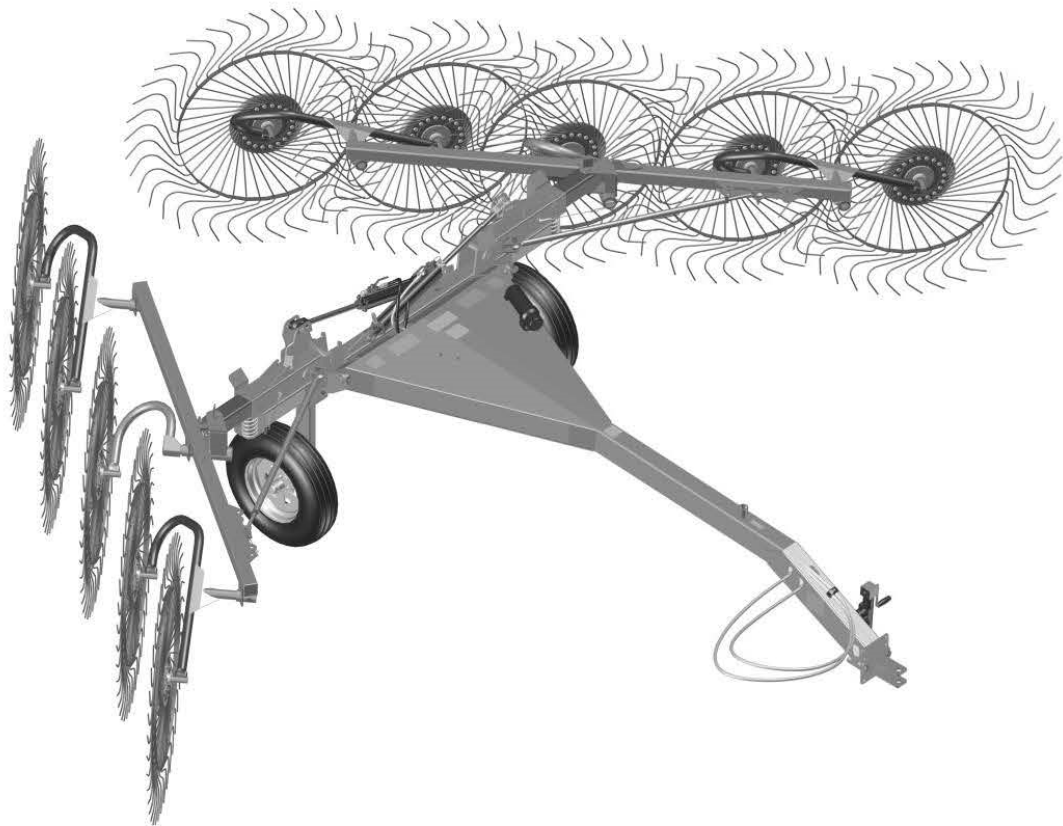


H&S PARTS BOOK

AR2110 RAKE



Revision #02
Starting Ser. #714821

Part #67831
HSMFG0117

P.O. BOX 768, MARSHFIELD, WI 54449
(715) 387-3414 FAX (715) 384-5463
www.hsmfgco.com

CONTENTS

Instructions For Ordering Parts - About Improvements	1
Figure 1 - Frame Components.	2-3
Figure 2 - Slider and Components.	4-5
Figure 3 - Hub Assembly.	6-7
Figure 4 - Rake Beam and Components.	8-9
Figure 5 - Rake Wheel Assembly.	10-11
Figure 6 - Optional Kicker Wheel.	12-13
Figure 7 - Hydraulics.	14-15
Figure 8 - Hydraulic Cylinder	16-17
Figure 9 - Optional Wind Guard	18-19
Parts Notes.	20

INSTRUCTIONS FOR ORDERING PARTS

All service parts should be ordered through your authorized H&S dealer. They will be able to give you faster service if you will provide them with the following

1. Model & Serial number is located on the left, rear main frame of your unit.
2. All reference to left or right apply to the machine as viewed from the rear.
3. Parts should not be ordered from illustration only. Please order by complete part number.
4. If your dealer has to order parts - give shipping instructions:

VIA truck - large pieces (please specify local truck lines)

VIA United Parcel Service (include full address)

H&S MFG. CO. INC.	
MARSHFIELD, WIS.	
MOD. NO.	<input type="text"/>
SER. NO.	<input type="text"/>
DESCR.	<input type="text"/>

PLEASE RECORD NUMBERS FOR YOUR UNIT FOR QUICK REFERENCE

ABOUT IMPROVEMENTS

H&S IS CONTINUALLY STRIVING TO IMPROVE IT'S PRODUCTS

We must therefore, reserve the right to make improvements or changes whenever it becomes practical to do so without incurring any obligation to make changes or additions to the equipment previously sold.

FIGURE 1

FRAME COMPONENTS

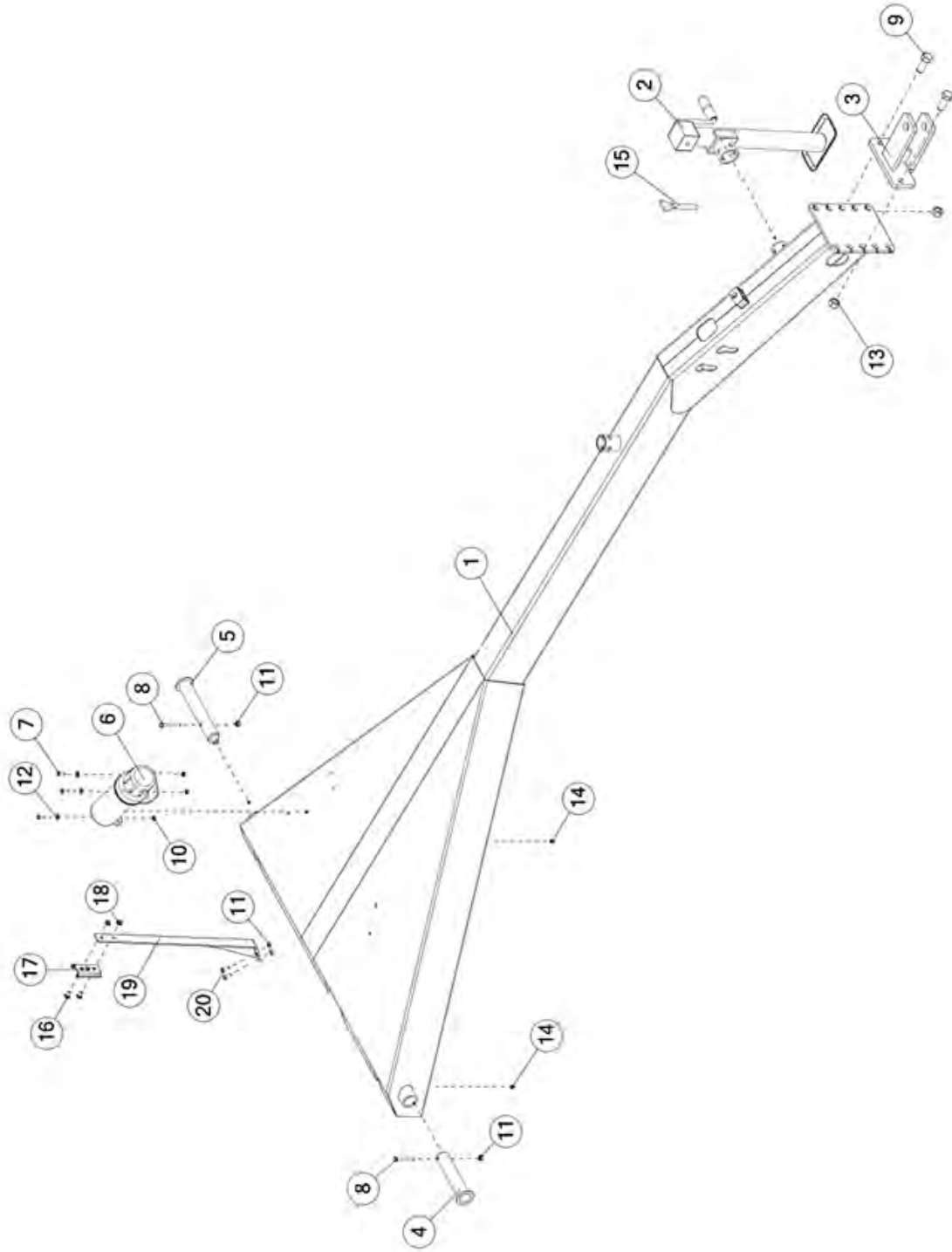


FIGURE 1

FRAME COMPONENTS

<u>ITEM</u>	<u>QTY</u>	<u>PART #</u>	<u>DESCRIPTION</u>
1	1	69909	MAIN FRAME WITH DECALS
2	1	BFR753	JACK, SIDEWIND,2000#
3	1	10ERWE06	CLEVIS
4	1	10WR7	ASSY, PIVOT ARM PIN
5	1	0240WE05	ASSY, PIVOT ARM PIN
6	1	S522	MANUAL HOLDER
7	3	YBHH08100	BOLT, 1/4 X 3/4 GR 5
8	2	YBHH10080	BOLT, 5/16 X 2-1/2 GR 5
9	2	YBHH24018	BOLT 3/4-10 X 2 GR 8 YELLOW ZINC HEX
10	3	YNRL08005	NUT, REVERSIBLE-SIDE LOCK, 1/4-20 HEX
11	4	YNRL10005	HEX NUT, REVERSIBLE-SIDE LOCK, 5/16-18
12	3	YWFL08005	WASHER, FLAT, 1/4 USS
13	2	YNRL24005	HEX NUT, REVERSIBLE-SIDE LOCK, 3/4-10
14	2	G89	ZERK, 1/4"-28 STRAIGHT
15	1	12N117	PIN, 0.56, 5.19, JACK
16	2	YBCR10030	CARR. BOLT, 5/16 X 3/4 GR 5
17	1	F97	SMV BRACKET
18	2	YNFG10005	HEX NUT, FLANGED-LOCK, 5/16-18
19	1	75209	BRACKET WELDMENT
20	2	YBHH10105	BOLT, 5/16 X 3/4 GR 5

FIGURE 2
SLIDER & COMPONENTS

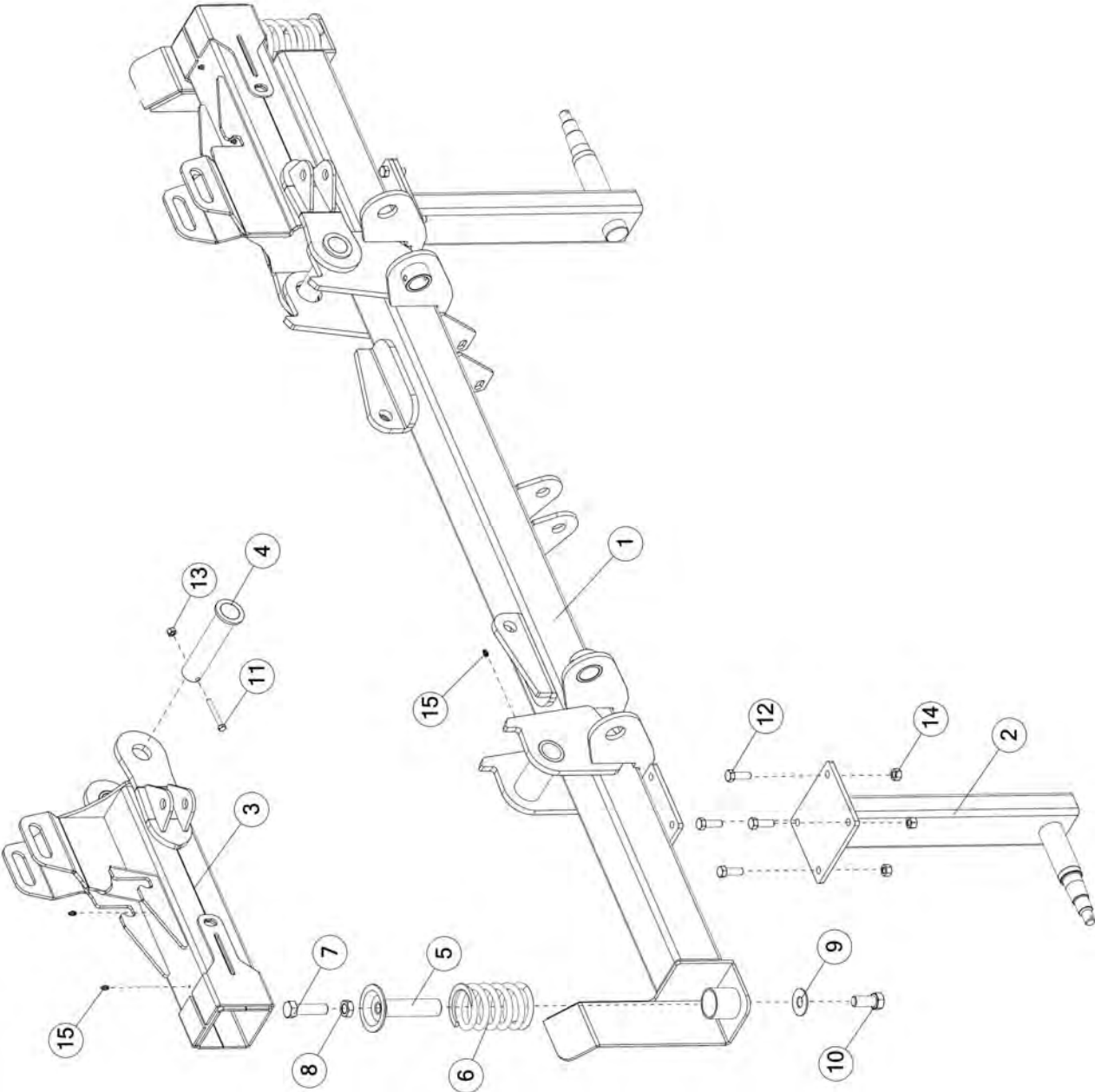


FIGURE 2

SLIDER & COMPONENTS

<u>ITEM</u>	<u>QTY</u>	<u>PART #</u>	<u>DESCRIPTION</u>
1	1	69945	BACK MAIN FRAME WITH DECALS
2	2	10ERWE07	AXLE WELDMENT
3	1	69950	ASSM, RIGHT SLIDE, WITH DECALS ASSM,
*	1	69949	LEFT SLIDER, WITH DECALS
4	2	10WR7	ASSY, PIVOT ARM PIN
5	2	10ERWE05	SPRING HOLDER
6	2	10WR47	SPRING
7	2	YBHH24042	3/4-10 X 2-3/4 GR. 5 TAP BOLT
8	2	YNJM24010	HEX JAM NUT, 3/4-10 GR 2, ZINC WASHER,
9	2	YWFL24005	FLAT, 3/4 USS
10	2	YBHH24014	BOLT, 3/4-10 X 1-3/4" GR. 5 2-1/2" GR. 5 BOLT,
11	2	YBHH10080	5/16 X 2-1/2 GR 5
12	8	YBHH16030	BOLT, 1/2 X 1-1/2 GR 5
13	2	YNRL10005	HEX NUT, REVERSIBLE-SIDE LOCK, 5/16-18
14	8	YNRL16005	HEX NUT, REVERSIBLE-SIDE LOCK, 1/2-13
15	6	G89	ZERK, 1/4"-28 STRAIGHT

* MEANS NOT SHOWN

FIGURE 3 HUB ASSEMBLY

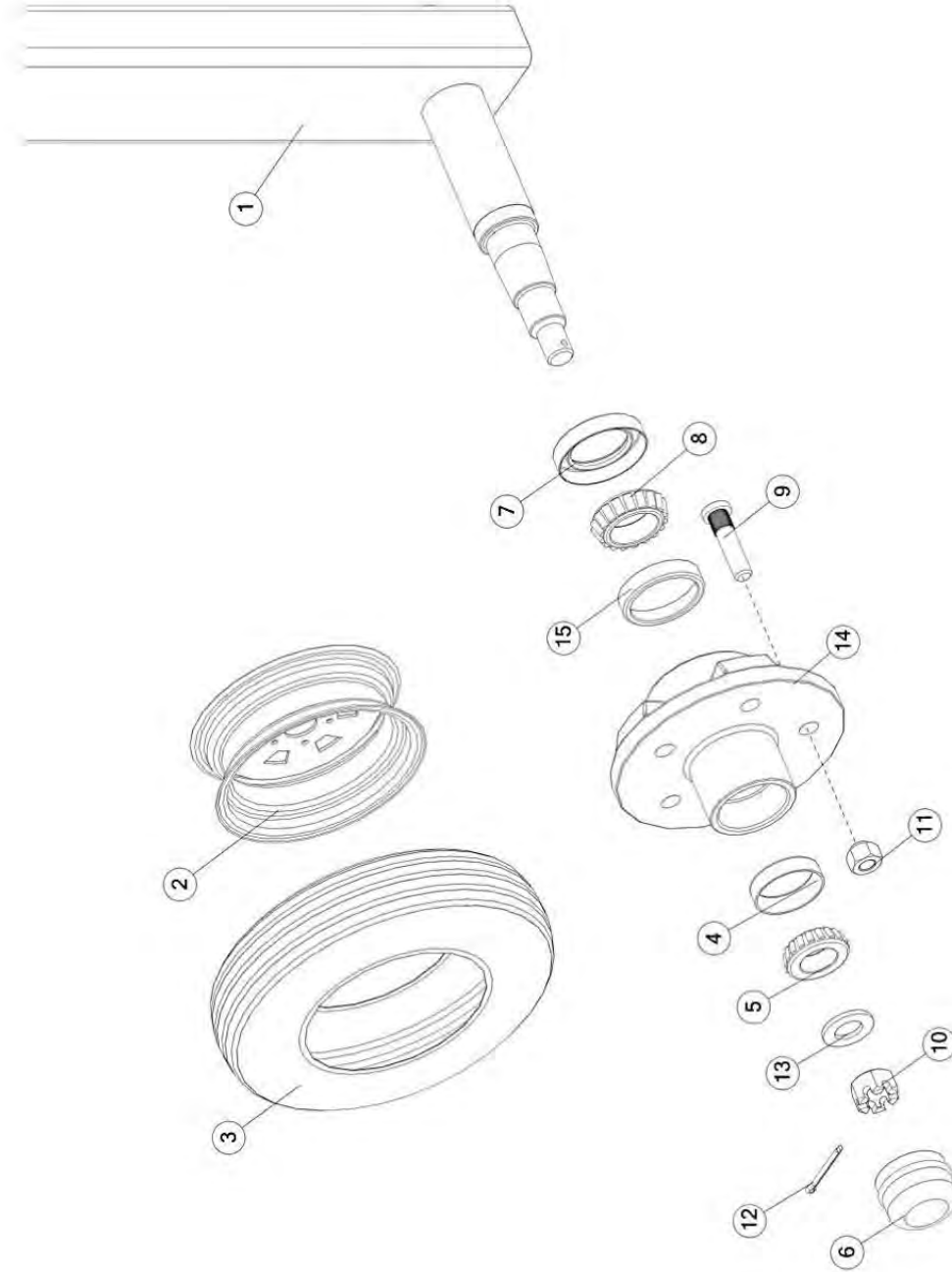


FIGURE 3

HUB ASSEMBLY

<u>ITEM</u>	<u>QTY</u>	<u>PART #</u>	<u>DESCRIPTION</u>
1	2	10ERWE07	AXLE WELDMENT
2	2	8603	RIM 15 X 5 5 BOLT
3	2	8604	205/75D15 LRC TIRE
4	2	BFR275	RACE
5	2	CAT10	OUTER BEARING
6	2	CAT46	CAP
7	2	CAT5	GREASE SEAL
8	2	CAT6	INNER BEARING
9	10	YBSD16018	STUD BOLT SPECIAL KNURL OD
10	2	YNSL24010	HEX NUT, SLOTTED, 3/4-16,
11	10	YNWL16005	WHEEL NUT, 1/2"-20 UNF
12	2	YPCT05010	COTTER PIN 5/32" X 1-1/2"
13	2	YWFL24010	WASHER, FLAT, SAE 3/4, PLAIN
14	2	CAT8	HUB, 545, 5 BOLT, 1250 LBS, WITH RACES
15	2	CAT7	INNER RACE

FIGURE 4
RAKE BEAM & COMPONENTS

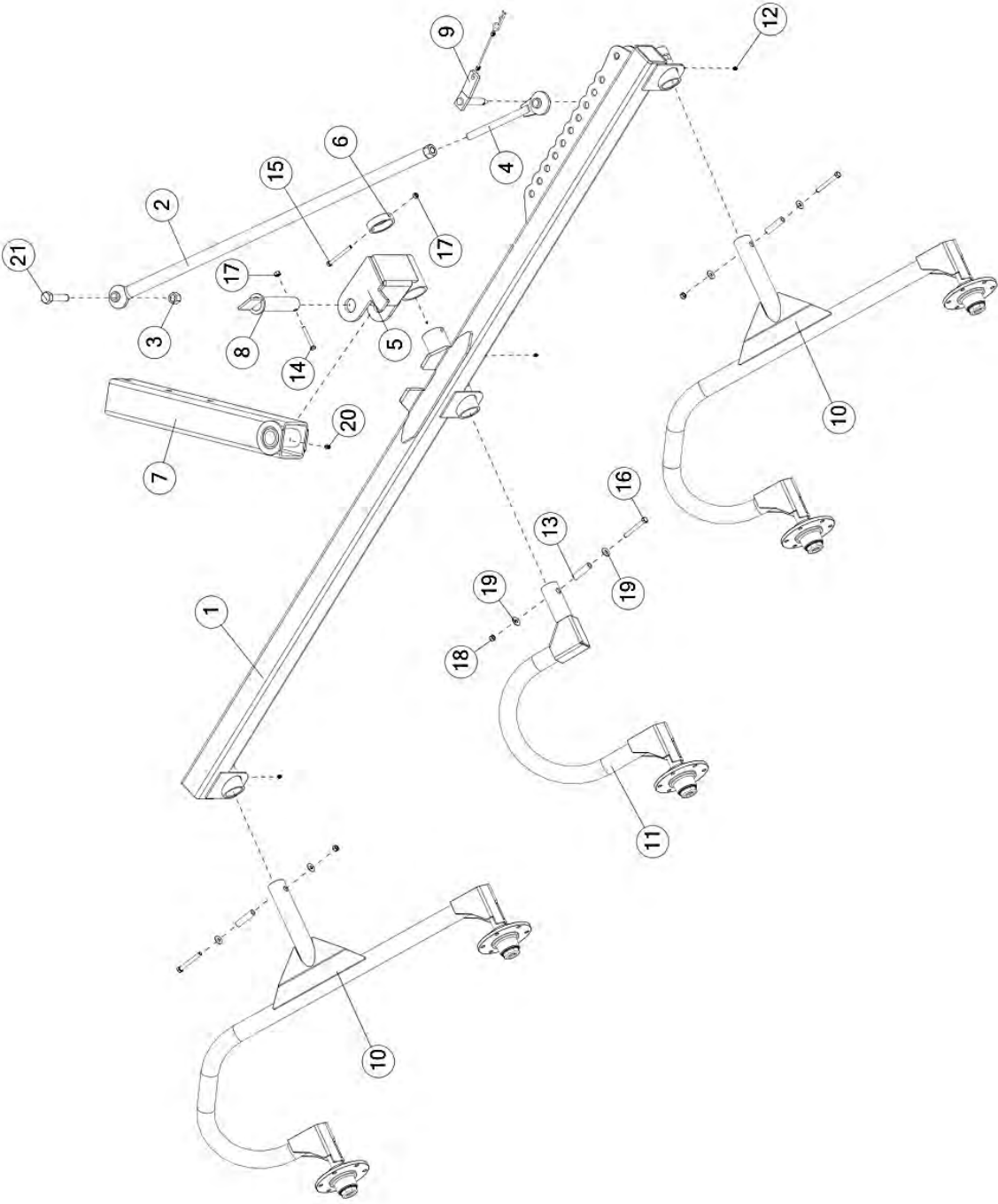


FIGURE 4

RAKE BEAM & COMPONENTS

<u>ITEM</u>	<u>QTY</u>	<u>PART #</u>	<u>DESCRIPTION</u>
1	1	66779	RIGHT RAKE BEAM
*	1	66770	LEFT RAKE BEAM
2	2	10WR31	ASSY, LINK ROD
3	2	YNRL24005	HEX NUT, REVERSIBLE-SIDE LOCK, 3/4-10
4	2	10WR9	ASSY, ADJUSTING ROD
5	1	12ERWE06	RIGHT INTERMEDIATE LINKAGE PIVOT
*	1	12ERWE05	LEFT INTERMEDIATE LINKAGE PIVOT
6	2	10WR8	THRUST WASHER
7	2	10WR34	WLDMT, SLIDE ARM, RAKE,
8	2	10WR6	ASSY, RAKE BEAM PIN
9	2	10ERAS20	LANYARD, WIDTH LINK PIN ASSEMBLY WLDMT,
10	2	71432	CANE, DUAL, RH
*	2	71436	WLDMT, CANE, DUAL, LH
11	1	71472	WLDMT, CANE, CENTER RH
*	1	71473	WLDMT, CANE, CENTER, LH
12	6	G89	ZERK, 1/4"-28 STRAIGHT
13	6	66247	SPACER, TUBE 5/8 OD X .385 ID
14	2	YBHH10080	BOLT, 5/16 X 2-1/2 GR 5
15	2	YBHH10110	BOLT, 5/16 X 3-1/2 GR 5
16	6	YBHH12155	BOLT, 3/8-16 X 3-1/4 GR 5
17	4	YNRL10005	HEX NUT, REVERSIBLE-SIDE LOCK, 5/16-18
18	6	YNRL12005	HEX NUT, REVERSIBLE-SIDE LOCK, 3/8"-16
19	12	YWFL12005	WASHER, FLAT, 3/8 USS
20	2	RG21	GREASE ZERK, 45 DEGREE
21	2	YBHH24050	BOLT, 3/4 X 3 GR 5

* MEANS NOT SHOWN

FIGURE 5

RAKE WHEEL ASSEMBLY

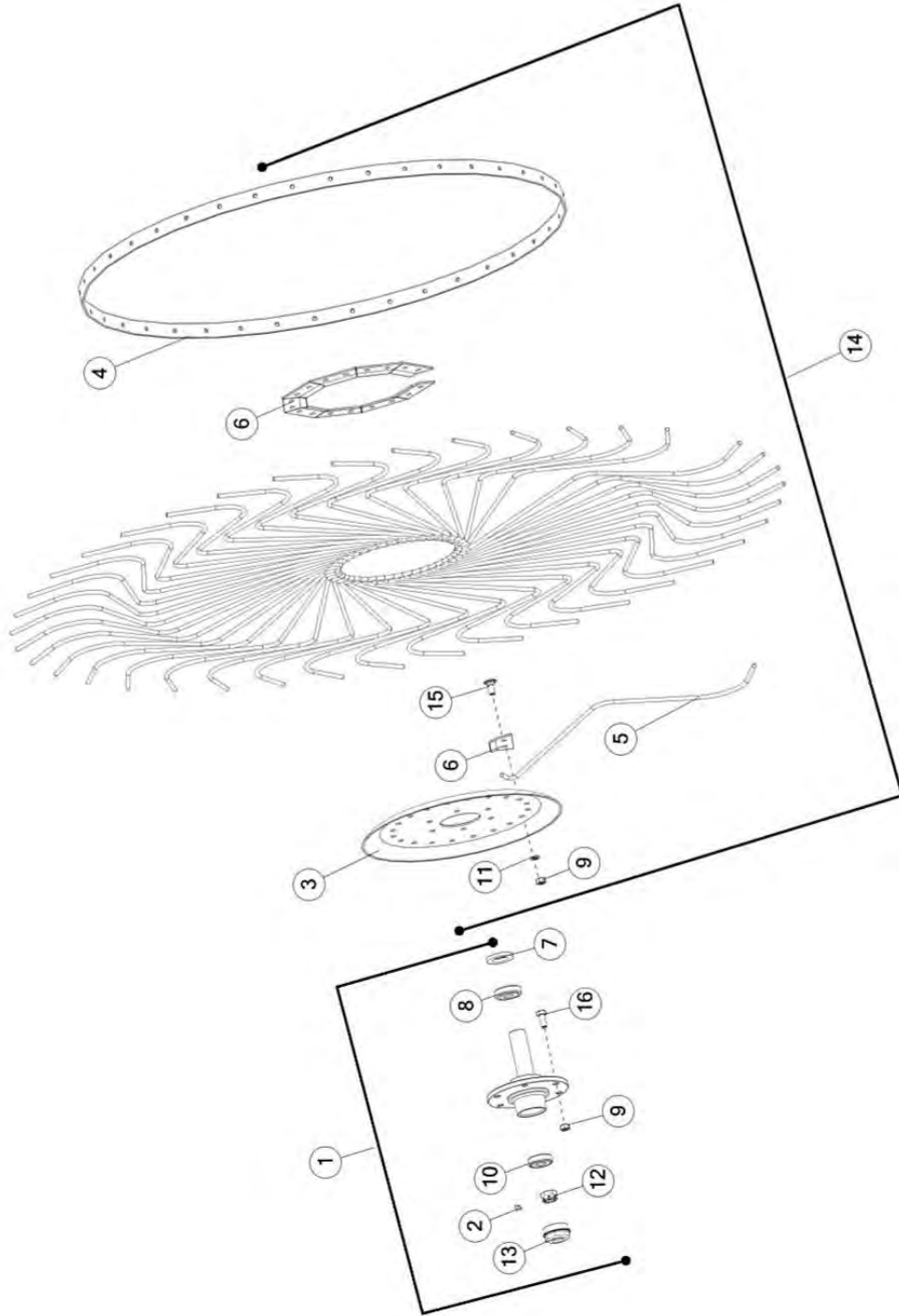


FIGURE 5

RAKE WHEEL ASSEMBLY

<u>ITEM</u>	<u>QTY</u>	<u>PART #</u>	<u>DESCRIPTION</u>
1	10	1081	RAKE WHEEL HUB COMPLETE AND SPINDLE
2	10	1088	CLIP, RETAINING
3	10	FR71	RAKE WHEEL CENTER
4	10	FR72	RAKE WHEEL OUTER RING
5	400	FR73	60" RAKE WHEEL TOOTH
6	100	FR74	RAKE TOOTH CLIP
7	10	T163	SEAL, 2.05 X 1.25 X .25
8	10	600012	INNER BEARING AND RACE
9	260	YNHX76015	HEX NUT, M10-1.5
10	10	600014	OUTER BEARING AND RACE WASHER,
11	200	YWLO76015	LOCK, M10
12	10	T172	NUT, HEX, 18MM - 1.5, CASTLE, G2, NF CAP,
13	10	T173	HUB, RAKE WHEEL
14	5	FR70	60" RIGHT HAND RAKE WHEEL ASSEMBLY
*	5	FR69	60" LEFT HAND RAKE WHEEL ASSEMBLY
15	200	YBCR76005	CARR. BOLT, 10MM X 25MM
16	60	YBHH76015	BOLT, M10-1.5 (25MM)

* MEANS NOT SHOWN

FIGURE 6

OPTIONAL - KICKER WHEEL

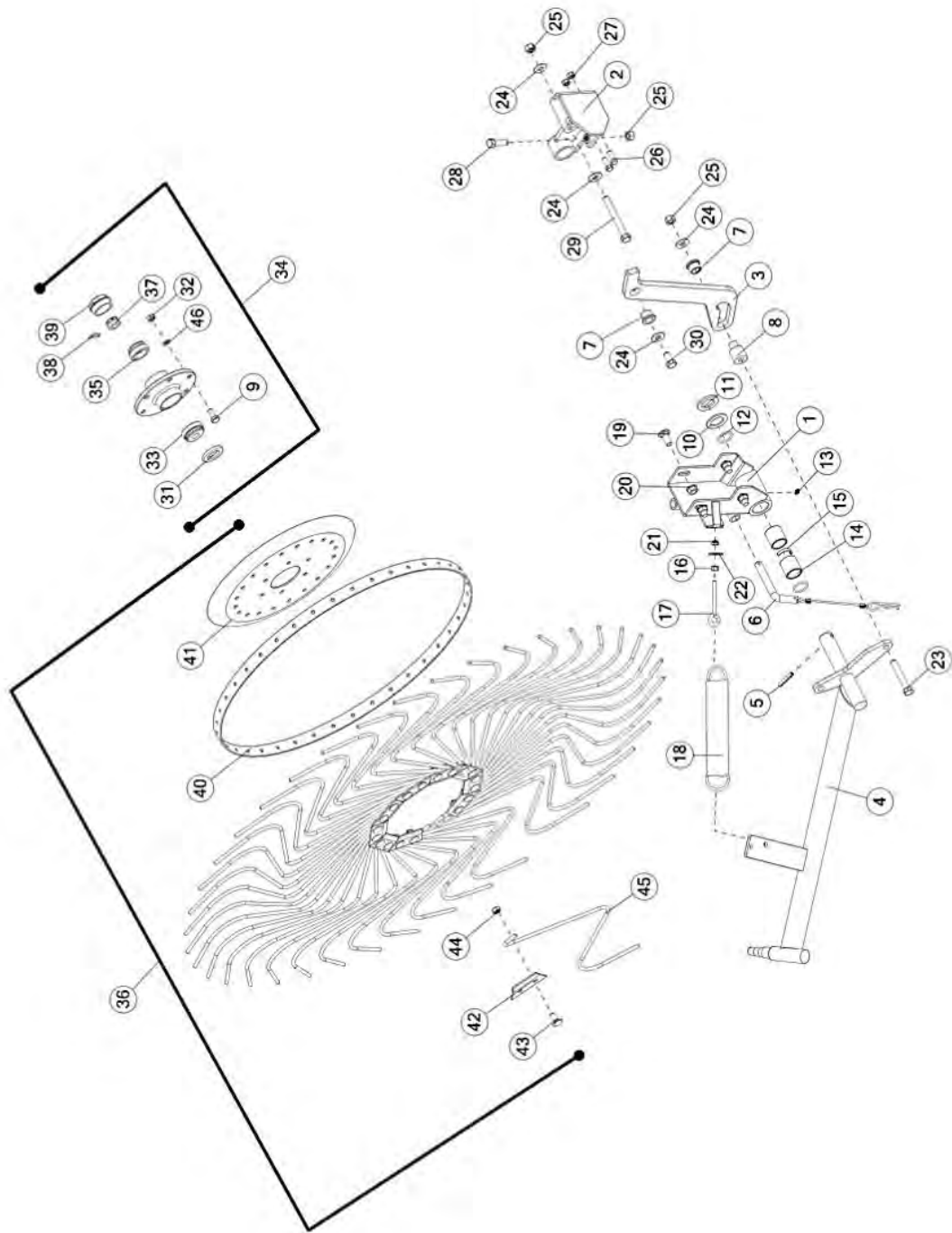


FIGURE 6

OPTIONAL - KICKER WHEEL

<u>ITEM</u>	<u>QTY</u>	<u>PART #</u>	<u>DESCRIPTION</u>
1	1	0240WE04	KICKER MOUNT WELD
2	1	0240WE07	KICKER STOP WELDMENT
3	1	0240HF03	KICKER LEVER LINK FRAME PIVOT
4	1	0240WE03	KICKER ARM WELD
5	1	YPEX10015	EXPANSION PIN, 5/16" X 1-3/4"
6	1	10ERAS08	LANYARD, CANE PIN ASSEMBLY
7	2	8579	POLY PIVOT BEARING
8	1	0240TU04	KICKER PIVOT SPACER LOWER
9	6	YBHH76015	BOLT, M10-1.5 (25MM)
10	1	BFR221	POLY WASHER
11	1	BFR229	WASHER
12	2	S99	O-RING, 218 BUNA-N, 1.50 OD X 1.25 ID ZERK,
13	1	G89	1/4"-28 STRAIGHT
14	2	G16	BRONZE BUSHING 1-1/2" X 1-1/4" X 1-1/2" BEARING
15	1	BFR230	SPACER
16	1	YNHX10005	HEX NUT, 5/16 GR 2
17	1	YBTE10030	TURNUED EYE BOLT, 5/16 X 3
18	1	BFR110	KICKER WHEEL SPRING
19	4	YBCR16015	CARR. BOLT, 1/2 X 1-1/4 GR 5
20	4	YNSF16005	HEX NUT, SERRATED FLANGED-LOCK, 1/2"-13 HEX
21	1	YNNY10005	NUT, NYLON LOCKNUT, 5/16-18
22	1	YWFL10010	WASHER, FLAT, 5/16" SAE GR. 8 (YELLOW ZINC)
23	1	YBHH16120	BOLT, 1/2 X 3-1/4 GR 5
24	4	YWFL16005	WASHER, FLAT, 1/2 USS
25	2	YNRL16005	HEX NUT, REVERSIBLE-SIDE LOCK, 1/2-13 BOLT,
26	2	YBHH12010	3/8 X 1 GR 5
27	2	YNRL12005	HEX NUT, REVERSIBLE-SIDE LOCK, 3/8"-16 BOLT,
28	1	YBHH16030	1/2 X 1-1/2 GR 5
29	1	YBHH16140	BOLT, 1/2 X 4-1/2 GR 5
30	1	YBHH16010	BOLT, 1/2 X 1 GR 5
31	1	T163	SEAL, 2.05 X 1.25 X .25
32	6	YBHH76015	BOLT, M10-1.5 (25MM)
33	1	600012	INNER BEARING AND RACE
34	1	1081	RAKE WHEEL HUB AND SPINDLE
35	1	600014	BEARING AND RACE
36	1	10WR17	49" RAKE WHEEL, ASSEMBLY
37	1	T172	NUT, HEX, 18MM - 1.5, CASTLE, G2, NF
38	1	1088	CLIP, RETAINING
39	1	T173	CAP, HUB, RAKE WHEEL
40	1	T177A	RAKE WHEEL OUTER RING
41	1	FR71	RAKE WHEEL CENTER
42	10	FR74	RAKE TOOTH CLIP
43	20	YBCR76005	CARR. BOLT, 10MM X 25MM
44	20	YNHX76015	HEX NUT, M10-1.5
45	40	10WR42	49" RAKE WHEEL TOOTH
46	6	YWLO76015	WASHER, LOCK, M10

FIGURE 7 HYDRAULICS

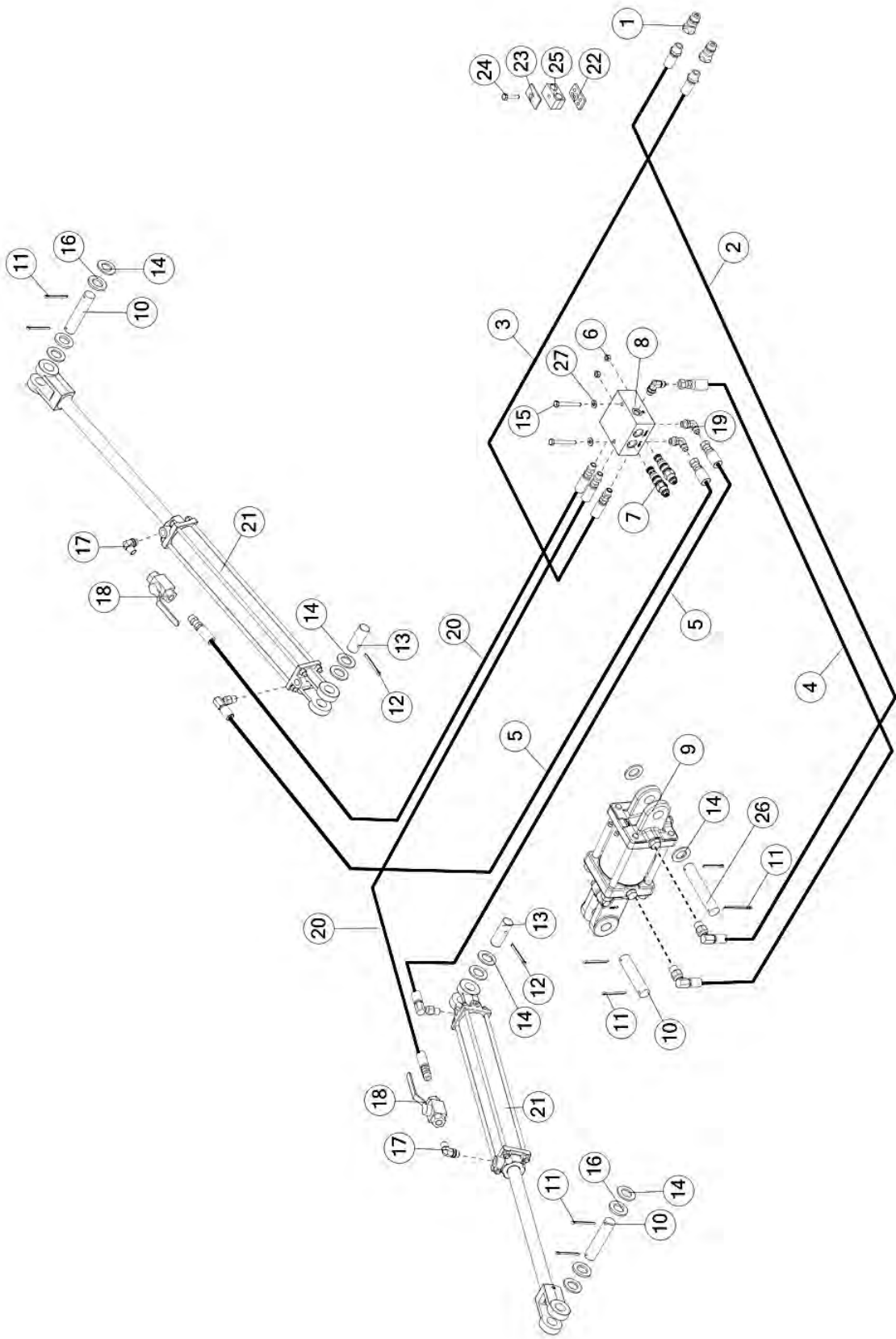


FIGURE 7

HYDRAULICS

<u>ITEM</u>	<u>QTY</u>	<u>PART #</u>	<u>DESCRIPTION</u>
1	2	67148	FTG, ST, 8ORB, QUICK COUPLER TIP
2	1	70101	HSASSM, HYD, 6, 190.0, 1/2 ORB, 1/2 ORB
3	1	70102	HSASSM, HYD, 6, 190.0, 3/8 ORB, 1/2 ORB
4	1	70097	HSASSM, HYD, 6, 20.0, 1/2 ORB, 3/8 JIC
5	2	70094	HSASSM, HYD, 6, 34.0, 3/8 ORB, 3/8 JIC
6	2	YNRL10005	HEX NUT, REVERSIBLE-SIDE LOCK, 5/16-18
7	2	66920	CARTRIDGE, COUNTERBALANCE
8	1	60426	MANF, HYD, 6, DIST WITH VALVES
9	1	56412	CYLINDER, HYDRAULIC REPHASING
*	1	73227	SEAL KIT
10	3	72884	PIN, 1.00 X 5.70, CYLINDER
11	8	YPCT06020	COTTER PIN, 3/16 X 2
12	2	YPCT07005	COTTER PIN, 7/32 X 2
13	2	23N107	CYLINDER PIN
14	10	16SV136	WASH, FLAT, 1.75 X 1.02 X 0.13, ZC
15	2	YBHH10080	BOLT, 5/16 X 2-1/2 GR 5
16	2	BFR33	WASHER
17	2	70113	FTG, 90, 9/16ORB, 3/8NPT, STL
18	2	59235	VALVE, BALL, 3/8" HIGH PRESSURE
19	3	CHM268	ELBOW (6 C50X-S)
20	2	70098	HSASSM, HYD, 6, 30.0, 3/8 ORB, 3/8 NPT
21	2	69969	2" X 16" HYDRAULIC CYLINDER WITH PINS 90 DEG TO ORB PORTS
22	2	1021	LINE DOUBLE T2 CLAMP BASE
23	2	56563	CLAMP TOP PLATE
24	2	56568	CLAMP BOLT
25	2	CHM278	3/8 TWO LINE CLAMP BLOCK
26	1	72844	PIN, 1.00 X 5.70, CYLINDER
27	2	YWFL08005	WASHER, FLAT, 1/4 USS

*** MEANS NOT SHOWN**

FIGURE 8 HYDRAULIC CYLINDER

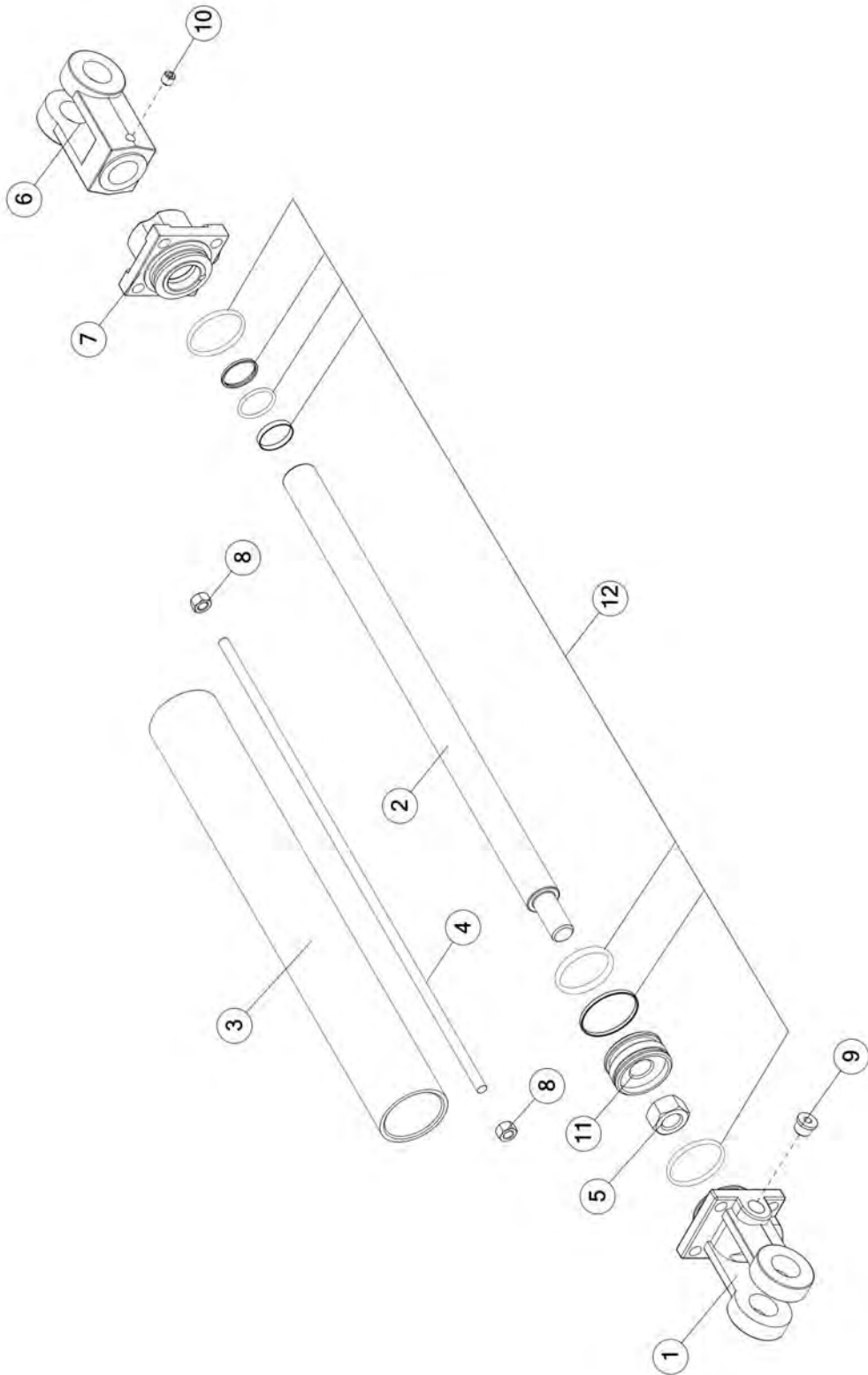


FIGURE 8

HYDRAULIC CYLINDER

<u>ITEM</u>	<u>QTY</u>	<u>PART #</u>	<u>DESCRIPTION</u>
1	1	66932	CLEVIS CAP FOR 2" CYLINDER
2	1	23N145A	ROD
3	1	23N146	CYL. TUBE
4	4	23N147	SHAFT, RND, 0.33 X 20.19
5	1	23N148	PISTON NUT
6	1	23N150A	ROD CLEVIS
7	1	66934	ROD CAP FOR 2" CYLINDERS
8	4	YNHX12005	HEX NUT, 3/8-16 GR 2
9	1	SD270	HOLLOW HEX PLUG 6
10	1	YSSO12015	SET SCREW, SOCKET, 3/8-24 X 3/8
11	1	56180	PISTON FOR 2" CYLINDER
12	6	56187	SEAL KIT FOR 2" CYLINDER
-	1	69969	2" X 16" HYDRAULIC CYLINDER WITH PINS 90 DEG TO ORB PORTS COMPLETE

FIGURE 9
OPTIONAL - WIND GUARD

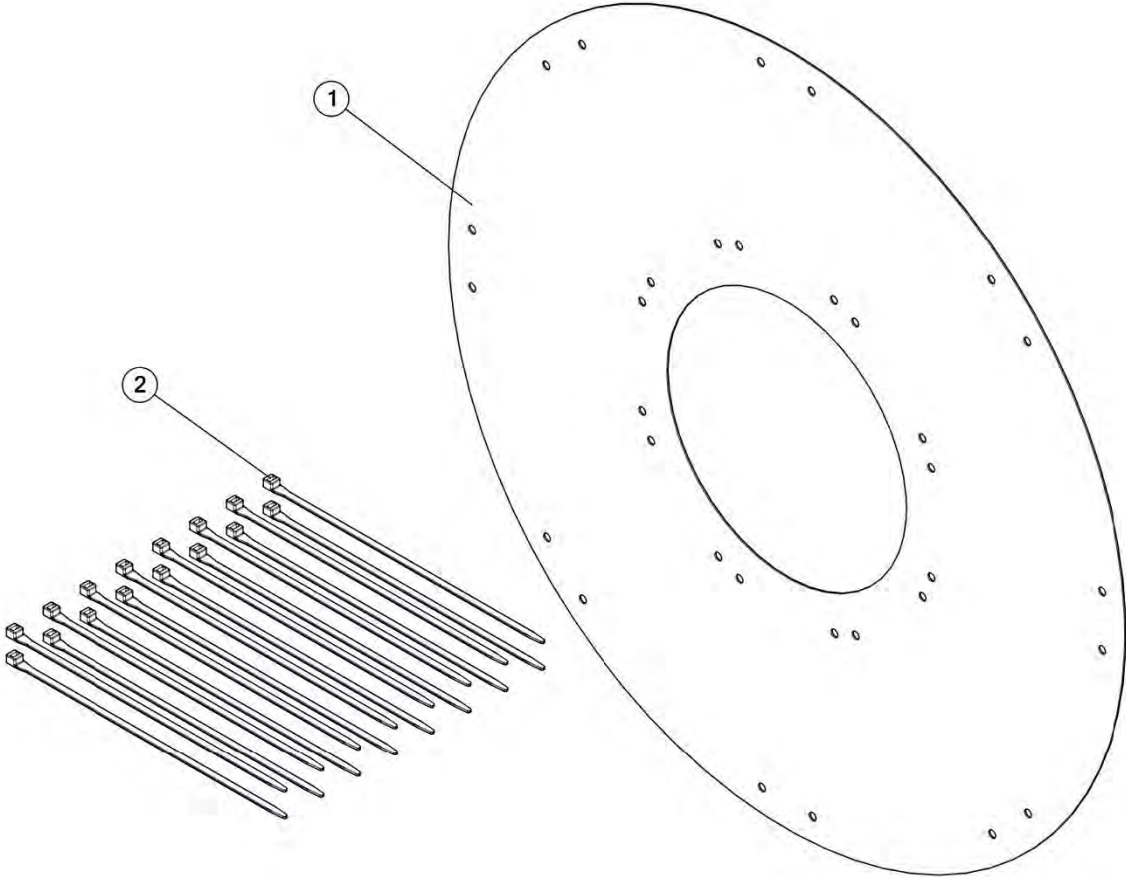
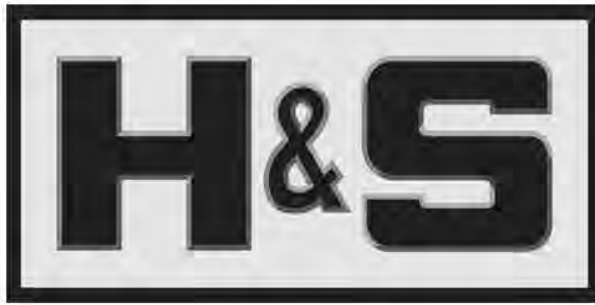


FIGURE 9
OPTIONAL - WIND GUARD

<u>ITEM</u>	<u>QTY</u>	<u>PART #</u>	<u>DESCRIPTION</u>
1	1	59039	POLY WIND GAURD, FOR 60" RAKE
2	16	57626	15 INCH 120# BLACK CABLE TIE



**H&S Manufacturing products are approved for the
FEMA SEAL OF QUALITY**

**P.O. BOX 768, MARSHFIELD, WI 54449
(715) 387-3414 FAX (715) 384-5463
www.hsmfgco.com**