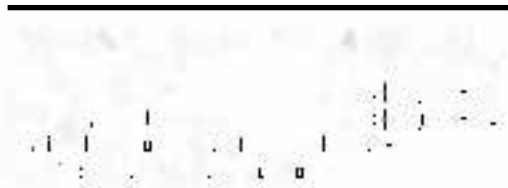


Series 225 DOW Flexible Tandem Wing Disc

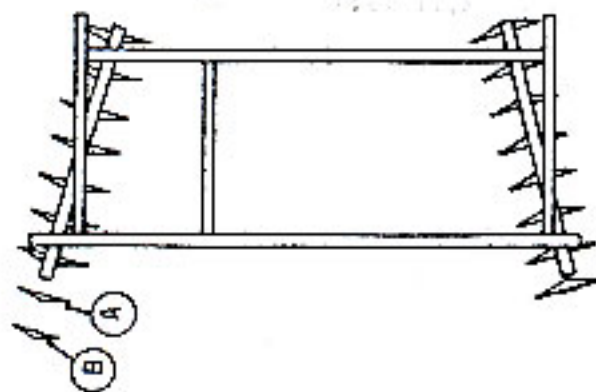
Owner's Manual



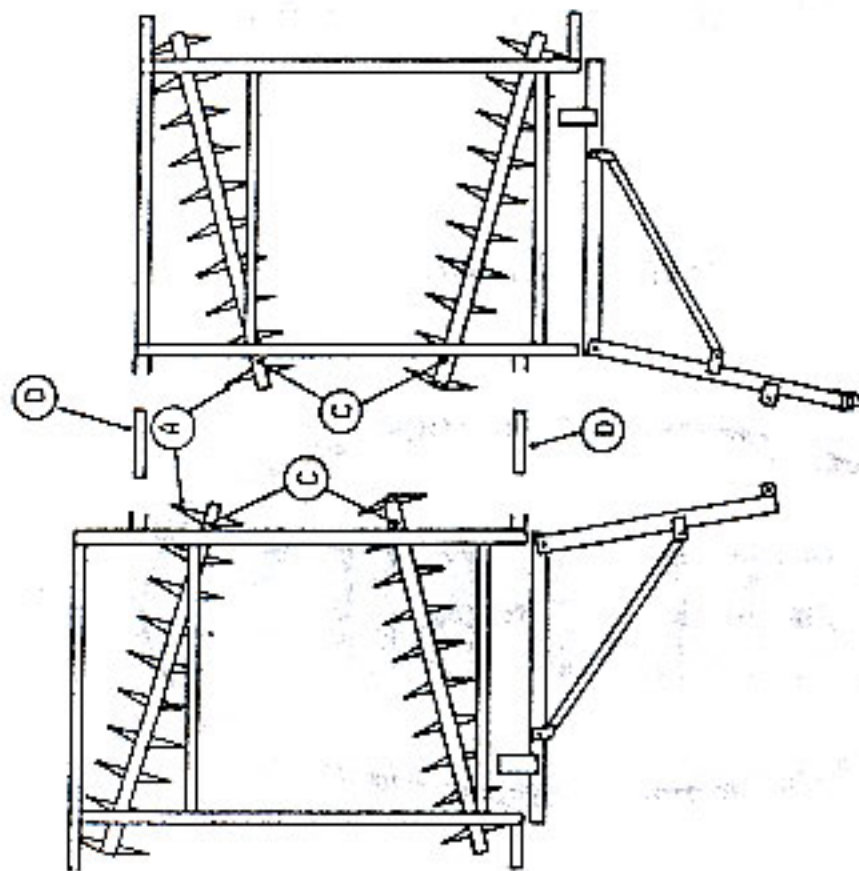
Manufactured by Kellough Bros. Ltd.



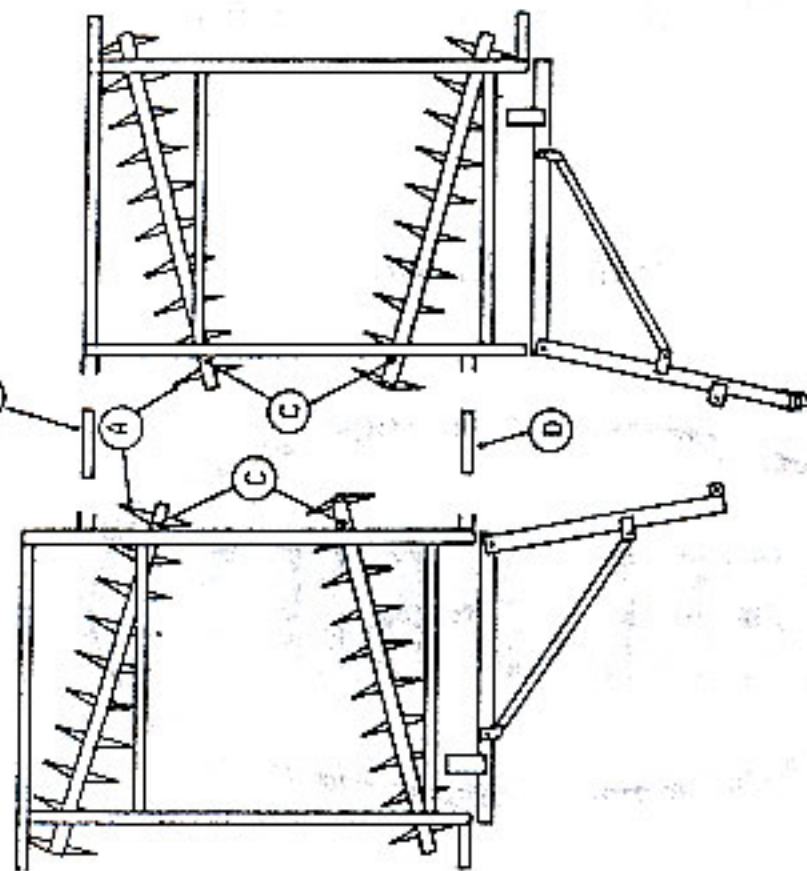
RIGHT WING
FRAME



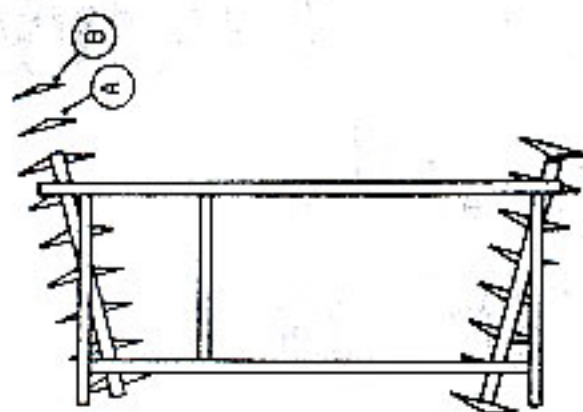
RIGHT MAIN
FRAME



LEFT MAIN
FRAME



LEFT WING
FRAME



DISC WIDTH

31'
32½'
34½'
36'
37½'
39'

TOTAL NO. OF BLADES

FRONT WING GANG BAR	REAR WING GANG BAR	FRONT MAIN GANG BAR	REAR MAIN GANG BAR
8	9	10	10
9	10	10	10
10	11	10	10
11	12	10	10
12	13	10	10
13	14	10	10

(A) 5/16" X 24" Blade

(B) 1/4" X 22" Blade

SET-UP INSTRUCTIONS

Refer to diagram on opposite page and parts diagrams.

1. Place appropriate wheel carriages under main and wing frames and attach with pins provided. Install wheels to hubs with wheel bolts and tighten securely.
2. Attach appropriate gang bars to main and wing frames with 1" X 3 1/2" bolts provided. At points (C) only place one 3/8" thick spacer washer between the gang bar and the frame plate.
3. Join the left and right main frames with spreader bars (D). Install restrictor pins over each end of spreader bars.
4. Attach left and right wing frames to center frames with 2" tapered pins.
5. Pin appropriate bridles to main frames.
6. Attach hitch poles to bridles and pin right pole to side of left pole. Bolt side arms to bridles and hitch poles.
7. To install fore/aft leveling assembly, pin long eye-bolt, spring and long tube to innermost side of bridle masts and to crossbar on main frames. Pin short eye-bolt and short tube to outermost side of bridle masts and to bottom side of main wheel carriages.
8. Hydraulics-- 5"X8" cylinder mounts between a wing frame and a wing frame wheel carriage. 5"X12" cylinder mounts between a main frame and a main frame wheel carriage. 5"X42" cylinder mounts between a main frame (barrel end) and a wing frame (shaft end).

IMPORTANT: BEFORE ATTEMPTING TO FOLD OR UNFOLD WINGS, MAKE SURE THAT THE LARGE FOLD CYLINDERS ARE FULL OF OIL. FAILURE TO PROPERLY CHARGE THESE CYLINDERS MAY RESULT IN SERIOUS DAMAGE OR INJURY.

9. Raise machine with hydraulics and install travel stays between the wheel carriages and main frame crossbars. Fold wings to transport.

MAINTENANCE AND OPERATING INSTRUCTIONS

1. With disc raised and hitched to tractor, adjust nut on bottom fore/aft eye-bolts until frames are level front to rear. Adjust nut against spring on top fore/aft until springs are snug. The spring should be under as little pressure as possible when discing and should never be compressed completely.
2. Disc axles must be kept tight at all times or serious bearing damage could result. Check gangs for tightness every day.
3. Wheel bearings must be properly adjusted and lubricated. Grease wheel bearing every 100 hours until grease shows outside wheel seals. Keep wheel bolts snug and tires properly inflated (50 psi maximum).
4. Grease fittings are provided for the wheel carriage pins (8), the wing hinge pins (4), the bridle pins (4), the spreader bar pins (4), the fore/aft tubes (4) and the wheel hubs (12). With the exception of the wheel hubs, these fittings should be greased every day of operation.
5. Keep all bolts tight.
6. Inspect entire machine every day before operating and repair or replace any worn or broken parts.

SET-UP INSTRUCTIONS

Refer to diagram on opposite page and parts diagrams.

1. Place appropriate wheel carriages under main and wing frames and attach with pins provided. Install wheels to hubs with wheel bolts and tighten securely.
2. Attach appropriate gang bars to main and wing frames with 1" X 3½" bolts provided. At points (C) only place one 3/8" thick spacer washer between the gang bar and the frame plate.
3. Join the left and right main frames with spreader bars (D). Install restrictor pins over each end of spreader bars.
4. Attach left and right wing frames to center frames with 2" tapered pins.
5. Pin appropriate bridles to main frames.
6. Attach hitch poles to bridles and pin right pole to side of left pole. Bolt side arms to bridles and hitch poles.
7. To install fore/aft leveling assembly, pin long eye-bolt, spring and long tube to innermost side of bridle masts and to crossbar on main frames. Pin short eye-bolt and short tube to outermost side of bridle masts and to bottom side of main wheel carriages.
8. Hydraulics-- 5"x8" cylinder mounts between a wing frame and a wing frame wheel carriage. 5"x12" cylinder mounts between a main frame and a main frame wheel carriage. 5"x42" cylinder mounts between a main frame (barrel end) and a wing frame (shaft end).

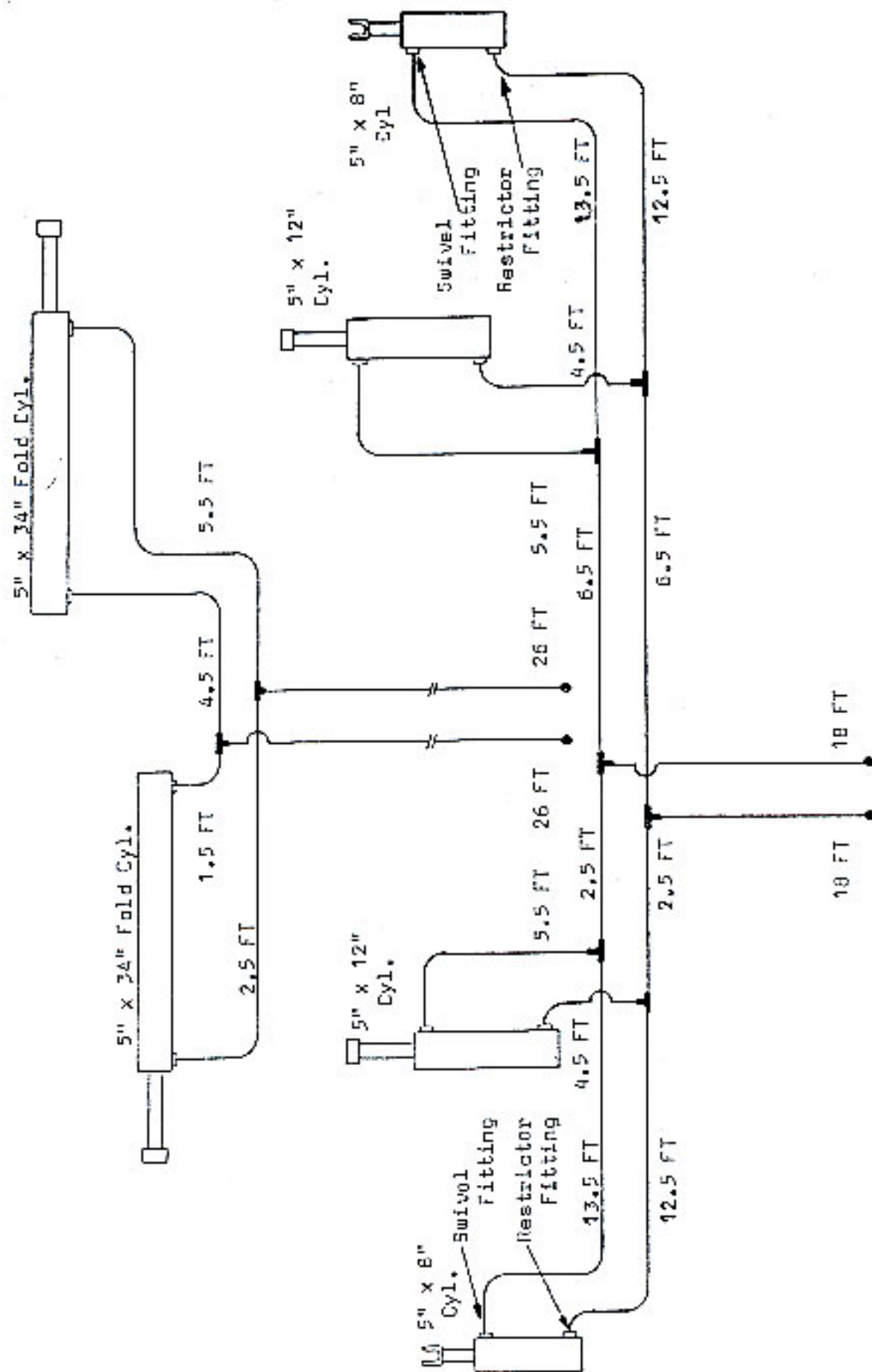
IMPORTANT: BEFORE ATTEMPTING TO FOLD OR UNFOLD WINGS, MAKE SURE THAT THE LARGE FOLD CYLINDERS ARE FULL OF OIL. FAILURE TO PROPERLY CHARGE THESE CYLINDERS MAY RESULT IN SERIOUS DAMAGE OR INJURY.

9. Raise machine with hydraulics and install travel stays between the wheel carriages and main frame crossbars. Fold wings to transport.

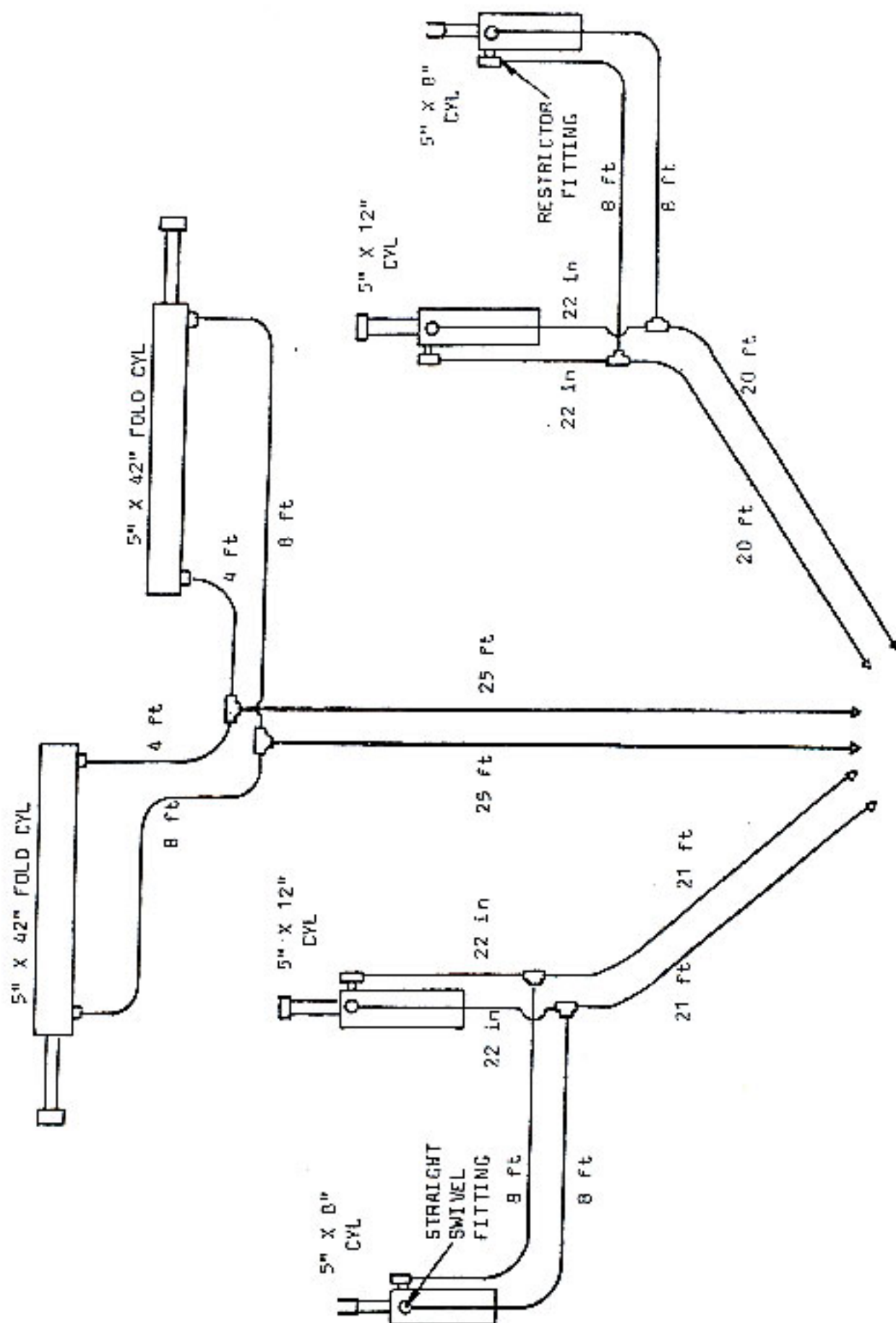
MAINTENANCE AND OPERATING INSTRUCTIONS

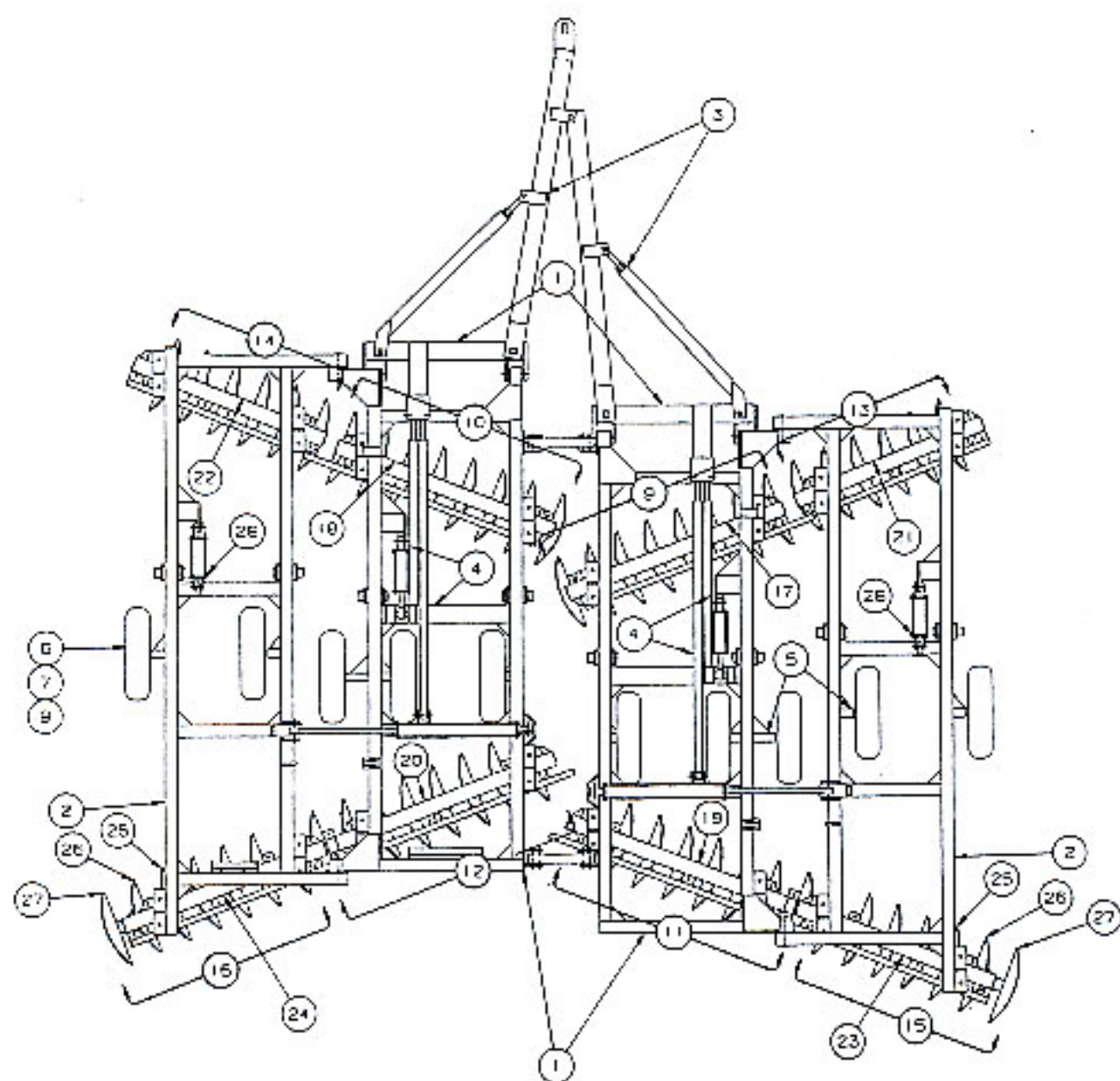
1. With disc raised and hitched to tractor, adjust nut on bottom fore/aft eye-bolts until frames are level front to rear. Adjust nut against spring on top fore/aft until springs are snug. The spring should be under as little pressure as possible when discing and should never be compressed completely.
2. Disc axles must be kept tight at all times or serious bearing damage could result. Check gangs for tightness every day.
3. Wheel bearings must be properly adjusted and lubricated. Grease wheel bearing every 100 hours until grease shows outside wheel seals. Keep wheel bolts snug and tires properly inflated (50 psi maximum).
4. Grease fittings are provided for the wheel carriage pins (8), the wing hinge pins (4), the bridle pins (4), the spreader bar pins (4), the fore/aft tubes (4) and the wheel hubs (12). With the exception of the wheel hubs, these fittings should be greased every day of operation.
5. Keep all bolts tight.
6. Inspect entire machine every day before operating and repair or replace any worn or broken parts.

HYDRAULIC HOSE SCHEMATIC 24' TO 29' MODELS

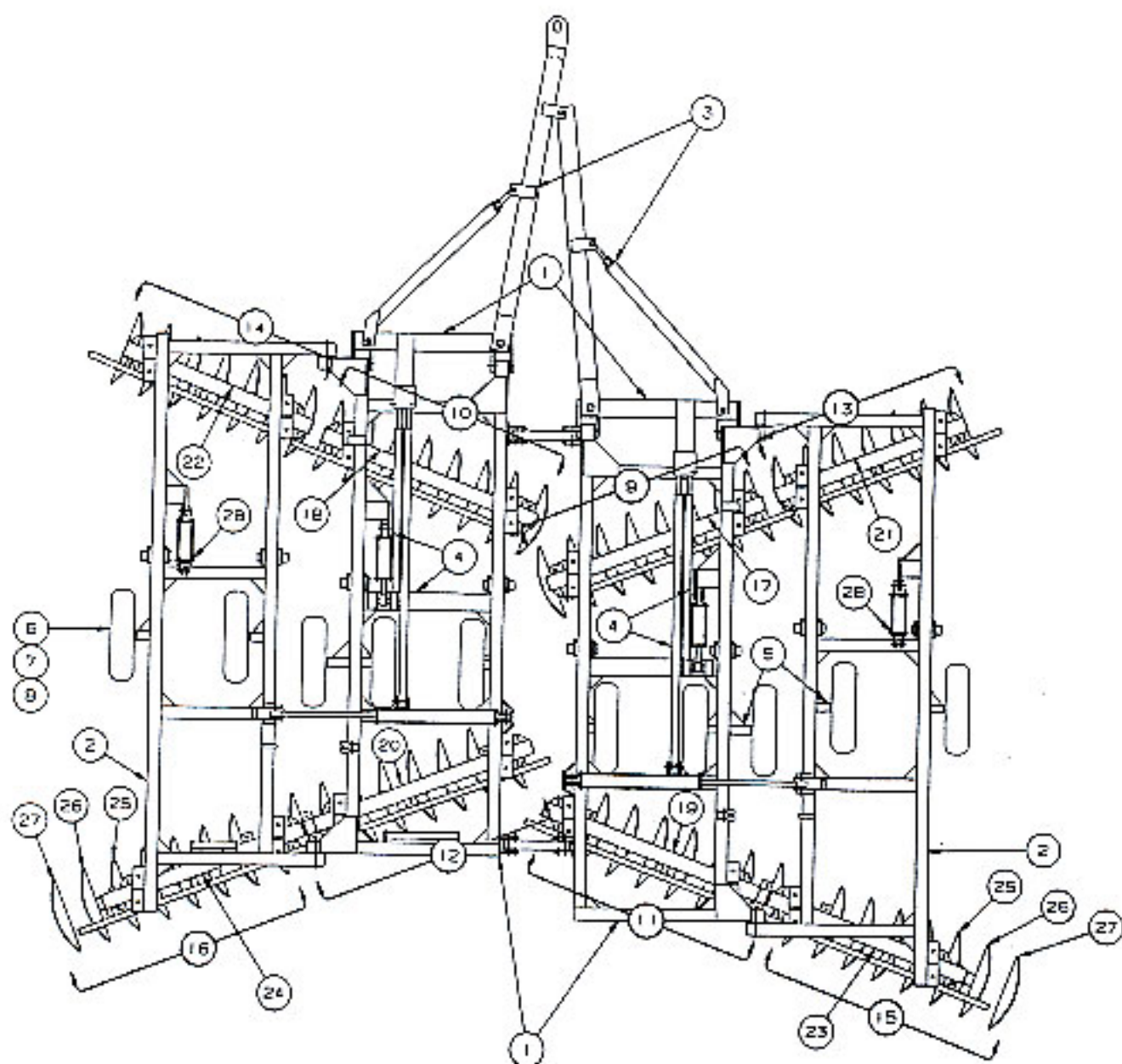


HYDRAULIC HOSE SCHEMATIC 31' TO 39' MODELS.

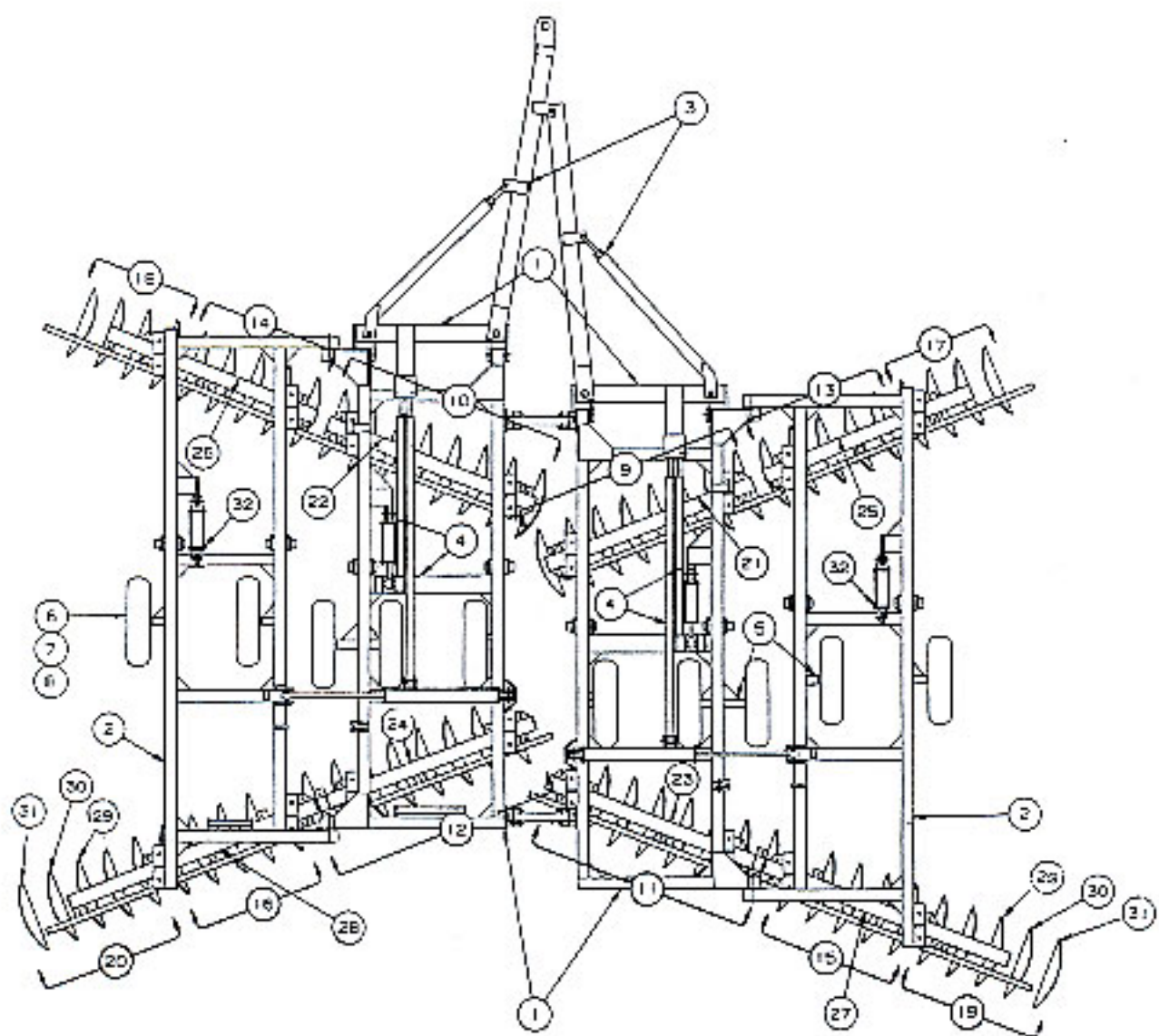




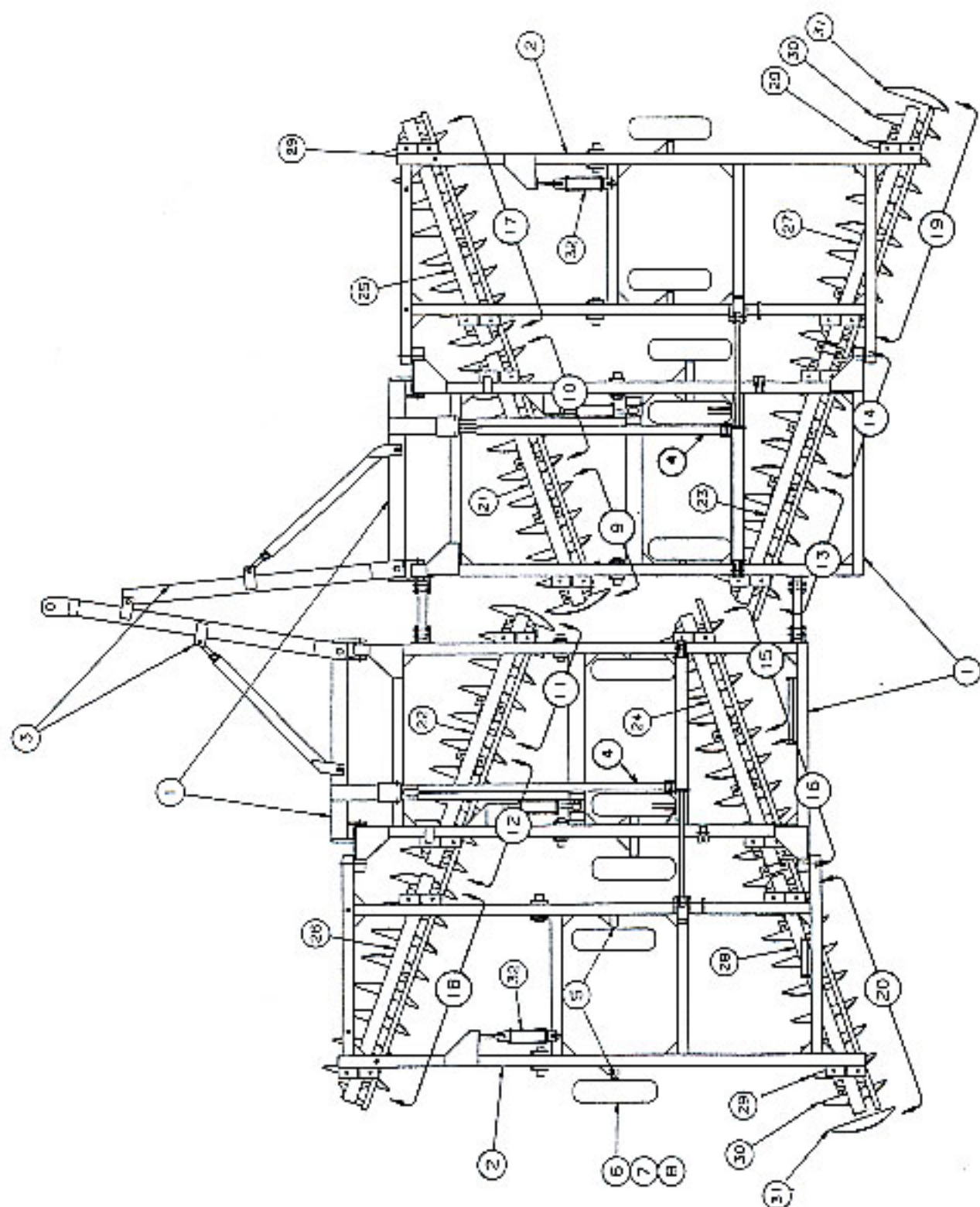
225 DOW - 5826B Flexible Tandem
24' Cutting Width



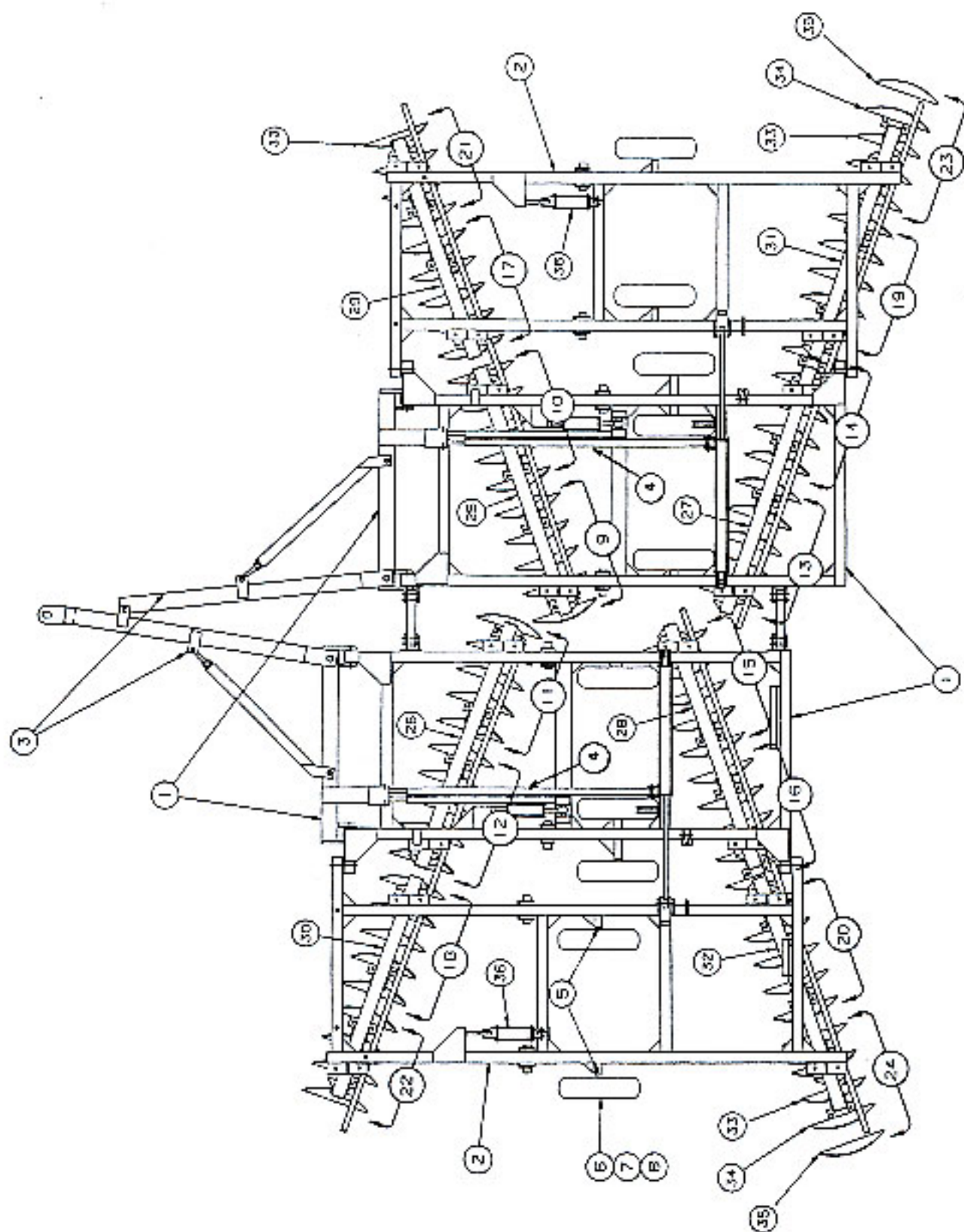
225 DOW - 6226B Flexible Tandem
25-1/2' Cutting Width



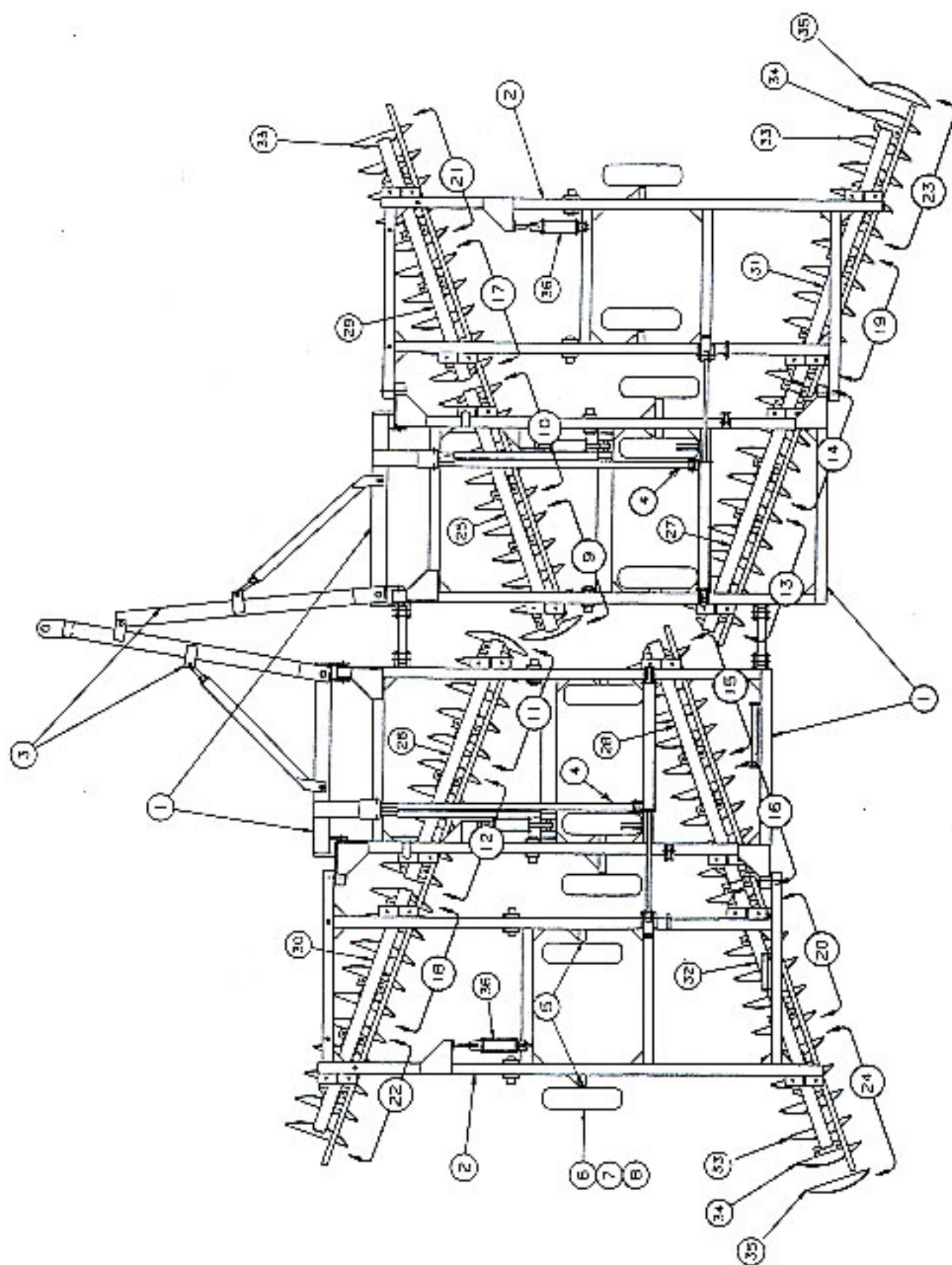
225 DOW - 7026B Flexible Tandem
29' Cutting Width



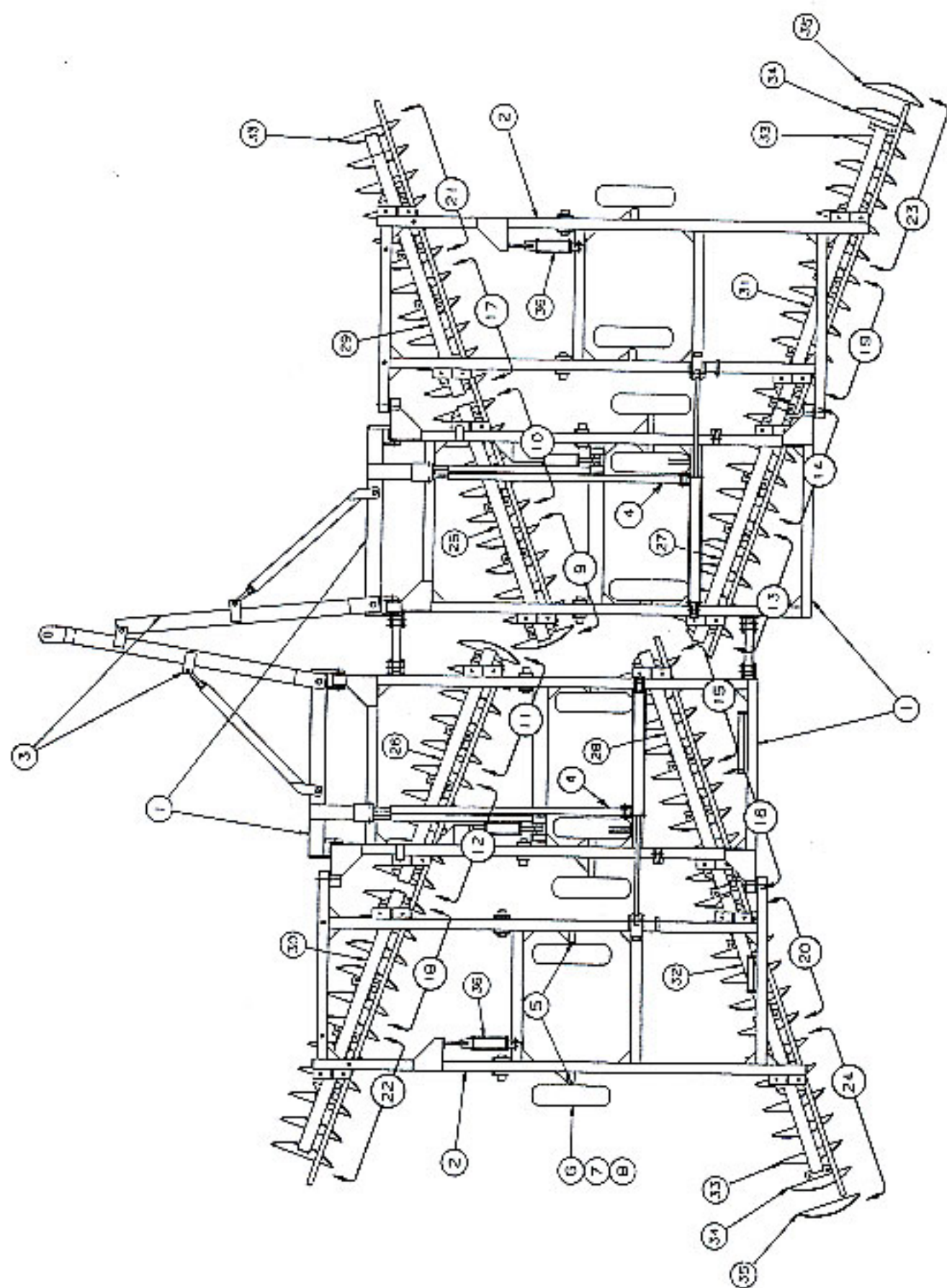
225 DOW - 7426B Flexible Tandem
31' Cutting Width



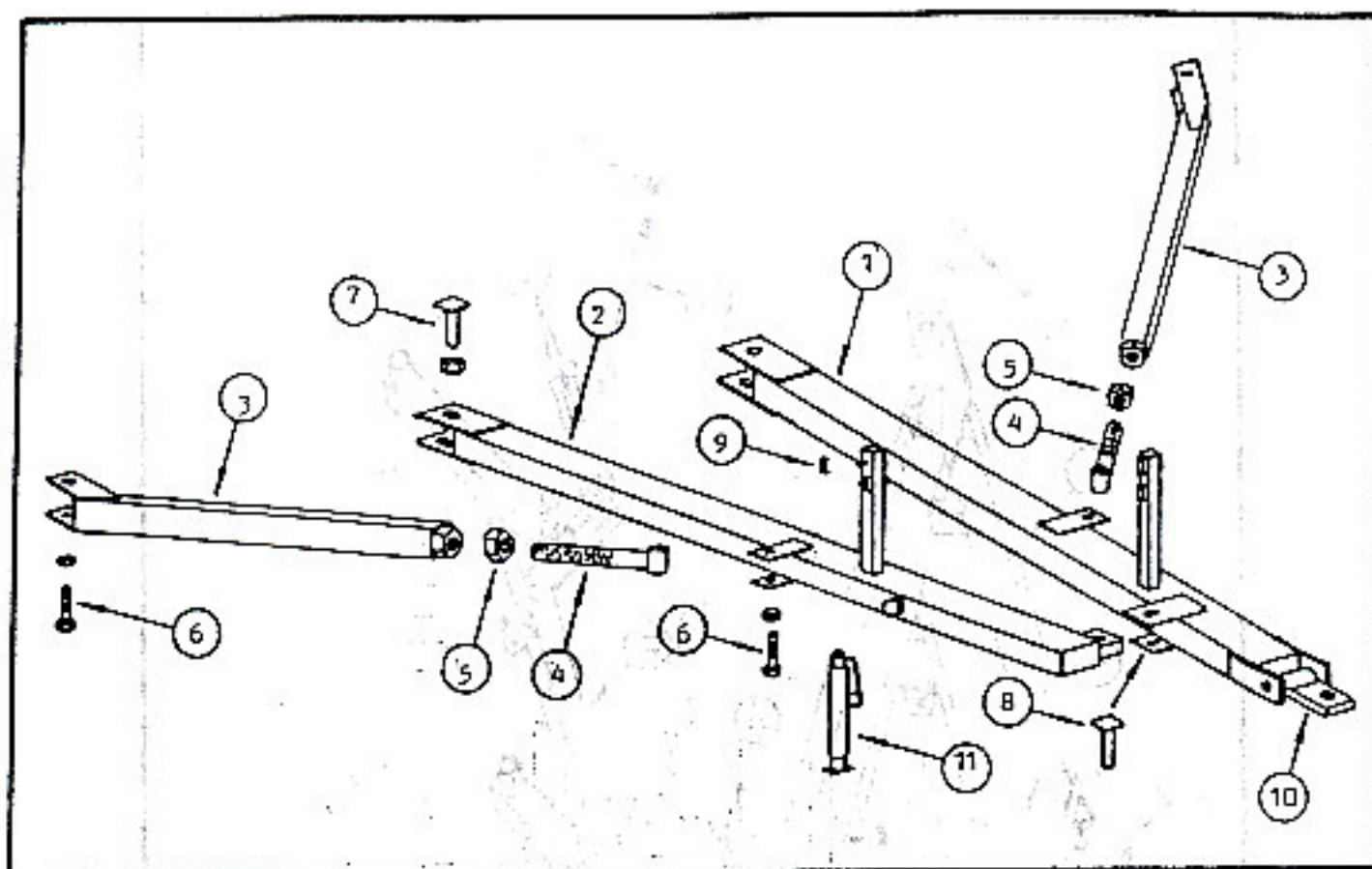
225 DOW - 7826B Flexible Tandem



225 DOW - 8226B Flexible Tandem

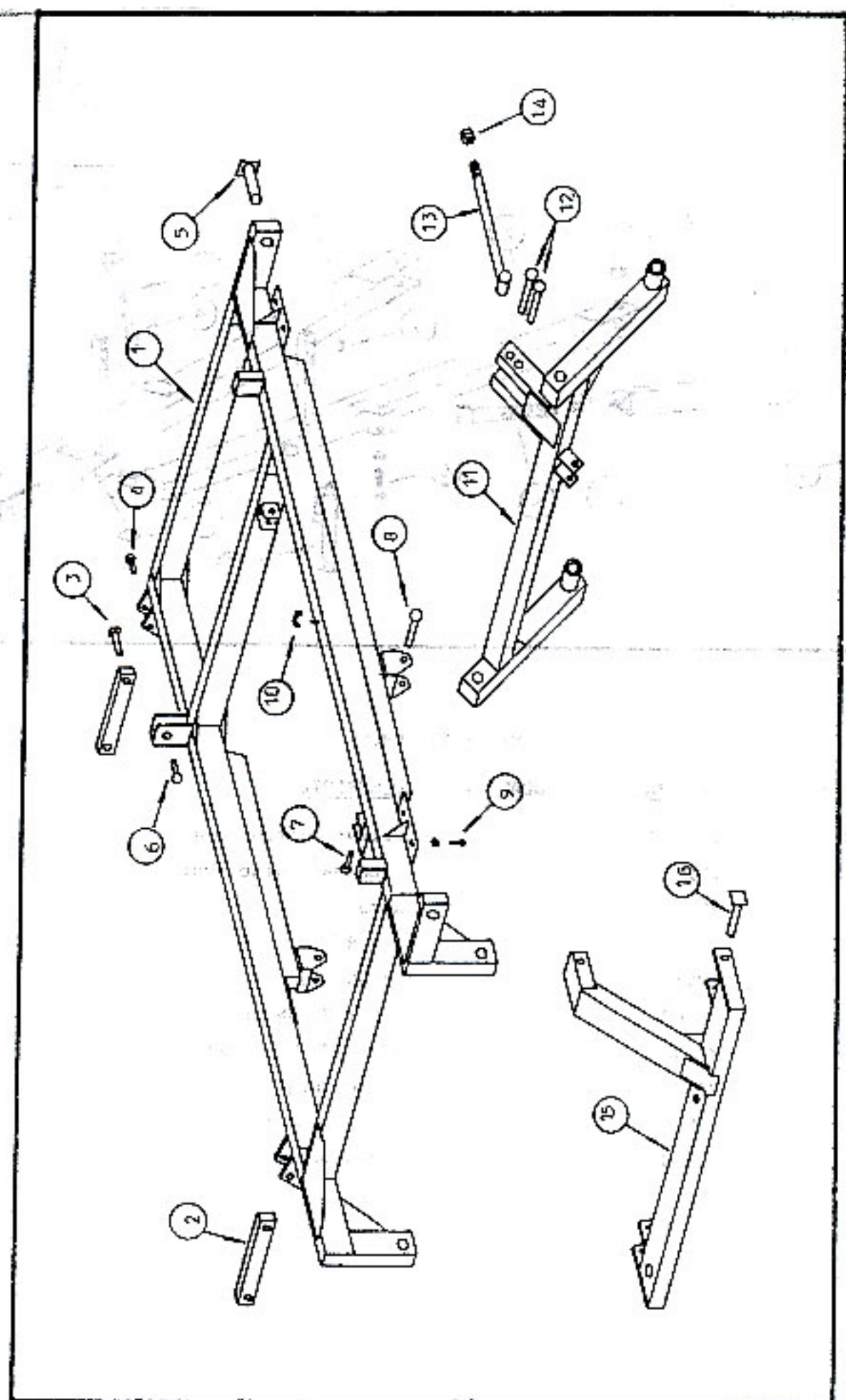


225 DOW - 8626B Flexible Tandem
36' Cutting Width



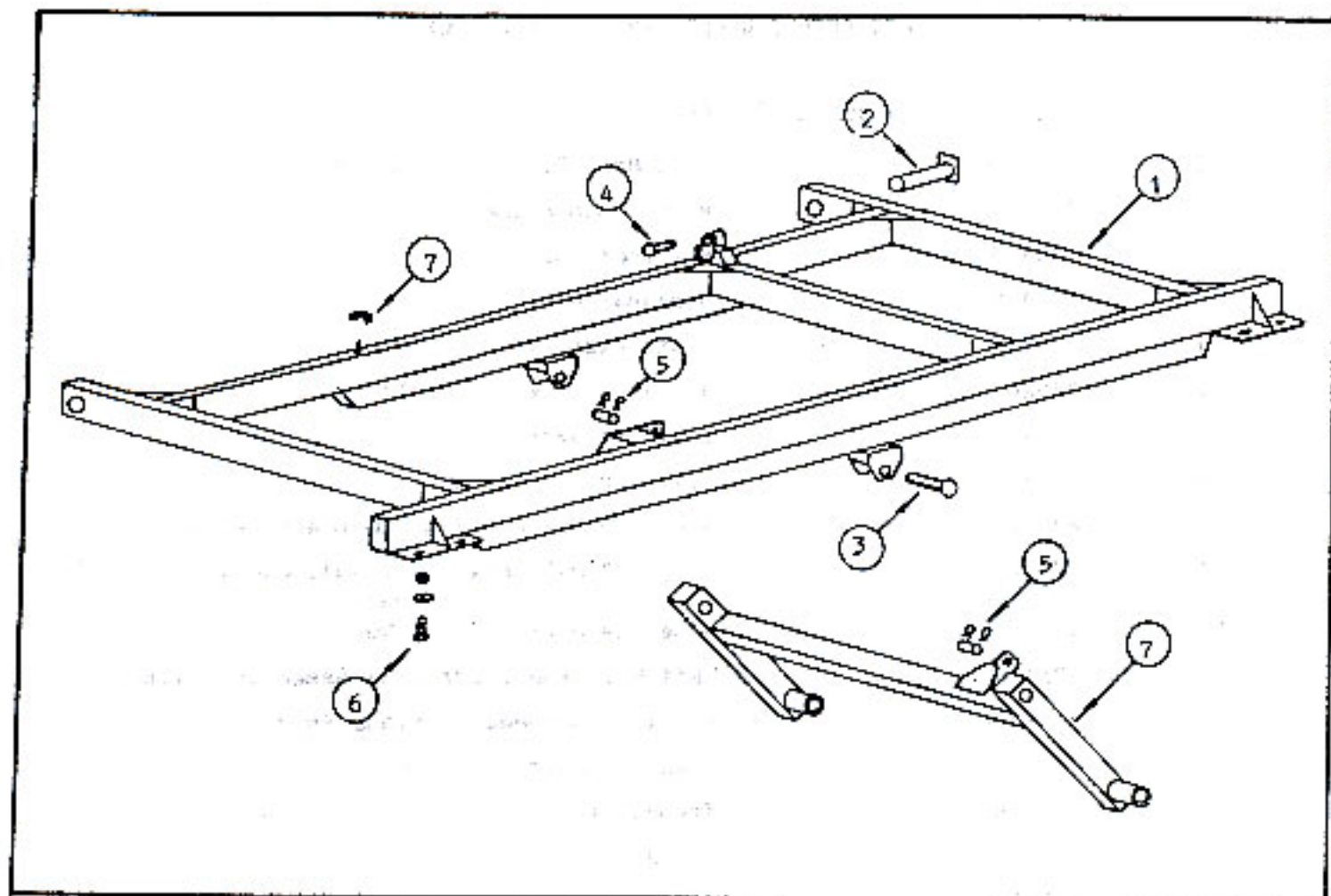
HITCH ASSEMBLY

ITEM NO	PART NO	QUANTITY	DESCRIPTION
1	225100	1	Primary Hitch Pole
2	225101	1	Secondary Hitch Pole
3	225102	2	Side Arm
4	225103	2	Eye Bolt
5	225104	2	2" UNC Nut
6	22567	4	1 1/2" X 7" UNC Fwd. Bolt, Nut & L.W.
7	22566	2	2" X 10" UNC Bolt & Nut
8	225105	1	Hitch Pole Pin
9	22565	4	Hose Clamp c/w 1/2" UNC Nut
10	225106	1	Hitch Flapper
11	22504	2	Jack



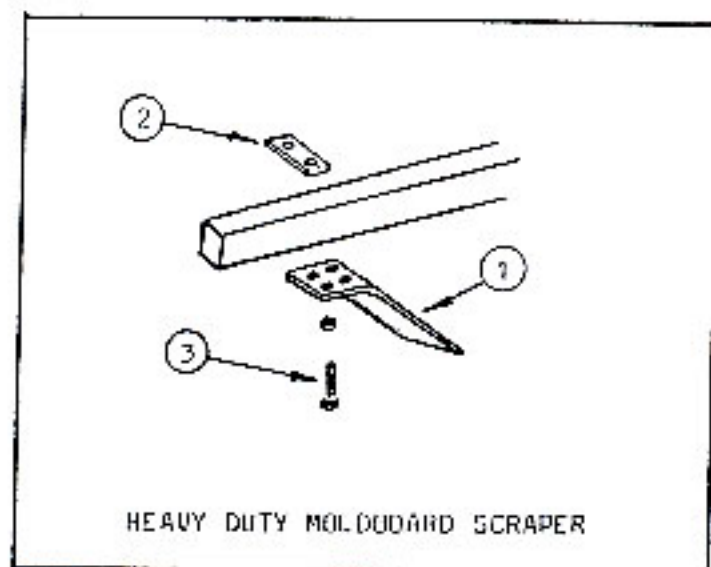
MAIN FRAME, WHEEL CARRIAGE & BRIDLE

<u>ITEM NO</u>	<u>PART NO</u>	<u>QUANTITY</u>	<u>DESCRIPTION</u>
1	225107L	1	Left Main Frame (Illustrated)
1	225107R	1	Right Main Frame
2	225108	2	Spreader Bar
3	225109	4	Spreader Bar Pin
4	225110	4	Restrictor Pin
5	22580	4	Hinge Pin c/w Lock Bolt
6	225111	2	Cylinder Barrel Pin
7	225112	2	Cylinder Barrel Pin
8	22572	4	Wheel Carriage Pivot Pin c/w Lock Bolt
9	22570	16	1" X 3 1/2" UNC Fed. Bolt, Nut, L.W., F.W. & Spacer
10	22565	8	Hose Clamp c/w 1/2" UNC Nut
11	225113L	1	Left Main Wheel Carriage Assembly (Illustrated)
11	225113R	1	Right Main Wheel Carriage Assembly
12	22573	4	Cylinder / Travel Stay Pin
13	225114	2	Travel Stay
14	225115	2	1 1/2" UNC Nut
15	225116L	1	Left Bridle (Illustrated)
15	225116R	1	Right Bridle
16	225117	4	Bridle Pin

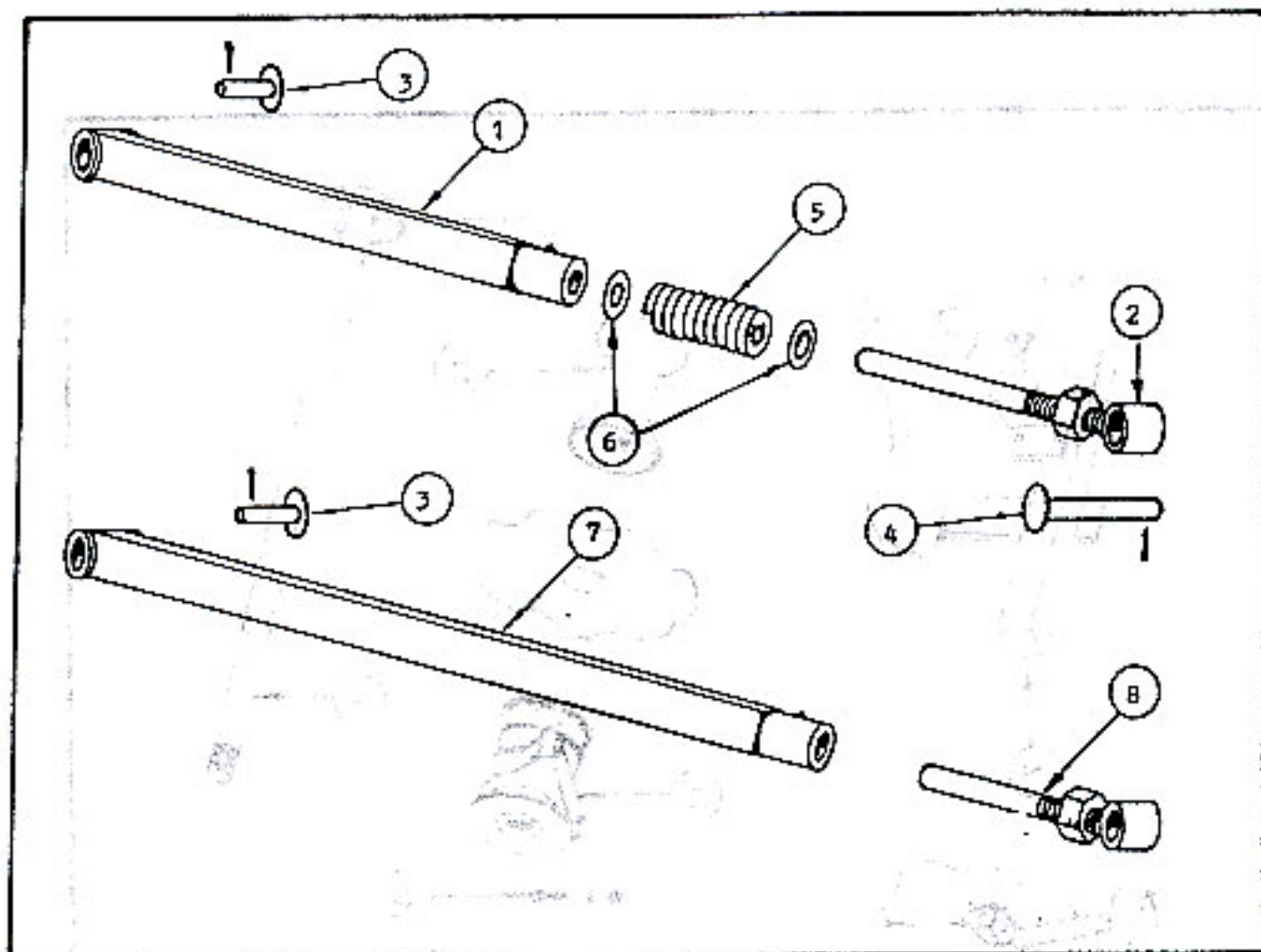


WING FRAME & WHEEL CARRIAGE

<u>ITEM NO</u>	<u>PART NO</u>	<u>QUANTITY</u>	<u>DESCRIPTION</u>
1	225118L	1	Left Wing Frame (Illustrated)
1	225118R	1	Right Wing Frame
2	22580	4	Hinge Pin c/w Lock Bolt
3	22572	4	Wheel Carriage Pivot Pin c/w Lock Bolt
4	225119	2	Cylinder Pin
5	225120	4	Cylinder Pin
6	22570	16	1" X 3 3/8" UNC Fed. Bolt, Nut, L.W., F.W. & Spacer
7	225121L	1	Left Wing Wheel Carriage Assembly (Illustrated)
7	225121R	1	Right Wing Wheel Carriage Assembly

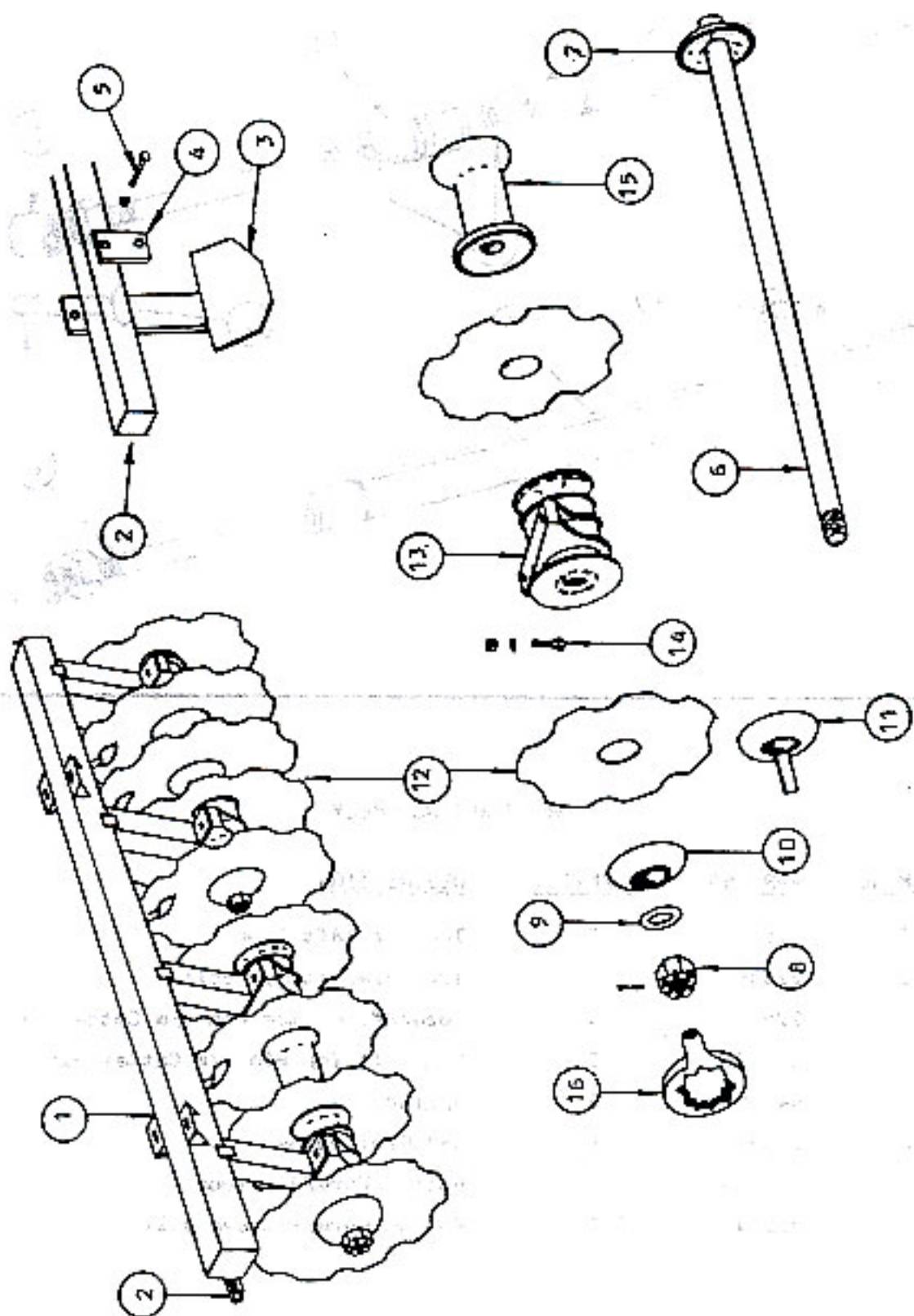


<u>ITEM NO</u>	<u>PART NO</u>	<u>QUANTITY</u>	<u>DESCRIPTION</u>
1	22589R		Right Hand HD Moldboard . Scraper
1	22589L		Left Hand HD Moldboard Scraper
2	22590	2 per	Scraper Clip
3	22591	4 per	$\frac{1}{2}$ " X 4" NC Gr5 Bolt, Nut & LW



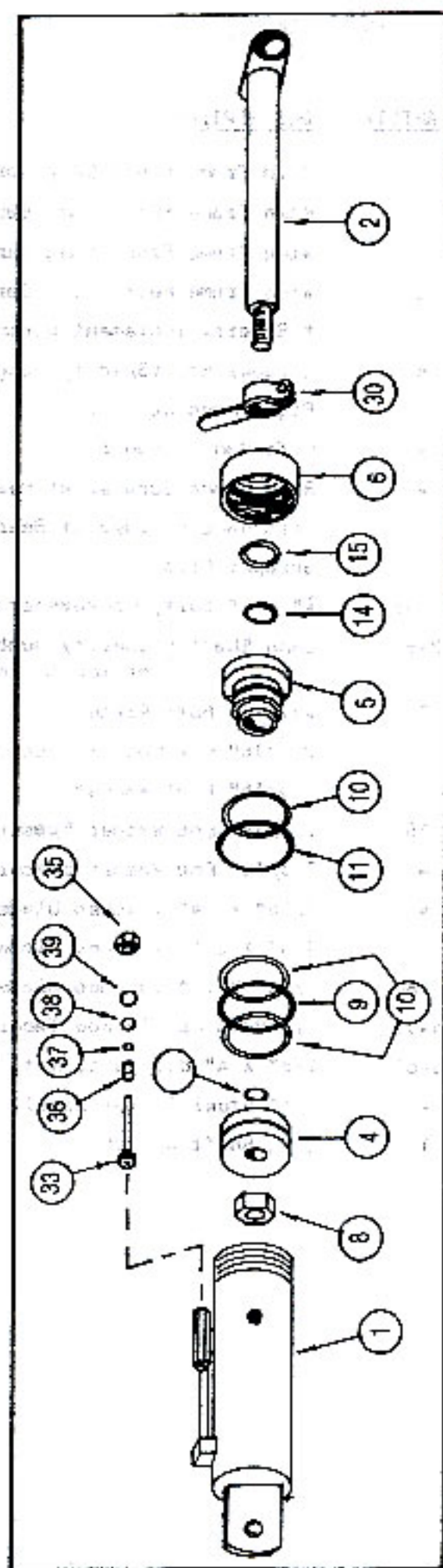
FORE / AFT ASSEMBLY

ITEM NO	PART NO	QUANTITY	DESCRIPTION
1	225122	2	Top Fore/Aft Tube
2	22586	2	Top Fore/Aft Eye Bolt
3	22574	4	Fore/Aft Bottom Pin c/w Cotter Pin
4	225123	2	Fore/Aft Top Pin o/w Cotter Pin
5	RWU65	2	Spring
6	22508	4	1½" Flat Washer
7	225124	2	Bottom Fore/Aft Tube
8	22584	2	Bottom Fore/Aft Eye Bolt



GANG ASSEMBLY

ITEM NO	PART NO	QUANTITY	DESCRIPTION
1	225225MF	2	Main Frame Front Gang Bar *
1	225225MR	2	Main Frame Rear Gang Bar *
1	225225WF	2	Wing Frame Front Gang Bar *
1	225225WR	2	Wing Frame Rear Gang Bar *
			* Specify implement width and right or left side
2	225226TB	6	Scraper Bar (Specify length in inches)
3	22539RTB	-	Right Hand Scraper
3	22539LTB	-	Left Hand Scraper
3	22539RBTB	-	Right Hand Scraper at Bearing
3	22539LBTB	-	Left Hand Scraper at Bearing
4	22540TB	-	Scraper Clip
5	22541TB	2 per	$\frac{3}{8}$ " X 4" Bolt, Lockwasher & Nut
6	225227	2-8	Gang Shaft (Specify number of blades or length in inches)
7	22547	16	Weld-On Butt Plate
8	22548	16	2 $\frac{3}{16}$ " Hex Nut c/w Lock Bolt
9	22549	16	2 $\frac{3}{16}$ " Flat Washer
10	22550	16	2 $\frac{3}{16}$ " End Washer Spacer
11	22550-D	-	2 $\frac{3}{16}$ " End Washer Spacer c/w Driver
12	20-5309	4	5/16" X 24" Notched Blade
12	20-4382	2	1/4" X 22" Notched Blade
12	20-6218	68-88	5/16" X 26" Notched Blade
13	0501040387	24-32	Oil Bath Double Row Tapered Roller Bearing
14	22557	48-64	7/8" X 4" UNC Bolt, Nut, Lockwasher & Flat Washers
15	K016762S	-	10 $\frac{1}{2}$ " Steel Spacer Spool
16	22562	1	Gang Shaft Wrench



MAIN FRAME WHEEL CARRIAGE & WING LIFT CYLINDERS

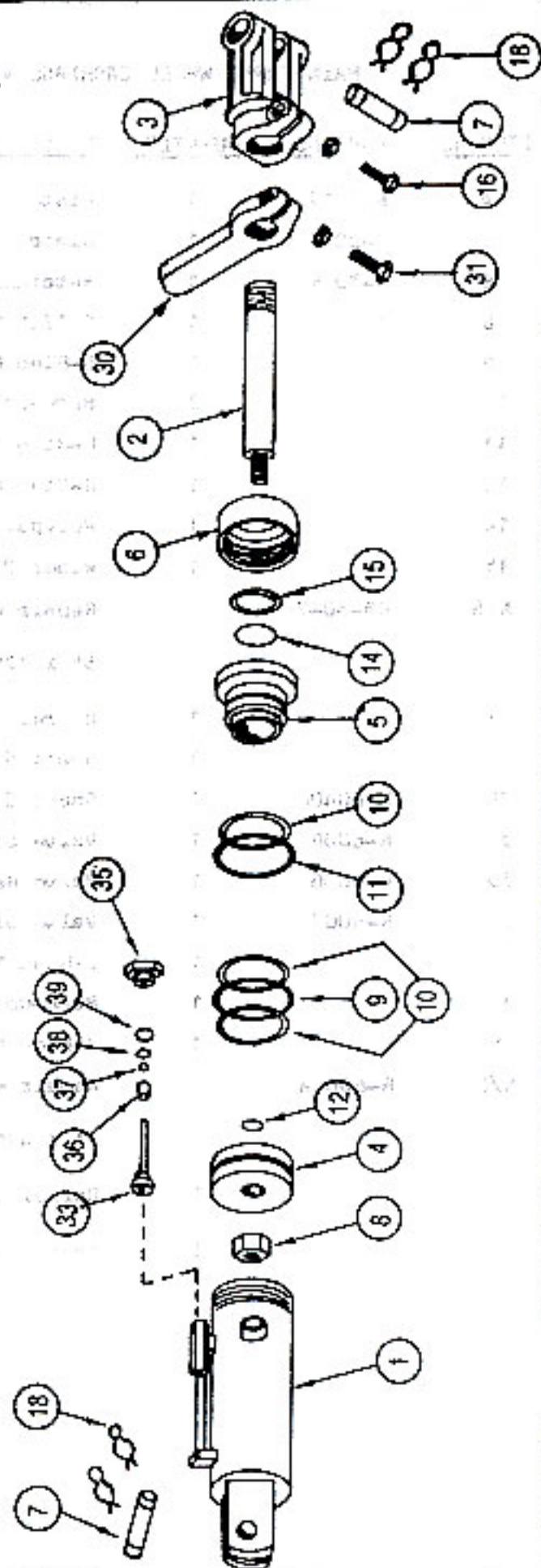
ITEM NO	PART NO	QUANTITY	DESCRIPTION
4	R-3517	1	Piston
5	R-2016	1	Gland
6	R-3009	1	Retaining Nut
8	1	1	1 1/8" UNF Locknut
9		1	O-Ring No. 425 4 1/2" X 5" Duro 90
10		3	Back-up Washer No. 425
11		1	O-Ring No. 425 4 1/2" X 5" Duro 90
12		1	O-Ring No. 216 Duro 70
14		1	Polypak 2" X 2 3/8" X 5/16" Cased
15		1	Wiper 2" X 2 3/8" X 3/16" Cased
N/S	R3-50-2		Repair Kit (Nos. 9, 10, 11, 12, 14, 15) 5" X 12" Cylinder c/w Hyd. Depth Control
1		1	Barrel S.A.
2		1	Shaft S.A.
30	R-6040A	1	Shaft Clamp 2" RD
33	R-6008	1	Valve Stem & Poppet
35	R-6006	1	Valve Head
36	R-6007	1	Valve Sleeve
37		1	O-Ring No. 009 Duro 70
38		1	Back-up Washer No. 009
39		1	O-Ring No. 114 Duro 70
N/S	R-6005A		Repair Kit (Nos. 33, 35, 36, 37, 38, 39) 5" X 42" Cylinder Less Depth Control
1		1	Barrel S.A.
2		1	Shaft S.A.

Ram RH Series Double Acting Cylinder

Model RH3-40A-08 c/w 1 1/4 shaft

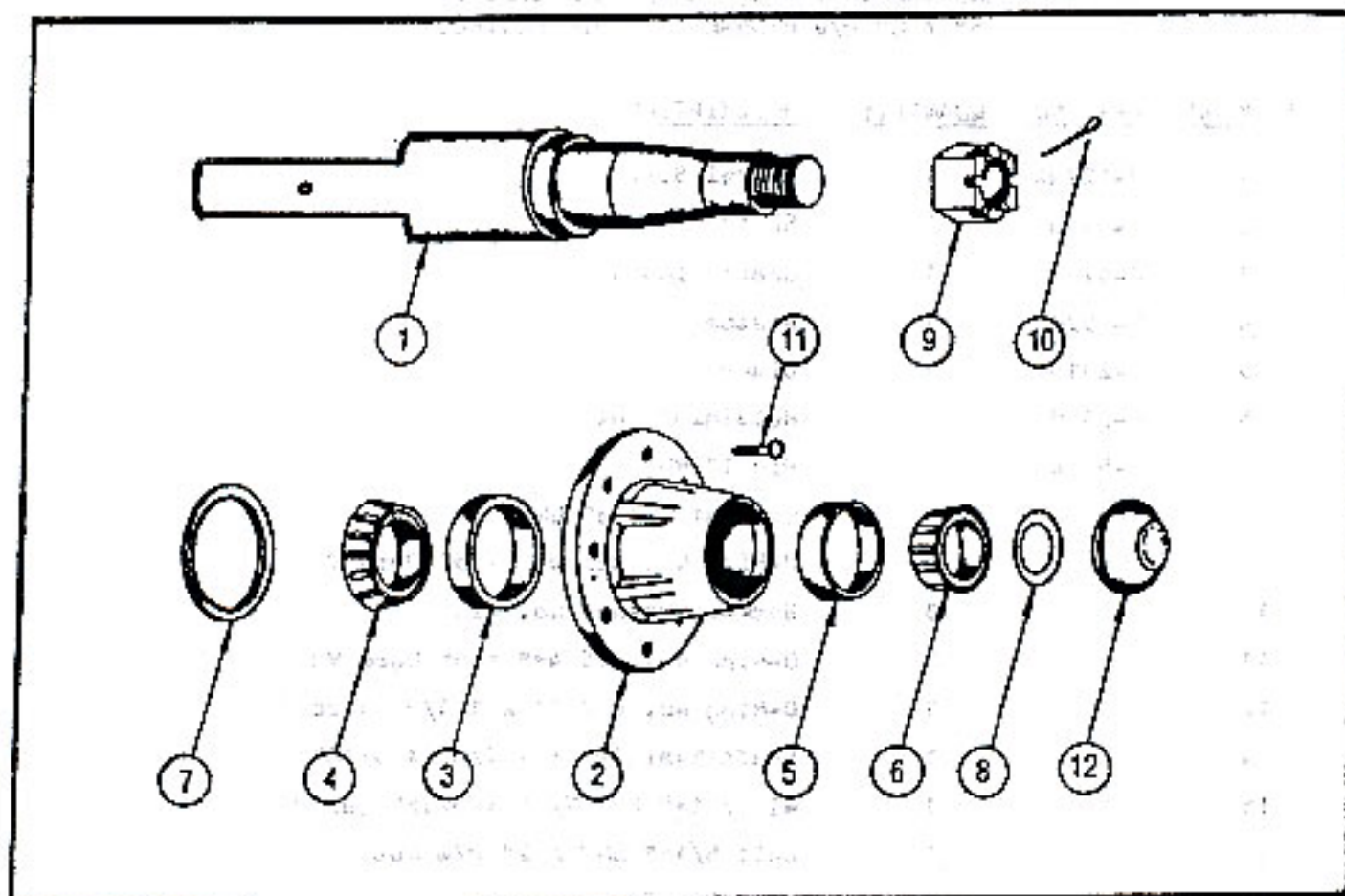
RH3-40A-08 c/w 1 1/2 shaft

RH3-50A-08 c/w 1 1/2 shaft



**RH3-50A-08 c/w 1½" SHAFT RAM CYLINDER
5" X 8" c/w HYDRAULIC DEPTH CONTROL**

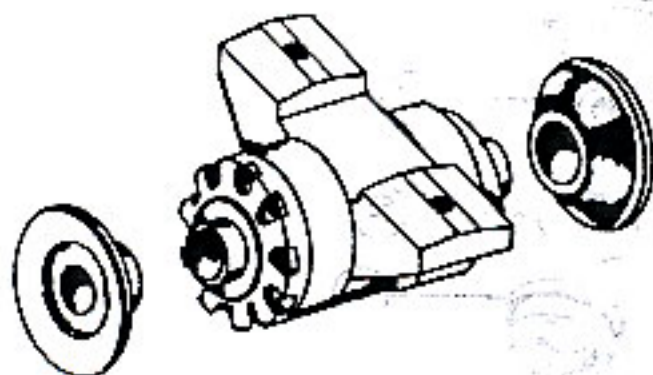
<u>ITEM NO</u>	<u>PART NO</u>	<u>QUANTITY</u>	<u>DESCRIPTION</u>
1	R-1274A	1	Barrel S.A.
2	R-1730	1	Shaft
3	R-4100	1	Shaft Clevis
4	R-3590	1	Piston
5	R-2015	1	Gland
6	R-3009	1	Retaining Nut
7	R-5914	2	Pin 1" RD
8		1	Locknut 1 1/8" UNF
9		1	O-Ring No. 425 4½" X 5" Duro 70
10		3	Back-up Washer No. 425
11		1	O-Ring No. 425 4½" X 5" Duro 90
12		1	O-Ring NO. 022 1" X 1 1/8" Duro 70
14		1	Shaft Seal 1½" X 1 7/8" X 5/16"
15		1	Wiper 1½" X 1 7/8" X 3/16" Cased
16		1	Bolt 5/16" UNC X 2" c/w Nut
18		4	Hair Pin Clip
22	RK-50-1.5		Repair Kit (Nos. 9, 10, 11, 12, 14, 15)
30	R-6004	1	Shaft Clamp 1½" Rd
31			Bolt 5/16" UNC X 2" c/w Nut
33	R-6008	1	Valve Stem & Poppet
35	R-6006	1	Valve Head
36	R-6007	1	Valve Sleeve
37		1	O-Ring No. 009 7/32" X 11/32" Duro 70
38		1	Back-up Washer No. 009
39		1	O-Ring No. 114 5/8" X 1 3/16" Duro 70
N/S	R-6005A		Repair Kit (Nos. 33, 35, 36, 37, 38, 39)



B-BOLT IMPLEMENT HUB ASSEMBLY

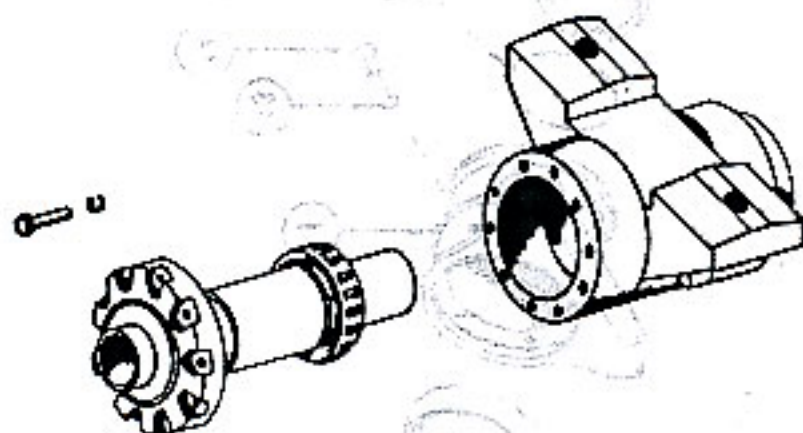
ITEM NO	PART NO	QUANTITY	DESCRIPTION
1	S812-A03	1	2 3/4" x 12 3/4" (machined down to 2") 2 1/2" x 1 1/2" Spindle (Machined down to 2")
2	HD812	1	Hub
3	3720	1	Inner Bearing Cup
4	3780	1	Inner Bearing Cone
5	2720	1	Outer Bearing Cup
6	2790	1	Outer Bearing Cone
7	SE17	1	Grease Seal
8	WA17	1	Spindle Washer
9	WB33	1	1" UNF Castellated Hex Nut
10		1	Cotter Pin 3/16" x 1 1/2"
11	WB12	8	9/16" x 1 1/4" UNF Wheel Bolt
12	DC17	1	Dust Cap
N/S	1681-813-1	1	16 X 8 X 8 Bolt Wheel

Bearing Replacement Procedure



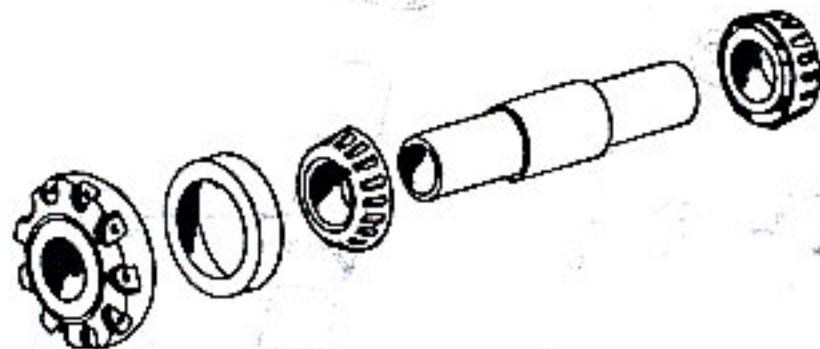
Remove Half Spools

Drain oil from unit. Half spools are pressed onto ends of interior housing. Apply pressure evenly when removing to avoid damage.



Extract Interior Housing

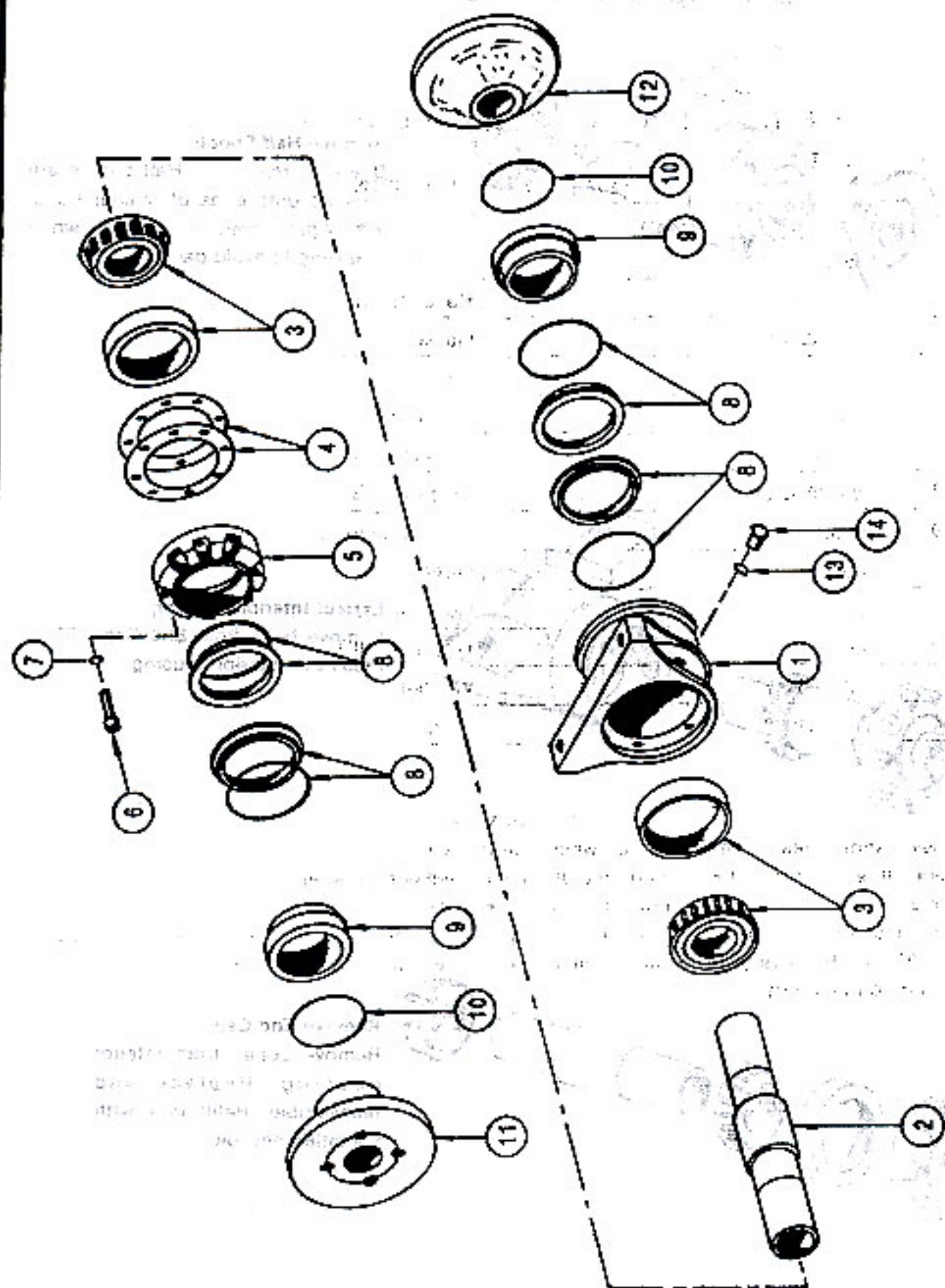
Remove bolts from End Cap. Press out interior housing.



Remove End Cap

Remove cones from interior housing. Replace and reassemble. Refill unit with specified new oil.

NOTE: It is recommended that new O-Rings, Gaskets and Seals be installed when replacing bearings. See Parts Diagram.



Oil Bath Double Row Tapered Roller Bearing

ITEM No.	PART No.	QUANTITY	DESCRIPTION
1	0502010293	1	Bearing Housing
2	0502040185	1	Bearing Axle
3	0503010107	2	Roller Bearing
4	0503030300	2	Gasket
5	0502010294	1	End Cap
6	0503010025	8	$\frac{3}{8}$ " Spring Washer
7	0501010175	8	$\frac{3}{8}$ " x 1 $\frac{1}{4}$ " Socket Head Cap Screws
8	0503030026	2	Duo-Cone Seal
9	0502040198	2	Seal Support with Bushing
10	0503010354	2	O-Ring
11	0502040185	1	Concave Half Spool
12	0502040196	1	Convex Half Spool
13	0503030172	1	Washer
14	0501010903	1	Plug

Maintenance

Oil level should reach bottom of plug when unit is level.

Check oil level after first 8 hours of operation and weekly thereafter.

Change oil every 1500 Hrs. Use only a quality Sae 90 Oil.

Compression on the roller bearings is accomplished through the use of Gaskets (Part No. 0503030034). Remove gaskets to eliminate excessive play and insert gaskets to increase pressure on bearings.

Kello-Bilt Warranty Information

To The Purchaser

Kello-Bilt Industries Ltd. warrants its products to the original owner for a period of one year from date of purchase. All matters related with the warranty of our products must be handled through the authorized selling dealer. Warranty does not cover normal wear of the disc components or damages caused by lack of maintenance or misuse, and is subject to the following provisions:

SUBJECT TO THE LIMITATIONS HEREINAFTER CONTAINED, every new Farm Implement (as defined in The Farm Implement Act, Chapter 20 S.A., 1967 and amendments thereto) if described in this parts manual and if purchased by a farmer for his own use, is covered by the warranties hereinafter made, and referred to in the said ACT AND NO OTHER.

LIMITATIONS OF WARRANTY

1. **Original Purchaser Only:** This said warranty is to the original purchaser only and to no other person.

2. **Duration:** The duration of time limit of the said warranty (hereinafter called the warranty period) shall be one (1) year from the date that the new farm implement is first used within the first normal season of use for its intended purpose.

3. **Replacement or Repair Only:** The sole liability for breach of the said warranty shall be to replace or repair free of charge including installation, at the Seller's place of business, any parts which prove to be defective within the warranty period, under reasonable operating conditions and proper use, care and maintenance; the said defective part or parts are to be returned to the Seller within 90 days of being found defective; IN NO EVENT shall there be any liability for any consequential damages such as damages for loss of use or loss of profit or expenses, out of pocket or otherwise.

4. **Replacement Parts:** Will be warranted for a period of 90 days.

5. **Labour:** Any labour subject to warranty must be authorized by a Kello-Bilt Industries Ltd. representative before work is started. Warranty labour allowance & rates will be handled according to established Service Warranty Policy.

6. **Warranty Parts:** Defective parts are to be stored at the dealership & warranty will be subject to inspection by a Kello-Bilt Industries Ltd. representative or shipped prepaid to Stettler, Alberta, Canada.

7. **Warranty on Machines Used For Custom Work, Rental or Industrial/Construction Use:** Warranty on discs used for custom work, rental or industrial/construction use shall be stated below, with the exception that it shall be for a period of 90 days only.

8. **Government Legislation:** Warranty terms & conditions are subject to provincial or state legislation.

9. **Warranty Will be Void:** If any disc component is altered or modified, unless written authorization is granted by Kello-Bilt Industries Ltd.

10. **Notice of Claim:** The Purchaser shall forthwith after any alleged breach of warranty within the warranty period, notify in writing the particulars of the Purchaser's claim by registered mail addressed to the Seller and the Manufacturer at their respective addresses, giving a description of the new Farm Implement and the return address of the Purchaser.

11. **No Other Warranties, Conditions or Representations:** Purchaser acknowledges that this agreement constitutes the entire contract and there are no other representations, warranties or conditions, expressed or implied, statutory or otherwise, other than as contained herein or delivered in writing herewith. Without limiting the generality of the foregoing, Purchaser agrees that there is no warranty as to the year and model, even if stated herein.

12. **Time:** Time shall strictly be of the essence.

13. **No Warranty on Tires - Tubes - Accessories:** No warranty whatsoever is given as to tires and tubes or as to accessories unless such accessories are new and are manufactured by the manufacturer named on the reverse side hereof and such accessories are sold as part of the said new Farm Implement.

14. **Disc Blade Warranty:** (1) Full warranty will be given for one year from date of purchase for a straight directional break or split disc caused by faulty or defective material.

(2) 50 per cent warranty will be given for one year from date of purchase for the following:

(a) Irregular breaks, tear type fractures, chipped or dented edges resulting from use in severe areas such as rocks or stumps, (b) Centre broken out - caused by rock or stump conditions, excessive flexing of discs or loose gang bolts.

(3) Warranty limited to disc replacement upon return of damaged disc, prepaid to Stettler, Alberta, Canada.

15. **Warranty - Property Other than New Farm Implements**

(Set forth above, warranty, if any, on property other than New Farm Implements, such warranty to be honoured only at Stettler's place of business).

I hereby acknowledge receipt of a true copy of this Agreement and that I am the Purchaser named therein.

Because we are constantly striving to improve our products, we reserve the right to incorporate any changes related to design, materials and specifications at any time, without notice or obligation.