DURATECH

formerly

HAYBUSTER

1206 Drill

Parts Book

Seed Rate Charts

Operators Manual

Duratech Industries International Inc., PO Box 1940, Jamestown, ND 58402-1940

HAYBUSTER

1206
DRILL

PARTS

PRICE $3.00

HAYBUSTER MANUFACTURING, BOX 1950, JAMESTOWN, NORTH DAKOTA 58401

WARRANTY

For one year from delivery date, Haybuster Mfg., Inc. will replace or repair for the original purchaser, free of charge, any part or parts, found upon examination at our factory in Jamestown, North Dakota, to be defective in material or workmanship under normal use and maintenance.

This warranty does not apply to tires or bearings or any other trade accessories not manufactured by Haybuster. Buyer must rely solely on the existing warranty, if any, of those respective manufacturers.

This warranty shall become void if the machine has been subject to misuse, negligence, alterations, accident or lack of required maintenance.

Warranty Registration form must be filled out and signed to validate warranty.

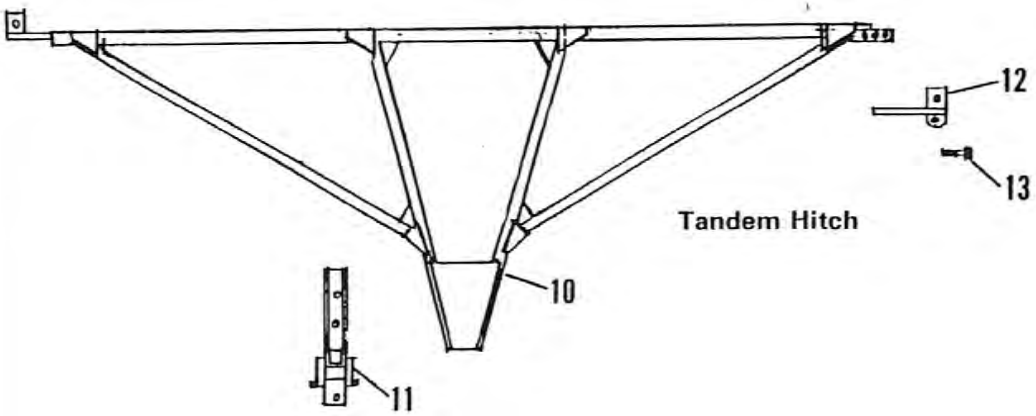
Replacement Parts are available only through your Haybuster dealer.

To obtain the fastest service, always remember to:

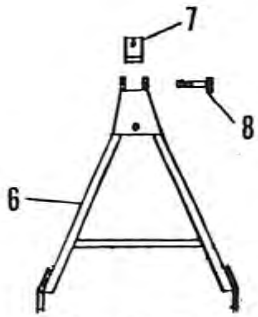
1. Order by part number.
2. Give the machine year and model.
3. Include the serial number.

HAYBUSTER GRAIN DRILL

PARTS BOOK

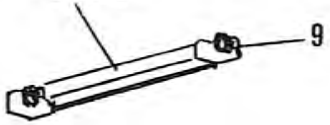


Tandem Hitch

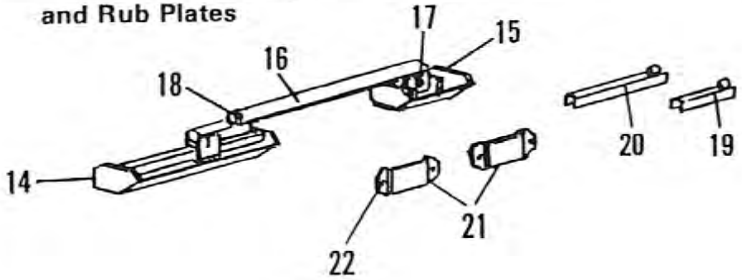


Single Drill Hitch

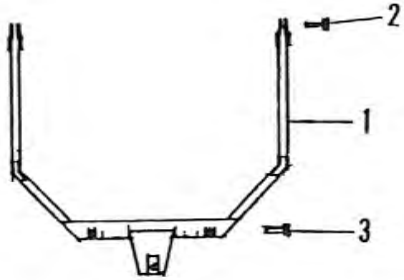
Cradle

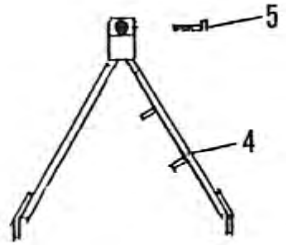


Stabilizer Bar and Rub Plates



Hitches Above Are Option Parts

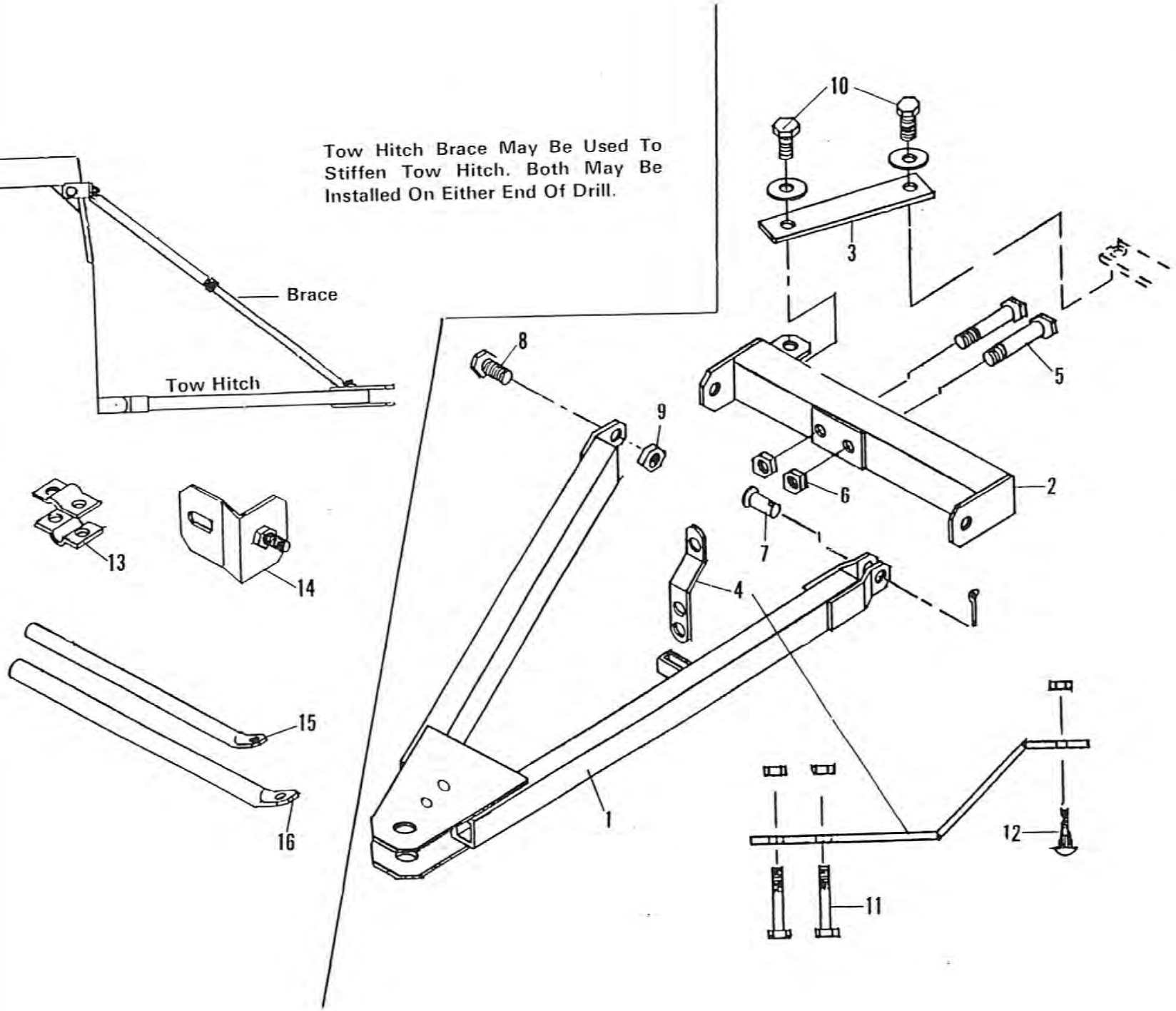




Hitches Above Are Standard With All Drills

Ref.	Part No.	Qty.	Description
1	7400117	1	Swivel Wheel Hitch
2	4800045	2	Clevis Pins 3/4" x 2-1 2"
3	4800046	2	Clevis Pins 3/4" x 3"
4	7400118	1	Swivel Hitch V Brace
5	4800057	1	Bolt 3/4" x 2-1/2" Crimp Lock Nut
6	7400119	1	Single Drill Hitch
7	7400120	1	Hitch Block
8	4800058	1	Bolt 3/4" x 6-1/2" Crimp Lock Nut
9	7400121	1	Cradle
10	7400122	1	Tandem Hitch
11	7400123	1	Slide Bar-Tandem Hitch
12	7400124	1	Adjusting Block
13	4800058	1	Bolt 3/4" x 3-1/2" Crimp Lock Nut
14	7400125	1	Stabilizer Slide End
15	7400126	1	Stabilizer Anchor End
16	7400127	1	Stabilizer Cross Bar
17	4800059	1	Bolt 3/4" x 3" Crimp Lock Nut
18	4800060	1	Bolt 3/4" x 4" Crimp Lock Nut
19	7400128	1	Red Stop Block 14" Long
20	7400129	1	Red Stop Block 22-1/2" Long
21	7400130	2	Rub Plates
22	4800061	4	Bolts-Carriage 1 2" x 1-1/2"

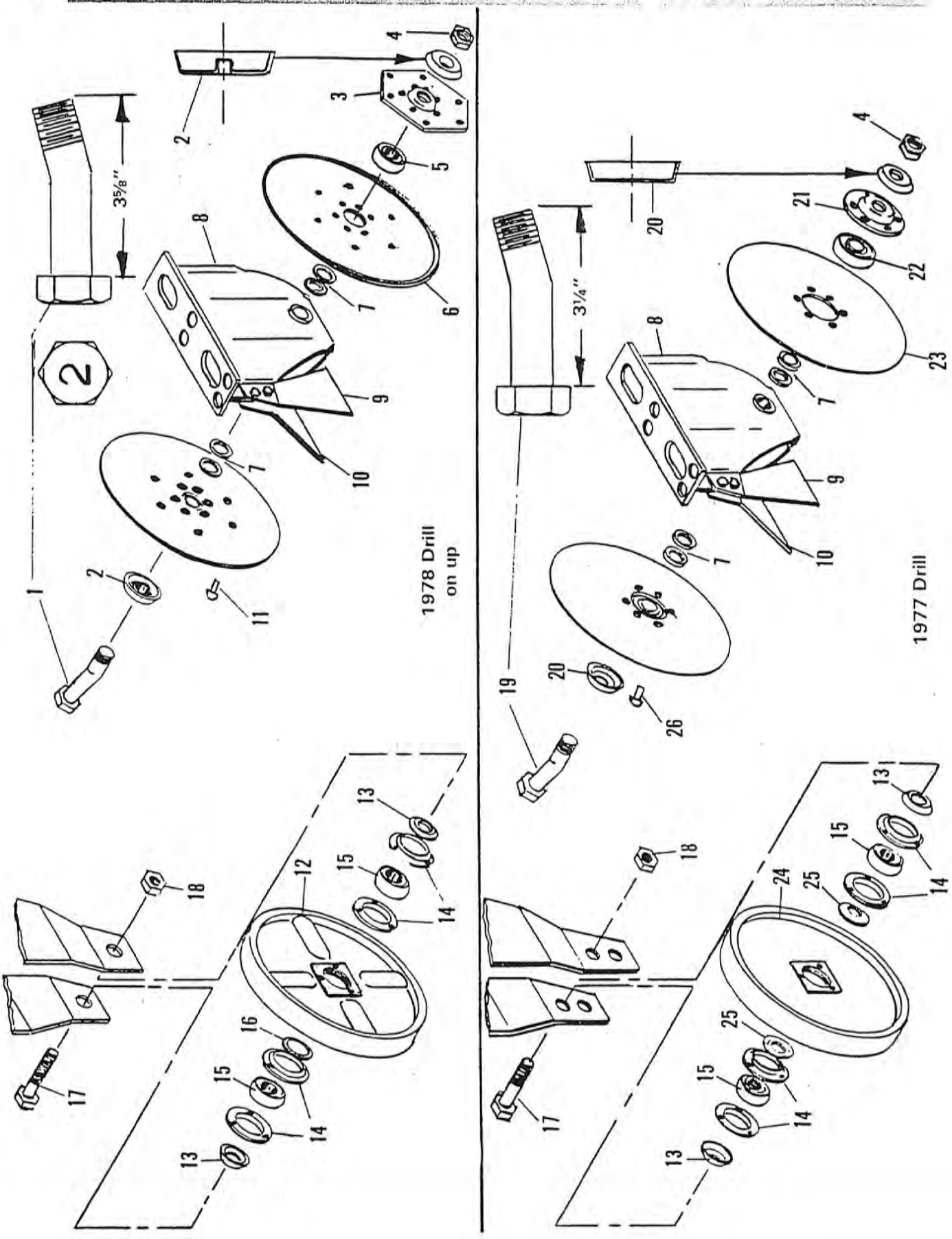
Tow Hitch Brace May Be Used To Stiffen Tow Hitch. Both May Be Installed On Either End Of Drill.



TOW HITCH AND BRACE 5

Ref.	Part No.	Qty.	Description
1	7400060	1	Hitch Frame
2	7400061	1	Anchor Tube
3	7400062	1	Brace Bar
4	7400063	1	Field Position Anchor
5	4800032	2	Bolt 5/8" x 5"
6	4900012	4	Nut-Crimped Lock 5/8"
7	4800035	1	Clevis Pin 3/4" x 2"
8	4800033	1	Bolt 3/4" x 2"
9	4900013	1	Nut-Crimped Lock 3/4"
10	4800010	2	Bolt 5/8" x 2"
11	4800034	2	Bolt 3/8" x 1-1 2"
12	4800012	1	Bolt-Carriage 3 8"
13	7400113	2	Pipe Straps
14	7400114	1	Top Anchor
15	7400115	1	Inside Pipe 42"
16	7400116	1	Outside Pipe 52"

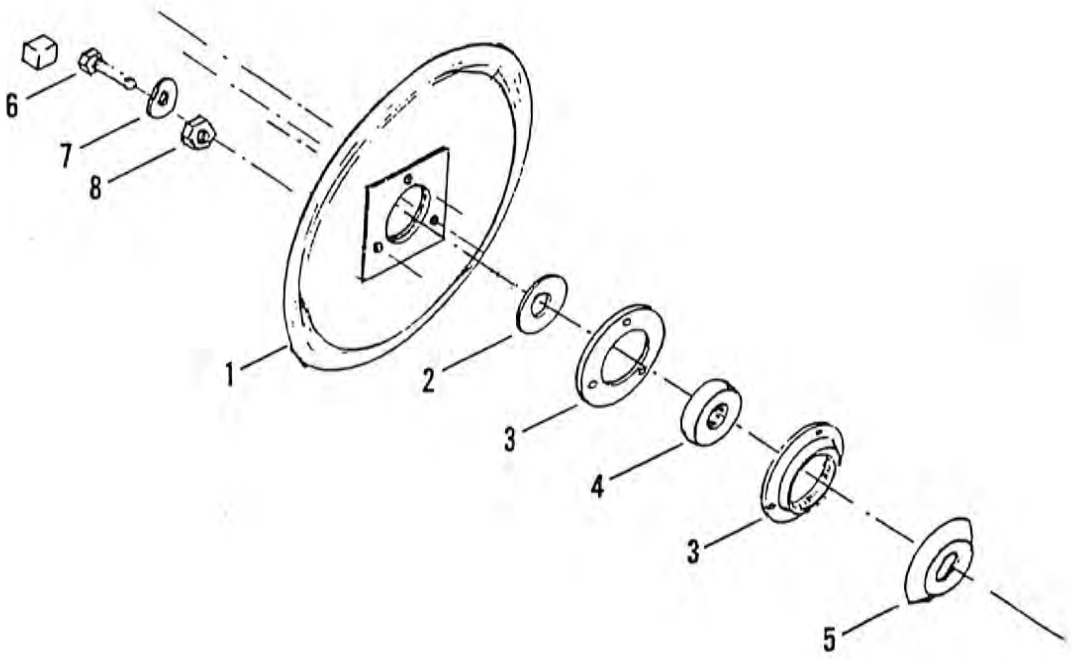
6 OPENER AND PRESS WHEEL ASSEMBLY



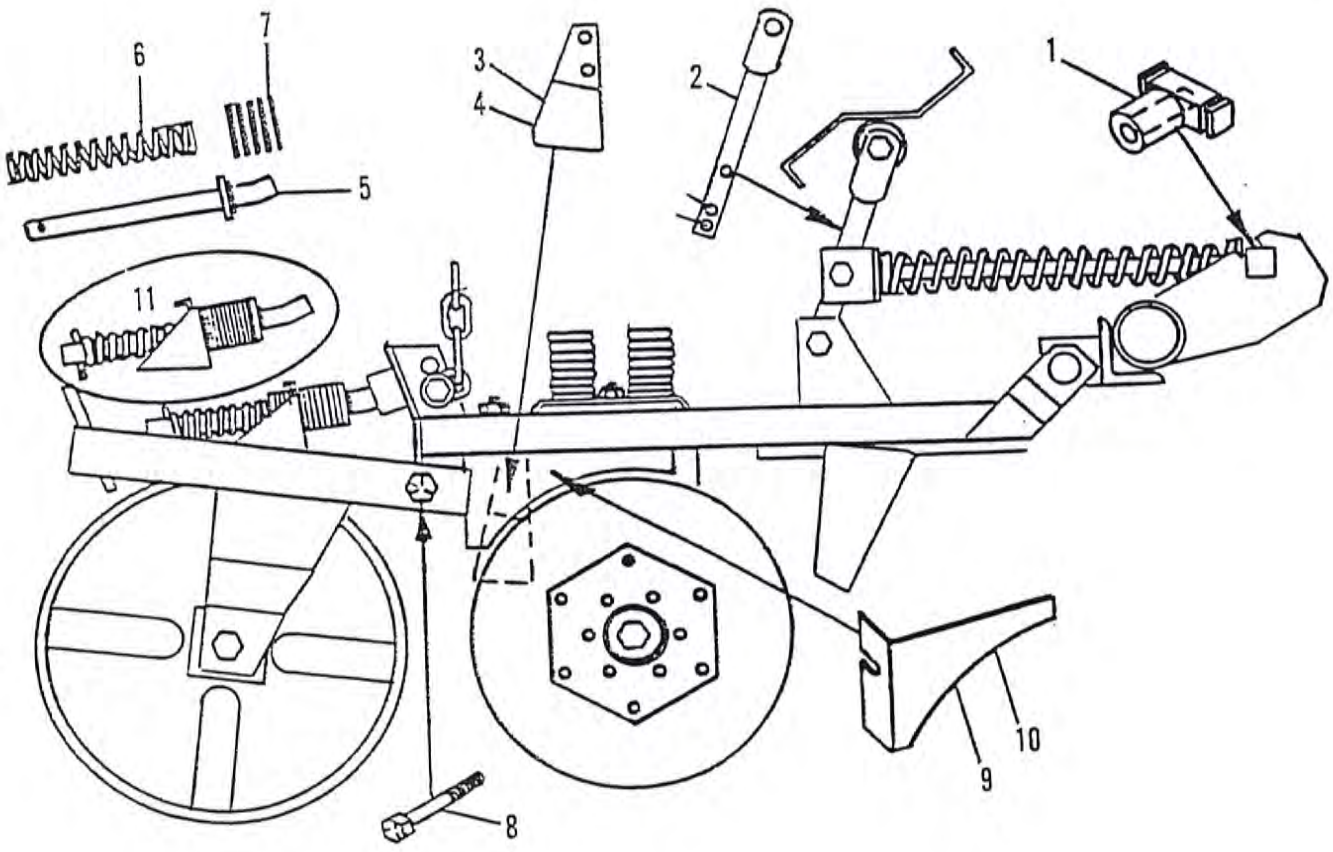
OPENER AND PRESS WHEEL ASSEMBLY 7

Ref.	Part No.	Qty.	Description
1	4800036	24	Bolt #2 5 8" x 3-5/8" Bent
2	7400071	48	Cap-W/Brg. Pilot
3	7400072	48	Bearing Cage 12 Rivet
4	4900012	24	Crimped Lock Nut
5	2000004	48	Bearing 3 4"
6	7500010	48	Disk 14" 12 Rivet
6A	7500017	48	Disk Complete-12 Rivet Hub
7	5000009	192	Shim Washers 1" O.D. x 5/8" I.D. x .030
8	7400040	24	Boot
9	7400041	24	Scraper Right Hand
10	7400042	24	Scraper Left Hand
11	4800039	576	Rivet 1/4" x 1/2" Rd. Head
12	7400043	24	Press Wheel - Ribbed - 16"
13	7400044	48	Bearing Shield
14	2100006	96	Flangette 3 Hole
15	2000020	48	Bearing 3/4" (Same as Disc Brg.)
16	5000010	24	Shim Washer 1-5/8" x 3/4" x .090
17	4800037	24	Bolt 3/4" x 3-1/2"
18	4900013	24	Nut - Crimped Lock 3/4"
19	4800038	24	Bolt 5/8" x 3-1/4" Bent
20	7400073	48	Cap 5/8" Center Hole - No Pilot
21	7400074	48	Bearing Cage 6 Rivet
22	2000018	48	Bearing 5 8"
23	7500011	48	Disc 14" 6 Rivets
23A	7500018	48	Disk Complete-6 Rivet Hub
24	7400045	24	Press Wheel 16" No Ribs
25	5000011	48	Shim Washer 1-3 8" x 3/4" x .060 Cupped
26	4800039	288	Rivet 1/4" x 1 2" Rd. Head

7A PRESS WHEEL ASSEMBLY (STD. 1980)



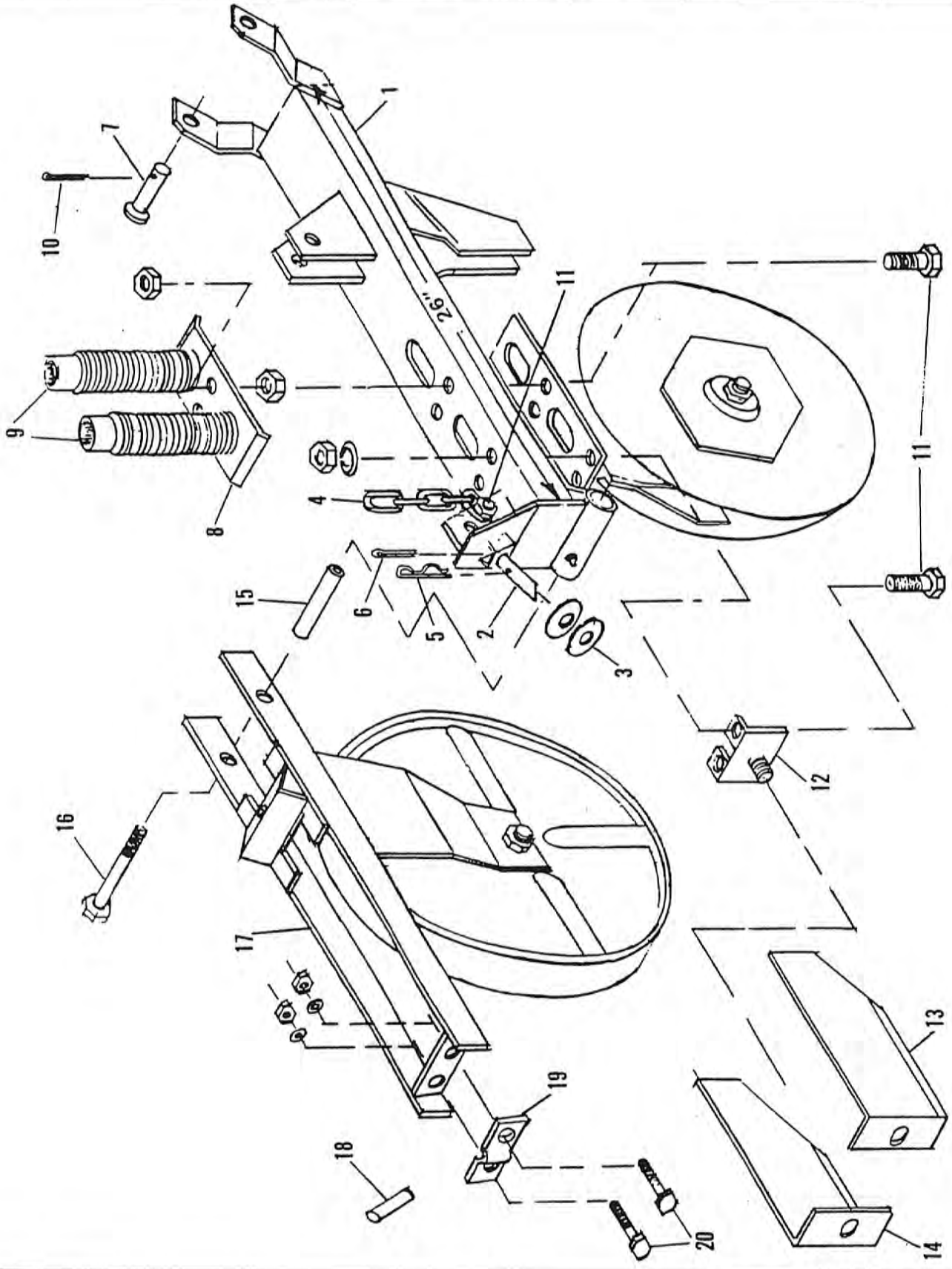
Ref.	Part No.	Qty.	Description
1	7400165	1	Press Wheel - V Type
2	5000010	1	Spacer Washer 1-5/8" x 3/4" x .090
3	2100006	4	3 Hole Flangette
4	2000017	2	Bearing 3/4" (Same as Disc. Brg.)
5	7400044	2	Bearing Shield
6	4800071	3	Bolt 5/16" x 1-1/4" Grade 5
7	5000015	3	Lock Washer Star 5/16"
8	4900017	3	Hex Nut 5/16"



Ref.	Part No.	Qty.	Description
1	7400157	24	Slide Block-Replaces #7400026
2	7400158	24	Roller Bar-Replaces #7400027
3	7400159	24	Scraper Right-Replaces #7400041
4	7400160	24	Scraper Left-Replaces #7400042
5	7400161	24	Depth Control Rod -11" Long -79 Drill
6	6100019	24	Depth Spring
7	5000005	312	Washer -3/4" Flat - 13 each
8	4800041	24	Bolt -1/2" x 5" Gr. 5 Replaces #4800041
9	7400162	24	Shield Right Side-Replaces #7400034
10	7400163	24	Shield Left Side-Replaces #7400035
11	7400164		Depth Rod Assembly will retrofit on 78 drill. Some welding required.

12 7400319 DEPTH ROD ASSEMBLY W/O ANCHOR

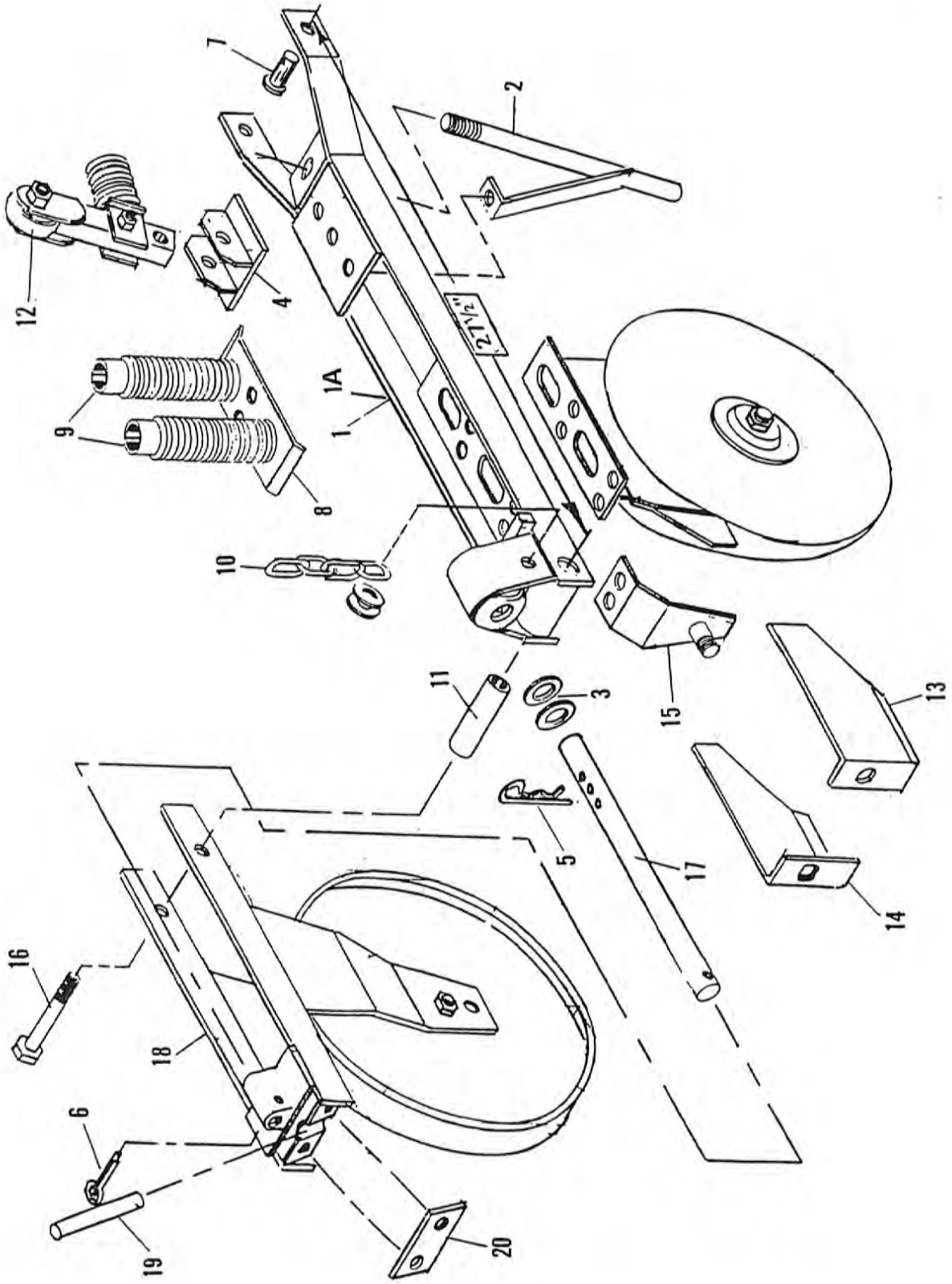
7C RUN & PRESS WHEEL ASSEMBLY 1978 Drill



RUN & PRESS WHEEL ASSEMBLY 1978 Drill 7D

Ref.	Part No.	Qty.	Description
1	7400029	12	Long Run-Channel 26" Long
	7400030	12	Short Run-Not Shown Channel 22" Long
2	7400031	24	Depth Control Rod 4-1/2" Long
3	5000005	168	Flat Washers-3/4"-7 Each Run
4	1100049	24	1/4" Chain - 13 Links
5	4800042	24	1/4" Hairpin 4" Long
6	4800043	24	Cotter Pin 1/4" x 2-1/2"
7	4800035	23	Clevis Pin 3/4" x 2"
	4800045	2	Clevis Pin 3/4" x 2-1/2"
8	7400032	24	Hose Anchor Plate
9	7500012	48	Convoluted Hose
10	4800044	25	Cotter Pin 5/32" x 1-1/2"
11	4800040	144	Bolt Gr. 5-7/16" x 1-1/2" - 6 Each Run
12	7400033	24	Stone Shield Anchor
13	7400162	24	Stone Shield-Right Side
14	7400163	24	Stone Shield - Left Side
15	7400036	24	Press Wheel Pivot Sleeve - 3-3/8" Long
16	4800041	24	Pivot Bolt 1/2" x 5" Crimp Lock Nut
17	7400037	24	Press Wheel Hanger Same on Long or Short Run
18	7400038	24	Scraper Rod 5/8" x 4-1/2"
19	7400039	24	Scraper Rod Lock Plate
20	4800003	48	Bolt 3/8" x 1"

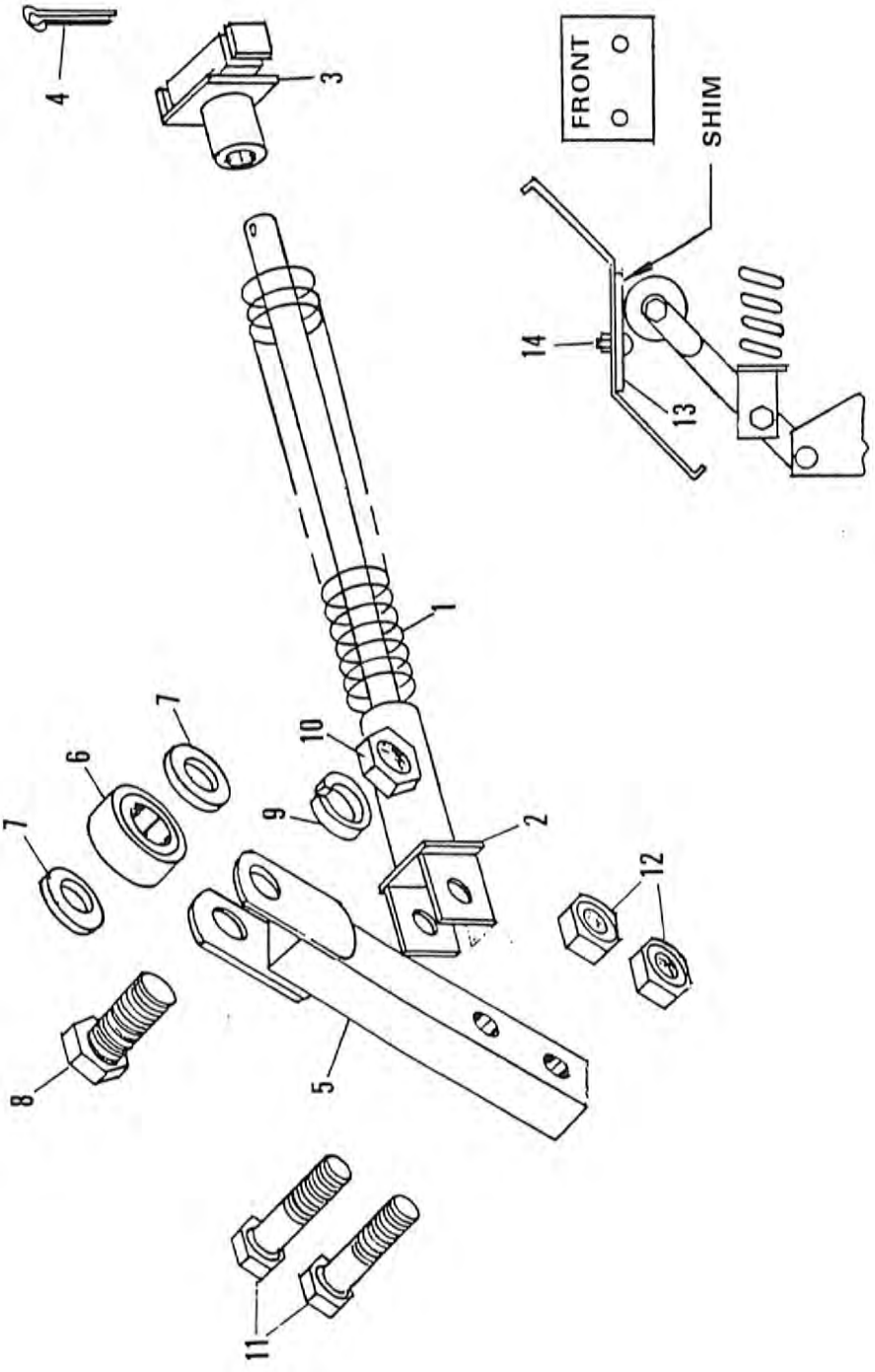
7E RUN & PRESS WHEEL ASSEMBLY 1977 Drill



RUN & PRESS WHEEL ASSEMBLY 1977 DRILL 7F

Ref.	Part No.	Qty.	Description
1	7400083	12	Long Run 27-1 2" Center to Center
1A	7400084	12	Short Run 23-1 2" Center to Center
2	7400154	24	Rock Guard
3	5000005	144	Flat Washers 3 4" 6 Each Row
4	7400085	24	Roller Bar Anchor
5	4800042	24	1 4" Hair Pin 4" Long
6	4800043	24	Cotter Pin 1/4" x 2-1/2"
7	4800035	23	Clevis Pin 3/4" x 2"
	4800045	2	Clevis Pin 3/4" x 2-1/2"
8	7400032	24	Hose Anchor Plate
9	7500012	48	Convoluted Hose
10	1100050	12	1/4" Chain Long Run 14 Links
	1100049	12	1/4" Chain Short Run 13 Links
11	7400086	24	Press Wheel Pivot Sleeve 1" O.D. x 3-9 16" Long
12	2000004	24	Bearing 3/4" 1978 Brg. Interchange
13	7400162	24	Stone Shield - Right Side Same as 1978
14	7400164	24	Stone Shield - Left Side Same as 1978
15	7400087	24	Stone Shield Anchor
16	4800041	24	Pivot Bolt 1/2" x 5" Crimp Lock Nut
17	7400088	24	Depth Control Rod 14 3 4" Long
18	7400089	24	Press Wheel Hanger
19	7400090	23	Scraper Rod 5 8" x 6"
20	7400091	24	Scraper Rod Lock Plate

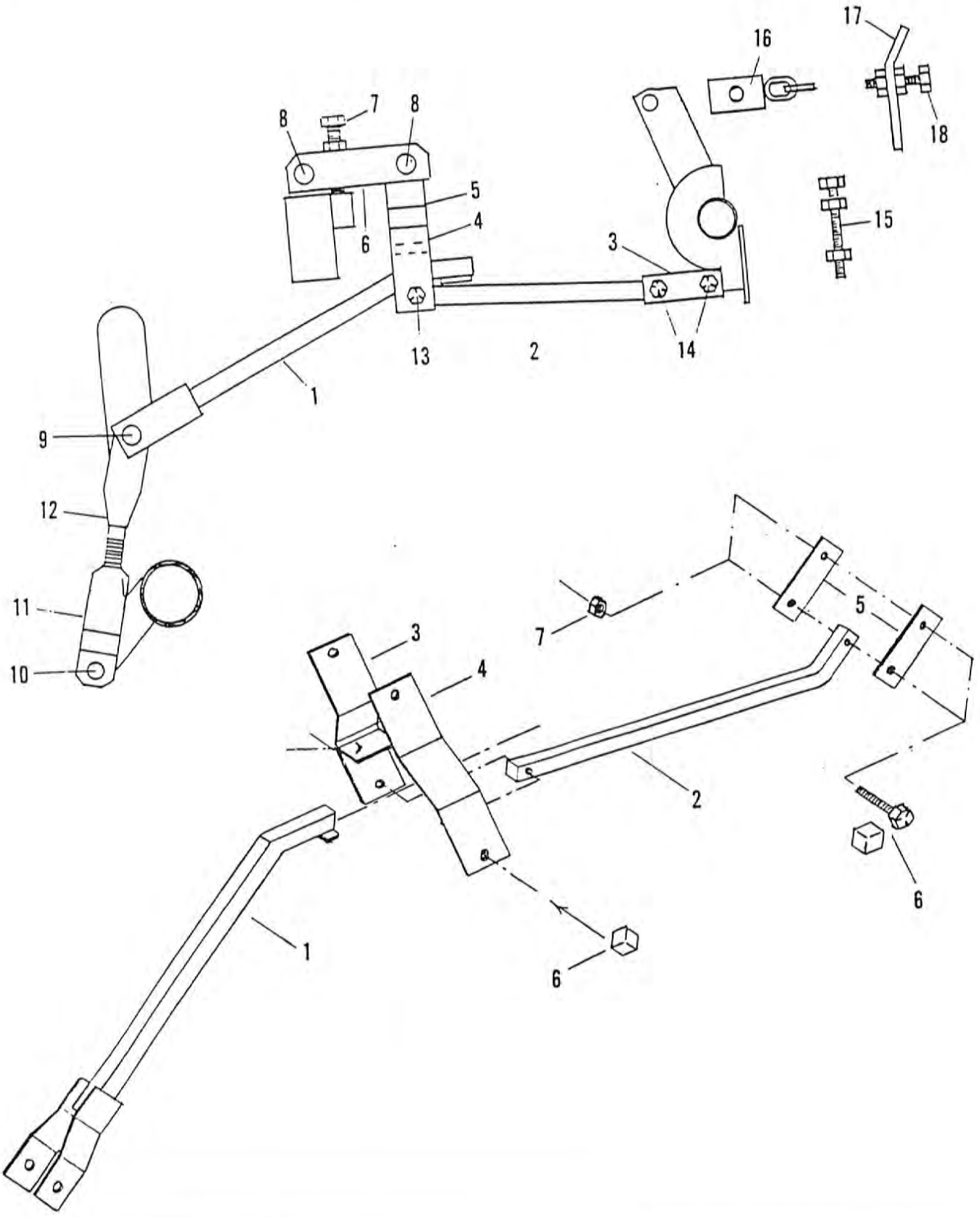
8 PRESSURE SPRING & ROLLER BAR ASSEMBLY



PRESSURE SPRING & ROLLER BAR ASSEMBLY 9

Ref.	Part No.	Qty.	Description
1	6100015	24	Pressure Spring
2	7400025	24	Pressure Spring Rod
3	7400157	24	Slide Block
4	4800050	24	Cotter 3/16" x 1-1/2"
5	7400158	24	Roller Bar
6	2000017	24	Bearing 3/4"
7	5000005	48	Spacer Washer
8	4800033	24	Bolt 3/4" x 2"
9	5000012	24	Lock Washer
10	4800052	24	Jam Nut 3. 4"
11	4800051	48	Bolt 1/2" x 2-1/2"
12	4900014	48	Crimp Lock Nut 1/2"
13	7400028		Shim - Roller Plate
14	4800053		Bolt Carriage 3/8" x 1"

10 RUN LIFT ASSEMBLY (1977, 1978, 1979)



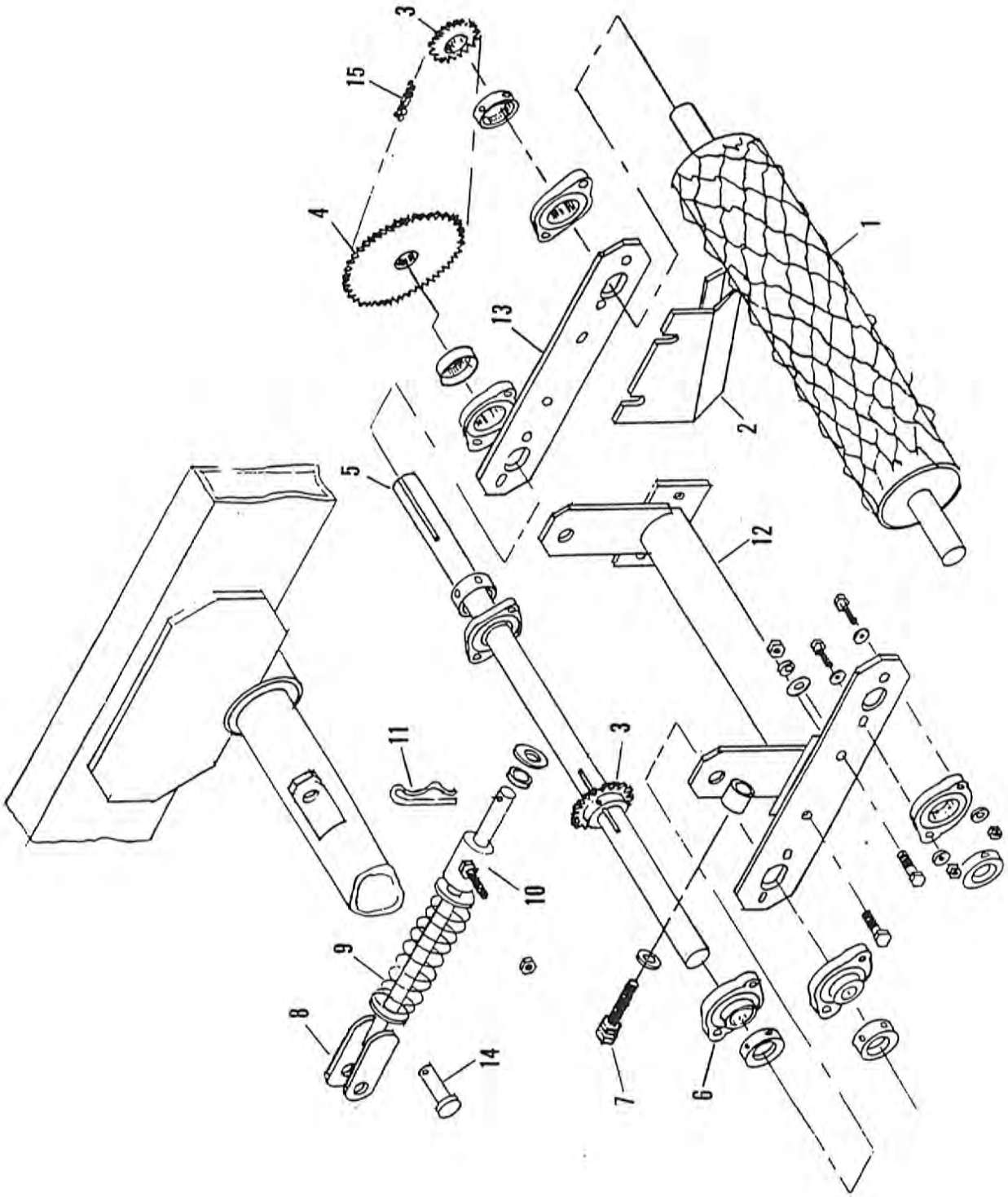
RUN LIFT ASSEMBLY 11

Ref.	Part No.	Qty.	Description
1	7400015	2	Front Lift Bar
2	7400016	2	Rear Lift Bar
3	7400017	4	Lift Hinge Links
4	7400018	2	Slide Link - With Spacer
5	7400019	2	Slide Link - Without Spacer
6	7400020	4	Adjusting Bars
7	7400069	2	Adjusting Bolt 3 4"
8	4800045	4	Clevis Pin 3 4" x 2-1/2"
9	4800046	2	Clevis Pin 3 4" x 3"
10	4800035	2	Clevis Pin 3 4" x 2"
11	7400021	2	Tension Link - Female End
12	7400022	2	Tension Link - Male End
13	4800047	2	Bolt - 7 16" x 2-1 2" Gr. 5 Plastic Lock Nut
14	4800048	4	Bolt - 7 16" x 2" Gr. 5 Plastic Lock Nut
15	7400070	2	Bolt - Lift Tube Stop
16	7400023	2	Transport Chain - 18 Link
17	7400024	2	Transport Anchor
18	4800054	2	Bolt - Transport Lock

RUN LIFT ASSEMBLY 1980

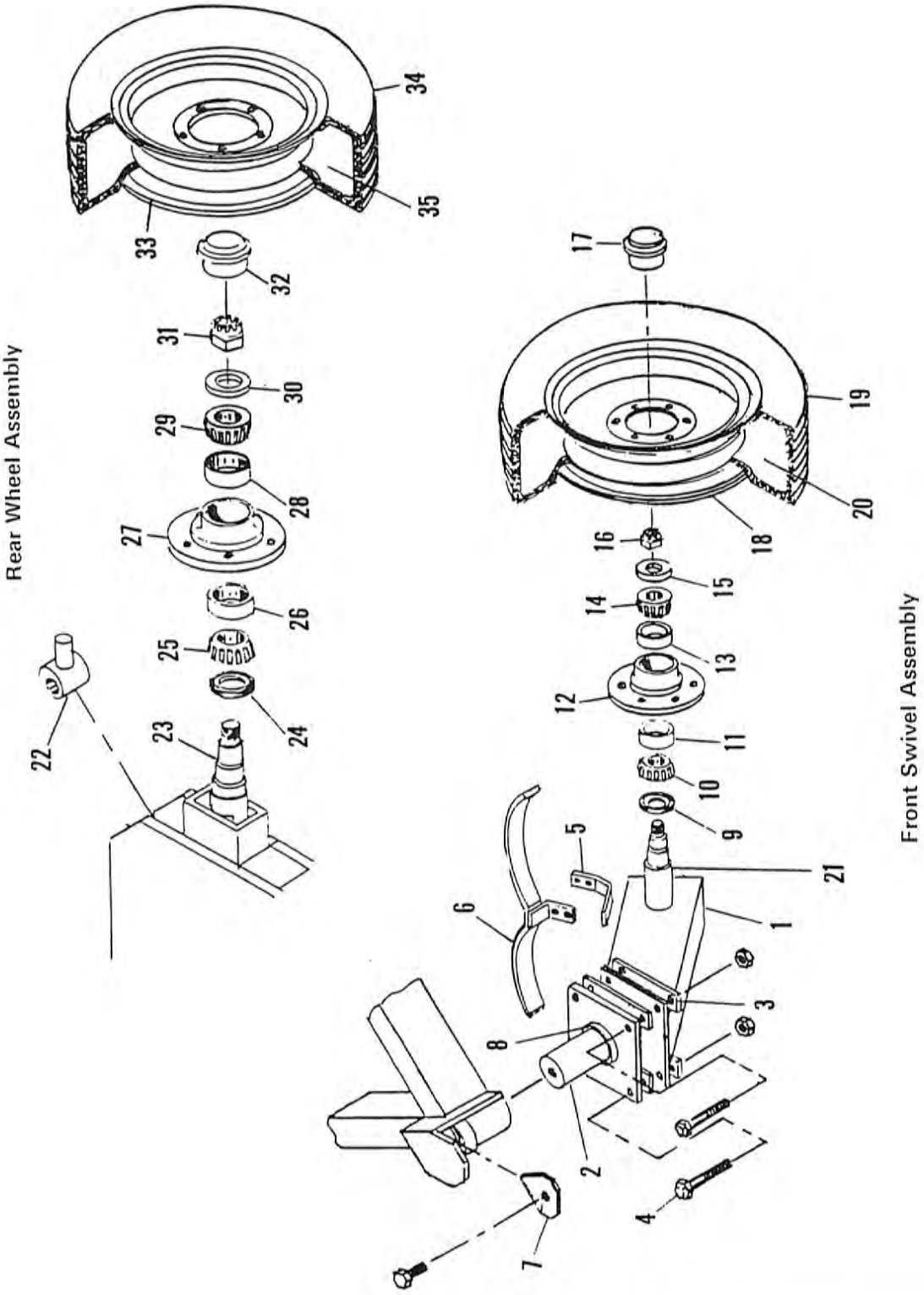
Ref.	Part No.	Qty.	Description
1	7400172	1	Front Bar - 1" Square
2	7400173	1	Rear Bar - 1" Square
3	7400174	1	Support Bar-W Spacer
4	7400175	1	Support Bar - Wo Spacer
5	7400176	2	Link Bars
6	4800070	3	1/2" x 2-1 2" - Grade 5
7	4900016	3	Nut - 1 2" Plastic Insert

12 DRIVE ROLLER ASSEMBLY



DRIVE ROLLER ASSEMBLY 13

Ref.	Part No.	Qty.	Description
1	7400008	1	Drive Roller
2	7400009	1	Chain Shield
3	1000055	2	Sprocket
4	1000012	1	Sprocket
5	7600005	1	Shaft
6	1900010	6	Bearing and Collar
7	7400010	1	Stop Bolt
8	7400011	2	Roller Lift Rod
9	6100017	2	Down Pressure Spring
10	7400012	2	Lift Rod Anchor
11	4800042	2	Hairpin
12	7400013	1	Cross Frame
13	7400014	2	Frame Side Bars
14	4800035	2	Clevis Pin 3/4" x 2"
15	1100048	1	Roller Chain


Rear Wheel Assembly
Front Swivel Assembly
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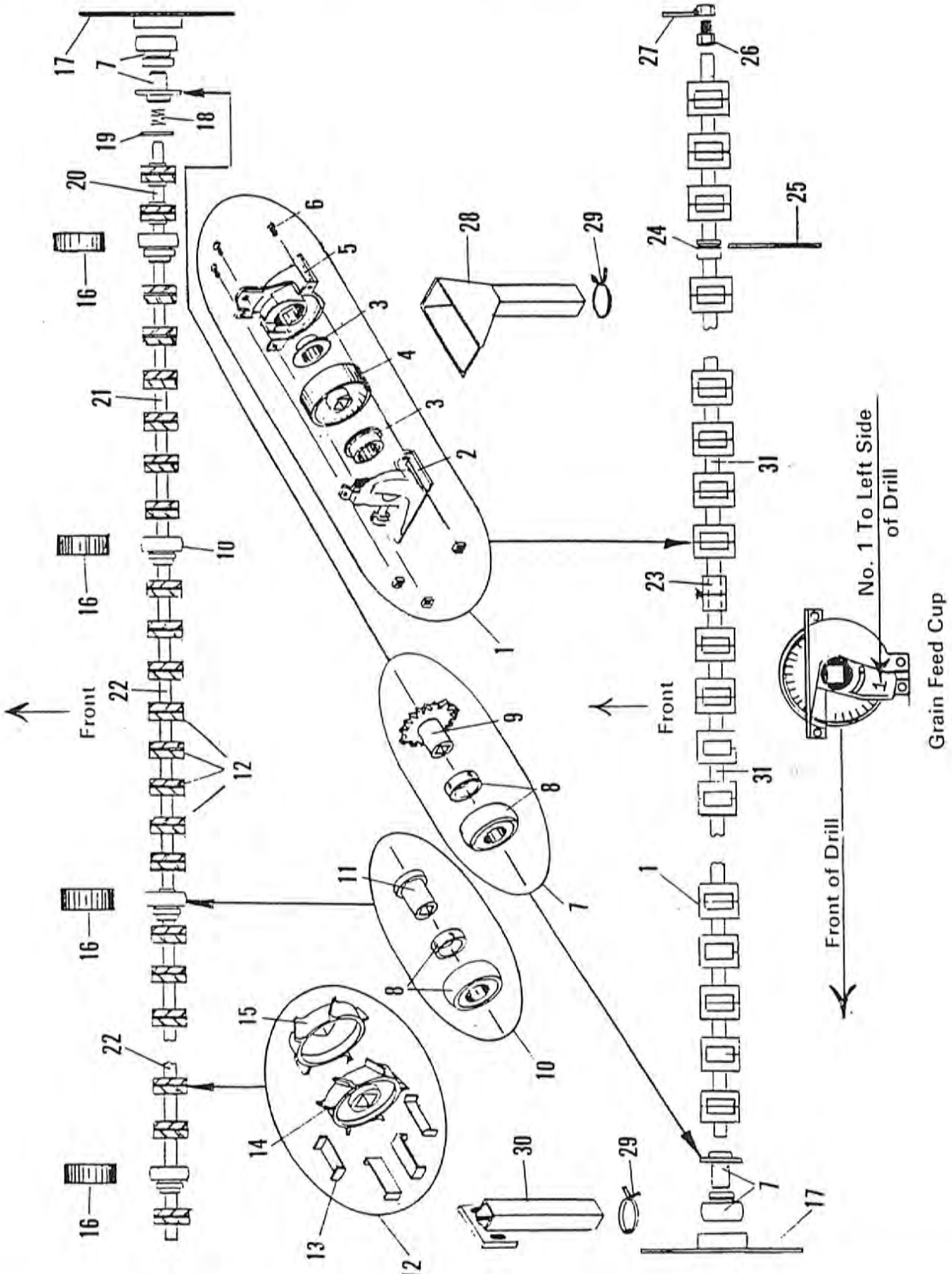
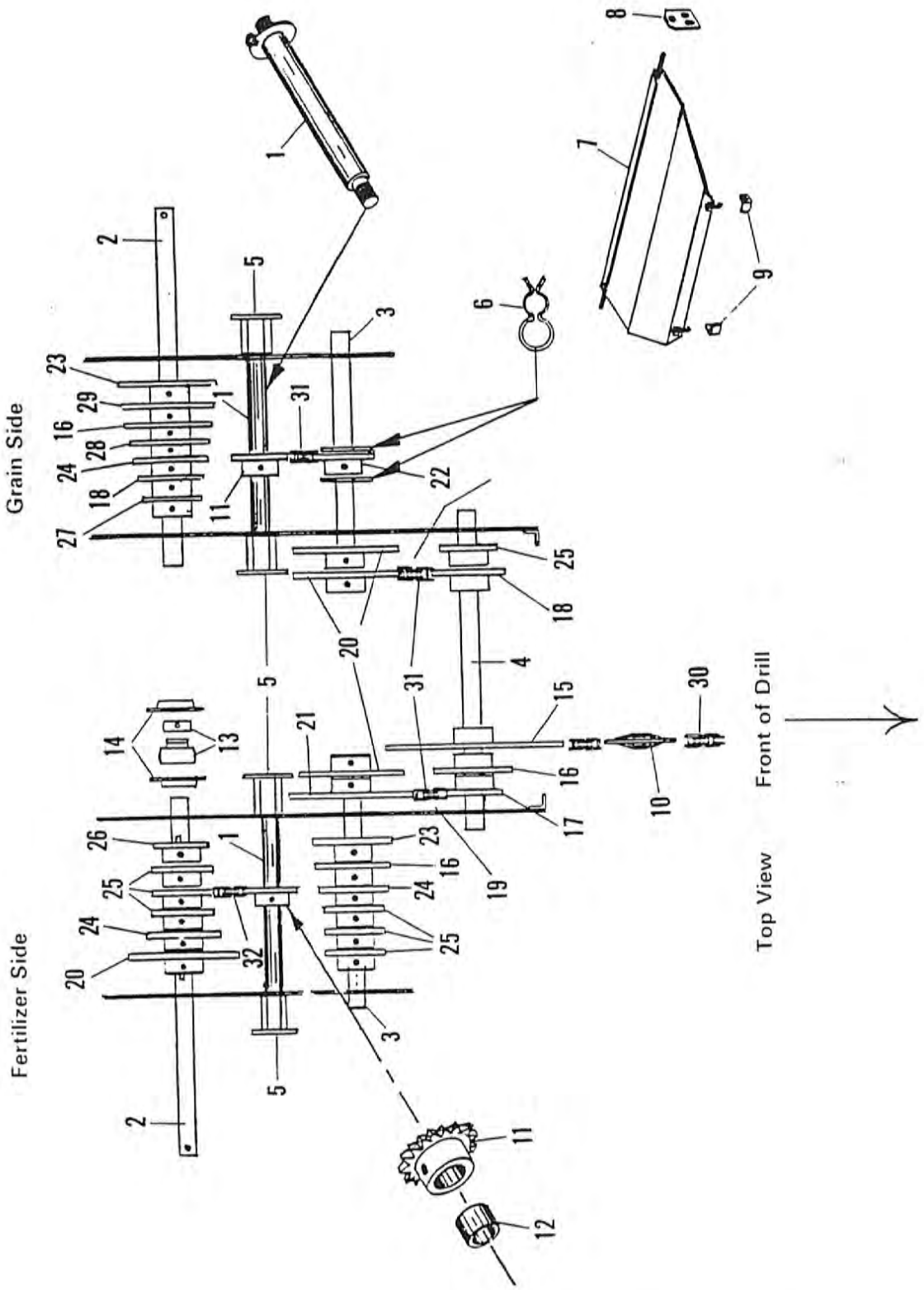
Ref.	Part No.	Qty.	Description
1	7400001	1	Swivel Leg and Spindle
2	7400002	1	Swivel Pin and Plate
3	7400003	4	Swivel Plate Shim Bars
4	4800037	4	Bolt 3/4 x 3-1/2 Grade 5
5	7400004	1	Scraper Anchor
6	7400005	1	Scraper
7	7400006	1	Dust Cap
8	7400007	1	Spacer Ring - 1" Long
9	2900041	2	Grease Seal
10	2900042	2	Cone-Inner 1-25/32" Bore
11	2900043	2	Cup-Inner
12	2900044	2	Hub-6 Bolt
13	2900045	2	Cup-Outer
14	2900046	2	Cone-Outer 1-3/8" Bore
15	2900047	2	Washer
16	3000012	2	Nut 1" 14 N.F.
17	2900048	2	Dust Cap
18	2800011	2	Wheel 14 x 8 6 Bolt
19	2600001	2	Tire 11L14 6 Ply Imp.
20	2700001	2	Tube
21	3000011	1	Double Spindle 22" Welded In
22	7400064	2	Cam Lock
23	3000010	2	Spindle and Stub Tube
24	2900014	2	Grease Seal
25	2900015	2	Cone-Inner 1-3 '8" Bore
26	2900016	2	Cup-Inner
27	2900039	2	Hub-5 Bolt
28	2900017	2	Cup-Outer
29	2900018	2	Cone-Outer 1-1/4" Bore
30	2900040	2	Washer
31	3000006	2	Nut 7 '8" 14 N.F.
32	2900013	2	Dust Cap
33	2800006	2	Wheel 15 x 5 5 Bolt
34	2600008	2	Tire 7:60 15 4 Ply Imp.
35	2700005	2	Tube

16 FERTILIZER & GRAIN ASSEMBLY

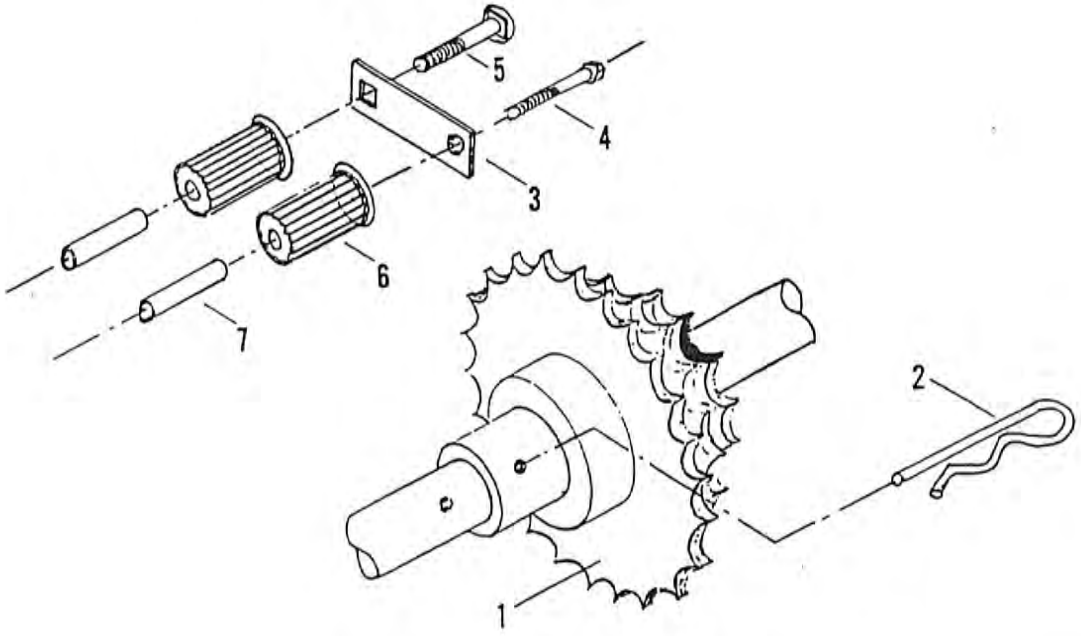


Ref.	Part No.	Qty.	Description
1	7500001	24	Grain Cup - Complete
2	7500002	24	Grain Cup - Right Half #2
3	7500003	48	Nylon Bushing
4	7500004	24	Feed Wheel
5	7500005	24	Grain Cup - Left Half #1
6	4800049	72	Bolt - 3/16" x 1/2"
7	7400079	2	Sprocket and Bearing - Complete
8	2000001	2	Bearing and Collar
9	7400080	2	Sprocket and Square Hub
10	7400081	4	Bearing and Square Hub - Complete
11	7400065	4	Square Hub Sleeve
12	7500006	24	Fertilizer Wheel - Complete
13	7400066	96	Fert. Wheel Retainer Clips
14	7500007	24	Fert. Left Half - Marked L
15	7500008	24	Fert. Right Half - Marked R
16	7400075	4	Brg. Retainer - Spring Steel
17	7400067	2	Brg. Mount End Plate
18	6100016	1	Coil Spring
19	5000013	1	Square Hole Washer
20	7600001	1	5/8" Square Shaft - 11-1 2" Long
21	7600002	1	5/8" Square Shaft - 36"
22	7600003	2	5 8" Square Shaft - 47-1 4"
23	7400076	1	Square Hole Coupler and Pin
24	7500013	1	Plastic Pulley with Set Screw
25	7500014	1	Plastic Monitor Belt
26	7400082	1	Bolt End Play Adjust - 3 4"
27	7400068	1	Bolt Anchor
28	7400077	24	Grain Hopper and Tube
29	7500009	48	Hose-Spring Clamps
30	7400078	24	Fertilizer Tube
31	7600004	2	5 8" Square Shaft - 70-1 2"

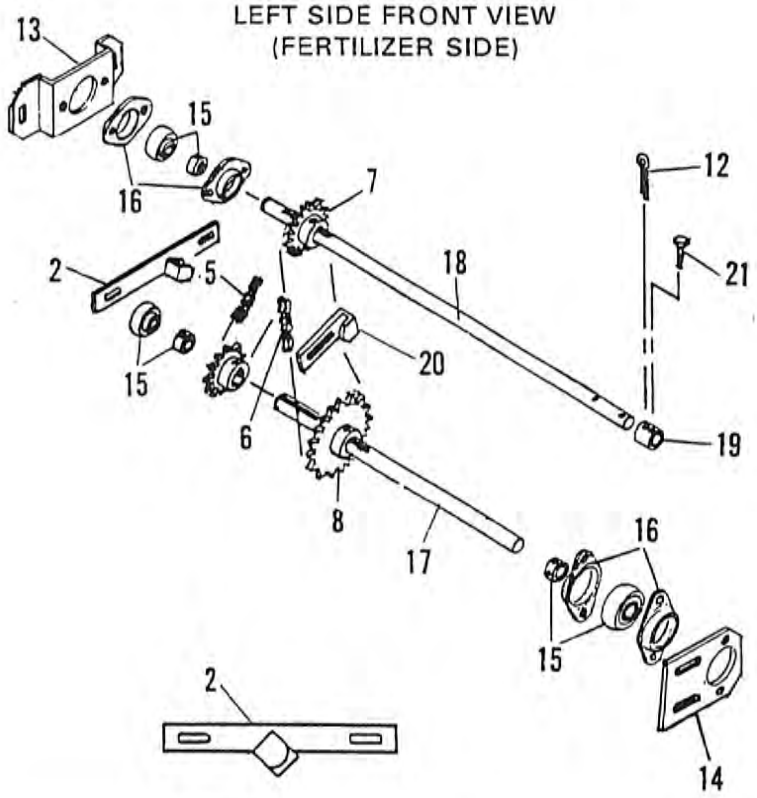

Grain Side
Fertilizer Side
Top View
Front of Drill

Ref.	Part No.	Qty.	Description
1	7600008	2	Slide Shaft-Threaded 11-3/4"
2	7600009	2	Shaft 1" 20"
3	7600010	2	Shaft 1" 14-1/2" Full Length Keyway
4	7600011	1	Shaft 1" 18-1/2"
5	7400109	4	Locking Knob
6	4800056	2	Hairpin - Sprocket Lock
7	7400110	1	Cover
8	7400111	2	Cover Hinge Plates
9	7400112	2	Cover Latch Anchors
10	1000011	1	Idler Chain - 50-17-1/2"
11	1000070	2	Sprocket 50 B 15 1-1/4"
12	2000019	2	Bushing - Oilite 1-1/4" x 1" x 1" Long
13	2000002	10	Bearing and Collar 1"
14	2100003	20	Flangette 2 Hole
15	1000059	1	Sprocket 50B48 1"
16	1000058	2	Sprocket 50B20 1"
17	1000055	1	Sprocket 50B12 1"
18	1000060	2	Sprocket 50B17 1"
19	1000061	2	Idler 50-17-5/8" Not Shown
20	1000012	4	Sprocket 50B30 1"
21	1000062	1	Sprocket 50B36 1"
22	1000063	1	Sprocket 50B15 1" Slide Keyed
23	1000064	2	Sprocket 50B22 1"
24	1000065	3	Sprocket 50B18 1"
25	1000056	7	Sprocket 50B15 1"
26	1000066	1	Sprocket 50B14 1"
27	1000067	1	Sprocket 50B16 1"
28	1000068	1	Sprocket 50B19 1"
29	1000069	1	Sprocket 50B21 1"
30	1100055	1	Chain #50 79 Links & Con.
31	1100040	3	Chain #50 51 Links & Con.
32	1100056	1	Chain #50 55 Links & Con.

GRAIN DRIVE
CLUSTER SPROCKET ASSEMBLY



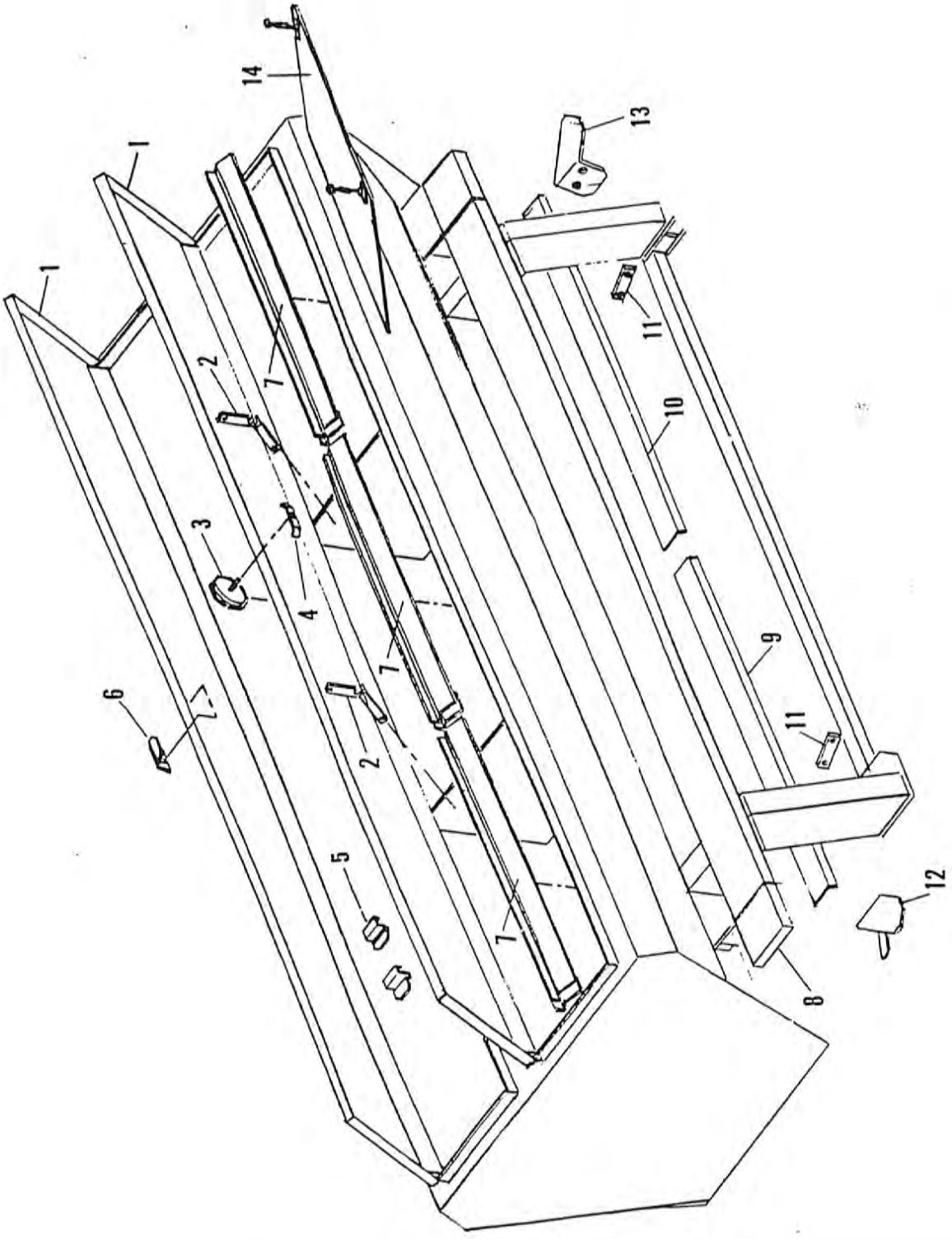
LEFT SIDE FRONT VIEW
(FERTILIZER SIDE)



Ref.	Part No.	Qty.	Description
1	7400103	1	Chain Tight.-Straight Slide Lt. Side of Drill Only
2	7400104	1	Chain Tightener-Angled Slide Rt. Side of Drill Only
3	1100051	1	Chain #50 33 Links & Con.
4	1100052	1	Chain #50 57 Links 5 Links 3 Links 3 Con. 1 Hlf. Link
5	1100053	1	Chain #50 45 Links & Con.
6	1100054	1	Chain #50 65 Links & Con.
7	1000056	3	Sprocket 50 Pi. 15 to 1"
8	1000012	2	Sprocket 50 Pi. 30 to 1"
9	1000058	1	Sprocket 50 Pi. 21 to 1"
10	1000055	1	Sprocket 50 Pi. 12 to 1"
11	1000058	1	Sprocket 50 Pi. 20 to 1"
12	4800043	2	Cotter-Shear 1/4" x 2-1/2"
13	7400105	2	Brg. Plate-Endwall
14	7400106	2	Brg. Plate-Inside
15	2000002	6	Bearing and Lock Collar 1"
16	2100003	8	Flangette 2 Hole
17	7600006	2	Shaft 1" 24"
18	7600007	2	Shaft 1" 43
19	7400107	2	Coupler 1" Round x 2-1/2" Long
20	7400108	2	Chain Tightener Slide
21	4800055	2	Bolt 1/4"

GRAIN DRIVE CLUSTER SPROCKET ASSEMBLY
Standard 1980

Ref.	Part No.	Qty.	Description
1	1000076	1	Spkt. 30-20-12 Tooth
2	4800042	1	Hairpin 1/4" x 4"
3	7400170	1	Hinge Strap
4	4800068	1	Hex Head Bolt, 1/2" x 3"
5	4800069	1	Carriage Bolt, 1/2" x 3"
6	7500021	2	Nylon Roller
7	7400171	2	Stainless Sleeve


14
13
1
1
11
2
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4
7
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6
11
2
5
12
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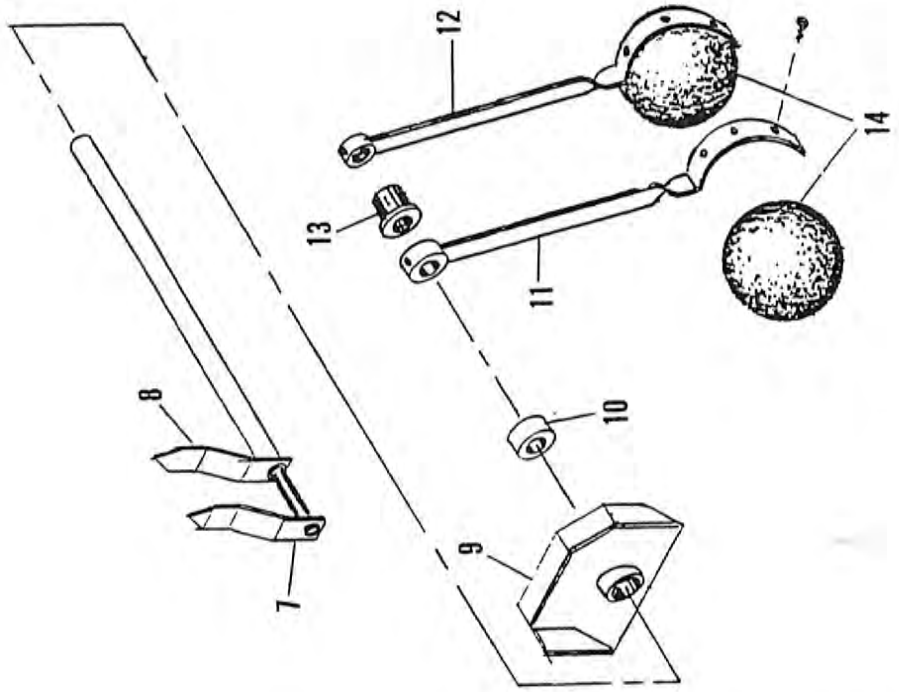
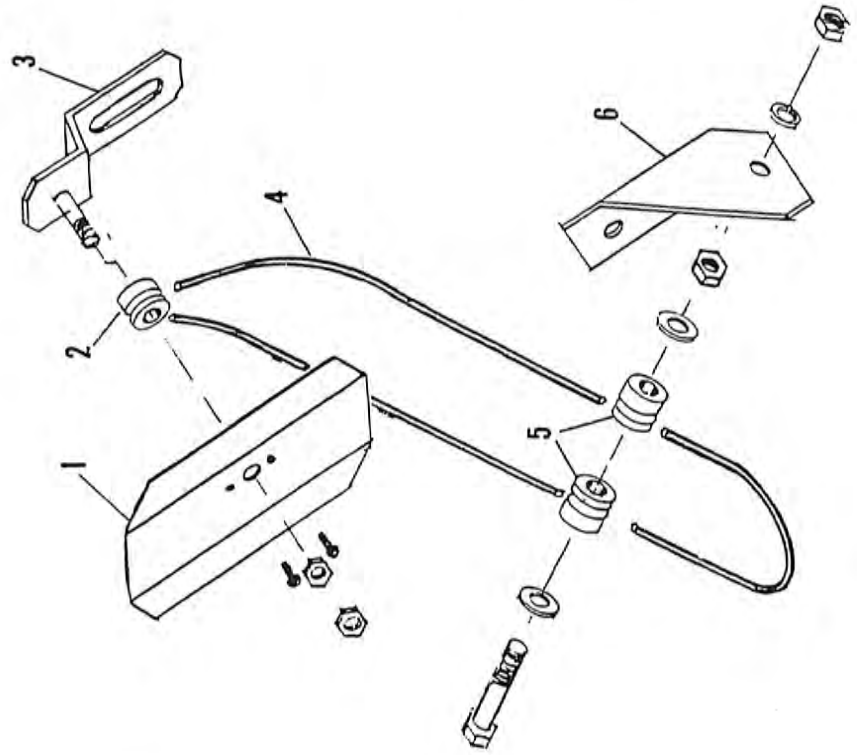
8

Ref.	Part No.	Qty.	Description
1	7400046	2	Cover
2	7400047	4	Hold Open Locks
3	7400048	9	Divider Plate Plug
4	7400049	9	Plug Retainer
5	7400050	24	Grain Cup Cover
6	7400051	2	Spring Latch
7	7400052	3	Fertilizer Wheel Covers
8	7400053	1	Rear Platform
9	7400054	1	Fert. Clean Out-Left-70 3/4
10	7400055	1	Fert. Clean Out-Right-65"
11	7400056	2	Step Anchor Bar
12	7400057	1	Step Left Side
13	7400058	1	Step Right Side
14	7400059	3	False Bottom Sheet & Turnbuckles

Tank Quantity Float Indicators

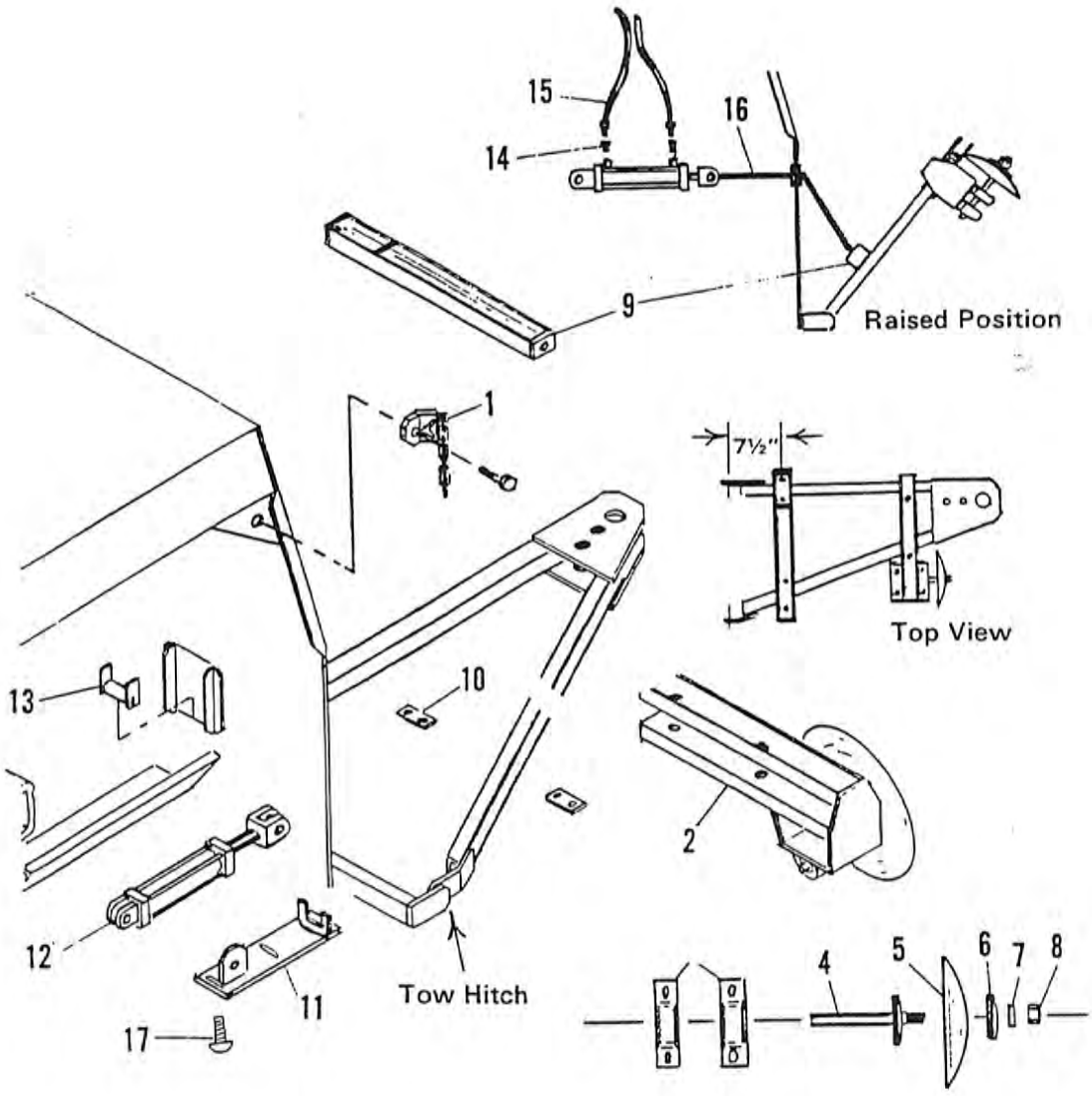


Grain Monitor Parts



Ref.	Part No.	Qty.	Description
1	7400093	1	Grain Monitor Blade - Red
2	7400095	1	Monitor Blade Pulley
3	7400094	1	Monitor Blade Hanger
4	7500014	1	Grain Monitor Belt
5	7500015	2	Plastic Pulleys 1/2" Bore
6	7400096	1	Pulley Anchor
7	7400097	1	Fertilizer Indicator-Rod
8	7400098	1	Grain Indicator-Tube
9	7400099	1	Float Indicator Bezel
10	2200007	1	Shaft Collar 3/4"
11	7400100	1	Float Bar 3/4" Collar
12	7400101	1	Float Bar 7/16" Collar
13	7400102	1	Bushing - Shouldered - 3/4" Bore
14	7500016	2	Float Balls 4"

SINGLE DRILL MARKER - Manual or Hydraulic



The single drill marker is mounted on a standard tow hitch. Bolt marker assembly as shown in top view and adjust blade angle to get desired cutting action. Tow hitch and marker may be installed on either end of drill. Remove disc and bearings and bolt on other side of channels. Install chain tie up clip on tank corner brace bolt.

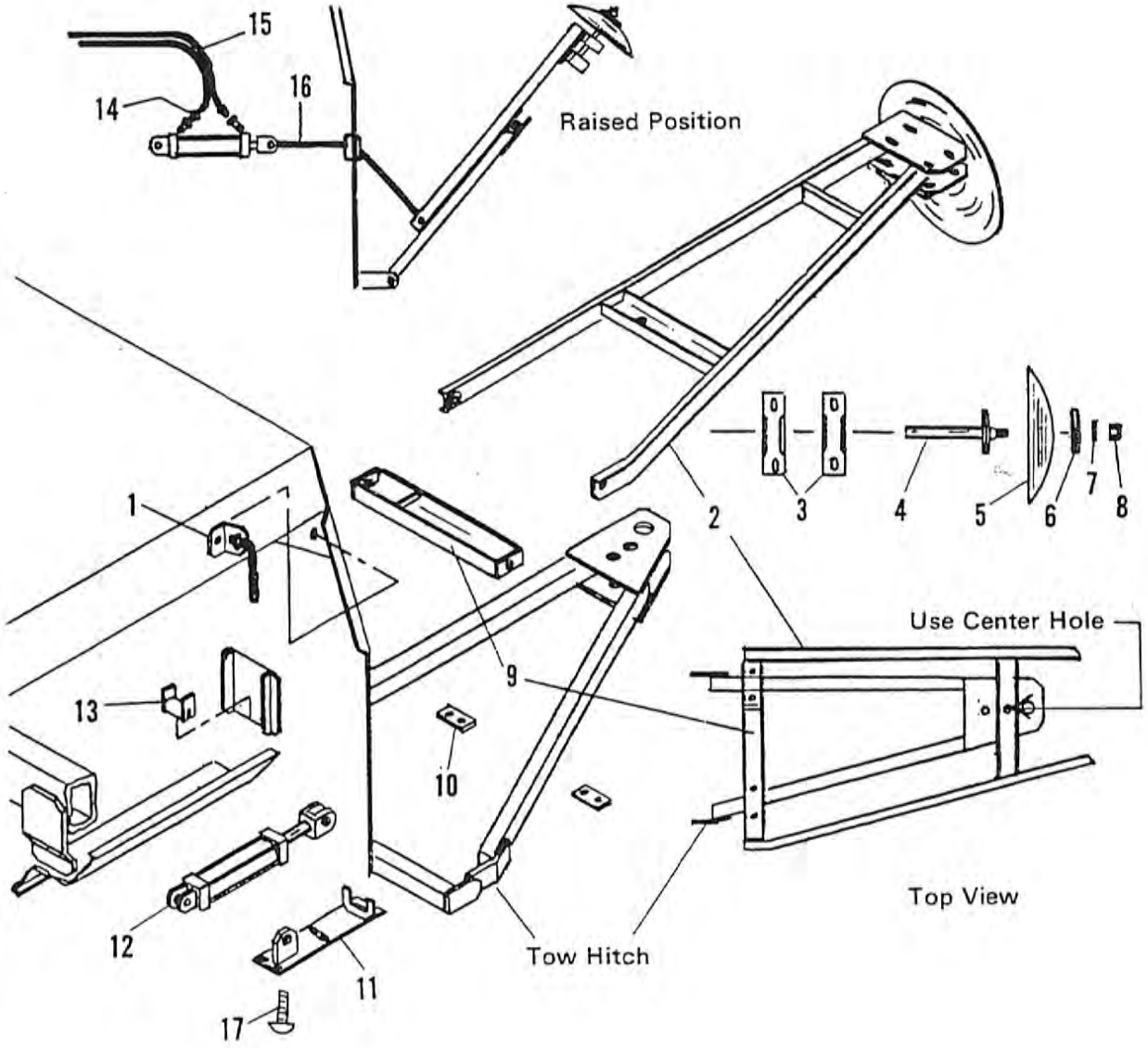
Bolt hydraulic cylinder bracket in with carriage bolts only. Ram should not extend thru end plate when ram is extended. Adjust cable so marker will cut with ram fully extended. It will then lift to about 45 degrees.

Ref.	Part No.	Qty.	Description
1	7400131	1	Tie Up Chain and Anchor Plate
2	7400132	1	Mounting Frame Only
3	1800007	2	Bearings 1-1/8"
4	7400133	1	Threaded Shaft and Flange
5	7400134	1	Maker Disk 14"
6	7400135	1	Flange - Outer
7	5000014	1	Flat Washer 1"
8	4900015	1	Nut Plastic Insert 1"

FOLLOWING PARTS ARE REQUIRED TO LIFT MARKER HYDRAULICALLY

Ref.	Part No.	Qty.	Descripption
9	7400136	1	Cable Lift Bar
10	7400137	2	Lift Bar Bolt Plates
11	7400138	1	Cylinder Anchor Plate
12	4100001	1	Hydraulic Cylinder 2" x 8"
13	7400139	1	Cable Slide
14	3800061	1	Restrictor Fitting - 1/16" Hole
15	3700040	2	Hydraulic Hose 1/4" Nylon 15 Feet Long
16	5600005	1	1/4" Wire Rope 5-1/2 Feet
17	4800053	3	Carriage Bolts 3/8" x 1"

28 TANDEM DRILL MARKER - Manual or Hydraulic



The tandem drill marker is mounted on a standard tow hitch. Bolt marker assembly as shown in top view and adjust blade angle to get desired cutting action. Tow hitch and marker may be installed on either end of drill. Remove disk and bearings and bolt on opposite bearing plate. Install chain tie up clip on tank corner brace bolt.

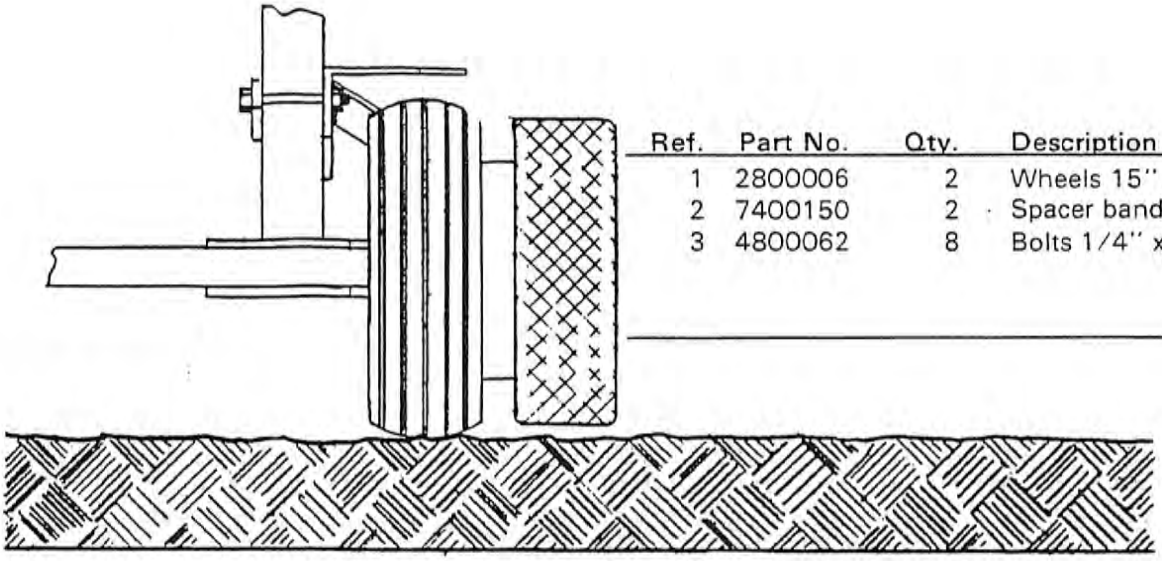
Bolt hydraulic cylinder bracket in with carriage bolts only. Ram should not extend thru end plate when ram is extended. Adjust cable so marker will cut with ram fully extended. It will then lift to about 45 degrees.

To transport end ways, remove the 1 bolt by the hitch pin hole and chain the marker up.

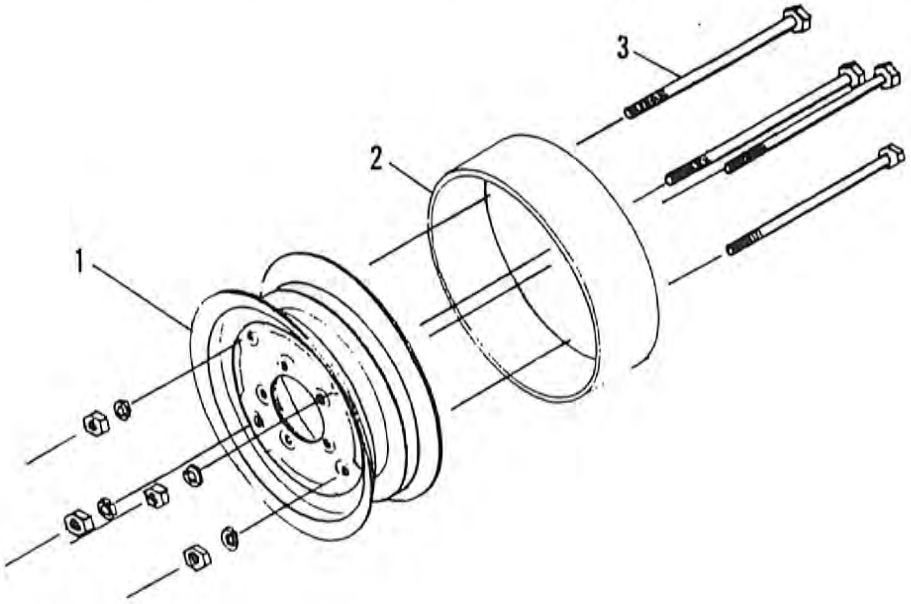
Ref.	Part NO.	Qty.	Description
1	7400131	1	Tie Cup Chain & Anchor Plate
2	7400140	1	Extension - Frame Only
3	1800007	2	Bearings 1-1/8"
4	7400133	1	Threaded Shaft and Flange
5	7400134	1	Marker Disc 14"
6	7400135	1	Flange - Outer
7	5000014	1	Flat Washer 1"
8	4900015	1	Nut - Plastic Insert 1"
9	7400136	1	Cable Lift Bar
10	7400137	2	Lift Bar Bolt Plates

FOLLOWING PARTS ARE REQUIRED TO LIFT MARKER HYDRAULICALLY

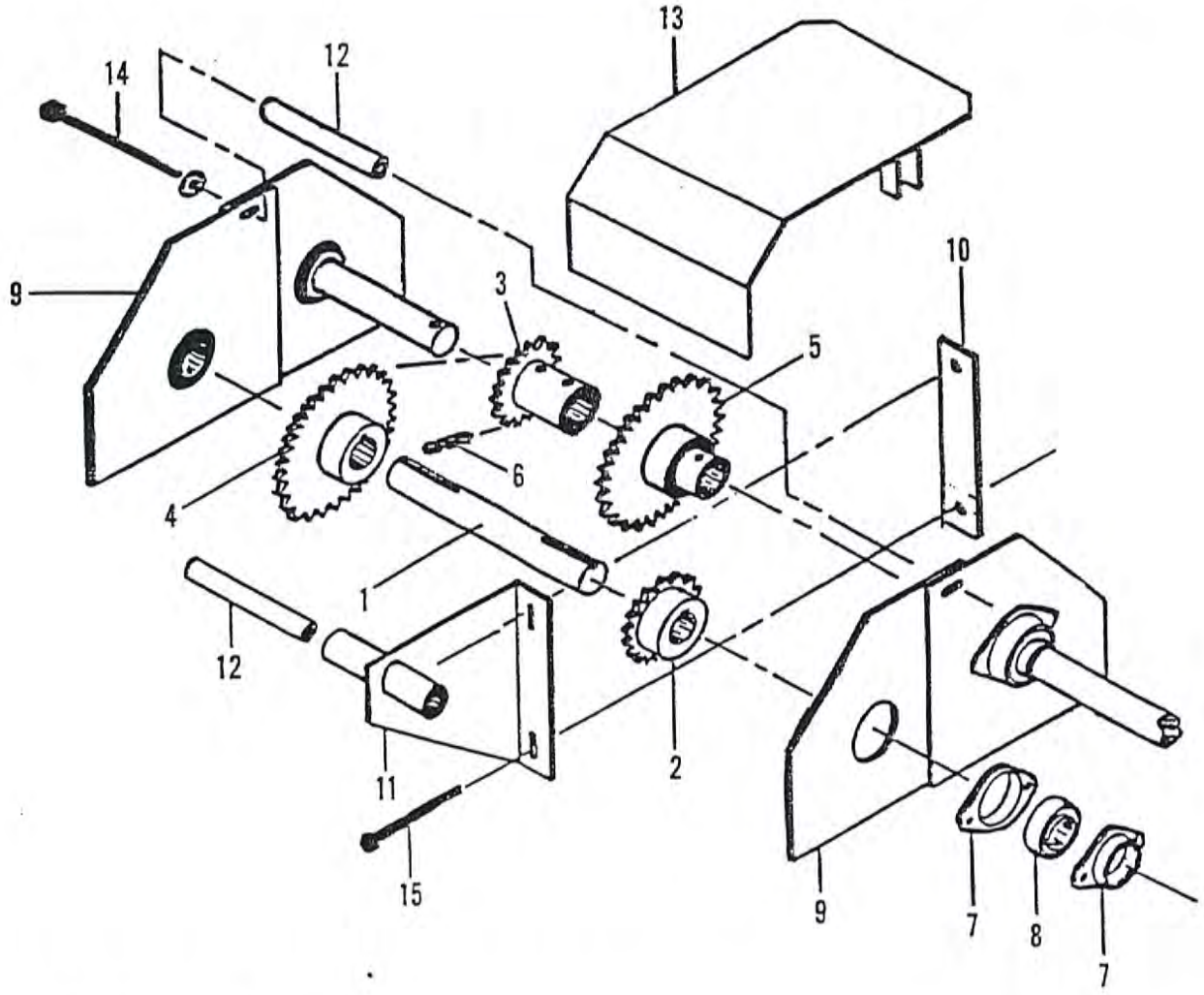
Ref.	Part No.	Qty.	Description
11	7400138	1	Cylinder Anchor Plate
12	4100001	1	Hydraulic Cylinder 2" x 8"
13	7400139	1	Cable Slide
14	3800061	1	Restrictor Fitting 1/16" Hole
15	3700041	2	Hyd. Hose 1/4" Nylon 25' 9" Long
16	5600005	1	1/4" Wire Rope 5-1/2 Feet
17	4800053	3	Carriage Bolts 3/8" x 1"



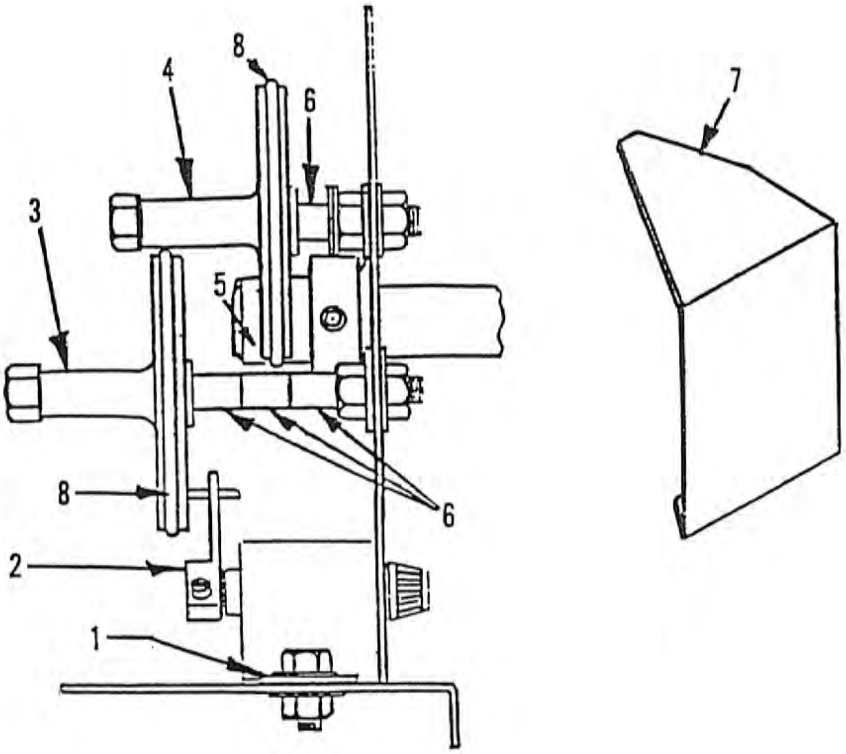
Ref.	Part No.	Qty.	Description
1	2800006	2	Wheels 15" x 5"
2	7400150	2	Spacer bands 3-1/4" Wide
3	4800062	8	Bolts 1/4" x 11



If more flotation is required when runs are lifted out of the ground, rear duals may be installed as shown. Tires may be used G78-15. This smaller tire will then carry only excess weight.

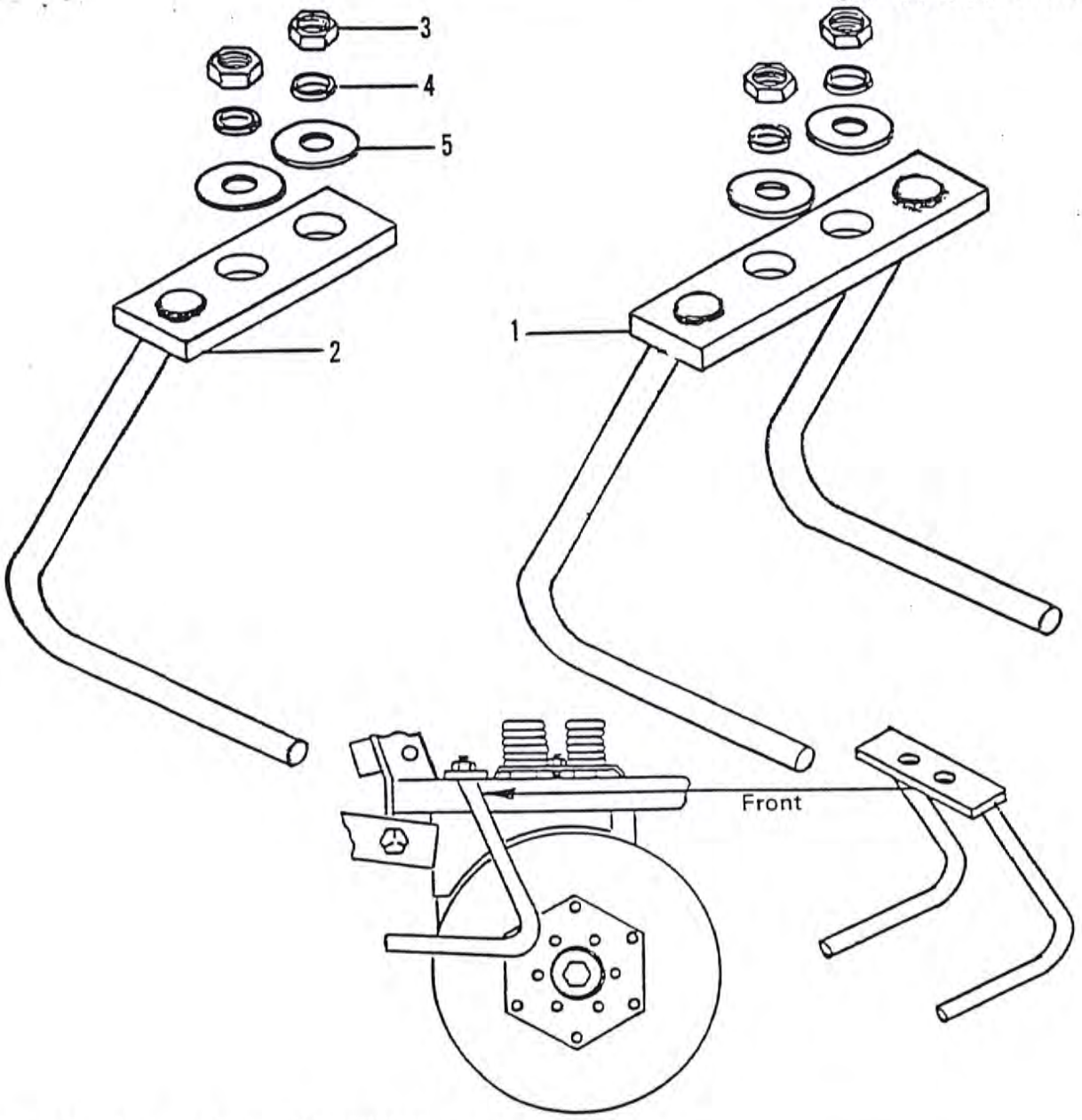


Ref.	Part No.	Qty.	Description
1	7600012	1	1" Shaft -11" Long
2	1000056	1	50B15-1" Sprocket
3	1000074	1	50B15-1" Spkt. - Extend Hub
4	1000062	1	50B36-1" Sprocket
5	1000075	1	50B36-1" Spkt. - Extend Hub
6	1100074	2	Chain #50-49 Links & Con.
7	2100003	8	Flangette - 2 Hole
8	2000002	4	Brg. & Collar
9	7400145	4	End Plate
10	7400146	1	Strap
11	7400147	1	Anchor Bracket
12	7400148	3	Spacer Tube - 8" Long
13	7400149	1	Cover
14	4800068	3	Bolts - 3/8" x 9-1/2"
15	4800069	2	Bolts - 3/8" x 4"



Ref.	Part No.	Qty.	Description
1	7400141	2	Hold Down Clip
2	7500019	1	Counter
3	7500020	1	Nylon Wheel - W/Bolt
4	7500021	1	Nylon Wheel
5	7400142	1	1" I.D. Sleeve
6	7400143	4	Spacer
7	7400144	1	Shield
8	7500022	2	Rubber Ring

OPTION PART

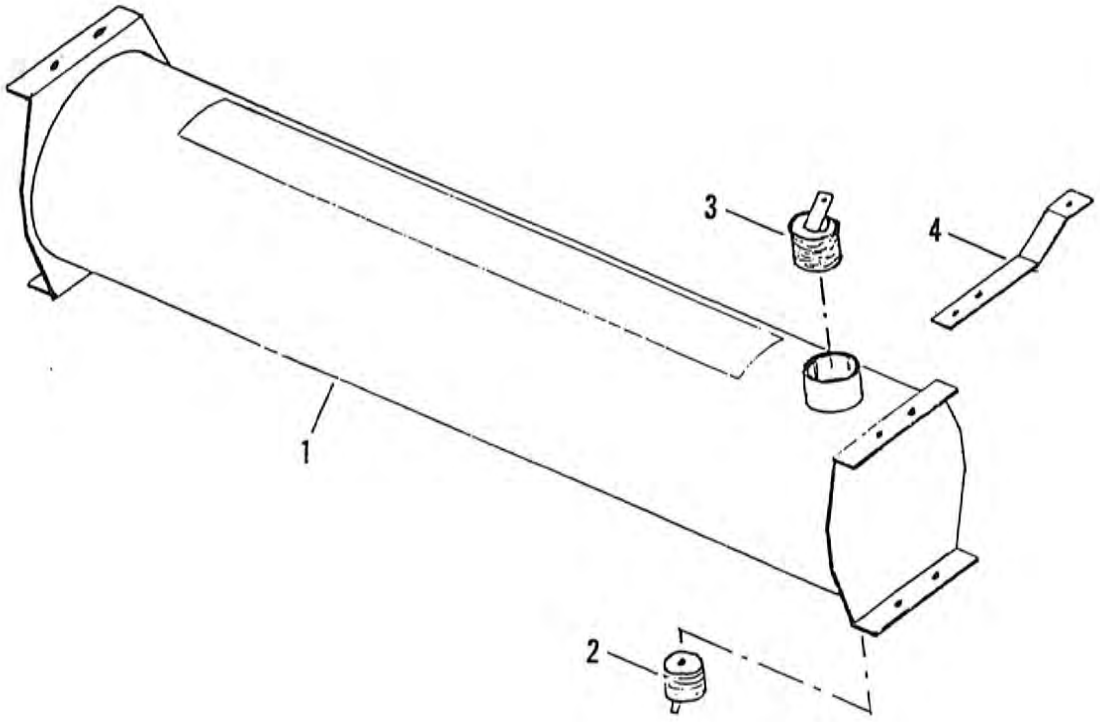


Ref.	Part No.	Qty.	Description
1	7400155	11	Rock Bar-Double Rod
2	7400156	1	Rock Bar-Single Rod
3	4900016	24	7/16" Hex Nut
4	5000015	24	7/16" Lock Washer
5	5000016	24	7/16" Flat Washer

Bars are installed on short runs only.

Single bar No. 2 is installed at left end of drill as viewed from the rear.

34 BALLAST TANK 1980



Ref.	Part No.	Qty.	Description
1	7400167	1	Ballast Tank
2	7500019	1	2" Drain Plug
3	7500020	1	3" Fill Plug
4	7400168	2	Top Bracket

HAYBUSTER™

1206 DRILL

SEED RATE CHARTS

DuraTech Industries International Inc., PO Box 1940, Jamestown, ND 58402-1940
NO. 0500018
Oct-97

1206 DRILL SEED RATE ADJUSTMENT

1. The seed cup is a double run type. Small seeds are fed through the left side, large seeds or large quantities are fed through the right side. To seed small seeds like alfalfa, remove the red cover and tape over the right side of the cup with duct tape to prevent seed leakage and overseeding.

2. At the same sprocket setting, the right side of the cup will seed about 2-1/2 times as much as the left side.

3. How to determine if the feed rate is correct or to calibrate a new seed mixture:

   -On the 3rd feed cup from the left end of drill-

   A. Slide the spring fastener up and pull off hose.

   B. Insert the square steel tube into a 1 gallon pail or similar container, and attach the pail to the 1" shaft.

   C. Lower the runs and travel at your normal drilling speed for 2 minutes.

   D. Weigh the seed in ounces and subtract the weight of the pail or container.

   E. Weight of seed in ounces x 6 = Lbs. per acre.

   Example: 14 ounces x 6 = 84 Lbs. per acre

4. If the drill is equipped with the fertilizer feed system, some fluffy type grains or grasses may be fed through it while a legume is fed through the front tank.

5. Seed Rate Charts:
   A. The word YES or NO indicates if the Optional Grass Reduction Unit is required for the seed shown.

   B. 12 , 20, or 30 Tooth sprocket refers to the 3 sprockets at the left end of the drill.

6. Large seeds like peas or beans should be fed through the rear tube of the seed opener or "boot". If the drill is equipped with 2 sets of hoses (i.e. with ertilizer attachment), reverse the hoses at the seed cups so that fertilizer will

be place at the front of the seed boot and the seed will be placed at the rear. If the drill has only 1 hose per seed boot, then remove the hose from the front of the boot and replace it in the rear of the boot. This procedure is done to prevent large seeds from being thrown out of the furrow due to being pinched between the disc blades.

Seed Rate Chart

Seed Type Wheat	Lbs. Per Bushel 60				Grass Reduction No	
Sprocket Setting	12 Tooth Cup Side		20 Tooth Cup Side		30 Tooth Cup side	
	Left	Right	Left	Right	Left	Right
A-7					72	157
A-6					75	164
A-5					78	171
B-7				118	80	176
A-4				121	84	183
B-6				125	86	187
A-3				128	88	192
B-5			58	131	90	196
A-2				136	93	
B-4			60	137	94	
A-1			63	145	99	
B-3			66	146	100	
B-2			69	154	106	
B-1		96	73	163	114	

Left side of cup is the small side of cup. Left side of drill is determined by standing behind the drill and looking towards the tractor.
Figures indicate Pounds per Acre in 6" row spacings.

Seed Type Durum	Lbs. Per Bushel 62				Grass Reduction No	
Sprocket Setting	12 Tooth Cup Side		20 Tooth Cup Side		30 Tooth Cup side	
	Left	Right	Left	Right	Left	Right
A-7				101		
A-6						
A-5				108	72	165
B-7						
A-4				120	78	172
B-6			54			
A-3					81	186
B-5			56	124		
A-2					86	192
B-4			58	130		
A-1					90	204
B-3			62	138		
B-2		89			96	
B-1			69	154	103	

Model 1206 Grain Drill
Seed Rate Chart

Seed Type Barley (small)	Lbs. Per Bushel 48		Grass Reduction No			
Sprocket Setting	**12 Tooth Cup Side**		**20 Tooth Cup Side**		**30 Tooth Cup side**	
	Left	**Right**	**Left**	**Right**	**Left**	**Right**
A-7		45		76		115
A-6		47		80		120
A-5		51		82		129
B-7		52		85		133
A-4		54		88		138
B-6				91		141
A-3		55		94		147
B-5		56		96		150
A-2		60		99		151
B-4		61		100		153
A-1		63		106		
B-3		64		107		
B-2		69		111		
B-1		73		117		

Left side of cup is the small side of cup. Left side of drill is determined by standing behind the drill and looking towards the tractor.
Figures indicate Pounds per Acre in 6" row spacings.

Seed Type Oats	Lbs. Per Bushel 32		Grass Reduction No			
Sprocket Setting	**12 Tooth Cup Side**		**20 Tooth Cup Side**		**30 Tooth Cup side**	
	Left	**Right**	**Left**	**Right**	**Left**	**Right**
A-7				59		87
A-6		37		60		91
A-5		38		63		97
B-7		39		67		100
A-4		40		68		102
B-6		42		70		104
A-3				72		109
B-5		43		75		111
A-2		45		76		115
B-4		47		77		116
A-1		49		80		123
B-3		51		81		124
B-2		54		86		130
B-1		55		93		141

Model 1206 Grain Drill
Seed Rate Chart

Seed Type Oats (High rate)	Lbs. Per Bushel 32		Grass Reduction No			
Sprocket Setting	**12 Tooth Cup Side**		**20 Tooth Cup Side**		**30 Tooth Cup side**	
	Left	**Right**	**Left**	**Right**	**Left**	**Right**
A-7					Use both	sides
A-6					of cup	
A-5						
B-7					136	
A-4					140	
B-6					144	
A-3					148	
B-5					150	
A-2					156	
B-4					159	
A-1					167	
B-3					171	
B-2					180	
B-1					195	

Left side of cup is the small side of cup. Left side of drill is determined by standing behind the drill and looking towards the tractor.
Figures indicate Pounds per Acre in 6" row spacings.

Seed Type Rye (grain)	Lbs. Per Bushel 56		Grass Reduction No			
Sprocket Setting	**12 Tooth Cup Side**		**20 Tooth Cup Side**		**30 Tooth Cup side**	
	Left	**Right**	**Left**	**Right**	**Left**	**Right**
A-7					66	
A-6					74	
A-5						
B-7					90	
A-4						
B-6			48			
A-3						
B-5			51			
A-2						
B-4			56			
A-1						
B-3			60			
B-2						
B-1						

Model 1206 Grain Drill
Seed Rate Chart

Seed Type Buckwheat	Lbs. Per Bushel 42		Grass Reduction No			
Sprocket Setting	12 Tooth Cup Side		20 Tooth Cup Side		30 Tooth Cup side	
	Left	Right	Left	Right	Left	Right
A-7			42			
A-6						
A-5			45			
B-7						
A-4	30		48			
B-6						
A-3	32		51			
B-5						
A-2	33		54			
B-4						
A-1	35		57			
B-3						
B-2	38		60			
B-1						

Left side of cup is the small side of cup. Left side of drill is determined by standing behind the drill and looking towards the tractor.
Figures indicate Pounds per Acre in 6" row spacings.

Seed Type Sorghum Sudan	Lbs. Per Bushel 50		Grass Reduction No			
Sprocket Setting	12 Tooth Cup Side		20 Tooth Cup Side		30 Tooth Cup side	
	Left	Right	Left	Right	Left	Right
A-7	24		40			
A-6						
A-5						
B-7						
A-4	27		46			
B-6						
A-3						
B-5						
A-2	30		52			
B-4						
A-1						
B-3						
B-2	35		60			
B-1	(G red)6		(G red)10		(G red) 15	

Model 1206 Grain Drill
Seed Rate Chart

Seed Type Milo	Lbs. Per Bushel 50		Grass Reduction Yes			
Sprocket Setting	12 Tooth Cup Side		20 Tooth Cup Side		30 Tooth Cup side	
	Left	Right	Left	Right	Left	Right
A-7	3.3		6.7			
A-6						
A-5						
B-7	4.5		7.6			
A-4						
B-6						
A-3	4.8					
B-5						
A-2			8.7			
B-4						
A-1	5.5					
B-3						
B-2						
B-1	6.3		10.4			

Left side of cup is the small side of cup. Left side of drill is determined by standing behind the drill and looking towards the tractor.
Figures indicate Pounds per Acre in 6" row spacings.

Seed Type Millet	Lbs. Per Bushel 50		Grass Reduction Yes			
Sprocket Setting	12 Tooth Cup Side		20 Tooth Cup Side		30 Tooth Cup side	
	Left	Right	Left	Right	Left	Right
A-7	4.9					
A-6						
A-5			9.8			
B-7					15	
A-4						
B-6						
A-3					18	
B-5	6.7		11			
A-2						
B-4						
A-1					20	
B-3						
B-2			12.9			
B-1	8					

Model 1206 Grain Drill
Seed Rate Chart

Seed Type Flax	Lbs. Per Bushel 56		Grass Reduction No			
Sprocket Setting	12 Tooth Cup Side		20 Tooth Cup Side		30 Tooth Cup side	
	Left	Right	Left	Right	Left	Right
A-7	26		44			
A-6						
A-5	29					
B-7						
A-4			51			
B-6	31					
A-3						
B-5						
A-2	35		58			
B-4						
A-1						
B-3						
B-2	39					
B-1						

Left side of cup is the small side of cup. Left side of drill is determined by standing behind the drill and looking towards the tractor.
Figures indicate Pounds per Acre in 6" row spacings.

Seed Type Rape	Lbs. Per Bushel 50		Grass Reduction Yes			
Sprocket Setting	12 Tooth Cup Side		20 Tooth Cup Side		30 Tooth Cup side	
	Left	Right	Left	Right	Left	Right
A-7	5		9.1			
A-6						
A-5	6		10			
B-7						
A-4						
B-6			11			
A-3						
B-5	6.8					
A-2						
B-4			12			
A-1	7.6					
B-3						
B-2						
B-1	8.6		14			

Model 1206 Grain Drill
Seed Rate Chart

Seed Type Mustard	Lbs. Per Bushel		Grass Reduction Yes			
Sprocket Setting	12 Tooth Cup Side		20 Tooth Cup Side		30 Tooth Cup side	
	Left	Right	Left	Right	Left	Right
A-7			6			
A-6						
A-5						
B-7						
A-4						
B-6						
A-3			7.5			
B-5					12	
A-2						
B-4						
A-1						
B-3						
B-2			10		14	
B-1						

Left side of cup is the small side of cup. Left side of drill is determined by standing behind the drill and looking towards the tractor.
Figures indicate Pounds per Acre in 6" row spacings.

Seed Type Saflower	Lb s. Per Bushel 38		Grass Reduction No			
Sprocket Setting	12 Tooth Cup Side		20 Tooth Cup Side		30 Tooth Cup side	
	Left	Right	Left	Right	Left	Right
A-7	32					
A-6						
A-5	35					
B-7						
A-4						
B-6	38					
A-3						
B-5						
A-2	42					
B-4						
A-1						
B-3						
B-2	50					
B-1						

Model 1206 Grain Drill
Seed Rate Chart

Seed Type Soybeans (3200)	Lbs. Per Bushel 60			Grass Reduction No		
Sprocket Setting	**12 Tooth Cup Side**		**20 Tooth Cup Side**		**30 Tooth Cup side**	
3200 seeds per pound	**Left**	**Right**	**Left**	**Right**	**Left**	**Right**
A-7				72		108
A-6				75		111
A-5				80		117
B-7				83		122
A-4				84		124
B-6				87		125
A-3				89		129
B-5				91		134
A-2		57		93		139
B-4		58		94		140
A-1		62		99		147
B-3		63		100		
B-2		65		107		
B-1		69		110		

Left side of cup is the small side of cup. Left side of drill is determined by standing behind the drill and looking towards the tractor.
Figures indicate Pounds per Acre in 6" row spacings.

Seed Type Soybeans (2500)	Lbs. Per Bushel 60			Grass Reduction No		
Sprocket Setting	**12 Tooth Cup Side**		**20 Tooth Cup Side**		**30 Tooth Cup side**	
2500 seeds per pound	**Left**	**Right**	**Left**	**Right**	**Left**	**Right**
A-7				79		118
A-6				83		120
A-5				90		126
B-7						132
A-4				91		134
B-6				94		135
A-3		57		96		139
B-5		58		98		144
A-2		60		102		149
B-4		61		103		
A-1		66		108		
B-3		67		109		
B-2		70		117		
B-1				119		

Model 1206 Grain Drill
Seed Rate Chart

Seed Type Idaho Peas	Lbs. Per Bushel 60		Grass Reduction No			
Sprocket Setting	12 Tooth Cup Side		20 Tooth Cup Side		30 Tooth Cup side	
	Left	Right	Left	Right	Left	Right
A-7				90		
A-6				93		
A-5				96		
B-7						
A-4				100		
B-6						
A-3				105		
B-5						
A-2		69		111		
B-4						
A-1		72				
B-3				119		
B-2		78				
B-1				130		

Left side of cup is the small side of cup. Left side of drill is determined by standing behind the drill and looking towards the tractor.
Figures indicate Pounds per Acre in 6" row spacings.

Seed Type Lentils	Lbs. Per B ushel		Gra ss Reduction No			
Sprocket Setting	12 Tooth Cup Side		20 Tooth Cup Side		30 Tooth Cup side	
	Left	Right	Left	Right	Left	Right
A-7						
A-6						
A-5					67	
B-7						
A-4			46		70	
B-6						
A-3			51		75	
B-5						
A-2			54		80	
B-4						
A-1			57		84	
B-3						
B-2			60		88	
B-1			63		93	

Model 1206 Grain Drill
Seed Rate Chart

Seed Type Orchard Grass	Lbs. Per Bushel				Grass Reduction No	
Sprocket Setting	**12 Tooth Cup Side**		**20 Tooth Cup Side**		**30 Tooth Cup side**	
	Left	**Right**	**Left**	**Right**	**Left**	**Right**
A-7	6	12	10	21		
A-6						32
A-5						
B-7	7	13.5				
A-4			11	23		
B-6						36
A-3	8	15			(G red) 3	
B-5				25.5		
A-2						
B-4					(G red)4	39
A-1	9	17		28		
B-3						
B-2				30		42
B-1					(G red) 4.5	

Left side of cup is the small side of cup. Left side of drill is determined by standing behind the drill and looking towards the tractor.
Figures indicate Pounds per Acre in 6" row spacings.

Seed Type Rye Grass	Lbs. Per Bushel 24				Grass Reduction No	
Sprocket Setting	**12 Tooth Cup Side**		**20 Tooth Cup Side**		**30 Tooth Cup side**	
	Left	**Right**	**Left**	**Right**	**Left**	**Right**
A-7				39		
A-6						60
A-5					24	
B-7			16			
A-4				46		67
B-6						
A-3						
B-5			19			72
A-2				51		
B-4						
A-1						79
B-3			21			
B-2				55		84
B-1						90

Model 1206 Grain Drill
Seed Rate Chart

Seed Crested Wheat Grass	Lbs. Per Bushel 22		Grass Reduction No			
Sprocket Setting	**12 Tooth Cup Side**		**20 Tooth Cup Side**		**30 Tooth Cup side**	
	Left	**Right**	**Left**	**Right**	**Left**	**Right**
A-7	8					
A-6						
A-5	9.5					
B-7						
A-4						
B-6	10.5					
A-3						
B-5						
A-2						
B-4	12					
A-1						
B-3						
B-2						
B-1	14					

Left side of cup is the small side of cup. Left side of drill is determined by standing behind the drill and looking towards the tractor.
Figures indicate Pounds per Acre in 6" row spacings.

Seed Type Fescue	Lbs. Per Bushel 24		Grass Reduction No			
Sprocket Setting	**12 Tooth Cup Side**		**20 Tooth Cup Side**		**30 Tooth Cup side**	
	Left	**Right**	**Left**	**Right**	**Left**	**Right**
A-7	12		20			
A-6					33	
A-5						
B-7	13.5				(G red) 6	
A-4		24				
B-6					37	
A-3	15					
B-5			26			
A-2					(G red) 7	
B-4					40	
A-1	16.5		28			
B-3						
B-2			31			
B-1					(G red) 9	

Model 1206 Grain Drill
Seed Rate Chart

Seed Type Bluegrass	Lbs. Per Bushel				Grass Reduction Yes	
Sprocket Setting	12 Tooth Cup Side		20 Tooth Cup Side		30 Tooth Cup side	
	Left	Right	Left	Right	Left	Right
A-7	4.2		7.1			
A-6						
A-5						
B-7						
A-4						
B-6					10.5.	
A-3						
B-5	6.3					
A-2						
B-4			7.8			
A-1					11.7	
B-3						
B-2						
B-1			9			12.5

Left side of cup is the small side of cup. Left side of drill is determined by standing behind the drill and looking towards the tractor.
Figures indicate Pounds per Acre in 6" row spacings.

Seed Type Bahia (High Rate)	Lbs. Per Bushel				Grass Reduction No	
Sprocket Setting	12 Tooth Cup Side		20 Tooth Cup Side		30 Tooth Cup side	
	Left	Right	Left	Right	Left	Right
A-7	20					
A-6	(G red) 3					
A-5			40			
B-7						
A-4						
B-6						
A-3						
B-5						
A-2						
B-4						
A-1	30					
B-3						
B-2						
B-1	(G red) 5		(G red) 8		(G red) 12	

Model 1206 Grain Drill
Seed Rate Chart

Seed Type Alfalfa	Lbs. Per Bushel 60		Grass Reduction Yes			
Sprocket Setting	**12 Tooth Cup Side**		**20 Tooth Cup Side**		**30 Tooth Cup side**	
	Left	**Right**	**Left**	**Right**	**Left**	**Right**
A-7	6					
A-6					16	
A-5						
B-7	7.7					
A-4						
B-6			12			
A-3					19	
B-5						
A-2	8.8					
B-4						
A-1					21	
B-3						
B-2			14			
B-1	10.6				23	

Left side of cup is the small side of cup. Left side of drill is determined by standing behind the drill and looking towards the tractor.
Figures indicate Pounds per Acre in 6" row spacings.

Seed Type Red Clover	Lbs. Per Bushel 60		Grass Reduction Yes			
Sprocket Setting	**12 Tooth Cup Side**		**20 Tooth Cup Side**		**30 Tooth Cup side**	
	Left	**Right**	**Left**	**Right**	**Left**	**Right**
A-7	6					
A-6						
A-5			12.3			
B-7	7.6					
A-4						
B-6						
A-3						
B-5			14			
A-2						
B-4	8.8					
A-1						
B-3						
B-2						
B-1	10.5		17			

Model 1206 Grain Drill
Seed Rate Chart

Seed Type Tibbet Clover	Lbs. Per Bushel				Grass Reduction Yes	
Sprocket Setting	12 Tooth Cup Side		20 Tooth Cup Side		30 Tooth Cup side	
	Left	Right	Left	Right	Left	Right
A-7	5.3					
A-6						
A-5						
B-7	6					
A-4						
B-6						
A-3	7					
B-5						
A-2						
B-4	8					
A-1						
B-3						
B-2						
B-1	9.4					

Left side of cup is the small side of cup. Left side of drill is determined by standing behind the drill and looking towards the tractor.
Figures indicate Pounds per Acre in 6" row spacings.

Seed Type Timothy	Lbs. Per Bushel				Grass Reduction Yes	
Sprocket Setting	12 Tooth Cup Side		20 Tooth Cup Side		30 Tooth Cup side	
	Left	Right	Left	Right	Left	Right
A-7						
A-6						
A-5					24.8	
B-7						
A-4						
B-6						
A-3						
B-5						
A-2						
B-4						
A-1						
B-3	16.5					
B-2					31.6	
B-1						

Model 1206 Grain Drill
Seed Rate Chart

Seed Type Sunflower #4	Lbs. Per Bushel				Grass Reduction Yes	
Sprocket Setting	12 Tooth Cup Side		20 Tooth Cup Side		30 Tooth Cup side	
	Left	Right	Left	Right	Left	Right
A-7	1.8		3.3		4.9	
A-6	2.1		3.5		5.2	
A-5			3.6		5.4	
B-7	2.2		3.7		5.6	
A-4			3.8		5.7	
B-6	2.3		3.9		5.9	
A-3	2.4		4.0		6.0	
B-5			4.1		6.2	
A-2	2.5		4.2		6.4	
B-4	2.6		4.3		6.5	
A-1	2.7		4.4		6.7	
B-3	2.8		4.5		6.8	
B-2	2.9		4.8		7.2	
B-1	3.1		5.1		7.7	

Left side of cup is the small side of cup. Left side of drill is determined by standing behind the drill and looking towards the tractor.
Figures indicate Pounds per Acre in 6" row spacings.

Seed Type Sunflower #4	Lbs. Per Bushel				Grass Reduction No	
Sprocket Setting	12 Tooth Cup Side		20 Tooth Cup Side		30 Tooth Cup side	
	Left	Right	Left	Right	Left	Right
A-7	11.4					
A-6	11.8					
A-5	12.5					
B-7	12.7					
A-4	13.1					
B-6	13.4					
A-3	13.8					
B-5	14.0					
A-2	14.7					
B-4	14.9					
A-1	15.6					
B-3	15.8					
B-2	16.7					
B-1	17.6					

Model 1206 Grain Drill
Seed Rate Chart Through Fertilizer Tank

Seed Type Oats	Lbs. Per Bushel					
Sprocket Setting	**Feed Wheel Covers On**		**Feed Wheel Covers Off**			
B-1	19.5		64.5			
B-2	27		106			
B-3	36		121.5			
B-4	40		144			
B-5	46		151			
B-6	48		165			
A-1	52.5		180			
A-2	57		187			
A-3	69					
A-4	79.5					
A-5	111					
A-6						

Left side of cup is the small side of cup. Left side of drill is determined by standing behind the drill and looking towards the tractor.
Figures indicate Pounds per Acre in 6" row spacings.

Seed Type Ryegrass	Lbs. Per Bushel 24		Feed Wheel Covers On			
Sprocket Setting	**15 Tooth Sprocket**		**14 Tooth Sprocket**			
B-1	13		12			
B-2	22		21			
B-3	27		25			
B-4	33		31			
B-5	37		35			
B-6	43		40			
A-1	27		25			
A-2	45		42			
A-3	52		49			
A-4	64		60			
A-5	70		66			
A-6	80		76			

TABLE OF CONTENTS

HAYBUSTER MICRO SEEDER DRILI

1206

OPERATION MANUAL

FIELD PREPARATION SETUP

Install swivel wheel hitch and support pipes as shown on page 21. The plate on the V shape brace goes on top. Check that all cotter pins on the drill are fully wrapped around their pins or the will vibrate out.

Remove the unpainted rod from the rear cylinder anchor. This rod is for long distance haulin only, or moving without a cylinder.

Install a 3½" or 4" diameter x 8" stroke cylinder **with stroke control** as shown on page 2 This drill requires positive control of the cylinder stroke. In tilled fields as little as 3" of ram trave used. Route hoses to tractor and **extend cylinder to full length.** When extending cylinder for fi time, make sure it clears the rear anchor block or the ram may be bent.

Loosen the 2 rear slotted transport chain anchors and hook the chain on peg. Do not remo the chains from the lift bars. Rear transport chains should always be used when transporting dr endways. If cylinder leaks down the disc openers could drag on the ground.

Activate the cylinder to lower and lift the runs. If runs are fully lowered, the rear wheels wi lift clear of the ground allowing the wheels to be changed to field direction. Rear spindles are he in place with a round cam lock. When wheels are changed, tighten the cam bolt fully to prever cam from turning.

HITCHES

SINGLE DRILL

Install as shown on page 21. Use a 1¼" hitch pin in front.

TOW HITCH

This hitch may be installed on either end of the drill frame. To move the tow hitch from one e of the drill to the other, the square tube must be turned over. For long distance or high spe towing with one drill, the tow hitch should be installed on **right side** of drill. This places the fro swivel wheels in the center of the roadway. Pages 22 and 27.

TWO DRILL HITCH (refer to page 22.)

Cradle (B) is bolted to left drill as shown. Install pulling hitch (A) with hose rings up. U hydraulic couplers on one side of tandem hitch to allow easier stowage of hitch in cradle f transport. Front slide bar is removed when stowing in cradle to make it easier to handle. Wh hitching to tractor, pull slide out to install drawbar pin and back tractor to engage lock pin. Tv holes are provided in slide bar for turn clearance.

Round shaft at one side of hitch telescopes to allow easier hook up after drills have be towed endways. Use 1¼" hitch pin (not furnished) at the 3 pull points.

STABILIZER (See Pages 18 and 22)

The stabilizer hitch allows two drills to move up and down as field conditions vary, and a pulls the rear drill during transport. Transport endways with one or two drills should be done w grain and fertilizer tanks empty or nearly empty.

A long and a short red safety stop is furnished with the stabilizer bar kit.

The long stop is used when transporting two drills endways. After drills are separated to all for turning clearance, drop the long stop over the square bar and install a bolt so it can not co out. The round slug on top contacts the slide part of the hitch. The red stop prevents the trailing d from running into the front drill. Install a safety chain .

The short red stop is required only if two drills are to be backed up a considerable distan

To transport two drills endways, the tow hitch (Page 27) must be installed on the left drill shown on page 22.

MUD SCRAPERS

Adjust swivel wheel and rear wheel scrapers close to the tires. The drive roller which is drive by the swivel wheels must be kept free of mud build up or the feed rate will vary. Lower the dri roller down to **operating position** and adjust scraper.

Adjust press wheel scraper rods downward as they wear. Tap down with hammer.

Opener disc scrapers are spring steel and should contact the disc lightly.

GRAIN FEED

Grain feed is thru double run feed cups. Left side of cup is the small side, right side is the larg side. Use the formed cover plate to close off one half of the cup.

The square drive shaft is two piece with a drive coupler in the center. An adjusting bolt at on end of the shaft controls end play. Page 23.

The red monitor blade indicates that the grain feed shaft is turning.

The left side of the reduction unit marked BA 1234567 controls the grain feed rate with 14 speeds.

FERTILIZER FEED

Fertilizer feed is by toothed feed wheels. The cover over the wheels and the bottom drop door may be removed for cleaning. The three long square shafts may be removed by taking the spring steel bearing retainers out and sliding one of the bearings to one side. Fertilizer Feed wheels mus be correctly installed or they will not work. Teeth must be inclined so as the wheel turns it lifts th fertilizer and moves it out the slot. Wheels are marked R & L. The side marked R must face the right side of drill.

If fertilizer is not applied, the 3 false bottom sheets may be installed and the center divide plate plugs removed. The fertilizer compartment will then hold about 12 bushels of wheat. Page 20.

To insure even fertilizer flow, the slotted holes in front of the fertilizer feed wheel should cleaned occasionally. A thorough cleaning of all parts at end of season is necessary to hold down corrosion.

Float indicators should be locked up when filling tanks and released before closing covers

Shear pin cotters on both drives are located in front near the reduction unit.

The right side of the reduction unit marked 123456 BA allows 12 different fertilizer feed rates

DEPTH CONTROL (refer to Page 20)

Seeding depth depends on spring tension and washer setting on depth rod.

Very loose soil of a prepared seed bed needs very little spring tension. "No Till" fields lik stubble or pasture require more spring tension depending on how hard the soil is.

The press wheel lock should be set so the washers are held tight except when the run has to lift over an obstruction. Moving one washer will change the depth about ½".

Packing pressure around the seed is dependent on spring pressure.

With the runs in the ground, the roller bar bearing will be under the flat center section of the roller bar plate. The roller should not operate down the rear slope of the plate unless the dis openers have to drop in a hole. The rear wheels should be on or near the ground at all times. In No Till or sod seeding ballast is required to hold the rear wheels down.

Disc openers running in a wheel track will require a different hairpin adjustment whe seeding in a prepared seed bed. Raising the press wheel slightly higher will allow the disc opener to penetrate deeper. This difference is not so noticeable in "No Till" conditions.

In soil which wheel tracks deeply, it may be necessary to add shims between the roller ba bearing and the bottom side of the roller bar plate. Refer to Page 16. Shims and bolts are include in parts bag.

GENERAL OPERATING PROCEDURES

With a heavy load of grain or fertilizer in the tanks, lower the runs into seeding depth **while in motion.**

When seeding "No Till" in hard, dry ground, lifting the runs out of the ground on tight corners will remove the side load from the opener discs and bearings.

Ground speed depends on field conditions. Stones in stubble or sod ground will not move and speed should be adjusted accordingly. When seeding in stubble or hard ground, seed placement depth will be shallower at 6 M.P.H. than at 4 M.P.H. **Seeding depth and feed rate recalibration should be checked at the speed you intend to travel.**

Extra weight is required in "No Till" conditions. The ballast box filled with soil will add about 950 lbs. In heavy trash or hard ground, it may be necessary to refill the top tanks before they are low to maintain enough weight for opener penetration.

If front swivel wheels do not track straight in a very soft seed bed, shims may be installed at one side of the top 4 bolt mounting plate. If this is required, the rear drive roller shaft hangers are slotted so the drive roller will lay flat on both front tires. An extra spacer bar is installed below the swivel wheel pin plate. If more clearance is required for the drive roller, this spacer may be installed between the plates.

All bearings are non-relubeable. Zerks are installed in the sleeves which mount the 3 rotating cross tubes and the swivel wheel king pin sleeve. Each press wheel hinge tube is equipped with a zerk.

When 2 drills are pulled, the sliding square socket on the stabilizer bar should be greased so drills may move apart when required.

If lower mounting plate which holds the convoluted seed and fertilizer hoses is removed from the run, rotate each hose in the plate after the plate is reinstalled to insure that the hose is not doubled over in the feed slot. Feed extra large bean seeds thru the fertilizer boot tube by reversing the hoses at the top end.

The ¼" chain which lifts the run should have 13 links. On the long run this chain bolts into the lower of the two holes in the run lift plate. On the short run the chain bolts into the upper hole.

The torque tube which compresses the springs is rotated by 2 adjustable links. The center to center on the link pins should be 13".

Hard objects such as nuts, bolts, or small stones can damage the Grain Feed Cups. To remove a cup, remove the end play adjusting bolt at the right hand end, loosen the set screw in the monitor belt pulley and pull ot the square shaft. This shaft is split in the center and coupled. Page 23.

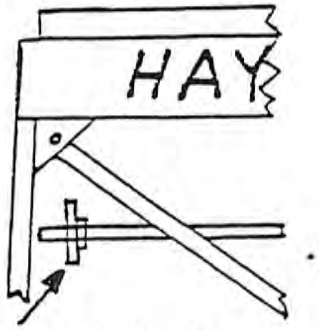
Tires are factory inflated to 32 lbs., front and 40 lbs. rear. This pressure may be lowered if extra deep opener penetration is needed.

The ballast box is equipped with clean out-doors in the bottom. Soil or sand which is free of large amounts of trash is easiest to remove.

If shims, stabilizer hitch parts, or marker attachments are bolted onto the roller bar plate, use carriage bolts only with round head down to clear the roller bar bearings.

NOTE: An optional dual wheel kit is available for rear wheels. Used tires are customer furnished.

FERTILIZER FEED RATES - 123456 BA



15 Tooth spkt is Std.
14 Tooth May Be Installed

Sprocket Setting	lbs. Acre 15 Tooth	lbs. Acre 14 Tooth
B-1	30	25
B-2	40	35
B-3	50	45
B-4	55	50
B-5	60	55
B-6	75	65
A-1	53	48
A-2	80	63
A-3	110	95
A-4	125	115
A-5	140	135
A-6	165	150

FEED RATE DEPENDS ON TYPE OF FERTILIZER. LBS. PER ACRE ARE APPROXIMATE ONLY.

-TO CALIBRATE FEED RATE-

Fill fert. tank full or mark level.
Set drive sprockets by chart.
Seed several acres to shake down load.
Reset or record acre tally reading and refill tank.
Seed several acres and measure amount needed to refill tank.

Figure lbs. per acre and reset sprocket drive if required.

-Example-

lbs. Fert Used	Divided by Acres	= lbs. per Acre
300	5	60
550	6.5	84.6

THESE SEEDS DO NOT REQUIRE THE GRASS REDUCTION DRIVE UNIT	THESE SEEDS REQUIRE GRASS REDUCTION
Soybeans - Large	Milo
Soybeans - Small	Mustard
Sunflower	Rape
Saflower	Millet
Sorghum - Sudan	Alfalfa
Wheat	Clover
Rye - Grain	Bahia
Oats	
Barley	
Flax	
Crested Wheat - Grass	
Rye - Grass	

GRAIN FEED CUP R.P.M.

Speeds are at 5 M.P.R. ground speed. Feed rate will increase or decrease as grou d speed changes. The 3 sprockets at left end of drill (12-20-30), the 14 changes on the reduction unit and the double run feed cup allow 84 different feed rates.

30 TOOTH SPROCKET			20 TOOTH SPROCKET			12 TOOTH SPROCKET		
Setting		R.P.M.	Setting		R.P.M.	Setting		R.P.M.
A-7	slow	12.7	A-7	slow	8.5	A-7	slow	5.1
A-6		13.3	A-6		8.9	A-6		5.3
A-5		14.0	A-5		9.3	A-5		5.5
B-7	INCREASE FLOW ↓	14.4	B-7	INCREASE FLOW ↓	9.6	B-7	INCREASE FLOW ↓	5.7
A-4		14.8	A-4		9.8	A-4		5.9
B-6		15.1	B-6		10.1	B-6		6.0
A-3		15.6	A-3		10.4	A-3		6.2
B-5		15.9	B-5		10.6	B-5		6.3
A-2		16.5	A-2		11.0	A-2		6.6
B-4		16.7	B-4		11.1	B-4		6.7
A-1		17.5	A-1		11.7	A-1		7.0
B-3		17.7	B-3		11.8	B-3		7.1
B-2		18.7	B-2		12.5	B-2		7.5
B-1	fast	19.9	B-1	fast	13.2	B-1	fast	7.9

GRAIN CUP FEED RATES

30-20-12 are sprockets at left end of drill.

Left is small side of cup - Right is large side.

WHEAT

62 lbs. BU.
Left side

30 Tooth	
B-3	100 lbs
B-4	94 lbs
B-5	90 lbs
B-6	85 lbs
B-7	81 lbs
A-6	75 lbs

20 Tooth	
B-2	73 lbs
A-1	68 lbs
A-2	64 lbs
A-3	60 lbs
B-7	56 lbs
A-6	51 lbs
A-7	49 lbs

12 Tooth	
B-1	42 lbs
B-3	38 lbs
B-4	35 lbs
B-6	32 lbs
A-5	30 lbs

OATS

32 lbs. BU.
Right Side

30 Tooth	
A-2	88 lbs
B-6	80 lbs
A-5	75 lbs
A-7	68 lbs

20 Tooth	
B-1	70 lbs
B-3	63 lbs
A-2	58 lbs
B-6	54 lbs
A-5	49 lbs
A-7	45 lbs

20 Tooth Left side	
B-2	30 lbs
B-6	24 lbs
A-7	20 lbs

BARLEY

48 lbs BU.
Right side

20 Tooth	
A-5	84 lbs
A-6	80 lbs
A-7	77 lbs

12 Tooth	
B-1	72 lbs
B-2	68 lbs
A-1	64 lbs
A-2	60 lbs

FLAX

56 lbs BU.
Left Side

20 Tooth	
A-2	58 lbs
A-4	51 lbs
A-7	44 lbs

12 Tooth	
B-2	39 lbs
A-2	35 lbs
B-6	31 lbs
A-5	29 lbs
A-7	26 lbs

GRAIN CUP FEED RATES

30-2-12 are sprockets at left end of drill

Left is small side of cup - Right is large side.

RYE - GRAIN

56 lbs BU.
Left Side

30 TOOTH

B-7	90 lbs
A-6	74 lbs
A-7	66 lbs

20 TOOTH

B-3	60 lbs
B-4	56 lbs
B-5	51 lbs
B-6	48 lbs

SAFLOWER

38 lbs BU.
Left Side

12 TOOTH

B-2	50 lbs
A-2	42 lbs
B-6	38 lbs
A-5	35 lbs
A-7	32 lbs

SORGHUM SUDAN

50 lbs BU.
Left Side

20 TOOTH

B-2	60 lbs
A-2	52 lbs
A-4	46 lbs
A-7	40 lbs

12 TOOTH

B-2	35 lbs
A-2	30 lbs
A-4	27 lbs
A-7	24 lbs

GRASS REDUCTION

30 TOOTH

B-1	15 lbs

20 TOOTH

B-1	10 lbs

12 TOOTH

B-1	6 lbs

CRESTED WHEAT GRASS

22 lbs BU.
Left Side

12 TOOTH

B-1	14 lbs
B-4	12 lbs
B-6	10.5 lbs
A-5	9.5 lbs
A-7	8 lb

GRAIN FEED CUP R.P.M.-
GRASS REDUCTION ENGAGED
SPEEDS ARE AT 5 M.P.H. GROUND SPEED

See page 17 to use or bypass reduction.

Reduction Unit may be field installed.

12 TOOTH SPROCKET			20 TOOTH SPROCKET			30 TOOTH SPROCKET		
Setting		R.P.M.	Setting		R.P.M.	Setting		R.P.M.
A-7	slow	.80	A-7	slow	1.47	A-7	slow	2.21
A-6		.93	A-6		1.55	A-6		2.32
A-5		.97	A-5		1.62	A-5		2.44
B-7		1.00	B-7		1.67	B-7		2.51
A-4	INCREASE	1.02	A-4	INCREASE	1.71	A-4	INCREASE	2.56
B-6		1.05	B-6		1.75	B-6		2.63
A-3		1.08	A-3		1.80	A-3		2.71
B-5		1.10	B-5		1.84	B-5		2.76
A-2	FLOW	1.14	A-2	FLOW	1.91	A-2	FLOW	2.87
B-4		1.16	B-4		1.94	B-4		2.91
A-1		1.22	A-1		2.03	A-1		3.05
B-3		1.24	B-3		2.04	B-3		3.07
B-2		1.30	B-2		2.17	B-2		3.25
B-1	fast	1.38	B-1	fast	2.29	B-1	fast	3.44

GRASS SEED REDUCTION PLANTING

Activate the Grass Seed Reduction Unit to plant these crops.
12-20-30 tooth sprockets are at left end of drill.
Left side is small side of cup.

MILO	RAPE	MILLET	ALFALFA
50 lbs BU.	50 lbs BU.	50 lbs BU.	60 lbs BU.
12 TOOTH LEFT SIDE	**12 TOOTH LEFT SIDE**	**12 TOOTH LEFT SIDE**	**12 TOOTH LEFT SIDE**
A-7 3.3 lbs B-7 4.5 lbs A-3 4.8 lbs A-1 5.5 lbs B-1 6.3 lbs	A-7 5 lbs A-5 6 lbs B-5 6.8 lbs A-1 7.6 lbs B-1 8.6 lbs	A-7 4.9 lbs B-5 6.7 lbs B-1 8.0 lbs	A-7 6 lbs B-7 7.7 lbs A-2 8.8 lbs B-1 10.6 lbs
20 TOOTH LEFT SIDE	**20 TOOTH LEFT SIDE**	**20 TOOTH LEFT SIDE**	**20 TOOTH LEFT SIDE**
A-7 6.7 lbs B-7 7.6 lbs A-2 8.7 lbs B-1 10.4 lbs	A-7 9.1 lbs A-5 10.0 lbs B-6 11.0 lbs B-4 12.0 lbs B-1 14.0 lbs	A-5 9.8 lbs B-5 11.0 lbs B-2 12.9 lbs	B-6 12 lbs B-2 14 lbs
		30 TOOTH LEFT SIDE	**30 TOOTH LEFT SIDE**
		B-7 15.0 lbs A-3 18.0 lbs A-1 20.0 lbs	A-6 16.0 lbs A-1 21.0 lbs B-1 23.5 lbs

GRASS SEED REDUCTION PLANTING

(Continued)

MUSTARD	BAHIA	CLOVER	
		60 lbs. BU.	
20 TOOTH LEFT SIDE A-7 6.0 lbs A-3 7.5 lbs B-2 10.0 lbs 30 TOOTH LEFT SIDE B-5 12.0 lbs B-2 14.0 lbs	12 TOOTH LEFT SIDE A-7 3.0 lbs B-1 4.8 lbs 20 TOOTH LEFT SIDE B-1 8.0 lbs 30 TOOTH LEFT SIDE B-1 12.0 lbs NO GRASS REDUCTION 12 TOOTH LEFT SIDE A-7 20.0 lbs A-1 30.0 lbs 20 TOOTH LEFT SIDE A-5 40.0 lbs	12 TOOTH LEFT SIDE A-7 6.0 lbs B-7 7.6 lbs B-4 8.8 lbs B-1 10.5 lbs 20 TOOTH LEFT SIDE A-5 12.3 lbs B-5 14.0 lbs B-1 17.0 lbs	

ROW CROP PLANTING

Any seed which will feed thru the seed cup may be row planted on spacing divisible by 6". If drill is equipped with 6" spacing or 24 runs it is not necessary to remove any runs. To close off th seed cup, remove the half cover from the top of cup and tape over the entire cup with duct tape.

To remove down pressure on disc openers, force the square slide block out of the compressor plates, remove the block and spring by pulling cotter. Pressure rod does not have to be removed

Runs may be tied up at the back or left down to roll on the ground.

To stop fertilizer flow on some runs, remove the spring clips which hold the fertilizer shaft bearings in place. The 3 long fertilizer feed shafts may be lifted out. Slide the feed wheels sideway so they are between the outlet slots.

Unless noted otherwise, seed rates are calibrated at 6" row spacing. If wider spacing is used, the feed rate must be increased to apply the proper pounds or seeds per acre.

EXAMPLE:
You want to seed 42 lbs. of wheat at 12" row spacing see page 7. 42 lbs. at 6" row spacing th setting is left side of cup. 12 tooth, B-1 See page 6. 12 tooth B-1 is 7.9 R.P.M. to double this amour the setting would be 30 tooth B-5.

SOYBEAN CALIBRATION

A 12 foot drill travels 3630 feet to seed 1 acre. Seeding rate charts will vary depending on bean count per pound. Set the rate according to the chart and opener spacing (6"-12" or 18") beinn used. Seed a test strip at the ground speed you intend to travel.

Measure off 10 feet of a seeded row and dig up and count the beans. Do this in several seeded rows.

EXAMPLE:

You find 22 beans in 10 feet of one row, 18 beans in 10 feet of another row, Average is 20 beans per 10 foot of seeded row.

3630 Feed (1 acre) times 24 runs (6" spacing) equals 87120 feet (total seeded in 1 acre, divided by 10 (length of row dug up) times 20 (average number of beans in 10 feet) Equals = 174,240 beans per acre.

3630 x 24 = 87120 ÷ 10 = 8712 x 20 = 174240
8712 x 18 (beans in 10 feet) = 156816
8712 x 16 (beans in 10 feet) = 139392

Sunflower or any other large seed which will pass thru the seed cup are calibrated the sam way as soybeans. The important requirement is to know the desired average number of kernels i 10 feet of seeded row. This method is more accurate than using pounds or bushels per acre.

SOYBEANS AND SUNFLOWERS

Test strip seeding to check seed count should be done on a roadway with no trash or grass. Remove the 2 hairpins which lift the drive roller and set the down pressure for shallow penetration.

LARGE SOYBEANS	SMALL SOYBEANS	SUNFLOWERS
Large side of cup No grass reduction 6" Rows B-1 12 tooth spkt (7.9 RPM page 6) 12" Rows B-7 30 tooth (14.4 RPM) 18" Rows B-2 30 tooth (18.7 RPM) Approx. 1 Bu. A.	Small side of cup No grass reduction 6" Rows B-6 30 tooth spkt (15.1 RPM page 6) Approx. 1 Bu. A.	Small side of cup No grass reduction 24" Rows B-1 12 tooth spkt (7.9 RPM page 6)

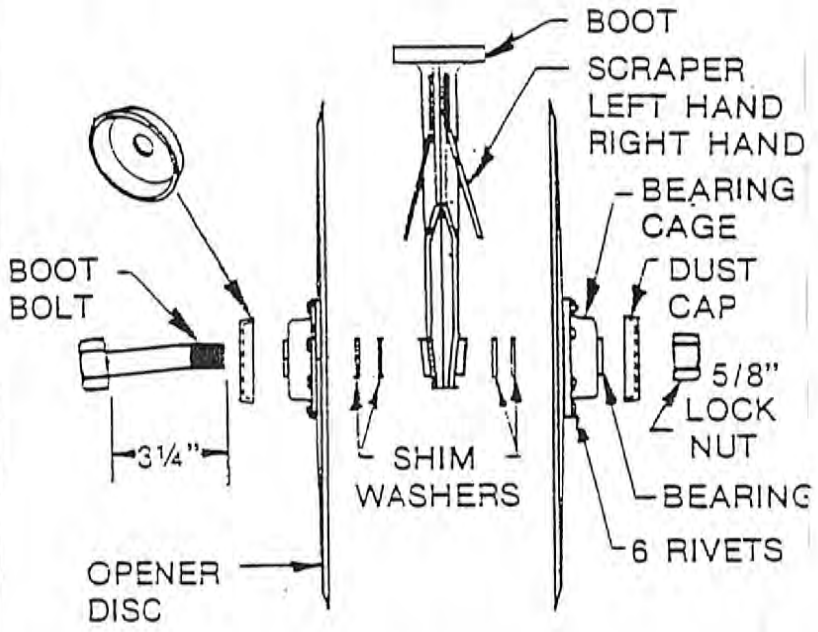
MICRO SEEDER
DISC OPENER ASSEMBLY

The boot bolt is bent to develop the correct opener angle.

Assemble parts as shown.

Snug up lock nut, then rotate bolt until it seats at the correct angle. Hold bolt head with wrench and tighten nut. TIGHT.

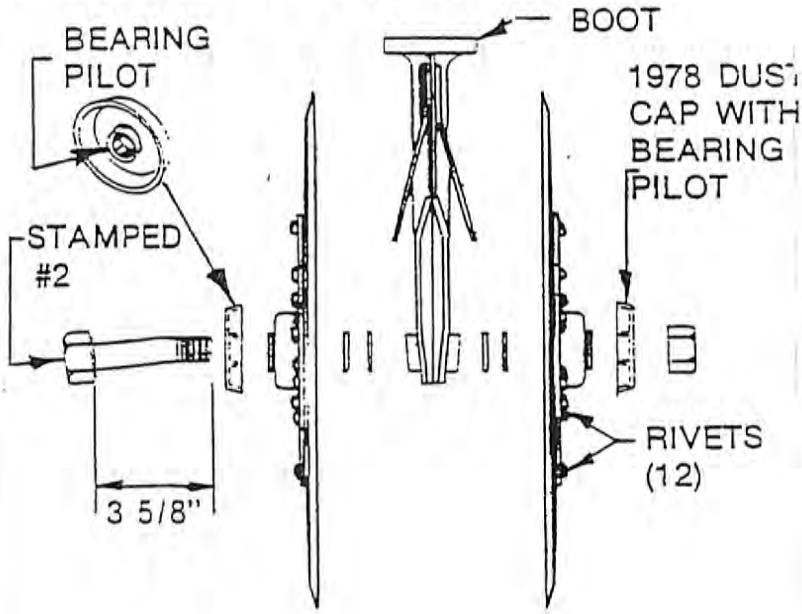
6 RIVET BEARING CAGE USED ON 1977 DRILL



The 12 rivet discs may be installed on the 1977 drill boot by using the longer #2 boot bolt, the "78" dust cap, and five shim washers on each side.

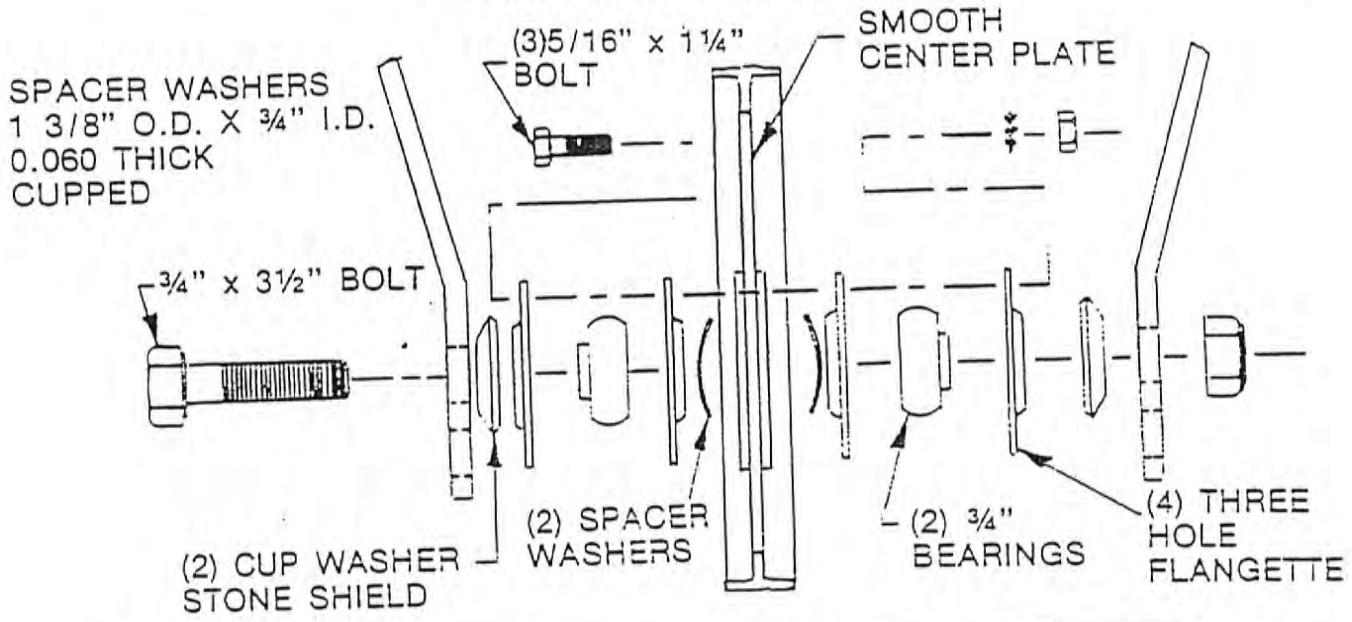
As discs wear shim washers may be removed to close opener discs in front.

12 RIVET BEARING CAGE USED ON 1978 DRILL & LATER

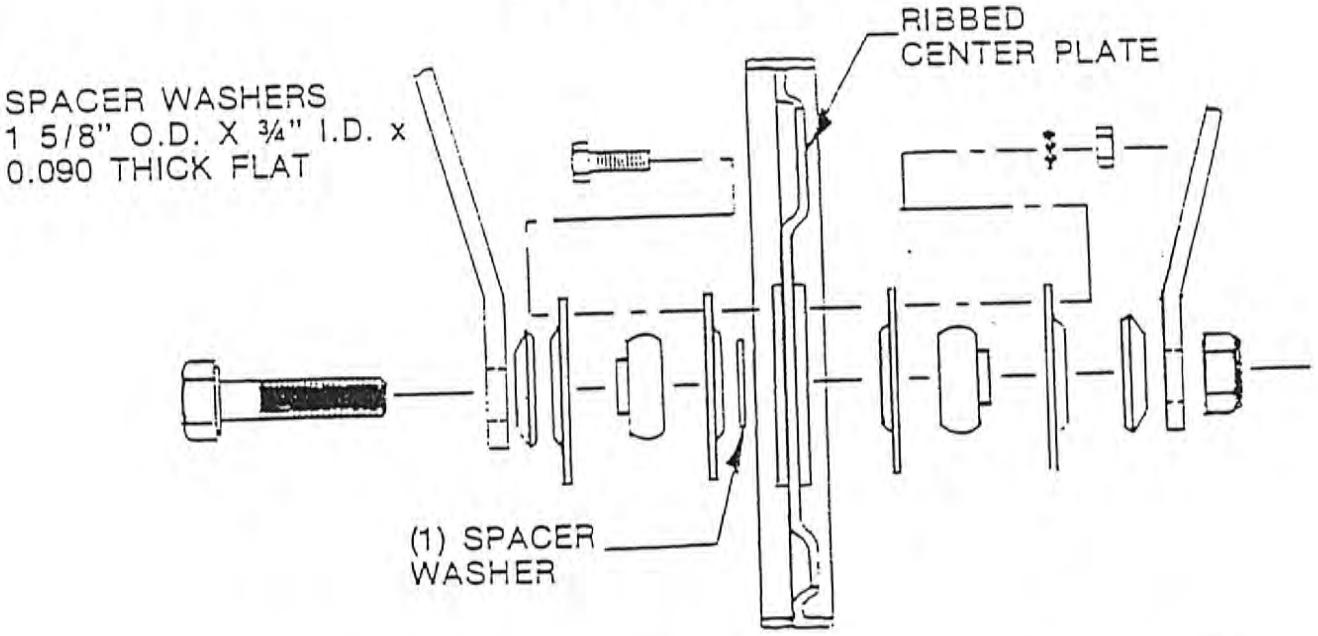


MICRO SEEDER
PRESS WHEEL ASSEMBLY

1977 PRESS WHEEL

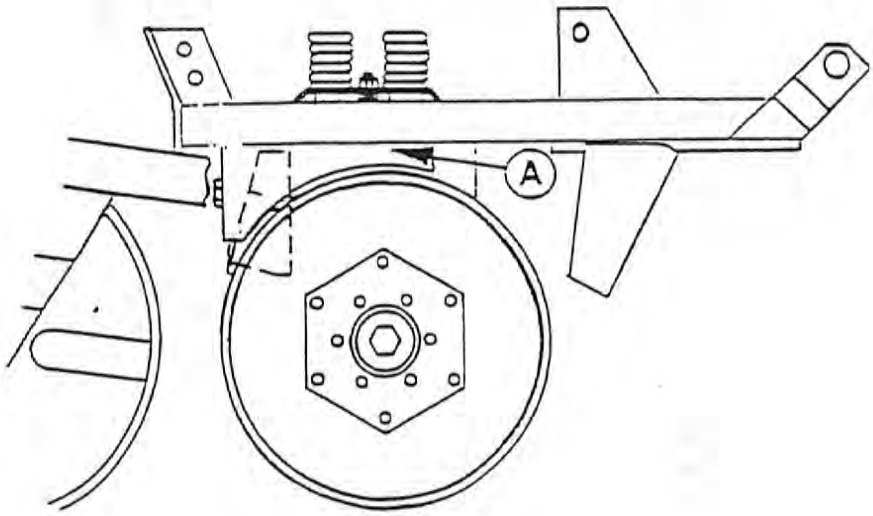


1978 AND LATER

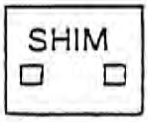


BOTH OF THESE PRESS WHEELS ARE INTERCHANGEABLE EXCEPT FOR SPACER WASHER BETWEEN THE BEARINGS.

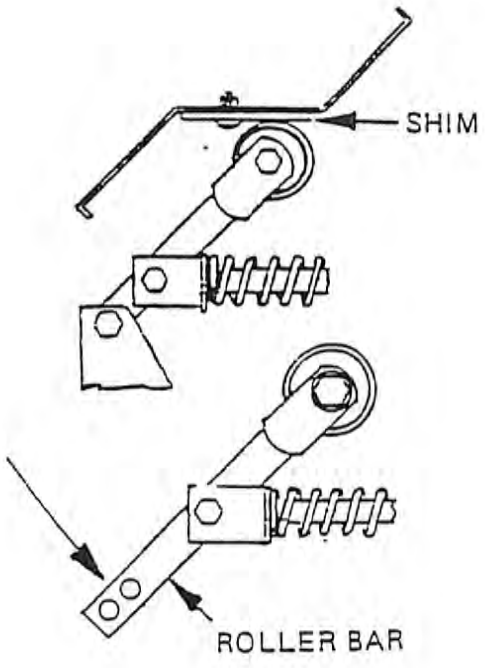
In some fields small stones may be thrown forward by the press wheels. These stones can fall down between the boot and opener disc and stop the disc from turning. Stone shields A. a factory installed and cover this opening. They should not touch the disc.

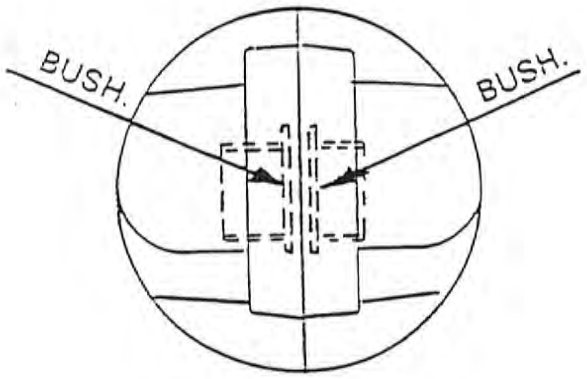


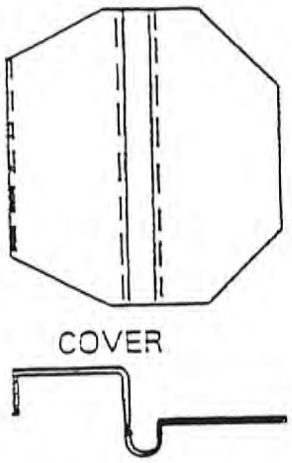
Roller plate shims may be installed where wheel tracks are a problem. Use carriage bolts with nut on top.



Roller bar has 2 lower holes. Drills are assembled using lower hole for deeper penetration in firm soil. These may be changed if required.



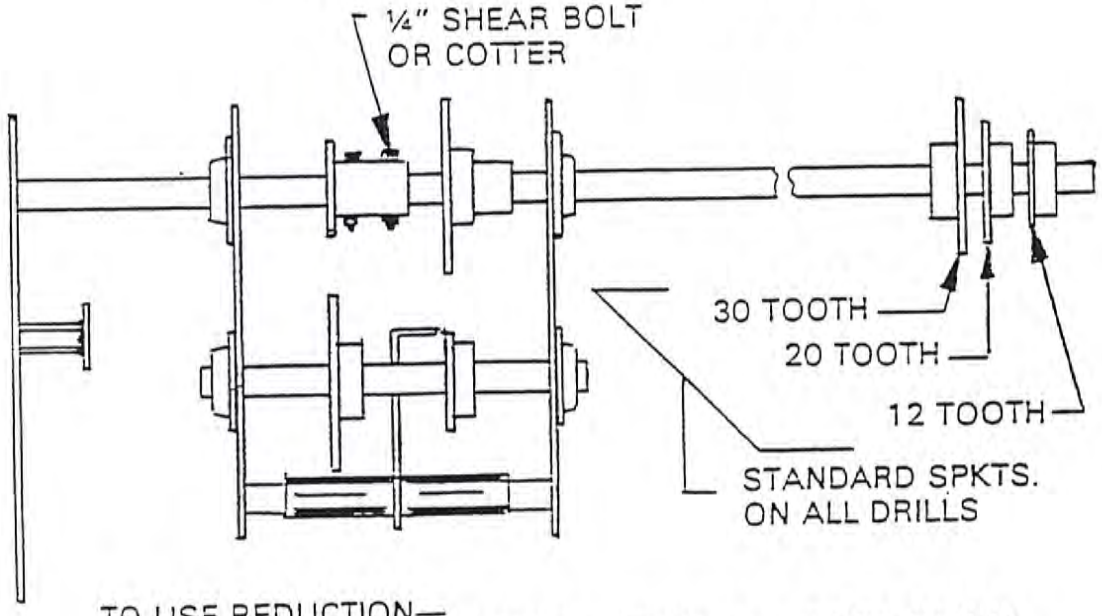




Feed cup bushings may gradually build up with dirt. This buildup causes the cup wheel to turn hard. This can cause a side pressure and wear on the side of the seed wheel. Some dirt comes from the seed and some may be blown in while seeding.

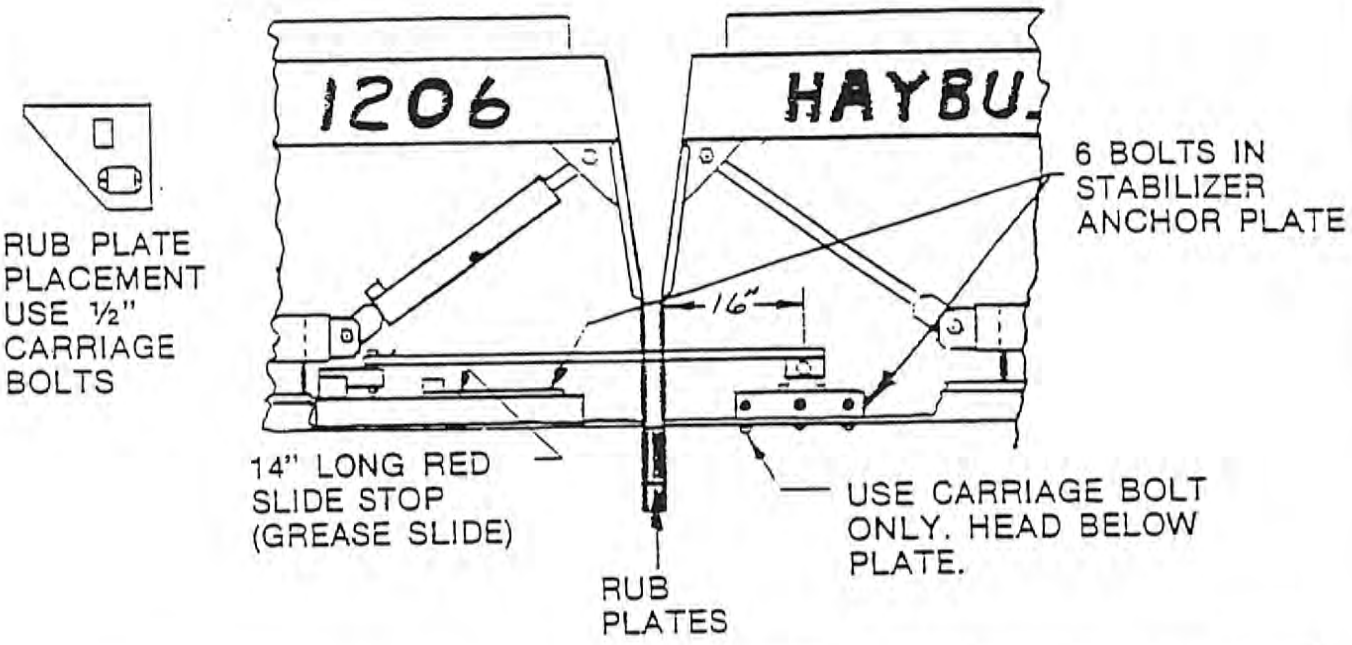
To correct this condition, remove the red cover and apply diesel fuel to both bushings with a pump can. Pull the drill with cups turning for several minutes. Repeat until feed wheels turn free.

GRASS SEED REDUCTION

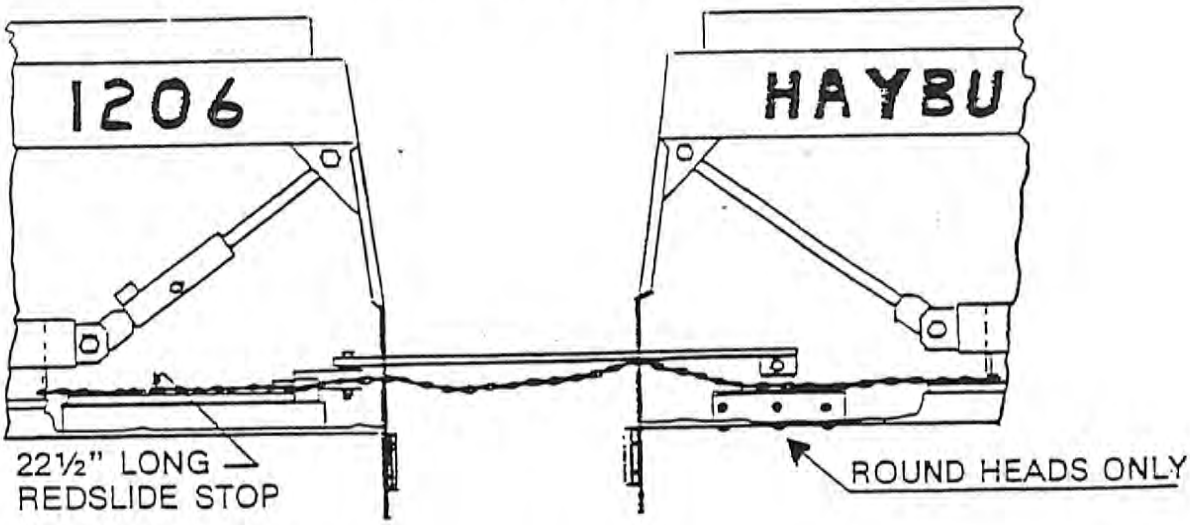


TO USE REDUCTION—
REMOVE ¼" SHEAR BOLT AND INSTALL BOTH CHAINS.
TO BYPASS REDUCTION—
INSTALL ¼" SHEAR BOLT AND REMOVE ONE CHAIN.

MICRO SEEDER
STABILIZER BAR INSTALLATION
FIELD POSITION



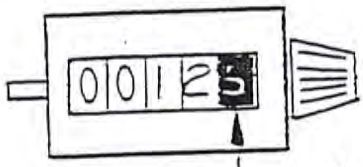
TRANSPORT POSITION

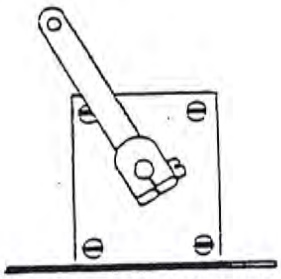


WARNING
Do Not Install Any Bolts Thru Roller Plate With Nuts On Bottom Side.

MICRO SEEDER DRILL

ACRE COUNTER INSTALLATION





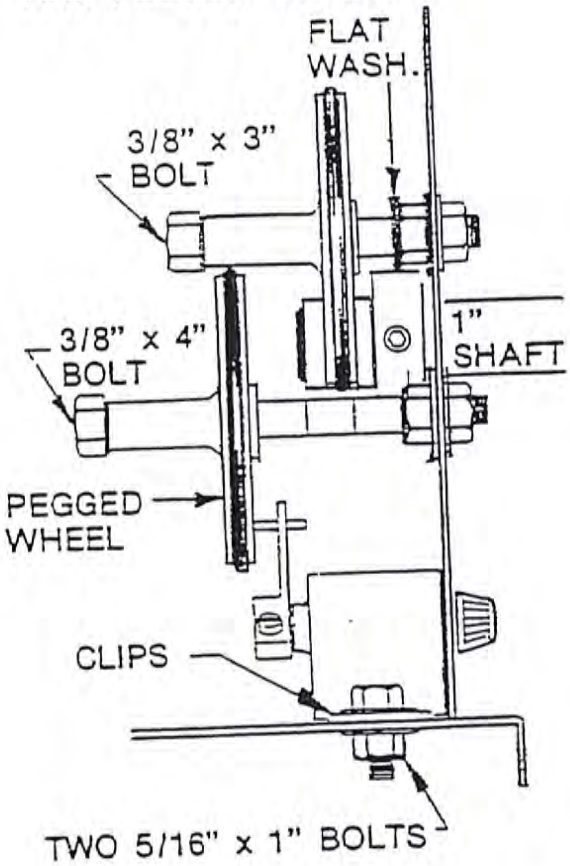
1. INSTALL COUNTER ARM AS SHOWN

THIS DIGIT IS 10ths
COUNTER READS 12½ ACRES

CENTER PUNCH AROUND SHAFT

2. INSTALL THIN WALL SLEEVE ON 1" SHAFT. CENTER PUNCH END OF SHAFT TO LOCK IN PLACE.

5. INSTALL 3/8" x 3" BOLT AND SPACER AS SHOWN. SLIDE DOWN IN SLOT. MUST TOUCH BOTH 1" SHAFT AND PEGGED WHEEL.



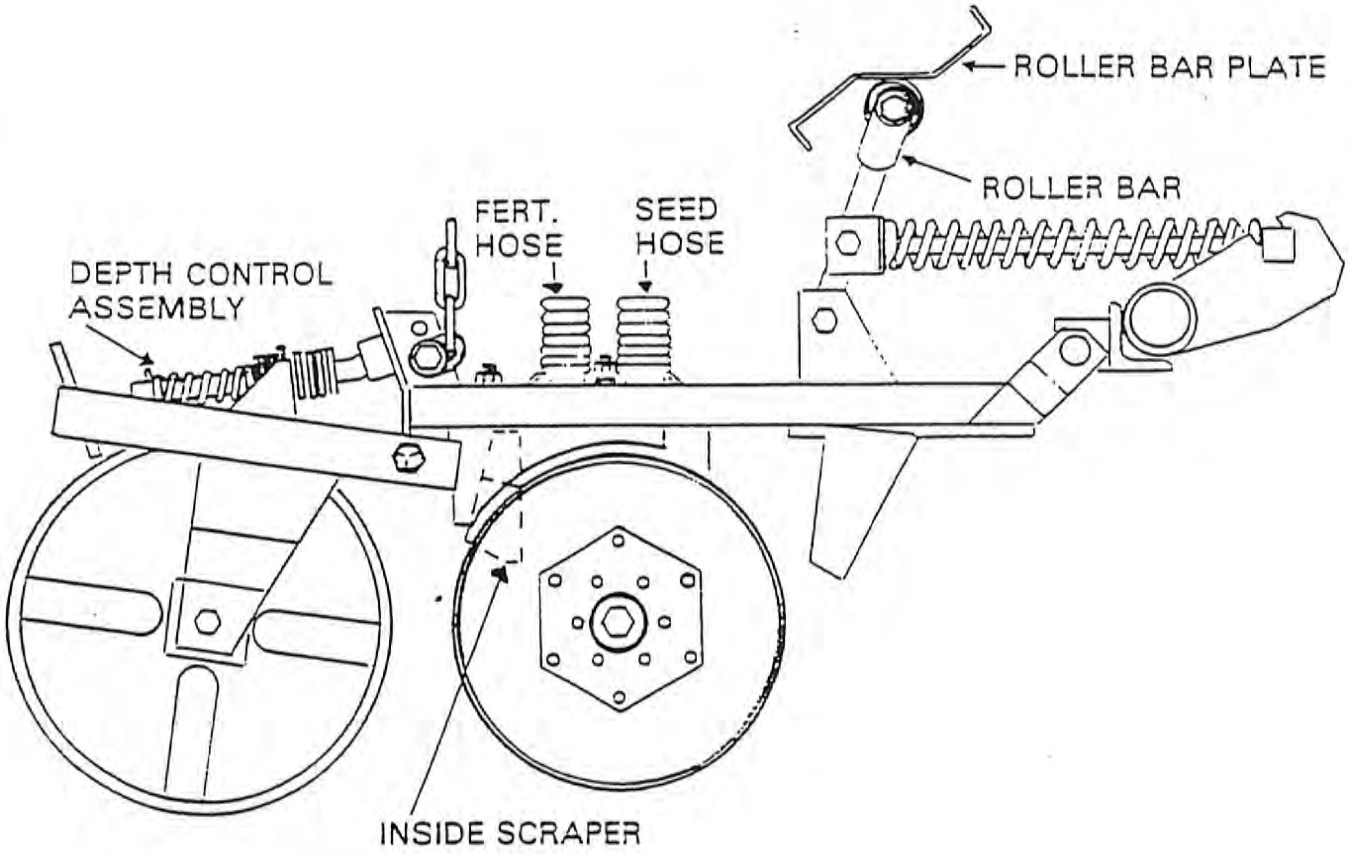
3. INSTALL 4" BOLT AND PEGGED WHEEL WITH 3 SPACERS AS SHOWN (Hole FOR BOLT MAY REQUIRE FILING TO ALLOW ADJUSTMENT OF WHEEL)

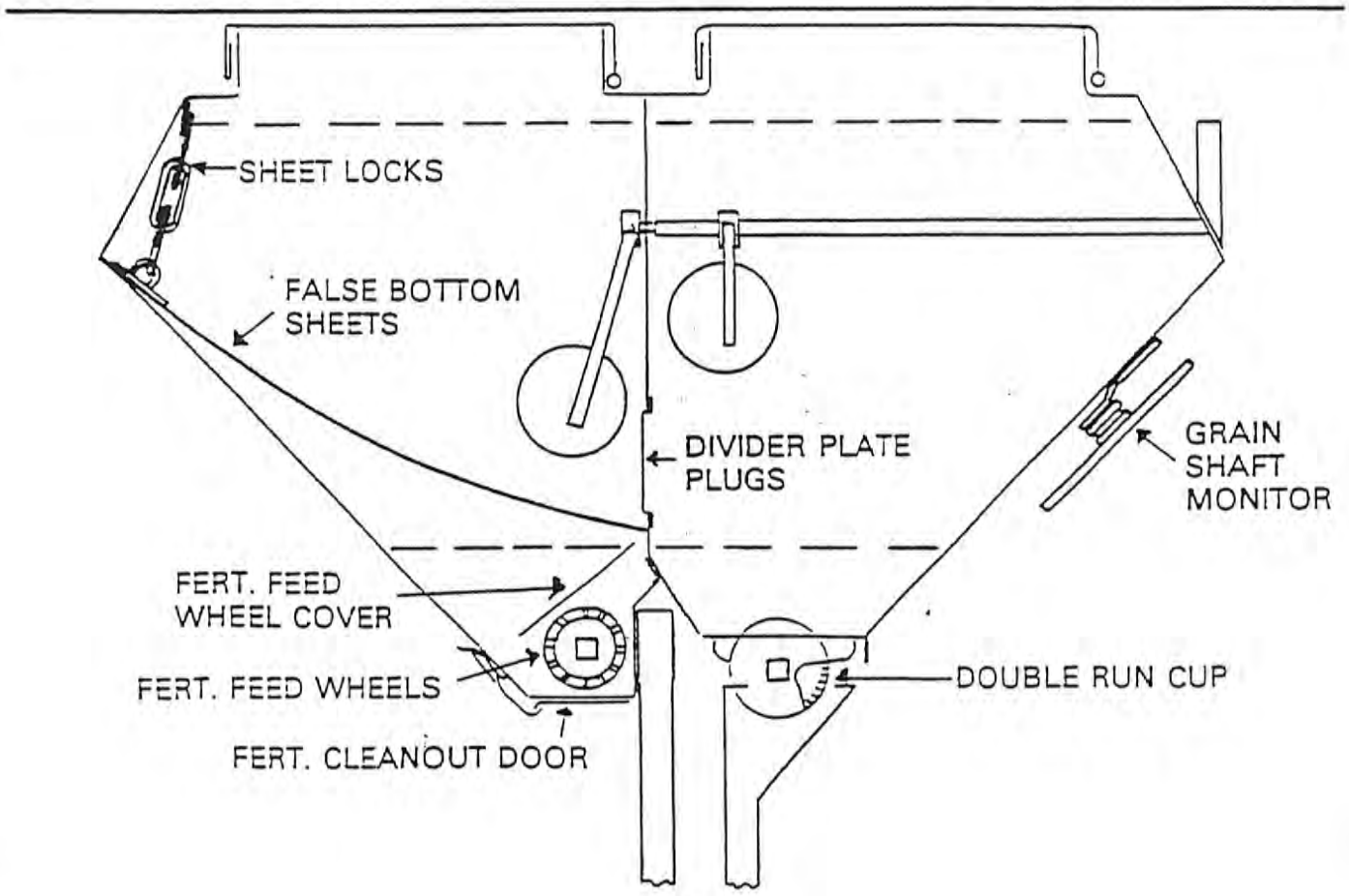
4. BOLT COUNTER WITH CLIPS. WHEEL WITH PEG, MUST TRIP COUNTER PROPERLY. CHECK BY ROTATING WHEEL.

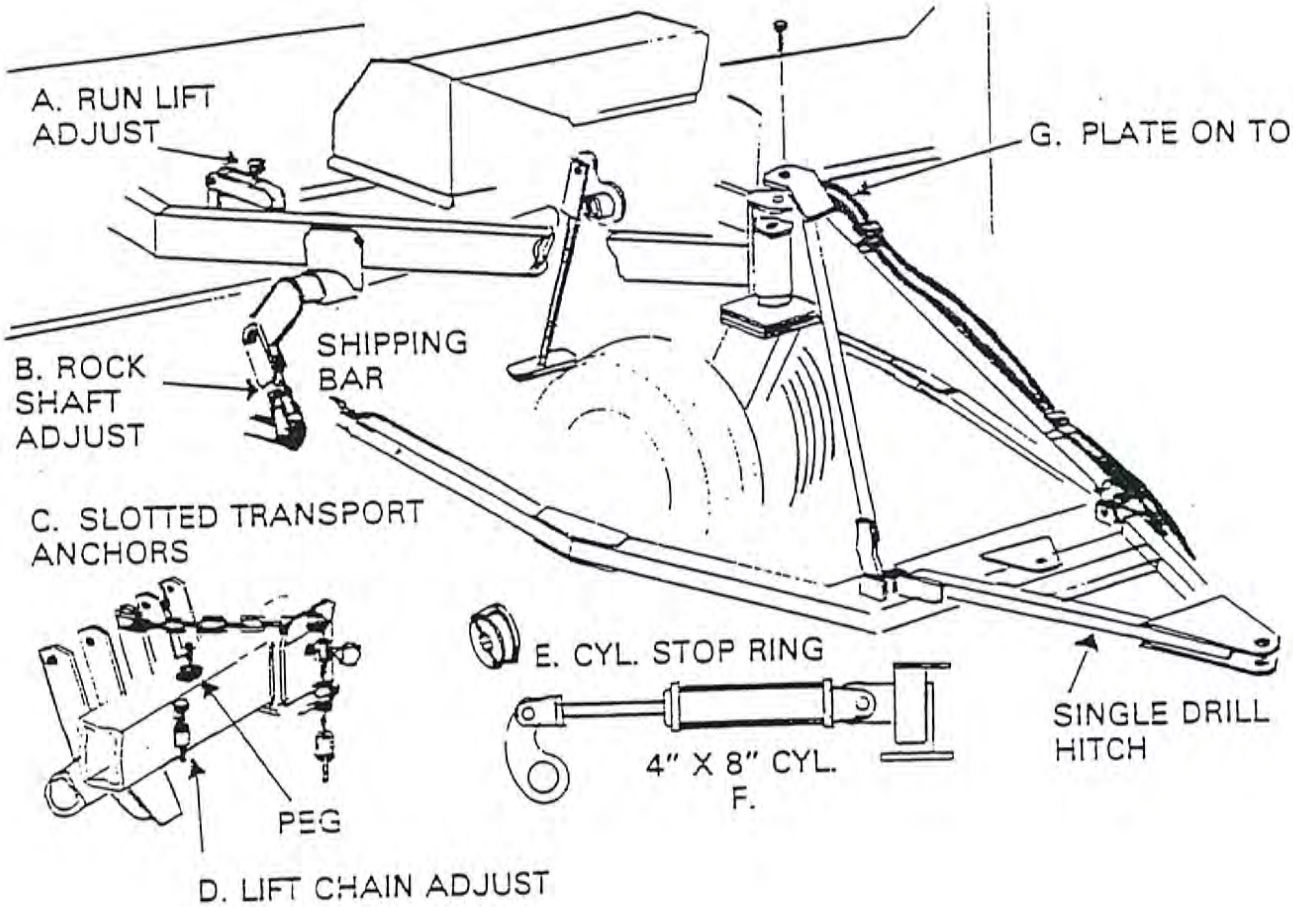
6. CAUTION: DO NOT PRESS RUBBER RING DOWN FLAT. SET ONLY TIGHT ENOUGH TO TRIP COUNTER.

7. INSTALL SHIELD WITH (2) TWO 5/16" X 1" BOLTS.

FRONT VIEW OF REDUCTION UNIT


ROLLER BAR PLATE
ROLLER BAR
FERT. HOSE
SEED HOSE
DEPTH CONTROL ASSEMBLY
INSIDE SCRAPER


SHEET LOCKS
FALSE BOTTOM SHEETS
DIVIDER PLATE PLUGS
GRAIN SHAFT MONITOR
FERT. FEED WHEEL COVER
FERT. FEED WHEELS
FERT. CLEANOUT DOOR
DOUBLE RUN CUP



A. 2 per drill. Used to adjust the height runs lift off ground.

B. Correct setting is 13" center to center on pins.

C. Release before lowering runs. Use to transport endways or without cylinder.

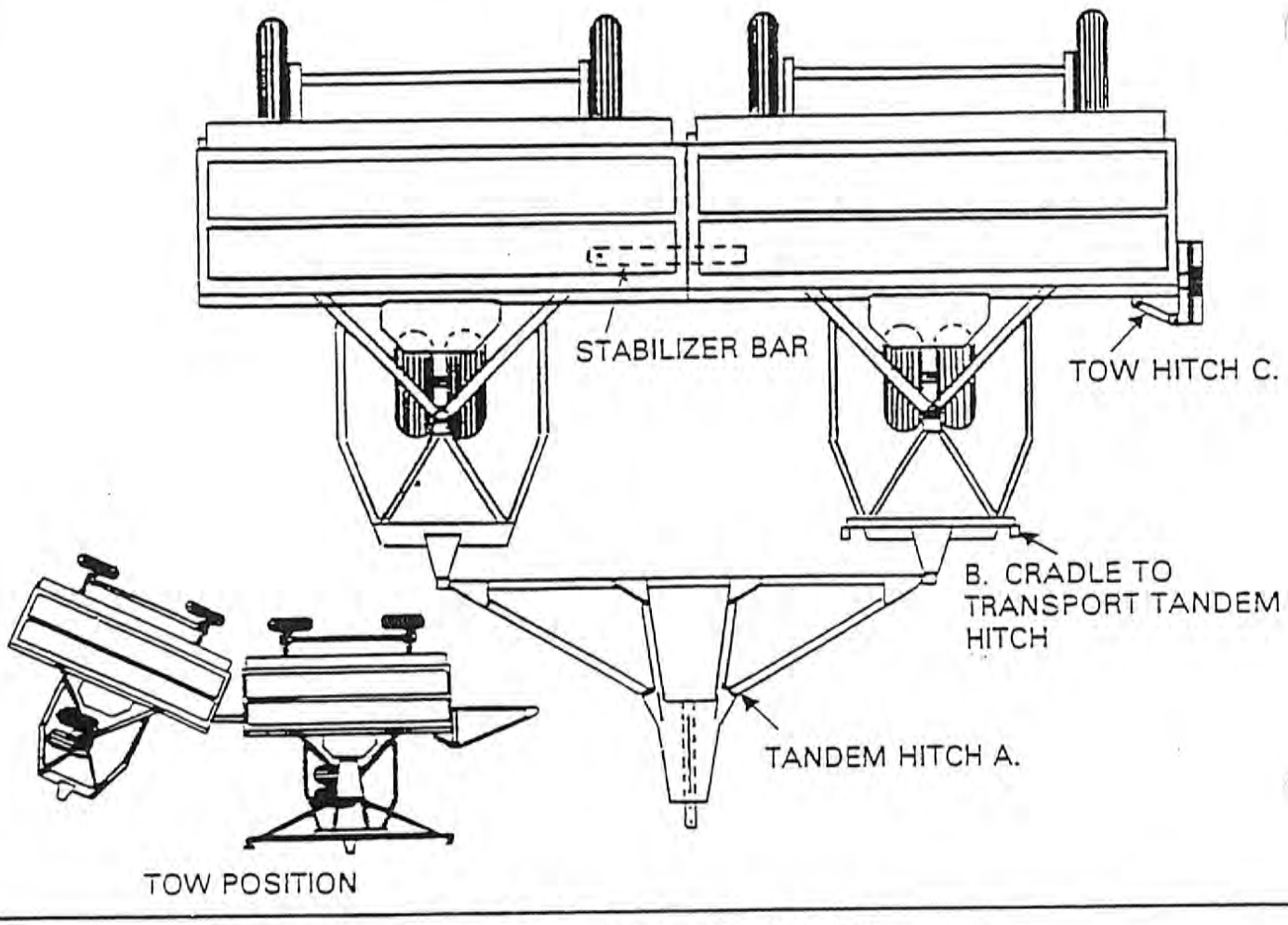
D. With openers at seeding depth, lift chains should hang loose.

E. A set of cyl. stop rings allows the cyl. to be stopped at any stroke length.

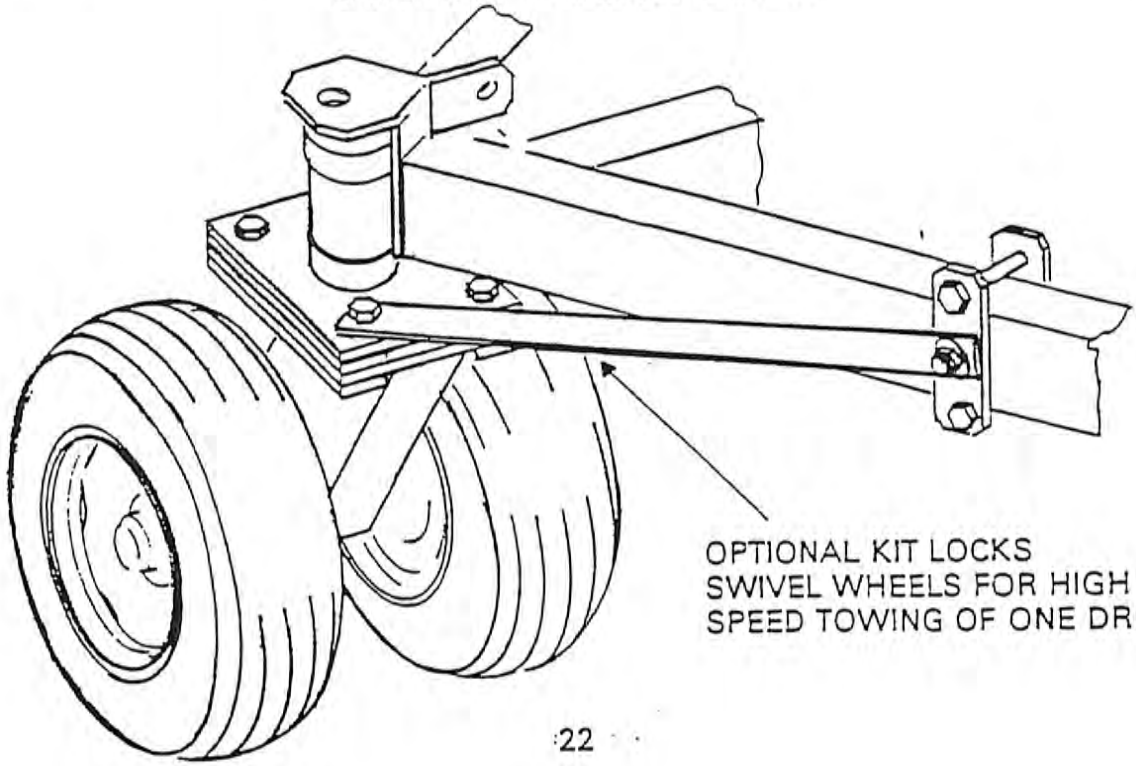
F. Most tractors require a 4" x 8" stroke cyl. center to center closed length on pins is 20¼".

G. Assemble "V" brace with plate on top.

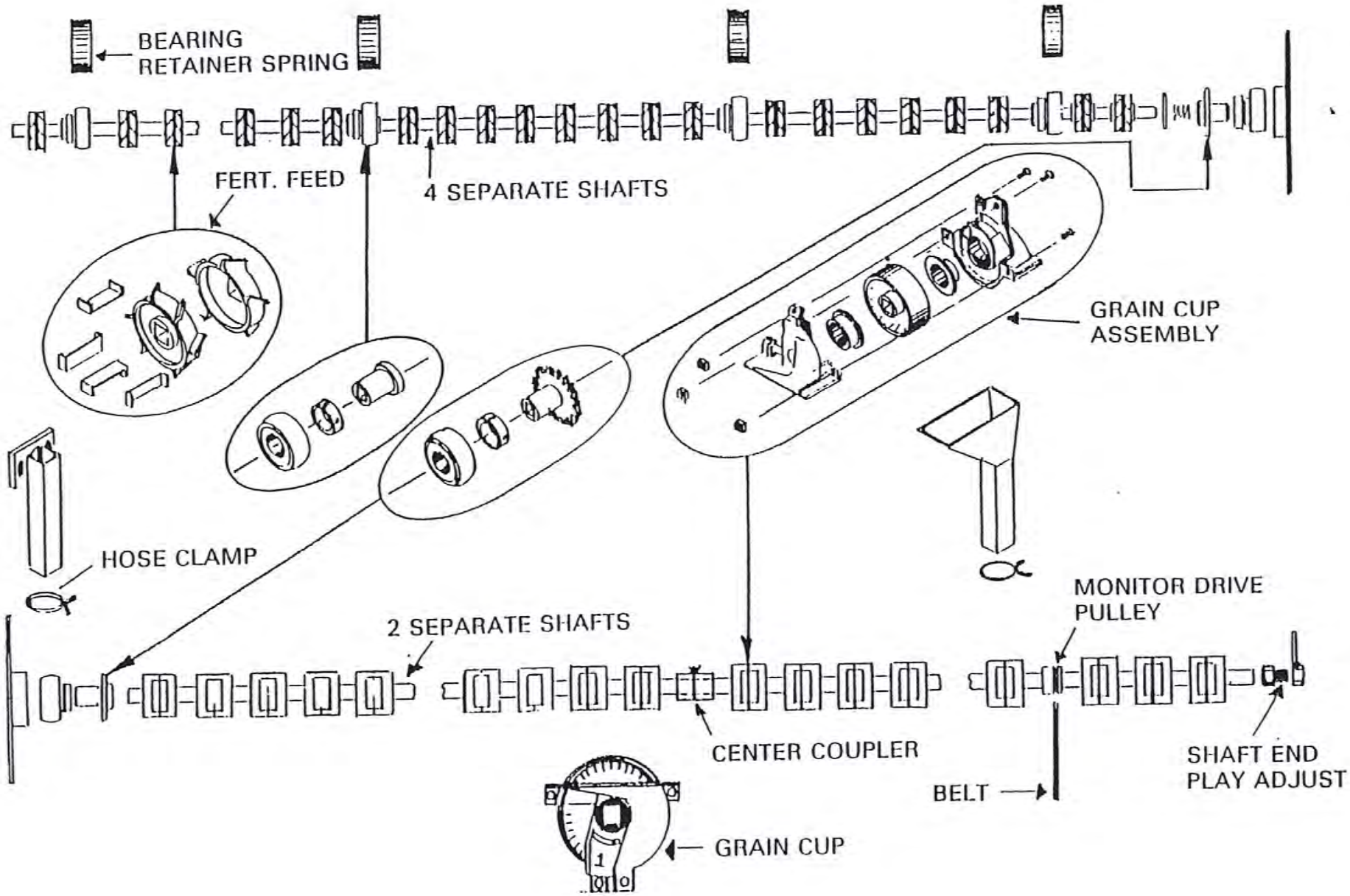
TWO DRILL HITCH



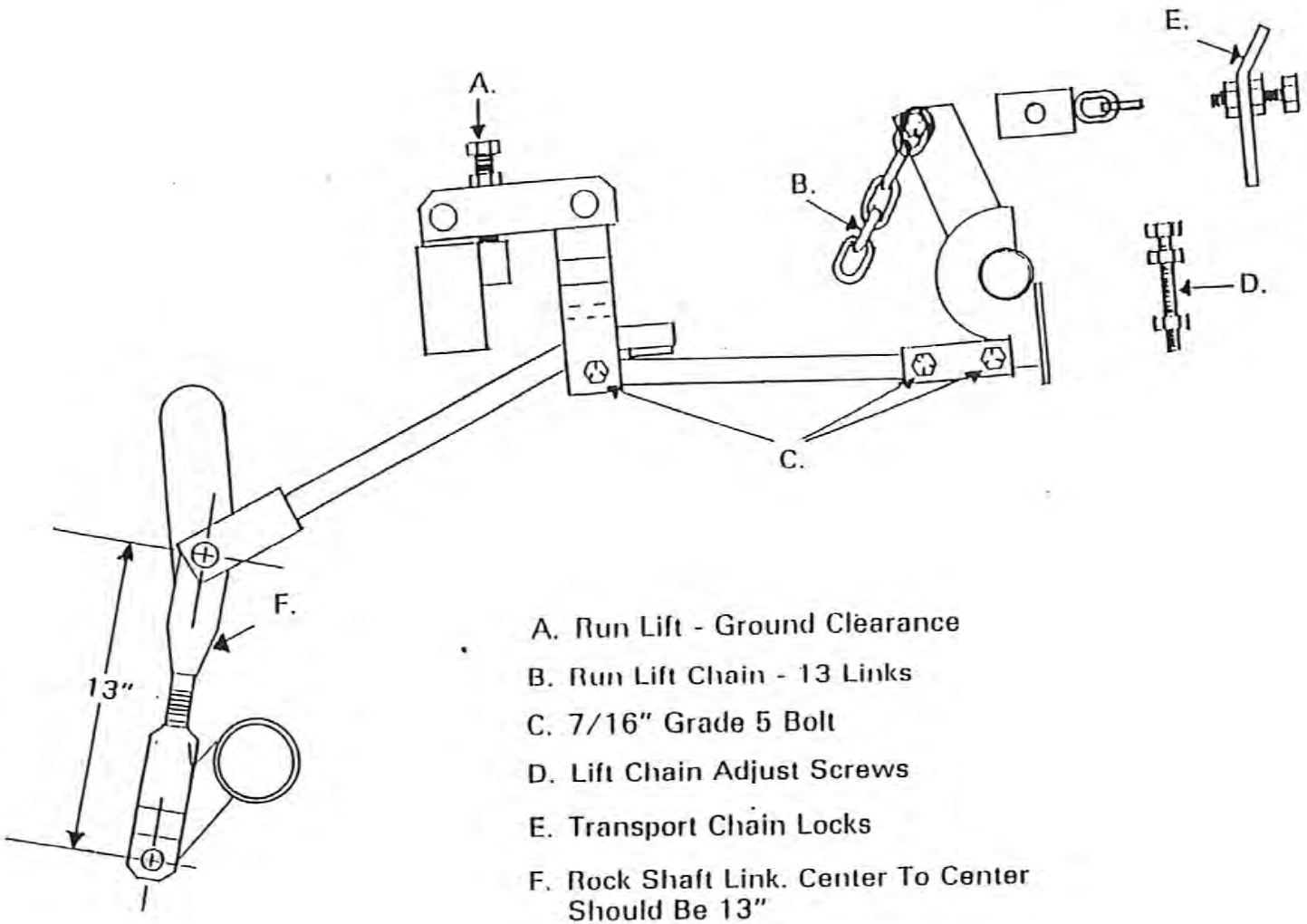
SWIVEL WHEEL LOCK



FERTILIZER & GRAIN FEED ASSEMBLY



RUN LIFT ASSEMBLY



A. Run Lift - Ground Clearance

B. Run Lift Chain - 13 Links

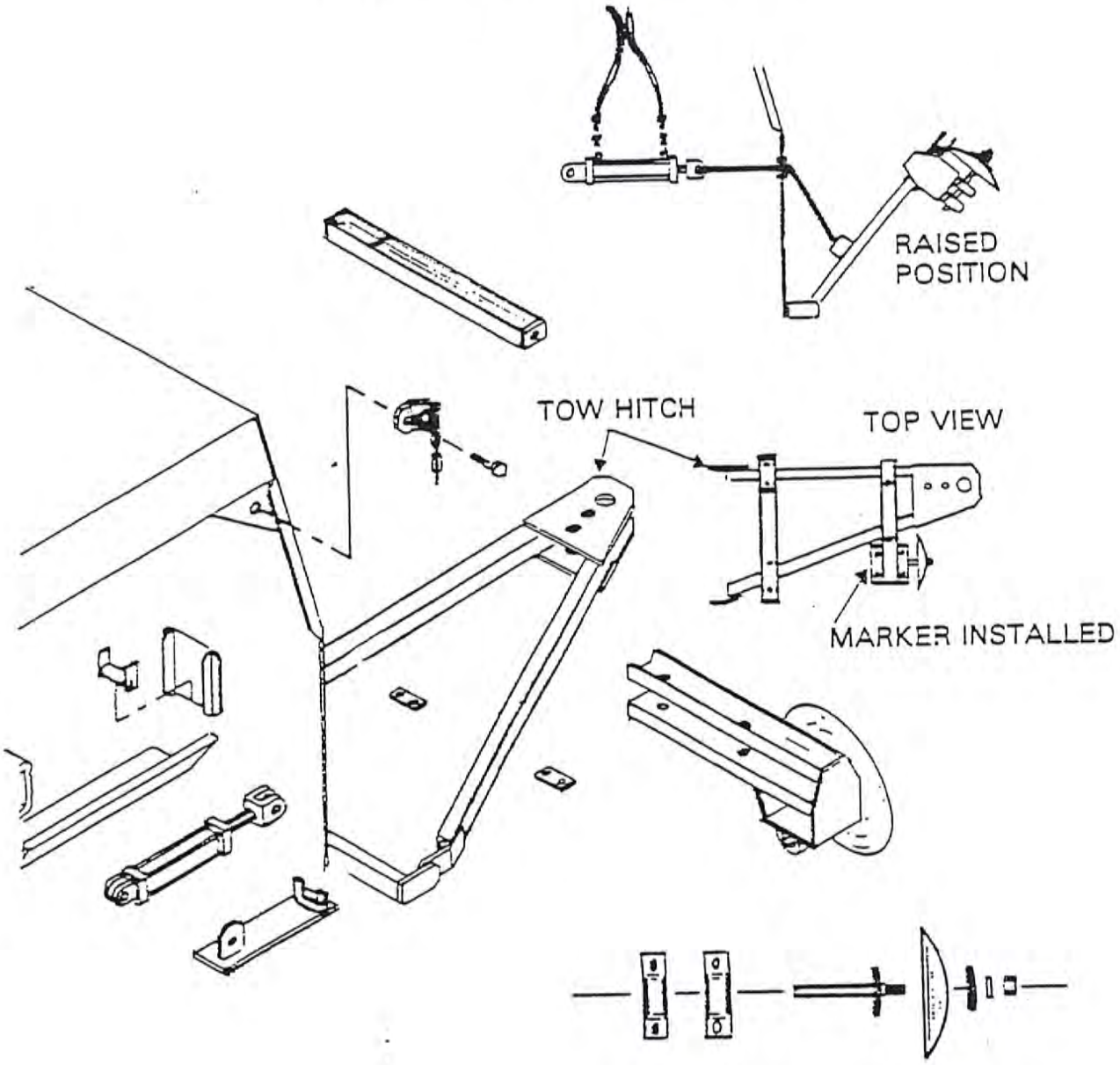
C. 7/16" Grade 5 Bolt

D. Lift Chain Adjust Screws

E. Transport Chain Locks

F. Rock Shaft Link. Center To Center Should Be 13"

SINGLE DRILL MARKER - MANUAL OR HYDRAULIC

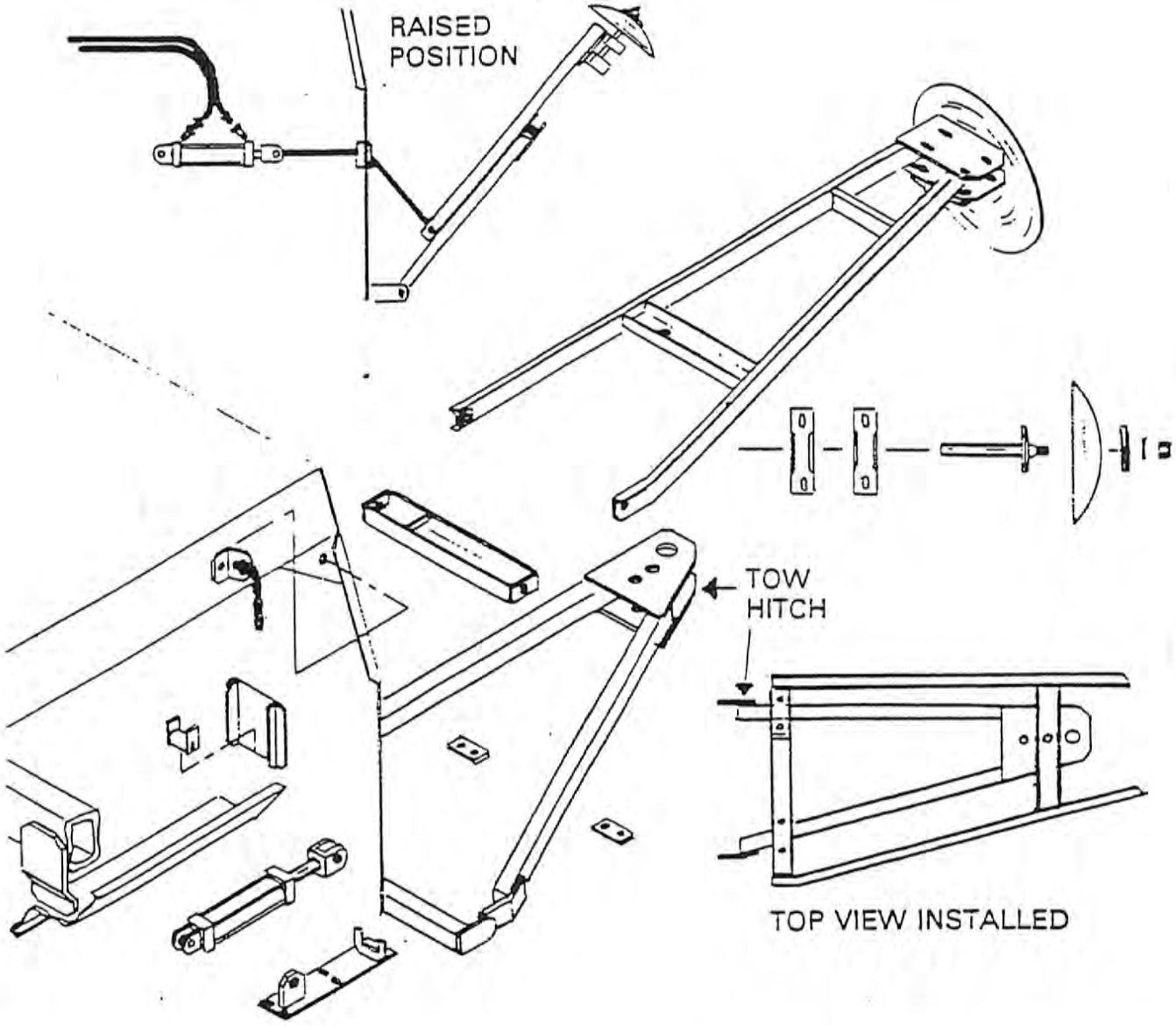


The single drill marker is mounted on a standard tow hitch. Bolt marker assembly as shown in top view and adjust blade angle to get desired cutting action. Tow hitch and marker may be installed on either end of drill. Remove disc and bearings and bolt on other side of channels. Install chain tie up clip on tank corner brace bolt.

Bolt hydraulic cylinder bracket in with carriage bolts only. Ram should not extend through end plate when ram is fully extended. Adjust cable so marker will cut with ram fully extended. It will then lift about 45 degrees.

NOTE: An extra tow hitch is required to install a marker at both ends of a single drill.

TANDEM DRILL MARKER - MANUAL OR HYDRAULIC



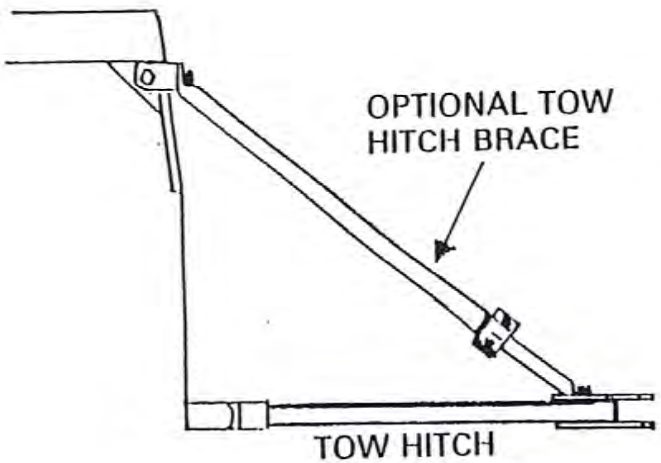
The tandem drill marker is mounted on a tow hitch. Bolt marker assembly as shown in top view and adjust blade angle to get desired cutting action. Tow hitch and marker may be installed on either end of drill. Remove disc and bearings and bolt on opposite bearing plate. Install chain tie up clip on tank corner brace bolt.

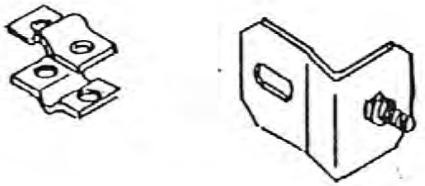
Bolt hydraulic cylinder bracket in with carriage bolts only. Ram should not extend through end plate when ram is extended. Adjust cable so marker will cut with ram fully extended. It will then lift to about 45 degrees.

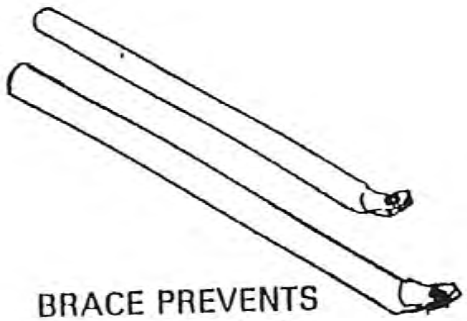
To transport endways, remove the 1 bolt by the hitch pin hole and chain the marker up.

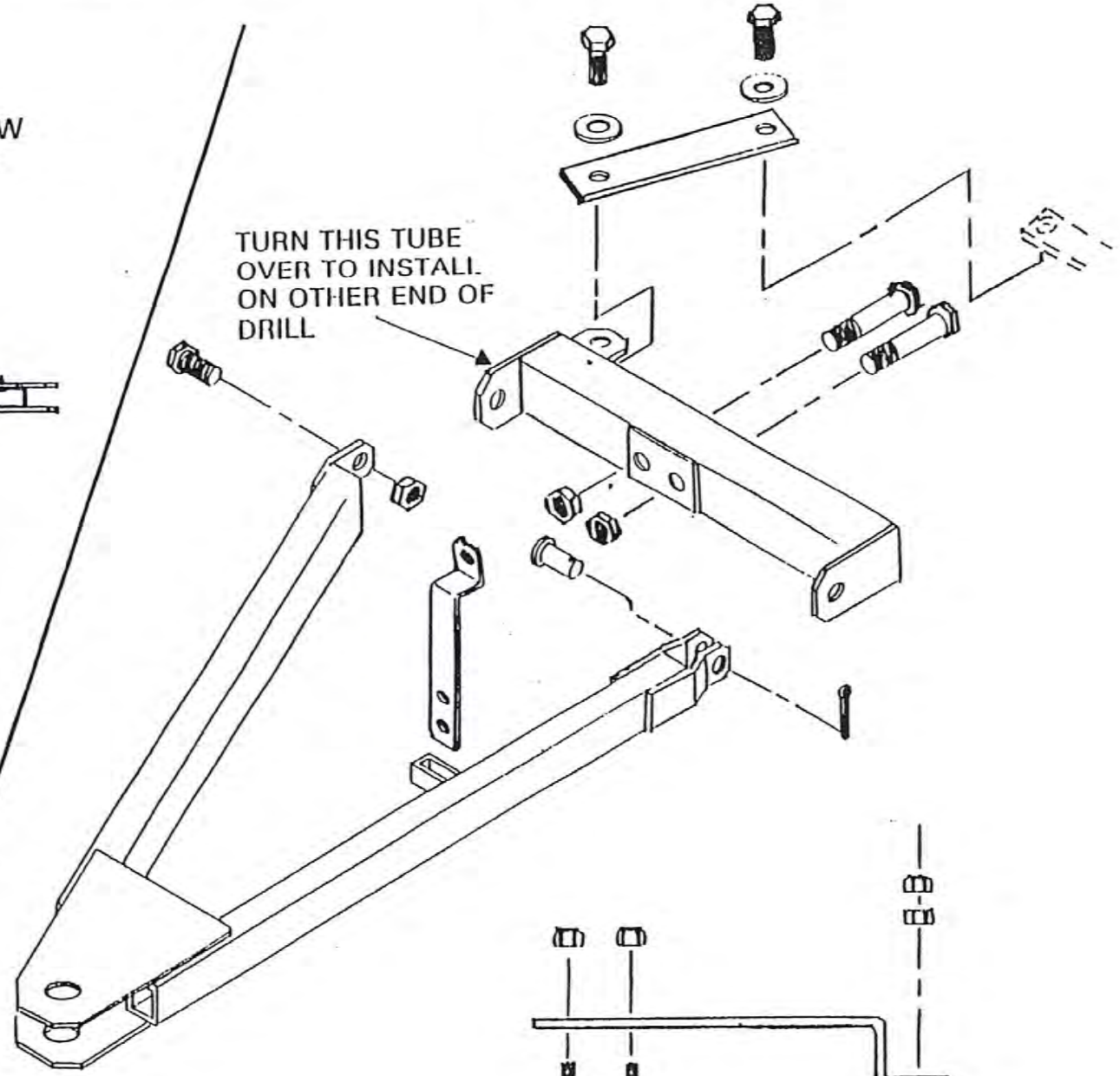
NOTE: An extra tow hitch is required to install a marker at both ends of a tandem drill se

TOW HITCH ASSEMBLY

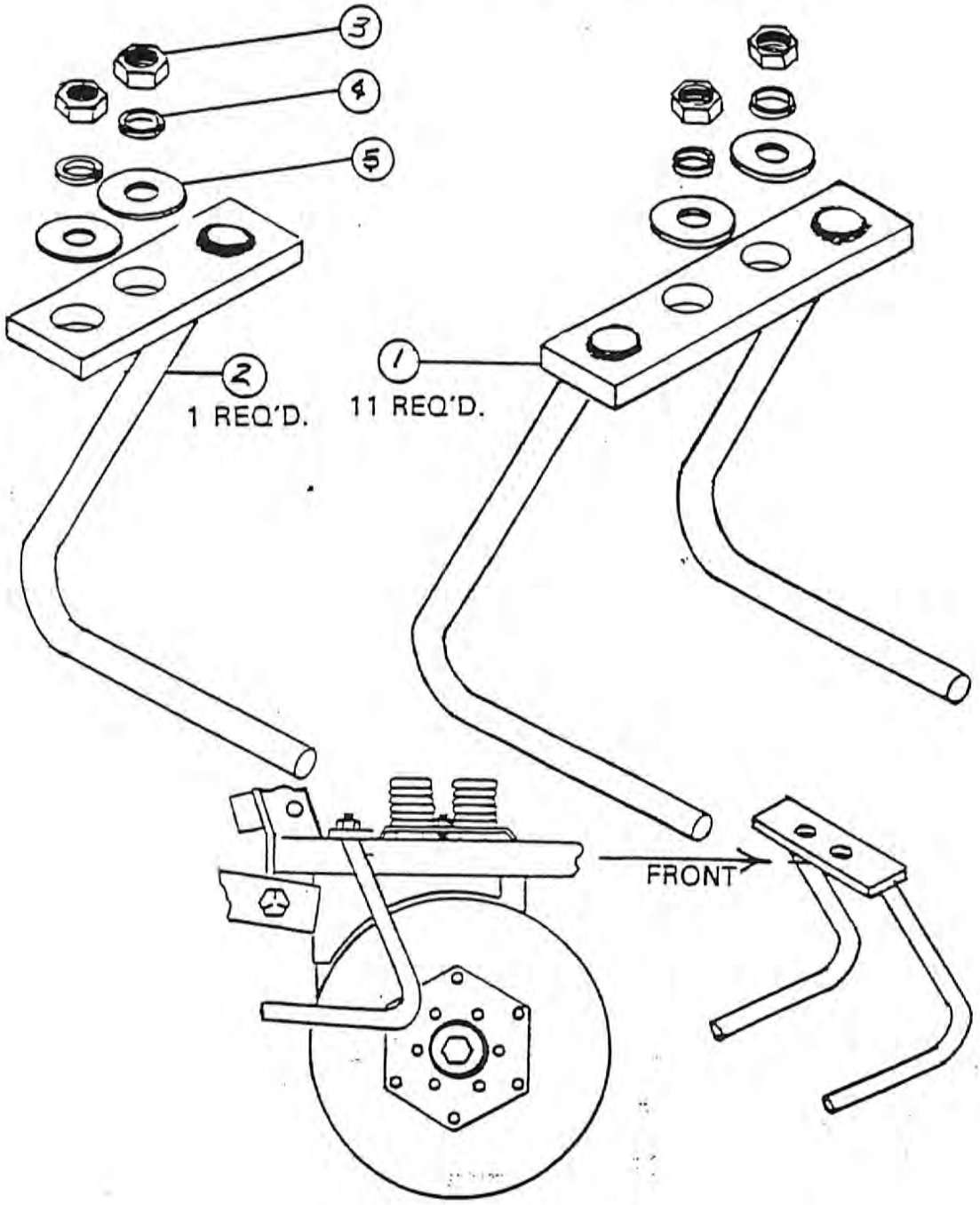








OPTIONAL ROCK BAR KIT



Surface rocks of 4" to 6" diameter may jam between the discs preventing their rotation. This kit will insure that these rocks pass through.

INSTALL ROCK BARS ON SHORT RUNS ONLY.

SINGLE ROD BAR GOES ON LEFT END OF DRILL.