

# PARTS & INSTRUCTION MANUAL

# **DARF** **HAY RAKES**

## **MODEL 1017L**



Manufactured by  
**NIKKEL IRON WORKS**  
SHAFTER, CA

E-Mail: [sales@nikkelironworks.com](mailto:sales@nikkelironworks.com)

Website: [nikkelironworks.com](http://nikkelironworks.com)

*Use Only Genuine DARF Parts*

# TABLE OF CONTENTS

THIS BOOK COVERS ALL 1017L STANDARD, WIDE, MANUAL AND FULLY HYDRAULIC MODELS.

Note: Right & Left are as viewed from the rear of the DARF RAKE

<b>WARRANTY REGISTRATION CARD.....</b>	<b>Yellow Stock</b>
<b>MODEL DESCRIPTIONS.....</b>	<b>C</b>
<b>SAFETY PRECAUTIONS.....</b>	<b>D</b>
<b>RAKING FRAMES.....</b>	<b>Pages 1- 10</b>
<b>RAKING WHEEL &amp; BEARING CRANK.....</b>	<b>Pages 11-12</b>
<b>WALKING BEAM ASSEMBLY.....</b>	<b>Pages 13-14</b>
<b>OVERHEAD MAIN FRAME/SLIDE SECTION.....</b>	<b>Pages 15-20</b>
<b>OVERHEAD COVER PLATES.....</b>	<b>Pages 21-22</b>
<b>LEG STRUT.....</b>	<b>Pages 23-24</b>
<b>TONGUE UNIT.....</b>	<b>Pages 25-30</b>
<b>STANDARD HYDRAULIC LAYOUT.....</b>	<b>Pages 31-34</b>
<b>HOSE ROUTING.....</b>	<b>Pages 35-42</b>
<b>FASSE VALVE APPLICATION.....</b>	<b>Pages 43-48</b>
<b>OPERATING INSTRUCTIONS.....</b>	<b>Pages 49-50</b>

# DARF 17-WHEEL SUPER DUTY OVERHEAD RAKES

**MODEL 1017LFDWB ----- HEAVY DUTY WIDE OVERHEAD FRAME**

**(COVER PICTURE)**

17-WHEEL OVERHEAD RAKE CAPABLE OF RAKING TO 8 FEET, WITH HEAVYTOP FRAME, FASSE 6-FUNCTION ELECTRO/HYDRAULIC CONTROL VALVE (OPERATE ALL FUNCTIONS FROM OPERATOR PLATFORM). EQUIPPED WITH SUPER DUTY WALKING BEAM AXLE W/2" SPINDLES, 8" WHEELS, HEAVY DUTY HUB, TAPER BEARING IN RAKE WHEEL CRANKS, RUBBER MTD.TINES & DUR-ADJUST. STANDARD 2-5/16 BALL HITCH.

REQUIRES ONE HYDRAULIC CIRCUIT & 12 VOLT ACCESS FOR CONTROL PANEL.

**MODEL 1017LFDDB ----- STANDARD OVERHEAD FRAME**

17-WHEEL OVERHEAD RAKE WITH FASSE 6-FUNCTION ELECTRO/HYDRAULIC CONTROL VALVE (OPERATE ALL FUNCTIONS FROM OPERATOR PLATFORM). EQUIPPED WITH SUPER DUTY WALKING BEAM AXLE W/2" SPINDLES, 8" WHEELS, HEAVY DUTY HUB, TAPER BEARING IN RAKE WHEEL CRANKS, RUBBER MTD.TINES & DUR-ADJUST. STANDARD 2-5/16 BALL HITCH.

REQUIRES ONE HYDRAULIC CIRCUIT & 12 VOLT ACCESS FOR CONTROL PANEL.

**MODEL 1017LWB ----- HEAVY DUTY WIDE OVERHEAD FRAME**

17-WHEEL OVERHEAD RAKE CAPABLE OF RAKING TO 28 FEET, WITH HEAVYTOP FRAME, 5' REPHASING CYLINDERS, SUPER DUTY WALKING BEAM AXLES W/2" SPINDLES, HEAVY DUTY HUBS, 8" WHEELS, RUBBER MOUNTED TINES & DUR-ADJUST. STANDARD 2-5/16 BALL HITCH.

REQUIRES 2 HYDRAULIC CIRCUITS ON PRIME MOVER.

**MODEL 1017LB ----- STANDARD OVERHEAD FRAME**

17-WHEEL OVERHEAD RAKE WITH SUPER DUTY WALKING BEAM AXLE W/2" SPINDLES, 8" WHEELS, HEAVY DUTY HUB, TAPER BEARING IN RAKE WHEEL CRANKS, RUBBER MTD.TINES & DUR-ADJUST. STANDARD 2-5/16 BALL HITCH.

REQUIRES 2 HYDRAULIC CIRCUITS ON PRIME MOVER.

# SAFETY PRECAUTIONS

**AVOID INJURY OR FATAL ACCIDENTS. READ THESE SAFETY PRECAUTIONS COMPLETELY AND CAREFULLY! FOLLOW THESE INSTRUCTIONS WHEN OPERATING YOUR MACHINE!**

This machine is inherently dangerous to children and persons unfamiliar with its operation. The operator should be a responsible adult familiar with farm equipment and trained in this machine's operations. Do not allow persons to operate or assemble this machine until they have read this manual & have developed a thorough understanding of the safety precautions and the machine's operation.

To prevent injury or death, use a tractor equipped with a roll-over protection system (ROPS). Do not paint over, remove or deface any safety or warning decals on your equipment. Observe all decals and practice the instructions on them.

**REMEMBER!** Your best insurance against accidents is a careful and responsible operator. If there is any portion of this manual or of the machine's operation you do not understand, contact your local authorized dealer.

## ***BEFORE OPERATING:***

- Carefully review and understand your manual.
- Inspect your rake for any loose bolts, worn parts, cracked welds, hydraulic leaks, frayed hoses, etc. – make necessary repairs. Follow the Performing Maintenance guidelines.
- Be sure the hydraulic lines do not conflict with moving parts.
- Be sure the machine is properly hitched to the tractor.
- Lubricate all fittings and joints as needed/required.

## ***DURING OPERATION:***

- Do not allow others to be careless near this equipment, or to ride in or on.
- Do not clean, lubricate or adjust your equipment while it is running.
- Use caution on inclines.
- Avoid loose fill, rocks & holes; they can be dangerous to the machines operation or movement.
- Do not back up rake with rake wheels lowered to raking position. Damage will result.
- Rake teeth can cause injury. Use special caution when lowering and raising as rake wheels will drop.
- Periodically clear machine of hay or other materials to prevent build-up of dry flammable materials.
- Always drive at a reasonable speed to maintain control of the equipment.

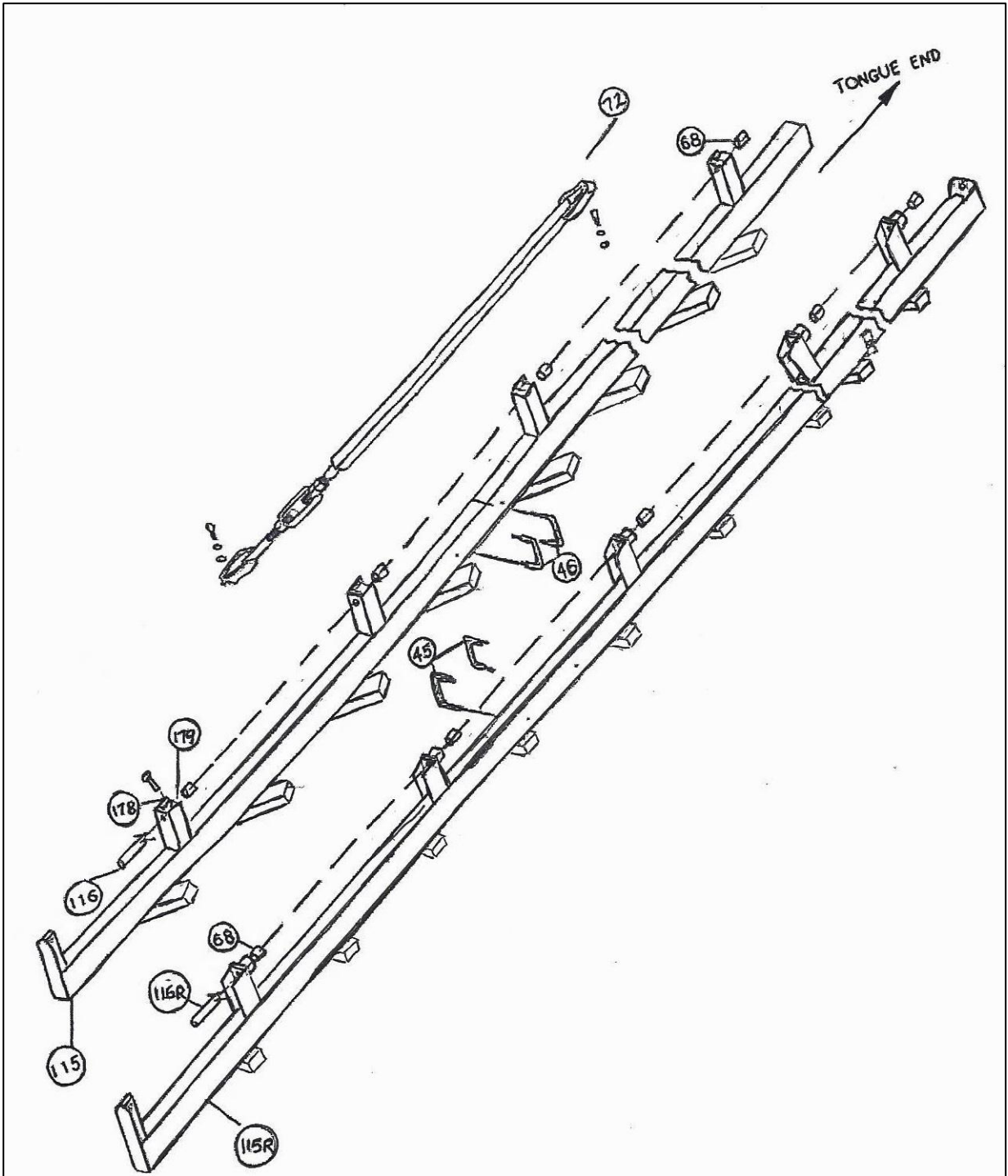
## ***HIGHWAY OPERATION:***

- Comply with your state and local laws governing highway safety and movement of farm machinery on public roads.
- Be a safe, courteous operator. Always yield to oncoming traffic in all situations, including narrow bridges, intersections, etc.
- Watch for obstructions overhead and to the side while transporting.

## ***PERFORMING MAINTENANCE:***

- Good maintenance is your responsibility. A poorly maintained machine will result in breakdown and failure.
- Always use proper tools or equipment for the job.
- Never use your hands to locate a hydraulic leak. Use a small piece of cardboard or wood.
- Hydraulic fluid escaping under pressure can penetrate the skin.
- Never replace hex bolts with less than Grade 5 bolts, unless otherwise specified by Nikkel Iron Works.
- If the DARG rake is altered or modified from the original design, or if genuine replacement parts or teeth are not used and properly installed, NIKKEL IRON WORKS, INC. does not assume any responsibility or liability for injury or warranty.

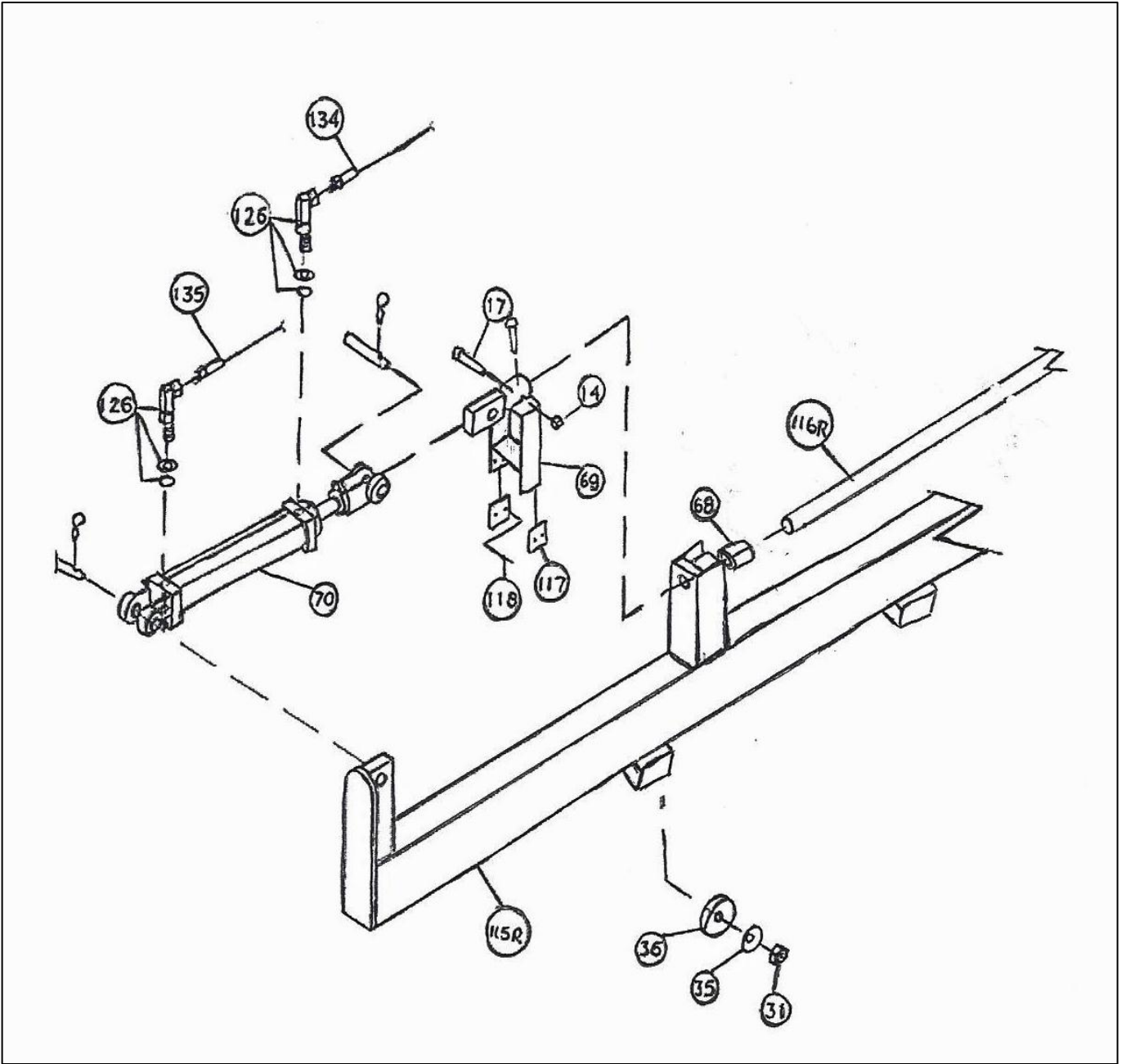
# LEFT AND RIGHT RAKING FRAME



# LEFT AND RIGHT RAKING FRAME

REF	PART NO.	DESCRIPTION	QTY	1017L	1017LW	101L7FD	1017LFDW
45	9027	U-BOLT TO FRAME BRACKET	4	X	X	X	X
46	9028	U-BOLT LEG STRUT TO FRAME	4	X	X	X	X
68	9047	UHMW BUSHING	AR	X	X	X	X
72	9099	HEAVY ADJ. RAKE FRAME BRACE	2	X	X	X	X
115	101792	LEFT RAKE FRAME WELDMENT	1	X	X	X	X
115R	101793	RIGHT RAKE FRAME WELDMENT	1	X	X	X	X
116	91790	LEFT SIDE LIFT TUBE, 9 HOLES	1	X	X	X	X
116R	91791	RIGHT SIDE LIFT TUBE, 10 HOLES	1	X	X	X	X
178	SMPAN12X06	#12X3/8 PHILIPS PAN SCREW	AR	X	X	X	X
179	INTLW10	5/8 INTERNAL LOCK WASHER	AR	X	X	X	X

# RIGHT RAKE FRAME (REAR VIEW WITH HYDRAULICS)



**RIGHT RAKE FRAME  
(REAR VIEW WITH HYDRAULICS)**

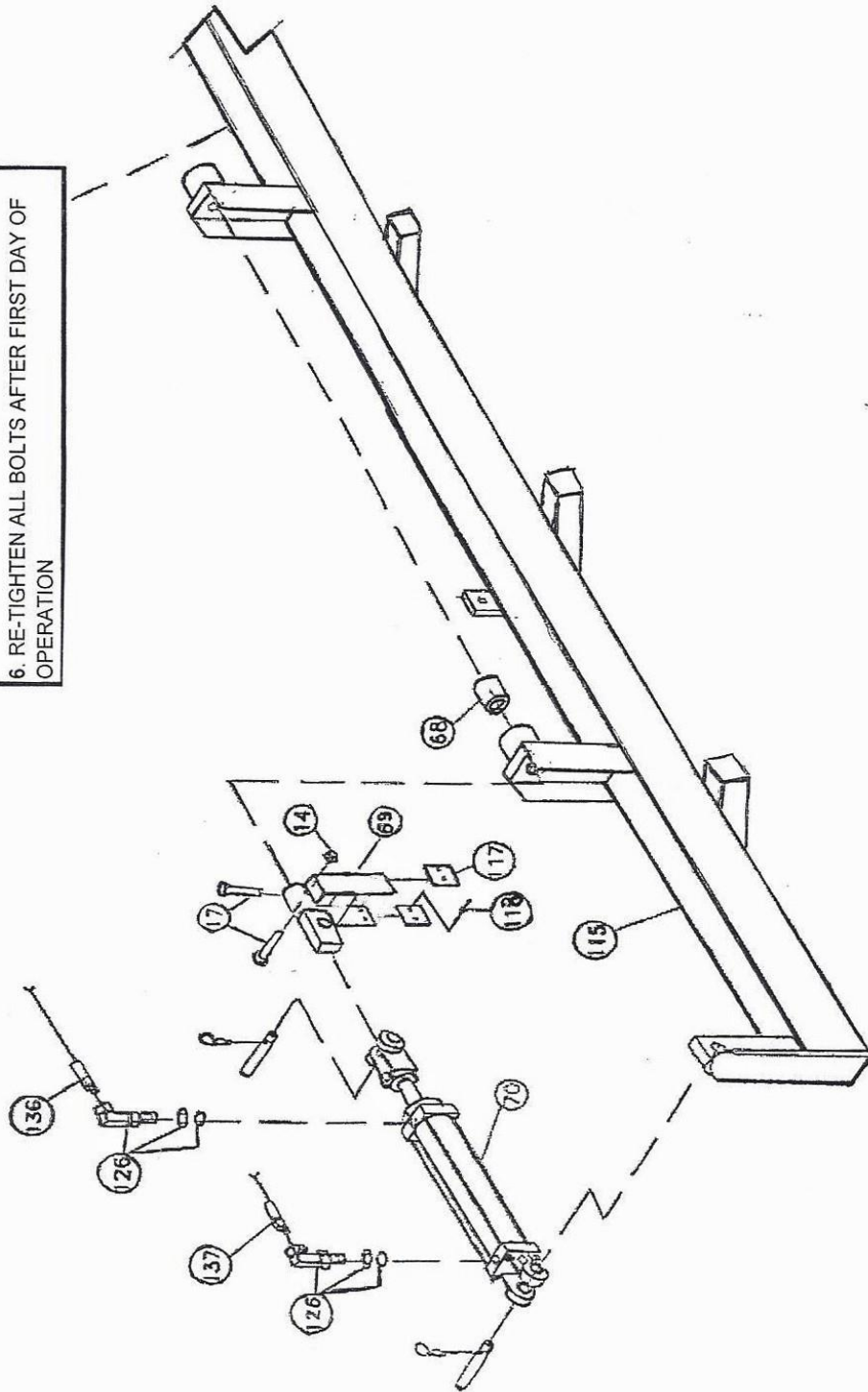
REF	PART NO.	DESCRIPTION	QTY	1017L	1017LW	1017LFD	1017LFDW
14	NUT06NCLK	3/8" NC LOCK NUT, GRD C	AR	X	X	X	X
17	CSNC06X32	3/8"X2" NC CAP SCREW, GRD 5	AR	X	X	X	X
31	NUT12NC	3/4" NC HEX NUT	AR	X	X	X	X
35	95044	INTERNAL LOCK WASHER	AR	X	X	X	X
36	95045	RETAINER (95019 SPINDLE, gold)	AR	X	X	X	X
68	9047	UHMW BUSHING	AR	X	X	X	X
69	92193A	LIFT TUBE HYD CLEVIS W/PART#117,#118	2	X	X	X	X
70	N201028	2X8 ASAE HYD CYLINDER W/PINS	2	X	X	X	X
		(use SKAR12104A, univ.2" repair kit)		X	X	X	X
115R	101793	RIGHT RAKE FRAME WELDMENT	1	X	X	X	X
116R	91791	RIGHT SIDE LIFT TUBE, 10 HOLES	1	X	X	X	X
117	92196-02	DRILLED UHMW PAD FOR 92193	4	X	X	X	X
118	92196-03	NYLON RIVET	8	X	X	X	X
126	HMBFP9064	O'RING TO PIPE X 90 DEGREE ADAPTER	4	X	X	X	X
134	04x1984x04	1/4"X11'10" HOSE, 1/4" ENDS	1	X	X	X	X
135	04x1792x04	1/4"X12'10" HOSE, 1/4" ENDS	1	X	X	X	X



# LEFT RAKE FRAME (REAR VIEW WITH HYDRAULICS)

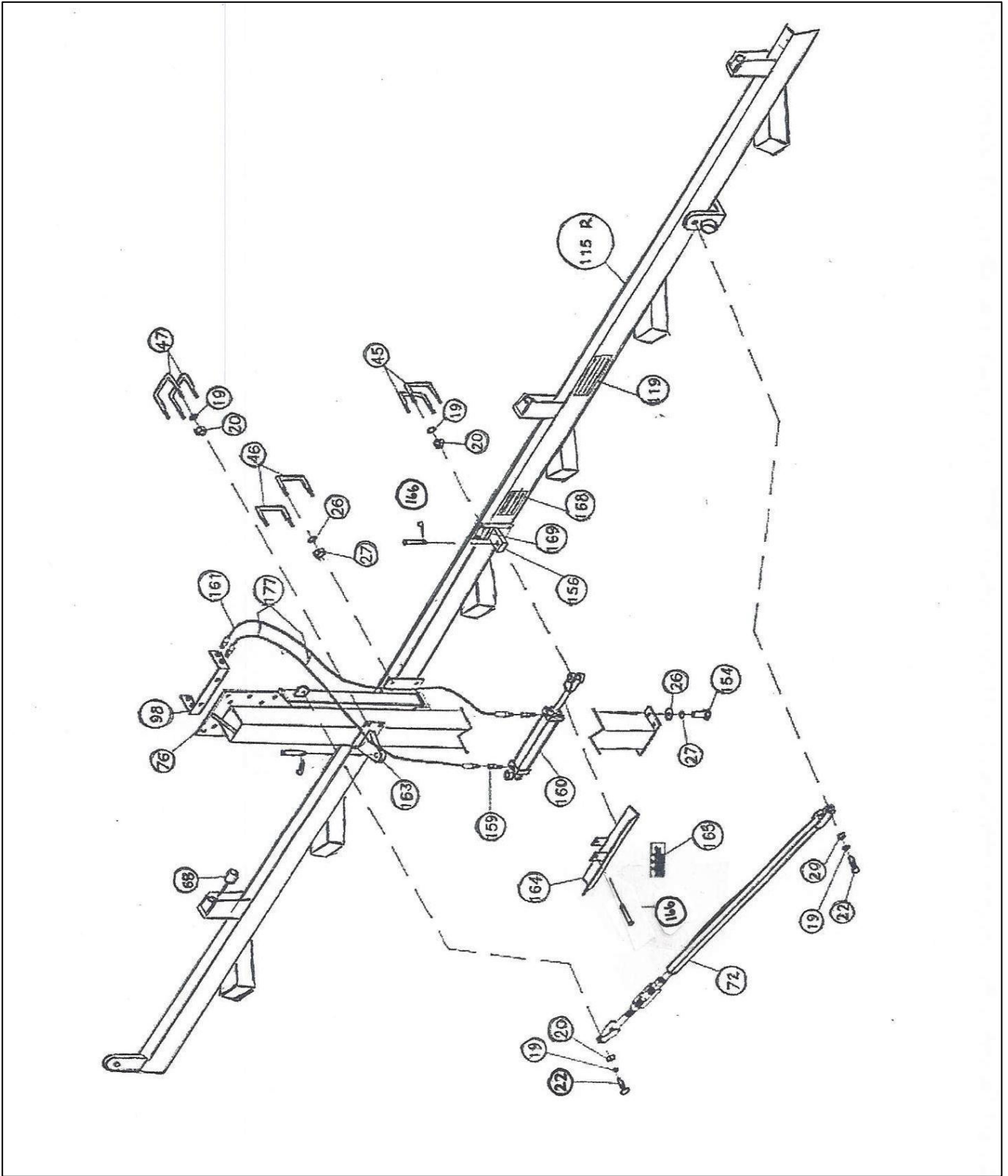
## OPERATING INSTRUCTIONS

1. LEVEL RAKE USING HITCH ADJUSTMENT.
2. SET TIRE PRESSURE TO 20 PSI.
3. ADJUST RAKING WHEEL SPRING TENSION TO ASSURE CLEAN RAKING WITHOUT EXCESSIVE GROUND CONTACT.
4. CHECK HYDRAULIC OIL LEVEL IN TRACTOR.
5. BLEED ALL LINES OF AIR.
6. RE-TIGHTEN ALL BOLTS AFTER FIRST DAY OF OPERATION





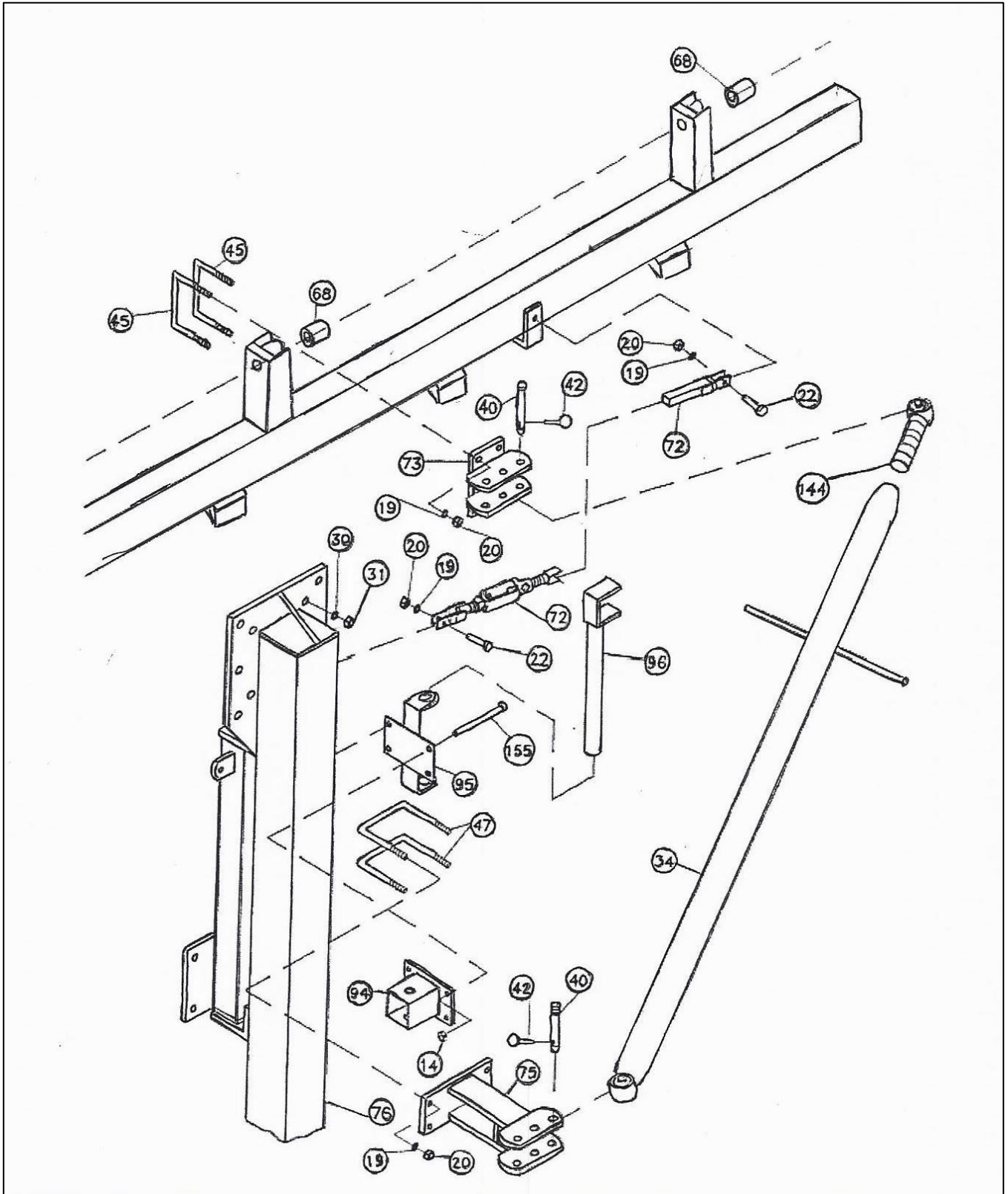
# RAKE FRAME AND RELATED PARTS FD MODELS



## **RAKE FRAME AND RELATED PARTS FD MODELS**

REF	PART NO.	DESCRIPTION	QTY	1017L	1017LW	1017LFD	1017LFDW
19	LW08SP	1/2" SPLIT LOCK WASHER	AR	X	X	X	X
20	NUT08NC	1/2" NC HEX NUT	AR	X	X	X	X
22	CSNC08X32	1/2"X2" NC CAP SCREW, GRD 5	AR	X	X	X	X
26	LW10SP	5/8" SPLIT LOCK WASHER	AR	X	X	X	X
27	NUT10NC	5/8" NC HEX NUT	AR	X	X	X	X
45	9027	U-BOLT, TO FRAME BRACKET	4	X	X	X	X
46	9028	U-BOLT, LEG STRUT TO FRAME	4	X	X	X	X
47	9029	U-BOLT, LEG STRUT/ANGLE BRACKET	4	X	X	X	X
68	9047	UHMW BUSHING	AR	X	X	X	X
72	9099	HEAVY ADJ. RAKE FRAME BRACE	2	X	X	X	X
76	92581L	LEG STRUT, RIGHT OR LEFT	2	X	X	X	X
98	9018B	4-HOSE COUPLER	2	X	X	X	X
115R	101793	RIGHT RAKE FRAME WELDMENT	1	X	X	X	X
115	101792	LEFT RAKE FRAME WELDMENT	1	X	X	X	X
		(not shown)					
119	NIWDEC4X10	DECAL - OPERATING INSTRUCTIONS	2	X	X	X	X
154	CSNC10X32	5/8"X2" NC CAP SCREW, GRD 5	8	X	X	X	X
156	922990	HYDRAULIC CYL BRACKET, FRAME END	2			X	X
159	HMBFPX84	O-RING HYDRAULIC ADAPTER	4	X	X	X	X
160	N301060	3X8 ASAE HYD. CLYLINDER	2			X	X
		use SKAR14106 3" repair kit					
161	04X800X04	1/4"X4'2" HOSE, 1/4" ENDS	4			X	X
163	9173	LEG STRUT/HYD CYL BRACKET	2			X	X
164	9189	HYDRAULIC CYLINDER STOP W/PIN	2			X	X
165	NIWFD20X96	DECAL FOR TRANSPORT LOCK	2			X	X
166	P7966	PTO LOCK PIN, 3/8"X3"	18	X	X	X	X
168	NIWFD96X52	DECAL, SAFETY BLOCK STORAGE	2			X	X
169	NIWFD56X24	DECAL, TRANSPORT SAFETY	2			X	X
177	9631	PLASTIC WIRE TIES	AR	X	X	X	X

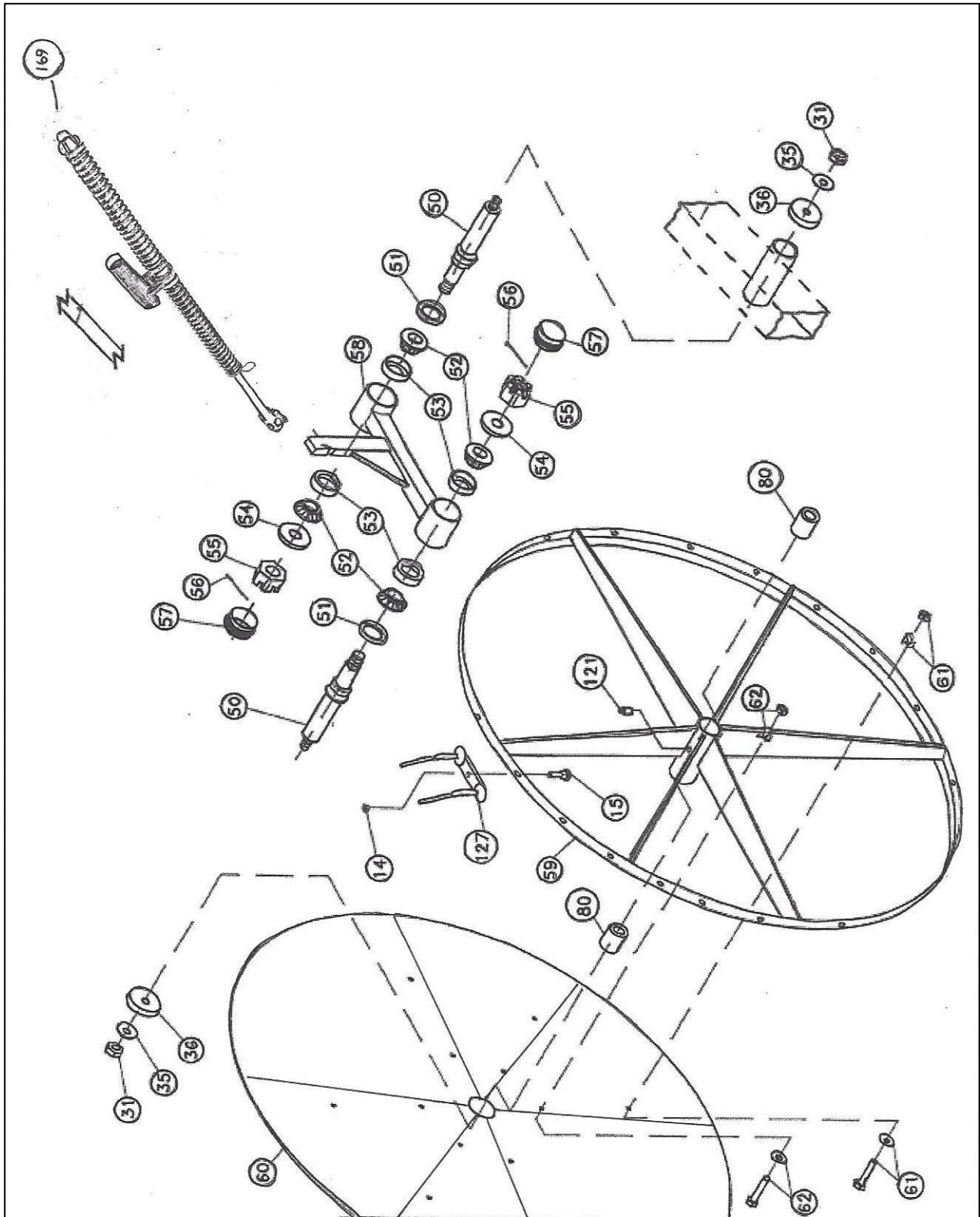
# RAKE FRAME AND RELATED PARTS STANDARD HYDRAULICS



## **RAKE FRAME AND RELATED PARTS STANDARD HYDRAULICS**

REF	PART NO.	DESCRIPTION	QTY	1017L	1017LW	1017LFD	1017LFDW
14	NUT06NCLK	3/8" NC LOCK NUT, GRD C	AR	X	X	X	X
19	LW08SP	1/2" SPLIT LOCK WASHER	AR	X	X	X	X
20	NUT08NC	1/2" NC HEX NUT	AR	X	X	X	X
22	CSNC08X32	1/2"X2" NC CAP SCREW, GRD 5	AR	X	X	X	X
30	LW12SP	3/4" SPLIT LOCK WASHER	AR	X	X	X	X
31	NUT12NC	3/4" NC HEX NUT	AR	X	X	X	X
34	9172	MANUAL ADJ. TUBE	1	X	X		X
40	P772	TOP LINK PIN, 3-5/8"	4	X	X		X
42	P791	LYNCH PIN, 7/16"	6	X	X		X
45	9027	U-BOLT, TO FRAME BRACKET	4	X	X	X	X
47	9029	U-BOLT, LEG STRUT/ANGLE BRACKET	4	X	X	X	X
68	9047	UHMW BUSHING	AR	X	X	X	X
72	9099	HEAVY ADJ. RAKE FRAME BRACE	2	X	X	X	X
73	922994	3-HOLE ADJ. BRACKET	2	X			
73	92206	5-HOLE ADJ. BRACKET	2		X		
75	922996	LEG STRUT ADJ. BRACKET	2	X	X		X
76	92581L	LEG STRUT, RIGHT OR LEFT	2	X	X	X	X
94	9012	JACK STOW BRACKET	1	X	X	X	X
95	901200	JACK STOWAGE BRKT. BUNDLE	1	X	X	X	X
96	9229930	WHEEL ADJUST LEVER	1	X	X	X	X
144	9171	THREADED END FOR 9172 ROD	2	X	X		X
155	CSNC06X96	3/8"X6" NC CAP SCREW, GRD 5	4	X	X	X	X

# RAKING WHEEL and BEARING CRANK



## RAKING WHEEL and BEARING CRANK

REF	PART NO.	DESCRIPTION	QTY	1017L	1017LW	1017LFD	1017LFDW
14	NUT06NCLK	3/8" NC LOCK NUT, GRD C	18	X	X	X	X
15	92133-01	OVAL HEAD TOOTH BOLT	18	X	X	X	X
31	NUT12NC	3/4" NC HEX NUT	2	X	X	X	X
35	95044	INTERNAL LOCK WASHER	2	X	X	X	X
36	95045	RETAINER (95019 SPINDLE, gold)	2	X	X	X	X
50	95019	SPINDLE W/NUTS	2	X	X	X	X
51	95022	SEAL (95019 SPINDLE, 471504)	2	X	X	X	X
52	9220	CONE (15123)	4	X	X	X	X
53	9221	CUP (15245)	4	X	X	X	X
54	95043	SPINDLE WASHER (A235)	2	X	X	X	X
55	NUT16NFSLT	1" NF SLOTTED NUT	2	X	X	X	X
56	COT32P	5/32"X1-1/2" COTTER PIN	22	X	X	X	X
57	9041	GREASE CAP (NIW EMBOSSED)	1	X	X	X	X
58	92219H	SUPPORT SECTION	1	X	X	X	X
	95019HOO	BRG CRANK KIT PARTS READY TO ASSMBLE					
59	92114	RAKE WHEEL W/BUSHING	1	X	X	X	X
60	92155	WIND SHIELD (POLY - 6 PIECE)	1	X	X	X	X
61	92175	SHIELD FASTENER ASSY (SHORT)	6	X	X	X	X
62	92175A	SHIELD FASTENER ASSY (LONG)	6	X	X	X	X
80	92115	BUSHING	AR	X	X	X	X
127	92117RL	RIGHT OR LEFT RUBBER MTD TOOTH	18	X	X	X	X
169	SRUNIT2-LH/RH	SPRING/ROD ASSY-PER WHEEL	AR	X	X	X	X

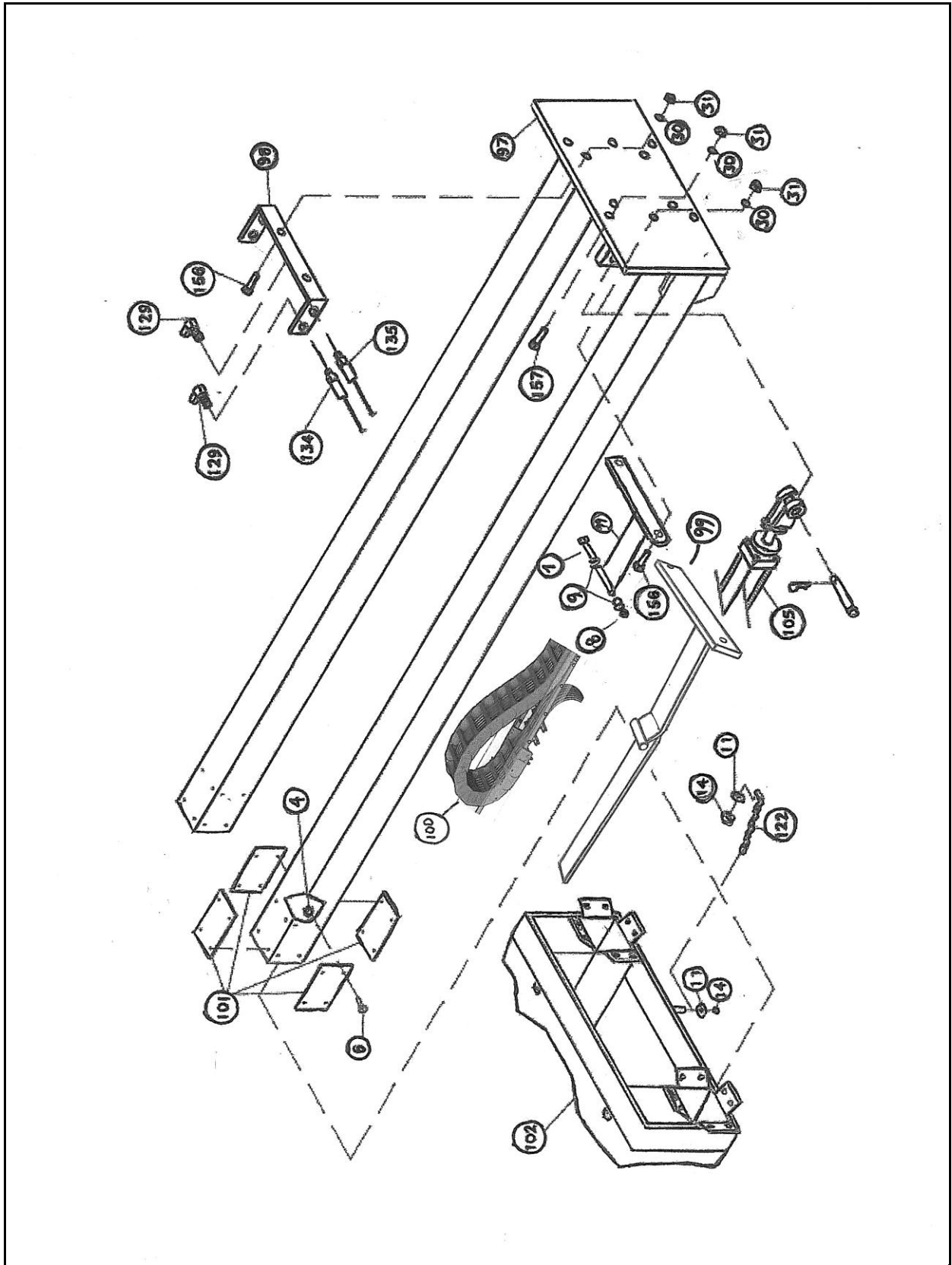




## SUPER DUTY WALKING BEAM ASSEMBLY (Right or Left)

REF	PART NO.	DESCRIPTION	QTY	1017L	1017LW	1017LFD	1017LFDW
1	1078-02	PIVOT PIN KIT	1	X	X	X	X
2	G8FLTWA20	1-1/4" HARD WASHER	1	X	X	X	X
3	1079	WALKING BEAM CRADLE	1	X	X	X	X
4	92125	7/8" SAE SLOTTED NUT	1	X	X	X	X
5	1078	WALKING BEAM WELDMENT	1	X	X	X	X
6	90801	17-1/2" SPINDLE (replaceable) for 90803 Hub	2	X	X	X	X
7	COT47P	1/4" X 2" COTTER PIN	1	X	X	X	X
10	SOCKHD08X48	1/2"X3" SOCK HEAD CAP SCREW w/lock nut	4	X	X	X	X
11	NUT08NCLK	1/2" LOCK NUT N.C. STD PLTD	4	X	X	X	X
22	1002A	BEARING INSERT	2	X	X	X	X
56	COT32P	5/32"X1-1/2" COTTER PIN	2	X	X	X	X
84	90803	4910# HUB w/cups installed (Yellow)	2	X	X	X	X
81	204506	SEAL, CR20148	2	X	X	X	X
82	25590	BEARING CONE, INNER	2	X	X	X	X
86	25877	BEARING CONE, OUTER	2	X	X	X	X
87	9043	7/8" SPINDLE WASHER	2	X	X	X	X
89	P502001	GREASE CAP	2	X	X	X	X
88	92125	SPINDLE NUT 7/8" SLOTTED	2	X	X	X	X
91	W50334	GROUND WHEEL, 15X8 (6on6)	4	X	X	X	X
92	P101303	WHEEL BOLT, 9/16x1-1/2"	12	X	X	X	X

# OVERHEAD SLIDE SECTION RIGHT SIDE



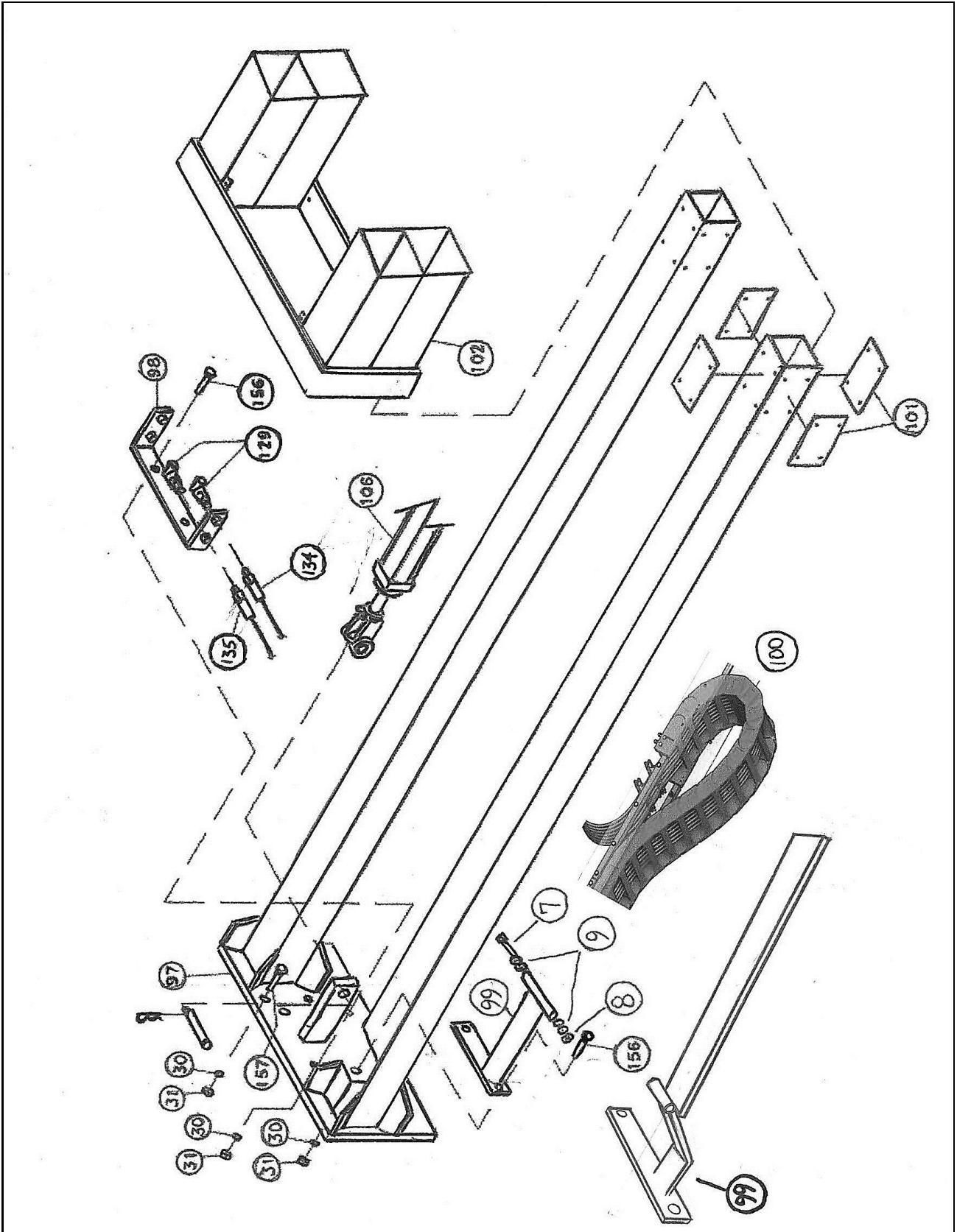
# OVERHEAD SLIDE SECTION

## RIGHT SIDE

REF	PART NO.	DESCRIPTION	QTY	1017L	1017LW	1017LFD	1017LFDW
4	NUT04NCNYL	1/4" NC NYLON LOCK NUT	AR	X	X	X	X
6	PHMS04X16	¼"X1" NC FLAT HEAD PHILLIPS	AR	X	X	X	X
7	CSNC07X56	7/16x3-1/2 GR.5 NC CAP SCREW	2	X	X	X	X
8	NUT07NFLK	7/16-20 GR. C LOCKNUT, FINE	2	X	X	X	X
9	FLTWA07	7/16 USS FLAT WASHER PLTD	8	X	X	X	X
11	FLTWA06	3/8" USS WASHER	AR	X	X	X	X
14	NUT06NCLK	3/8" NC LOCK NUT, GRD C	AR	X	X	X	X
30	LW12SP	3/4" SPLIT LOCK WASHER	AR	X	X	X	X
31	NUT12NC	3/4" NC HEX NUT	AR	X	X	X	X
97	9071	MALE EXT. WELDMENT, ( <b>WIDE</b> ) RT OR LT	2		X		X
97	93285	MALE EXT. WELDMENT, (STD) RT OR LT	2	X		X	
98	9018B	4-HOSE COUPLER	2	X	X	X	X
99	101787	E-TRACK GUIDE/ATTACHMENT	1	X		X	
99	101787R	E-TRACK GUIDE/ATTACHMENT	1		X		X
100	101700ET	E-TRACK - 5.51" HT @ 62"	1	X		X	
100	101700WET	E-TRACK - 5.51" HT @ 74"	1		X		X
101	93100	3/16"X6" BEARING PLATE	AR	X	X	X	X
101	93101	1/4"X6" BEARING PLATE	AR	X	X	X	X
102	9070	MAIN FRAME WELDMENT ( <b>WIDE</b> )	1		X		X
102	93286	MAIN FRAME WELDMENT (STD)	1	X		X	
105	N325349	3.25X60 SLAVE CYLINDER, RIGHT SIDE, LOWER	1		X		X
105	N325277	3.25X48 SALVE CYLINDER, RIGHT SIDE, LOWER	1	X		X	
		1 Valve Cap at Rod end (use 4A2105 repair kit)		X	X	X	X
122	03PCCHAIN	3/16" PROOF COIL CHAIN, 10 LINKS	2'	X	X	X	X
129	HMPFP9044	90 DEGREE ADAPTER	AR	X	X	X	X
134	04X2272X04	1/4"X142" HOSE, 1/4" ENDS	1	X	X	X	X
135	04X2464X04	1/4"X154" HOSE, 1/4" ENDS	1	X	X	X	X
156	CSNC12X48	3/4"X3" NC CAP SCREW, GRD 5	AR	X	X	X	X
157	CSNC12X40	3/4"X2-1/2" NC CAP SCREW, GRD 5	AR	X	X	X	X

**See Pages 36, 38, 40, and 42 for Complete Hose Listings**

# OVERHEAD SLIDE SECTION LEFT SIDE

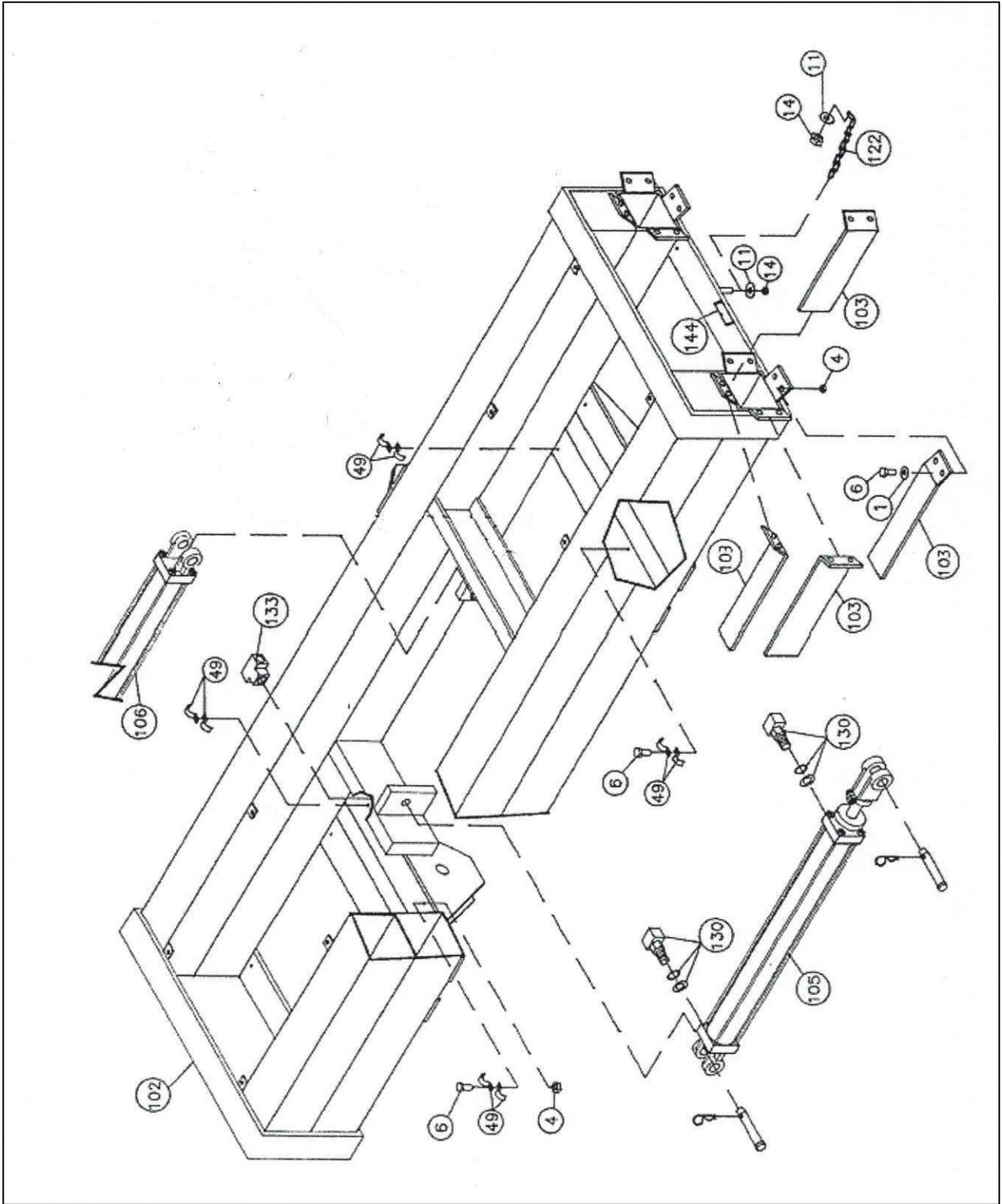


## OVERHEAD SLIDE SECTION LEFT SIDE

REF	PART NO.	DESCRIPTION	QTY	1017L	1017LW	1017LFD	1017LFDW
7	CSNC07X56	7/16x3-1/2 GR.5 NC CAP SCREW	2	X	X	X	X
8	NUT07NFLK	7/16-20 GR. C LOCKNUT, FINE	2	X	X	X	X
9	FLTWA07	7/16 USS FLAT WASHER PLTD	8	X	X	X	X
30	LW12SP	3/4" SPLIT LOCK WASHER	AR	X	X	X	X
31	NUT12NC	3/4" NC HEX NUT	AR	X	X	X	X
97	9071	MALE EXT. WELDMENT, ( <b>WIDE</b> ) RT OR LT	2		X		X
97	93285	MALE EXT. WELDMENT, RT OR LT	2	X		X	
98	9018B	4-HOSE COUPLER	2	X	X	X	X
99	101787	E-TRACK GUIDE/ATTACHMENT	1	X		X	
99	101878L	E-TRACK GUIDE/ATTACHMENT	1		X		X
100	101700ET	E-TRACK - 5.51" HT @ 62"	1	X		X	
100	101700WET	E-TRACK - 5.51" HT @ 74"	1		X		X
101	93100	3/16"x6" BEARING PLATE	AR	X	X	X	X
101	93101	1/4"x6" BEARING PLATE	AR	X	X	X	X
102	9070	MAIN FRAME WELDMENT ( <b>WIDE</b> )	1		X		X
102	93286	MAIN FRAME WELDMENT (STD)	1	X		X	
106	N353249	3.5X60 MASTER CYLINDER, LEFT SIDE, UPPER	1		X		X
106	N353177	3.5x48 MASTER CYLINDER, LEFT SIDE, UPPER	1	X		X	
		2 valve caps, 1 each end (use 4A3105) repair kit		X	X	X	X
129	HMPFP9044	90 DEGREE ADAPTER	4	X	X	X	X
134	04X2272X04	1/4"x11'10" HOSE, 1/4" ENDS	1	X	X	X	X
135	04X2464X04	1/4"x12'10" HOSE, 1/4" ENDS	1	X	X	X	X
156	CSNC12X48	3/4"x3" NC CAP SCREW, GRD 5	AR	X	X	X	X
157	CSNC12X40	3/4"x2-1/2" NC CAP SCREW, GRD 5	AR	X	X	X	X

**See Pages 36, 38, 40, and 42 for Complete Hose Listings**

# OVERHEAD MAIN FRAME

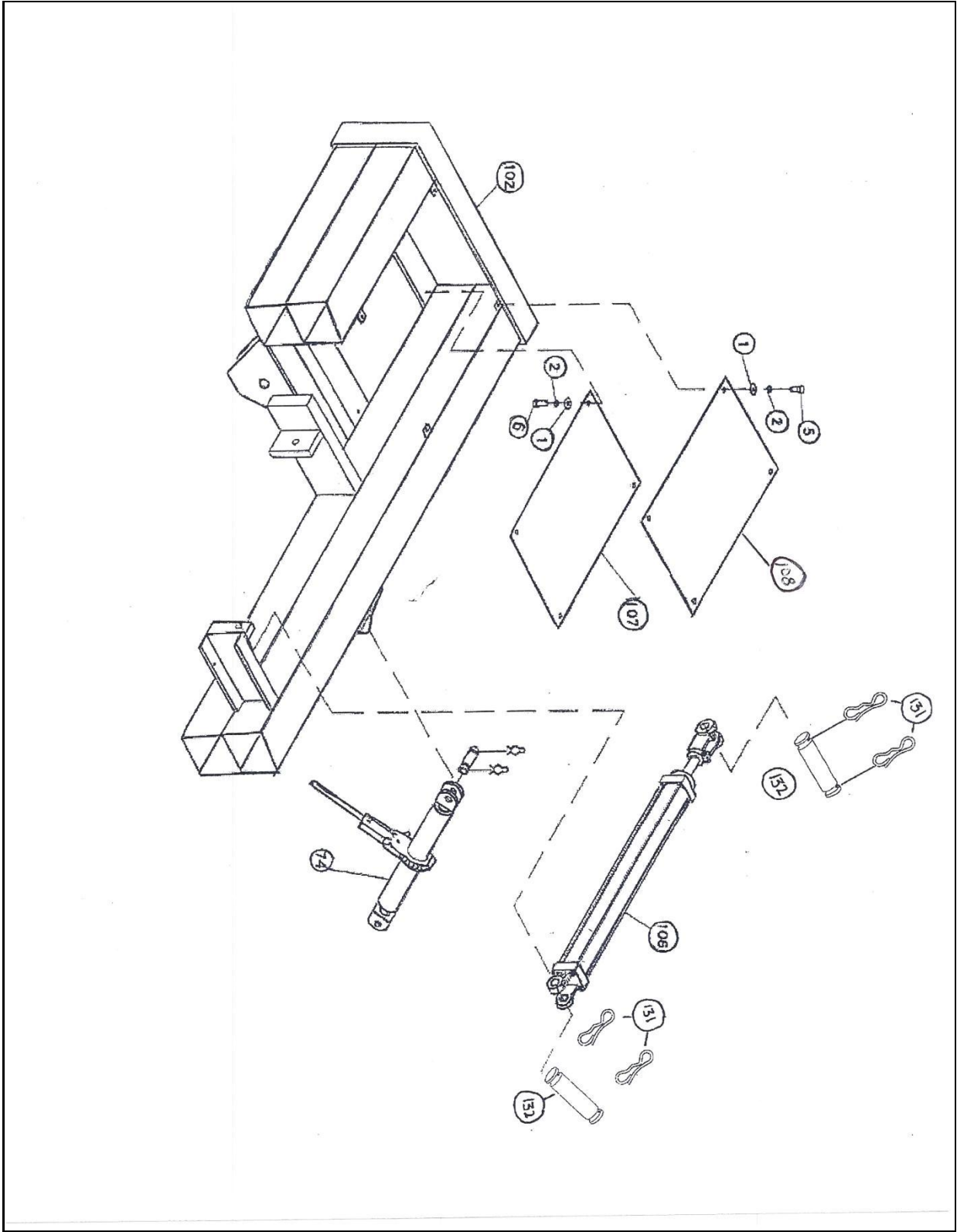


# OVERHEAD MAIN FRAME

REF	PART NO.	DESCRIPTION	QTY	1017L	1017LW	1017LFD	1017LFDW
1	FLTWA04	1/4" USS WASHER	AR	X	X	X	X
4	NUT04NCNYL	1/4" NC NYLON LOCK NUT	AR	X	X	X	X
6	CSNC04X16	1/4"X1" NC CAP SCREW, GRD 5	AR	X	X	X	X
11	FLTWA06	3/8" USS WASHER	AR	X	X	X	X
14	NUT06NCLK	3/8" NC LOCK NUT, GRD C	AR	X	X	X	X
49	MIN-E28	HOSE CLAMP	23	X	X	X	X
102	9070	MAIN FRAME WELDMENT ( <b>WIDE</b> )	1		X		X
102	93286	MAIN FRAME WELDMENT	1	X		X	
103	92283A	1/4" FORMED BEARING PLATE	AR	X	X	X	X
103	92284A	3/16" FORMED BEARING PLATE	AR	X	X	X	X
105	N325349	3.25X60 SLAVE CYLINDER, RIGHT SIDE, LOWER	1		X		X
105	N325277	3.25X48 SLAVE CYLINDER, RIGHT SIDE, LOWER	1	X		X	
		1 Valve cap at rod end (use 4A2105 repair kit)					
106	N353249	3.5X60 MASTER CYLINDER, LEFT SIDE, UPPER	1		X		X
106	N353177	3.5X48 MASTER CYLINDER, LEFT SIDE, UPPER	1	X		X	
		2 valve caps, 1 each end (use 4A3105 repair kit)					
122	03PCCHAIN	3/16" PROOF COIL CHAIN, 10 LINKS	2	X	X	X	X
130	HMBFP9086	O'RING 90 ADAPTER	4	X	X	X	X
133	HFPT4	1/4" FEMALE TEE	AR	X	X		
144	9110	HOSE CLAMP	2	X	X	X	X



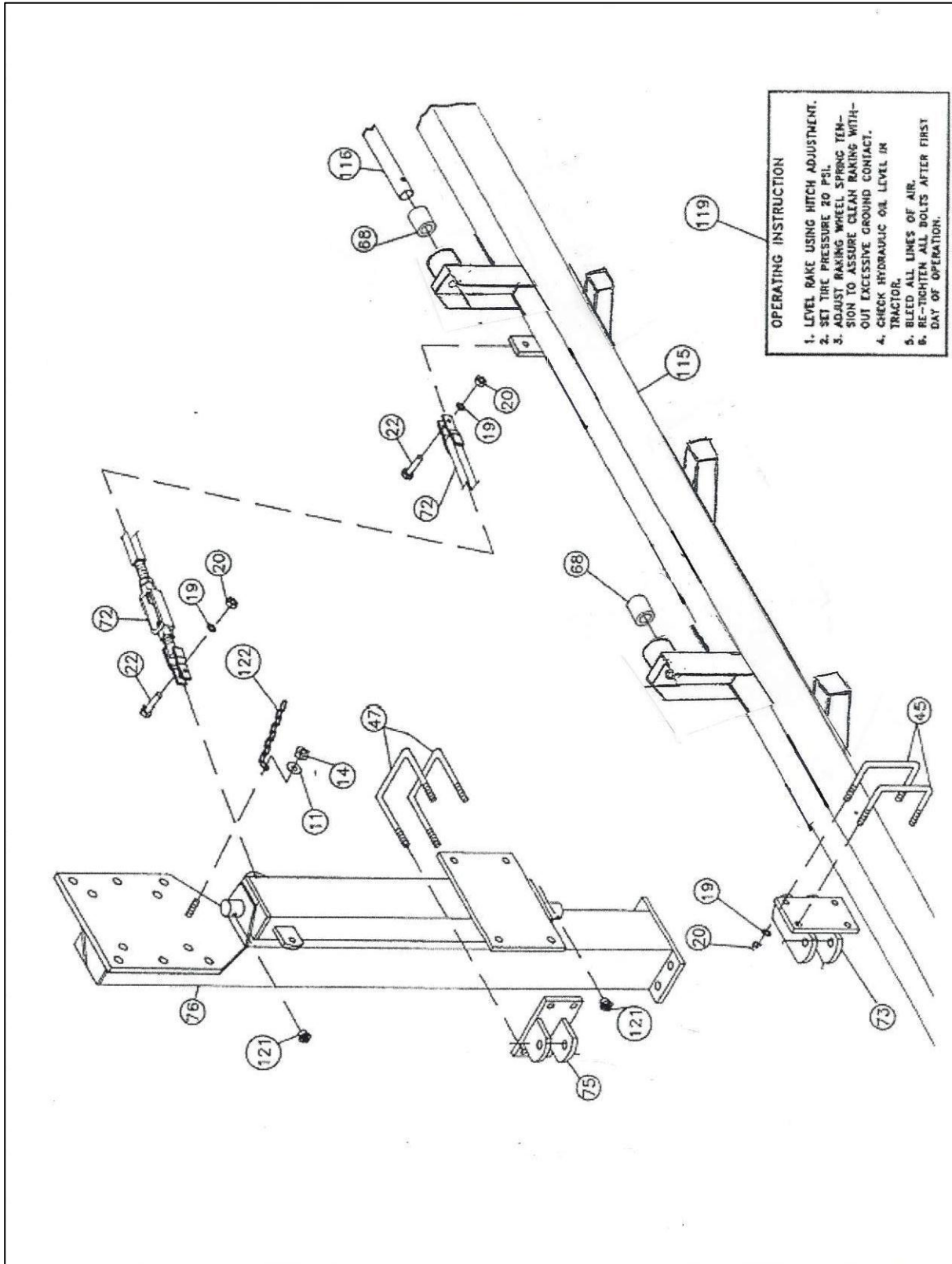
# OVERHEAD COVER PLATES



## OVERHEAD COVER PLATES

REF	PART NO.	DESCRIPTION	QTY	1017L	1017LW	1017LFD	1017LFDW
1	FLTWA04	1/4" USS WASHER	AR	X	X	X	X
2	LW04SP	1/4" SPLIT LOCK WASHER	AR	X	X	X	X
5	CSNC04X10	1/4"X5/8" NC CAP SCREW, GRD 5	AR	X	X	X	X
6	CSNC04X16	1/4"X1" NC CAP SCREW, GRD 5	AR	X	X	X	X
74	SL1541	RATCHET JACK	1	X	X	X	X
102	9070	MAIN FRAME WELDMENT ( <u>WIDE</u> )	1		X		X
102	93286	MAIN FRAME WELDMENT	1	X		X	
106	N353249	3.5X60 MASTER CYLINDER, LEFT SIDE, UPPER	1		X		X
		2 Valve caps, 1 each end (use 4A3105 repair kit)					
106	N353177	3.5X48 MASTER CYLINDER, LEFT SIDE, UPPER	1	X		X	
		(use 4A3105 repair kit)					
107	93288	COVER PLATE	3	X	X	X	X
108	93288L	COVER PLATE, LONG	1	X	X	X	X

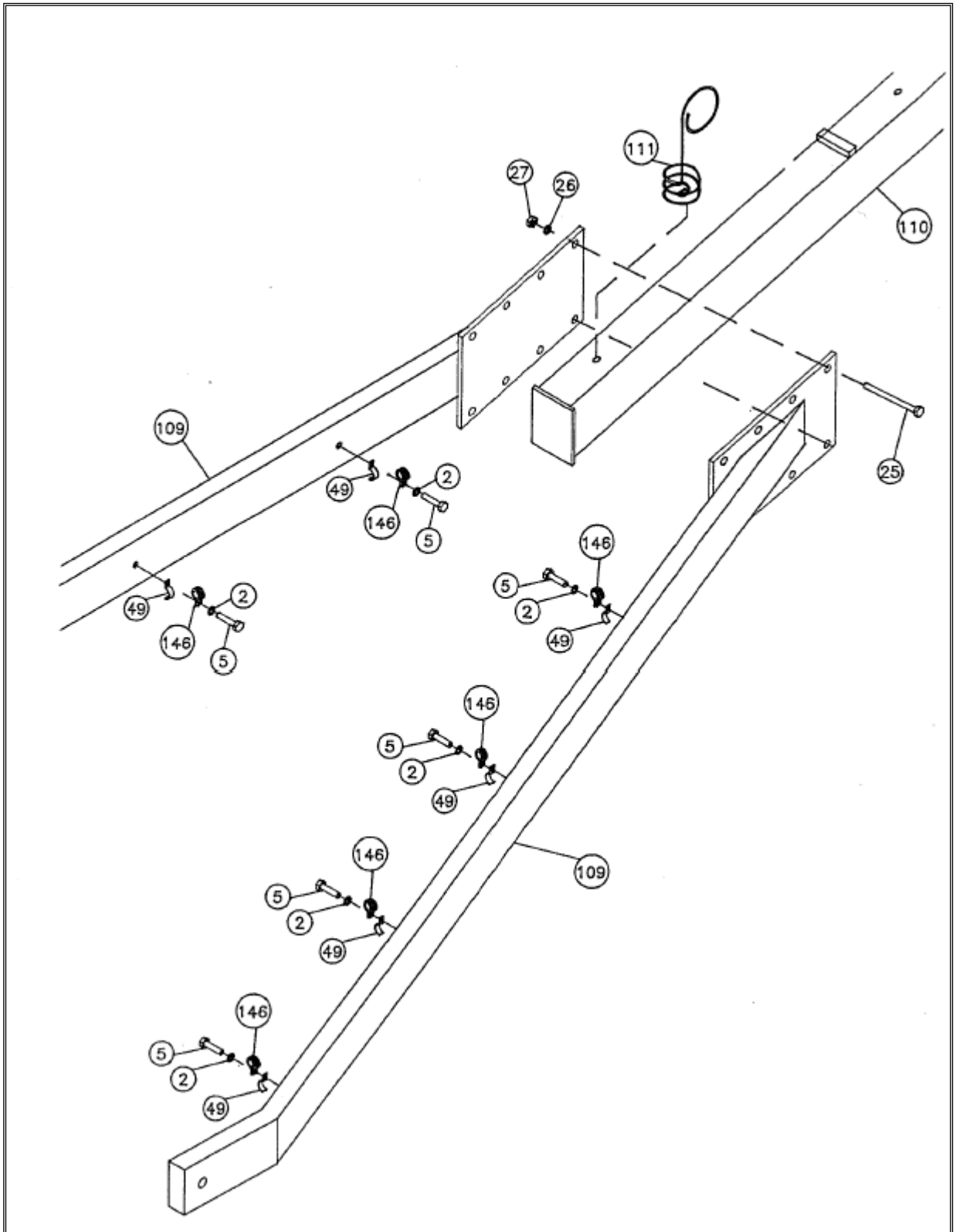
# LEG STRUT RIGHT OR LEFT SIDE



**LEG STRUT  
RIGHT OR LEFT SIDE**

REF	PART NO.	DESCRIPTION	QTY	1017L	1017LW	1017LFD	1017LFDW
11	FLTWA06	3/8" USS WASHER	AR	X	X	X	X
14	NUT06NCLK	3/8" NC LOCK NUT, GRD C	AR	X	X	X	X
19	LW08SP	1/2" SPLIT LOCK WASHER	AR	X	X	X	X
20	NUT08NC	1/2" NC HEX NUT	AR	X	X	X	X
22	CSNC08X32	1/2"X2" NC CAP SCREW, GRD 5	AR	X	X	X	X
45	9027	U-BOLT TO FRAME BRACKET	4	X	X	X	X
47	9029	U-BOLT, LEG STRUT/ANGLE BRACKET	4	X	X	X	X
68	9047	UHMW BUSHING	AR	X	X	X	X
72	9099	HEAVY ADJ. RAKE FRAME BRACE	2	X	X	X	X
73	92206	5-HOLE ADJ. BRACKET	2		X		X
73	922994	3-HOLE ADJ. BRACKET	2	X		X	
76	92581L	LEG STRUT, RIGHT OR LEFT	2	X	X	X	X
115	101792	LEFT RAKE FRAME WELDMENT	1	X	X	X	X
115R	101793	RIGHT RAKE FRAME WELDMENT	1	X	X	X	X
		(not shown)					
116	91790	LEFT SIDE LIFT TUBE, 9 HOLES	1	X	X	X	X
116R	91791	RIGHT SIDE LIFT TUBE, 10 HOLES	1	X	X	X	X
		(not shown)					
119	NIWDEC4X10	DECAL - OPERATING INSTRUCTIONS	2	X	X	X	X
121	B511ZERK	3/16" DRIVE IN ZERK	4	X	X	X	X
122	O3PCCHAIN	3/16" PROOF COIL CHAIN, 10 LINKS	2	X	X	X	X

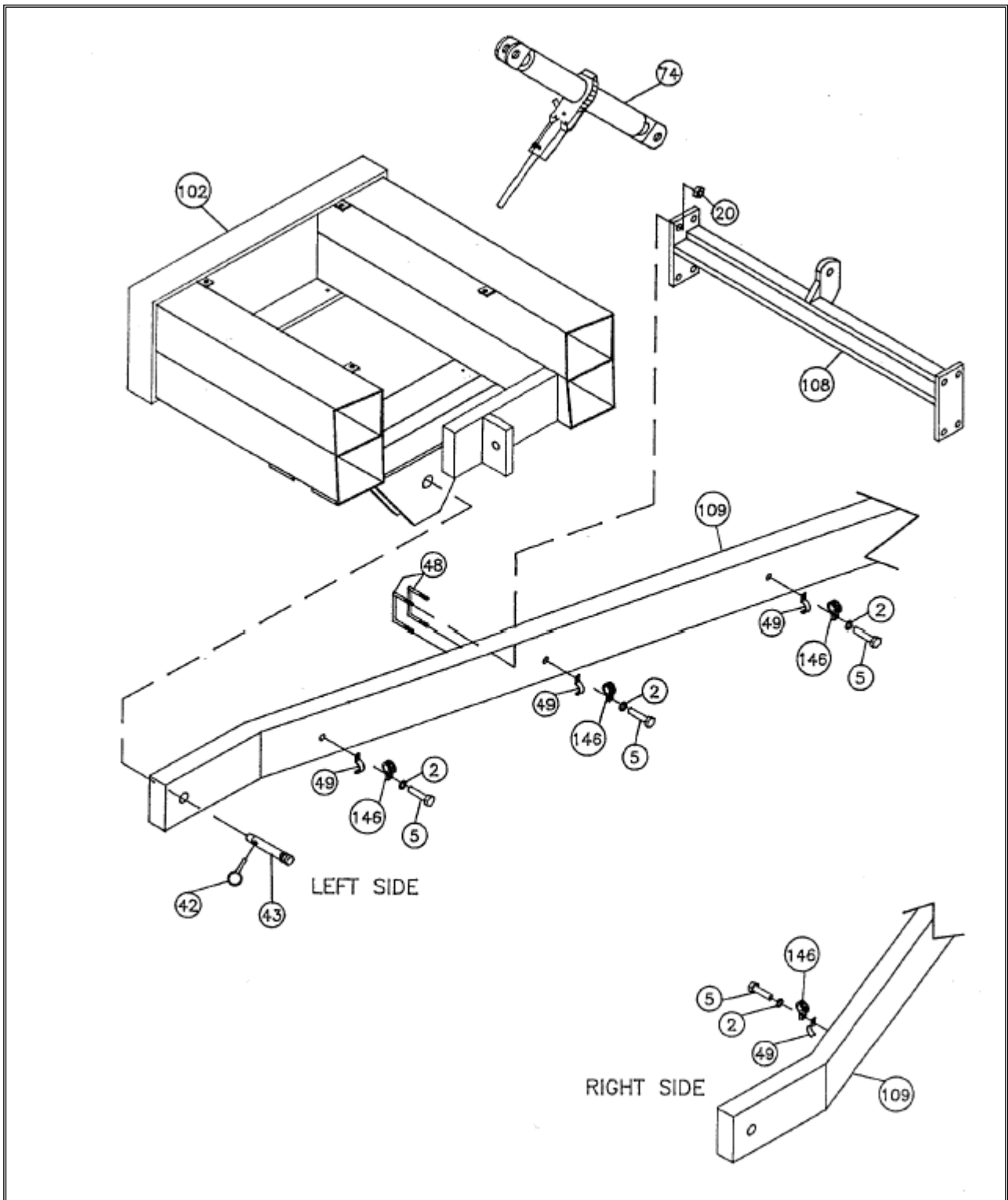
# TONGUE UNIT



**TONGUE UNIT**

<b>REF</b>	<b>PART NO.</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>1017L</b>	<b>1017LW</b>	<b>1017LFD</b>	<b>1017LFDW</b>
2	LW04SP	1/4" SPLIT LOCK WASHER	AR	X	X	X	X
5	CSNC04X10	1/4"X5/8" NC CAP SCREW, GRD 5	AR	X	X	X	X
25	CSNC20X96	5/8X6" NC CAP SCREW, GRD 5	8	X	X	X	X
26	LW10SP	5/8" SPLIT LOCK WASHER	8	X	X	X	X
27	NUT10NC	5/8" NC HEX NUT	8	X	X	X	X
49	MIN-E28	HOSE CLAMP	AR	X	X	X	X
109	91796	TOP YOKE TUBE FOR TONGUE	2	X	X	X	X
110	91794	LOWER TONGUE MEMBER	1	X	X	X	X
111	91798A	HYDRAULIC HOSE HOLDER	AR	X	X	X	X
146	2006LC	3/8" HOSE CLAMP	AR	X	X	X	X

# UPPER TONGUE SECTION

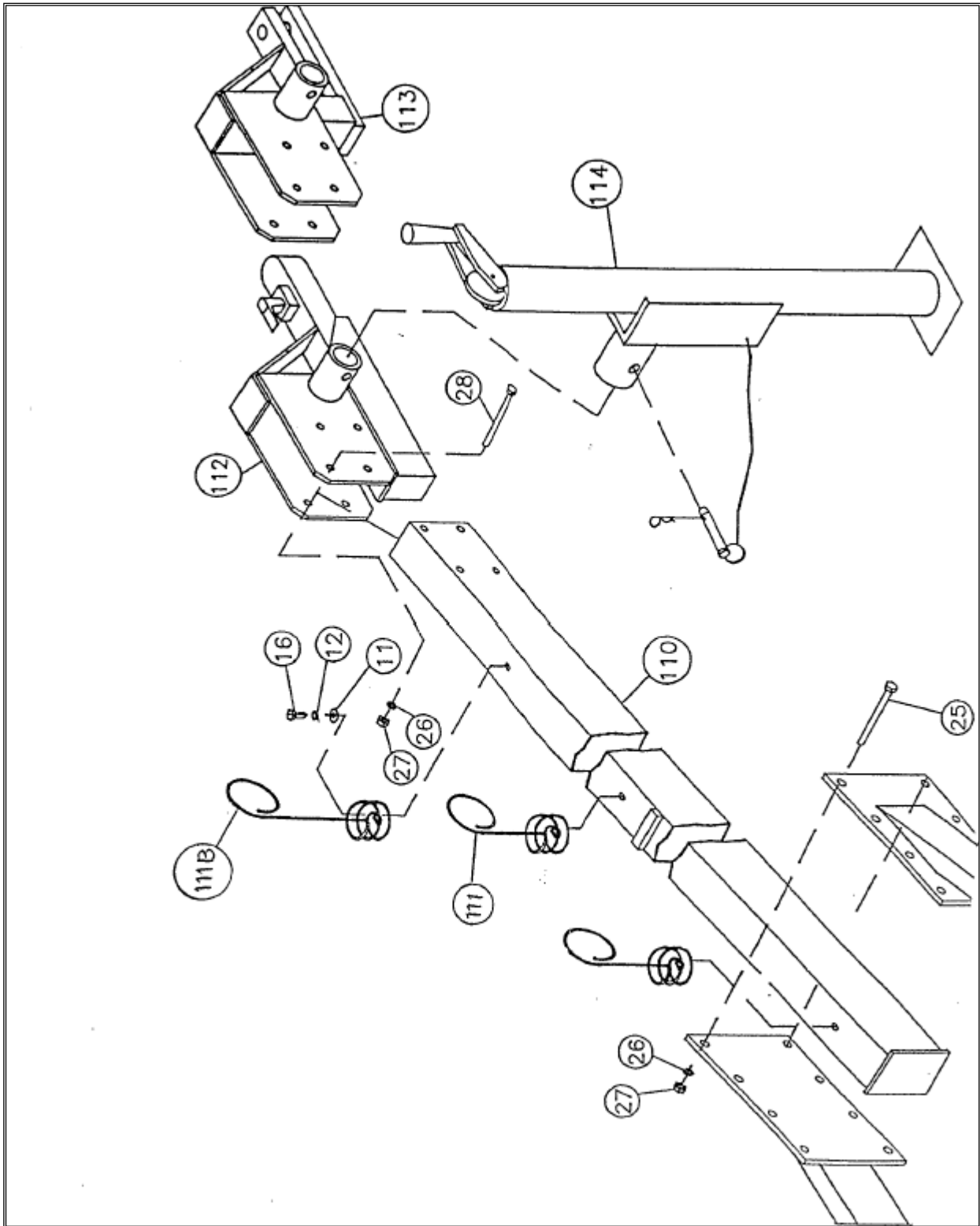


# UPPER TONGUE SECTION

REF	PART NO.	DESCRIPTION	QTY	1017L	1017LW	1017LFD	1017LFDW
2	LW04SP	1/4" SPLIT LOCK WASHER	AR	X	X	X	X
5	CSNC04X10	1/4"X5/8" NC CAP SCREW	AR	X	X	X	X
20	NUT08NCLK	1/2" LOCK NUT	AR	X	X	X	X
42	P791	LYNCH PIN, 7/16	6	X	X	X	X
43	P774	TOP LINK PIN	2	X	X	X	X
48	9032	U-BOLT, TONGUE CROSS BAR	4	X	X	X	X
49	MIN-E28	HOSE CLAMP	AR	X	X	X	X
74	SL1541	RATCHET JACK	1	X	X	X	X
102	93286	MAIN FRAME WELDMENT	1	X		X	
102	9070	MAIN FRAME WELDMENT	1		X		X
108	9107A	TONGUE CROSS BAR	1	X	X	X	X
109	91796	TOP YOKE TUBE FOR TONGUE	2	X	X	X	X
146	2006LC	3/8" HOSE CLAMP	AR	X	X	X	X



# LOWER TONGUE UNIT HITCH and JACK

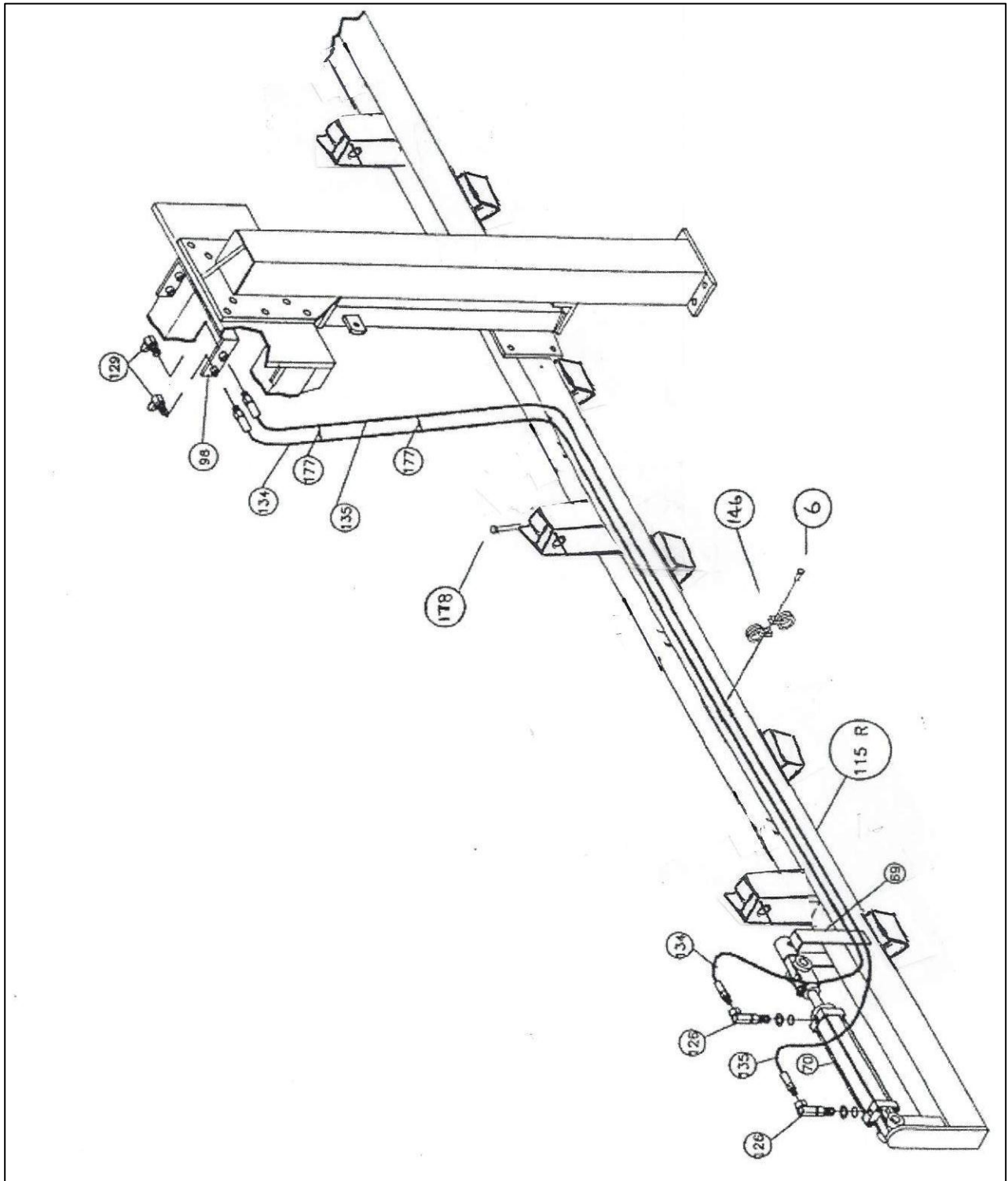


## LOWER TONGUE UNIT HITCH and JACK

REF	PART NO.	DESCRIPTION	QTY	1017L	1017LW	1017LFD	1017LFDW
11	FLTWA06	3/8" USS WASHER	AR	X	X	X	X
12	LW06SP	3/8" SPLIT LOCK WASHER	AR	X	X	X	X
16	CSNC06X16	3/8"X1" NC CAP SCREW, GRD 5	AR	X	X	X	X
25	CSNC10X96	5/8X6" NC CAP SCREW, GRD 5	8	X	X	X	X
26	LW10SP	5/8" SPLIT LOCK WASHER	12	X	X	X	X
27	NUT10NC	5/8" NC HEX NUT	12	X	X	X	X
28	CSNC10X88	5/8"X5-1/2" NC CAP SCREW, GRD 5	4	X	X	X	X
110	91794	LOWER TONGUE MEMBER	1	X	X	X	X
111	91798A	HYDRAULIC HOSE HOLDER	AR	X	X	X	X
111B	91798B	HYDRAULIC HOSE HOLDER - LONG	1	X	X	X	X
112	91799B	BALL HITCH 2-5/16"	1	X	X	X	X
113	91799C	CLEVIS STYLE HITCH	1	X	X	X	X
114	82471	TONGUE JACK	1	X	X	X	X

**See Pages 36, 38, 40, and 42 for Complete Hose Listings**

# STANDARD HYDRAULIC LAYOUT RIGHT SIDE

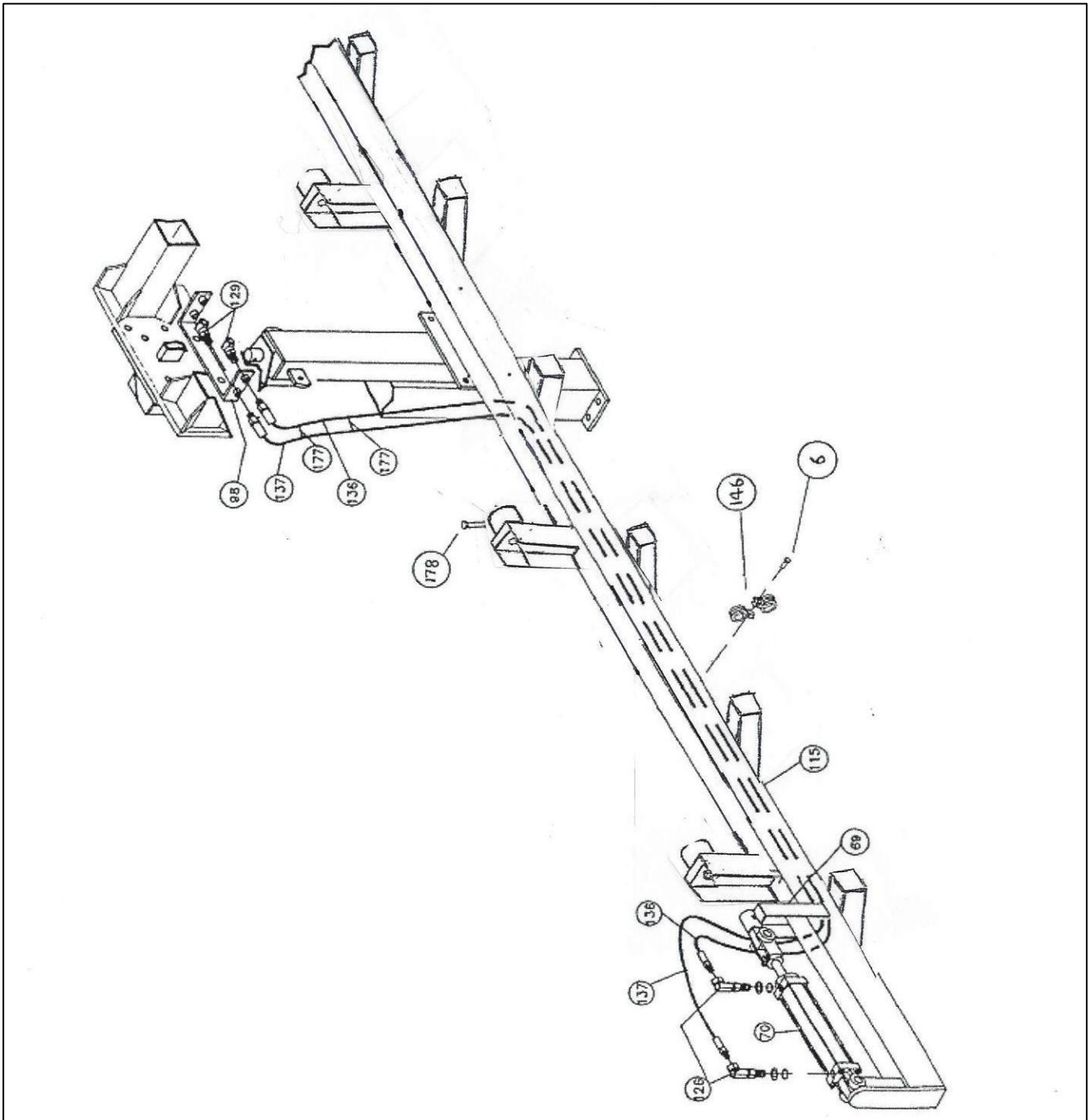


## STANDARD HYDRAULIC LAYOUT RIGHT SIDE

REF	PART NO.	DESCRIPTION	QTY	1017L	1017LW	1017LFD	1017LFDW
6	TYPEF04X12	HEX WASHER HD, 1/4X3/4	3	X	X	X	X
69	92193	LIFT TUBE HYD. CLEVIS	2	X	X	X	X
70	N201028	2X8 ASAE HYD.CYLINDER W/PINS	2	X	X	X	X
		(use SKAR12104A, univ.2" repair kit)					
98	9018B	4-HOSE COUPLER	2	X	X	X	X
115R	101792	LEFT RAKE FRAME WELDMENT	1	X	X	X	X
126	HMBFP9064	O'RING TO PIPE X 90 DEGREE ADAPTER	4	X		X	
126	HMBFP9064	O'RING TO PIPE X 90 DEGREE ADAPTER	8		X		X
129	HMPFP4544	45 DEGREE ADAPTER	4	X	X	X	X
134	04X1792X04	1/4"X124" HOSE, 1/4" ENDS	1	X	X	X	X
135	04X1984X04	1/4"X112" HOSE, 1/4" ENDS	1	X	X	X	X
146	2006LC	3/8 HOSE CLAMP	3	X	X	X	X
177	9629	PLASTIC WIRE TIES, 7-1/2"	2	X	X	X	X
178	SMPAN12X06	#12X3/8 PHILIPS PAN SCREW	AR	X	X	X	X

**See Pages 36, 38, 40, and 42 for Complete Hose Listings**

# STANDARD HYDRAULIC LAYOUT LEFT SIDE



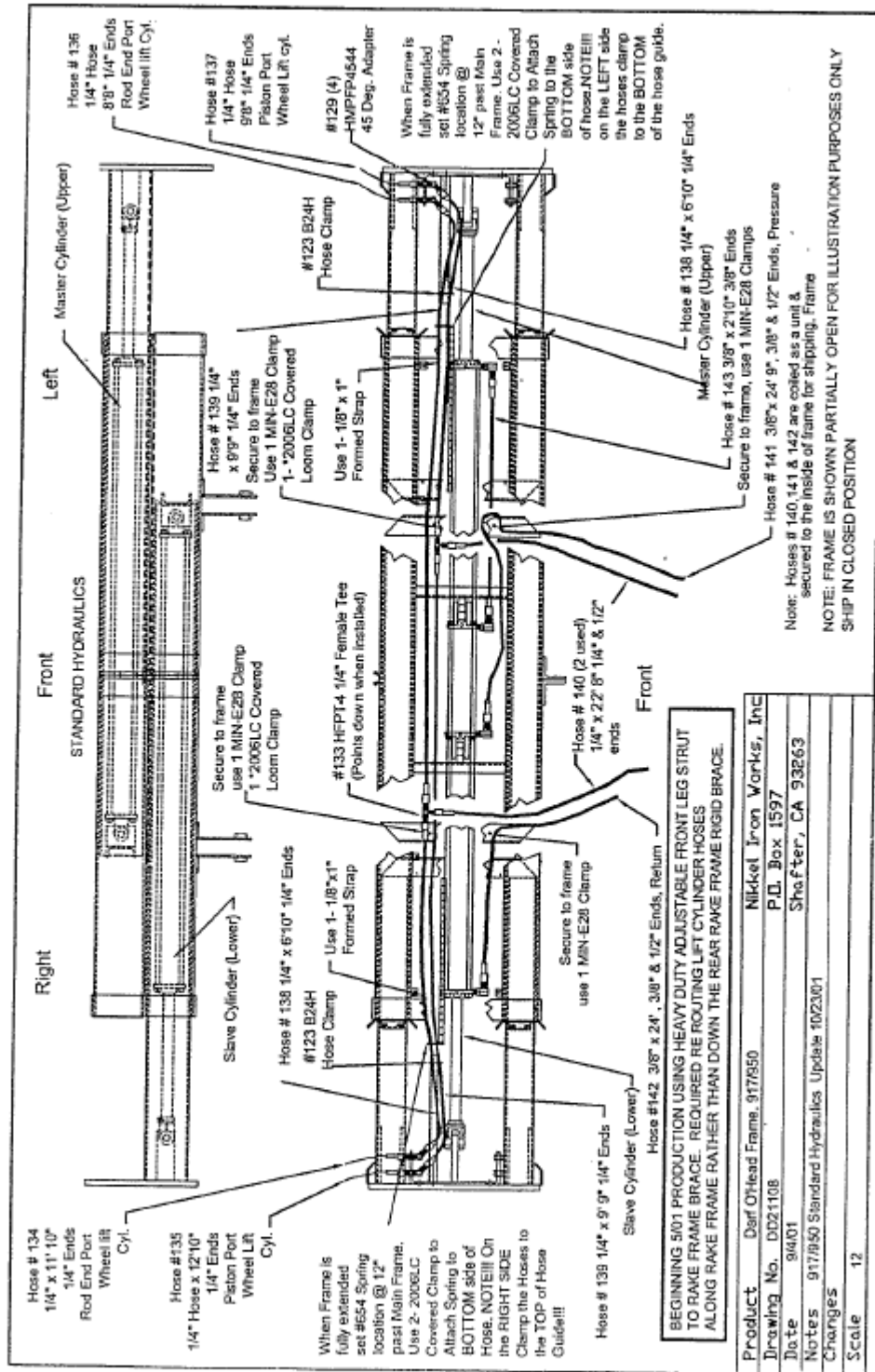
## STANDARD HYDRAULIC LAYOUT LEFT SIDE

REF	PART NO.	DESCRIPTION	QTY	1017L	1017LW	1017LFD	1017LFDW
6	TYPEF04X12	HEX WASHER HD, 1/4X3/4	3	X	X	X	X
69	92193	LIFT TUBE HYD. CLEVIS	2	X	X	X	X
70	N201028	2X8 ASAE HYD.CYLINDER W/PINS	2	X	X	X	X
		(use SKAR12104A, univ.2" repair kit)					
98	9018B	4-HOSE COUPLER	2	X	X	X	X
115	101792	LEFT RAKE FRAME WELDMENT	1	X	X	X	X
126	HMBFP9064	O'RING TO PIPE X 90 DEGREE ADAPTER	4	X		X	
126	HMBFP9064	O'RING TO PIPE X 90 DEGREE ADAPTER	8		X		X
129	HMPFP4544	45 DEGREE ADAPTER	4	X	X	X	X
136	04X1792X04	1/4"X124" HOSE, 1/4" ENDS	1	X	X	X	X
137	04X1984X04	1/4"X112" HOSE, 1/4" ENDS	1	X	X	X	X
146	2006LC	3/8 HOSE CLAMP	3	X	X	X	X
177	9629	PLASTIC WIRE TIES, 7-1/2"	2	X	X	X	X
178	SMPAN12X06	#12X3/8 PHILIPS PAN SCREW	AR	X	X	X	X

See Pages 36, 38, 40, and 42 for Complete Hose Listings

# HOSE ROUTING

## MODEL 1017L STANDARD HYDRAULICS



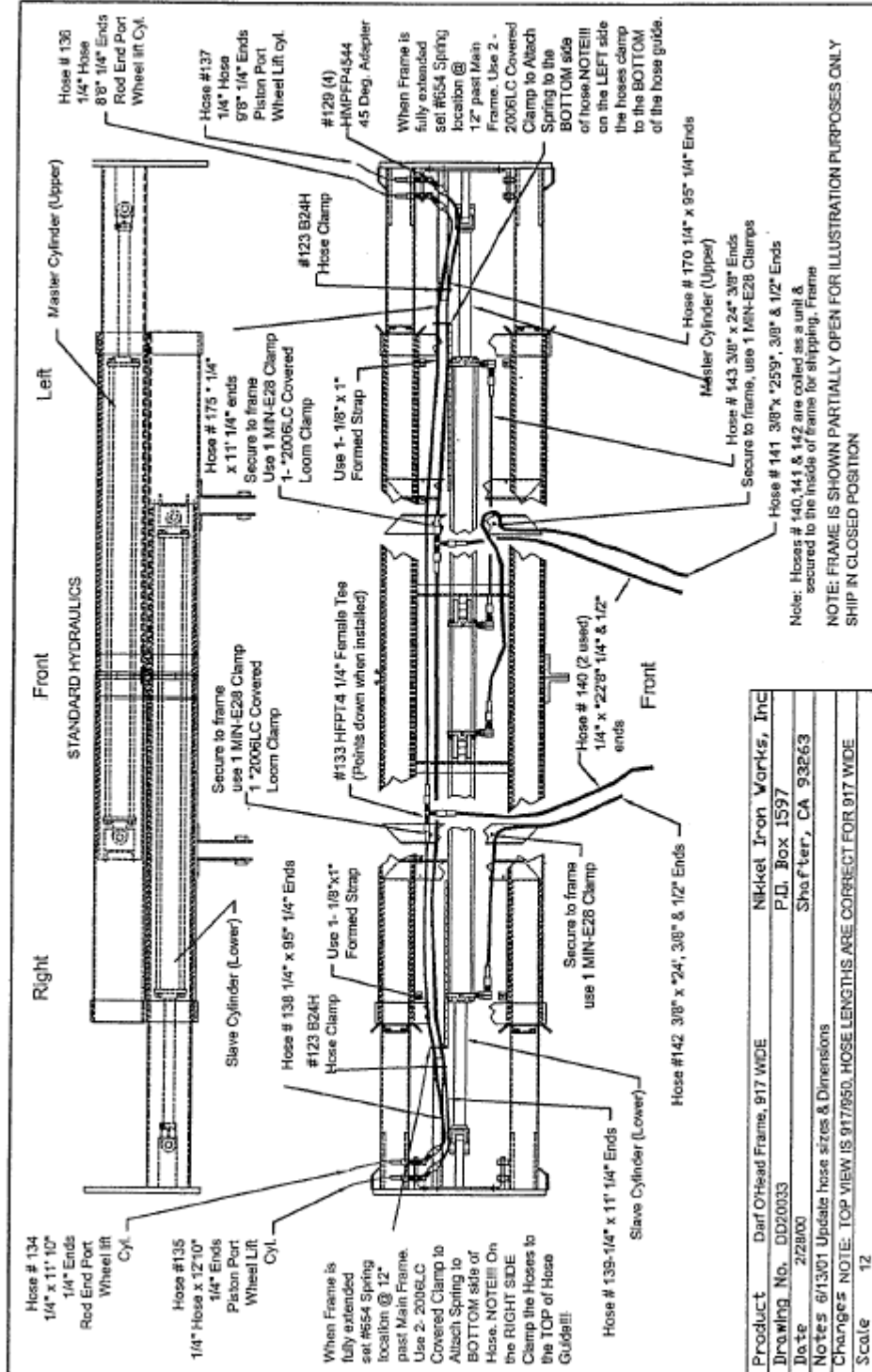
## HOSE ROUTING MODEL 1017L STANDARD HYDRAULICS

Drawing #DD21108

REF	PART	DESCRIPTION	ROUTING/FUNCTION
134	04X2272x04	1/4"X142" HOSE, 1/4" ENDS	RIGHT SIDE, INNER REAR COUPLER TO ROD END PORT WHEEL LIFT CYL
135	04X2464x04	1/4"X154" HOSE, 1/4" ENDS	RIGHT SIDE OUTER REAR COUPLER TO PISTON PORT WHEEL LIFT CYL
136	04X1792x04	1/4"X112" HOSE, 1/4" ENDS	LEFT SIDE INNER REAR COUPLER TO ROD END PORT WHEEL LIFT CYL
137	04X1984x04	1/4"X124" HOSE, 1/4" ENDS	LEFT SIDE OUTER REAR COUPLER TO PISTON PORT WHEEL LIFT CYL
138	04X1568x04	1/4"X98" HOSE, 1/4" ENDS	RIGHT SIDE FROM RIGHT HFPT4 TEE TO RIGHT REAR OUTER COUPLER
138	04X1568x04	1/4"X98" HOSE, 1/4" ENDS	LEFT SIDE FROM LEFT HFPT4 TEE TO LEFT REAR OUTER COUPLER
139	04X2176x04	1/4"X136" HOSE, 1/4" ENDS	RIGHT SIDE FROM LEFT HFPT4 TEE TO RIGHT REAR INNER COUPLER
139	04X2176x04	1/4"X136" HOSE, 1/4" ENDS	LEFT SIDE FROM RIGHT HFPT4 TEE TO LEFT REAR INNER COUPLER
140	04X4352X04	1/4"X272" HOSE, 1/4" & 1/2" ENDS	FROM HFPT4 TEE TO TRACTOR VALVE (2 used)
141	06X4752X08	3/8"X297" HOSE, 3/8" & 1/2" ENDS	PRESSURE HOSE TO TRACTOR VALVE
142	06X4608X08	3/8"X288" HOSE, 3/8" & 1/2" ENDS	RETURN HOSE TO TRACTOR VALVE
143	06X544X06	3/8"X34" HOSE, 3/8" ENDS	PISTON PORT SLAVE CYL TO ROD END PORT MASTER CYL



# HOSE ROUTING FOR REPHASING CYLINDERS MODEL 1017L WIDE, STANDARD HYDRAULICS

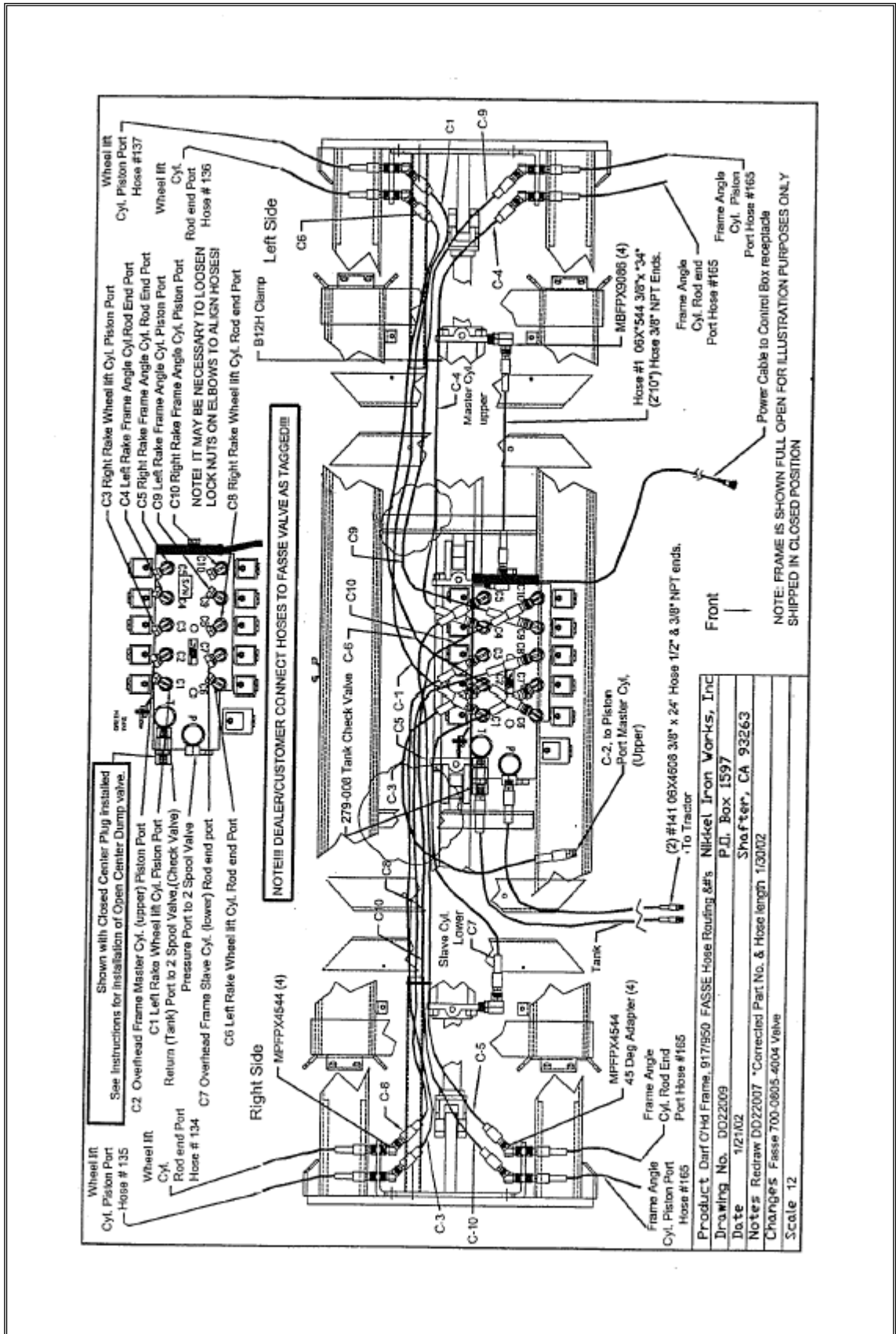


## HOSE ROUTING FOR REPHASING CYLINDERS MODEL 1017L WIDE, STANDARD HYDRAULICS

Drawing #DD20033

REF	PART	DESCRIPTION	ROUTING/FUNCTION
105	N325349	3.25 X 60" SLAVE CYLINDER	LOWER CYLINDER, RIGHT, 1 VALVE CAP AT ROD END
106	N353249	3.5 X 60" MASTER CYLINDER	UPPER CYLINDER, LEFT, 2 VALVE CAPS, 1 AT EACH END
134	04X2272X04	1/4"X132" HOSE, 1/4" ENDS	COUPLER TO RIGHT WHEEL LIFT CYLINDER, ROD END PORT
135	04X2464X04	1/4"X154" HOSE, 1/4" ENDS	COUPLER TO RIGHT WHEEL LIFT CYLINDER, PISTON PORT
136	04X1792X04	1/4"X112" HOSE, 1/4" ENDS	COUPLER TO LEFT WHEEL LIFT CYLINDER, ROD END PORT
137	04X1984X04	1/4"X124" HOSE, 1/4" ENDS	COUPLER TO LEFT WHEEL LIFT CYLINDER, PISTON PORT
138	04X1744X04	1/4"X109" HOSE, 1/4" ENDS	1/4" TEE TO COUPLER, WHEEL LIFT, RIGHT SIDE (inside frame)
139	04X2352X04	1/4"X147" HOSE, 1/4" ENDS	1/4" TEE TO COUPLER, WHEEL LIFT, RIGHT SIDE (inside frame)
140	04X4352X04	1/4"X272" HOSE, 1/4" & 1/2" ENDS	FROM HFPT4 TEE TO TRACTOR VALVE (2 used)
141	06X4452X08	3/8"X297" HOSE, 3/8" & 1/2" ENDS	PISTON PORT OF MASTER CYLINDER TO TRACTOR
142	06X4608X08	3/8"X288" HOSE, 3/8" & 1/2" ENDS	ROD END OF SLAVE CYLINDER TO TRACTOR
143	06X384X06	3/8"X24" HOSE, 3/8" ENDS	ROD END OF MASTER CYLINDER TO PISTON PORT OF SLAVE CYL
170	04X1744X04	1/4"X109" HOSE, 1/4" ENDS	1/4" TEE TO COUPLER, WHEEL LIFT, LEFT SIDE
175	04X2352X04	1/4"X147" HOSE, 1/4" ENDS	1/4" TEE TO COUPLER, WHEEL LIFT, LEFT SIDE (inside frame)

# HOSE ROUTING MODEL 1017L with FASSE VALVE



Shown with Closed Center Plug Installed  
See Instructions for Installation of Open Center Dump Valve.

C2 Overhead Frame Master Cyl. (upper) Piston Port  
Return (Tank) Port to 2 Spool Valve (Check Valve)  
Pressure Port to 2 Spool Valve

C1 Left Rake Wheel Lift Cyl. Piston Port  
C7 Overhead Frame Slave Cyl. (lower) Rod end port  
C6 Left Rake Wheel Lift Cyl. Rod end Port

Wheel Lift Cyl. Piston Port Hose # 135  
Wheel Lift Cyl. Rod end Port Hose # 136  
NOTE! IT MAY BE NECESSARY TO LOOSEN LOCK NUTS ON ELBOWS TO ALIGN HOSES!

C3 Right Rake Wheel Lift Cyl. Piston Port  
C4 Left Rake Frame Angle Cyl. Rod End Port  
C5 Right Rake Frame Angle Cyl. Piston Port  
C9 Left Rake Frame Angle Cyl. Piston Port  
C10 Right Rake Frame Angle Cyl. Piston Port  
C8 Right Rake Wheel Lift Cyl. Rod end Port

MBFPX4544 (4)  
45 Deg Adapter (4)  
Frame Angle Cyl. Rod End Port Hose #165  
Frame Angle Cyl. Piston Port Hose #165  
Power Cable to Control Box receptacle

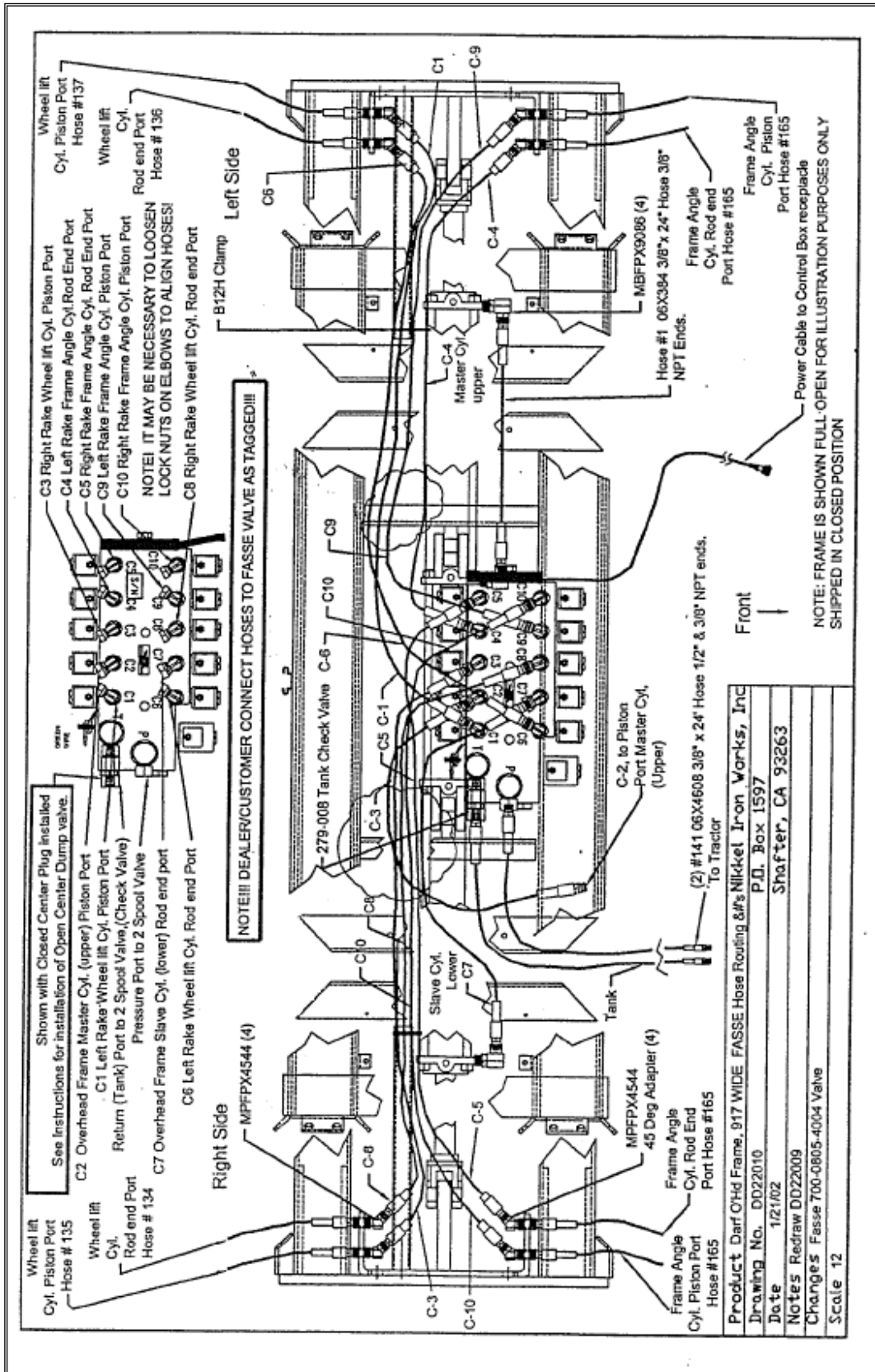
279-000 Tank Check Valve C-6  
C-3  
C-4  
C-5 C-1  
C-6  
C-7  
C-8  
C-9  
C-10  
C-11  
C-12  
C-13  
C-14  
C-15  
C-16  
C-17  
C-18  
C-19  
C-20  
C-21  
C-22  
C-23  
C-24  
C-25  
C-26  
C-27  
C-28  
C-29  
C-30  
C-31  
C-32  
C-33  
C-34  
C-35  
C-36  
C-37  
C-38  
C-39  
C-40  
C-41  
C-42  
C-43  
C-44  
C-45  
C-46  
C-47  
C-48  
C-49  
C-50  
C-51  
C-52  
C-53  
C-54  
C-55  
C-56  
C-57  
C-58  
C-59  
C-60  
C-61  
C-62  
C-63  
C-64  
C-65  
C-66  
C-67  
C-68  
C-69  
C-70  
C-71  
C-72  
C-73  
C-74  
C-75  
C-76  
C-77  
C-78  
C-79  
C-80  
C-81  
C-82  
C-83  
C-84  
C-85  
C-86  
C-87  
C-88  
C-89  
C-90  
C-91  
C-92  
C-93  
C-94  
C-95  
C-96  
C-97  
C-98  
C-99  
C-100

Product Darf CHd Frame, 917/950 FASSE Hose Routing & Nickel Iron Works, Inc  
Drawing No. DD22009 P.O. Box 1597  
Date 1/21/02 Shafton, CA 93263  
Notes Redraw DD22007 \*Corrected Part No. & Hose length 1/30/02  
Changes Fasse 700-0605-4004 Valve  
Scale 1:2

**HOSE ROUTING**  
**MODEL 1017L with FASSE VALVE**  
Drawing #DD22009

REF	PART	DESCRIPTION	ROUTING/FUNCTION
1	06x544X06	3/8x34" HOSE, 3/8" ENDS	PISTON PORT, SLAVE CYL, TO ROD PORT OF MASTER CYL
134	04X2272X04	1/4"X142" HOSE, 1/4" ENDS	RAKE WHEEL LIFT CYL. ROD END PORT, RIGHT SIDE
135	04X2464X04	1/4"X154" HOSE, 1/4" ENDS	RAKE WHEEL LIFT CYL. PISTON PORT, RIGHT SIDE
136	04X1792X04	1/4"X112" HOSE, 1/4" ENDS	RAKE WHEEL LIFT CYL. ROD END PORT, LEFT SIDE
137	04X1984X04	1/4"X124" HOSE, 1/4" ENDS	RAKE WHEEL LIFT CYL. PISTON PORT, LEFT SIDE
141	06X4608X08	3/8"X288" HOSE, 3/8" & 1/2" ENDS	PRESSURE & RETURN HOSE, TRACTOR TO FASSE VALVE (2 used)
165	04X800X04	1/4"X50" HOSE, 1/4" ENDS	FOR FRAME ANGLE CYLINDERS (4 USED)
C1	04X2272X04	1/4"X142" HOSE, 1/4" ENDS	RAKE WHEEL LIFT CYL. PISTON PORT, LEFT SIDE
C2	06X384X06	3/8"X24" HOSE, 1/4" ENDS	OVERHEAD FRAME MASTER CYL. (Upper) PISTON PORT
C3	04X2272X04	1/4"X142" HOSE, 1/4" ENDS	RAKE WHEEL LIFT CYL. PISTON PORT, RIGHT SIDE
C4	04X2272X04	1/4"X142" HOSE, 1/4" ENDS	RAKE FRAME ANGLE CYL. ROD END PORT, LEFT SIDE
C5	04X2272X04	1/4"X142" HOSE, 1/4" ENDS	RAKE FRAME ANGLE CYL. ROD END PORT, RIGHT SIDE
C6	04X2272X04	1/4"X142" HOSE, 1/4" ENDS	RAKE WHEEL LIFT CYL. ROD END PORT, LEFT SIDE
C7	06X800X06	3/8"X50" HOSE, 3/8" ENDS	OVERHEAD FRAME SLAVE CYL. (lower) ROD END PORT
C8	04X2272X04	1/4"X142" HOSE, 1/4" ENDS	RAKE WHEEL LIFT CYL. ROD END PORT, RIGHT SIDE
C9	04X2272X04	1/4"X142" HOSE, 1/4" ENDS	RAKE FRAME ANGLE CYL. PISTON PORT, LEFT SIDE
C10	04X2272X04	1/4"X142" HOSE, 1/4" ENDS	RAKE FRAME ANGLE CYL. PISTON PORT, RIGHT SIDE

# HOSE ROUTING MODEL 1017L WIDE with FASSE VALVE

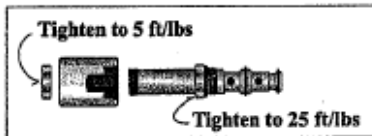
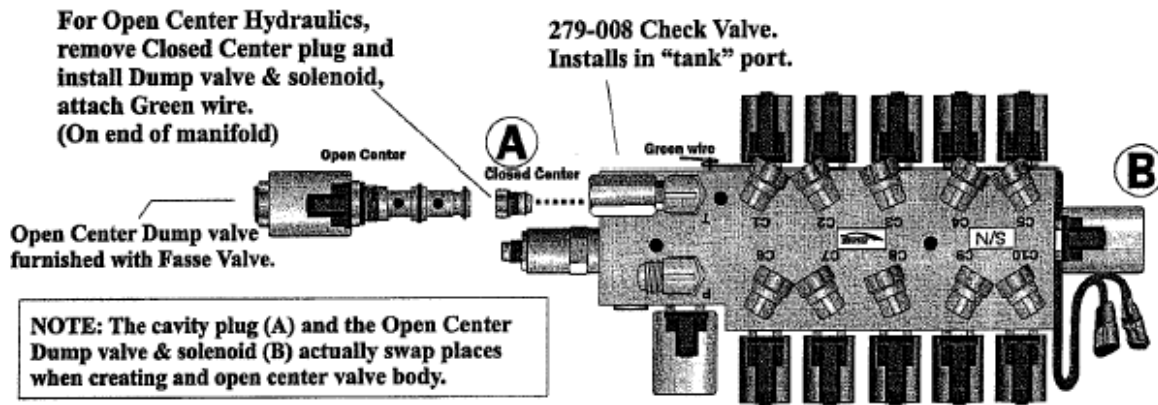
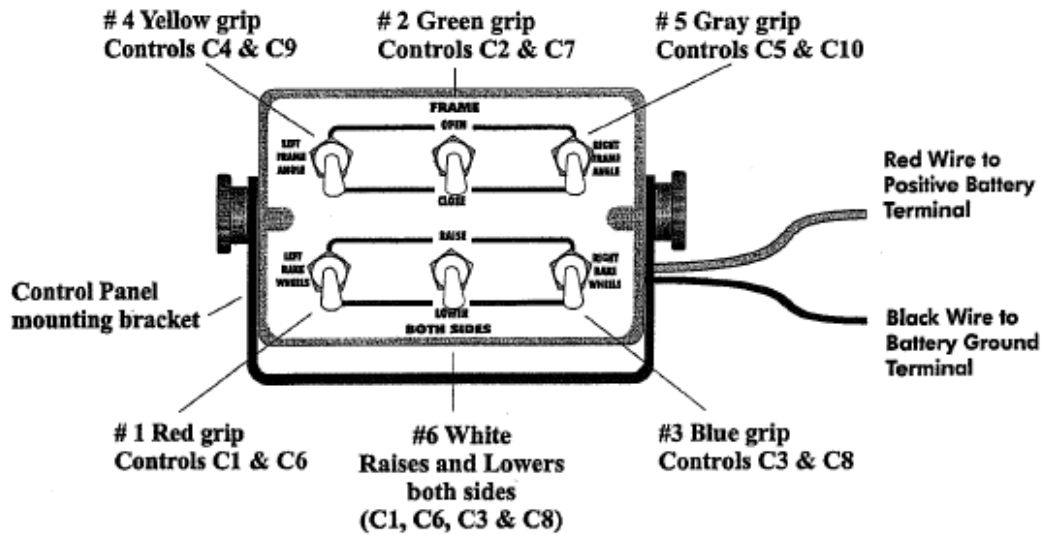


**HOSE ROUTING**  
**MODEL 1017L WIDE with FASSE VALVE**  
Drawing #DD22010

REF	PART	DESCRIPTION	ROUTING/FUNCTION
1	06x384X06	3/8"x24" HOSE, 3/8" ENDS	PISTON PORT, SLAVE CYLINDER TO ROD PORT OF MASTER CYL
134	04X2272X04	1/4"X142" HOSE, 1/4" ENDS	RAKE WHEEL LIFT CYLINDER ROD END PORT, RIGHT SIDE
135	04X2464X04	1/4"X154" HOSE, 1/4" ENDS	RAKE WHEEL LIFT CYLINDER PISTON PORT, RIGHT SIDE
136	04X1792X04	1/4"X112" HOSE, 1/4" ENDS	RAKE WHEEL LIFT CYLINDER ROD END PORT, LEFT SIDE
137	04X1984X04	1/4"X124" HOSE, 1/4" ENDS	RAKE WHEEL LIFT CYLINDER PISTON PORT, LEFT SIDE
141	06X4608X08	3/8"X288" HOSE, 3/8" & 1/2" ENDS	PRESSURE & RETURN HOSE, TRACTOR TO FASSE VALVE (2 used)
165	04X800X04	1/4"X50" HOSE, 1/4" ENDS	FOR FRAME ANGLE CYLINDERS (4 used)
C1	04X2448X04	1/4"X153" HOSE, 1/4" ENDS	RAKE WHEEL LIFT CYLINDER PISTON PORT, LEFT SIDE
C2	06x384X06	3/8"x24" HOSE, 3/8" ENDS	OVERHEAD FRAME MASTER CYLINDER, PISTON PORT (upper)
C3	04X2448X04	1/4"X153" HOSE, 1/4" ENDS	RAKE WHEEL LIFT CYLINDER PISTON PORT, RIGHT SIDE
C4	04X2448X04	1/4"X153" HOSE, 1/4" ENDS	RAKE FRAME ANGLE CYLINDER, ROD END PORT, LEFT SIDE
C5	04X2448X04	1/4"X153" HOSE, 1/4" ENDS	RAKE FRAME ANGLE CYLINDER, ROD END PORT, RIGHT SIDE
C6	04X2448X04	1/4"X153" HOSE, 1/4" ENDS	RAKE WHEEL LIFT CYLINDER, ROD END PORT, LEFT SIDE
C7	06X800X06	3/8"X50" HOSE, 3/8" ENDS	OVERHEAD FRAME SLAVE CYLINDER, ROD END PORT (Lower)
C8	04X2448X04	1/4"X153" HOSE, 1/4" ENDS	RAKE WHEEL LIFT CYLINDER, ROD END PORT, RIGHT SIDE
C9	04X2448X04	1/4"X153" HOSE, 1/4" ENDS	RAKE FRAME ANGLE CYLINDER, PISTON PORT, LEFT SIDE
C10	04X2448X04	1/4"X153" HOSE, 1/4" ENDS	RAKE FRAME ANGLE CYLINDER, PISTON PORT, RIGHT SIDE

# FASSE SET UP – START UP INSTRUCTIONS

- Note:** The Fasse Valve for the Darf Rake is assembled for **CLOSED CENTER HYDRAULICS**. See below for installation of the Open Center Dump Valve supplied with the Fasse Valve.
- Use the accompanying instructions for Fasse Start-up and reference.
- If the hydraulics are erratic during start-up, **AIR** is likely the cause. Be sure to thoroughly purge the complete system.



Product: Fasse Set-up/Start-up Instructions 700-0805-4005  
 Drawing No.: Dd22006  
 Date: 10/27/04  
 Notes: 6 Function control box. Beginning with 2002 production changes  
 Scale: 4

Nikkel Iron Works, Inc.  
 P.O. Box 1597  
 Shafter, CA 93263

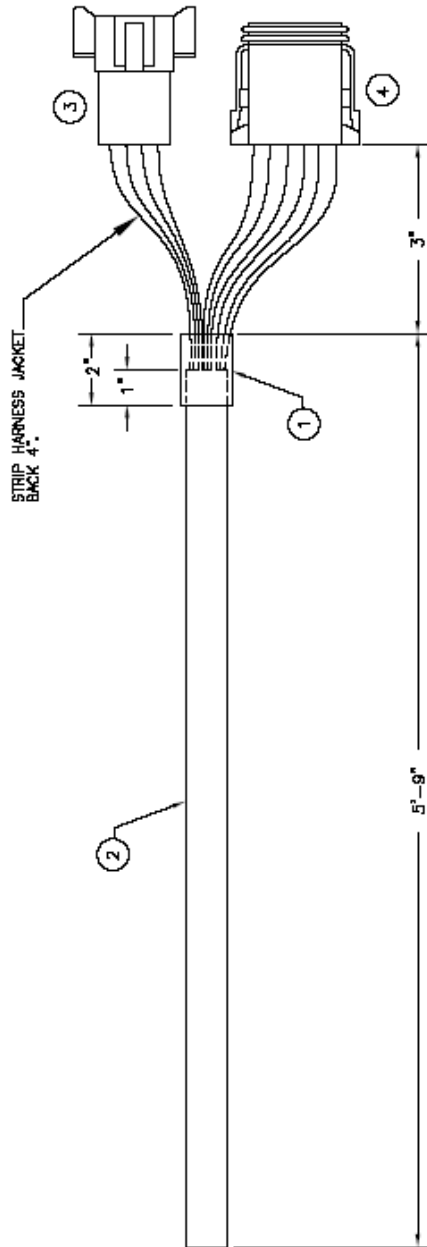
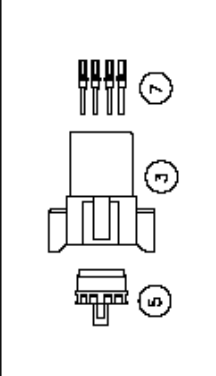
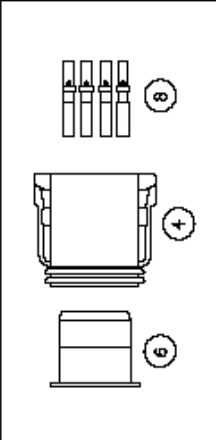
700-0805-4005

Switch No.	Boot Color	Switch Position	Hot Wires	Pressure Ports	Tank Ports	Function
1	Red	Up	Red & Org & Grn	C1	C6	L Rake Wheel Raise
		Down	Red & Org & Grn & Blk/Wht	C6	C1	L Rake Wheel Lower
2	White	Up	Red & Org & Org/Blk & Red/Blk & Grn	C1 & C3	C6 & C8	L & R Rake Wheel Raise
		Down	Red & Org & Org/Blk & Red/Blk & Grn & Blk/Wht	C6 & C8	C1 & C3	L & R Rake Wheel Lower
3	Blue	Up	Red/Blk & Org/Blk & Grn	C3	C8	R Rake Wheel Raise
		Down	Red/Blk & Org/Blk & Grn & Blk/Wht	C8	C3	R Rake Wheel Lower
4	Yellow	Up	Blue & Wht/Blk & Grn	C4	C9	L Rake Frame Angle
		Down	Blue & Wht/Blk & Grn & Blk/Wht	C9	C4	L Rake Frame Angle
5	Green	Up	Blu/Blk & Wht & Grn	C2	C7	Frame Master Raise
		Down	Blu/Blk & Wht & Grn & Blk/Wht	C7	C2	Frame Master Lower
6	Grey	Up	Grn/Wht & Red/Wht & Grn	C5	C10	R Rake Frame Angle
		Down	Grn/Wht & Red/Wht & Grn & Blk/Wht	C10	C5	R Rake Frame Angle

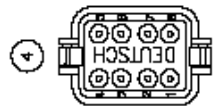


### PARTS LIST

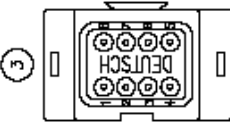
N/A	PART NUMBER	QTY	PART DESCRIPTION
1	231-007	2"	SHRINK TUBING .625
2	252-020	6"	CABLE 15CON 18GA
3	255-218	1	CONNECTOR
4	200-218	1	CONNECTOR
5	255-220	1	CONNECTOR
6	255-221	1	CONNECTOR
7	255-977	7	CONNECTOR
8	255-978	8	CONNECTOR
9	255-978	1	CONNECTOR



#### PIN OUT DETAIL



- 1-RED
- 2-GRN
- 3-WHT
- 4-BLU/BLK
- 5-RED/BLK
- 6-GRN/BLK
- 7-BLU/WHT
- 8-GRN/WHT



- 1-BLK/WHT
- 2-GRN
- 3-WHT/BLK
- 4-GRN/BLK
- 5-BLU
- 6-RED/WHT
- 7-BLU/WHT
- 8-NOT USED

NOTE: 1. NOT SHOWN: (9)

REV	DESCRIPTION	DATE	APPROVED	DATE	APPROVED	DESIGNED	DATE	APPROVED
	RELEASED PART							

MAKE	ITEM	QUANTITY	SIGNATURE	DATE
NS-0000	10/00/00	10		

THE INFORMATION CONTAINED HEREIN IS UNCLASSIFIED EXCEPT WHERE SHOWN OTHERWISE.  
 THIS DOCUMENT IS A WORK PRODUCT DERIVED FROM THE INFORMATION REPORTS AND IS NOT TO BE REPRODUCED OR DISTRIBUTED WITHOUT THE WRITTEN PERMISSION OF THE COMPANY.

FASSE VALVES	BRUNNEN
HRN 15CON 18GA DTP BR(S) DTR BK(7) 8"	HRN 15CON 18GA DTP BR(S) DTR BK(7) 8"
REV FROM: A	REV TO: A
DWG NO: 307-002	REV: 001

# PARTS LIST

NA PARTNUMBER	QTY	PART DESCRIPTION
1	2	SCREW
2	2	INSERT
3	2	KNOB
4	2	SCREW WELDED
5	2	WASHER NYLON
6	14	CABLE TIE BLACK 7"
7	1	BRKT HING MONITOR
8	1	BAG POLY CLR 14 X 18 2MIL W/LOGO
9	2	DECL S/N (SILVER)
10	2	DECL GOLD/BLK 1.5 X .5
11	1	LIT GAUGE NIKKEL IRON BRDS
12	6	SW TOG
13	6	SW TOG BOOT OPN GRY
14	1	DIODE
15	22	TRM T-TAP F PO BLU
16	11	TRM PO F INS 22/18GA
17	2	TRM SPLICE CLOSED END
18	6	TRM PO M/F 16-14GA
19	3	TRM PO F INS 16-14GA
20	1	TRM SPLICE CLOSED END LRG 14-18GA
21	1	STRAIN RLF
22	1	SW TOG GRIP VNYL WHT .187
23	1	SW TOG GRIP VNYL RED .187
24	1	SW TOG GRIP VNYL BLU .187
25	1	SW TOG GRIP VNYL YEL .187
26	1	SW TOG GRIP VNYL GRN .187
27	1	SW TOG GRIP VNYL GRY .187
28	1	HARNSS R/B WIRE /8"
29	1	ENCL DRILL MNTBRX
30	1	HRN 150GN
31	1	ENCL FP DRL MNTR
32	1	DIODE ASSY
33	1	HARNSS
34	1	HARNSS
35	1	HARNSS
36	1	FUSEHOLDER

- NOTES:
1. USE 2-CABLE TIES TO COIL UP HARNSS
  2. PUT REMAINING CABLE TIES IN BAG
  3. NOT SHOWN: (6)(B)(11)
  4. CUT OFF GRN/BLK WIRE AT HARNSS.

REV	DESCRIPTION	DATE	BY	CHKD	APPROVED
1	ISSUED	1/1			
2	REVISED	1/1			
3	REVISED	1/1			

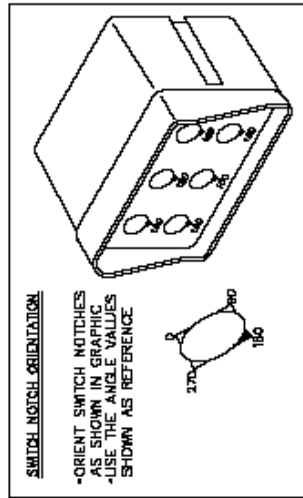
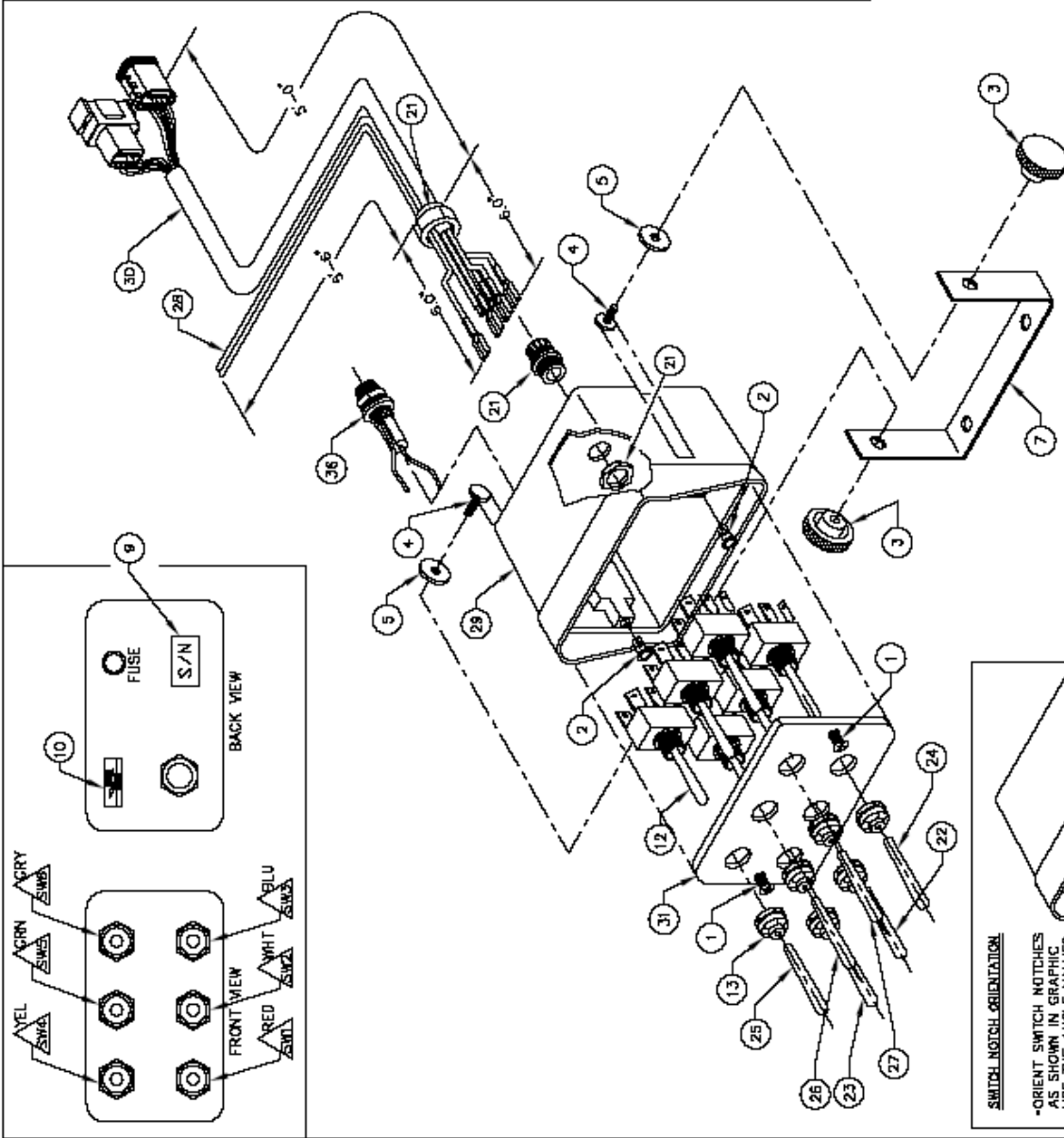
ISSUE	DATE	BY	CHKD	APPROVED
1	1/1			
2	1/1			

REV	DESCRIPTION	DATE	BY	CHKD	APPROVED
1	ISSUED	1/1			
2	REVISED	1/1			
3	REVISED	1/1			

REV	DESCRIPTION	DATE	BY	CHKD	APPROVED
1	ISSUED	1/1			
2	REVISED	1/1			
3	REVISED	1/1			

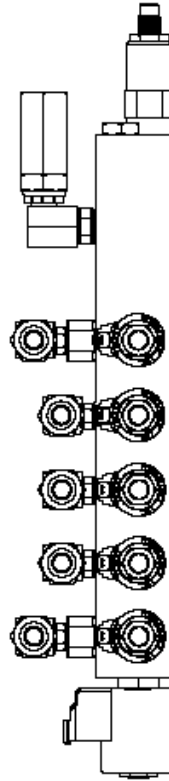
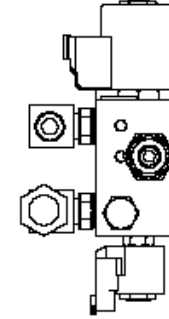
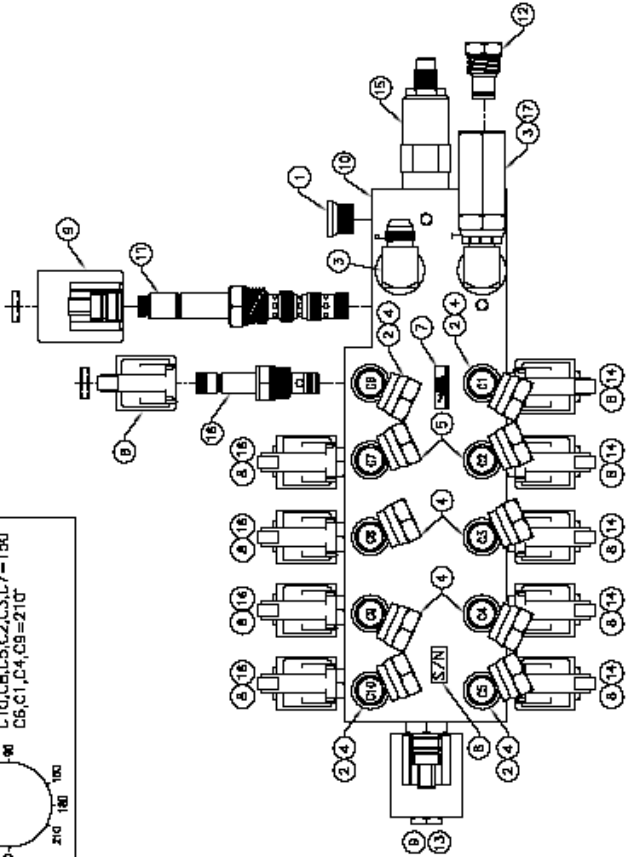


**FITTING ORIENTATION**



**PARTS LIST**

N <sup>o</sup>	PART NUMBER	QTY	PART DESCRIPTION
1	210-036	1	FITTING
2	210-151	4	FITTING
3	210-166	2	FITTING
4	210-169	6	FITTING
5	210-224	2	FITTING
6	232-050	2	DEGL S/N (SILVER)
7	232-058	1	DECAL PASSE BLK/GOLD 1" X .75" R
8	253-046	10	COIL
9	253-421	2	COIL
10	270-093	1	MANIFOLD
11	273-008	1	CARTRIDGE
12	273-012	1	CARTRIDGE
13	273-017	1	CARTRIDGE
14	273-077	5	CARTRIDGE
15	273-078	1	CARTRIDGE
16	273-676	1	CARTRIDGE
17	279-008	1	CHECK VALVE



NOTE:  
1. 210-151 FITS IN PORTS C1, C6, C8, AND C10 UNDER THE P/N'S 210-156.

**SPECIFICATIONS:**

- MAXIMUM PRESSURE 3000 PSI
- MAXIMUM FLOW 8 GPM
- PORT SIZE (P, T) -8 SAE O-RING
- PORT SIZE (ALL C) -6 SAE O-RING
- MOUNTING HOLES (2) -406 DIA
- MOUNTING HOLES (1) 5/16-18 TAPPED

REV	DESCRIPTION	REVISED	FORM A	DATE	APPROVED	DESIGNED BY	DATE	QUANTITIES	DATE
1	ISSUED DRAWING								
2	REPLACED DRAWING								

MANUFACTURED BY	DATE	QUANTITIES	DATE
ASSEMBLED BY			
TESTED BY			
INSPECTED BY			
APPROVED BY			

MANUFACTURED BY	DATE	QUANTITIES	DATE
ASSEMBLED BY			
TESTED BY			
INSPECTED BY			
APPROVED BY			

MANUFACTURED BY	DATE	QUANTITIES	DATE
ASSEMBLED BY			
TESTED BY			
INSPECTED BY			
APPROVED BY			

MANI ASSY 0805 5DA CLSD D-INTC  
 3002-662  
 1 OF 2

# FASSE SET UP-START UP INSTRUCTIONS

**THE CORRECT START-UP IS THE RESPONSIBILITY OF THE DEALER AND/OR OPERATOR!!  
PLEASE FOLLOW THESE INSTRUCTIONS**

1. Mount control box on tractor in a location easily accessible for the operator.  
Attach **RED** wire to positive battery lead ----- Attach **Black** wire to negative lead.  
Connect Control Cable from rake to Control Box cable with threaded coupler.  
**12-Volt DC Negative Ground Only.** Consult Factory for Positive Ground option.
2. Install correct tips on the 2 hydraulic hoses routed down the tongue. Locate hydraulic hose from the “P” port on the valve. Insert into one of the remote valve couplings. **DO NOT INSERT RETURN LINE AT THIS TIME.** Operate the control valve to determine which position it must be in to supply oil to the pressure hose. You may have a detent that allows the valve to remain in this position, or you may have to tie the valve handle with a bracket, wire or twine. Return the valve to neutral and install the **return hose in the return coupler.**
3. Remove the 1” pins on the rod end of the Frame Angle Cylinders, as well as the angle iron cylinder safety stop. Swing cylinders out to clear rake frame tab.
4. **With the tractor moving** operate the Tractor valve control handle to supply oil to the pressure hose.
5. You will likely see the overhead frame begin to move as a rule the right side frame will extend first, then the left side frame. **Until the air is purged from the system this may take place without using the white “Frame switch in the center of the control panel.**
6. **Until the system is fully purged, it is possible that any one or all of the 6 functions may cause the cylinders to extend or retract with the control switches in the neutral position.**
7. Operate the 4 remaining switches until the air is completely purged. Extend the rake frame cylinders fully and re-insert the 1” pins.
8. Check the tractor transmission/hydraulic oil level before completing the start-up. About 4-5 gallons may be required to replenish the system.
9. On occasion it is necessary to extend and retract the overhead frame 2-3 times in order that the hoses take a “set” so they will fold as intended.
10. **REMEMBER!! The rake must be moving at any time you extend or retract the overhead frame.**

## **PURGING THE OVERHEAD FRAME REPHASING CYLINDERS**

To properly purge the air from the system, cylinders should be fully extended to the rephasing mode. (You will note that one side will extend first until the cylinders are fully purged) Hold the cylinders in the fully extended mode for approximately 30 seconds; retract the cylinders until the air is purged from the system. Make sure tractor RPM is moderate so the hydraulic pump is at its full capacity. During initial startup the seals may need a few cycles to seat themselves for a good seal.

**PATIENCE is the key and air is the worst enemy. NEVER loosen a fitting to bleed off the system. This can be dangerous!**

# OPERATING INSTRUCTIONS

## FULL HYDRAULIC MODELS

***Use with FASSE Valve instructions***

- **Maintain tire pressure: 20 PSI front and rear.**
- **Adjust spring tension to allow crop to rotate raking wheels.**
- **Do not operate raking wheels in the ground.**
- Install suitable hose couplers on the 3/8" 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.
- Remove the two dealer installed safety transport chains-03PCCHAIN08

### **TO OPEN FROM TRANSPORT POSITION TO RAKING POSITION**

1. Operate the FASSE control switch as indicated on the valve decal to raise the raking wheels to the "up" position.
2. Operate the FASSE control switch to open the overhead frame, WHILE MOVING. Pull forward slowly until the main frame is fully open, and then close about 4" to 6".
3. Using the FASSE control switch indicated on the valve decal, adjust the raking wheel frames to the required angle.
4. Level raking frames to the ground by alternately adjusting the main frame to drawbar adjusting links.
5. Operate the FASSE control switch as indicated on the valve decal to lower the raking wheels.
6. Check hydraulic fluid in your tractor. You will likely need to add approx. 4-5 gallons for initial startup.
7. Adjust the raking wheel crop contact (spring tension) by using the supplied rake crank handle and position chain in slot so the raking wheel will move the crop with minimum or no ground contact. The 2 slots in the chain bracket allow for 1/2 link adjustment. Replace handle in storage bracket.

**NOW YOU ARE READY TO RAKE**

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

1. Operate the FASSE control switch as indicated on the valve decal to raise the raking wheels to the "up" position.
2. Return raking frames to straight position.
3. Operate the FASSE control switch to close the overhead frame WHILE MOVING. Pull forward slowly until main frame is fully closed.

**NOW YOU ARE READY TO TRANSPORT**

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

# **OPERATING INSTRUCTIONS**

## **STANDARD & WIDE MODELS**

### **STANDARD HYDRAULICS**

1. Install suitable hose couplers on the 4 hoses supplied. You will need one double acting valve to open and close the main frame and one double acting valve for raising and lowering the raking wheels.
2. Remove the 2 dealer installed 03PCCHAIN08 safety transport chains.

### **TO OPEN FROM TRANSPORT POSITION TO RAKING POSITION**

1. Operate the tractor valve to raise the raking wheels to the “up” position.
2. To open the overhead frame, operate the tractor valve while moving. Pull forward slowly until the frame is fully open, or to the width suitable for your raking conditions.
3. Use the adjusting links on the raking wheel frames to adjust raking angle as required.
4. Level raking frames to the ground by alternately adjusting the main frame to drawbar adjusting links.
5. Operate the tractor valve to lower the raking wheels, check each raking wheel for proper crop contact.
6. Check hydraulic fluid in your tractor. You will need to add approximately 2 gallons for initial startup.

**NOW YOU ARE READY TO RAKE**

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

1. Operate the tractor valve to raise raking wheels to the “up” position.
2. Return raking frames to straight position.
3. To close the overhead frame, operate the tractor valve while moving. Pull forward slowly until the frame is fully closed.

**NOW YOU ARE READY TO TRANSPORT**

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