

Kello-Bilt '176' Series Offset Disc

Owner's Manual



Manufactured by Kellough Bros. Ltd.

SOLD AND SERVICED BY

KELLOUGH ENTERPRISES INC.

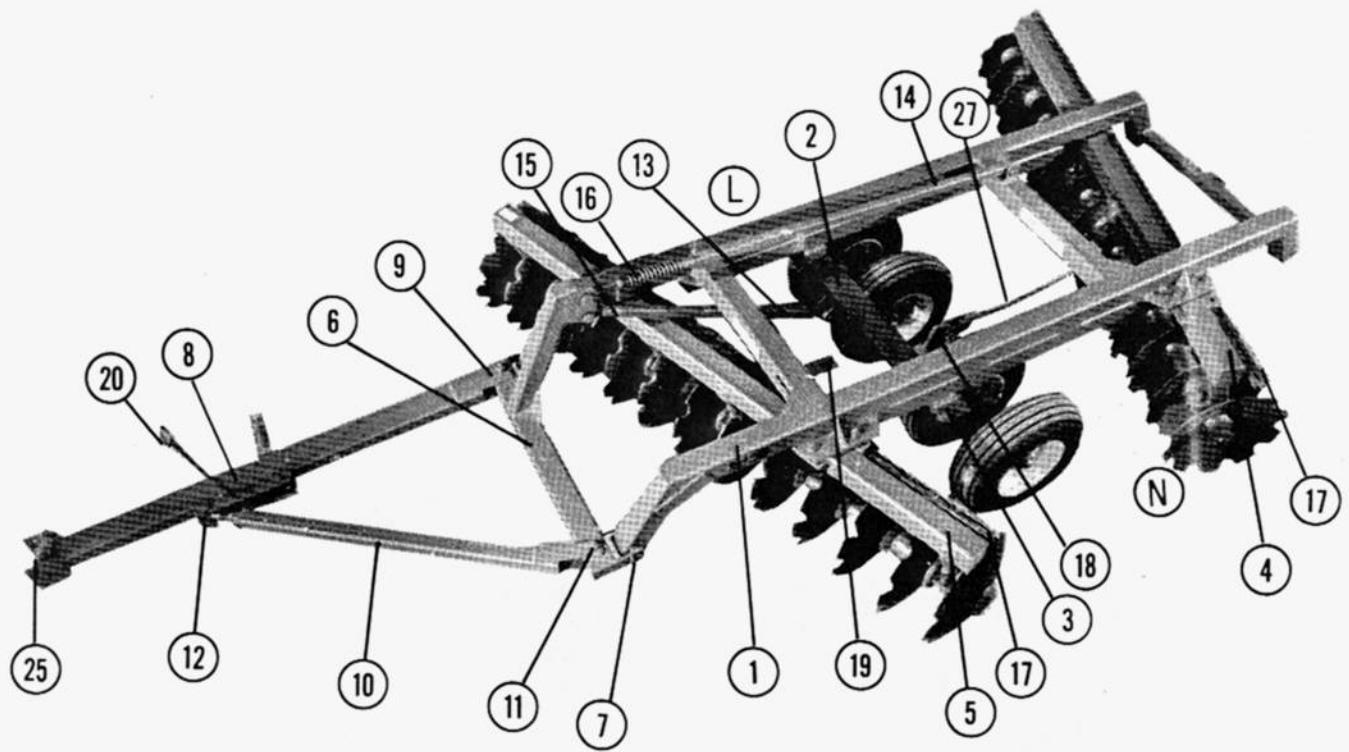


Figure 1

OPERATING INSTRUCTIONS

1. Hydraulic Cylinder and Hoses: (Refer to Figure 1) A standard 8" stroke double acting hydraulic cylinder is required to lift disc. Two 18 ft. hydraulic hoses are needed to allow full offsetting and turning without hose damage.

CAUTION: Be certain the rod or moving end of the cylinder is to the rear(18) with the butt end to the front at main frame(19). Fasten the hoses through hose stand(20) with enough slack to allow tractor to turn, but without enough to let hose drag.

2. Angle Changing: (Refer to Figure 1) To change angle. Raise disc on wheels until discs are clear of ground. Remove bolt(21) and loosen the three remaining bolts. Slide gang bar forward or backward as desired. Replace bolt and tighten all bolts securely. For ordinary conditions set both front and rear gangs in next to maximum angle. Increase angles as required to suit conditions.

3. Offsetting Rear Gang Bar: (Refer to Figure 3) for ordinary conditions bolt(22) should be in the centre of lateral plate(23). When using disc as a double wide unit the rear gang bar is adjusted to maximum width to fill furrow. Remove two bolts(22), loosen bolt where slots are(24), adjust laterally then retighten all bolts.

4. Offsetting The Hitch: (Refer to Figure 1) This unit is designed to trail straight behind the tractor. Minimum side draft will be obtained when the hitch is in line with outside beam of main frame. If more adjustment is required screw hitch side arm eye bolt(12) to desired position, then retighten jamb nut to reduce pressure on eye bolt thread.

CAUTION: Tighten the hitch bolts to about 450 ft./lbs. torque (three foot wrench for average man). Loose hitch bolts will result in extensive damage to the hitch pole and hitch bridle.

5. Hitch Height: (Refer to Figure 1) The hitch pole should always be as near level as possible when discing. Flapper hitch(25) can be raised or lowered to proper tongue level of tractor. (Not adjustable on Series 250)

6. Leveling:

A. Front to Rear: (Refer to Figure 1) With disc raised and hitch to tractor, adjust bottom fore-aft eye bolt(15) until main frame is level. Adjust fore-aft spring lock(16) until spring is snug. The top spring should be under some compression when discing, but should never be compressed solidly. NOTE: In general use as little pressure as possible when discing.

B. Side to Side Leveling: (Refer to Figure 3) In general, adequate levelling from side to side may be obtained by placing leveling washers(26) between angling plate on frame and gang bar. leveling washers are always used on narrow side(N) of disc only.

C. Penetration: It is better to reduce the angle of the gangs to decrease penetration rather than to gauge the penetration by use of the wheels. By use of this method, width of cut is increased and draft and fuel consumption in extremely soft or sandy soils, decreased. It may be necessary to use the wheels for additional leveling and gauging.

7. Transporting: (Refer to Figure 1) Disc may be transported without using hydraulic cylinder. Place the rod(27) through the hole in anchor on frame(1) and place clevis over transport block. Raise the disc until the cylinder has reached the end of its stroke. Insert pin in clevis and adjust transport rod nut until there is about $\frac{1}{8}$ " between nut and transport anchor. Release pressure on hydraulic cylinder and remove. **CAUTION:** Extreme care should be taken not to collapse the cylinder too much with the transport rod in transport position.

POINTS TO CHECK IN OBTAINING THE BEST PERFORMANCE

1. Side Draft on Tractor:

- A. Adjust hitch for proper line of draft.
- B. Reduce angle of front gang bar.
- C. Increase angle of rear gang bar.
- D. Increase spring pressure slightly.
- E. Put front wheel weights on tractor.
- F. Lower tractor drawbar and/or raise hitch flapper on disc.

2. Furrow Not Filled:

- A. Increase angle of rear gang bar.
- B. Offset rear gang bar to outside.
- C. Increase spring pressure slightly.
- D. Put leveling spacer between main frame and gang bar on narrow side of disc.
- E. Position hitch pole on bridle to move disc in opposite direction.

3. Furrow Overfilled:

- A. Adjust opposite to No. 2 above.

4. Ridging on Rear:

- A. Reduce angle of rear drawbar.
- B. Decrease spring pressure.

5. Disc Unstable Laterally: (Plowing crooked furrow)

- A. Decrease spring pressure.
- B. Correct drawbar and/or hitch flapper height.
- C. Reduce angle of front gang bar.

6. Clogging Between Discs:

- A. Adjust scrapers properly.
- B. Decrease angle front and/or rear.
- C. Decrease depth of plowing.

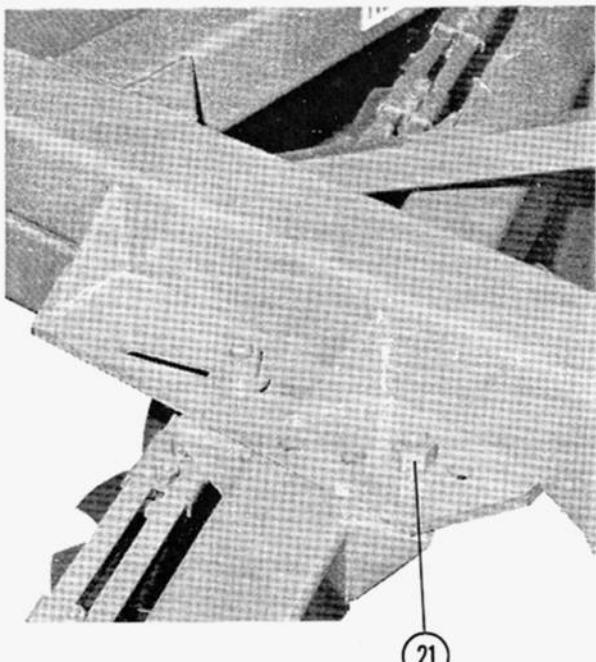


Figure 2

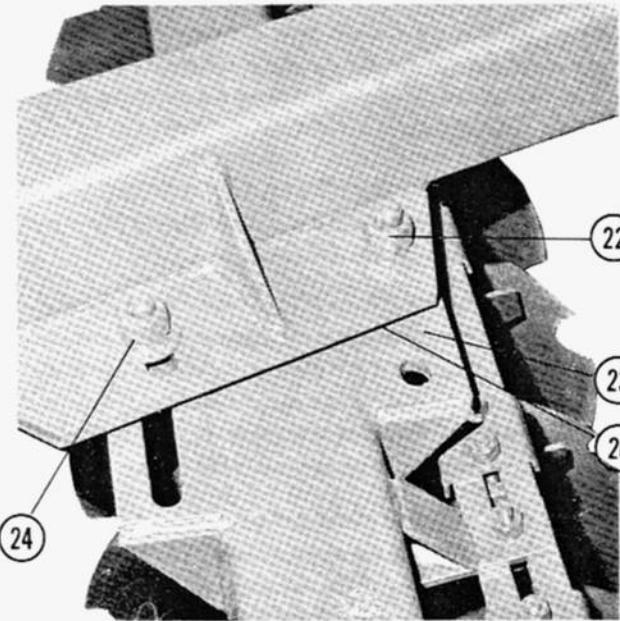


Figure 3

SET-UP INSTRUCTIONS

1. **To Install Wheel Carriage and Wheels:** (Refer to Figure 1) Place wheel carriage(2) under the main frame(1) and attach frame with pins(3). Install 5/16 x 2 lock bolts in pins and tighten lock nuts securely. Install wheels on to hubs with wheel bolts provided and tighten securely.
2. **To Attach Gang Bars to Frame:** (Refer to Figure 1) Bolt rear gang bar(4) to main frame(1) in center set of offsetting holes and in next-to-maximum angle with $\frac{3}{8}$ x 3 1/2 bolts. Install leveling washers on top of angling plates on long side of disc(L). Install leveling washers between gang bar and angling plates on narrow side of disc(N). Bolt front gang bar(5) to main frame in next to maximum angle with $\frac{3}{8}$ x 3 1/2 bolts. Install leveling washers same as rear gang.
3. **To Attach Hitch Bridle to Frame:** (Refer to Figure 1) Place bridle(6) at front of frame(1) and attach with pins(7). Install lock bolts and tighten nuts securely.
4. **To Attach Hitch Pole to Bridle:** (Refer to Figure 1) Attach main hitch pole(8) to bridle(6) at lead corner(9) with 1 x 6 bolt. Attach hitch side arm(10) to opposite side of bridle(11) with 1 x 6 bolt. Join hitch pole and side arm with 1" pin at adjustable eye bolt(12). Tighten all bolts securely.

5. **To Attach Fore-Aft Leveling Assembly:** (Refer to Figure 1) Install short tube(13) to wheel carriage with 1" pin. Install long tube(14) with 1" pin. Slide short fore-aft eye bolt(15) into bottom tube(13) (pinned to wheel carriage) and pin to bottom hole of bridle mast(6). Slide long fore-aft eye bolt c/w spring and washers into top tube(14) (attached to main frame) and pin to top hole of bridle mast(6).
6. **To Attach Scrapers:** (Refer to Figure 1) Attach scraper bars(17) to gang bars (4 & 5) with carriage bolts provided. Attach scrapers to scraper bar with clamps and bolts provided use care to adjust scrapers close to discs but not rubbing.
7. **To Double Wide Right and Left Hand Offsets:** (Refer to Double Wide drawing). Set together following regular instructions except item No. 4 - to attach hitch pole to bridle - the hitch pole is attached to the opposite side from the lead corner and the side arm is attached to the lead corner with 1 x 6 bolt. Set left hand disc(1) stationary and pull right hand disc(1) along side leaving front gang of right hand disc behind front gang of left hand disc. Attach rear spreader bar(5) with pins. Attach front spreader bar(6) with pins. Join right hand main hitch pole to left hand main hitch pole(3) with 1 1/4" pin(7). Adjust swivel flapper with 1 x 6 bolt for proper direction(8).

MAINTENANCE

Before operating the disc be certain that:

1. All bolts are tight.
2. The disc axles are tight

NOTE - Disc gangs must be kept tight at all times!

3. Wheel bearings are adjusted properly and lubricated with bearing grease.
4. Grease fore-aft tubes each day.

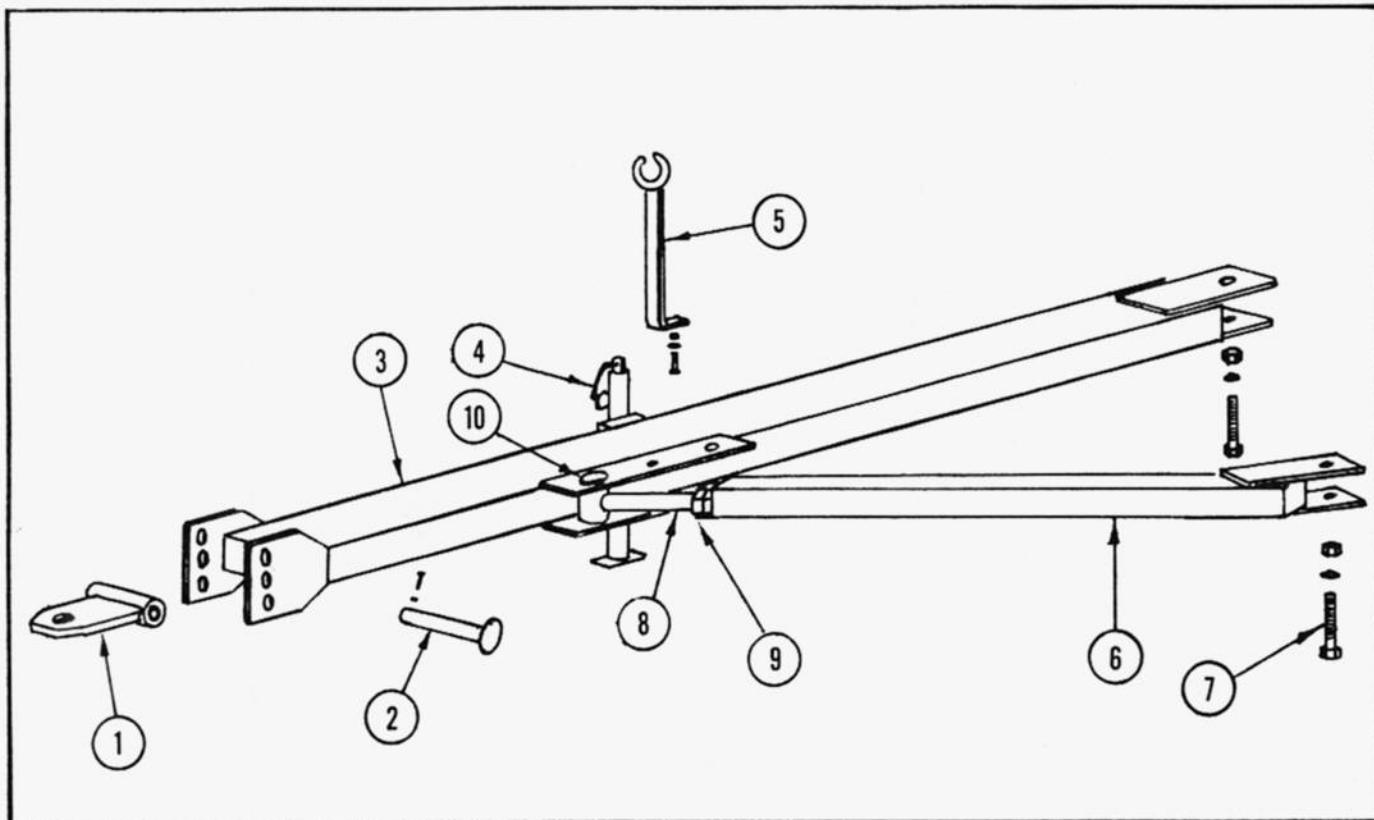
After First Day of Operation — Tighten all bolts and disc axles, check wheel bearings for adjustment, oil threads on eye bolts and transport rod.

Every Day — Inspect and repair or replace broken or worn parts, check and/or tighten bolts and disc axles.

Every 100 Hours — Grease wheel bearings until grease shows outside wheel seals.

Caution — Wipe grease fitting clean before attaching pressure gun. Use clean lithium-base bearing grease and keep it clean. Keep tires properly inflated for long life but do not exceed 50 pounds pressure for proper flotation and protection of associated parts.

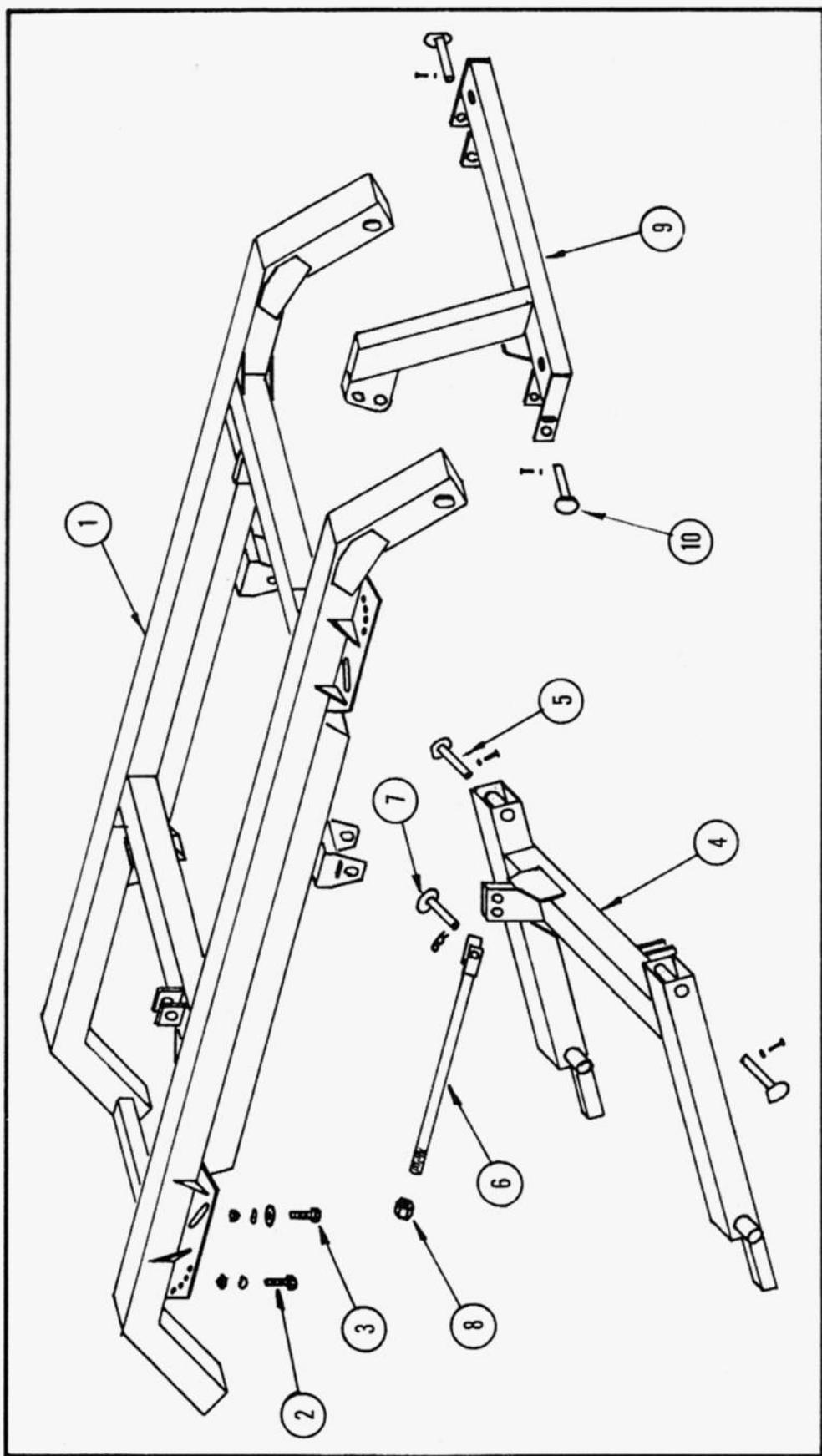
Kello-Bilt Series 176 Offset Disc



Hitch Assembly

Item No.	Part No.	Quantity	Description
1	17601	1	Hitch Flapper
2	17602	1	Hitch Flapper Pin
3	17603	1	Main Hitch Pole
4	17604	1	Jack
5	17605	1	Hose Holder
6	17606	1	Hitch Side Arm
7	17607	2	1" x 6" Bolt Lockwasher & Nut
8	17608	1	Hitch Adjustment Eye Bolt
9	17609	1	1 1/2" Jamb Nut
10	17610	1	Hitch Side Arm Pin

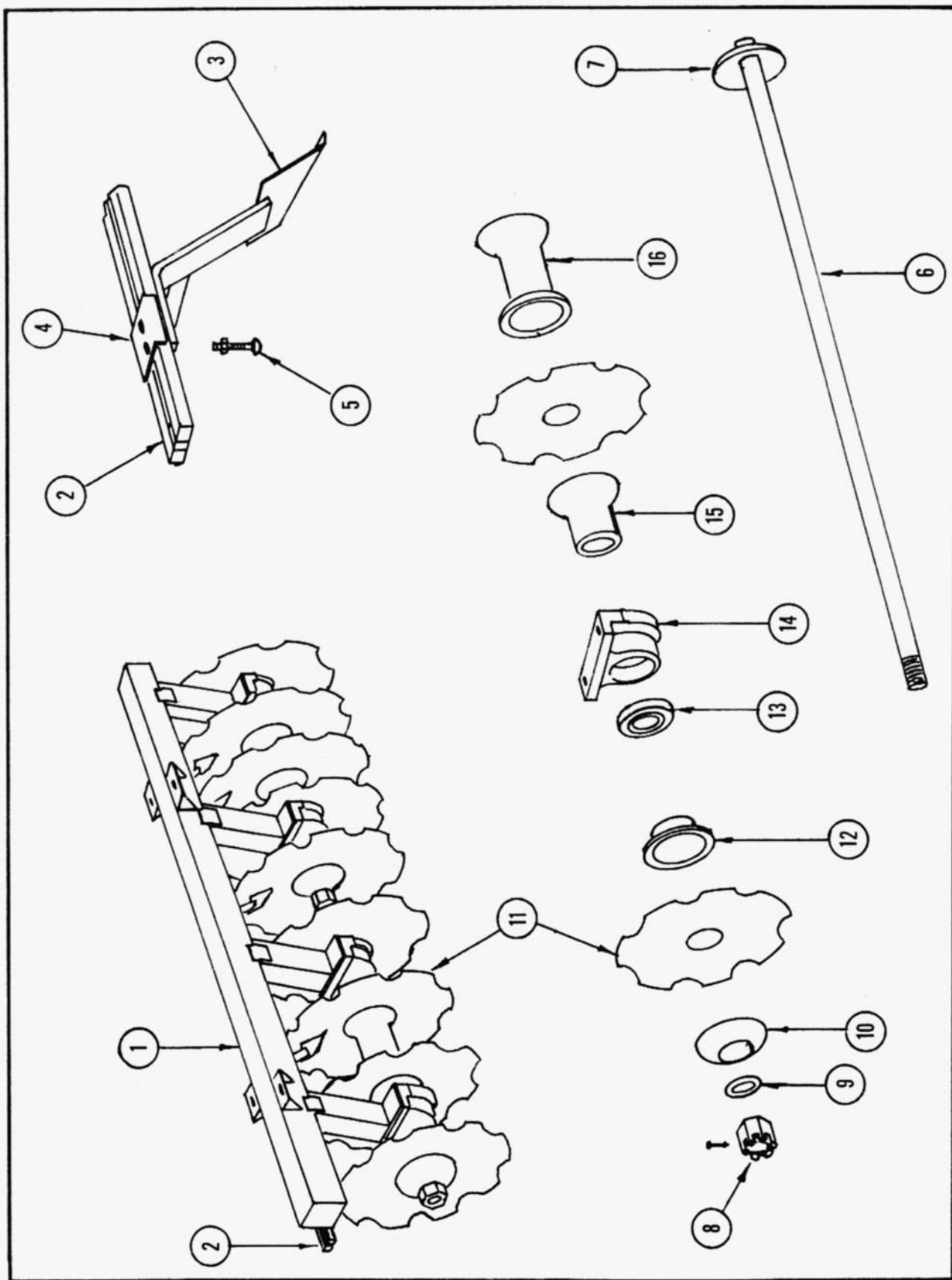
Frame & Wheel Carriage



Frame & Wheel Carriage

17611L		Main Frame Assembly	
Item No.	Part No.	Quantity	Description
1	17611R	1	Main Frame Assembly
2	17612	4	7/8" x 3 1/2" Bolt, Washer & Nut
3	17613	4	7/8" x 3 1/2" Bolt, Washer, Nut & Spacer
4	17614	1	Wheel Carriage Assembly 1 3/16" x 8 3/4"
5	17615	2	Wheel Carriage Pivot Pin
6	17616	1	Transport Rod
7	17617	1	Transport Rod Pin 1" x 8 3/4"
8	17618	1	Transport Rod Nut
9	17619	1	Hitch Bridle Assembly
10	17620	2	Hitch Bridle Pins 1 1/4" x 9"

Gang Assembly



Gang Assembly

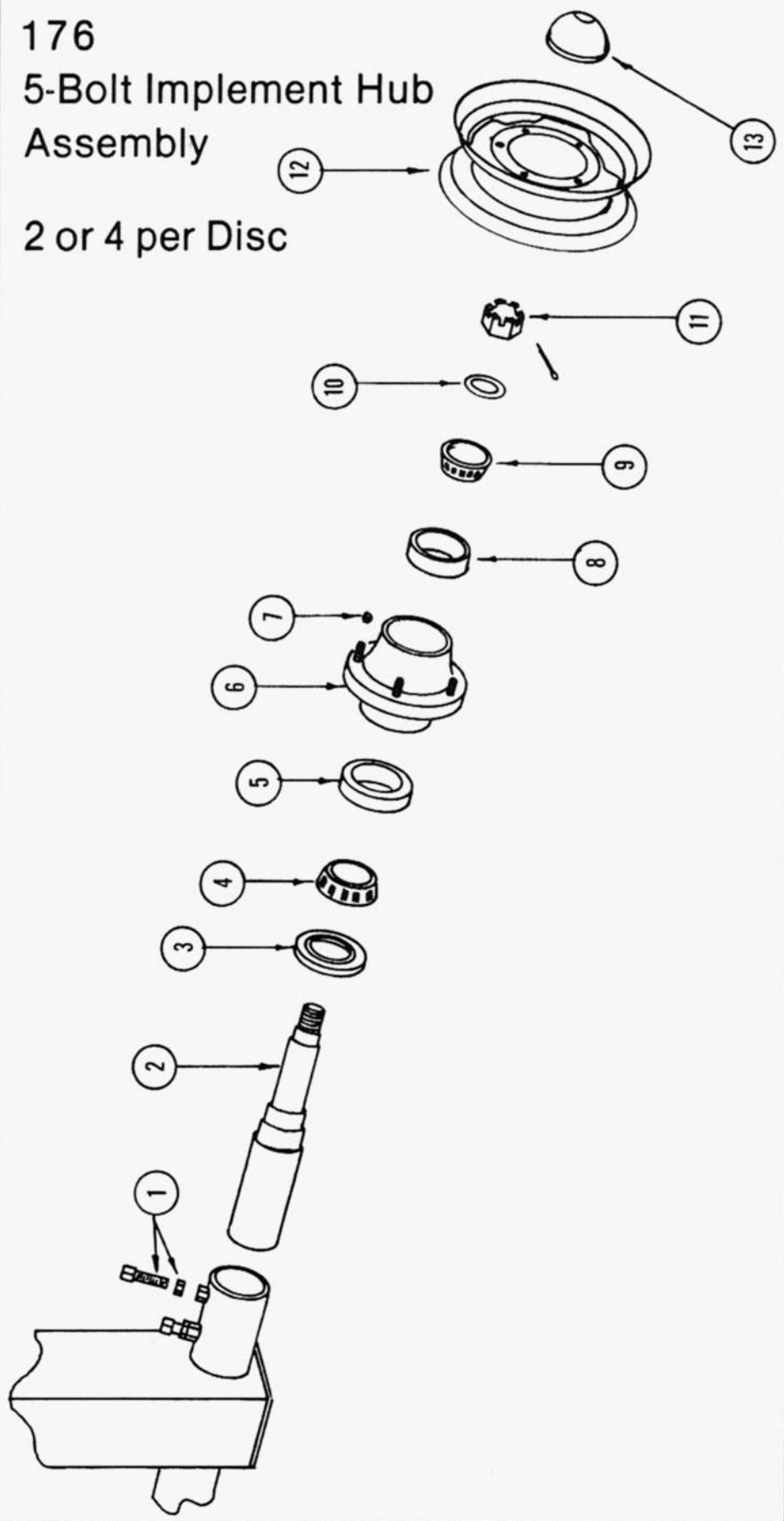
Item No.	Part No.	Quantity	Description
1	17628F-8	1	Front Gang Bar 8 Ft. Disc
1	17628F-9	1	Front Gang Bar 9 Ft. Disc
1	17628F-10	1	Front Gang Bar 10 Ft. Disc
1	17628F-11	1	Front Gang Bar 11 Ft. Disc
1	17628F-12	1	Front Gang Bar 12 Ft. Disc
1	17628F-14	1	Front Gang Bar 14 Ft. Disc
1	17628R-8	1	Rear Gang Bar 8 Ft. Disc
1	17628R-9	1	Rear Gang Bar 9 Ft. Disc
1	17628R-10	1	Rear Gang Bar 10 Ft. Disc
1	17628R-11	1	Rear Gang Bar 11 Ft. Disc
1	17628R-12	1	Rear Gang Bar 12 Ft. Disc
1	17628R-14	1	Rear Gang Bar 14 Ft. Disc
2	17629	1	84" Scraper Bar
2	17630	1	90" Scraper Bar
2	17631	1	95" Scraper Bar
2	17632	1	100" Scraper Bar
2	17633	1	105" Scraper Bar
2	17634	1	115" Scraper Bar
2	17635	1	125" Scraper Bar
2	17636	1	135" Scraper Bar
2	17637	1	145" Scraper Bar
2	17638	1	155" Scraper Bar
3	17639R	7-15	Right Hand Scraper
3	17639L	7-15	Left Hand Scraper
4	17640	15-32	Scraper Clip
5	17641	2 Per Scraper	1/2" x 2" Carriage Bolt, Washer & Nut
6	17642	1-4	Gang Shaft 40" Long x 2 3/16" Rd.
6	17643	1-4	Gang Shaft 51" Long x 2 3/16" Rd.
6	17644	1-4	Gang Shaft 62" Long x 2 3/16" Rd.
6	17645	1-4	Gang Shaft 72" Long x 2 3/16" Rd.
6	17646	1-4	Gang Shaft 81" Long x 2 3/16" Rd.
7	17647	4	Weld-On Butt Plate
8	17648	4	2 3/16" Hex Nut c/w Lock Bolt
9	17649	4	2 3/16" Flat Washer
10	17650	4	2 3/16" End Washer Spacer
11	20-5049	9-31	1/4" x 24" Notched Blade
11	20-5309	9-31	5/16" x 24" Notched Blade
11	20-5070	9-15	3/16" x 24" Notched Blade
11	20-4382	1	1/4" x 22" Notched Blade
11	20-4063	1	3/16" x 22" Notched Blade
11	21-8273	1	3/16" x 20" Notched Blade
12	KB16761RS	4	4" Concave Half Spool
12	KB16759RS	4	2 1/2" Concave Half Spool
13	W211PPB-2	8	Fafnir Sealed Bearing
14	KB16758	8	Bearing Housing
15	KB16760RS	8	5 1/4" Convex Half Spool
16	KB16762S	3-7	10 1/2" Steel Full Spool
16	KB16763S	6-12	9" Steel Full Spool

17647 3/4 x 1 1/2"

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5-Bolt Implement Hub
Assembly

2 or 4 per Disc



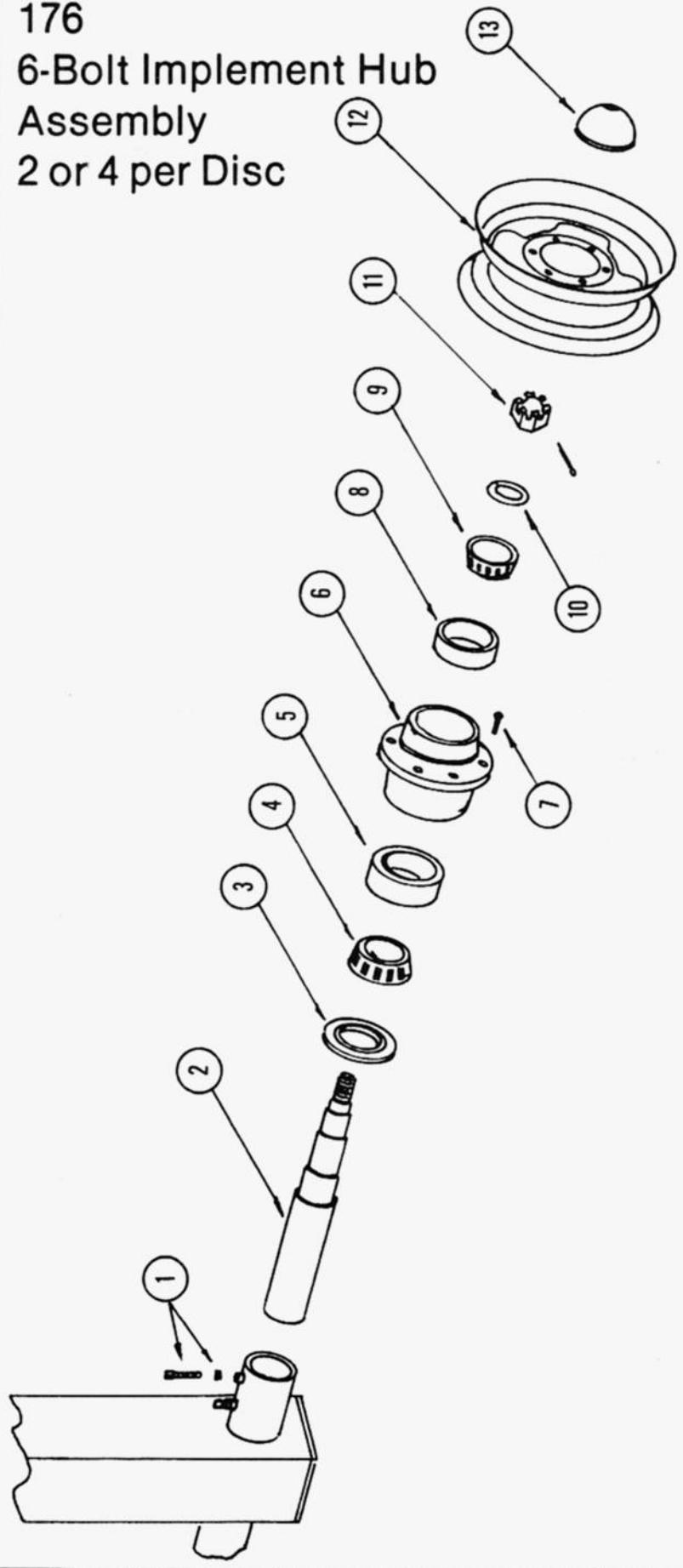
176 5-Bolt Implement Hub Assembly
Capacity 2000 lbs.

Maximum Speed - 20 m.p.h.

Item No.	Part No.	Quantity	Description
1	17651	2	1/2"x2" NC Sq. Head Set Screw c/w half nut
2	5519-1-A01	1	2"x12" Spindle
3	SE13	1	Seal (63x1048) Garlock Klozure
4	13685	1	Bearing Cone
5	13621	1	Bearing Cup
6	H519	1	Hub
7	WB11	5	1/2" wheel stud & nut
8	15250	1	Bearing Cup
9	15118	1	Bearing Cone
10	WA-13	1	1" SAE Plain Washer
11	WB-33	1	1" N.F. Castellated Hex Nut 3/16"x1 1/2" Cotter pin
12	1551-542-1	1	15"x5"x5 Bolt Wheel (White)
	1581-542-1	1	15"x8"x5 Bolt Wheel (Yellow)
13	DC-15	1	Dust Cap

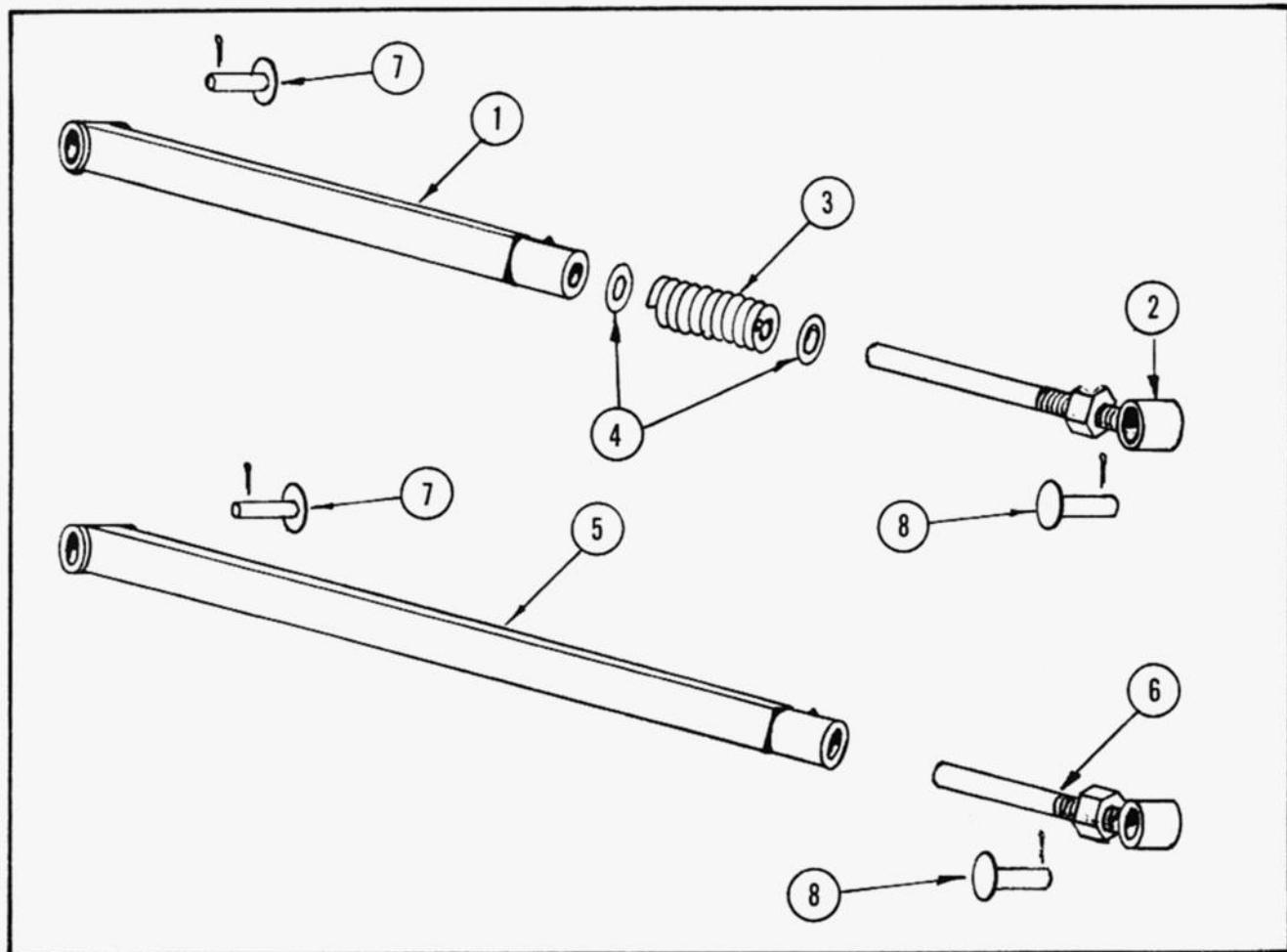
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6-Bolt Implement Hub
Assembly
2 or 4 per Disc



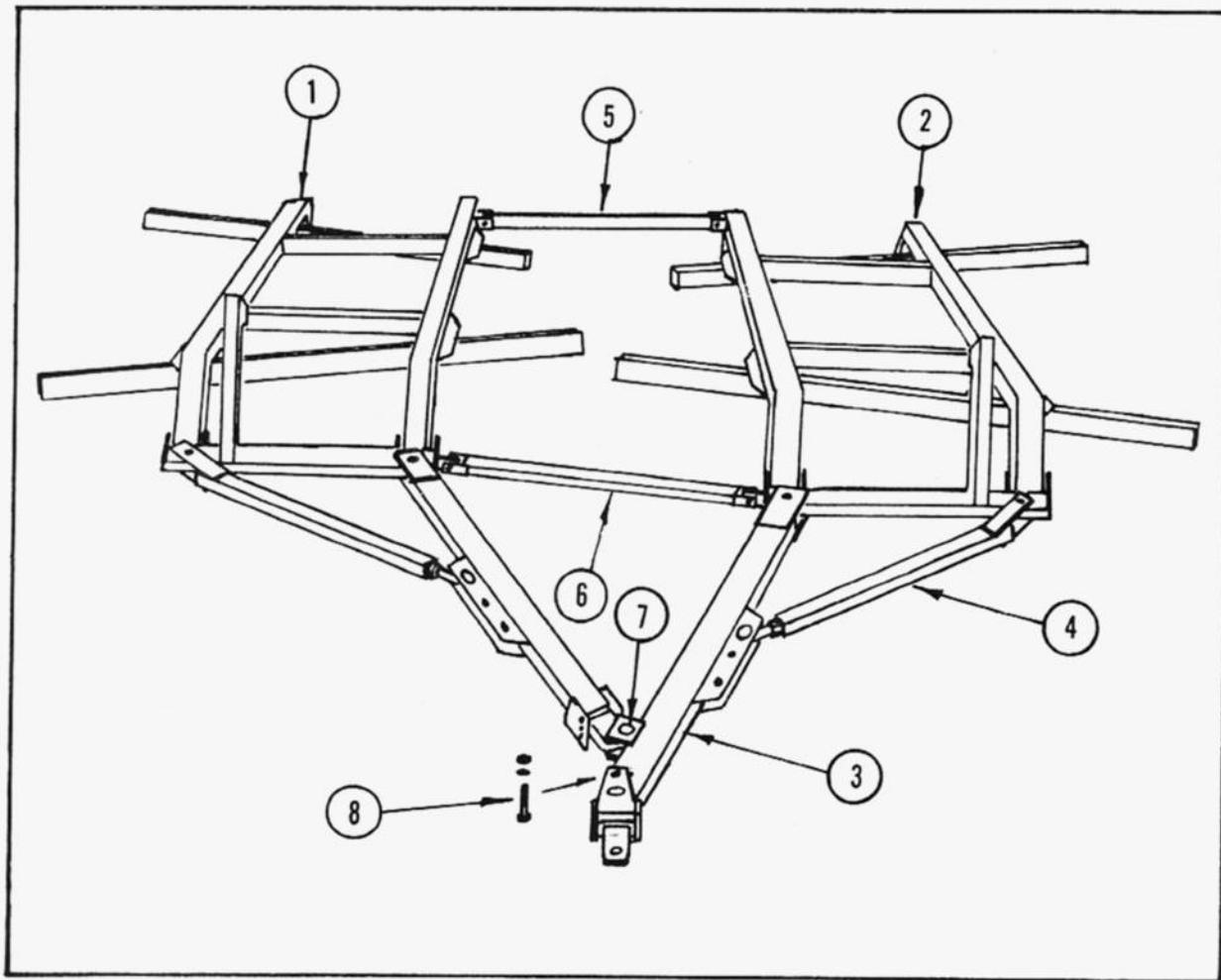
176 6-Bolt Implement Hub Assembly
Capacity 5000 lbs.
Maximum Speed - 20 m.p.h.

Item No.	Part No.	Quantity	Description
1	17651	2	1/2" x 2" N.C. Sq. Head Set Screw c/w Half Nut
2	S614-A15	1	2" x 12" Spindle
3	SE-16	1	Seal
4	LM603049	1	Bearing Cone
5	LM603011	1	Bearing Cup
6	H614	1	Hub
7	WB12	6	9/16-18 x 1 1/4 NF Wheel Bolt
8	LM48510	1	Bearing Cup
9	LM48548	1	Bearing Cone
10	WA-13	1	1" SAE Plain Washer
11	WB-33	1	1" N.F. Castellated Hex Nut & 3/16" x 1 1/2" Cotter Pin
12	1581-624-1	1	15" x 8" x 6 Bolt Imp Rim (White)
13	DC-15	1	Dust Cap
	504/00		9/16 x 3 1/2 N.C #5 Bolt & locknut



Fore Aft Control Assembly

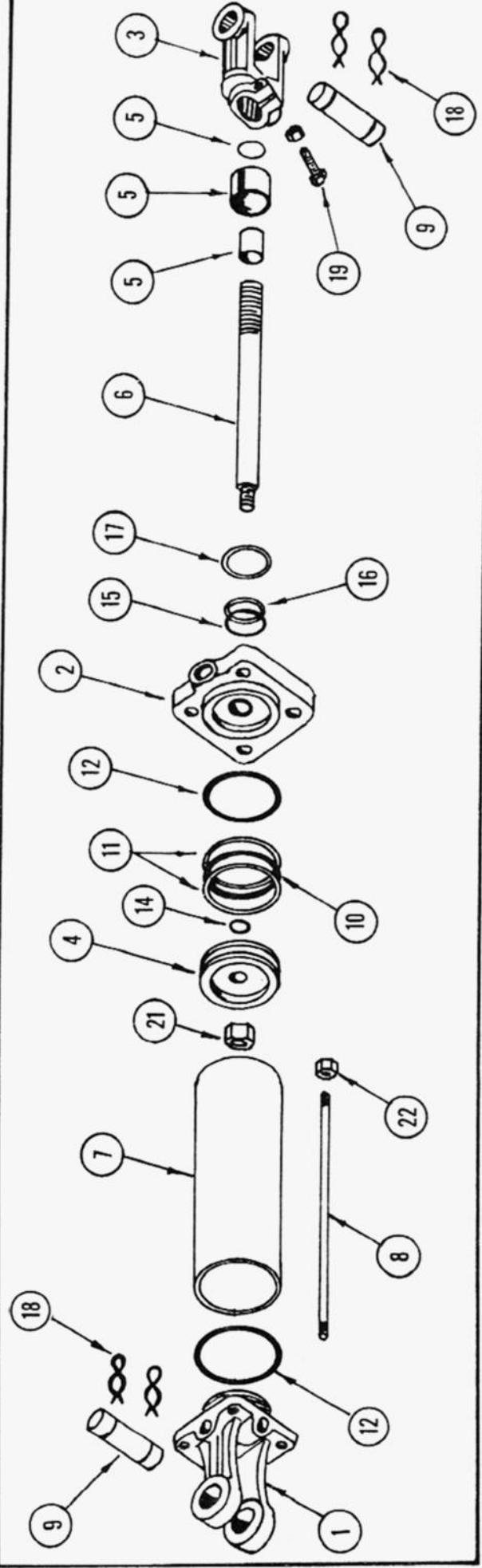
Item No.	Part No.	Quantity	Description
1	17621	1	Top Fore Aft Tube
2	17622	1	Top Fore Aft Eye Bolt
3	RWU65	1	Spring
4	17623	2	1 1/4 Flat Washer
5	17624	1	Bottom Fore Aft Tube
6	17625	1	Bottom Fore Aft Eye Bolt
7	17626	2	1" x 5" Pin c/w Cotter Pin
8	17627	2	1" x 4" Pin c/w Cotter Pin



Double Wide Disc Assembly

Item No.	Part No.	Quantity	Description
1	17611	1	Right Hand Main Frame Assembly
2	17611	1	Left Hand Main Frame Assembly
3	17603 DW	1	Main Hitch Pole for Double Wide Offset
4	17606	2	Hitch Side Arm
5	17652	1	Rear Spreader Bar c/w Pins
6	17653	1	Front Spreader Bar c/w Pins
7	17654	1	Flapper Pin
8	17655	1	1" x 6", Lock Washer & Nut

Ram Industries Ltd. RT-40A - 8C Series Double Acting
Tie Rod Cylinder



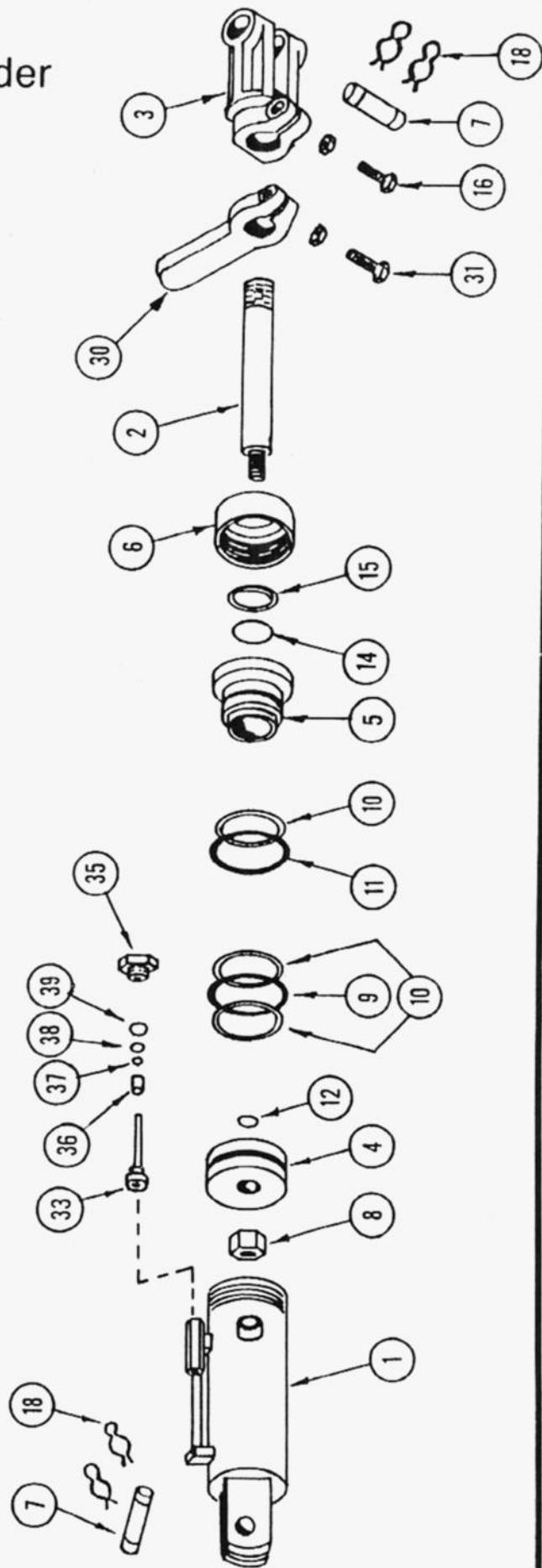
Item No.	Part No.	Quantity	Description	Item No.	Part No.	Quantity	Description
1	R-5724	1	Base Clevis	12		2	O Ring No. 342 3 5/8" x 4
2	R-2038	1	Open End Cap	14		1	O Ring No. 214 1" x 1 1/4"
3	R-4100	1	Rod Clevis	15		1	O Ring No. 218 1 1/4" x 1 1/2"
4	R-3538	1	Piston	16		1	Back-Up Washer No. 218
5	ASC 2	1	Adjustable Stroke Control Kit	17		1	Wiper Seal 1 1/4" x 1 5/8" x 1/4"
6	R-1565	1	Rod 1 1/4" OD	18		4	Hair Pin Clip
7	R-1107	1	Cylinder Tube	19		1	Bolt 5/16" UNC x 1 3/4" c/w Nut
8	R-6860	4	Tie Rod	21		1	Lock Nut 1" UNF
9	R-5904	2	Pin 1" Round	22		8	UNF 5/8"V Nut
10	1	1	O Ring No. 342 3 5/8" x 4"	25	RTK-40		Repair Kit Consisting of Items 10, 11, 12,
11	2	2	Back-Up Washer No. 342				14, 15, 16 & 17

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



RH3-40A-08 c/w 1 1/4" Shaft Ram Cylinder 4" x 8"
c/w Hydraulic Depth Control

Item No.	Part No.	Quantity.	Description
1	R-1273A	1	Barrel SA
2	R-1504	1	Shaft
3	R-4100	1	Shaft Clevis
4	R-3515	1	Piston
5	R-2014	1	Gland
6	R-3000	1	Retaining Nut
7	5-5914	2	Pin 1" Rd.
8		1	Lock Nut 7/8" UNF
9		1	O Ring No. 342 3 5/8" x 4" Duro 70
10		3	Back-up Washer No. 342
11		1	O Ring No. 342 3 5/8" x 4" Duro 90
12		1	O Ring No. 018 3/4" x 7/8" Duro 70
14		1	Shaft Seal 1 1/4" x 1 5/8" x 3/16" Snap-In
15		1	Wiper 1 1/4" x 1 5/8" x 3/16" Snap-In
16		1	Bolt 5/16" UNC x 2" c/w Nut
18		4	Hair Pin Clip
✓ 22	R3K-40	1	Cylinder Repair Kit consists of 9, 10, 11, 12, 14, 15
30	R-6003	1	Shaft Clamp 1 1/4" 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
40	HDCSK	1	Repair Kit consists of 37, 38, 39

RH3-40A-08 c/w 1 1/2" Shaft Ram Cylinder

14		1	Shaft Seal 1 1/2" x 1 7/8" x 5/16"
15		1	Wiper 1 1/2" x 1 7/8" x 3/16" Cased
30	R-6004	1	Shaft Clamp 1 1/2" Rd.

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 30 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. Labor: 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.