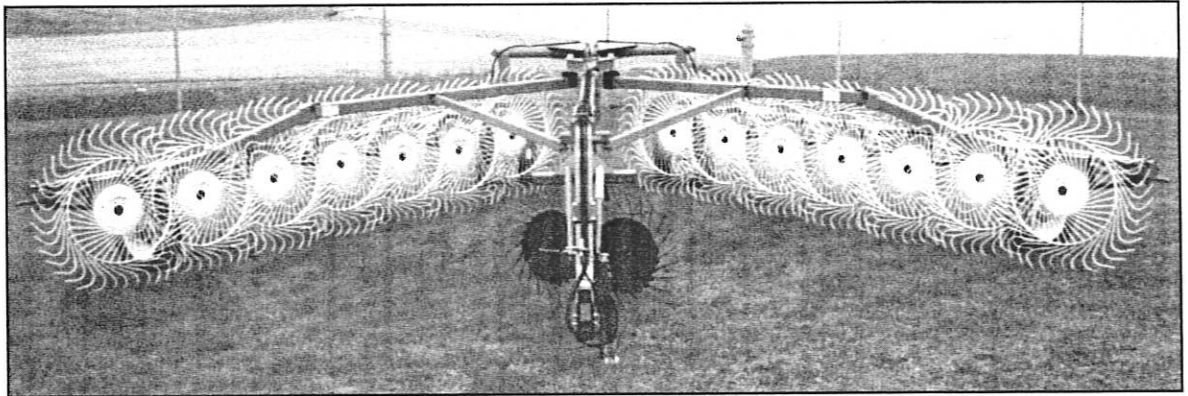


H&S DELUXE

BF12HC
BF14HC
BF16HC

12 & 14 WHEEL HI CAPACITY BI-FOLD RAKE



WARNING

READ AND UNDERSTAND THIS MANUAL
BEFORE OPERATING THIS EQUIPMENT.

UNSAFE OPERATION OR MAINTENANCE OF THIS EQUIPMENT CAN RESULT IN SERIOUS
INJURY OR DEATH.

OPERATOR'S MANUAL and PARTS LIST

9-25-09

Manufactured By

H&S MANUFACTURING CO., INC.

P.O. BOX 768 • (715) 387-3414 FAX (715) 384-5463

MARSHFIELD, WISCONSIN 54449

FIGURE 1
H&S 12 WHEEL HI CAPACITY RAKE – MAIN FRAME

ITEM	PART NO.	DESCRIPTION	ITEM	PART NO.	DESCRIPTION
1.	BFR450	Hitch Pin	72.	3G22	Roll Pin
2.	BFR157	Hitch	73.	BFR436	Rake Arm LH
3.	BFR753	Jack	*	BFR437	Rake Arm RH
4.	12N117	Jack Pin & Chain	74.	BFR140	Rake Arm Adjustment Chain
5.	5N78	Jack Handle	75.	BFR138	Rake Arm Spring
*	12N118	Replacement Bearing	76.	BFR36	Rake Arm Spindle
6.	HE42	Hose Holder	77.	T174	Rake Wheel LH
7.	BFR660	Pole	*	BFR31	Rake Wheel RH
8.	BFR384	Transport Lock Pipe LH	78.	BFR652	10MM Lock Nut
*	BFR415	Transport Lock Pipe RH	79.	T175	10MM x 25MM Carriage Bolt
9.	BFR385	Center Pole Section	80.	T176	Rake Wheel Tooth
10.	BFR502	Front Rod	81.	T178	Rake Tooth Clip
11.	BFR387	Front Linkage Slider	82.	T179	Rake Wheel Center
12.	BFR388	Hose Guide Spacer	83.	T169	Cotter Pin
13.	BFR389	Slider Spacer	84.	T166	10MM Nut
14.	BFR390	Front Linkage	85.	T168	10MM x 25MM Bolt
15.	BFR391	Rake Beam Arm RH	86.	T173	Hub Cap
16.	BFR392	Rake Beam Arm LH	87.	T172	Nut
17.	BFR393	Rake Beam Arm Pin	88.	T170	Outer Bearing
18.	BFR394	Right Rear Linkage	*	T171	Outer Race
19.	BFR395	Left Rear Linkage	89.	BFR32	Rake Wheel Hub
20.	BFR396	Cylinder Pin	90.	T164	Inner Bearing
21.	BFR397	Back Pole Section	*	T165	Inner Race
22.	BFR398	Center Slider	91.	T163	Seal
23.	BFR399	Linkage Stop	92.	BFR449	Spindle
24.	BFR400	Center Slider Spacer	93.	BFR57	Seal
25.	BFR401	Center Slider Pin	94.	BFR58	Inner Bearing
26.	BFR402	Hose Guide	95.	BFR59	Inner Race
28.	BFR503	Back Rod	96.	BFR60	Hub
29.	BFR404	Back Slider Roller	97.	BFR61	Outer Race
30.	BFR405	1/2" x 5-1/2" Bolt GR.5	98.	BFR62	Outer Bearing
31.	BFR406	Front Rake Beam RH	99.	BFR63	Washer
32.	BFR407	Front Rake Beam LH	100.	BFR64	Nut
33.	BFR408	Back Rake Beam RH	101.	BFR65	Cotter Pin
34.	BFR409	Back Rake Beam LH	102.	BFR66	Hub Cap
35.	BFR410	Back Linkage Yoke RH	103.	BFR143	Stud Bolt
36.	BFR411	Back Linkage Yoke LH	104.	BFR144	Nut
37.	BFR412	Back Linkage Yoke Pin	105.	BFR67	Wheel 5 x 15
38.	ES7	Hair Pin	106.	BFR438	5/8" x 2" Bolt GR.5
39.	BFR413	Pivot Yoke Shaft Pin	107.	BFR439	5/8" x 1-3/4" Bolt GR.5
40.	BFR7	Cotter Pin 3/16" x 3-3/4"	108.	BFR440	Back Linkage Slider
41.	BFR414	Left Pivot Yoke Shaft	109.	BFR441	Stop Washer
42.	BFR228	Slotted Nut 1-1/4"	110.	T143	Cylinder Pin
43.	BFR518	3/4" Nut	111.	BFR653	Hydraulic Cylinder
44.	BFR506	Nylon Wear Block	112.	12N121	Jack Mount
45.	BFR498	Rear Pivot Assembly	113.	BFR443	Linch Pin
46.	BFR661	Right Axle Upright	115.	BFR517	Cylinder Pin
47.	BFR662	Left Axle Upright	116.	23N108	Cotter Pin
48.	23N67	Hose Holder	117.	16SV136	Washer
49.	BFR419	3/4" Acme Nut	118.	BFR523	Poly Washer
50.	BFR420	Rear Width Adjustment Rod	119.	RG135	Bolt 1/2" x 1" GR.5
51.	BFR485	Rear Width Adjustment Tube	120.	BFR117	Bolt 3/8" x 2-1/2" GR.5
52.	BFR422	Width Adjustment Collar	121.	BFR614	Bolt 5/8" x 8" GR.5
53.	BFR423	Width Adjustment Handle	122.	12V59	Roll Pin 3/8" x 2-3/4"
54.	BFR499	Beam Pivot Shaft	123.	BFR438	Bolt 5/8" x 2" GR.5
55.	BFR425	Rake Arm Bushing W/Flange	124.	BFR545	Bolt 1" x 3-1/2" GR.5
56.	BFR229	Rake Arm Washer		BFR509	RH Tandem Axle
57.	BFR137	Hair Pin		BFR510	LH Tandem Axle
58.	BFR426	Rake Pressure Handle	125.	BFR611	Width Adjustment Bar
59.	BFR427	Rake Arm Lock-Up Shaft	126.	BFR612	Side Arm Stabilizer Rod
60.	BFR111	Back Rake Arm Adjustment Chain	127.	BFR241	Adjustment Handle
61.	K106	Cylinder Spacer	128.	BFR240	Spring
62.	BFR428	Hydraulic Cylinder End Slide LH	129.	BFR239	Sleeve Adjustable Lock
*	BFR429	Hydraulic Cylinder End Slide RH	130.	BFR613	Width Adjustment Stop
63.	BFR622	Spring Bracket (2 Hole)	131.	RG174	5/8" x 5" Bolt GR.5
64.	BFR69A	Hydraulic Lift Cylinder	132.	BFR649	SMV Bracket
65.	X94	Cylinder Spacers	133.	BFR716	Flange Nut
66.	BFR431	LH Spring Bracket	134.	DF22	Washer
*	BFR430	RH Spring Bracket	135.	BFR634	Cylinder Pin
67.	BFR82	Pipe Clamps	136.	T177	Outer Ring
68.	BFR84	Compression Spring	137.	BFR642	Width Adjustment Spacer
69.	BFR432	LH Lifting Pipe Connector	138.	BFR724	Self Tapping Bolt
*	BFR433	RH Lifting Pipe Connector	139.	S522	Manual Holder
70.	BFR519	Lifting Pipe Back	140.	S523	Manual Clamp - Large
71.	BFR520	Lifting Pipe Front			

TANDEM OPTIONS:

NOTE: * (Means Not Shown)

FIGURE 2

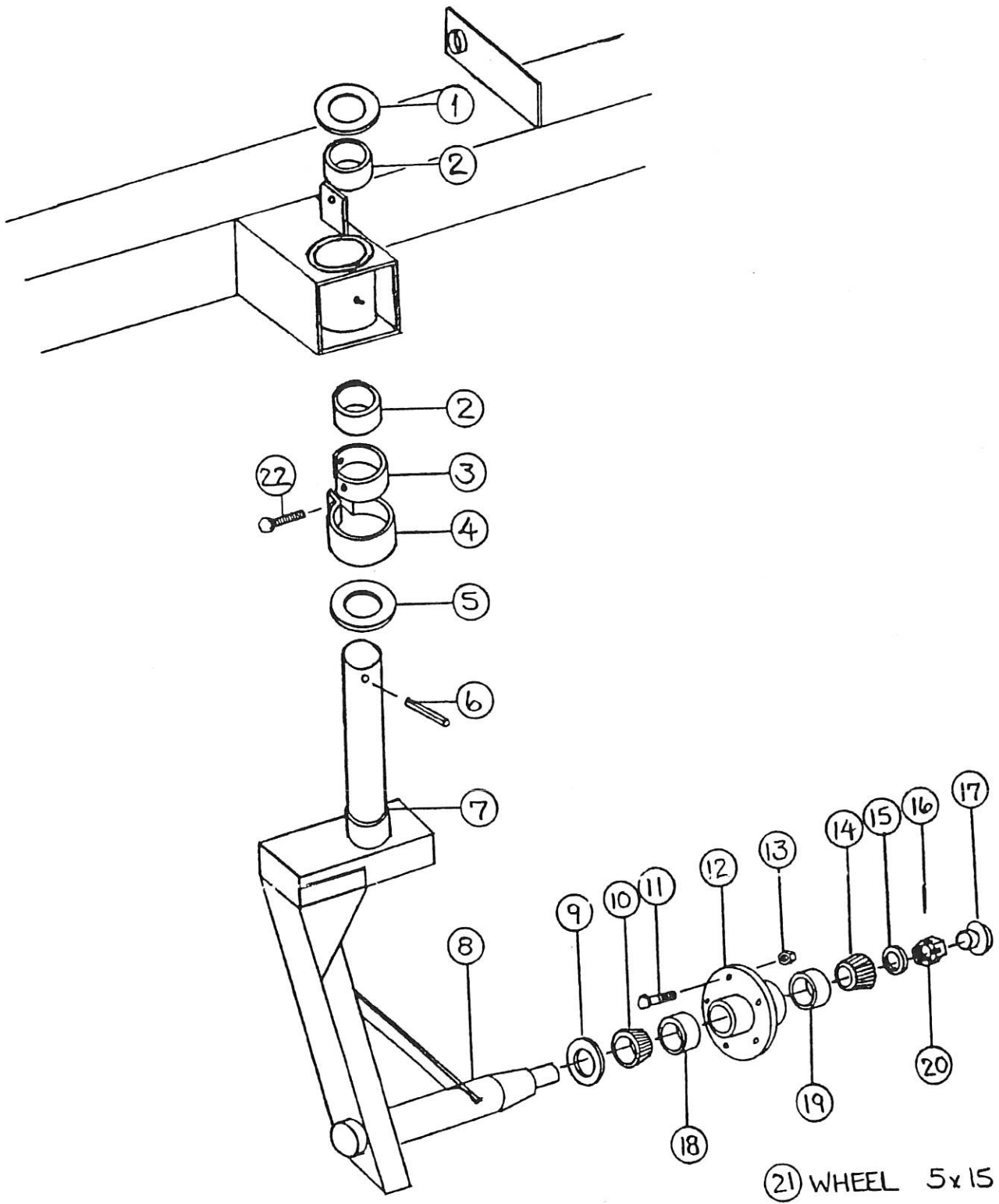


FIGURE 2
H&S 12 & 14 WHEEL HI CAPACITY RAKE
GAUGE WHEEL

ITEM	PART NO.	DESCRIPTION
1.	BFR309	Gauge Wheel Washer
2.	BFR527	Bronze Bushing
3.	BFR310	Brake Pad (2)
4.	BFR311	Brake Collar
5.	RG24	Bronze Washer
6.	BFR313	Roll Pin 5/16" x 2-3/4"
7.	BFR312	Complete Fork RH
*	BFR316	Complete Fork LH
8.	BFR56	Spindle
9.	BFR57	Seal
10.	BFR58	Inner Bearing
11.	BFR143	Stud Bolt
12.	BFR60	Hub
13.	BFR144	Nut
14.	BFR62	Outer Bearing
15.	BFR63	Washer
16.	BFR65	Cotter Pin
17.	BFR66	Hub Cap
18.	BFR59	Inner Race
19.	BFR61	Outer Race
20.	BFR64	Nut
21.	BFR67	Wheel 5 x 15
22.	X26	Bolt 3/8" x 3" Full Thread

FIGURE 3

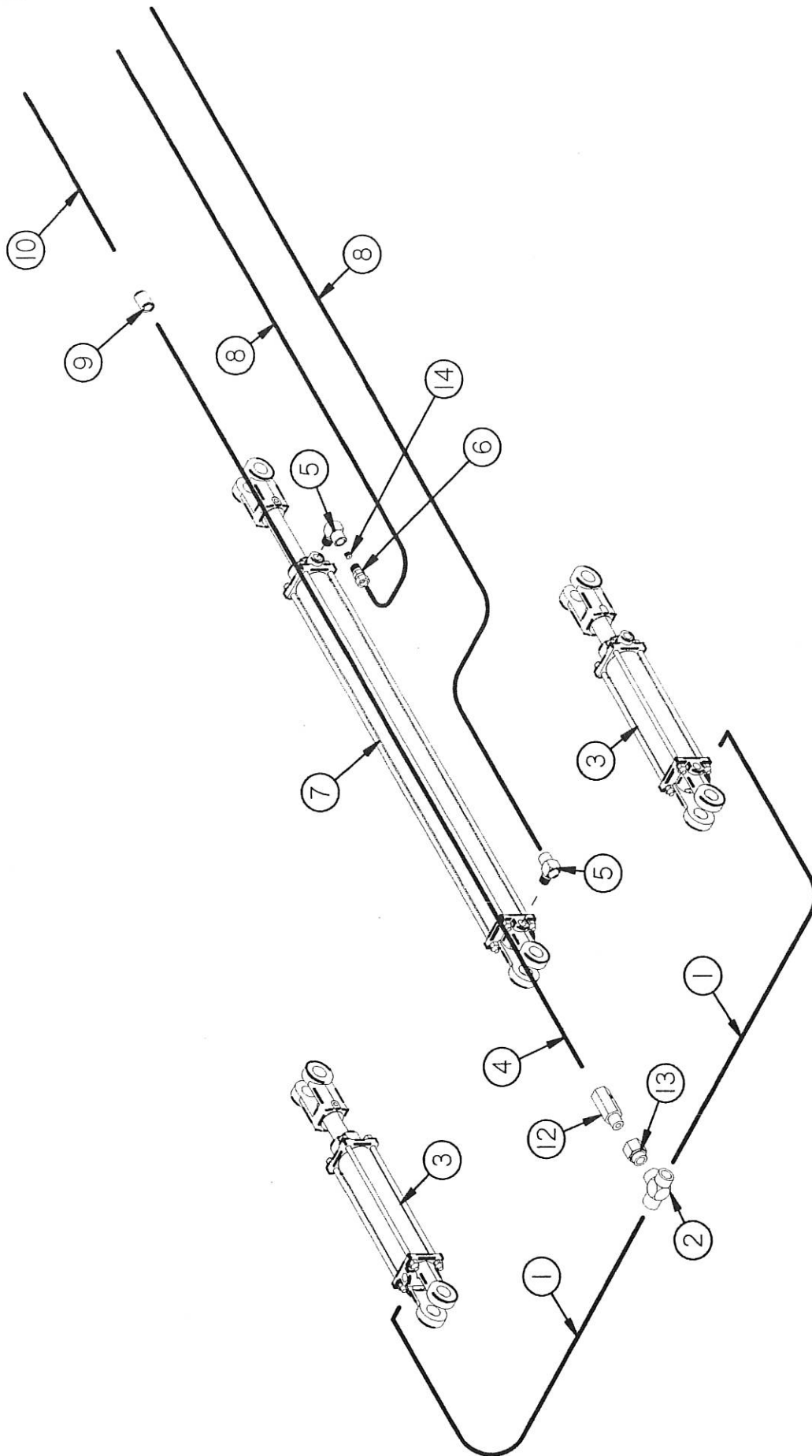
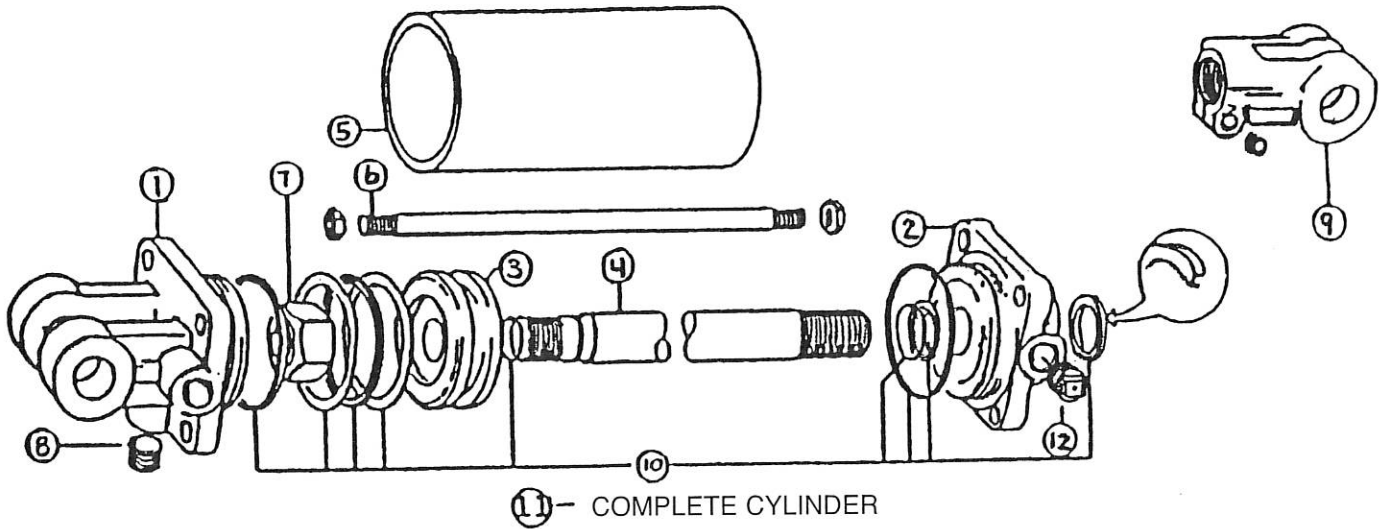


FIGURE 3
H&S 12 WHEEL HI CAPACITY RAKE HYDRAULICS

ITEM	PART NO.	DESCRIPTION
1.	37N60	108" Hose
2.	BFR74	3/8" Female Tee
3.	BFR69A	Hydraulic Lift Cylinders
4.	23N302	264" Hose
5.	23N234	3/8" Street Elbow
6.	BFR617	Male Adapter Union w/Orifice
7.	BFR653	Hydraulic Open Cylinder
8.	BFR621	256" Hose
9.	HE60	3/8" Pipe Coupler
10.	BFR448	66" Hose
12.	BFR554	Flow Valve
13.	BFR555	Adapter
14.	BFR747	Pipe Exp. Plug

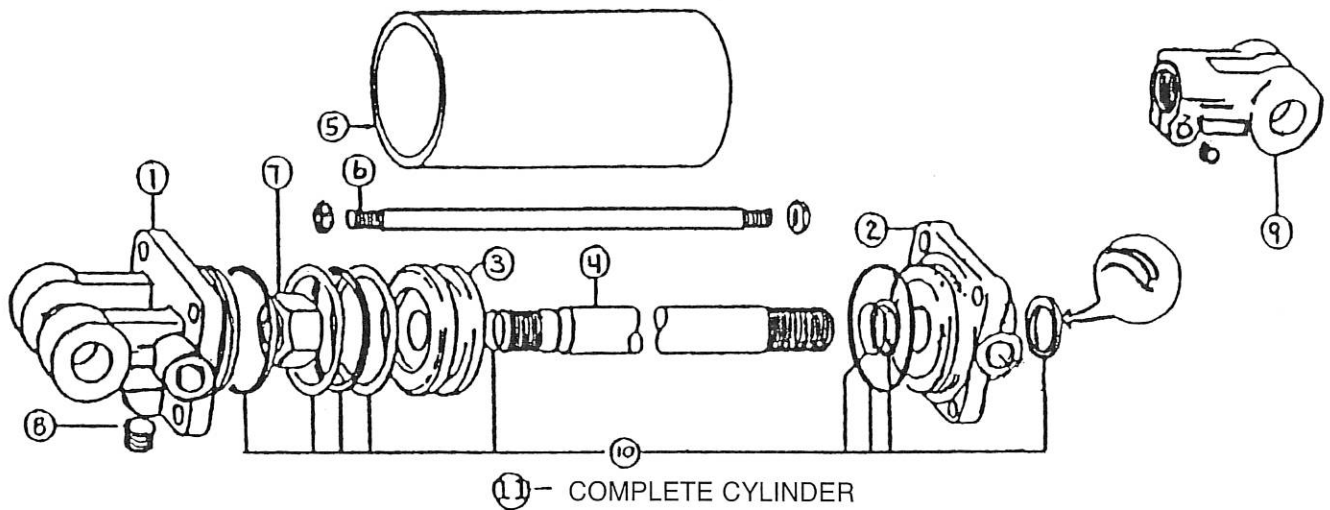
FIGURE 4



H&S 12 WHEEL HI CAPACITY RAKE
HYDRAULIC LIFT CYLINDER

ITEM	PART NO.	DESCRIPTION
1.	23N142A	Clevis Cap
2.	23N143A	Rod Cap
3.	23N144	Piston
4.	T184A	Rod
5.	BFR68	Cylinder Tube
6.	T186	Tie Rod
7.	23N148	Piston Nut
8.	23N149	Plug
9.	23N150A	Rod Clevis
10.	23N151	Seal Kit
11.	BFR69A	Complete Cylinder
12.	BFR70	Vent Plug

FIGURE 5



H&S 12 & 14 WHEEL HI CAPACITY RAKE
HYDRAULIC OPEN CYLINDER

ITEM	PART NO.	DESCRIPTION
1.	23N142A	Clevis Cap
2.	23N143A	Rod Cap
3.	23N144	Piston
4.	BFR654	Rod
5.	BFR655	Cylinder Tube
6.	BFR656	Tie Rod
7.	23N148	Piston Nut
8.	23N149	Plug
9.	23N150A	Rod Clevis
10.	23N151	Seal Kit
11.	BFR653	Complete Cylinder

FIGURE 6

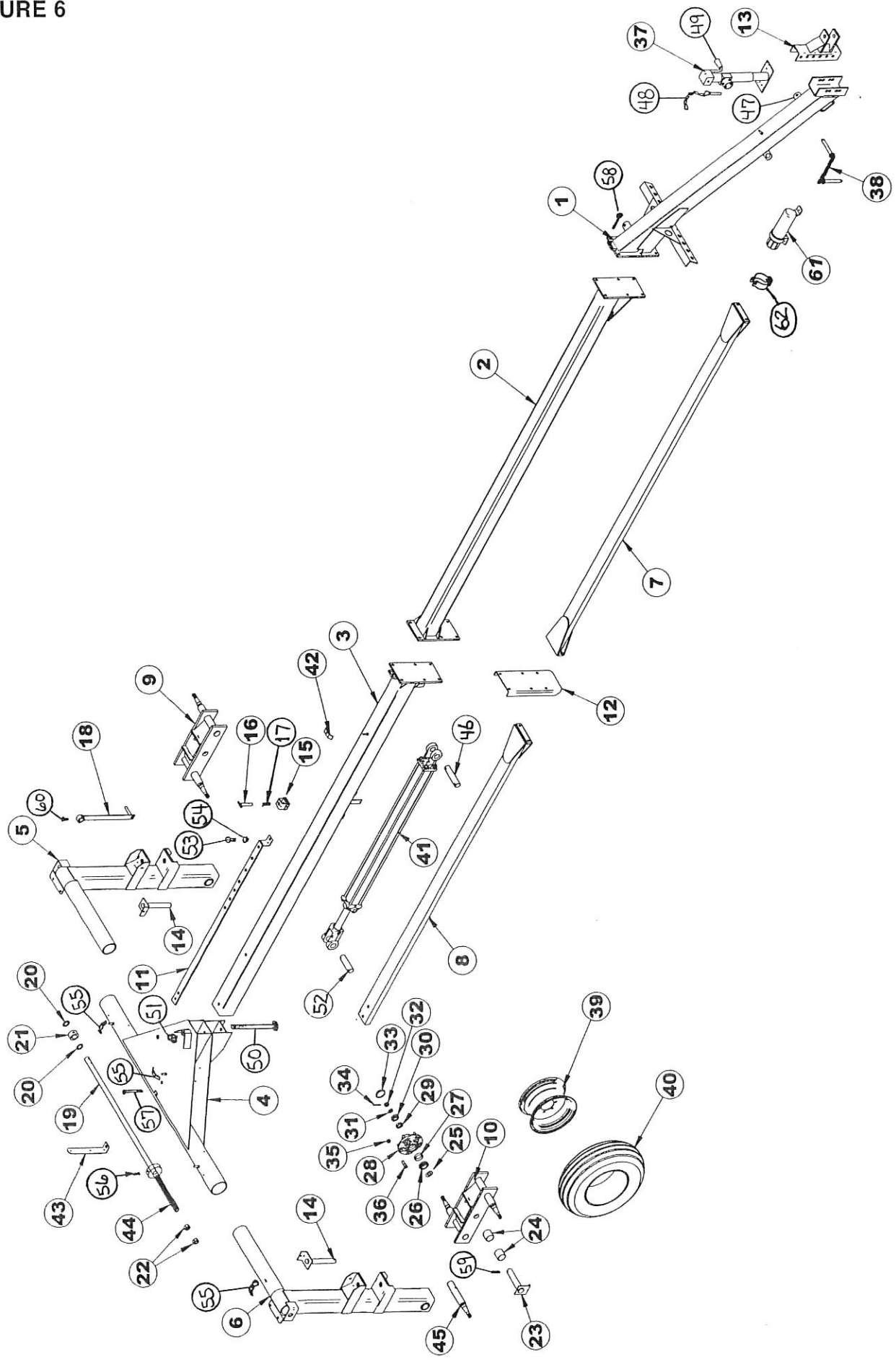


FIGURE 6
H&S 14 WHEEL HI CAPACITY RAKE – MAIN FRAME

ITEM	PART NO.	DESCRIPTION	ITEM	PART NO.	DESCRIPTION
1.	BFR663	Pole	33.	BFR66	Hub Cap
2.	BFR714	Center Pole Section	34.	BFR65	Cotter Pin
3.	BFR715	Back Pole Section	35.	BFR144	Nut
4.	BFR709	Rear Pivot Assembly	36.	BFR143	Stud
5.	BFR662	Left Axle Upright	37.	BFR753	Jack
6.	BFR661	Right Axle Upright	38.	BFR450	Hitch Pins
7.	BFR711	Center Pole Brace - Removable	39.	BFR67	Wheel (15 x 5)
8.	BFR710	Back Pole Brace - Removable	40.	BFR128	Tire (6.70 x 15)
9.	BFR510	LH Tandem Axle	41.	BFR653	Hydraulic Cylinder
10.	BFR509	RH Tandem Axle	42.	HE42	Hose Holder
11.	BFR611	Width Adjustment Bar	43.	BFR649	SMV Bracket
12.	BFR712	Middle Linkage Stop	44.	BFR420	Rear width Adjustment Rod
13.	BFR157	Hitch	45.	BFR522	Spindle
14.	BFR499	Beam Pivot Shaft	46.	BFR396	Cylinder Pin
15.	BFR239	Sleeve Adjustable Lock	47.	12N121	Jack Mount
16.	BFR241	Adjustment Handle	48.	12N117	Jack Pin & Chain
17.	BFR240	Spring	49.	5N78	Jack Handle
18.	BFR423	Width Adjustment Handle	*	12N118	Replacement Bearing
19.	BFR485	Rear width Adjustment Tube	50.	BFR615	Bolt 3/4" x 8-1/2" GR.5
20.	BFR523	Poly Washer	51.	BFR518	3/4"-16 Nut
21.	BFR422	Width Adjustment Collar	52.	BFR634	Front Width Cylinder Pin
22.	BFR419	3/4" Acme Nut	53.	BFR724	Self Tapping Bolt
23.	BFR524	Tandem Pin	54.	BFR 642	Width Adjustment Spacer
24.	BFR625	Bushing	55.	23N67	Hose Holder
25.	BFR57	Seal	56.	RG135	Bolt 1/2" x 1" GR.5
26.	BFR58	Inner Bearing	57.	50N129	3/4" x 6" Bolt GR.5
27.	BFR59	Inner Race	58.	BFR438	Bolt 5/8" x 2" GR.5
28.	BFR60	Hub	59.	12V59	Roll Pin 3/8" x 2-3/4"
29.	BFR61	Outer Race	60.	BFR117	Bolt 3/8" x 2-1/2" GR.5
30.	BFR62	Outer Bearing	61.	S522	Manual Holder
31.	BFR63	Washer	62.	S523	Manual Clamp - Large
32.	BFR64	Nut			

NOTE: * (Means Not Shown)

FIGURE 7

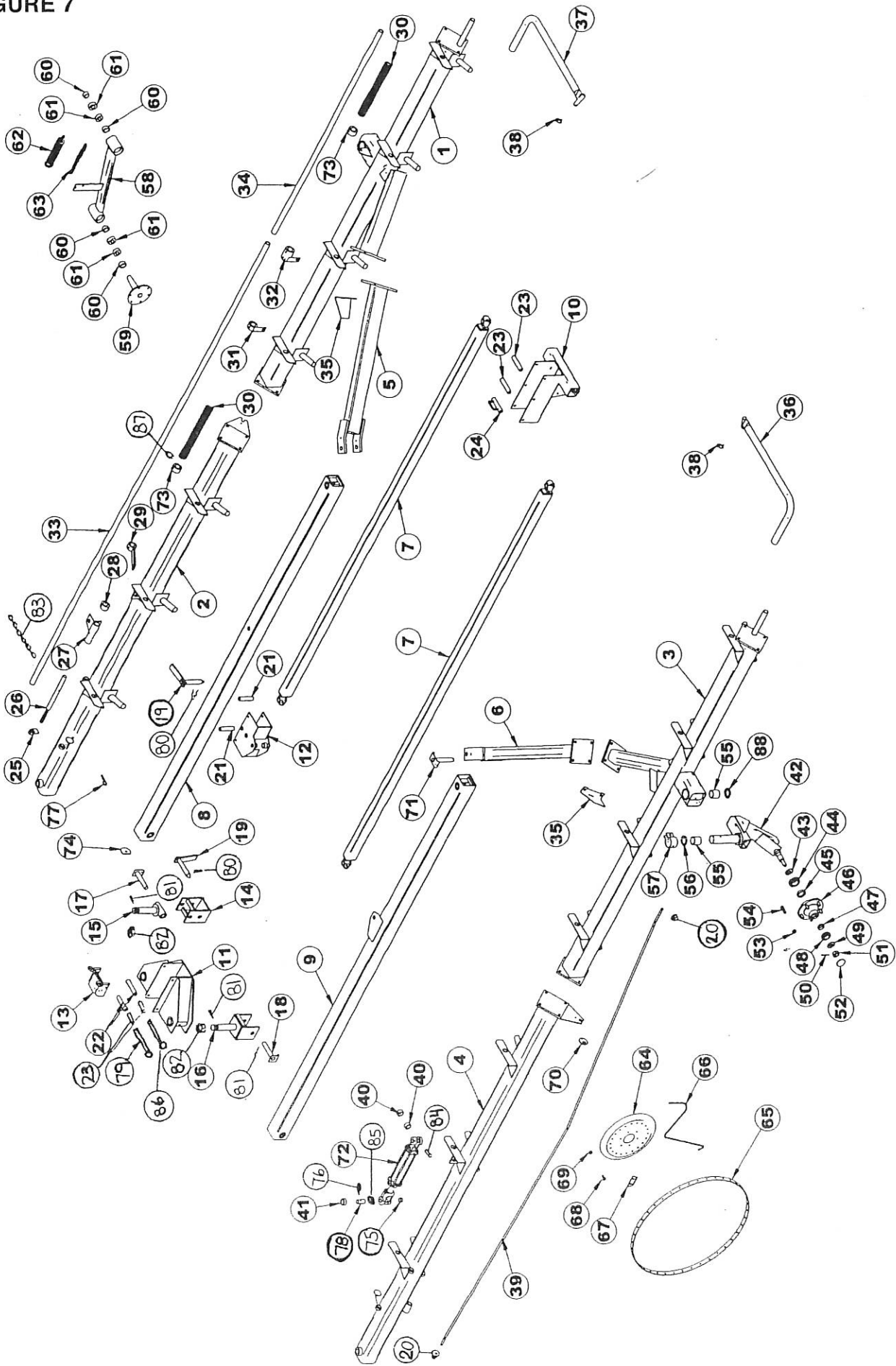
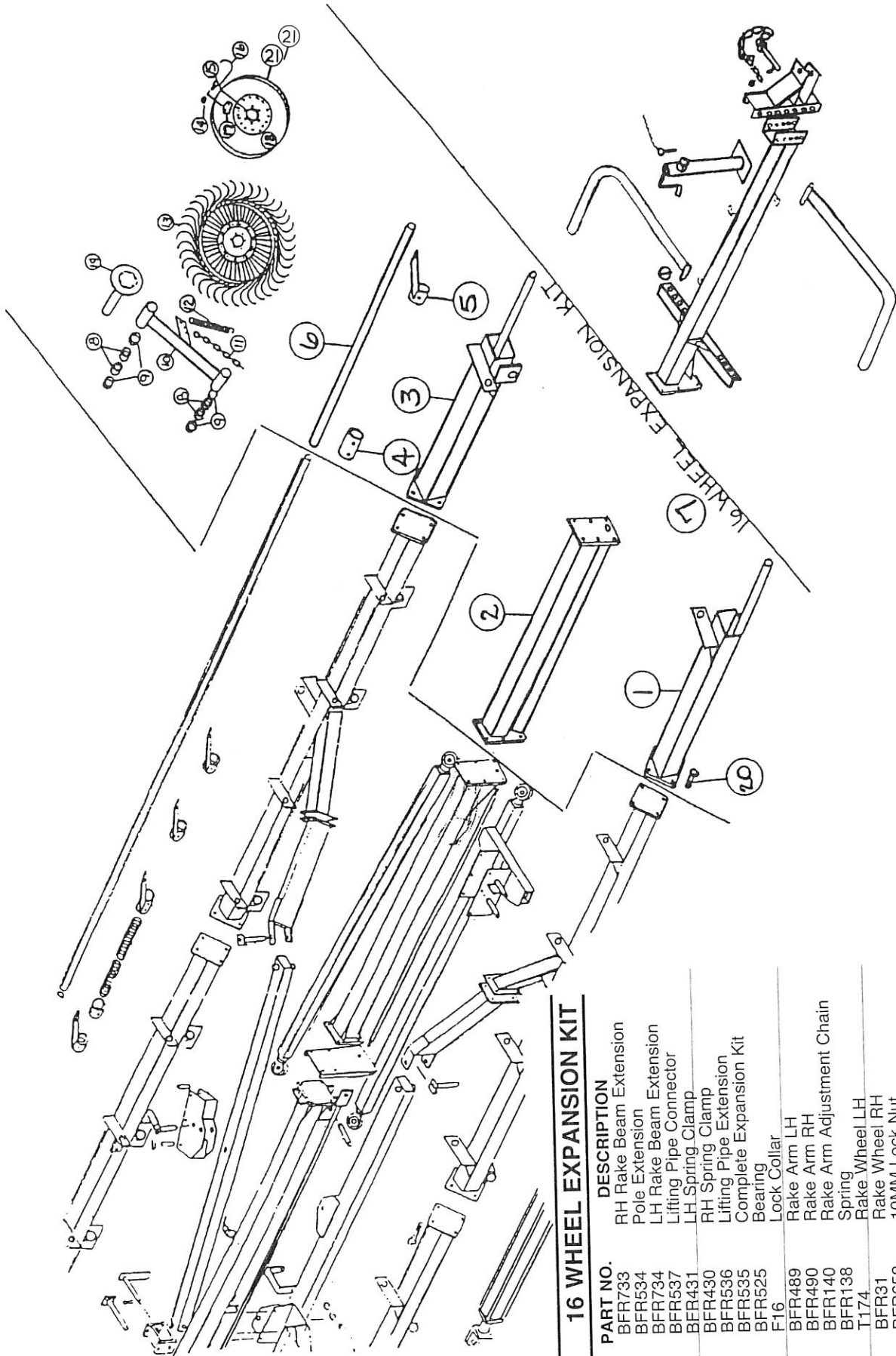


FIGURE 7
H&S 14 WHEEL HI CAPACITY RAKE – BEAMS AND LINKAGE

ITEM	PART NO.	DESCRIPTION	ITEM	PART NO.	DESCRIPTION
1.	BFR473	Front Rake Beam LH	45.	BFR59	Inner Race
2.	BFR475	Back Rake Beam LH	46.	BFR60	Hub
3.	BFR472	Front Rake Beam RH	47.	BFR61	Outer Race
4.	BFR474	Back Rake Beam RH	48.	BFR62	Outer Bearing
5.	BFR745	Rake Beam Arm LH	49.	BFR63	Washer
6.	BFR744	Rake Beam Arm RH	50.	BFR65	Cotter Pin
7.	BFR458	Front Linkage	51.	BFR64	Nut
8.	BFR463	Left Rear Linkage	52.	BFR66	Hub Cap
9.	BFR462	Right Rear Linkage	53.	BFR144	Nut
10.	BFR455	Front Linkage Slider	54.	BFR143	Stud
11.	BFR491	Back Linkage Slider	55.	BFR527	Bronze Bushing
12.	BFR465	Center Slider	56.	BFR309	Gauge Wheel Washer
13.	BFR616	Width Adjustment Stop	57.	BFR311	Brake Collar
14.	BFR477	Back Linkage Yoke LH	58.	BFR489	Rake Arm LH
15.	BFR480	Left Pivot Yoke Shaft	*	BFR490	Rake Arm RH
16.	BFR476	Back Linkage Yoke RH	59.	BFR657	Rake Wheel Hub
17.	BFR505	Pivot Yoke Shaft Pin LH	60.	F16	Lock Collar
18.	BFR479	Pivot Yoke Shaft Pin RH	61.	BFR525	Bearing
19.	BFR468	Linkage Pins	62.	BFR138	Rake Arm Spring
20.	BFR716	Flange Nut	63.	BFR140	Rake Arm Adjustment Chain
21.	BFR467	Center Slider Spacer	64.	T179	Rake Wheel Center
22.	BFR471	Back Slider Roller	65.	T177	Outer Ring
23.	BFR457	Slider Spacer	66.	T176	Rake Wheel Tooth
24.	BFR456	Hose Guide Spacer	67.	T178	Rake Tooth Clip
25.	BFR 426	Rake Pressure Handle	68.	T175	10mm x 25mm Carriage Bolt
26.	BFR486	Rake Arm Lock-Up Shaft	69.	BFR652	10mm Lock Nut
27.	BFR530	Hydraulic Cylinder End Slide LH	*	T174	Rake Wheel LH
*	BFR531	Hydraulic Cylinder End Slide RH	*	BFR31	Rake Wheel RH
28.	BFR83	Pipe Clamps (2 Holes)	70.	DF22	Washer
29.	BFR430	RH Spring Bracket	71.	BFR461	Rake Beam Arm Pin
30.	BFR84	Compression Spring	72.	16SV171	Hydraulic Lift Cylinder
31.	BFR431	LH Spring Bracket	73.	BFR82	Pipe Clamp (1 Hole)
32.	BFR432	LH Lifting Pipe Connector	74.	BFR693	Stop Washer
*	BFR433	RH Lifting Pipe Connector	75.	BFR506	Nylon Wear Block
33.	BFR521	Lifting Pipe Back	76.	23N108	Cotter Pin
34.	BFR520	Lifting Pipe Front	77.	BFR137	Hair Pin
35.	BFR549	Tooth Deflector	78.	BFR517	Cylinder Pin - Back
36.	BFR492	Transport Lock Pipe RH	79.	16SV77	Bolt 1/2" x 6" x GR.5
37.	BFR452	Transport Lock Pipe LH	80.	ES7	Hair Pin
38.	BFR443	Linch Pin	81.	BFR7	Cotter Pin 3/16" x 3-3/4"
39.	BFR612	Side Arm Stabilizer Rod	82.	BFR481	Slotted Nut 1-1/2"
40.	X94	Cylinder Spacer	83.	BFR111	Back Rake Arm Adjustment Chain
41.	K106	Cylinder Spacer	84.	T143	Cylinder Pin
42.	BFR312	Complete Fork RH	85.	16SV136	Washer
*	BFR316	Complete Fork LH	86.	BFR494	Bolt 1/2" x 6-1/2" GR.5
43.	BFR57	Seal	87.	BFR641	Washer
44.	BFR58	Inner Bearing	88.	RG24	Bronze Thrust Washer

NOTE: * (Means Not Shown)

FIGURE 8



16 WHEEL EXPANSION KIT

ITEM	PART NO.	DESCRIPTION
1.	BFR733	RH Rake Beam Extension
2.	BFR534	Pole Extension
3.	BFR734	LH Rake Beam Extension
4.	BFR537	Lifting Pipe Connector
5.	BER431	LH Spring Clamp
*	BFR430	RH Spring Clamp
6.	BFR536	Lifting Pipe Extension
7.	BFR535	Complete Expansion Kit
8.	BFR525	Bearing
9.	F16	Lock Collar
10.	BFR489	Rake Arm LH
*	BFR490	Rake Arm RH
11.	BFR140	Rake Arm Adjustment Chain
12.	BFR138	Spring
13.	T174	Rake Wheel LH
*	BFR31	Rake Wheel RH
14.	BFR652	10MM Lock Nut
15.	T175	10MM x 25MM Carriage Bolt
16.	T176	Rake Wheel Tooth
17.	T178	Rake Tooth Clip
18.	T179	Rake Wheel Center
19.	BFR657	Rake Wheel Hub
20.	BFR438	Bolt 5/8" x 2" GR.5 (14 pcs.)
21.	T177	Outer Ring
*	BFR635	Hose 1/2" FP x 1/2" MP x 33" (3)
*	BFR555	Adapter
*	JB82	1/2 To 3/8 Bushing

NOTE: * (Means Not Shown)

FIGURE 9

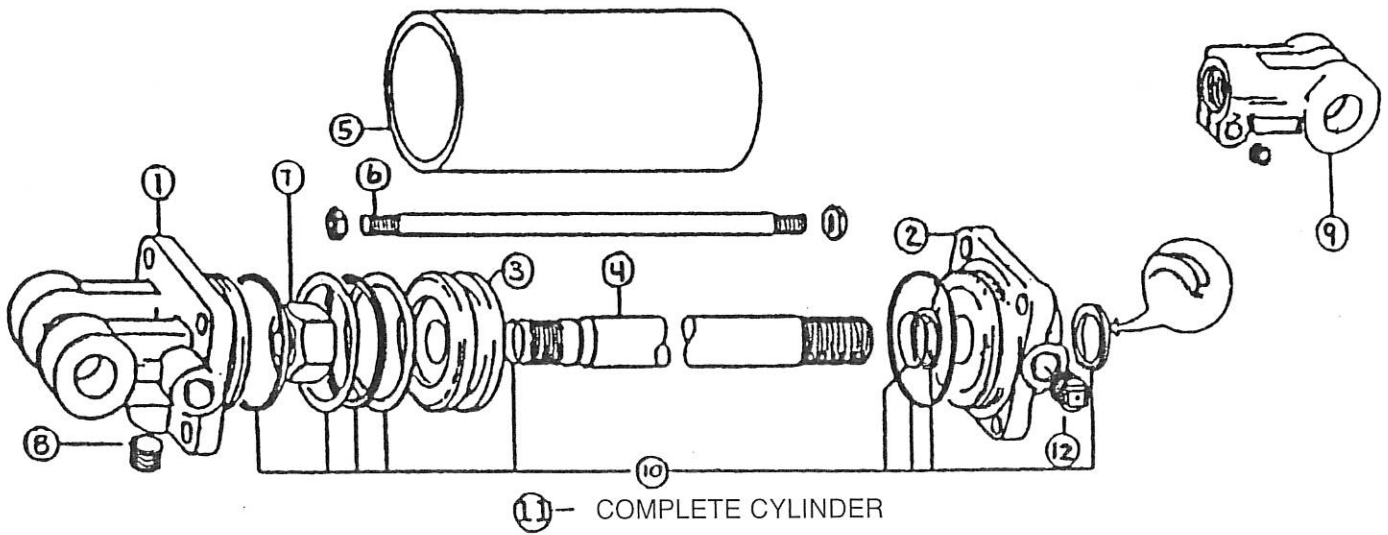


FIGURE 9
H&S 14 WHEEL HI CAPACITY RAKE
HYDRAULIC LIFT CYLINDER

ITEM	PART NO.	DESCRIPTION
1.	23N142A	Clevis Cap
2.	23N143A	Rod Cap
3.	23N144	Piston
4.	16SV168A	Rod
5.	16SV169	Cylinder Tube
6.	16SV170	Tie Rod
7.	23N148	Piston Nut
8.	23N149	Plug
9.	23N150A	Rod Clevis
10.	23N151	Seal Kit
11.	16SV171A	Complete Cylinder
12.	BFR70	Vent Plug

FIGURE 10

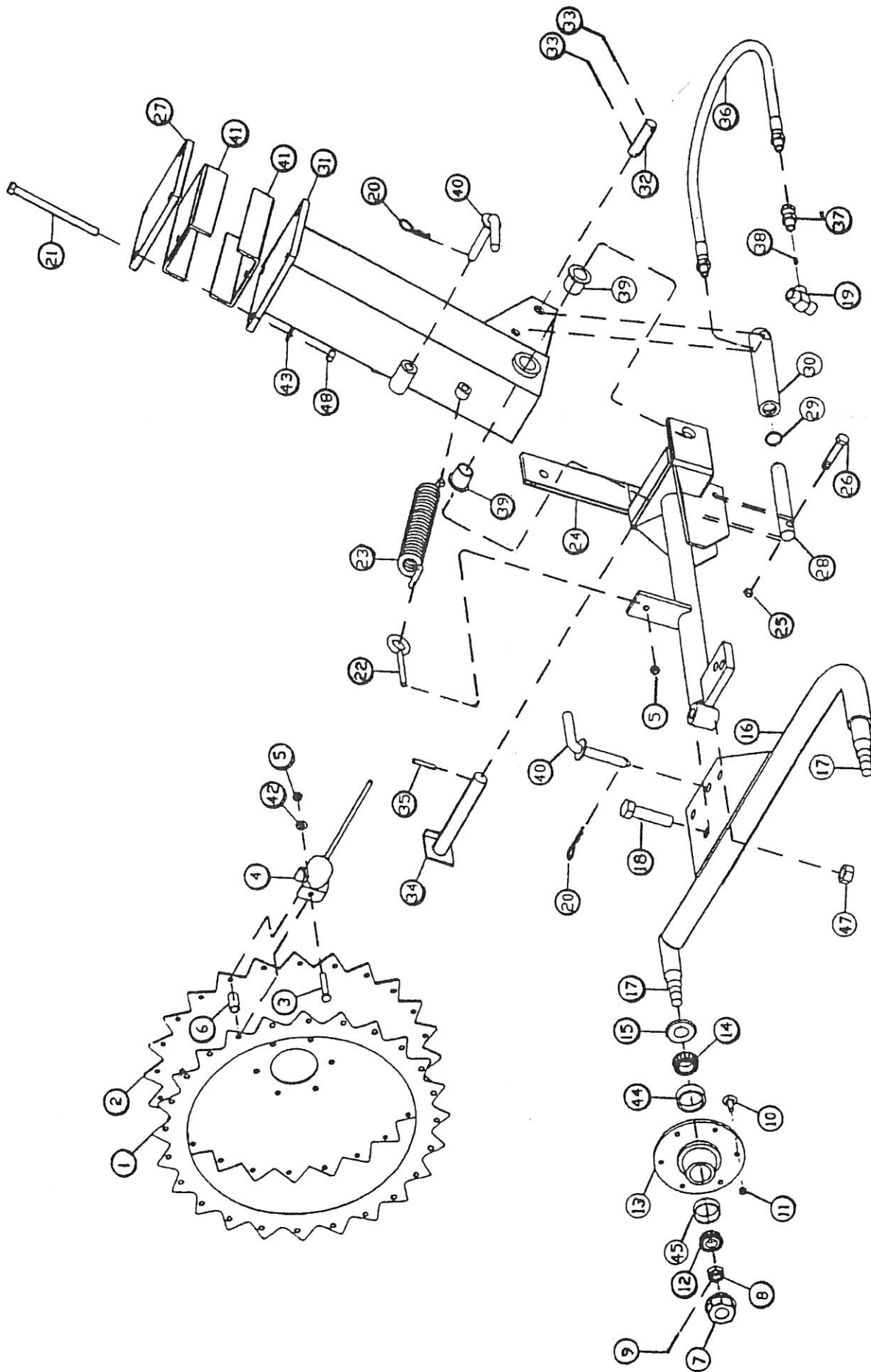


FIGURE 10
H&S 12 & 14 WHEEL HI CAPACITY RAKE
OPTIONAL 2 WHEEL CENTER KICKER WHEEL

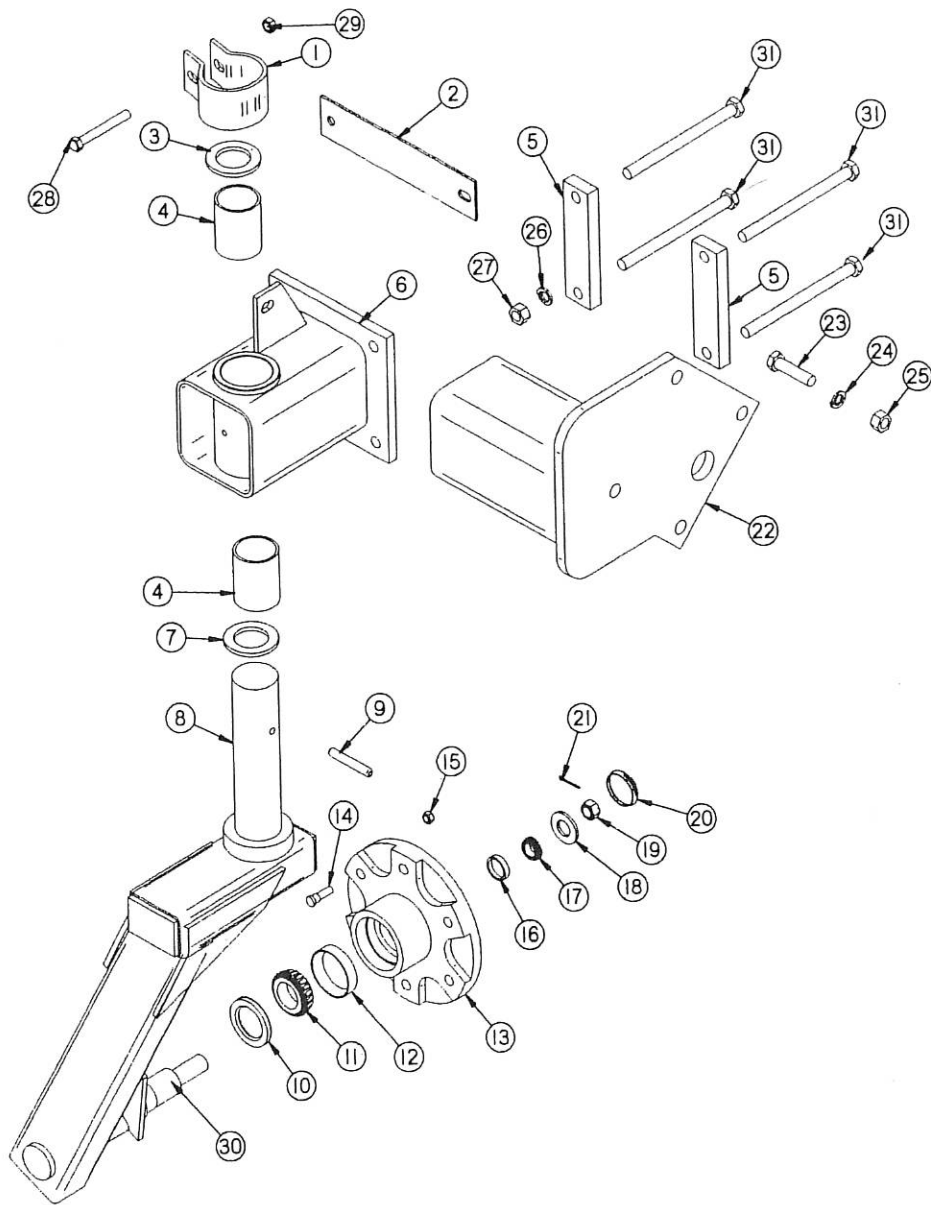
ITEM	12 WHEEL	14 WHEEL	DESCRIPTION
1.	BFR369	"	Rake Wheel Ring
2.	BFR370	"	Rake Wheel Center
3.	T123	"	3/8" x 2-1/4" Bolt GR.5
4.	T82	"	Rake Wheel Tooth
5.	K93	"	3/8" Lock Nut
6.	BFR371	"	Rake Wheel Spacer
7.	T173	"	Hub Cap
8.	T172	"	Nut
9.	T169	"	Cotter Key
10.	T168	"	10MM x 25MM Bolt
11.	T166	"	10MM Nut
12.	T170	"	Outer Bearing
13.	BFR32	"	Rake Wheel Hub
14.	T164	"	Inner Bearing
15.	T163	"	Seal
16.	BFR511	"	Center Kicker Wheel Arm
17.	BFR36	"	Spindle
18.	18N48	"	Pivot Pin Bolt 3/4" x 3" GR.5
19.	BFR74	"	3/8" Pipe Tee
20.	ES7	"	Hair Pin
21.	BFR494	"	1/2" x 6-1/2" Bolt GR.5
22.	BFR374	"	3/8" x 3" I-Bolt
23.	BR62	"	Spring
24.	BFR512	"	Center Kicker Wheel Pivot
25.	9S17	"	1/2" Locknut
26.	BFR375	"	1/2" x 2-1/2" Bolt GR.5
27.	BFR513	"	Kicker Wheel Mount
28.	BFR114	"	Piston
29.	BFR115	"	"O" Ring
30.	BFR116	"	Hydraulic Cylinder
31.	BFR514	"	Kicker Wheel Offset
32.	BFR515	"	Cylinder Pin
33.	T72	"	5/32" x 1-1/2" Cotter Key
34.	BFR379	"	Axle Shaft
35.	3G22	"	Roll Pin
36.	BFR121	"	Hose
37.	BFR122	"	3/8" Union/Adapter
*	BFR529	"	Adapter Union w/Orifice
38.	BFR380	"	Orifice
39.	BFR27	"	Bushing
40.	BFR197	"	Locking Pin
41.	BFR516	-	Filler Plate
42.	B68	"	Lockwasher
43.	R3	"	Lockwasher
44.	T165	"	Inner Race
45.	T171	"	Outer Race
47.	HE7	"	Locknut
48.	R11	"	Locknut

NOTE: " (Same Part No. as 12 Wheel Rake)

- (Part is Not Used on This Model)

* (Means Not Shown)

FIGURE 11



H&S 14 & 16 WHEEL HI CAPACITY RAKE OPTIONAL 15" GAUGE WHEEL

ITEM	PART NO.	DESCRIPTION	ITEM	PART NO.	DESCRIPTION
1.	BFR311	Brake Collar	17.	BFR62	Outer Bearing
2.	BFR310	Brake Pad (2)	18.	BFR63	Washer
3.	BFR309	Gauge Wheel Washer	19.	BFR64	Nut
4.	BFR527	Bronze Bushing	20.	BFR66	Hub Cap
5.	BFR725	Mounting Strap	21.	BFR65	Cotter Pin
6.	BFR643	Gauge Wheel Mount	22.	BFR644	Gauge Wheel Extension Left
7.	RG24	Bronze Washer	*	BFR645	Gauge Wheel Extension Right
8.	BFR316	Complete Fork LH	23.	BFR438	5/8" x 2" Bolt
*	BFR312	Complete Fork RH	24.	T69	5/8" Lock Washer
9.	BFR313	Roll Pin 5/16" x 2-3/4"	25.	T68	5/8" Nut
10.	BFR57	Seal	26.	R35	1/2" Lock Washer
11.	BFR58	Inner Bearing	27.	K96	1/2" Nut
12.	BFR59	Inner Race	28.	X26	3/8" x 3" Bolt Full Thread
13.	BFR60	Hub	29.	K60	3/8" Nut
14.	BFR143	Stud	30.	BFR56	Spindle
15.	BFR144	Nut	*	BFR67	Wheel (5 x 15)
16.	BFR61	Outer Race	31.	BFR494	1/2" x 6-1/2" Gr. 5 Bolt

NOTE: * (Means Not Shown)

14 WHEEL HI CAPACITY RAKE HYDRAULICS

ITEM	PART NO.	DESCRIPTION
1.	37N60	108" Hose
2.	BFR74	3/8" Female Tee
3.	16SV171A	Hydraulic Lift Cylinders
4.	BFR448	66" Hose
5.	23N234	3/8" Street Elbow
6.	BFR617	Male Adapter Union w/Orifice
7.	BFR653	Hydraulic Open Cylinder
8.	27N45	288" Hose
9.	HE60	3/8" Pipe Coupler
11.	BFR554	Flow Valve
12.	BFR555	Adapter
13.	BFR747	Pipe Exp. Plug

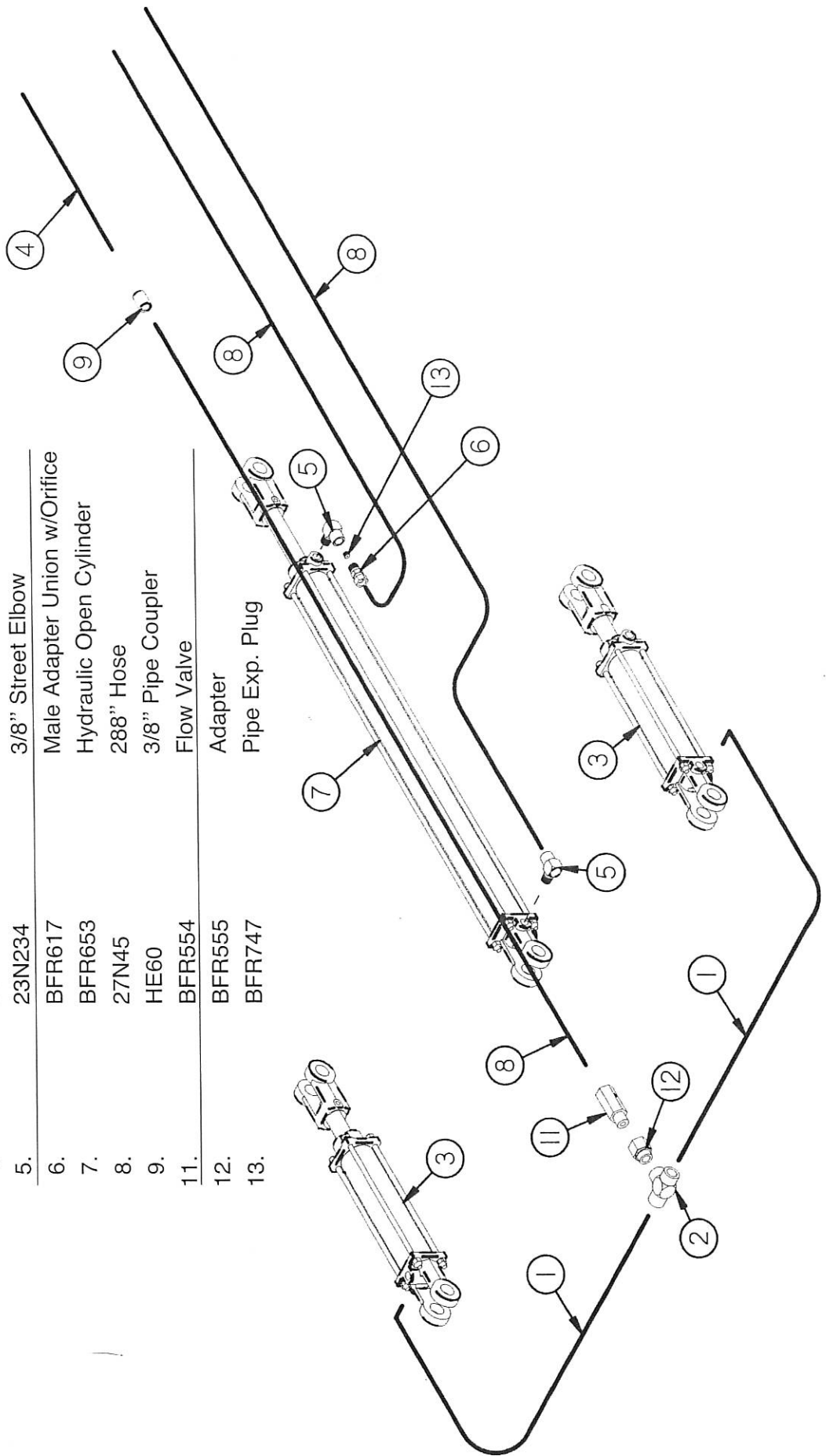


FIGURE 13

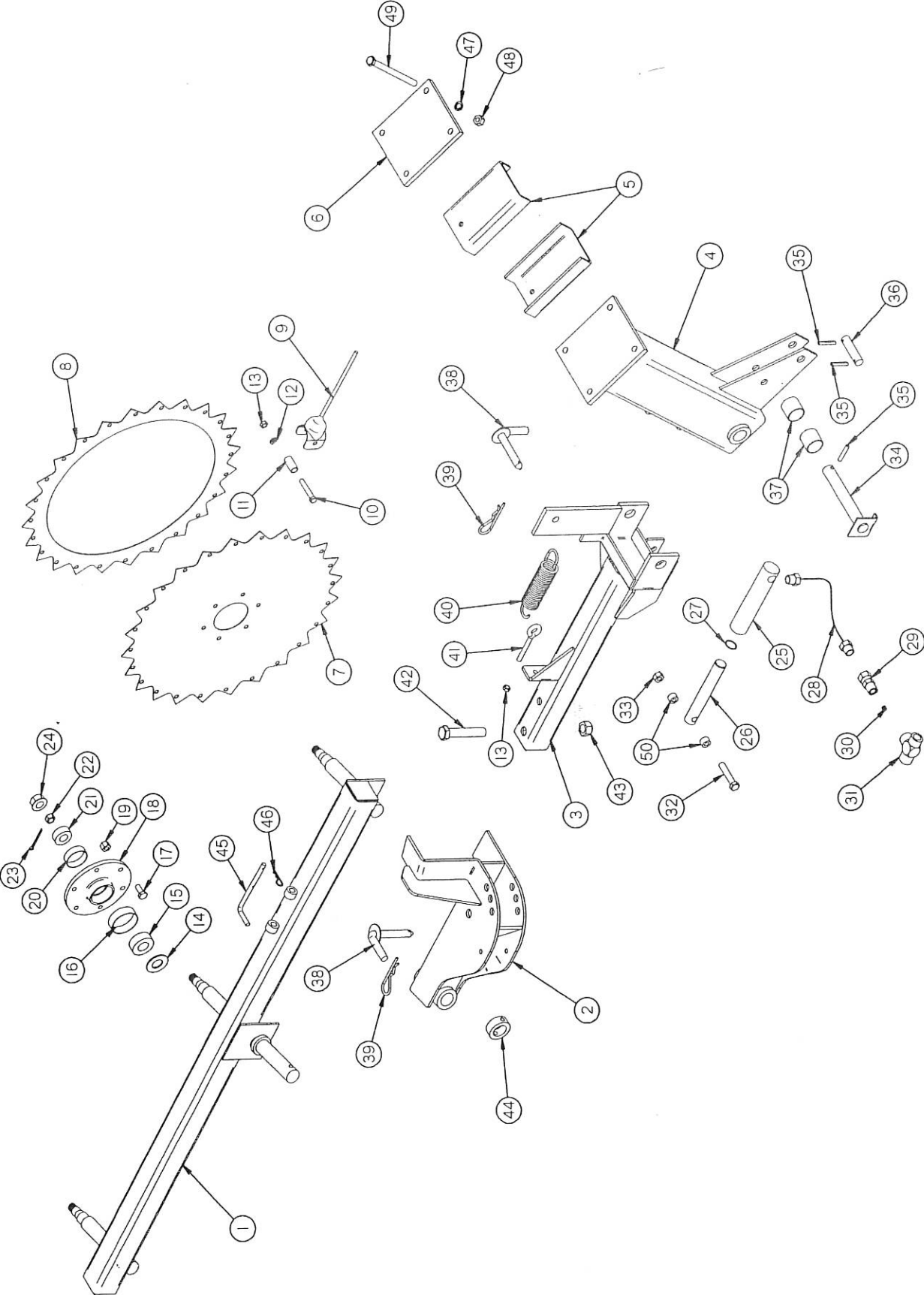
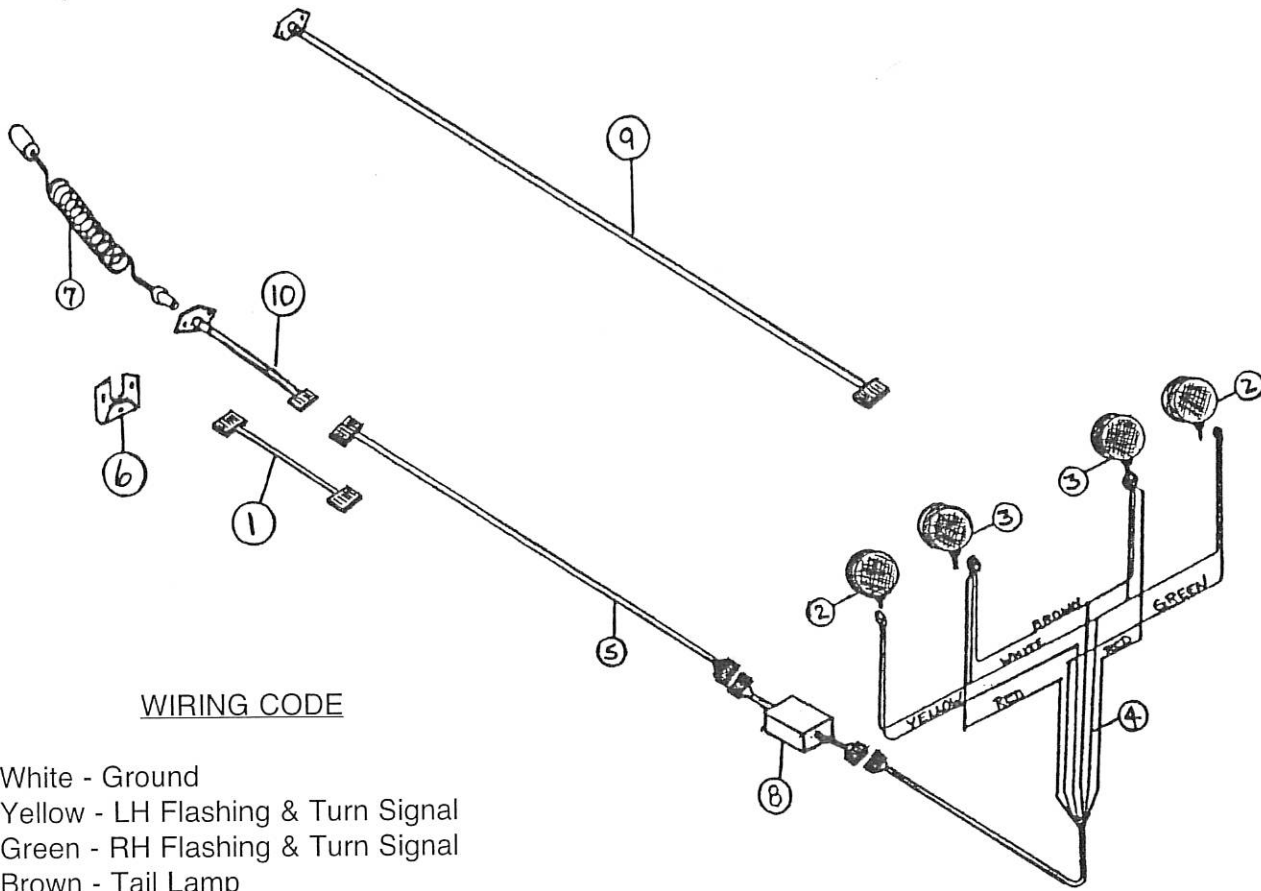


FIGURE 13
H&S 12 & 14 WHEEL HI CAPACITY RAKE
OPTIONAL 3 WHEEL CENTER KICKER WHEEL

ITEM	PART NO.	DESCRIPTION
1.	BFR717	Kicker Rake Beam
2.	BFR718	Pivot
3.	BFR719	Square Rake Arm
4.	BFR514	Kicker Wheel Offset
5.	BFR516	Filler Plate (12 Wheel Only)
6.	BFR513	Kicker Wheel Mount
7.	BFR370	Rake Wheel Center
8.	BFR369	Rake Wheel Ring
9.	T82	Rake Wheel Tooth
10.	T123	3/8" x 2-1/4" Bolt Gr. 5
11.	BFR371	Rake Wheel Spacer
12.	B68	Lockwasher
13.	K93	3/8" Lock Nut
14.	T163	Seal
15.	T164	Inner Bearing
16.	T165	Inner Race
17.	T168	10MM x 25MM Bolt
18.	BFR32	Rake Wheel Hub
19.	T166	10MM Nut
20.	T171	Outer Race
21.	T170	Outer Bearing
22.	T172	Nut
23.	T169	Cotter Key
24.	T173	Hub Cap
25.	BFR116	Hydraulic Cylinder
26.	BFR114	Piston
27.	BFR115	"O" Ring
28.	BFR121	Hose
29.	BFR122	3/8" Union/Adapter
30.	BFR380	Orifice
31.	BFR74	3/8" Pipe Tee
32.	LW131	1/2" x 3-1/2" Bolt Gr. 5
33.	9S17	1/2" Locknut
34.	BFR379	Axle Shaft
35.	3G22	Roll Pin
36.	BFR515	Cylinder Pin
37.	BFR27	Bushing
38.	BFR197	Locking Pin
39.	ES7	Hair Pin
40.	BR62	Spring
41.	BFR374	3/8" x 3" I-Bolt
42.	BFR23	Pivot Pin Bolt 3/4" x 4" Gr. 5
43.	HE7	Locknut
44.	BFR720	Pivot Lock Collar
45.	BFR721	Beam Lock Pin
46.	X97	Hair Pin
47.	R3	Lockwasher
48.	R11	Locknut
49.	BFR494	1/2' x 6-1/2" Bolt Gr. 5
50.	BFR722	Lift Cylinder Spacer

FIGURE 14



WIRING CODE

- White - Ground
- Yellow - LH Flashing & Turn Signal
- Green - RH Flashing & Turn Signal
- Brown - Tail Lamp
- Red - Tail Lamp (Flash LH/RH)

12-14-16 WHEEL HI-CAP OPTIONAL RAKE LIGHTING

ITEM	PART NO.	DESCRIPTION
1.	BFR666	16 Wheel Ext. Light Harness
2.	DWM129	Amber Light
3.	BFR675	Red Light
4.	BFR667	Light Harness (6 WIRE)
5.	BFR705	14 Wheel Light Harness
6.	BFR659	Mounting Bracket
7.	S317	Tractor Cord (Optional)
8.	S441	Light Module
9.	BFR668	12 Wheel Light Harness
10.	BFR706	Front Pigtail
*	BFR671	12 Wheel Comp. Light Harness Less Optional Cord
*	BFR707	14 Wheel Comp. Light Harness Less Optional Cord
*	BFR708	16 Wheel Comp. Light Harness Less Optional Cord

H&S HI CAPACITY BI-FOLD RAKE

Your new H&S Hi Capacity Rake has been manufactured of the finest quality materials and components. The performance you get from your machine is largely dependent upon how well you read and understand this manual and apply this knowledge. There is a right and a wrong way to do everything. Please do not assume that you know how to operate and maintain your Bi-Fold Rake before reading this manual carefully. Keep this manual available for ready reference.

HI CAPACITY SPECIFICATIONS

Rake wheel diameter – 55"
Number of teeth per wheel – 40
Diameter of rake teeth – 7 mm

	12 Wheel	14 Wheel	16 Wheel
Overall Length	24' 6"	27' 3"	30' 3"
Overall Width	8'	8' 1"	8' 1"
Weight	3500	3800	4200
Tires	670 x 15" 6 ply	670 x 15" 6 ply	670 x 15" 6 ply
Raking Width (range)	0' to 24'	0' to 28'	0' to 31' 6"
Windrow Width (range)	38" to 58"	38" to 58"	38" to 58"

NOTE

Determine right or left side of Hi Capacity Rake by viewing it from the rear. If instructions or parts lists call for hardened bolts, they are identified as Grade 5 by three lines on the head.

H&S MANUFACTURING CO. INC.

2608 S. Hume Ave.
P.O. Box 768 – Telephone (715) 387-3414
FAX (715) 384-5463
MARSHFIELD, WI 54449



H&S WAREHOUSE Rt. #5 and 76
P.O. Box 1260 – Telephone (716) 736-7595
FAX (716) 736-7596
RIPLEY, NY 14775

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