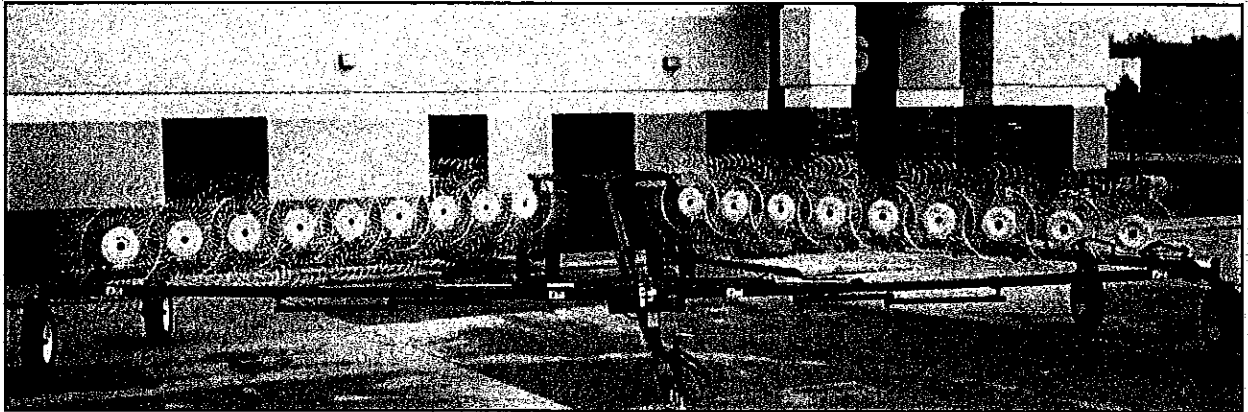


H&S

18 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

10-26-99

Manufactured By

H&S MANUFACTURING CO., INC.

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

MARSHFIELD, WISCONSIN 54449

FIGURE 1

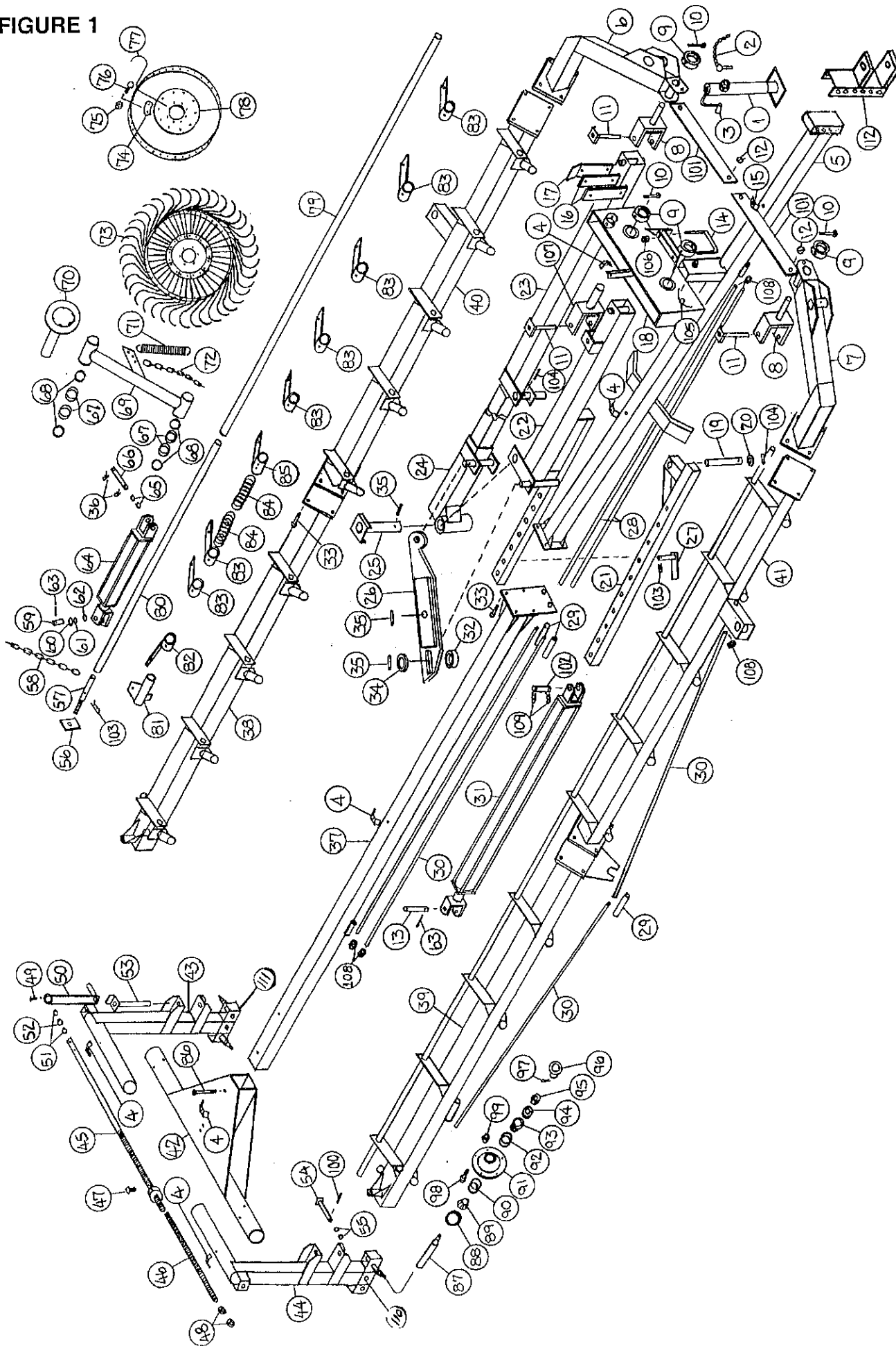


FIGURE 1
H&S 18 WHEEL HI CAPACITY RAKE

ITEM	PART NO.	DESCRIPTION
1.	BFR223	Jack
2.	BFR4	Jack Pin & Chain
3.	B17B	Jack Handle
4.	23N67	Hose Holder
5.	BFR557	Front Pole Section
6.	BFR558	LH Gauge Wheel Stand-off
7.	BFR559	RH Gauge Wheel Stand-off
8.	BFR560	Outboard Yoke
9.	BFR561	Yoke Collar
10.	16SV91	Bolt 1/2" x 3-1/4" GR.5
11.	BFR562	Yoke Pin
12.	BFR443	Clip Pin
13.	23N107	Cylinder Pin
14.	BFR564	U-Bolt
15.	HE42	Hose Holder
16.	BFR556	Bumper
17.	BFR567	Poly Slides
18.	BFR568	Center Pivot Mount
19.	BFR599	Pin
20.	BFR33	Washer
21.	BFR569	Bottom Adjustment Tube
22.	BFR570	Inboard Arm LH
*	BFR571	Inboard Arm RH
23.	BFR572	Outboard Slider LH
*	BFR573	Outboard Slider RH
24.	BFR574	Inside Slider LH
*	BFR575	Inside Slider RH
25.	BFR563	Hinge Pin
26.	BFR576	Linkage Lever LH
*	BFR577	Linkage Lever RH
27.	BFR578	Width Adjustment Pin
28.	BFR579	Front Stabilizer Rod
29.	BFR580	Coupling Nut
30.	BFR581	Stabilizer Rod
31.	BFR166	Hydraulic Open Cylinder
32.	BFR582	Wear Collar
33.	BFR438	Bolt 5/8" x 2" GR.5
34.	BFR583	Linkage Lever Washer
35.	F26	Expansion Pin 5/16" x 2-1/4"
36.	T72	Cotter Pin 5/32" x 1-1/2"
37.	BFR584	Back Pole Section
38.	BFR585	Back Rake Beam LH
39.	BFR586	Back Rake Beam RH
40.	BFR587	Front Rake Beam LH
41.	BFR588	Front Rake Beam RH
42.	BFR589	Rear Pivot Assembly
43.	BFR590	Left Axle Upright
44.	BFR591	Right Axle Upright
45.	BFR592	Rear Width Adjustment Tube
46.	BFR593	Rear Width Adjustment Rod
47.	RG135	Bolt 1/2" x 1" GR.5
48.	BFR419	3/1" Acme Nut
49.	BFR117	Bolt 3/8" x 2-1/2" GR.5
50.	BFR 423	Width Adjustment Handle
51.	BFR523	Poly Washer
52.	BFR422	LH Width Adjustment Collar
53.	BFR594	Beam Pivot Shaft
54.	BFR524	Tandem Pin
55.	BFR625	Bushing

NOTE: * (Means Not Shown)

FIGURE 1

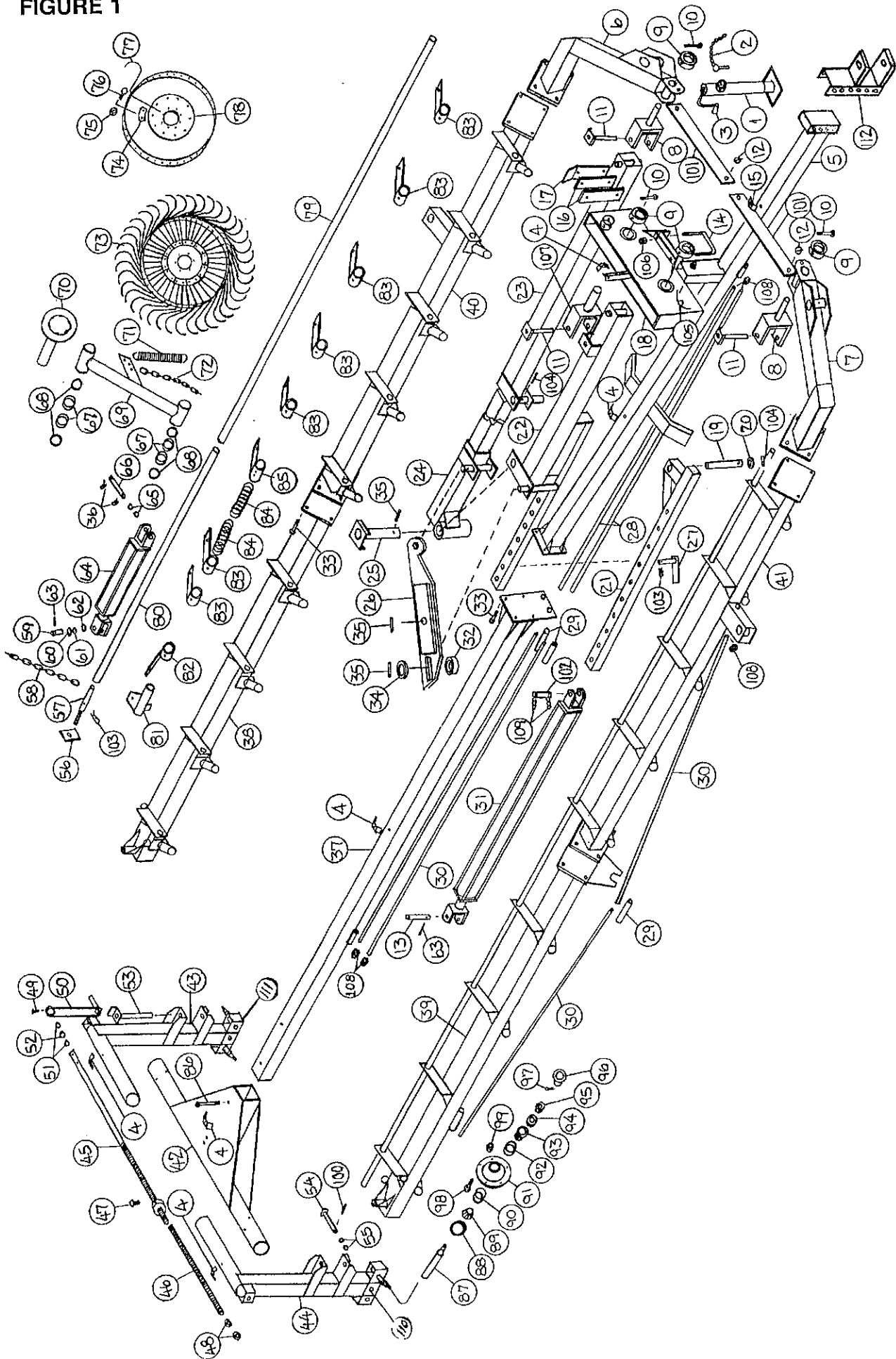
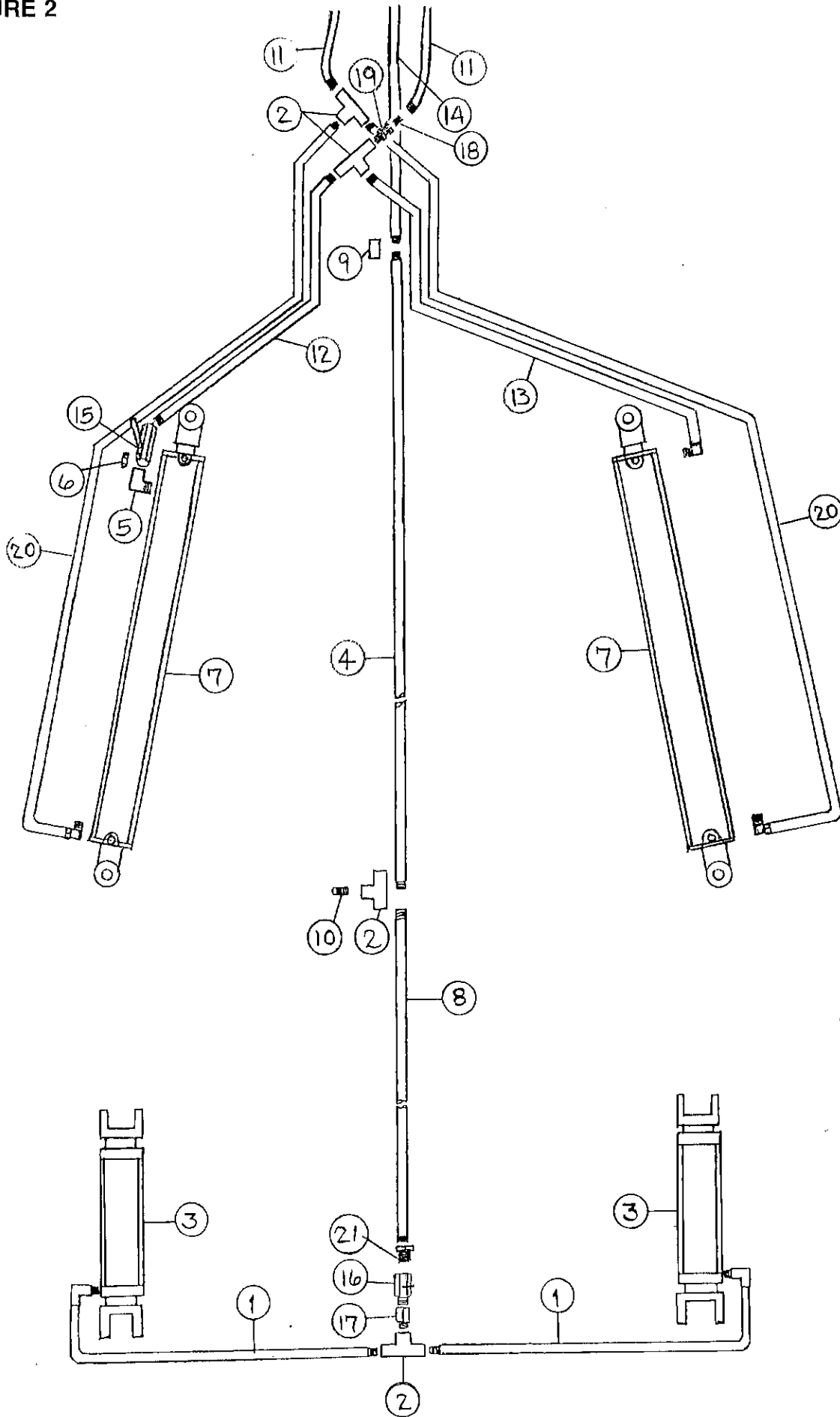


FIGURE 1
H&S 18 WHEEL HI CAPACITY RAKE

ITEM	PART NO.	DESCRIPTION
56.	BFR426	Rake Pressure Handle
57.	BFR486	Rake Arm Lock-up Shaft
58.	BFR111	Back Rake Arm Adjustment Chain
59.	BFR517	Cylinder Pin
60.	16SV136	Washer
61.	K106	Cylinder Spacer
62.	BFR506	Nylon Wear Block
63.	23N108	Cotter Pin 5/16" x 2-1/2"
64.	16SV171	Hydraulic Lift Cylinder
65.	X94	Cylinder Spacers
66.	T143	Cylinder Pin
67.	BFR525	Bearing
68.	F16	Lock Collar
69.	BFR489	Rake Arm LH
*	BFR490	Rake Arm RH
70.	BFR493	Rake Wheel Hub
71.	BFR138	Rake Arm Spring
72.	BFR140	Rake Arm Adjustment Chain
73.	T174	LH Rake Wheel
*	BFR31	RH Rake Wheel
74.	T178	Rake Tooth Clip
75.	T166	10MM Nut
76.	T175	10MM x 25MM Carriage Bolt
77.	T176	Rake Wheel Tooth
78.	T179	Rake Wheel Center
79.	BFR595	Front Lifting Pipe
80.	BFR596	Back Lifting Pipe
81.	BFR530	Hydraulic Cylinder End Slide LH
*	BFR531	Hydraulic Cylinder End Slide RH
82.	BFR430	RH Spring Bracket
83.	BFR431	LH Spring Bracket
84.	BFR84	Compression Spring
85.	BFR432	LH Lifting Pipe Connector
*	BFR433	RH Lifting Pipe Connector
86.	50N129	Bolt 3/4" x 6" GR.5
87.	BFR522	Spindle
88.	BFR57	Seal
89.	BFR58	Inner Bearing
90.	BFR59	Inner Race
91.	BFR60	Hub
92.	BFR61	Outer Race
93.	BFR62	Outer Bearing
94.	BFR63	Washer
95.	BFR64	Nut
96.	BFR66	Dust Cap
97.	BFR65	Cotter Pin 5/32" x 1-3/4"
98.	BFR143	Stud Bolt
99.	BFR144	Nut
100.	12V59	Roll Pin 3/8" x 2-3/4"
101.	BFR597	Safety Bar
102.	T143	Cylinder Pin
103.	BFR137	Hair Pin
104.	3G22	Roll Pin 5/16" x 1-3/4"
105.	BFR598	Rake Lock Spring
106.	12V95	5/8" Fine Thread Nut
107.	BFR560	Inboard Yoke
108.	BFR518	3/4" Fine Thread Nut
109.	T144	Hair Pin
110.	BFR509	RH Tandem Axle
111.	BFR510	LH Tandem Axle
112.	BFR619	Hitch

NOTE: * (Means Not Shown)

FIGURE 2



**FIGURE 2
H&S 18 WHEEL HI CAPACITY RAKE
HYDRAULICS**

ITEM	PART NO.	DESCRIPTION
1.	37N60	Hose 108"
2.	BFR74	3/8" Female Tee
3.	16SV171	Hydraulic Lift Cylinder
4.	BFR551	Front Hydraulic Pipe
5.	23N234	3/8" Street Elbow
6.	16SV351	3/8" Close Nipple
7.	BFR166	Hydraulic Open Cylinder
8.	BFR552	Back Hydraulic Pipe
9.	HE60	3/8" Pipe Coupler
10.	G65	3/8" Pipe Plug
11.	12SV25	Hose 145"
12.	BFR315	Hose 20"
13.	BFR553	Hose 22"
14.	BFR620	Hose 72"
15.	16SV338	Ball Valve
16.	BFR554	Flow Valve
17.	BFR555	Adapter
18.	BFR120	Orifice
19.	BFR122	Adapter Union
*	BFR617	Adapter Union w/Orifice
20.	JB80	Hose 58"
21.	JB82	Bushing 3/8" to 1/2"

NOTE: * (Means Not Shown)

FIGURE 3

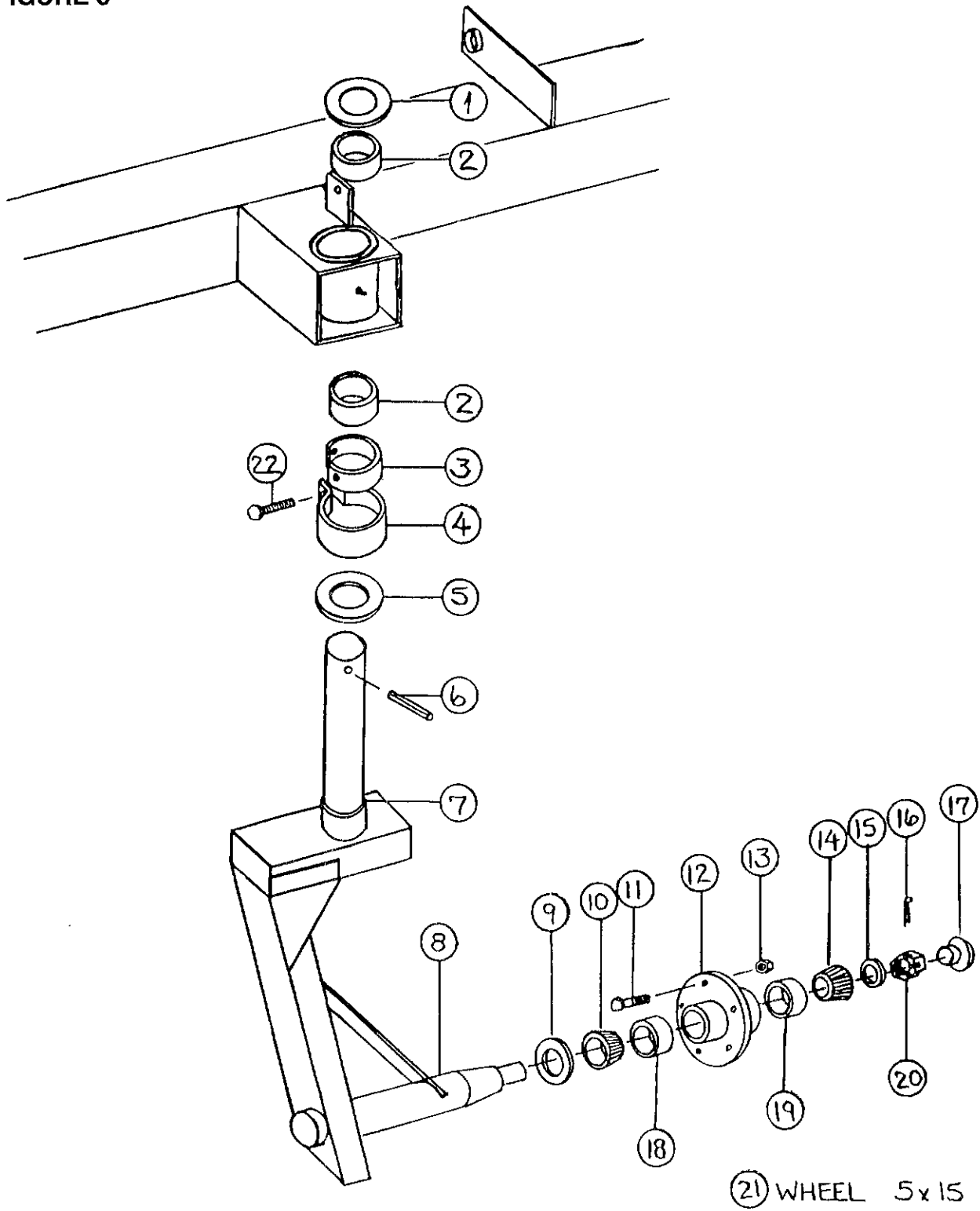


FIGURE 3
H&S 18 WHEEL HI CAPACITY RAKE
OUTBOARD GAUGE WHEEL

ITEM	PART NO.	DESCRIPTION
1.	BFR309	Gauge Wheel Washer
2.	BFR527	Bronze Bushing
3.	BFR310	Brake Pad
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 5" Full Thread

NOTE: * (Means Not Shown)

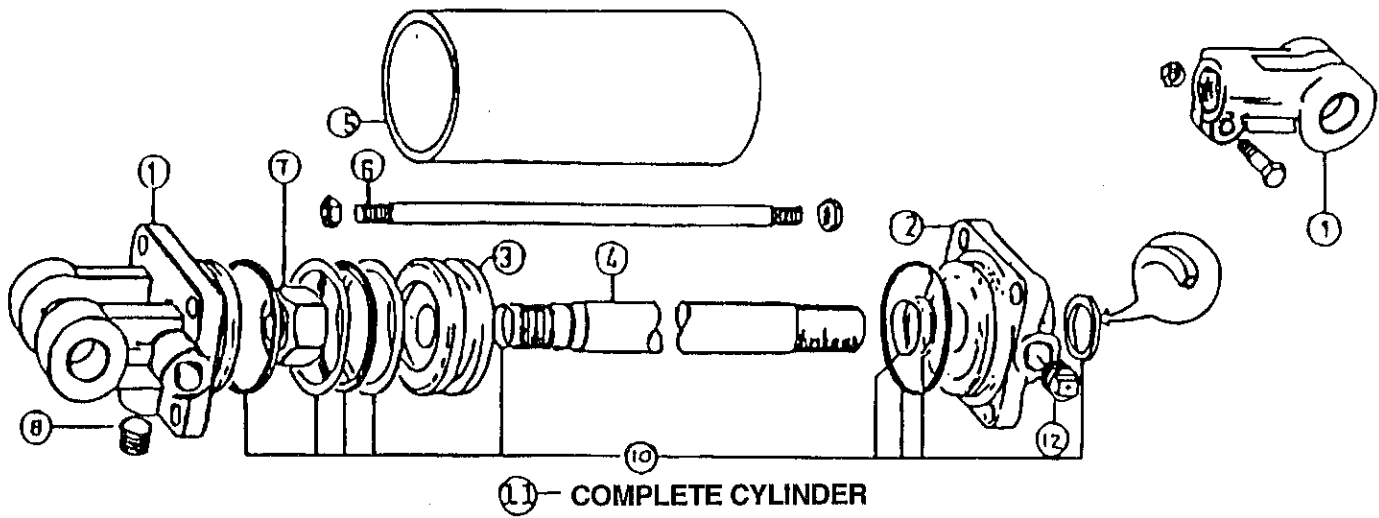


FIGURE 4
18 WHEEL HI CAPACITY RAKE
HYDRAULIC LIFT CYLINDER

ITEM	PART NO.	DESCRIPTION
1.	23N142	Clevis Cap
2.	23N143	Rod Cap
3.	23N144	Piston
4.	16SV168	Rod
5.	16SV169	Cylinder Tube
6.	16SV170	Tie Rod
7.	23N148	Piston Nut
8.	23N149	Plug
9.	23N150	Rod Clevis
10.	23N151	Seal Kit
11.	16SV171	Complete Cylinder
12.	BFR70	Vent Plug

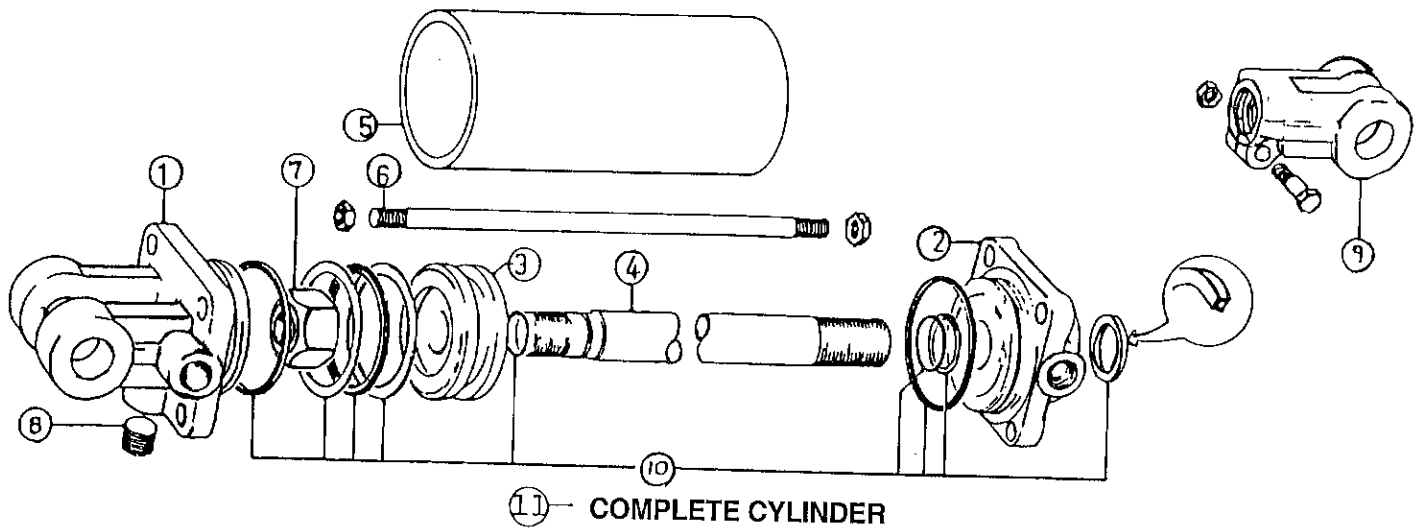


FIGURE 5
18 WHEEL HI CAPACITY RAKE
HYDRAULIC OPEN CYLINDER

ITEM	PART NO.	DESCRIPTION
1.	23N142	Clevis Cap
2.	23N143	Rod Cap
3.	23N144	Piston
4.	BFR184	Rod
5.	BFR185	Cylinder Tube
6.	BFR186	Tie Rod
7.	23N148	Piston Nut
8.	23N149	Plug
9.	23N150	Rod Clevis
10.	23N151	Seal Kit
11.	BFR166	Complete Cylinder

FIGURE 6

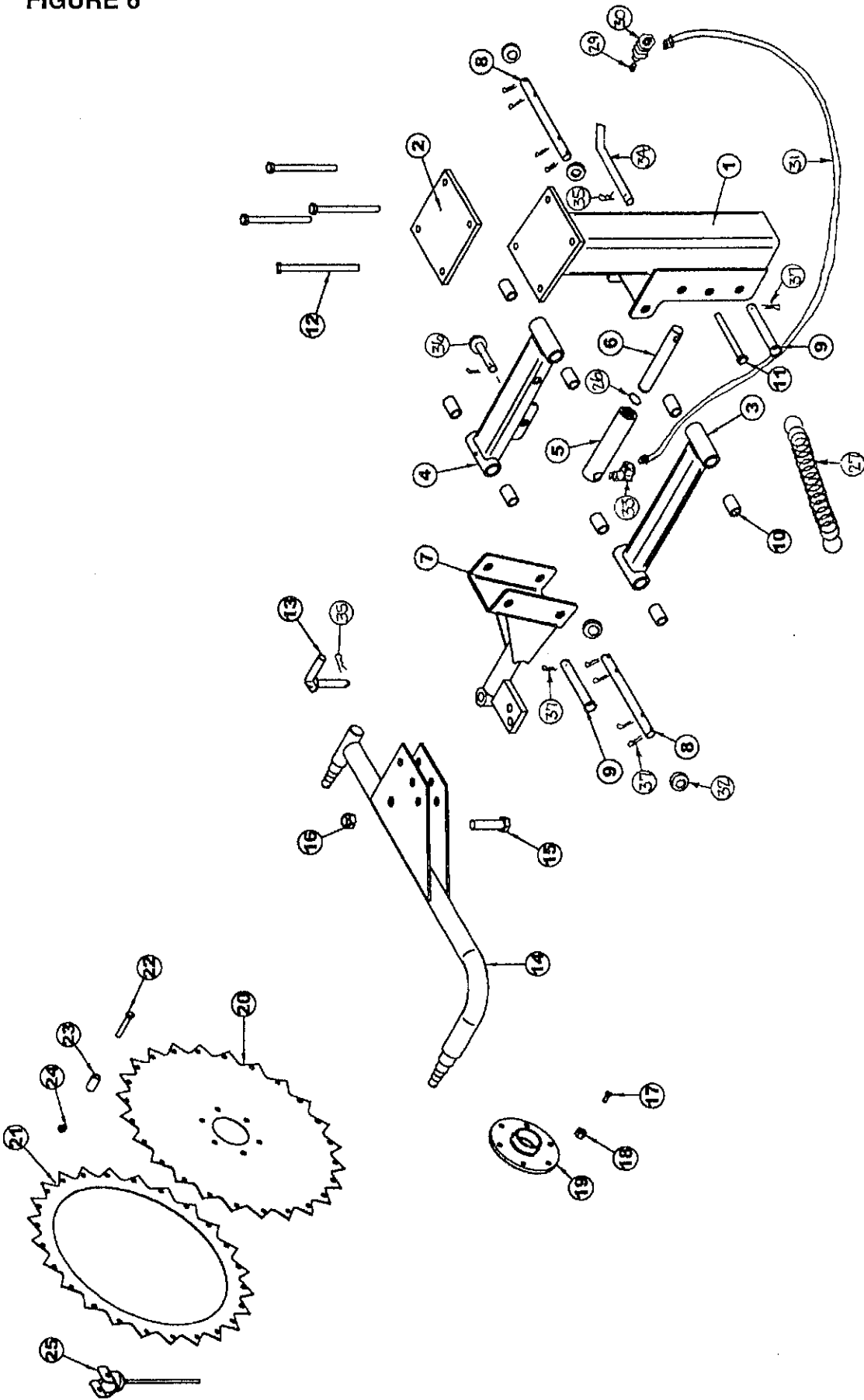


FIGURE 6
H&S 18 WHEEL HI CAPACITY RAKE
OPTIONAL CENTER KICKER WHEELS

ITEM	PART NO.	DESCRIPTION
1.	BFR626	Kicker Wheel Stand Off
2.	BFR633	Top Mount Plate
3.	WM17	Bottom Link
4.	BFR627	Top Link
5.	BFR116	Hydraulic Cylinder
6.	BFR114	Piston
7.	BFR628	Pole
8.	WM89	Spring Mount Shaft (2)
9.	RG1	Clevis Pin (2)
10.	T52	Bushing (8)
11.	B61	1/2" x 5" Bolt GR.5
12.	BFR494	1/2"-13x6-1/2" Bolt GR.5 (4)
13.	BFR197	Caster Locking Pin
14.	BFR511	Axle
15.	18N48	3/4" x 3" Bolt GR.5
16.	HE7	3/4" Lock Nut
17.	T168	Hub Bolt 10MM x 25MM (6)
18.	T166	Hub Nut 10MM (6)
19.	BFR32	Rake Wheel Hub
20.	BFR370	Wheel Hub
21.	BFR369	Wheel Hub Band
22.	T123	3/8" x 2-1/4" Bolt GR.5 (48)
23.	BFR371	Hub Spacer (48)
24.	K93	3/8" Lock Nut (48)
25.	T82	Rake Wheel Tooth (48)
26.	BFR115	O-Ring
27.	BFR110	Spring (2)
29.	BFR120	Orifice
30.	BFR122	Adapter Union
31.	BFR630	Hose 1/4" x 40"
32.	T73	Washer (4)
33.	BFR631	Street Elbow
34.	BFR363	Pin
35.	ES7	Hair Pin (2)
36.	BFR629	Arm Pin
37.	T72	Cotter Pin (11)

