



# **PARTS** BOOK

**FF6120  
RAKE**

Part #60313  
Rev. #10  
HSMFG121123

**Starting Serial #421FF20001**





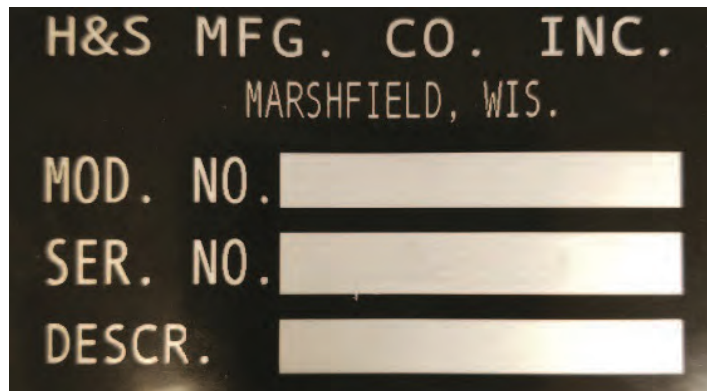
# INSTRUCTIONS FOR ORDERING PARTS

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

1. Model & Serial Number - Both can be located on the left, rear main frame of your unit.
2. All references to left or right apply to the machine as viewed from the rear.
3. Parts should not be ordered from illustration only. Please order 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)



PLEASE RECORD NUMBERS FOR YOUR UNIT FOR QUICK REFERENCE

## ABOUT IMPROVEMENTS

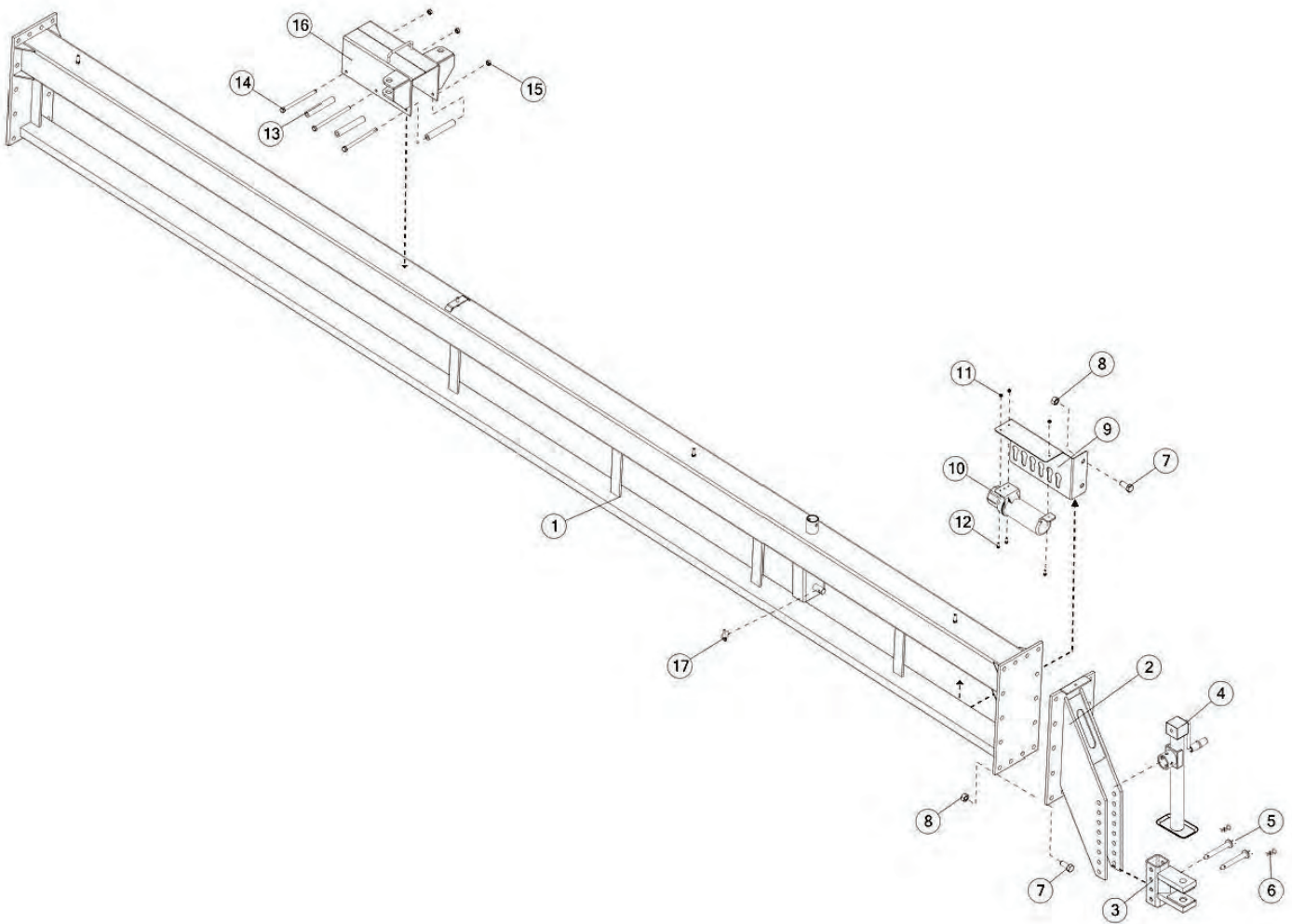
H&S IS CONTINUALLY STRIVING TO IMPROVE IT'S PRODUCTS

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.





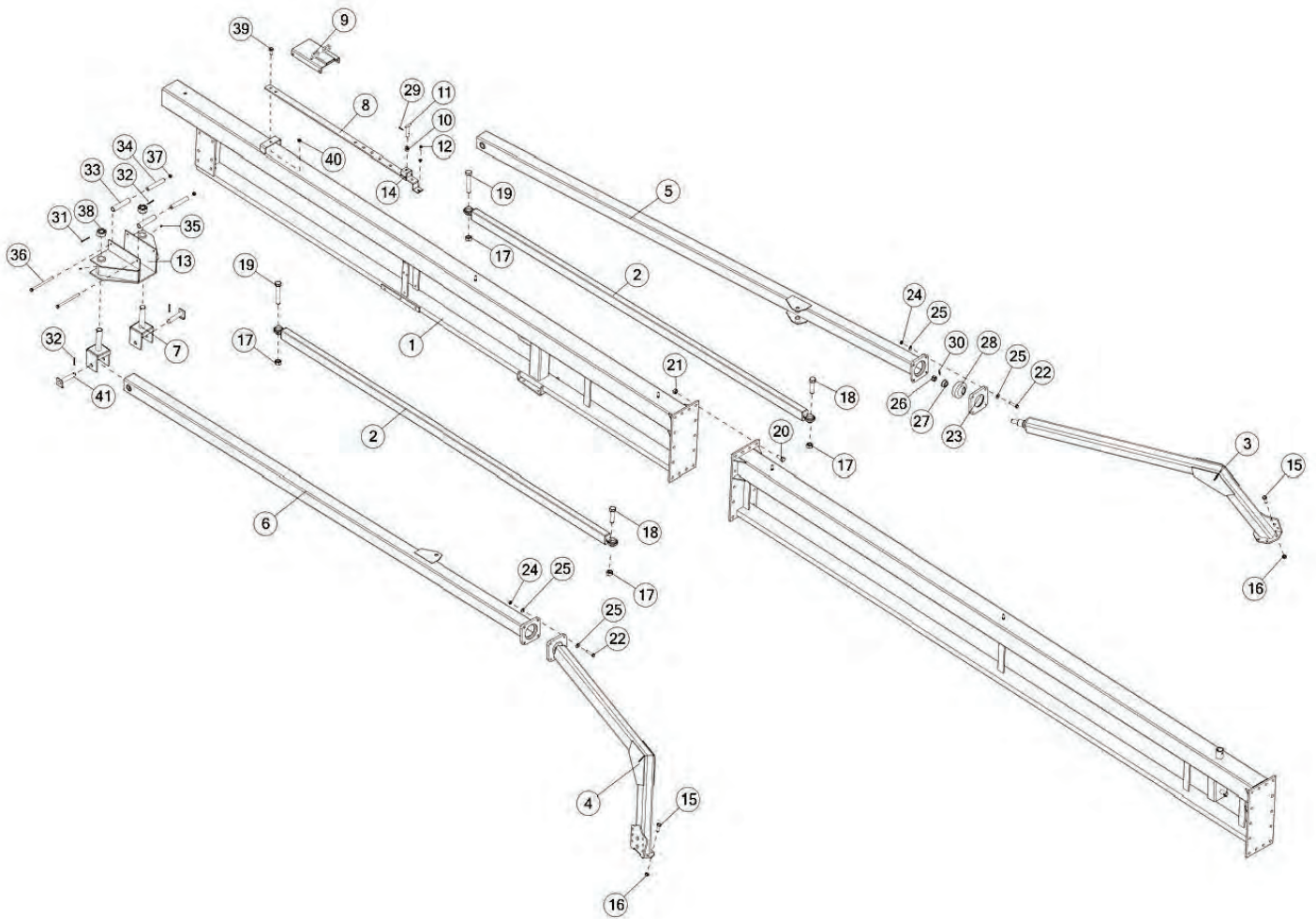
**FIGURE 1**  
**MAIN FRAME FRONT**







**FIGURE 2**  
**MAIN FRAME MIDDLE**



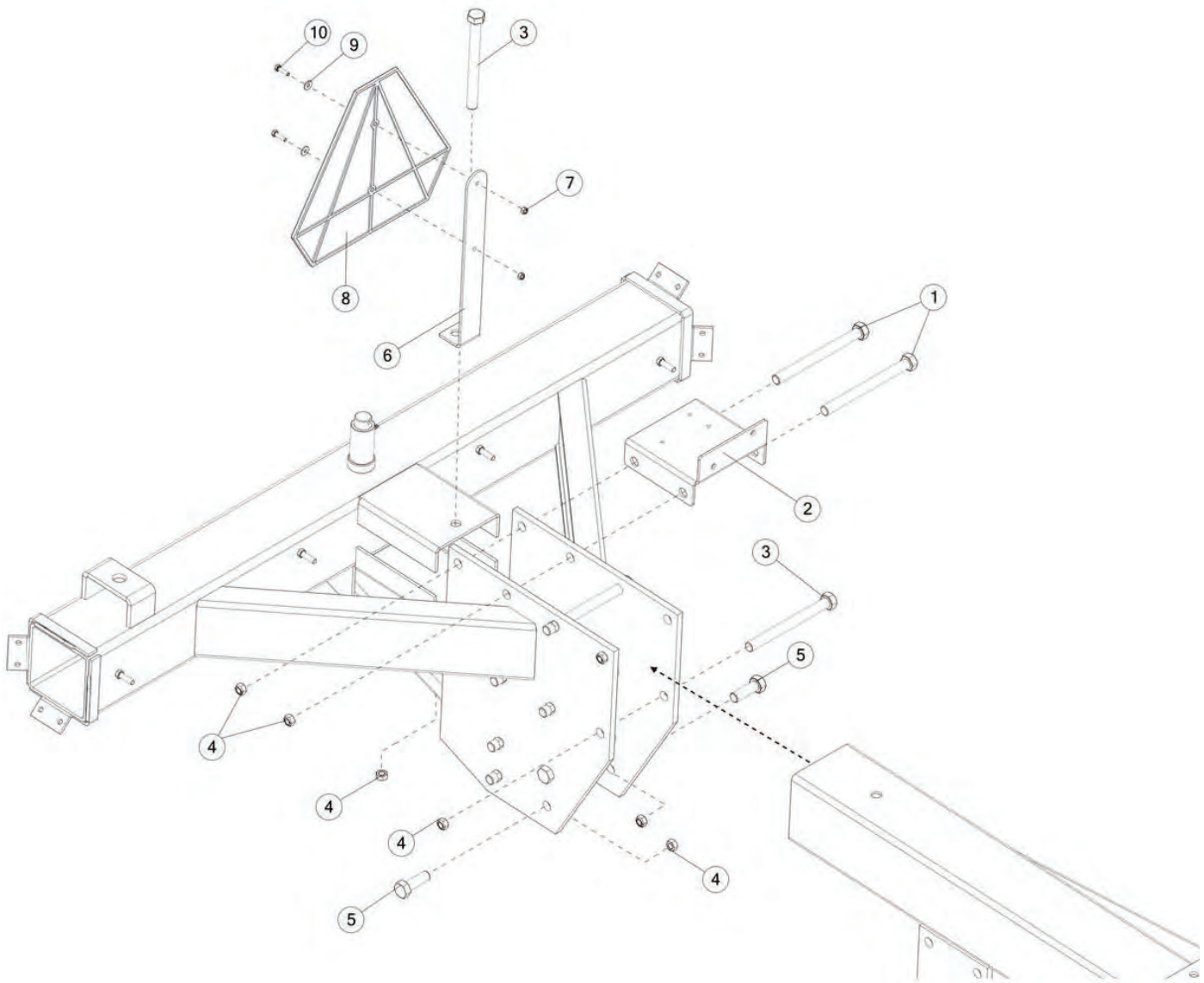


# FIGURE 2

## MAIN FRAME MIDDLE

REF #	PART #	DESCRIPTION	QTY
1	58293	POLE BACK	1
2	BFR458	LINKAGE FRONT	2
3	58352	ARM LH	1
4	58353	ARM RH	1
5	63371	LINKAGE ARM LH	1
6	63372	LINKAGE ARM RH	1
7	BFR476	LINKAGE YOKE BACK RH	2
8	67416	WIDTH ADJUSTMENT BAR	1
9	58380	WIDTH ADJUSTMENT STOP	1
10	BFR240	SPRING	1
11	BFR241	ADJUSTMENT HANDLE	1
12	YBFB10002	BOLT FLANGE, 5/16 X 1/2	1
13	58251	LINKAGE SLIDER BACK	1
14	55748	WIDTH ADJUSTMENT LOCK	1
15	YBHH20020	BOLT HEX, 5/8 X 1-3/4 G5	20
16	YNTL20005	NUT HEX, TOP LOCK, 5/8	20
17	YNTL32005	NUT HEX, TOP LOCK, 1	4
18	YBHH32015	BOLT HEX, 1 X 4 G5	2
19	YBHH32025	BOLT HEX, 1 X 6 G5	2
20	YBHH24014	BOLT HEX, 3/4 X 1-3/4 G5	14
21	YNTL24005	NUT HEX, TOP LOCK, 3/4	14
22	YBHH16080	BOLT HEX, 1/2 X 2-1/2 G5	8
23	58287	BEARING SUPPORT	4
24	YNTL16006	NUT HEX, TOP LOCK, 1/2	8
25	YWFL16005	WASHER FLAT, 1/2	16
26	YNSL28005	NUT HEX, SLOTTED, 7/8	2
27	58301	BALL SPACER	2
28	58409	PITCH ROD BALL PIN	2
29	YPCT05005	COTTER PIN, 5/32 X 1	1
30	YPCT05020	COTTER PIN, 5/32 X 1-3/4	2
31	YPCT05035	COTTER PIN, 5/32 X 2-1/2	1
32	YPCT06020	COTTER PIN, 3/16 X 2	3
33	58297	BACK SLIDER ROLLER	2
34	58298	SLIDER SPACER	2
35	G89	STRAIGHT ZERK 1/4-28 X 90	2
36	YBHH16182	BOLT HEX, 1/2 X 8 G5	2
37	YNTL16005	NUT HEX, TOP LOCK, 1/2	2
38	YNSL40005	NUT HEX, SLOTTED, 1-1/2	2
39	YBHH20010	BOLT HEX, 5/8 X 1-1/2 G5	1
40	YNTL16006	NUT HEX, TOP LOCK, 1/2	1
41	BFR479	PIVOT YOKE SHAFT PIN RH	2



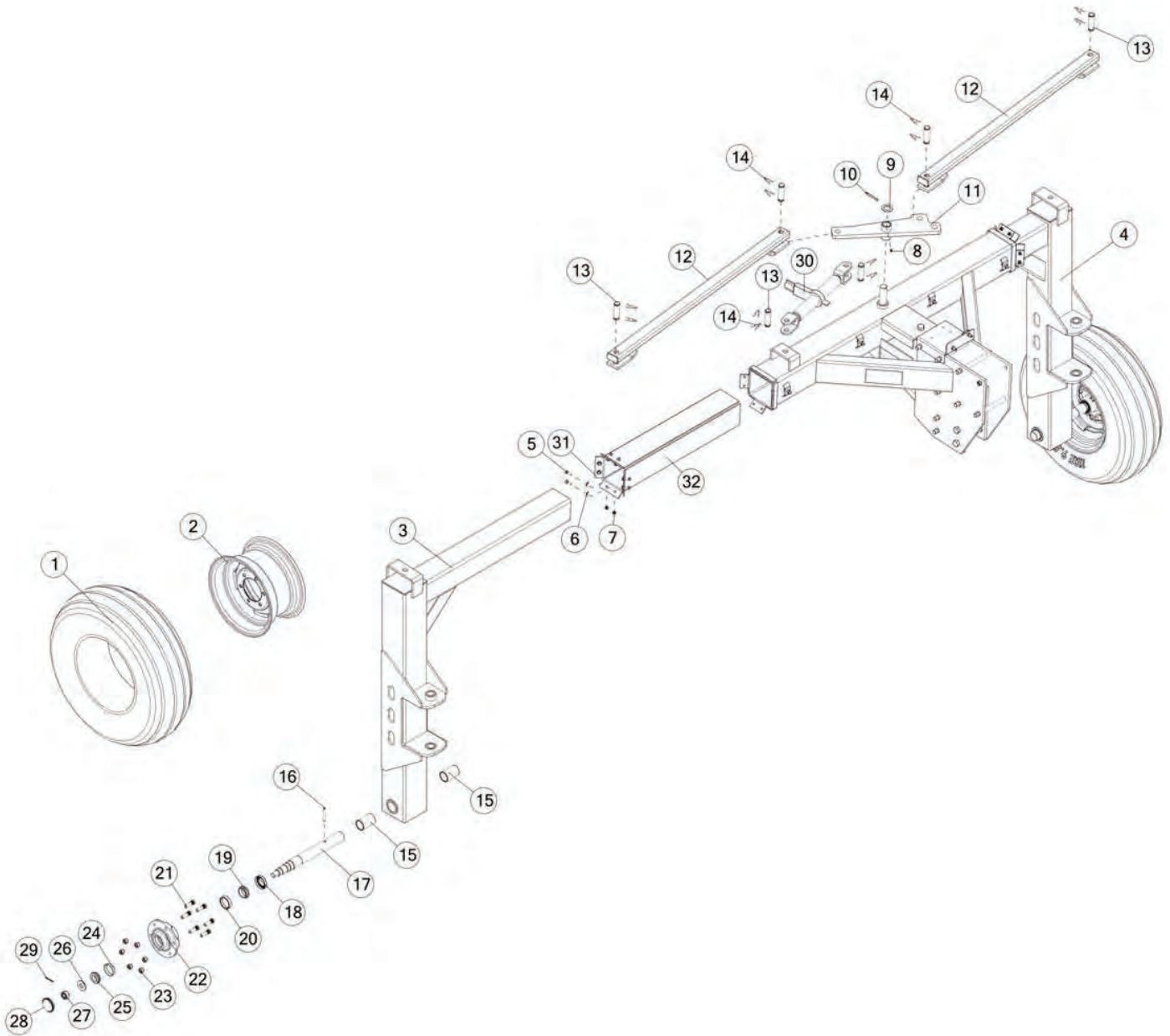








# FIGURE 4 REAR FRAME & AXLE ASSEMBLY



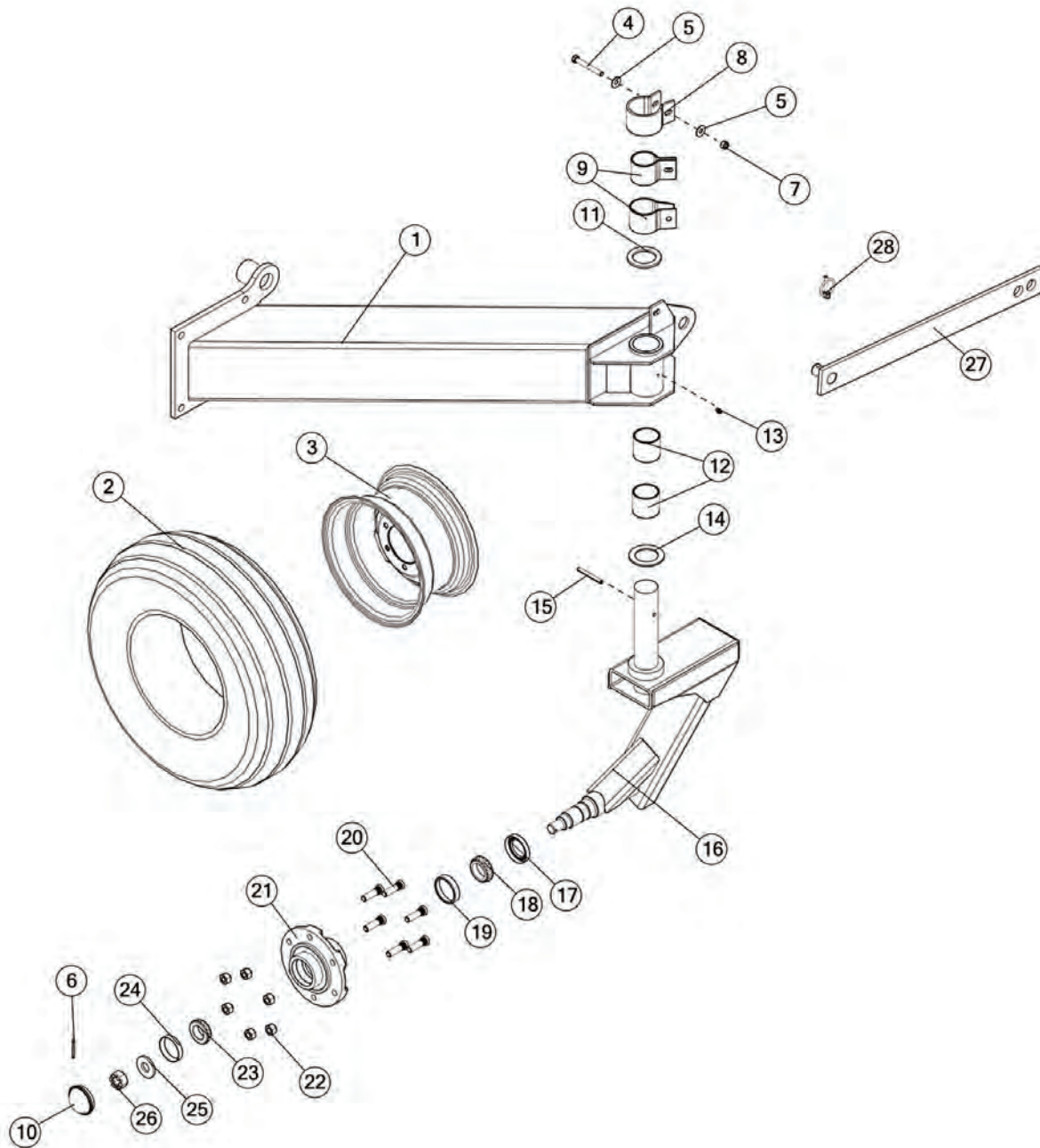


# FIGURE 4

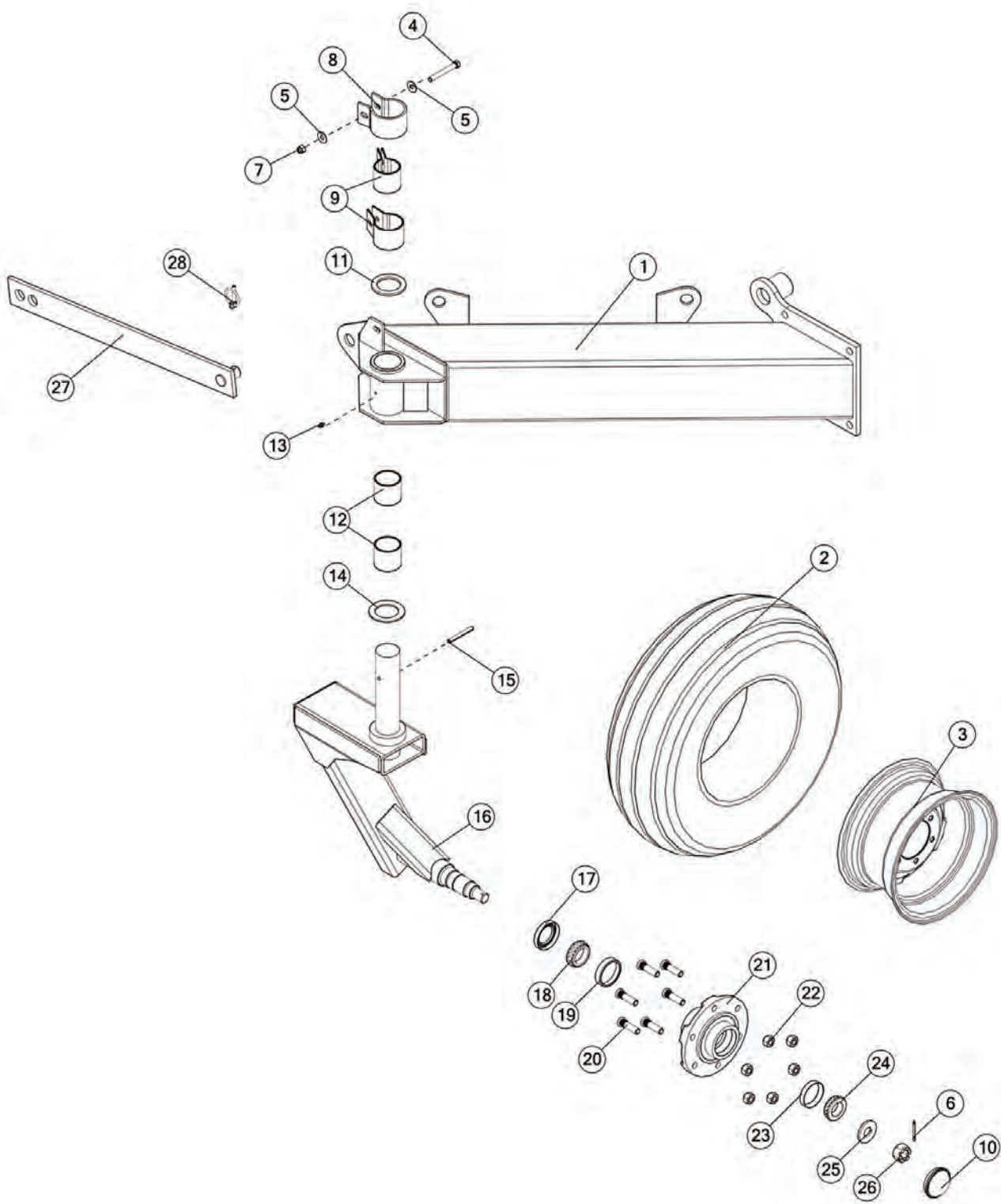
## REAR FRAME & AXLE ASSEMBLY

REF #	PART #	DESCRIPTION	QTY
1	UR2	TIRE AND TUBE 11L X 15	2
2	12N24	WHEEL 15 X 8, 6 BOLT	2
*	33417	WHEEL W/11LX15 8 PLY IMPL TIRE	2
3	60200	UPRIGHT RH	1
4	60199	UPRIGHT LH	1
5	YBHH10010	BOLT HEX, 5/16 X 1 G5	16
6	YWFL10005	WASHER FLAT, 5/16	16
7	YNTL10005	NUT HEX, TOP LOCK, 5/16	16
8	G89	STRAIGHT ZERK, 1/4 - 28 X 90	1
9	BFR229	WASHER	1
10	YPCT08010	COTTER PIN, 1/4 X 2-1/2	1
11	HD8	CAM ARM	1
12	FR9	CYLINDER LINK	2
13	T143	HYD CYLINDER PIN	6
14	53371	HYD CYLINDER PIN	8
15	58275	BUSHING	4
16	YPEX12025	EXPANSION PIN, 3/8 X 2-3/4	2
17	FR55	BACK SPINDLE	2
18	12N17	SEAL	2
19	12N18	INNER BEARING	2
20	12N19	INNER RACE	2
21	YBSD16005	BOLT STUD, 1/2 X 1-7/8	12
22	RG101	HUB W/RACES & STUDS	2
23	YNWL16005	NUT WHEEL, 1/2	12
24	17G146	OUTER RACE	2
25	17G145	OUTER BEARING	2
26	HD200	ROAD WHEEL SPINDLE WASHER	2
27	YNSL28005	NUT HEX, SLOTTED, 7/8	2
28	17G144	HUB CAP	2
29	YPCT05010	COTTER PIN, 5/32 X 1-1/2	2
30	T138	RATCHET JACK W/ HANDLE	1
31	FR52	THICK POLY SLIDES	4
32	FR53	THIN POLY SLIDES	4





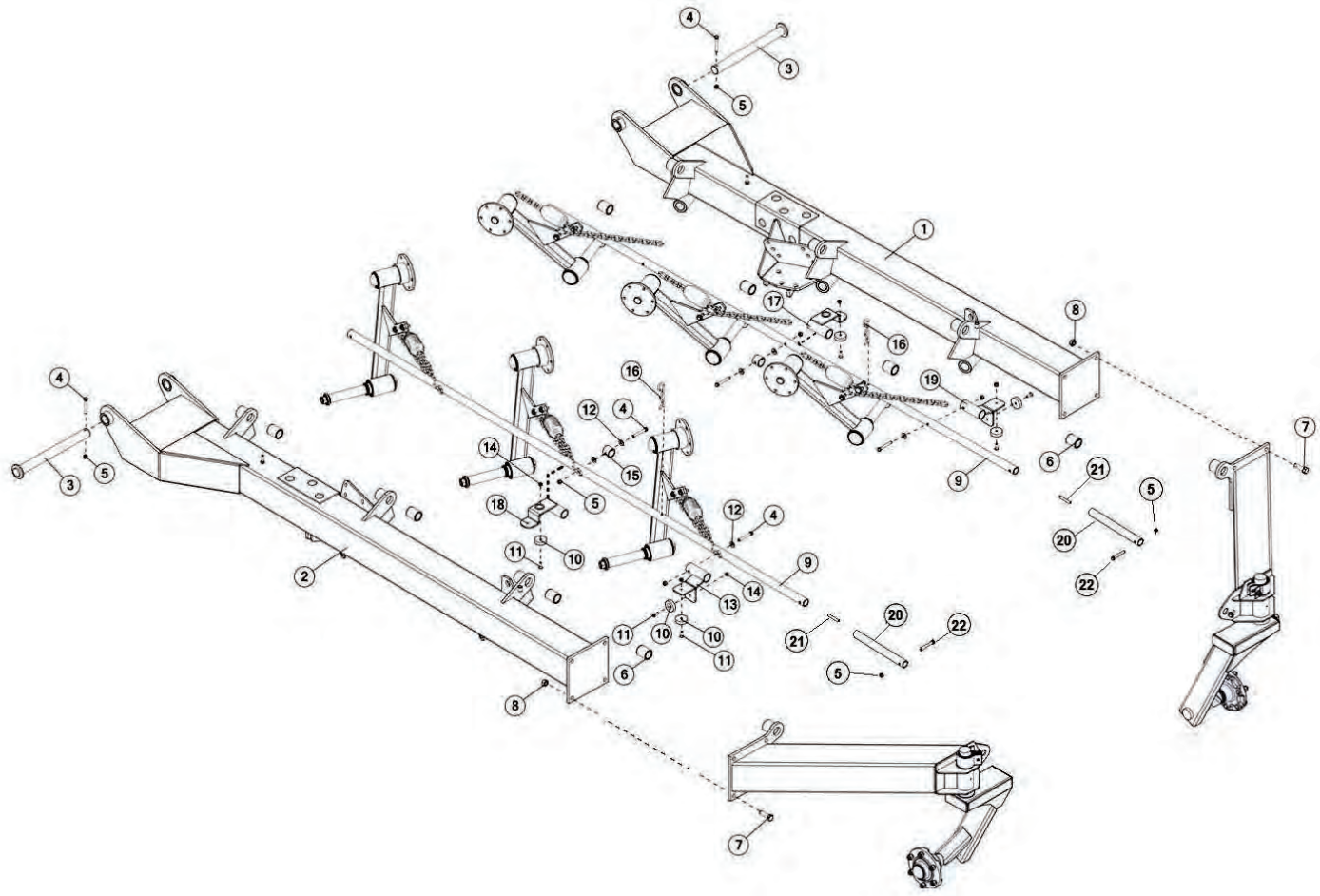






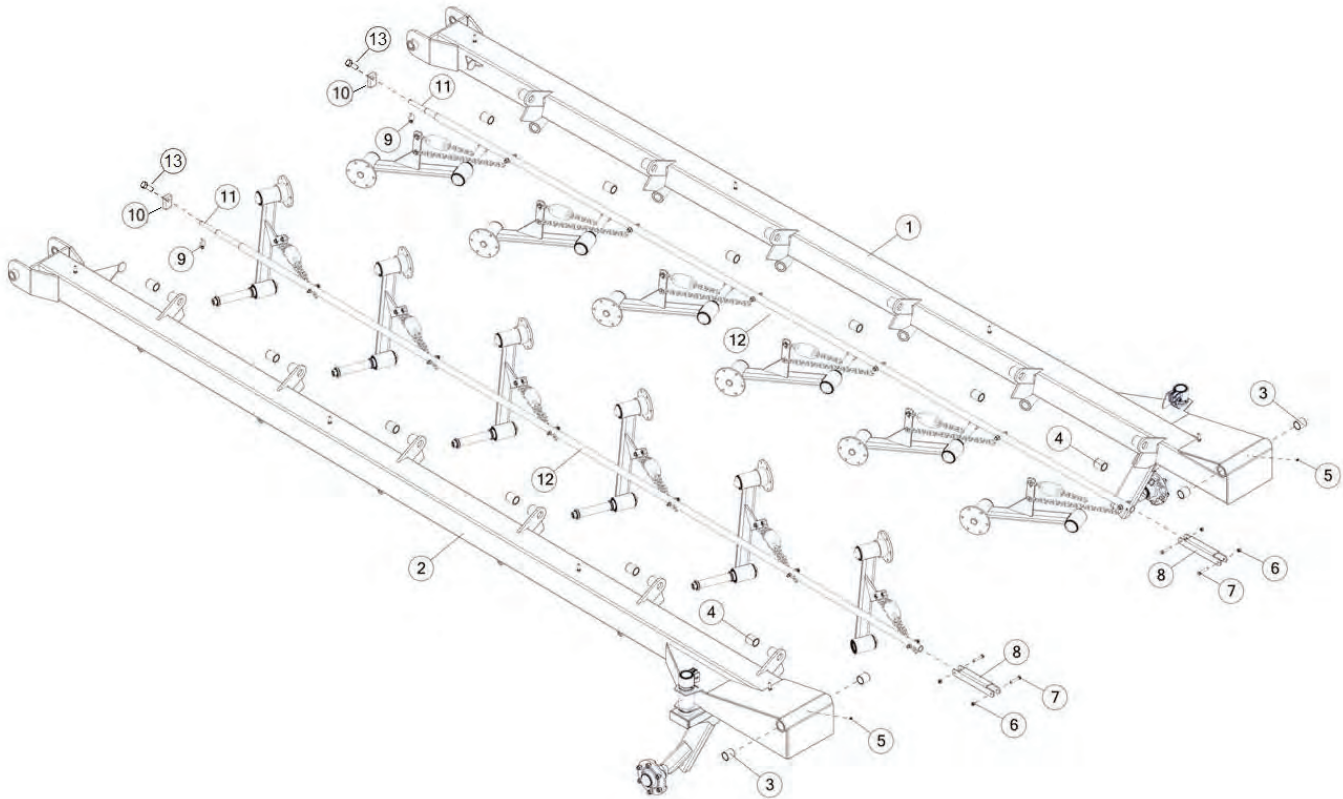


# FIGURE 7 RIGHT & LEFT FRONT RAKE BEAMS







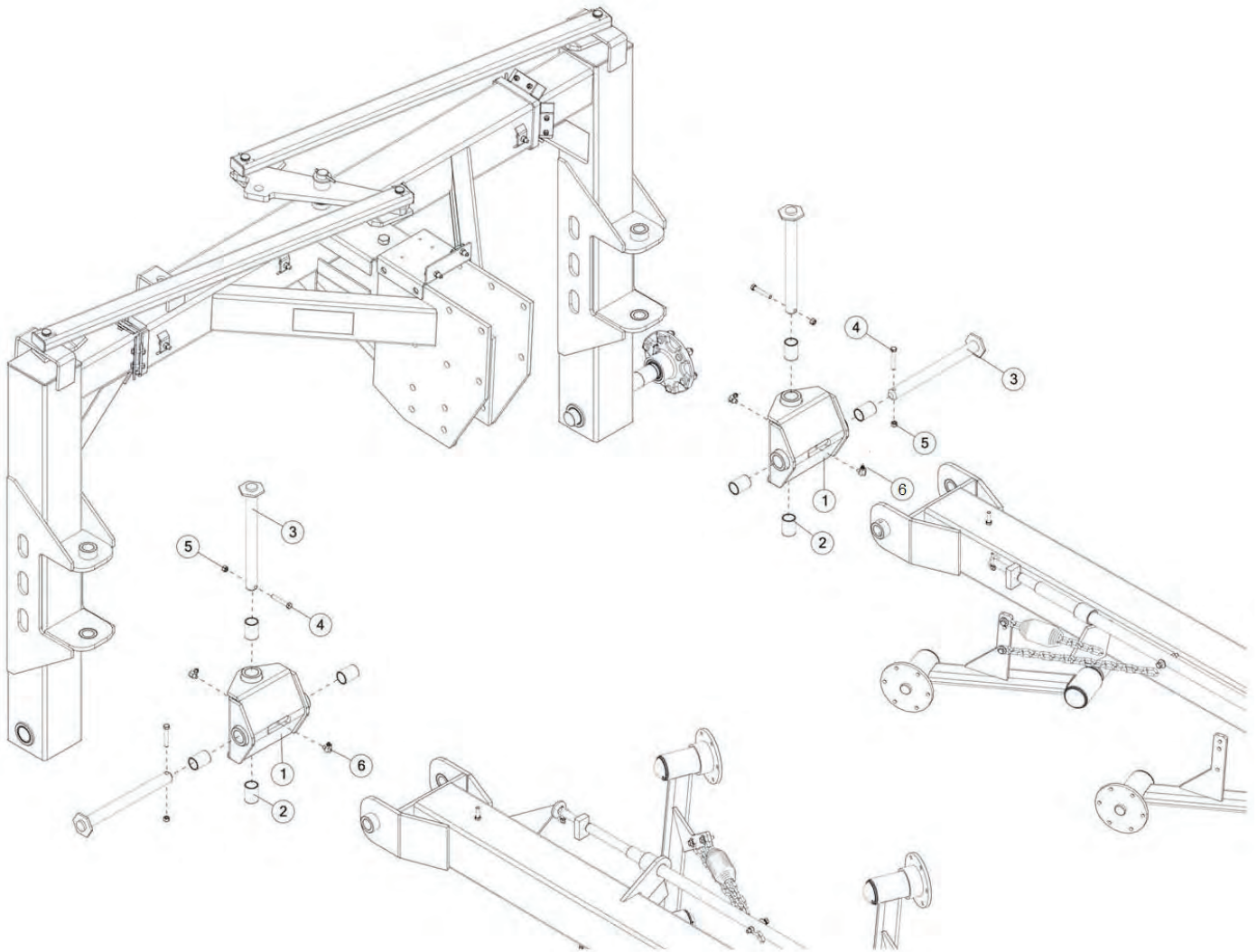


REF #	PART #	DESCRIPTION	QTY
1	FR13	RAKE BEAM REAR LH	1
2	FR14	RAKE BEAM REAR RH	1
3	FR83	IRON BUSHING	4
4	HD128	BUSHING	12
5	G89	STRAIGHT ZERK, 1/4 - 28 X 90	2
6	YNL12005	NUT HEX, TOP LOCK, 3/8	4
7	YBHH12105	BOLT HEX, 3/8 X 2-1/4 G5	4
8	58392	PIPE LINKAGE	2
9	YPLY08011	LYNCH PIN, 1/4 X 1-9/16	2
10	64103	RAKE PRESSURE HANDLE	2
11	BFR486	RAKE ARM LOCK-UP SHAFT	2
12	FR57	LIFT PIPE REAR	2



# FIGURE 9

## U-JOINT ASSEMBLY

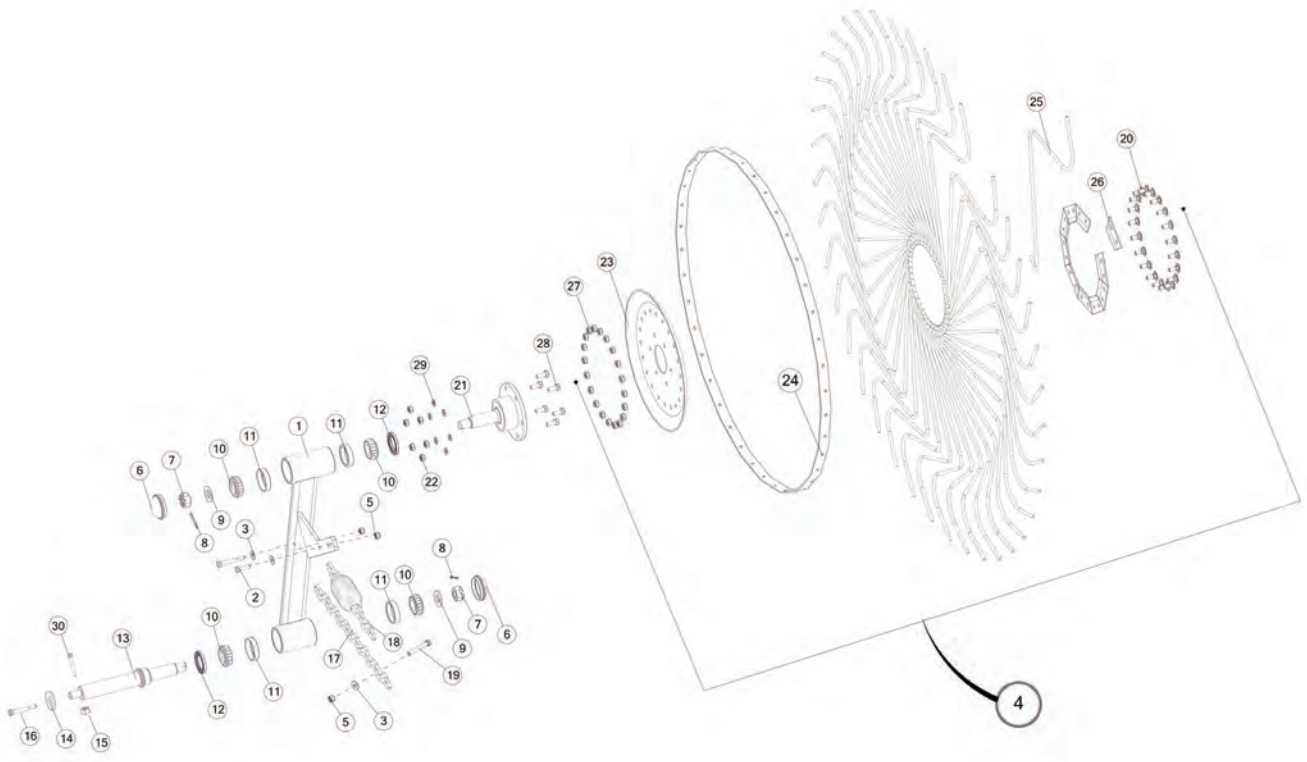


REF #	PART #	DESCRIPTION	QTY
1	FR5	U-JOINT	2
2	RG132	BUSHING	8
3	FR10	U-JOINT PIN	4
4	YBHH12090	BOLT HEX, 3/8 X 2-1/2 G5	4
5	YNTL12005	NUT HEX, TOP LOCK, 3/8	4
6	DWM133	1/8 PIPE - 45 DEGREE ZERK	4





# FIGURE 10 RAKE WHEEL ASSEMBLY



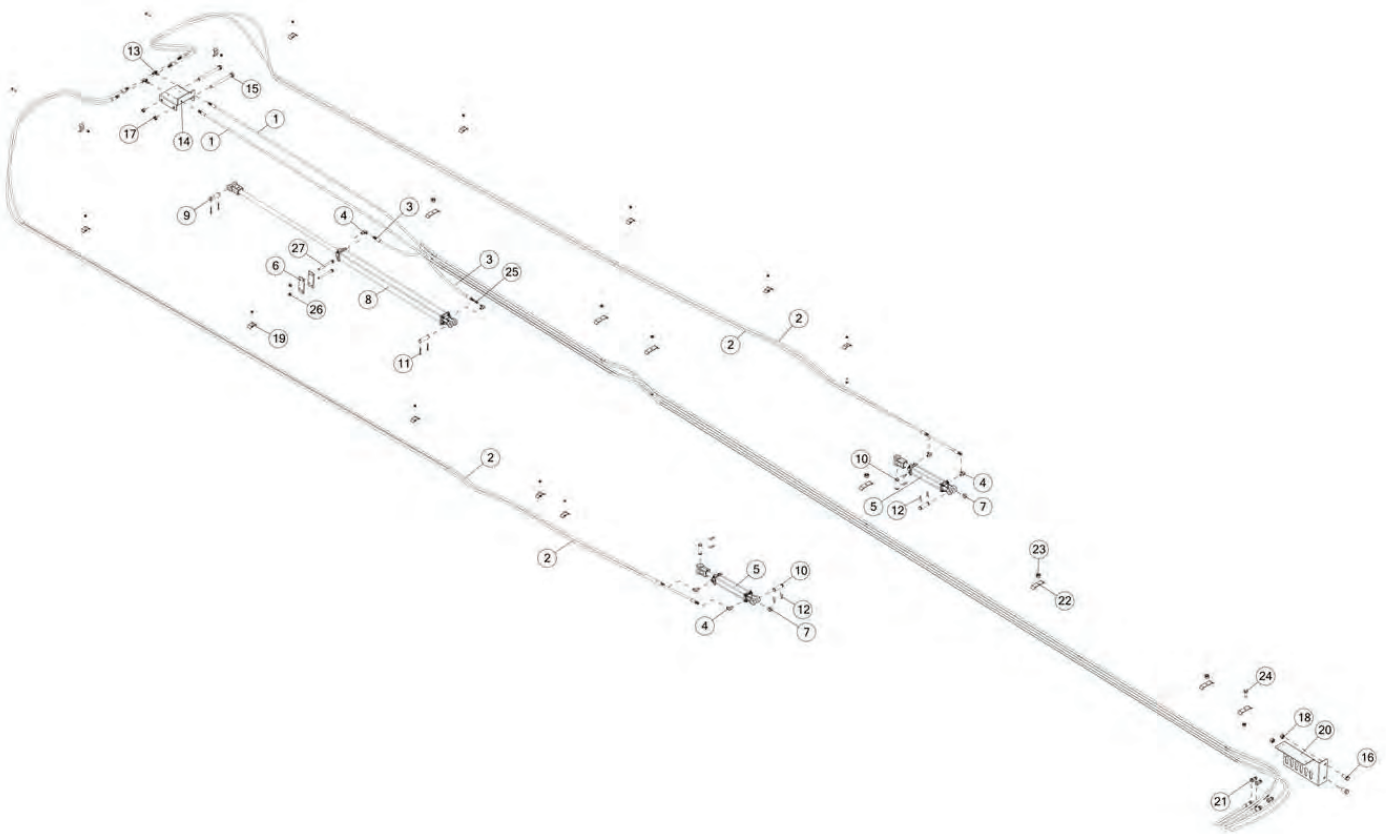


# FIGURE 10

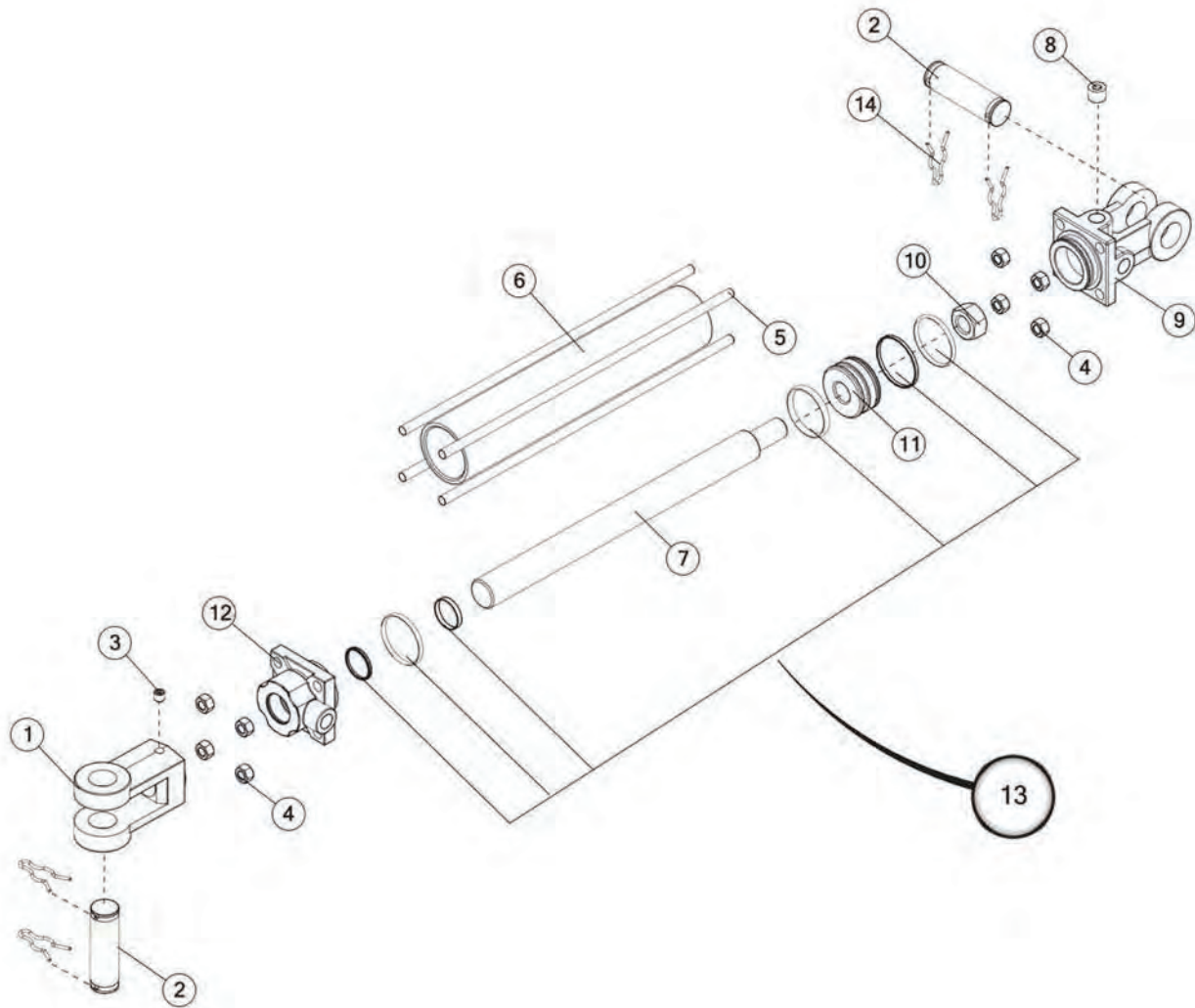
## RAKE WHEEL ASSEMBLY

REF #	PART #	DESCRIPTION	QTY
1	FR6	RAKE ARM RH	10
*	FR7	RAKE ARM LH	10
2	YBHH12035	BOLT HEX, 3/8 X 1-1/4 G5	40
3	YWFL12005	WASHER FLAT, 3/8	60
4	FR70	RAKE WHEEL RH, 60 IN	10
*	FR69	RAKE WHEEL LH, 60 IN	10
5	YNTL12005	NUT HEX, TOP LOCK, 3/8	60
6	17G144	HUB CAP	40
7	YNSL28005	NUT HEX, SLOTTED, 7/8	40
8	YPCT05010	COTTER PIN, 5/32 X 1-1/2	40
9	YWFL28010	WASHER FLAT, 7/8	40
10	HD122	TAPER BEARING	80
11	3G18	BEARING RACE	80
12	HD124	SEAL	40
13	96835	PIVOT SPINDLE	20
14	YWCU99005	WASHER, CUSTOM, FENDER 3/8 X 2"OD	20
15	YNFG12006	NUT FLANGE, 3/8 GF	20
16	YBFB12075	BOLT FLANGE, 3/8 X 3/4 G5	20
17	FR58	CHAIN (15 LINKS)	20
18	8771	RAKE WHEEL SPRING	20
19	YBHH12110	BOLT HEX, 3/8 X 2-3/4 G5	20
20	YBCR76005	BOLT CARRIAGE, 10MM X 25MM	400
21	FR24	RAKE WHEEL HUB	20
22	YNHX76015	NUT HEX, M10-1.5	120
23	FR71	RAKE WHEEL CENTER	20
24	FR72	RAKE WHEEL OUTER RING	20
25	FR73	RAKE WHEEL TOOTH	800
26	FR74	RAKE TOOTH CLIP	400
27	YNLC76005	NUT LOCK, 10 MM	400
28	YBHH76015	BOLT HEX, M10-1.5 X 25, 10.9	120
29	YWLO76015	WASHER LOCK, M10	120
30	YBFB12300	BOLT FLANGE, 3/8 X 3 G5	20













# FIGURE 12

## LIFT CYLINDER

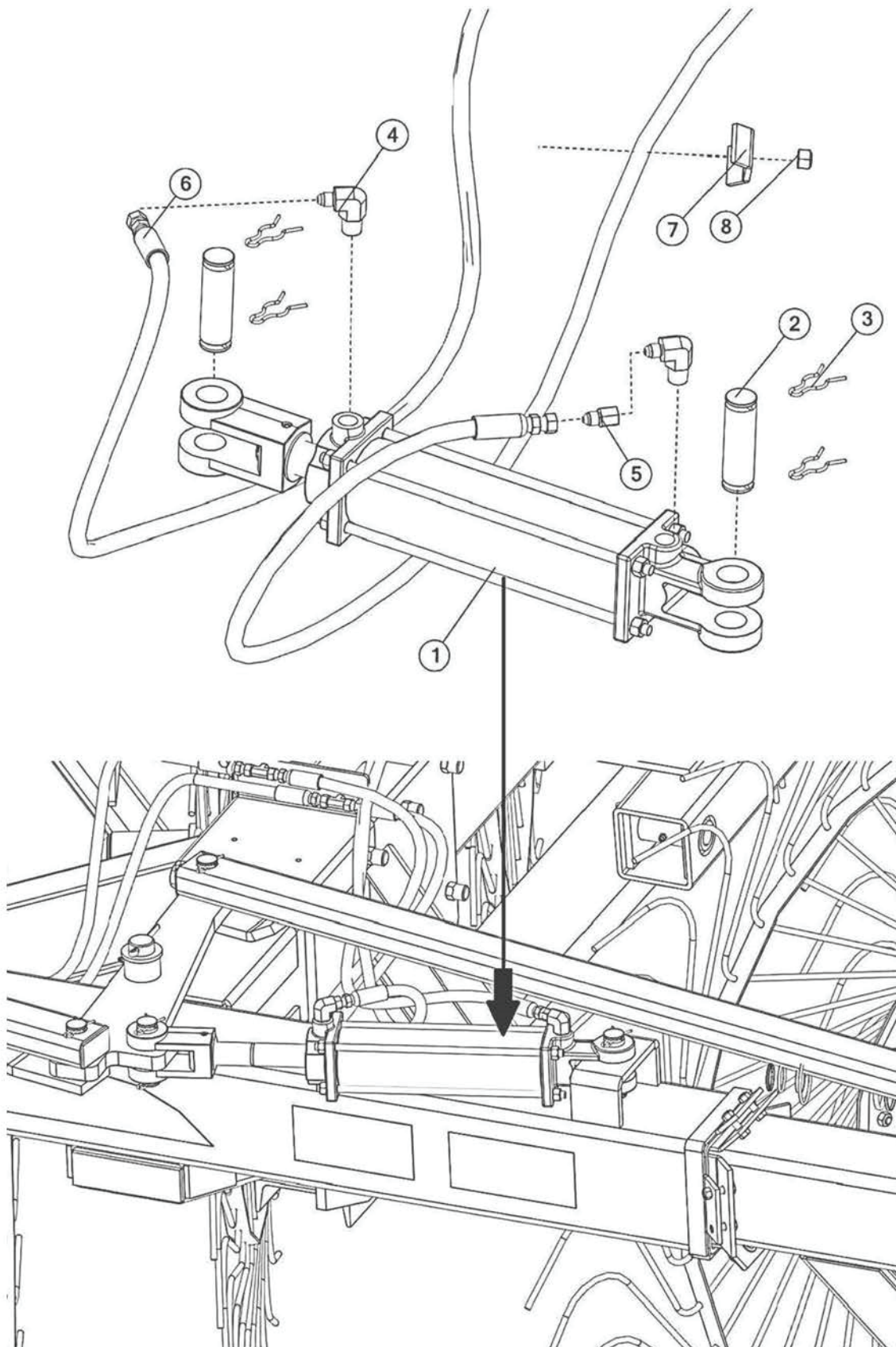
REF #	PART #	DESCRIPTION	QTY
1	23N150A	ROD CLEVIS	1
2	T143	HYD CYLINDER PIN	2
3	YSSO12015	SCREW SET, SOCKET, 3/8 X 3/8	1
4	YNHX12006	NUT HEX, 3/8	8
5	16SV170	TIE ROD	4
6	16SV169	CYLINDER TUBE	1
7	16SV168A	CYLINDER ROD	1
8	23N149	PLUG	1
9	23N142A	CLEVIS CAP	1
10	23N148	PISTON NUT	1
11	56180	PISTON	1
12	56174	ROD CAP	1
13	56187	SEAL KIT	1
14	53371	CYLINDER PIN	1
*	56000	HYD CYLINDER 2 X 10	1





# FIGURE 13

## OPTIONAL FFOHYDROP HYDRAULIC REAR OPENING CYLINDER

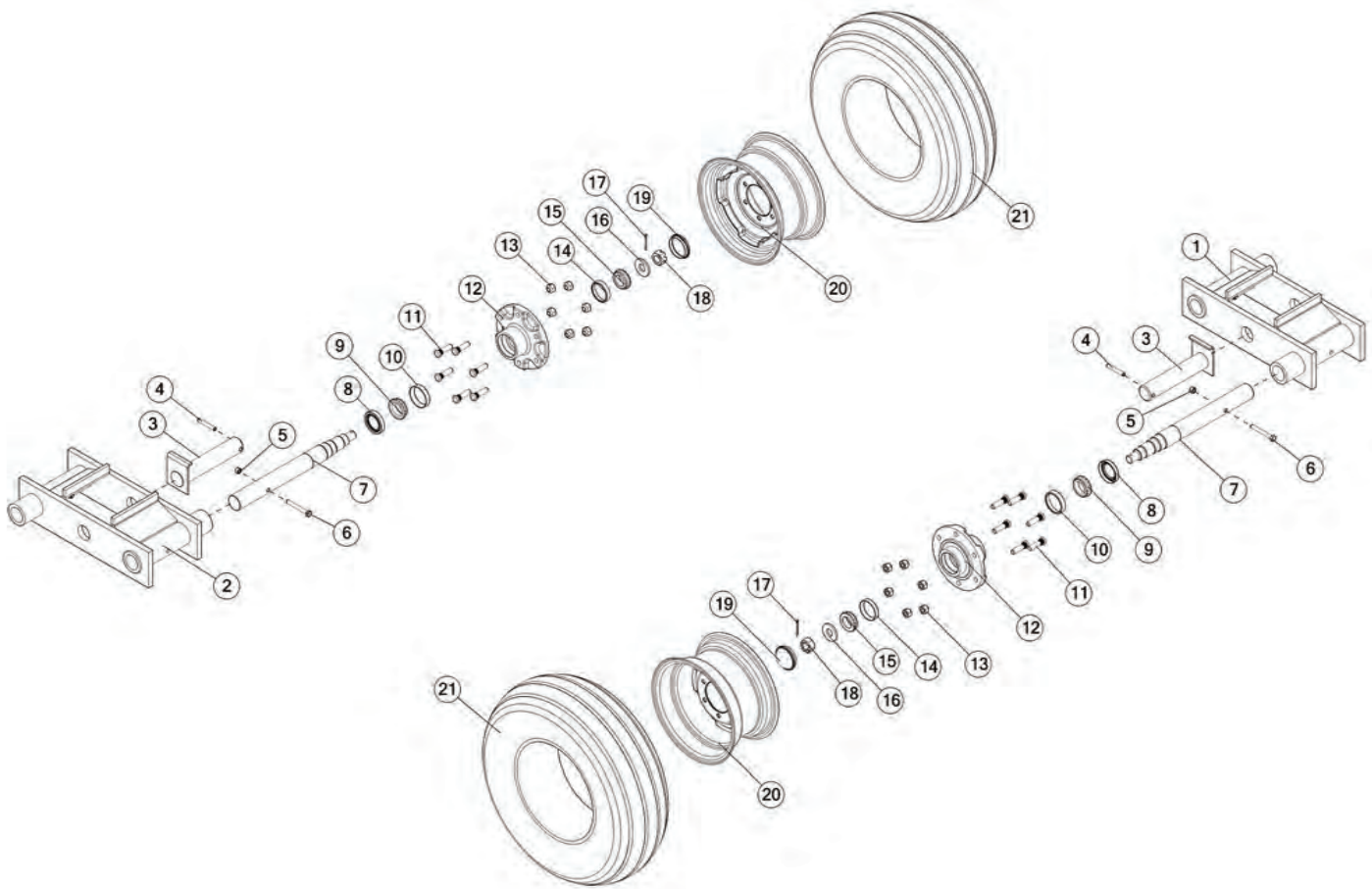






# FIGURE 14

OPTIONAL  
TANDEM AXLE

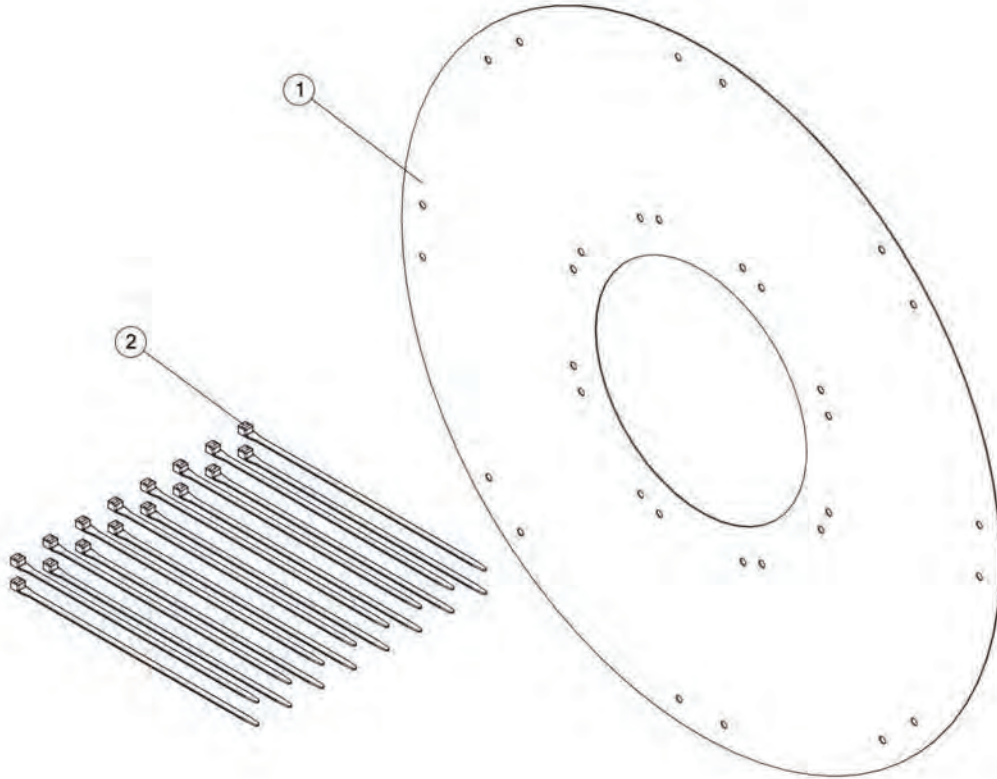




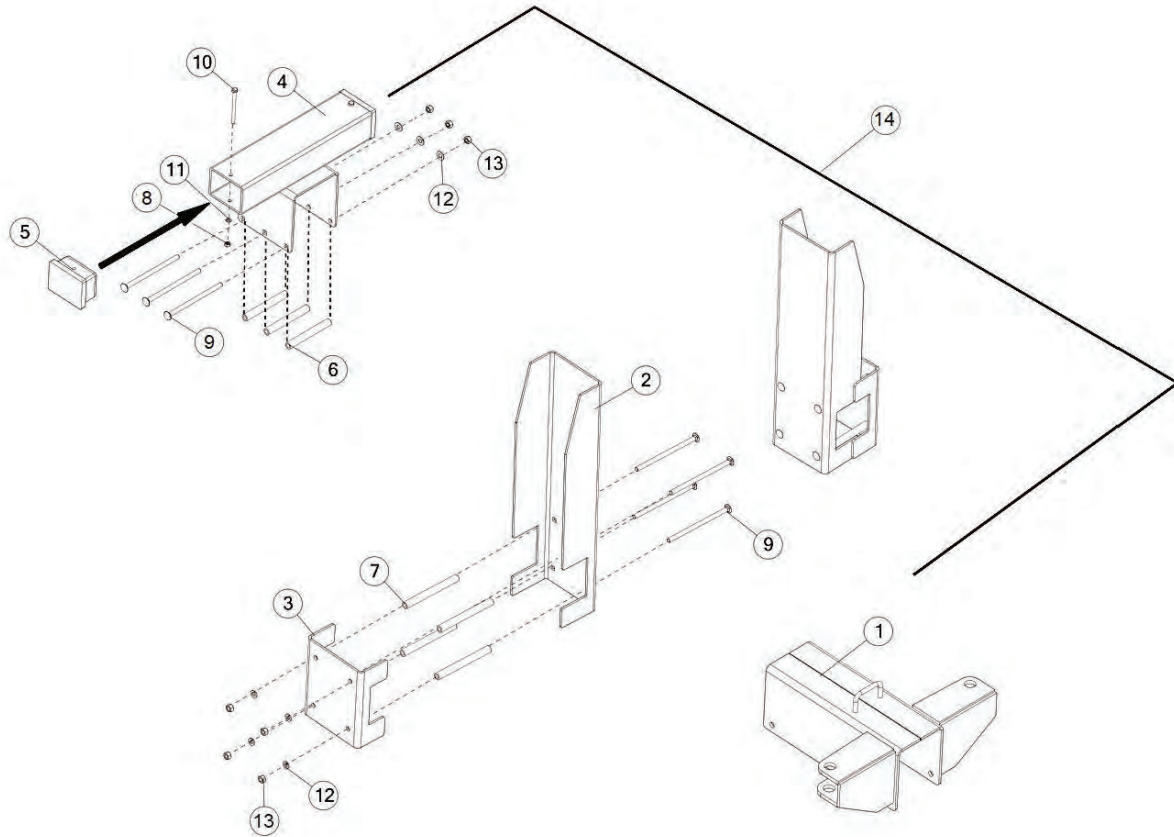


# FIGURE 15

## OPTIONAL BFWP60 WIND GUARD



REF #	PART #	DESCRIPTION	QTY
1	59039	POLY WIND GUARD, FOR 60 RAKE WHEEL	1
2	CIZT105	ZIPTIE	16

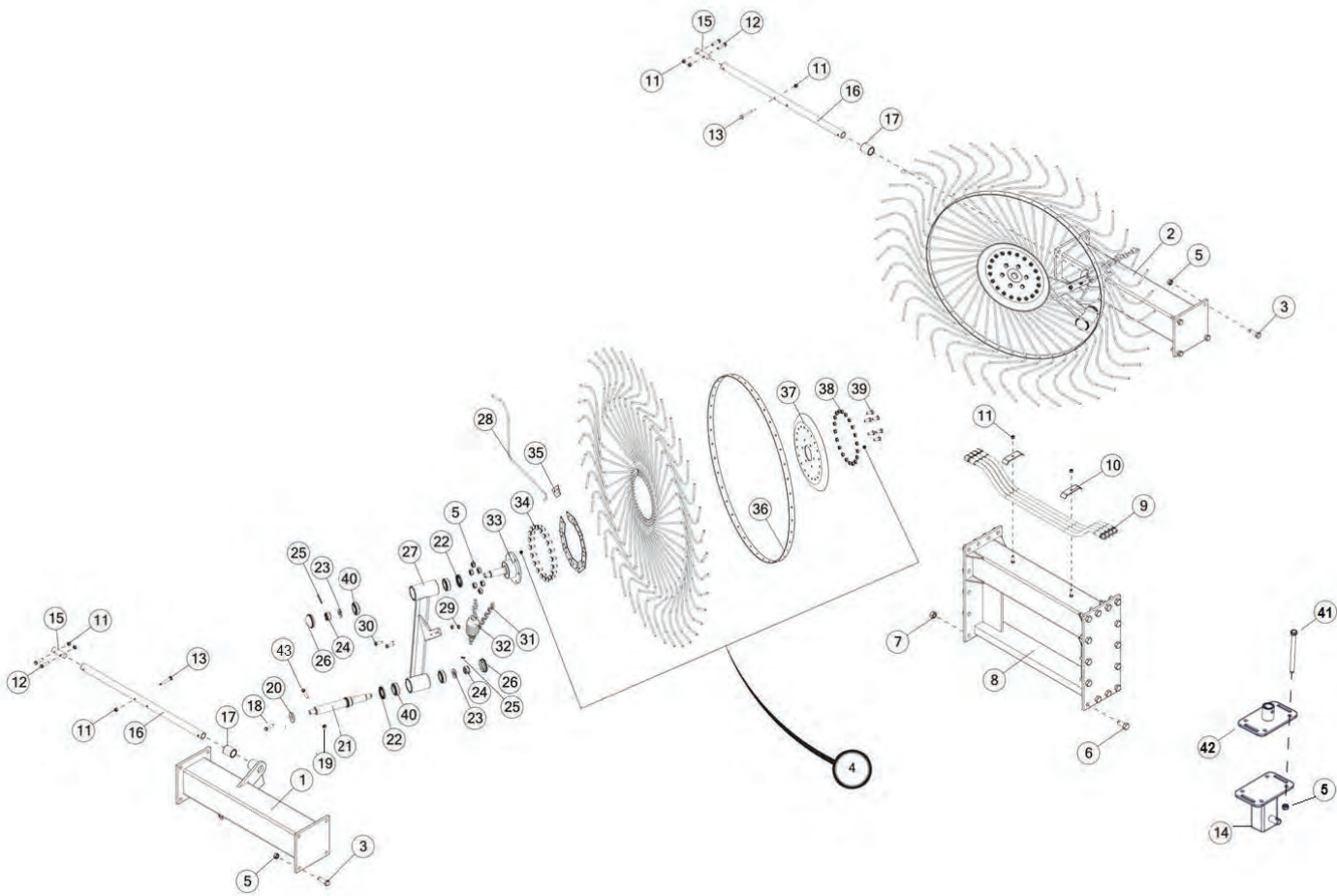


REF #	PART #	DESCRIPTION	QTY
1	76465	LINKAGE SLIDER FRONT	1
2	75574	RAKE ARM BUMPER PLATE	2
3	75575	RAKE BUMPER BACK PLATE	2
4	76478	BUMPER	1
5	75763	BLACK PLUG, UHMW, 3 X 4 X 2	2
6	76467	SPACER TUBE	3
7	75576	SPACER TUBE	8
8	YNHX08007	NUT HEX, 1/4 G5	2
9	YBCR12130	BOLT CARRIAGE, 3/8 X 7 G2	11
10	YBHH08092	BOLT HEX, 1/4 X 3-1/2 G5	2
11	YWLO08005	WASHER LOCK, 1/4	2
12	YWLO12005	WASHER LOCK, 3/8	11
13	YNHX12005	NUT HEX, 3/8	11
14	76469	BUMPER KIT	1



# FIGURE 17

## OPTIONAL FFO2WHL 2-WHEEL EXTENSION



REF #	PART #	DESCRIPTION	QTY
1	FR61	BEAM FRONT RH	1
2	FR62	BEAM FRONT LH	1
3	YBFB20200	BOLT FLANGE, 5/8 X 2 G5	8
4	FR70	RAKE WHEEL, 60 IN RH	1
*	FR69	RAKE WHEEL 60 IN LH	1





# FIGURE 17

## OPTIONAL FFO2WHL 2-WHEEL EXTENSION

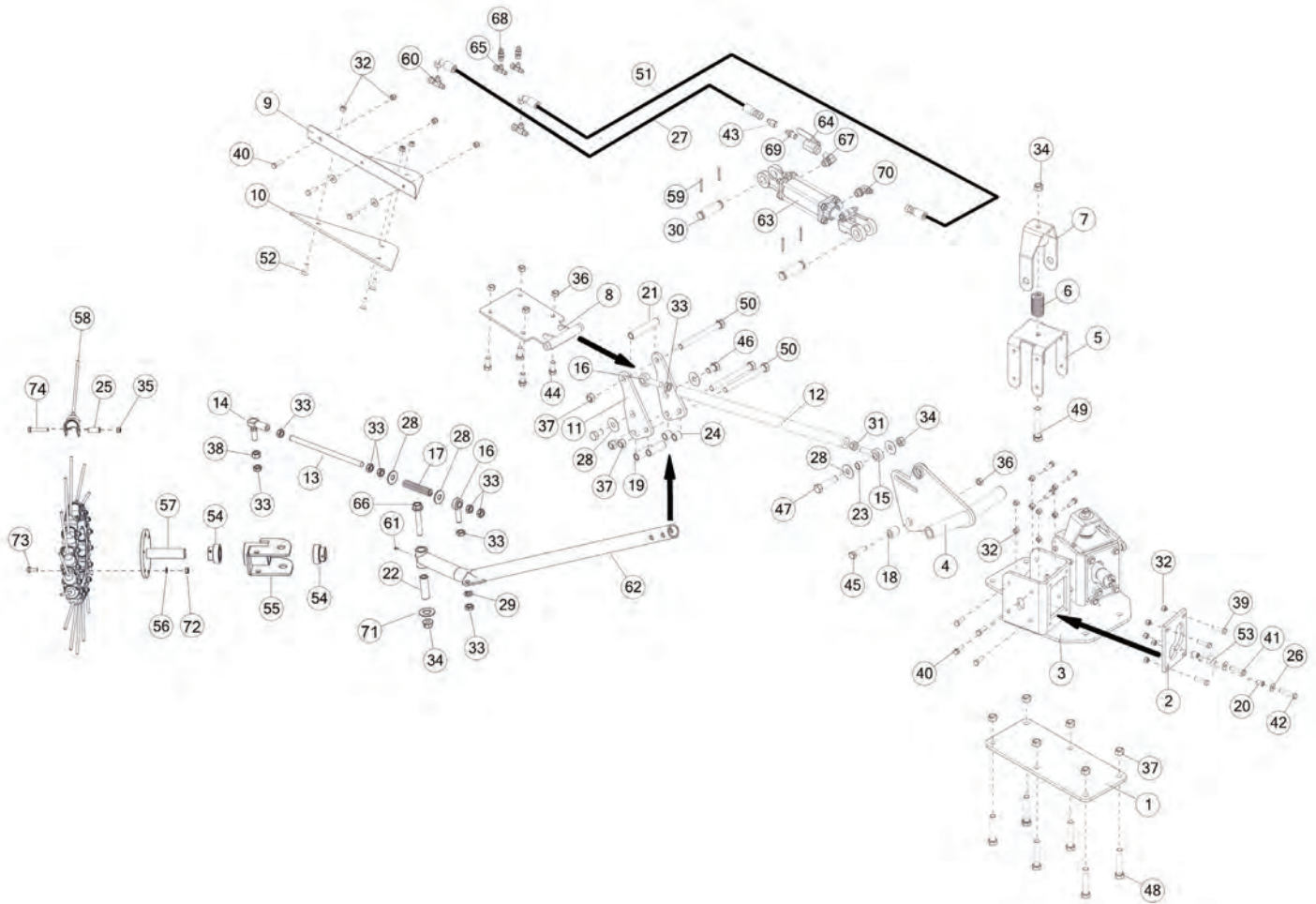
REF #	PART #	DESCRIPTION	QTY
5	YNL20005	NUT HEX, TOP LOCK, 5/8	24
6	YBFB24200	BOLT FLANGE, 3/4 X 2 G5	14
7	YNL24005	NUT HEX, TOP LOCK, 3/4	14
8	60513	EXTENSION POLE	1
9	BFR635	HOSE, 3/8 X 33 1/2 FP & 1/2 MP	4
10	58448	HOSE BRACKET	2
11	YNFG12006	NUT FLANGE, 3/8 GF	10
12	YBFB12200	BOLT FLANGE, 3/8 X 2 G5	2
13	YBFB12275	BOLT FLANGE, 3/8 X 2-3/4 G5	2
14	FR29	TRANSPORT POST	1
15	FR63	LIFT PIPE CONNECTOR	2
16	83169	LIFT PIPE	2
17	HD128	BUSHING	2
18	YBFB12075	BOLT FLANGE, 3/8 X 3/4 G5	2
19	YNFG12006	NUT FLANGE, 3/8 GF	2
20	YWCU99005	WASHER, CUSTOM, FENDER 3/8 X 2 OD	2
21	96835	PIVOT SPINDLE	2
22	HD124	SEAL	4
23	HD121	WASHER	4
24	YNSL28005	NUT HEX SLOTTED, 7/8	4
25	YPCT05010	COTTER PIN, 5/32 X 1-1/2	4
26	17G144	HUB CAP	4
27	FR6	RAKE ARM RH	1
*	FR7	RAKE ARM LH	1
28	FR73	RAKE WHEEL TOOTH	40
29	FR29	TRANSPORT POST	4
30	YBHH12035	BOLT HEX, 3/8 X 1-1/4 G5	4
31	FR58	CHAIN (15 LINKS)	2
32	8771	RAKE WHEEL SPRING	2
33	FR24	RAKE WHEEL HUB	2
34	YBCR76005	BOLT CARRIAGE, 10MM X 25MM	40
35	FR74	RAKE TOOTH CLIP	20
36	FR72	RAKE WHEEL OUTER RING	2
37	FR71	RAKE WHEEL CENTER	2
38	YNHX76015	NUT HEX, M10-1.5	40
39	YBHH12035	BOLT HEX, 3/8 X 1-1/4 G5	12
40	58714	RACE	8
41	YBHH20110	BOLT HEX, 5/8 X 8	4
42	FR66	JACK STORAGE HOLDER	1
43	YBFB12300	BOLT FLANGE, 3/8 X 3 G5	2





# FIGURE 18

## OPTIONAL FFOCKW KICKER WHEEL





# FIGURE 18

## OPTIONAL FFOCKW KICKER WHEEL

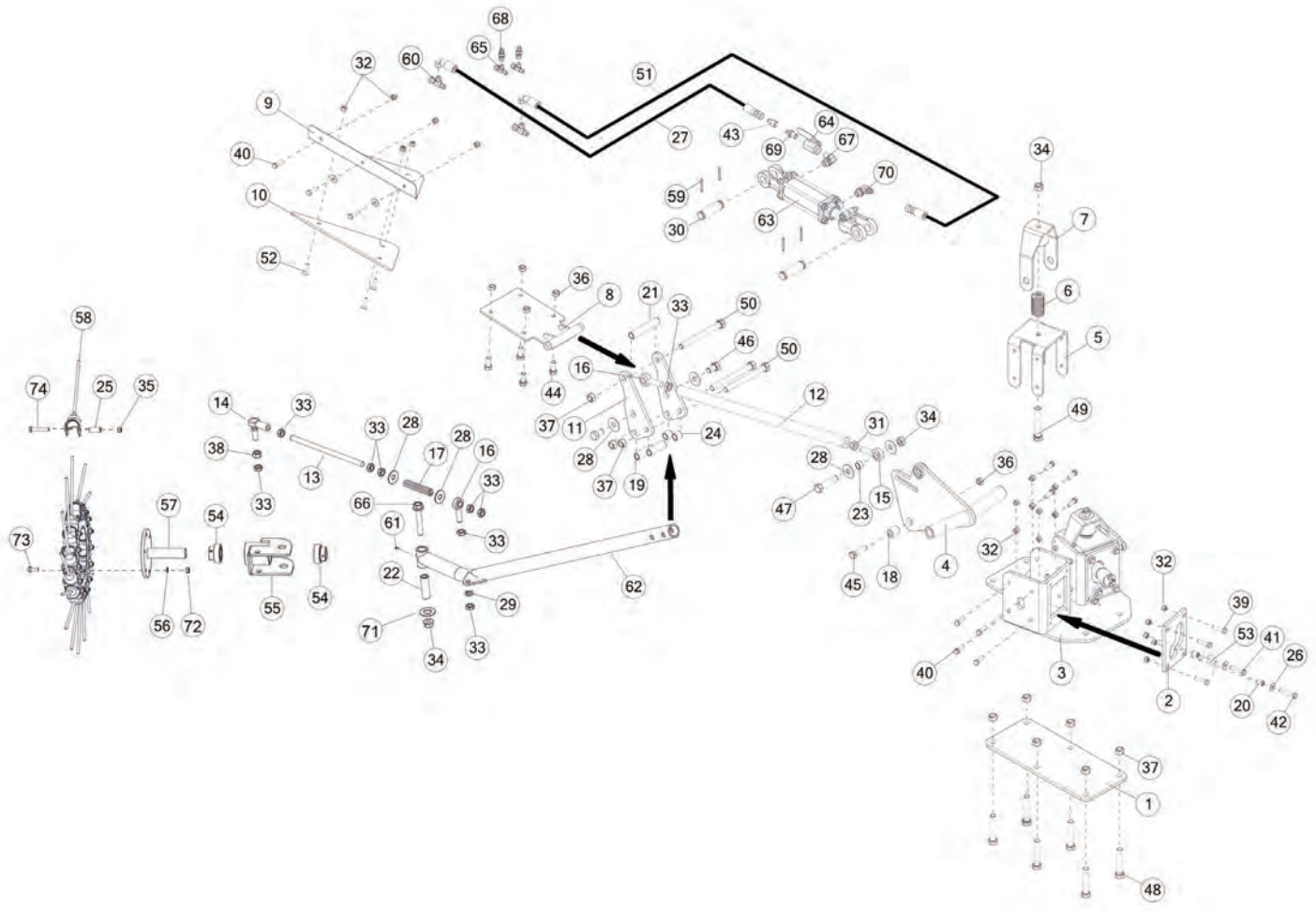
REF #	PART #	DESCRIPTION	QTY
1	71496	PLATE	1
2	71526	PLATE	2
3	71486	KICKER MAIN	1
4	71495	KICKER BELL	1
5	71500	SPRING BASE BRACKET	2
6	71574	DIE SPRING	2
7	71534	SPRING YOKE	2
8	71521	PIVOT	1
9	71185	KICKER DEFLECTOR BRACKET	1
10	71192	POLY DEFLECTOR PANEL, 1/4	1
11	71522	PLATE	2
12	71601	TUBE	1
13	71618	ALLTHREAD, 5/8 X 12.5	1
14	71599	BALL JOINT BEARING, 5/8	1
15	71593	ROD END BEARING, 5/8 LH	1
16	71594	ROD END BEARING RH	2
17	71296	SPRING	1
18	71487	BUSHING	1
19	71548	STEEL BUSHING	2
20	71568	TUBE	2
21	71577	STEEL BUSHING	1
22	93655	CYLINDER SPACER	1
23	71605	STEEL BUSHING	1
24	71536	STEEL BUSHING	2
25	70807	TUBE	15
26	YWFL12005	WASHER FLAT, 3/8	2
27	90544	HYDRAULIC HOSE, 6 X 162	1
28	YWFL20005	WASHER FLAT, 5/8	6
29	YWLO20005	WASHER LOCK, 5/8	1
30	T143	CYLINDER PIN	1
31	YNJM20011	NUT HEX, 5/8 G5	1
32	YNFG12006	NUT FLANGE, 3/8	24
33	YNJM20010	NUT HEX, JAM, 5/8	8
34	YNFG10005	NUT FLANGE, 5/16 GF	3
35	YNTL12005	NUT HEX, TOP LOCK, 3/8	15
36	YNFG16003	NUT FLANGE, 1/2 GF	5
37	YNTL20005	NUT HEX, TOP LOCK, 5/8	9
38	YNHX20008	NUT, HEX, 5/8-18, NA, A, ZC	1
39	YBFB12150	BOLT FLANGE, 3/8 X 1-1/2	6
40	YBFB12125	BOLT FLANGE, 3/8 X 1-1/4 G5	11
41	YBFB12175	BOLT FLANGE, 3/8 X 1-3/4 G5	2





# FIGURE 18

## OPTIONAL FFOCKW KICKER WHEEL





# FIGURE 18

## OPTIONAL FFOCKW KICKER WHEEL

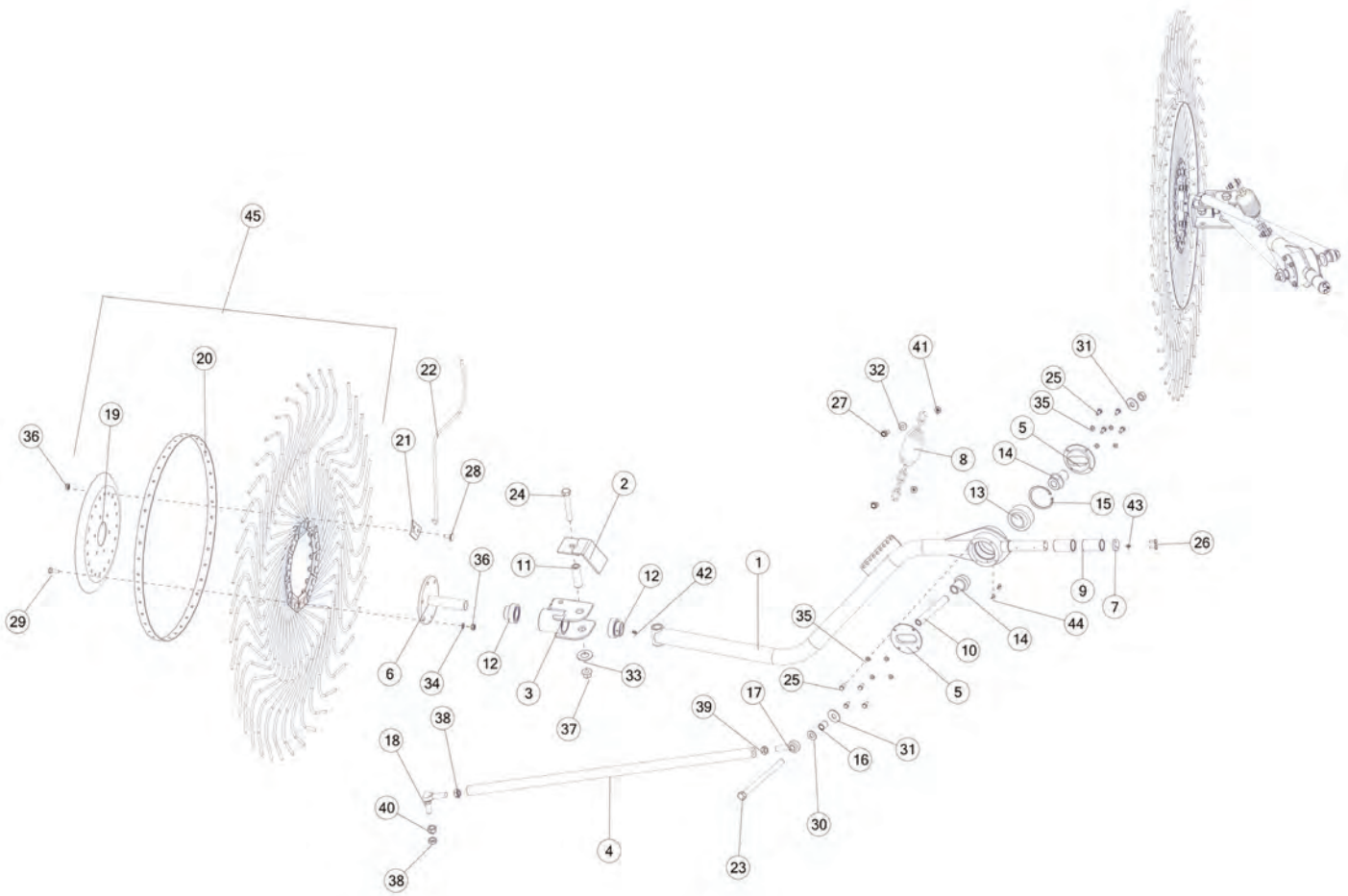
REF #	PART #	DESCRIPTION	QTY
42	YBFB12225	BOLT FLANGE, 3/8 X 2-1/4 G5	2
43	90534	IN-LINE CONNECTOR, ORIFICE, 4-XHX7-S .022	1
44	YBFB16150	BOLT FLANGE, 1/2 X 1-1/2 G5	4
45	YBFB16200	BOLT FLANGE, 1/2 X 2 G5	1
46	YBHH20005	BOLT HEX, 5/8 X 1 G5	2
47	YBHH20045	BOLT HEX, 5/8 X 2-3/4 G5	1
48	YBFB20350	BOLT FLANGE, 5/8 X 3-1/2 G5	6
49	YBHH20065	BOLT HEX, 5/8 X 4 G5	2
50	YBHH20103	BOLT HEX, 5/8 X 6-1/2 G5	3
51	71780	HYDRAULIC HOSE, 6, 201IN	1
52	YSFS12005	SCREW FLAT, HEAD SOCKET CAP, 3/8 X 1-1/4	3
53	71570	TORSION SPRING	2
54	BFR525	BEARING W/LOCK COLLAR	2
55	93653	RAKE HUB PIVOT	1
56	YWLO76015	WASHER LOCK, M10	6
57	93650	RAKE WHEEL HUB	1
58	T82	RUBBER MOUNTED TOOTH	15
59	YPCT05010	COTTER PIN 5/32 X 1-1/2	4
60	CHM242	TEE SWIVEL RUN	2
61	MS26	SHORT SHANK ZERK (STRAIGHT)	1
62	71529	CENTER POLE	1
63	70797	HYD CYL, 10.2 X 14.2	1
*	72160	CYLINDER TIE ROD	1
*	72161	SEAL KIT	1
64	16SV338	BALL VALVE, 3/8	1
65	58101	FITTING 4 R6X-S	2
66	YBFB20400	BOLT FLANGE, 5/8 X 4 G5	1
67	70158	FITTING, 90, 3/4ORB, 3/8NPT, STL	1
68	71802	FITTING, ST, 6 MALE JIC, 4 FEMALE JIC, STL	2
69	58124	FITTING STRAIGHT, 04JIC, 06NPT	1
70	CHM206	FITTING, 90, 6JIC X 8ORB	1
71	YWFL32005	WASHER, FLAT, SAE 1	1
72	YNHX76015	NUT HEX, M10-1.5	6
73	YBHH76015	BOLT HEX, M10-1.5 X 25	6
74	YBHH12100	BOLT HEX, 3/8 X 2-1/4 G5	15





# FIGURE 18

## OPTIONAL FFOCWK KICKER WHEEL



REF #	PART #	DESCRIPTION	QTY
1	71558	RIGHT POLE	1
*	71560	LEFT POLE	1
2	85319	RAMP BRACKET	2
3	93653	RAKE HUB PIVOT	2
4	71600	TIE ROD	2

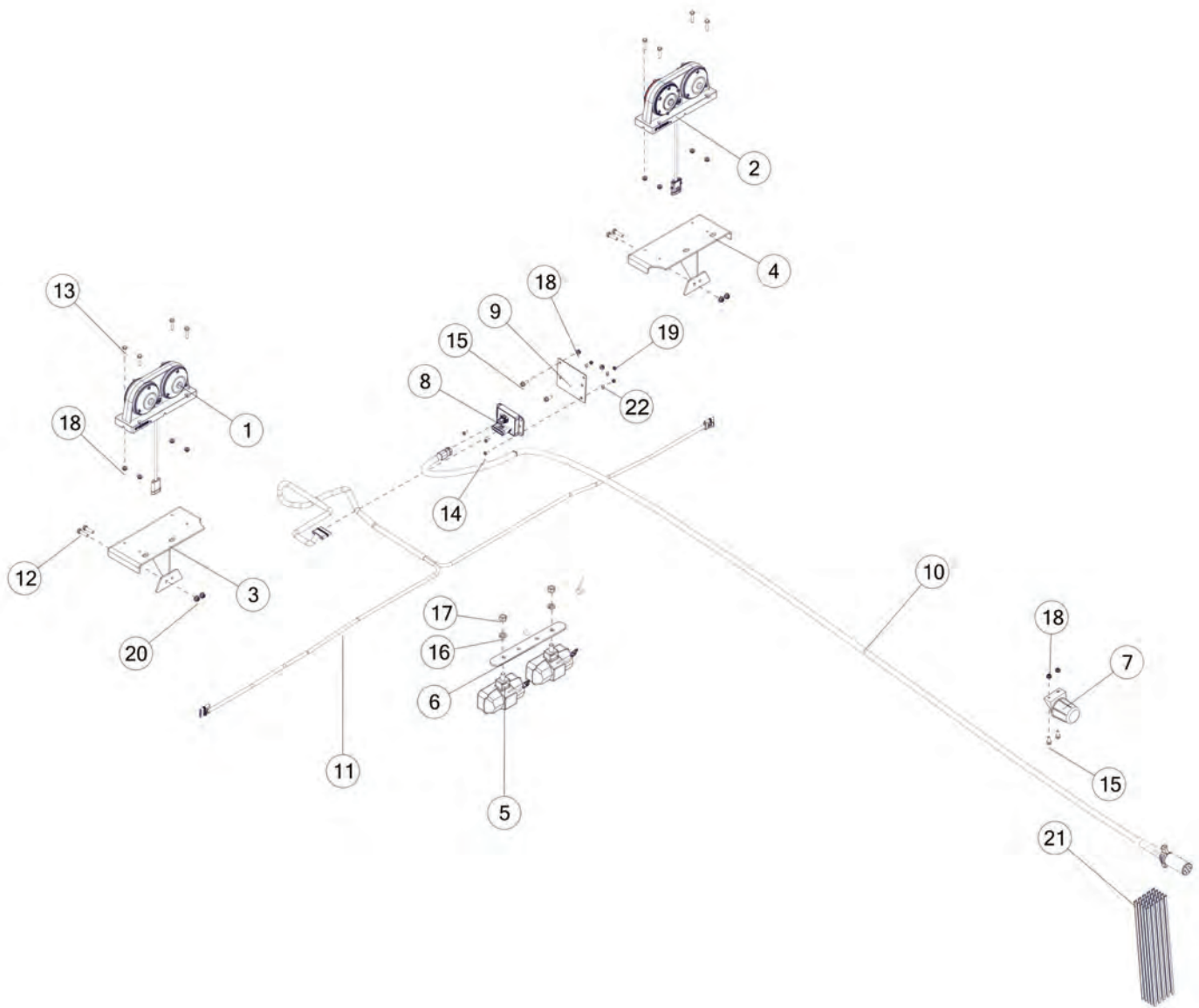


# FIGURE 18

## OPTIONAL FFOCKW KICKER WHEEL

REF #	PART #	DESCRIPTION	QTY
5	71562	PLT 4.25 X 0.50, KICKER GUIDE	4
6	93650	RAKE WHEEL HUB	2
7	71993	PLT, 1.50 X 1.50 X 0.25, KEEPER	2
8	8771	RAKE WHEEL SPRING	2
9	71563	BSH, 1.50 X 1.25 X 2.47	4
10	71535	BSH, .875 X .635 X 6.374	2
11	93655	CYLINDER SPACER	2
12	BFR525	PEER FHR206-20 BEARING 1-1/4"	4
13	71553	BRG, 3.125 X 1.75 X 1.56	2
14	71550	BSH, 2.08 X 0.89 X 2.44, STL	4
15	71608	SNAP RING	2
16	71536	BSH, 0.88 X 0.66 X 0.88, STL	2
17	71593	BRG, 5/8 ROD END LH	2
18	71598	BRG, BALL JOINT 5/8-18 M	2
19	FR71	RAKE WHEEL CENTER 60 IN BLACK	2
20	T177A	OUTER RING FOR 48" RAKE WHEEL	2
21	FR74	RAKE TOOTH CLIP BLACK	20
22	10WR42	RAKE WHEEL TOOTH, 49", BLACK	80
23	YBHH20120	BOLT, 5/8-11 X 9" GR 5	2
24	YBHH20067	BOLT, 5/8-11 X 4-1/4 GR 5, ZINC	2
25	YBHH10105	BOLT, 5/16 X 3/4 GR 5	16
26	YBHH08102	BOLT, 1/4 X 3/4 GR 8, YELLOW ZINC	4
27	YBFB12150	BOLT FLG, 3/8 X 1-1/2 G5	1
28	YBCR76005	BOLT, CARR, M10-1.5 X 25MM, 8.8, NF	40
29	YBHH76015	BOLT HEX, M10-1.5 X 25, 10.9, ZC	12
30	YWFL20010	WASHER, FLAT, 5/8" SAE GR 8 YELLOW ZINC	2
31	YWFL20005	WASHER, FLAT, 5/8 USS	4
32	YWFL12005	WASHER, FLAT, 3/8 USS	2
33	YWFL32005	WASHER, FLAT, SAE 1.00, ZINC	2
34	YWLO76015	WASHER, LOCK, M10	12
35	YWLO10005	WASHER, LOCK, 5/16	16
36	YNHX76015	NUT, HEX, M10-1.5, NA, CL10, ZC	32
37	YNFG20005	NUT, FLG, 5/8-11, LKTL, F, ZC	2
38	YNJM20010	NUT JAM, 5/8 A	4
39	YNJM20011	NUT JAM, 5/8 G5 LH	2
40	YNHX20008	NUT, HEX, 5/8-18, NA, A, ZC	2
41	YNFG12006	NUT FLG, 3/8 GF	8
42	MS26	STRAIGHT ZERK, 1/4-28	2
43	G89	STRAIGHT ZERK, 1/4-28	2
44	RG51	ZERK, 90 DEGREE 1/4-28	4
45	10WR17	LH RAKE WHEEL, 49 DIAMETER, BLACK	2







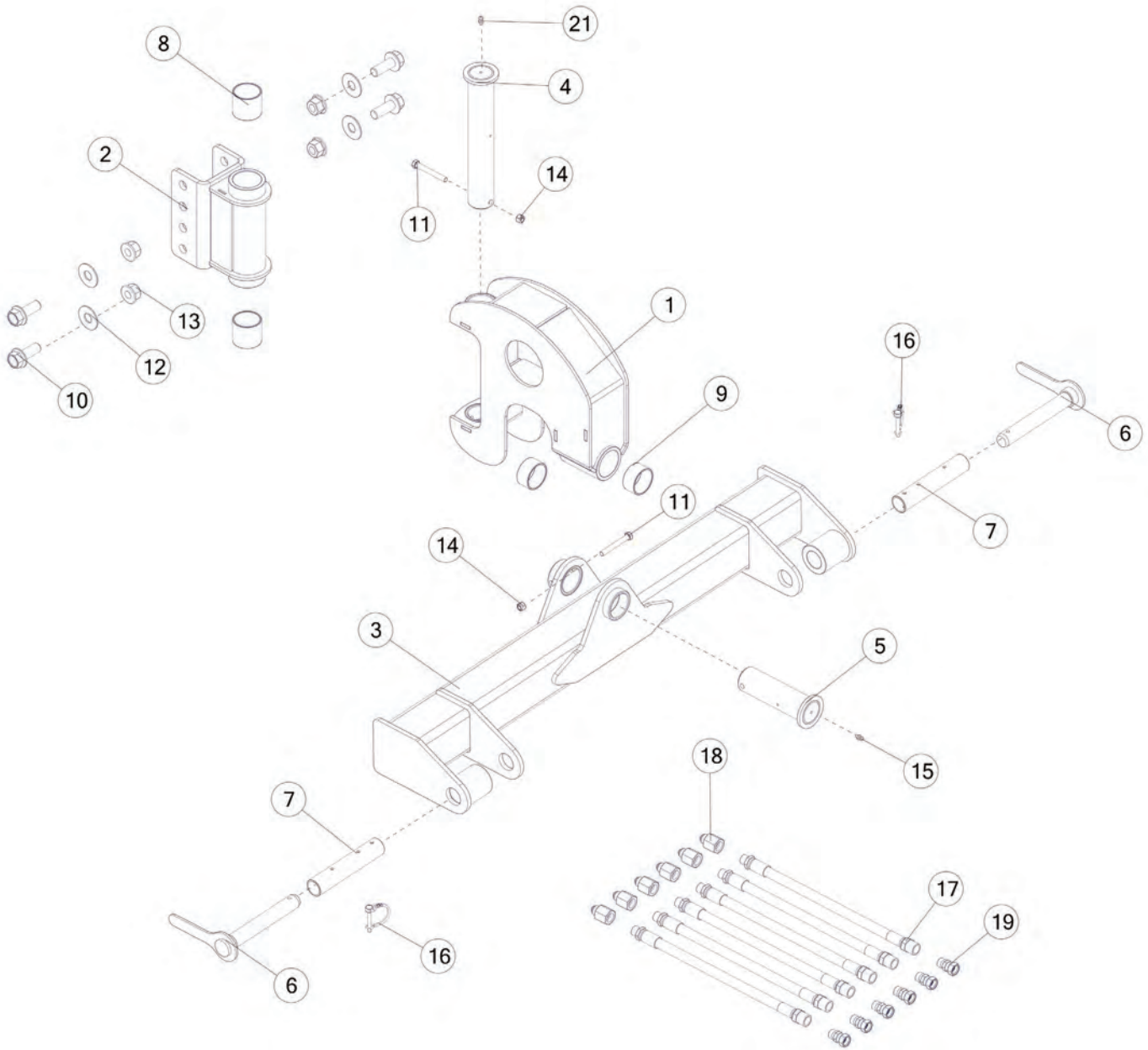




# FIGURE 20

## OPTIONAL FFOH2P

### 2-POINT HITCH











Manufactured By:

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