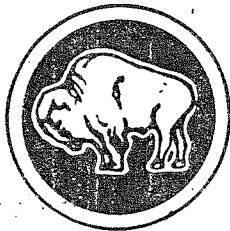


CI291

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



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DISC RIDGERS 1, 2, 3 and 4 Blade Models  
"S" TINE AND SPRINGTINE FIELD CULTIVATORS  
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SLED CULTIVATORS AND SLED SPIKE HARROWS  
TOOL BAR ACCESSORIES: Gauge Wheels, Square and  
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