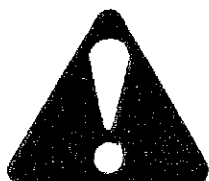
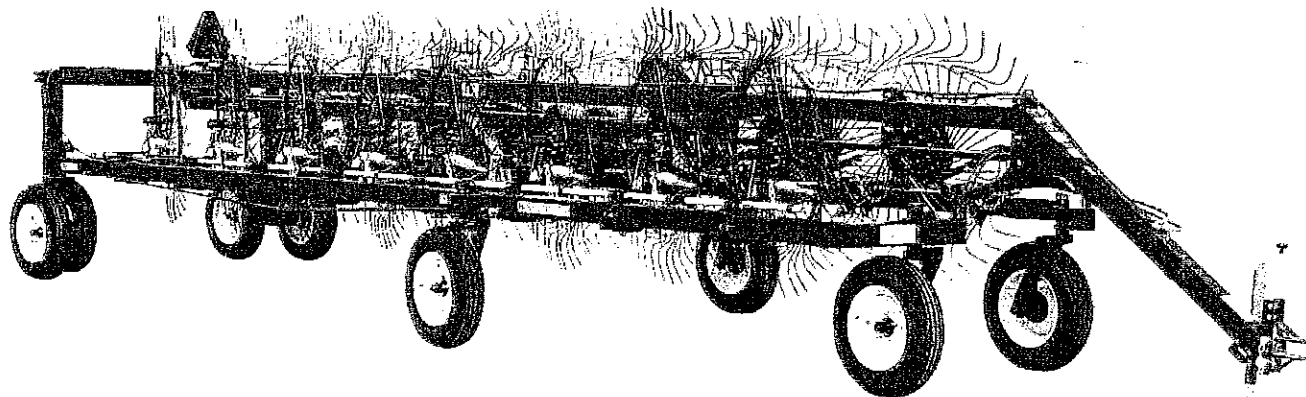


H&S

1460 - 1660 HI-CAPACITY 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

HSMFG0106

Manufactured By
H&S MANUFACTURING CO., INC.

P.O. BOX 768 (715) 387-3414 FAX (715) 384-5463
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FIGURE 1

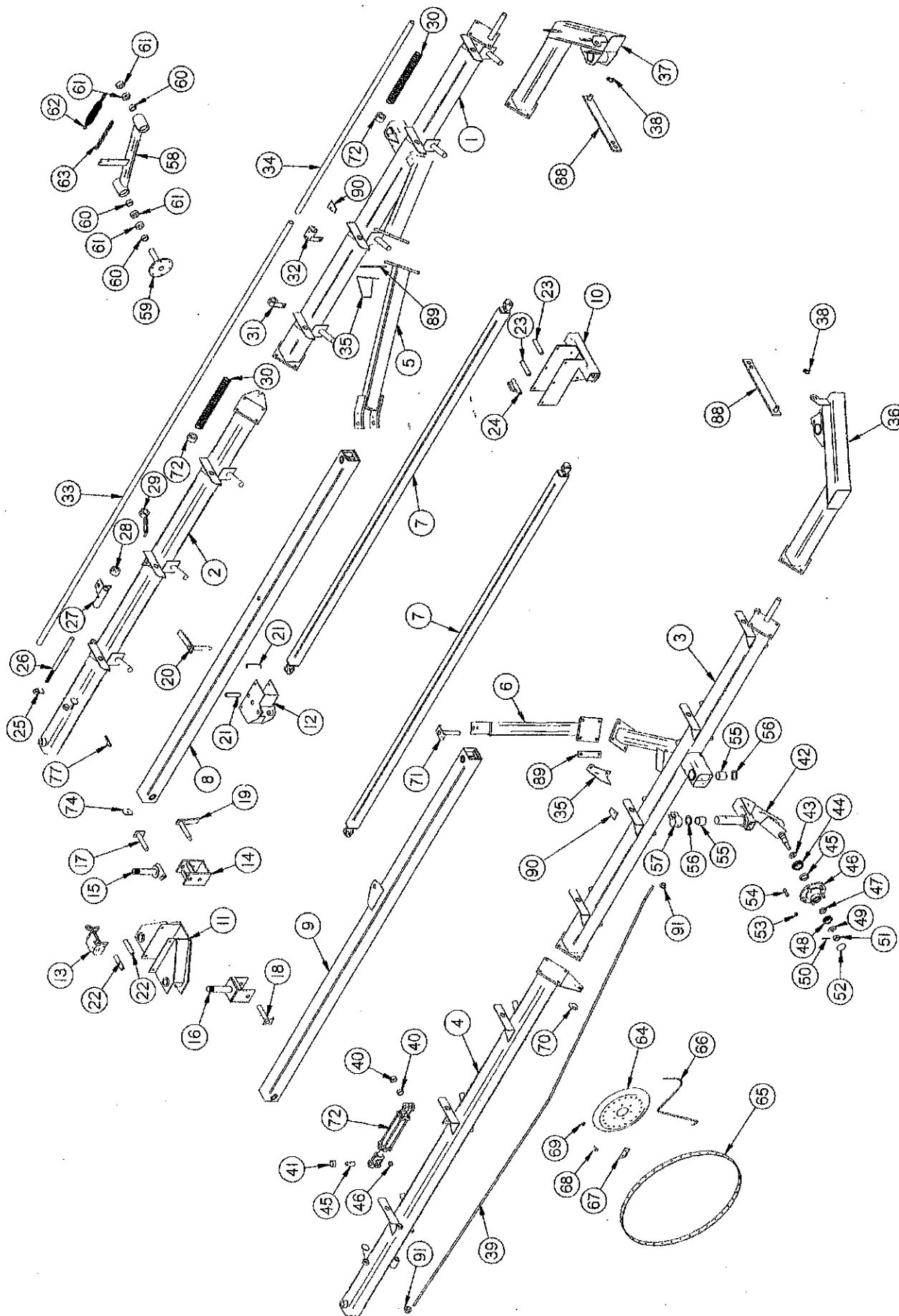


FIGURE 1
1460-1660 HI-CAPACITY RAKE
BEAMS AND LINKAGE

ITEM	PART NO.	DESCRIPTION	ITEM	PART NO.	DESCRIPTION
1.	BFR473	Front Rake Beam LH	46.	BFR60	Hub
2.	BFR475	Back Rake Beam LH	47.	BFR61	Outer Race
3.	BFR472	Front Rake Beam RH	48.	BFR62	Outer Bearing
4.	BFR474	Back Rake Beam RH	49.	BFR63	Washer
5.	BFR460	Rake Beam Arm LH	50.	BFR65	Cotter Pin
6.	BFR459	Rake Beam Arm RH	51.	BFR64	Nut
7.	BFR458	Front Linkage	52.	BFR66	Hub Cap
8.	BFR463	Left Rear Linkage	53.	BFR144	Nut
9.	BFR462	Right Rear Linkage	54.	BFR143	Stud
10.	BFR455	Front Linkage Slider	55.	BFR527	Bronze Bushing
11.	BFR491	Back Linkage Slider	56.	BFR309	Gauge Wheel Washer
12.	BFR465	Center Slider	57.	BFR311	Brake Collar
13.	BFR616	Width Adjustment Stop	58.	BFR489	Rake Arm LH
14.	BFR477	Back Linkage Yoke LH	*	BFR490	Rake Arm RH
15.	BFR480	Left Pivot Yoke Shaft	59.	BFR657	Rake Wheel Hub
16.	BFR476	Back Linkage Yoke RH	60.	F16	Lock Collar
17.	BFR505	Pivot Yoke Shaft Pin LH	61.	BFR525	Bearing
18.	BFR479	Pivot Yoke Shaft Pin RH	62.	FR44	Rake Arm Spring
19.	BFR468	Linkage Pins	63.	BFR140	Rake Arm Adjusting Chain
20.	BFR716	Flange Nut	64.	FR71	Rake Wheel Center
21.	BFR467	Center Slider Spacer	65.	FR72	Outer Ring
22.	BFR471	Back Slider Roller	66.	FR73	Rake Wheel Tooth
23.	BFR457	Slider Spacer	67.	FR74	Rake Tooth Clip
24.	BFR456	Hose Guide Spacer	68.	T175	10mm x 25mm Carriage Bolt
25.	BFR426	Rake Pressure Handle	69.	BFR652	10mm Lock Nut
26.	BFR486	Rake Arm Lock-up Shaft	*	FR69	Rake Wheel LH
27.	BFR530	Hydraulic Cylinder End Slide LH	*	FR70	Rake Wheel RH
*	BFR531	Hydraulic Cylinder End Slide RH	70.	DF22	Washer
28.	BFR83	Pipe Clamp (2 Holes)	71.	BFR461	Rake Beam Arm Pin
29.	BFR430	RH Spring Bracket	72.	16SV171A	Hydraulic Lift Cylinder (2"x10")
30.	BFR84	Compression Spring	73.	BFR82	Pipe Clamp (1 Hole)
31.	BFR431	LH Spring Bracket	74.	BFR693	Stop Washer
32.	BFR432	LH Lifting Pipe Connector	75.	BFR506	Nylon Wear Block
*	BFR433	RH Lifting Pipe Connector	76.	23N108	Cotter Pin
33.	BFR521	Lifting Pipe Back	77.	BFR137	Hair Pin
34.	BFR520	Lifting Pipe Front	78.	BFR517	Cylinder Pin - Back
35.	BFR549	Tooth Deflector	79.	16SV77	1/2" x 6" Bolt GR. 5
36.	BFR726	Right Extension	80.	ES7	Hair Pin
37.	BFR727	Left Extension	81.	BFR7	3/16" x 3-3/4" Cotter Pin
38.	BFR443	Lynch Pin	82.	BFR481	1-1/2" Slotted Nut
39.	BFR612	Side Arm Stabilizer Rod	83.	BFR111	Back Rake Arm Adjustment Chain
40.	X94	Cylinder Spacer	84.	T143	Cylinder Pin
41.	K106	Cylinder Spacer	85.	16SV136	Washer
42.	BFR312	Complete Fork RH	86.	BFR494	1/2" x 6-1/2" Bolt GR. 5
*	BFR316	Complete Fork LH	87.	BFR641	Washer
43.	BFR57	Seal	88.	BFR597	Safety Bar
44.	BFR58	Inner Bearing	89.	BFR728	Shim
45.	BFR59	Inner Race	90.	BFR729	Rake Arm Stop
			91.	BFR716	3/4" Flange Nut

NOTE: * (MEANS NOT SHOWN)

FIGURE 2
1460-1660 HI-CAPACITY RAKE
MAIN FRAME

ITEM	PART NO.	DESCRIPTION	ITEM	PART NO.	DESCRIPTION
1.	BFR730	Pole	34.	BFR65	Cotter Pin
2.	BFR714	Center Pole Section	35.	BFR144	Nut
3.	BFR715	Back Pole Section	36.	BFR143	Stud
4.	BFR709	Rear Pivot Assembly	37.	BFR223	Jack
5.	BFR662	Left Axle Upright	38.	BFR450	Hitch Pins
6.	BFR661	Right Axle Upright	39.	BFR67	Wheel (15 x 5)
7.	BFR711	Center Pole Brace-Removable	40.	BFR128	Tire (6.70 x 15)
8.	BFR710	Back Pole Brace-Removable	41.	BFR653	Hydraulic Cylinder (2" X 40")
9.	BFR510	LH Tandem Axle	42.	HE42	Hose Holder
10.	BFR509	RH Tandem Axle	43.	BFR649	SMV Bracket
11.	BFR611	Width Adjustment Bar	44.	BFR420	Rear Width Adjustment Rod
12.	BFR712	Middle Linkage Stop	45.	BFR522	Spindle
13.	BFR157	Hitch	46.	BFR396	Cylinder Pin
14.	BFR499	Beam Pivot Shaft	47.	12N14	Jack Mount
15.	BFR239	Sleeve Adjustment Lock	48.	BFR4	Jack Pin & Chain
16.	BFR241	Adjustment Handle	49.	B17B	Jack Handle
17.	BFR240	Spring	50.	BFR107	3/4" x 8-1/2" Bolt GR. 5
18.	BFR423	Width Adjustment Handle	51.	BFR518	3/4" - 16 nut
19.	BFR485	Rear Width Adjustment Tube	52.	BFR634	Front Width Cylinder Pin
20.	BFR523	Poly Washer	53.	BFR724	Self Tapping Bolt
21.	BFR422	Width Adjustment Collar	54.	BFR642	Width Adjustment Spacer
22.	BFR419	3/4" Acme Nut	55.	23N67	Hose Holder
23.	BFR524	Tandem Pin	56.	RG135	1/2" x 1" Bolt GR. 5
24.	BFR625	Bushing	57.	50N129	3/4" x 6" Bolt GR. 5
25.	BFR57	Seal	58.	BFR438	5/8" x 2" Bolt GR. 5
26.	BFR58	Inner Bearing	59.	12V59	3/8" x 2-3/4" Roll Pin
27.	BFR59	Inner Race	60.	BFR117	3/8" x 2-1/2" Bolt GR. 5
28.	BFR60	Hub	61.	BFR534	Pole Extension
29.	BFR61	Outer Race	62.	BFR731	Transport Mount
30.	BFR62	Outer Bearing	63.	BFR732	Width Stop Ring
31.	BFR63	Washer	64.	12V59	3/8" x 2-3/4" Roll Pin
32.	BFR64	Nut	65.	BFR420	Rear Width Adjustment Rod
33.	BFR66	Hub Cap			

FIGURE 2

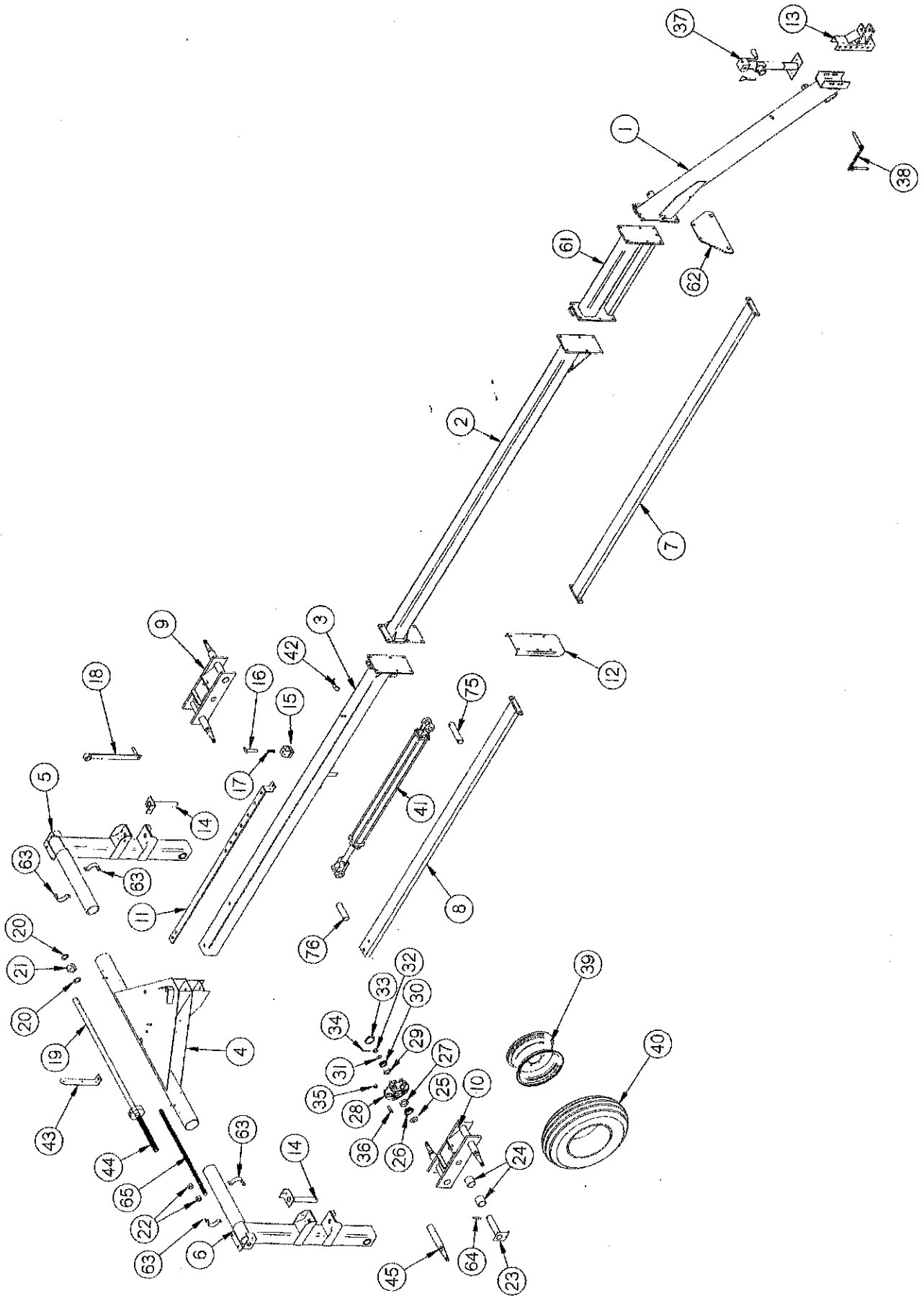


FIGURE 3

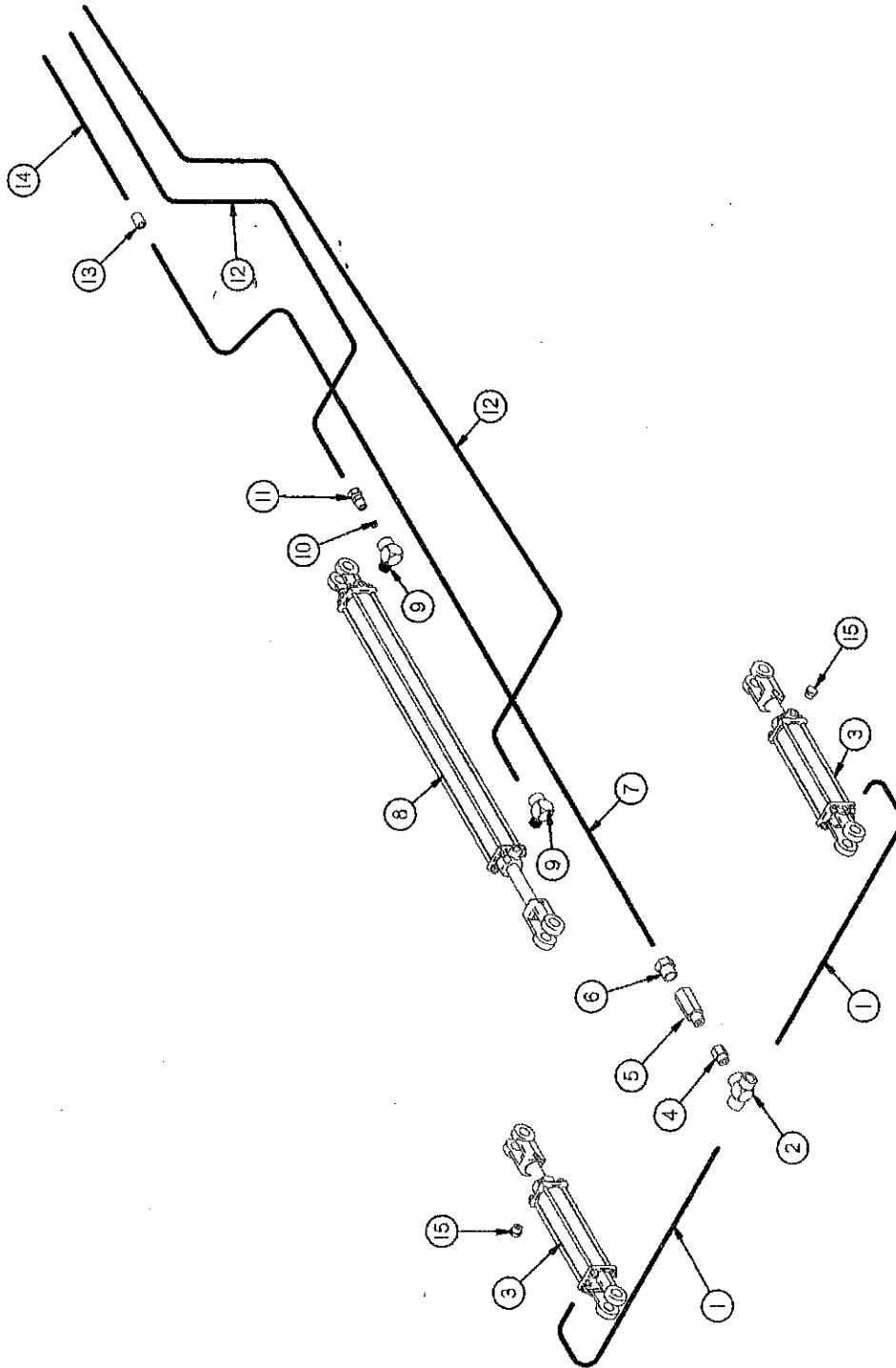


FIGURE 3
1460-1660 HI-CAPACITY RAKE
HYDRAULICS

ITEM	PART NO.	DESCRIPTION
1.	37N60	Hydraulic Hose 108"
2.	BFR74	3/8" Female Tee
3.	16SV171A	Hydraulic Lift Cylinder (2" x 10")
4.	BFR555	Adapter 3/8" Male To 1/2" Female
5.	BFR554	Flow Valve
6.	JB82	Bushing 3/8" x 1/2"
7.	BFR738	Hydraulic Hose 3/8"x255" 1/2"MP x 3/8"MP
8.	BFR653	Hydraulic Cylinder (2" x 40")
9.	23N34	3/8" Street Elbow
10.	BFR120	Orifice
11.	BFR122	3/8" Male Union Adapter
12.	BFR739	Hydraulic Hose 3/8"x321" 3/8"MP x 1/2"MP
13.	HE60	3/8" Pipe Coupler
14.	BFR740	Hydraulic Hose 3/8"x132" 3/8"MP x 1/2"MP
15.	BFR70	Vent Plug