



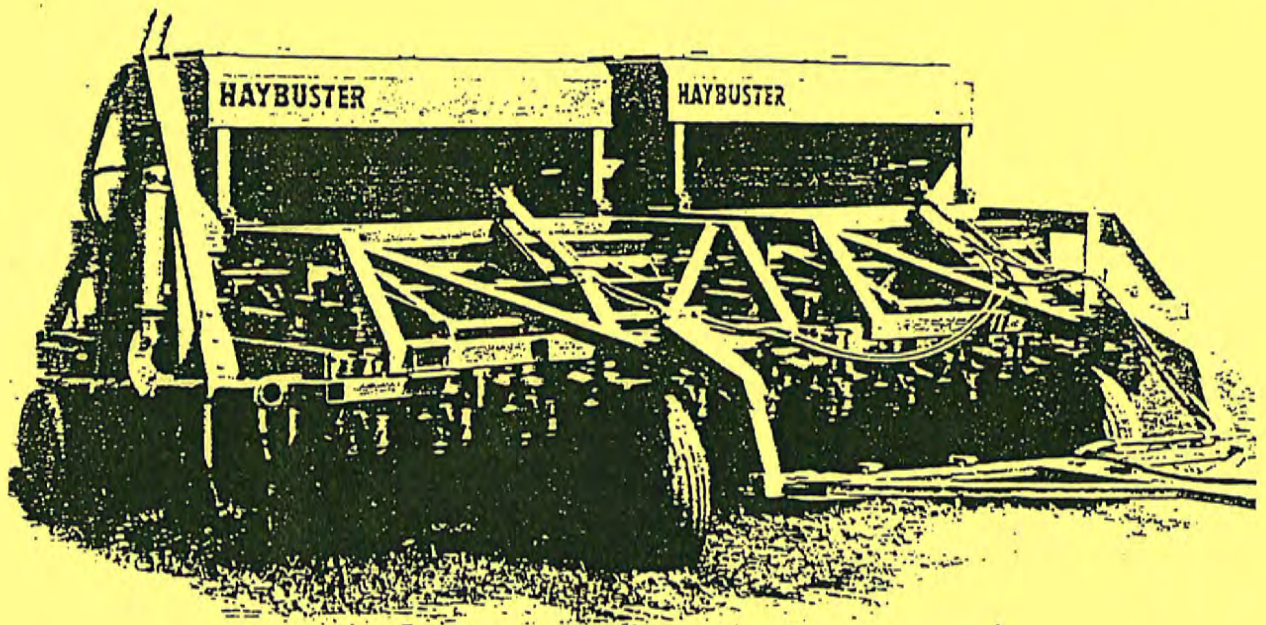
DURATECH

formerly

HAYBUSTER

8000 SERIES

FERTILIZER-BANDING HOE DRILL



DEALER SET UP
OPERATION MANUAL
PARTS BOOK 1984 THRU

8000 Drill

INTRODUCTIONS

The Haybuster Hoe Drill is designed primarily for deep-banding fertilizer below the seed in tilled soil or in No-till conditions. Its other features are: Seeding without fertilizer-placing seed and fertilizer together - deep banding fertilizer only.

25 inches vertical and 28 inches front to back enables the 8000 series drill to seed through heavy trash. Optional coulters let trash flow evenly around hoe points.

Fertilizer is distributed directly behind the hoe point in moist soil for quick activation. Seed tubes distribute seed above the fertilizer in a moist seed bed.

Large 27 inch diameter steel, V type packer wheels give better flotation and less draft in soft soil. A steel V band has been added to increase strength and wearability.

When using standard, dual outlet seed tubes, packer wheels run in the center of the furrow to firm seeds in moist soil on both sides of the furrow.

This method of packing allows seedlings to emerge through softer, non-crusting soil on each side of the packer wheel track.

When using the optional single outlet seed tube this same effect can be achieved by moving the packer wheels 1½ inches to the side.

Combinations of 2-3-4-5-6 drills are available to meet the needs of your operation.

Drill tanks are designed with a front and rear compartment for seed and fertilizer. A false bottom is available for either the front or rear compartment to increase capacity when seeding without fertilizing or for banding fertilizer only.

8000 Drill

SPECIFICATIONS

Overall Width	97½"
Seeding Width	100"
End Transport Width	199"
Wheelbase	114"
Clearance: Vertical - shank tip to shank frame	25"
Horizontal - between ranks	28"
Raised position - ground level to point	8"
Height	84"
Tires: 9.5L x 14 Flotation Front Swivel and Rear Transport except First Drill Transport	
Tire Pressure: Front Swivel Wheel	45 Lbs
Transport Wheels	55 Lbs
First Drill Transport	90 Lbs
Tank Capacity: Seed - front	13 Bu - 25 Bu/ft.
Granular Fertilizer - rear	1040 lbs. - 125 lbs./ft. ^{1.625} 130
Seed - front and rear	24 Bu - 28 Bu/ft. ^{3.0}
Packer Wheels: 3" x 27" Steel V type	
Weight: Basic drill w/ 10" spacing	5400 Lbs
Feed Spacing: Infinitely Adjustable Meter	
Shank Spacing: 10" - 12½" - 16⅝"	
Hoses: Rubber Convuluted	

8000 Drill

BASIC MODEL

Shanks: Automatic Reset w/deep banding granular fertilizer inlet tubes.
Rigid w/deep banding granular fertilizer inlet tubes.
Automatic Reset w/Anhydrous
Rigid w/Anhydrous

Optional Equipment

Shank inlet tubes: Deep banding liquid fertilizer.

Acre Counter:

Rock Guards: (Packer Wheel) 10" and 12½" Spacing

Coulters: 18" Blade - Reset Swivel
- Rigid Swivel

Hitches and Stabilizers: 1-2-3-4-5-6 Drill

Mechanical Hitch Lift: 3-4-5-6 Drill

Front Stabilizer: 2-3-4-5-6 Drill - Recommended for Hill Side Seeding

End Transport: 2-3-4-5-6 Drill - Hitch-Hydraulic Cylinder-Hose and fittings

Single Outlet Seed Tube: Single Tube and Sealer Plate

False Bottom: Increases Seed or Fertilizer capacity

Flotation Link: 3-4-5-6 Drill

Double Shooter Shank

Dual Swivel Wheel

Auxiliary Fertilizer Tank

Rear Mount Transport

8000 Drill

DEEP BANDING OPTIONS

Several methods of deep banding fertilizer are available on the 8000 Hoe Drill, depending on the availability, or the individual's choice of fertilizer.

The standard shank can be adapted for granular or liquid by changing shank inlet tubes, page 15. Anhydrous gas requires a special shank.

The standard shank is equipped with dual outlet seed tubes and a sealer plate. A single outlet seed tube and sealer plate are available for different soil conditions, page 15.

The anhydrous shank is available only with dual seed tubes and sealer plate.

When using the standard shank with dual outlet seed tubes, packer wheels run directly behind shank, centered in the furrow. This enables the V shaped packer wheels to firm seeds in moist soil against the side wall of the furrow. Should soil crust in packer wheel track, seedlings are allowed to emerge through softer soil on either side.

If single outlet seed tube is used, packer wheel gangs can be moved 1 ½" from center of furrow. This again prevents crustings of soil over seed row. Refer to page 21, 22 for moving packer wheel gangs.

SEED AND FERTILIZER OPTIONS

All available options are shown on pages 14 and 15.

- #2 Drills come standard with shanks set up for deep banding granular fertilizer.
- #6 Deep banding liquid fertilizer.
- #7 Seed and granular fertilizer together along with deep banding liquid fertilizer.
- #3 Seed and granular together allows shank to run shallower. Also sealer plate can be removed for less resistance.
- #5 Special anhydrous shank for deep banding anhydrous gas.
- #1 Special anhydrous shank for deep banding anhydrous gas and allowing granular fertilizer to be placed with seed.

8000 Drill

FIELD PREPARATION

Check List:

Due to possible damage in shipment, drills are delivered with grain and fertilizer hoses and rear step removed. One step is furnished for each drill purchased. For installation of these two items and optional parts, refer to TABLE OF CONTENTS.

Lubrication:

See Lubrication chart. Check to see that all points have been greased before operating.

Drive Chains:

Check drive sprockets and chains for alignment and proper tension.

Shanks:

Shanks with dual seed outlets must be aligned on center of packer wheel to ensure firming soil around seeds. Shanks with single seed outlets may either be aligned on center of packer wheel or packer wheel gangs may be moved 1½" to allow packing on side of furrow. See page 21-22.

Coulters: (When used)

It is recommended coulters be used when seeding in no till or trashy conditions. Coulters properly aligned with shanks will keep soil and trash flowing evenly around points and seed tubes.

Swivel Wheel Damper:

Swivel wheel shimmy is dampened by a nylatron washer and pressure plate. Pressure is maintained by a nut and spring washer above pressure plate. **WARNING:** If nut is too tight, swivel wheel will not caster properly.

Note:

After drills have been checked and are ready to operate, it is recommended they be pulled a short distance in the field before filling the seed and fertilizer tanks to be sure feed shafts and all drive components turn freely. Take note that reversing drive gears engage properly when shanks are lowered into operating position.

8000 Drill

OPERATING HINTS

Seeding Depths:

Adjust depth stop on hydraulic cylinder to maintain correct depth so seed is placed in moist soil.

Note: Never back drill with hoe bed on the ground. It is advisable to lower hoe bed whole moving in a forward motion in wet sticky soils to prevent plugging fertilizer and grain outlets.

CAUTION: Do not make sharp turns with shanks in the ground.

Seeding Speed:

Seeding at excess ground speed will cause soil from rear shanks to flow over into furrows left by front shanks thus burying seed too deep. 4½ mph is the recommended speed for moist conditions. Speed should be maintained to get correct flow of soil over seed tubes.

Adjusting Feed Wheels:

If it is necessary to adjust feed wheel spacing, (see page 17) always check to be sure feed wheel shafts turn freely before filling seed and fertilizer tanks.

CAUTION: If drills are to set idle for any length of time with shanks in raised position, it will be necessary to make sure hoses are cleared of any seed or fertilizer to prevent sprouting or caking inside of hoses.

WARNING:

Fertilizer can be vary damaging to metal parts. Corrosion can cause moving parts to stick together. After calibration plates have stayed in one position for some time, they may be stuck to tank. Do not try to loosen by forcing calibration screw. Free plate by inserting screwdriver blade between plate and tank.

Hill Side Seeding:

Drills may have a tendency to seed deeper on the down hill side due to the high center of gravity. Installing front stablizers greatly improves this condition.

Cont.

OPERATING HINTS

Cont.

Automatic Reset Shanks:

Shanks are designed to automatically reset after striking an object. Tension springs and trip hinge offset are adjusted at factory. If for any reason trip has to be disassembled, see page 13 for reassembly specifications.

Rigid Shank:

Rigid shank is protected by a 1/2" machine bolt that will break should shank strike a solid object.

Wind Guard:

Wind guards should be down when seeding in windy conditions. Guards may be left in raised position to observe seed flow when conditions permit.

Rigid or Spring Loaded Coulters:

When loose trash is buried beneath the soil surface such as in soft tilled soil, coulters blades need to cut deeper than the shank point to prevent trash from hanging around shank. When trash is laying on top of more solid soil, coulters blades can run shallower. Coulters shanks will allow for these adjustments.

Coulters spring tension is adjusted at factory. See Page 12 for specifications.

Keep Packer Wheel Shaft Nut Tight:

Check nuts on packer wheel shaft after one day of seeding. Check again periodically. Retighten if necessary. **CAUTION:** Don't forget to insert locks on packer wheel gangs after raising drills for transport. Remove locks before letting drill down into field position.

Tire Pressure:

Front swivel wheel tires	45 P.S.I.
Transport - First Drill (Heavy tire)	90 P.S.I.
Transport - Additional Drills (Std. tire)	55 P.S.I.

8000 Drill

END TRANSPORT OPERATING INSTRUCTIONS

- A. Raise hoe bed to full up position. Engage lock to keep bed from lowering due to hydraulic leakage while in transport.
- B. Disconnect hydraulic hose and unhook tractor from field hitch.
- C. Winch field hitch to upright position. Lock in position with safety bar.
- D. Connect hoses from transport tow hitch and transport wheel cylinders to tractor. Activate hydraulic to unlatch transport hitch from upright position down to drawbar level. Connect hitch to tractor drawbar.
- E. Lower transport wheels until all hydraulic cylinders are fully extended. Use tow hitch to level first drill.
SAFETY: To prevent injury or possible death while working under the drill or damage to drills while towing, always use safety bars on all transport wheel cylinders in case of hydraulic failure.
- F. **WARNING:** Don't forget to insert locks on packer wheel gangs. Drills are now ready for towing. Drive ahead slowly allowing front swivel wheels to turn in direction of travel. Do not exceed 10 mph, under any conditions. Grain and fertilizer tanks should be as empty as possible when transporting.

FROM TRANSPORT TO FIELD POSITION

- A. Remove lock from packer wheel gangs.
- B. Remove and store hydraulic cylinder safety bars. Raise Transport wheels lowering drills to field position.

Cont.

FROM TRANSPORT TO FIELD POSITION

Cont.

- C. The purpose of the hold up bar is to keep the transport wheel in the raised position in case of hydraulic failure. See page 32 for proper positioning of the hold up bar.
- D. Reverse the procedure in step D, page 8, to unhook and store tow hitch. Store hydraulic hoses in lower main frame tube, page 32.
- E. Remove safety bar from field hitch. Lower hitch to approximate tractor drawbar height.
- F. Attach field hitch and hydraulic hose to tractor. Raise hoe bed to full position. Disengage bed lock.
- G. **CAUTION:** When drills have been transported with seed and fertilizer in tanks, care should be taken to see that feed wheels turn free while hoe bed is still in raised position.
- H. Drive ahead slowly allowing front swivel wheels to turn in the direction of travel.

STORAGE

Drills should be stored in a dry place. Before storing, lower hoe bed until hoses are stretched tight enough to allow seed and fertilizer to be flushed through while tanks are being washed out. Clean out slides (see page 18) should be opened to remove as much seed and fertilizer as possible. Both tanks should be flushed out thoroughly. Open and close slides while flushing to allow any trapped fertilizer to work its way free.

WARNING: Fertilizer can be damaging if left in contact with metal parts for a prolonged period. Pour oil or diesel fuel over all fertilizer parts after letting them dry.

8000 Drill

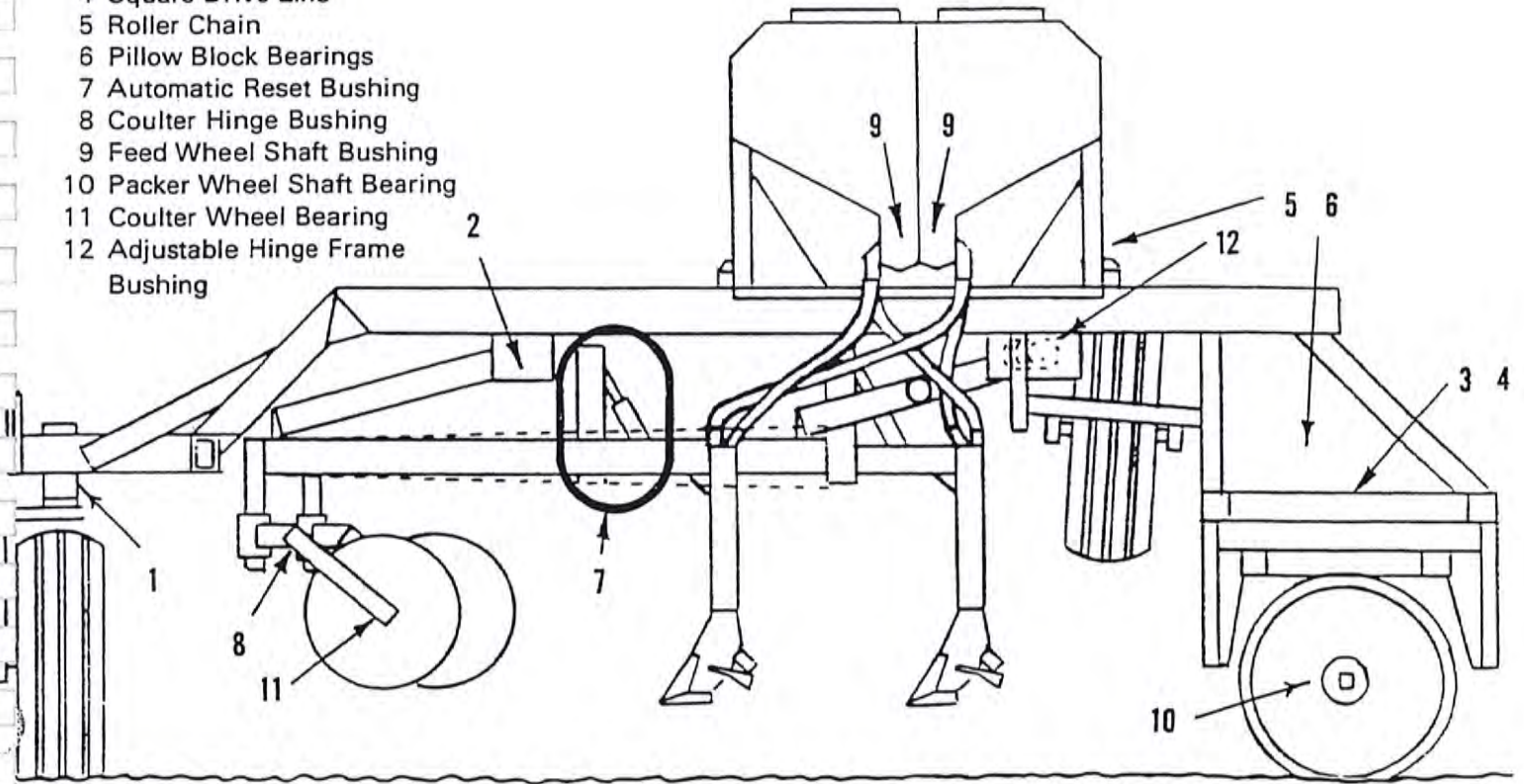
LUBRICATION

See Page 11 for grease zerk locations

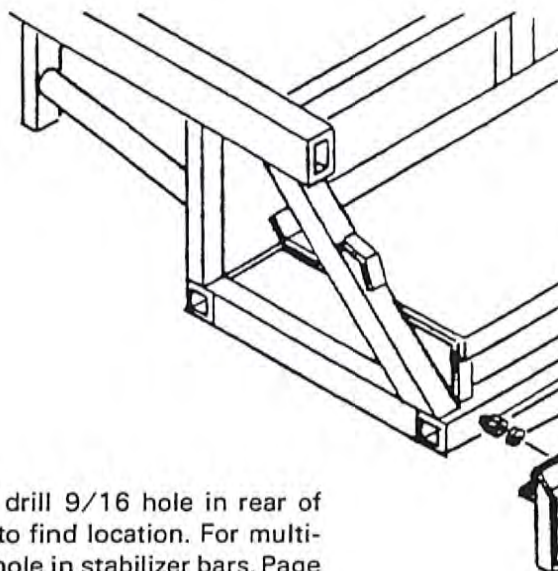
Ref. No.	Description	Type	Frequency	No. Zerks
1	Swivel Wheel pivot	Grease	20 Hrs.	2
2-12	Hinge Frame Bushings	Grease	40 Hrs.	4
3	Universal Joints	Grease	40 Hrs.	2
4	Square Drive Line	Grease	40 Hrs.	1
5	Feed Wheel Shaft	Grease	100 Hrs.	4
6	Pillow Block Bearings	Grease	Annually	4
7	Automatic Reset Bushings	Grease	Seasonally	5 per shank
8	Coulter Hinge Bushing	Grease	Seasonally	1 per coulter
9	Roller Chains	Oil	Daily in Dusty Conditions	
10	Packer Wheel Axle Bearings are non-relubable			
11	Coulter Bearings are equipped with tapered roller bearings. Inspect grease seals periodically. Remove any foreign material wrapped on spindle that may damage seal. Annually remove dust cap and bearings. If bearings appear to be dry, repack with a good grade of wheel bearing grease.			

8000 SERIES DRILL LUBRICATION

- 1 Swivel Wheel Pivot
- 2 Hinge Frame Bushing
- 3 Universal Joint
- 4 Square Drive Line
- 5 Roller Chain
- 6 Pillow Block Bearings
- 7 Automatic Reset Bushing
- 8 Coulter Hinge Bushing
- 9 Feed Wheel Shaft Bushing
- 10 Packer Wheel Shaft Bearing
- 11 Coulter Wheel Bearing
- 12 Adjustable Hinge Frame Bushing



LEVELING HOE BED: Hoe bed has been leveled with drill main frame at factory. Different soil conditions may allow front of main frame to run higher or lower than rear. Additional adjustment may be necessary to ensure even penetration of hoe points.



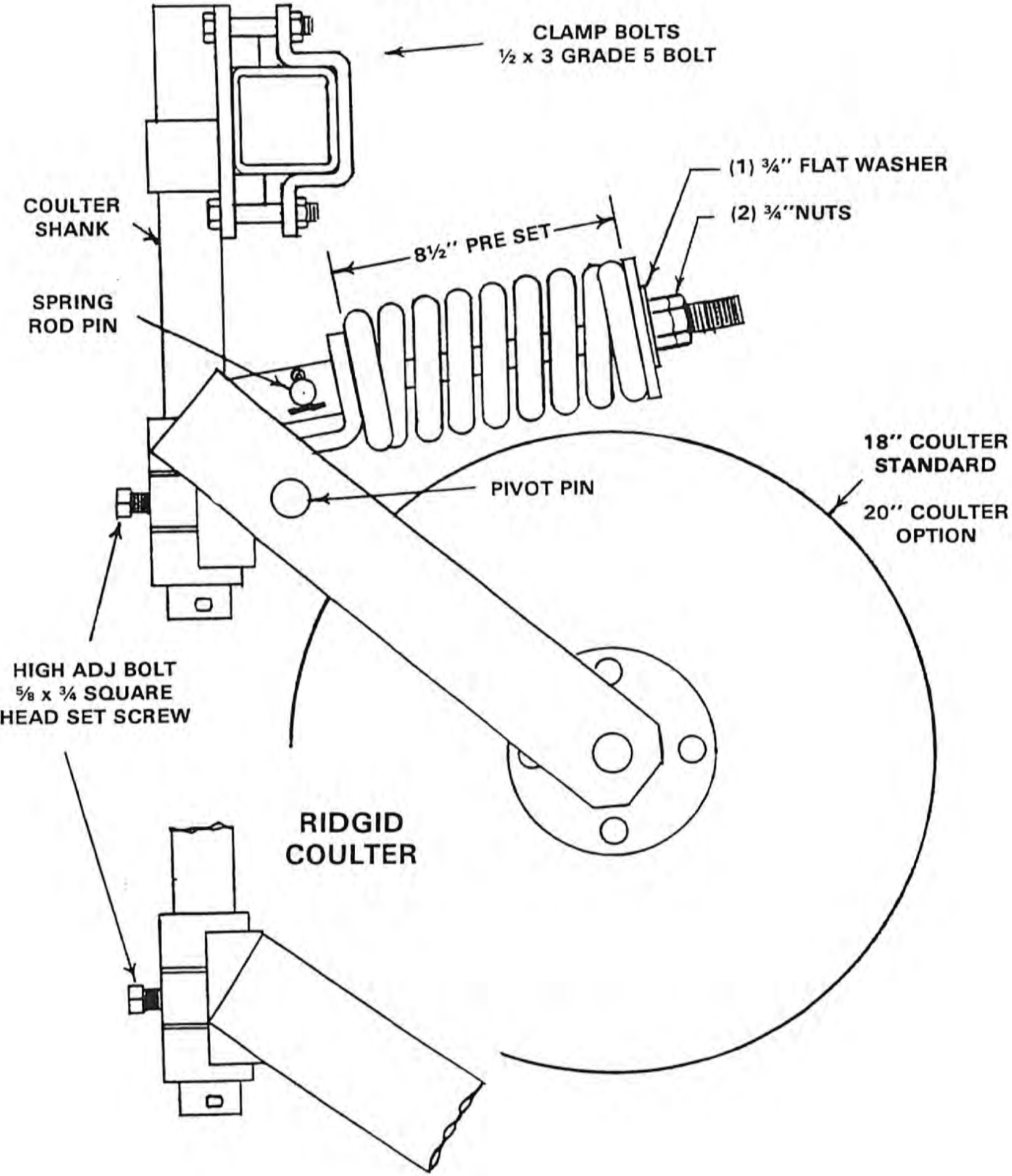
8000 Series Drill Step

ITEM	QTY.	DESCRIPTION
1	1	Step
2	1	1/2 x 1 1/2 Bolt
3	1	Flat Washer
4	1	Lock Washer
5	1	Hex Nut

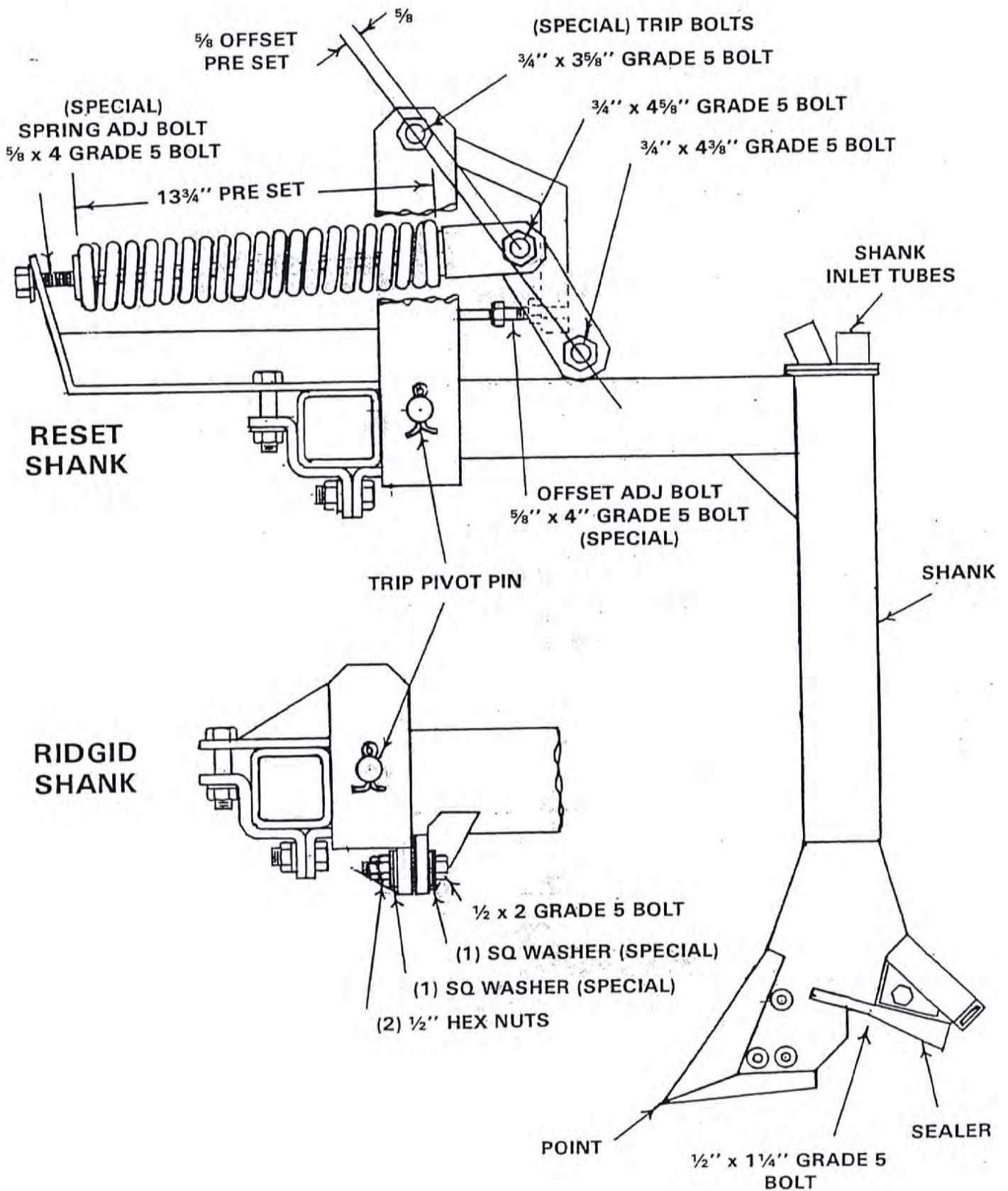
NOTE: For Single drill, drill 9/16 hole in rear of frame. Use step to find location. For multi-drill set ups, use hole in stabilizer bars. Page 28.

8000 SERIES COULTER

RESET COULTER



SHANK 8000 SERIES



HAYBUSTER 8000 HOE DRILL DEEP BANDING OPTIONS

A - SEED

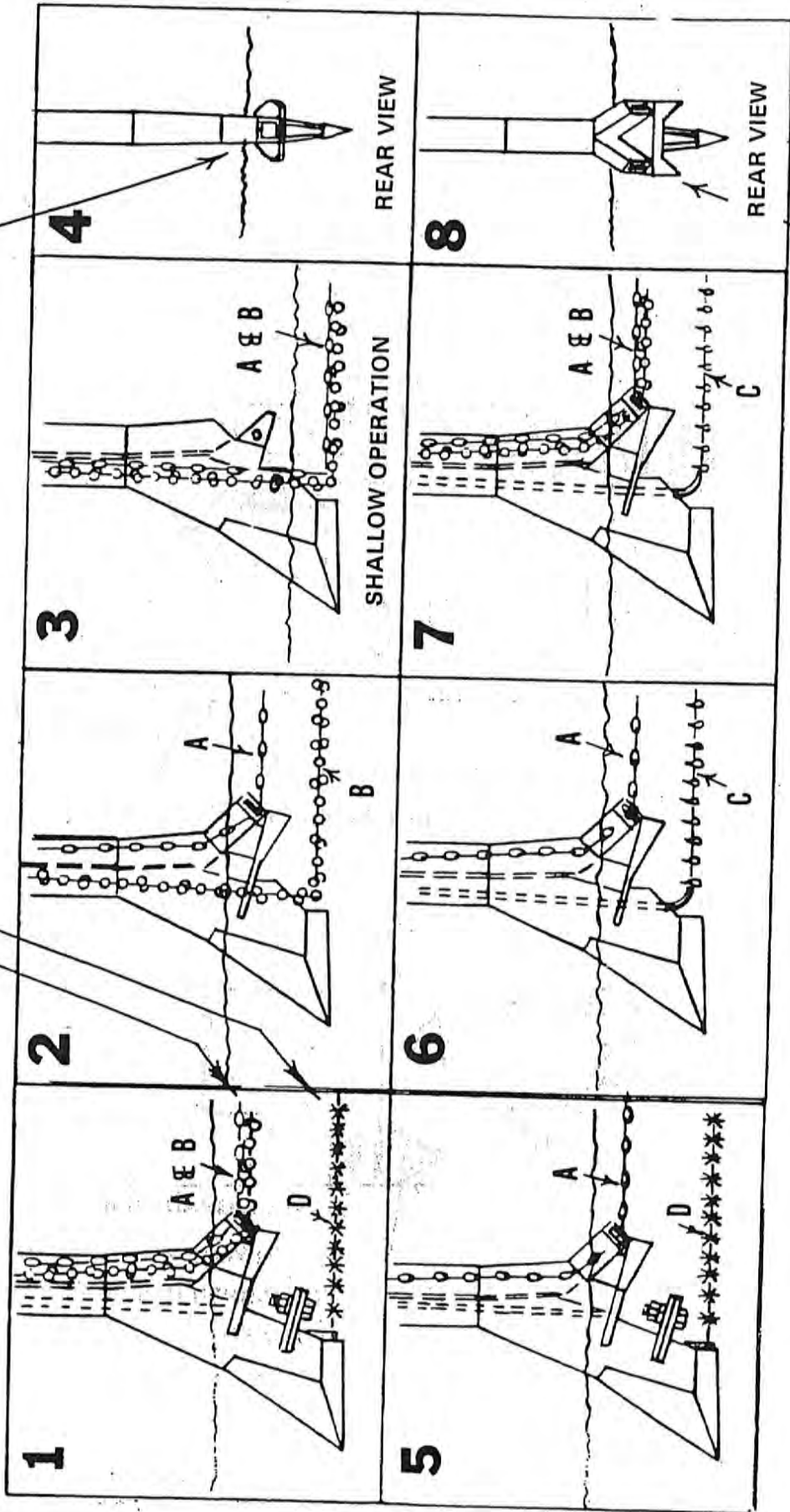
B - GRANULAR FERTILIZER

C - LIQUID FERTILIZER

D - ANHYDROUS GAS

SEED BED

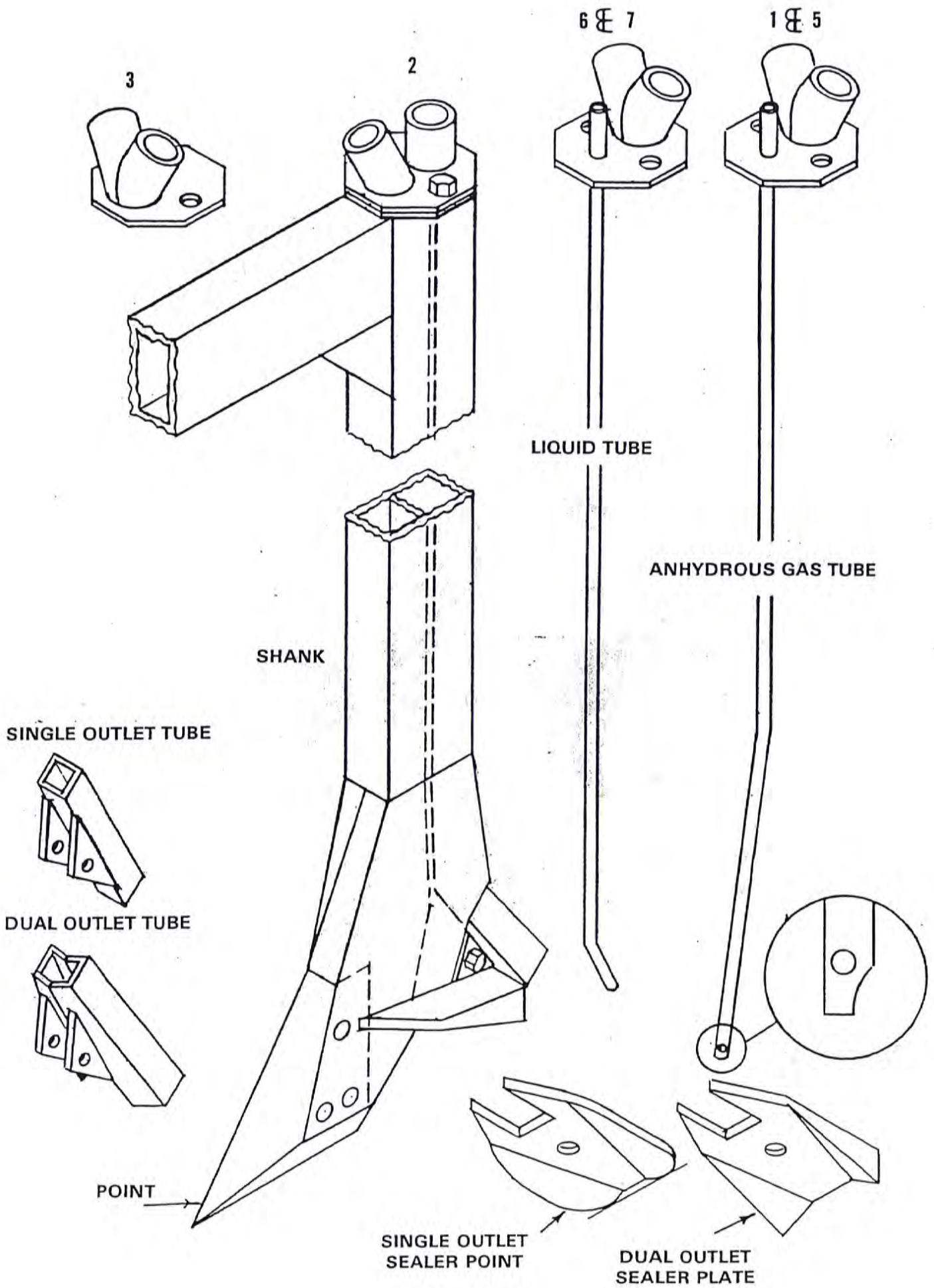
DEEP BAND



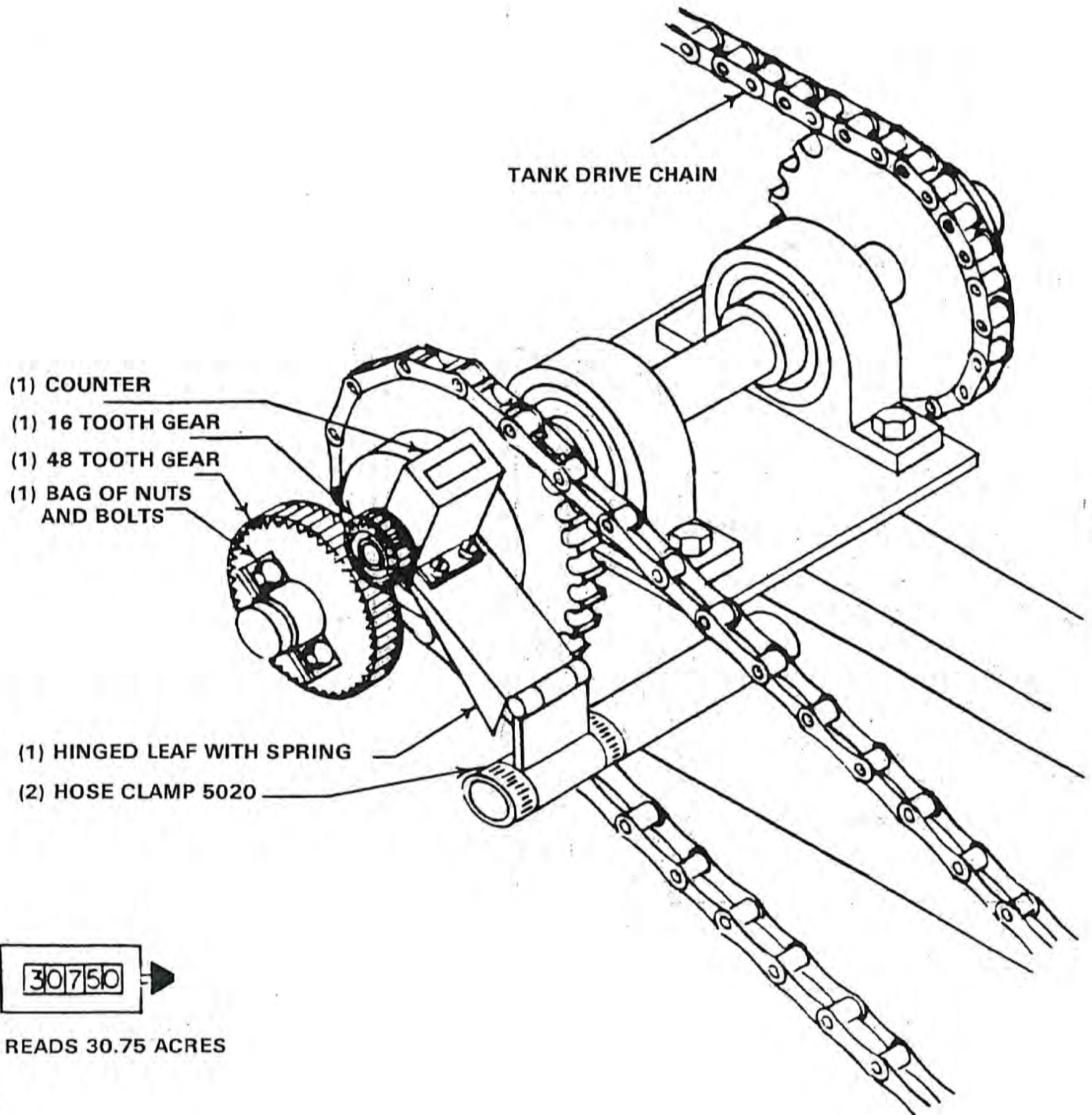
SINGLE OUTLET TUBE
WITH SEALER PLATE

NOTE: Use of Anhydrous Gas requires Special Shanks.

DUAL OUTLET TUBES
WITH SEALER PLATE



8000 DRILL ACRE COUNTER INSTALLATION



FEED WHEEL SPACE ADJUSTMENT

Large seeds require more space between feed wheel lugs and tank wall than small seeds to prevent cracking. Small seeds require less space to provide an even flow. Therefore each seed listed in the feed rate chart shows a required wheel space.

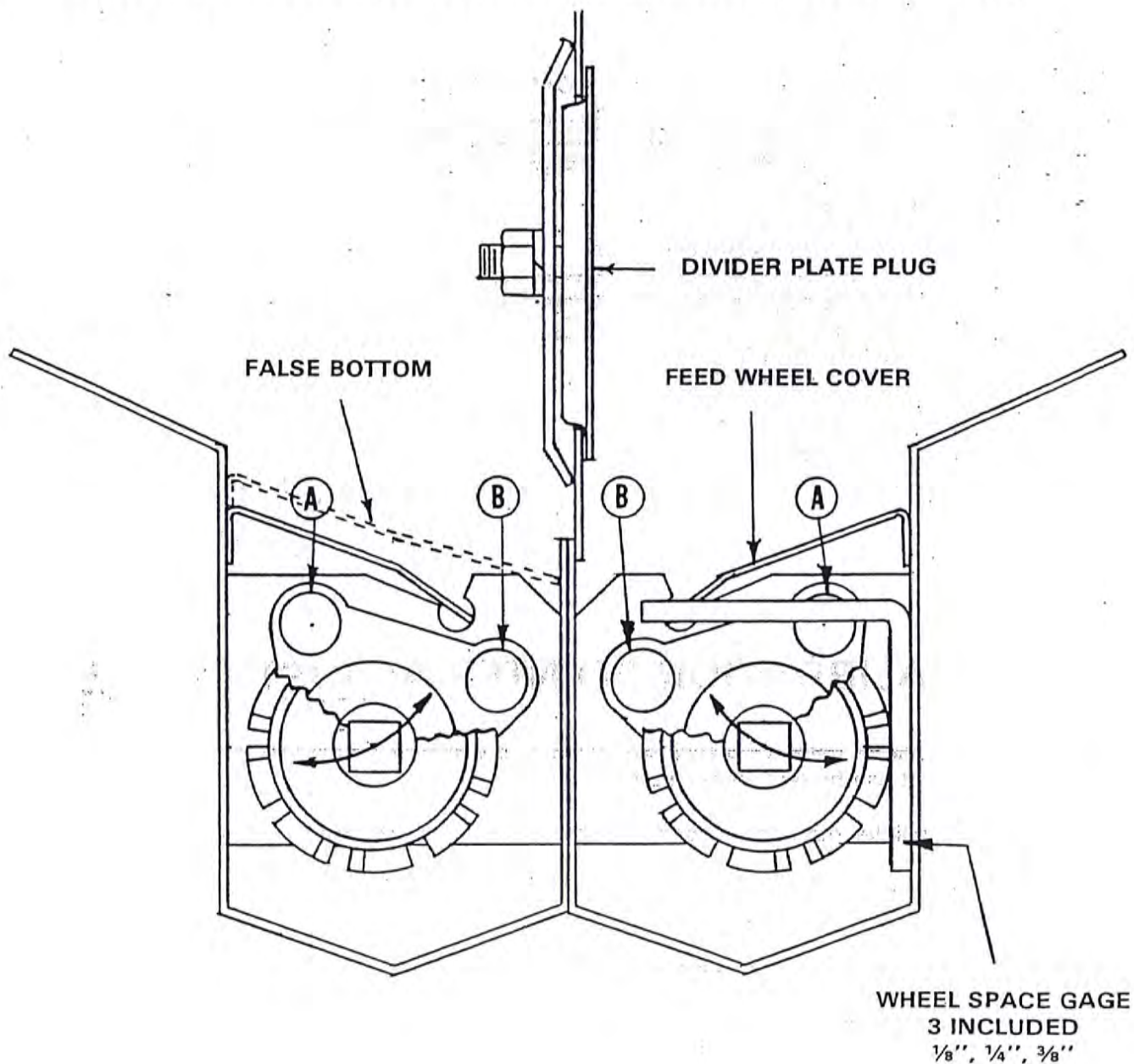
See Illustration Below

Remove feed wheel covers. Loosen bolts A and B. Insert gauge required and retighten bolts. Recheck for accuracy. Be sure to replace feed wheel cover before filling tank.

Fertilizer requires only the $\frac{1}{8}$ " setting.

To increase capacity when seeding without fertilizer or for banding fertilizer only, remove divider plate plugs.

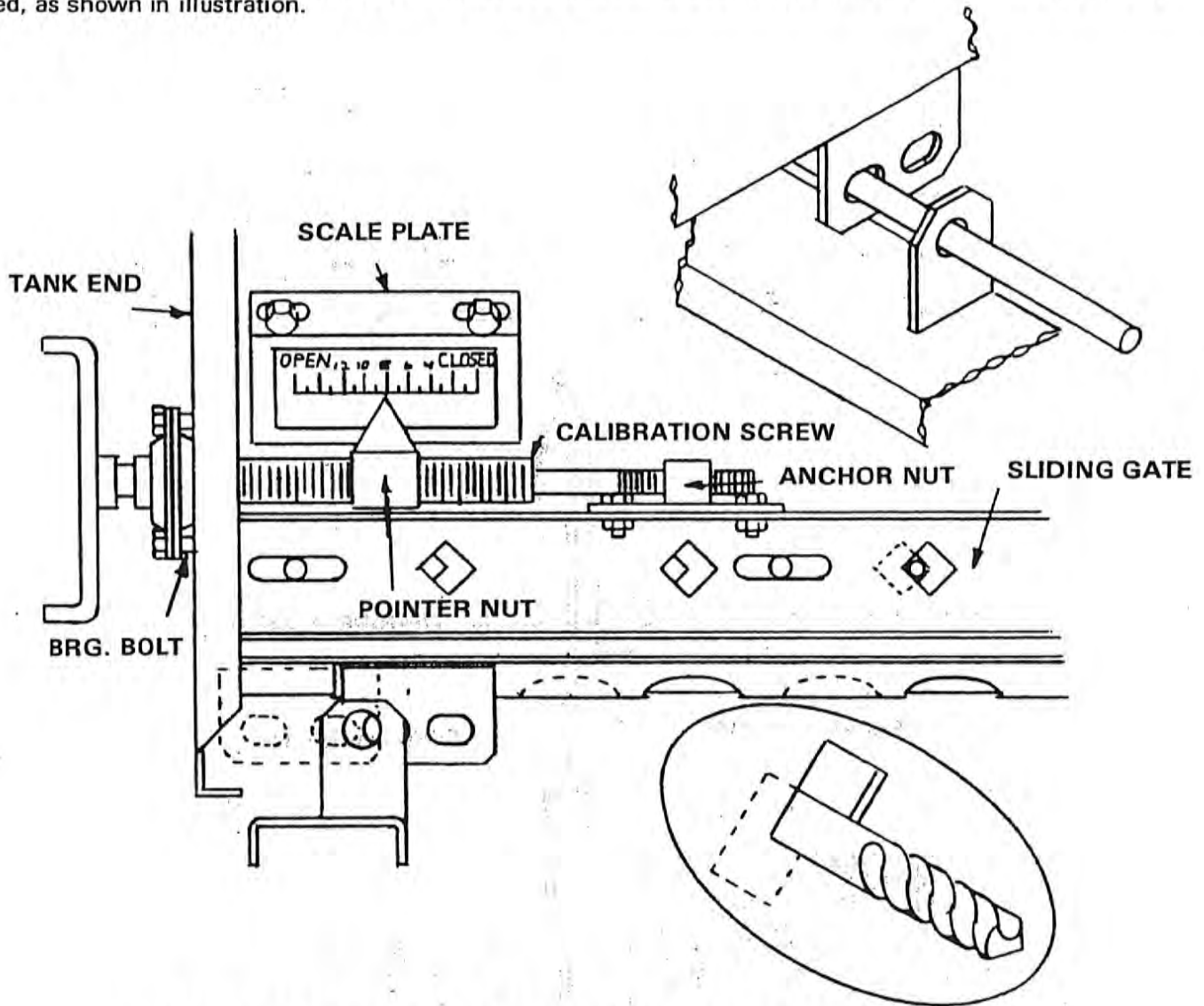
Remove feed wheel covers and install false bottom in compartment being used for extra storage.



8000 Drill

CLEANOUT SLIDES

Both grain and fertilizer tanks are equipped with cleanout slides. Use screwdriver or small bar to pry slides open or closed, as shown in illustration.



CALIBRATION POINTER ADJUSTMENT

Grain and fertilizer sliding gates are preadjusted at the factory. In the event any part of the calibrating mechanism is removed or replaced, it can be recalibrated in this order:

- Step 1** - Place both pointer nut and anchor nut in the center of their respective thread.
- Step 2** - Insert a short length of 7/16" rod or the shank end of a 7/16" drill bit into the square hole in sliding gate as shown.
- Step 3** - Tighten bearing bolts securing calibration screw to end of tank.
- Step 4** - Tighten bolts securing anchor nut to sliding gate.
- Step 5** - Place scale plate on tank so number 8 is directly in line with tip of pointer. This will insure pointer setting to coincide with chart. Scale plate must be parallel with calibration screw to allow pointer to operate smoothly along plate.

Series 8000 CHART FOR DRILLING GRAIN IN POUNDS PER ACRE



Spacing 12½" (8 Shanks)

MODEL NO.

POINTER SETTING

Wheel Space		3	4	5	6	7	8	9	10	11	12	13	14	15	16													
Wheat	½			8	13	19	25	32	40	50	60	71	82	95	110	127	139	156	180									
Barley	½						14	18	23	30	35	40	47	57	66	74	84	98	112	125								
Oats	½						9	11	15	19	23	29	36	40	48	53	64	74	82	94	107	119	128	135	136	138		
Rye	½				9	14	19	26	32	40	49	58	67	79	91	104	117	132	149	168	192							
Soybeans	¾						11	13	16	22	29	37	43	52	61	73	82	92	109	118	136	154	175	194	212	226	231	
Buckwheat	½				10	14	18	24	31	39	47	55	64	76	88	102	115	130										
Sorghum or Vetch	½		2	3	5	8	13	17	22	28	35	42	50	59	69	79	94											
Alfalfa or Rape	½	2	5	9	12	17	22	30	37	45	55																	
Millet	½	3	5	10	14	19	25	34	42	52	62																	
Flax or Sudan Grass	½		3	5	7	11	15	19	24	31	39	46	56	65	75													
Fertilizer	½	2	4	7	11	15	22	31	39	49	59	73	88	101	118	134	152	175	195	206	224	235	244	249	258	263	266	270
18-46-0																												

Series 8000 CHART FOR DRILLING GRAIN IN POUNDS PER ACRE



Spacing 10" (10 Shanks)

MODEL NO.

POINTER SETTING

Wheel Space		3	4	5	6	7	8	9	10	11	12	13	14	15	16													
Wheat	½			10	16	23	31	40	50	62	76	88	100	119	137	158	173	198	225									
Barley	½						17	23	29	37	43	50	59	71	83	93	106	122	140	156								
Oats	½						11	14	19	24	29	36	45	51	60	66	81	93	103	117	134	149	160	168	170	173		
Rye	½				12	18	24	32	40	50	62	73	84	98	113	130	147	165	187	210	240							
Soybeans	¾						13	16	20	28	37	46	54	65	76	91	102	115	136	147	170	193	218	243	265	283	289	
Buckwheat	½				13	17	23	30	39	49	58	69	81	95	110	127												
Sorghum or Vetch	½		3	4	7	10	16	21	27	35	44	53	62	74	86	98												
Alfalfa or Rape	½	2	6	11	15	21	28	38	47	57																		
Millet	½	4	6	12	17	24	31	42	52	65																		
Flax or Sudan Grass	½		4	6	8	13	19	24	30	38	49	58	70															
Fertilizer	½	2	5	9	13	19	27	39	49	61	74	92	110	127	147	168	190	218	243	257	280	294	304	312	322	329	333	337
18-46-0																												

Series 8000 CHART FOR DRILLING GRAIN IN POUNDS PER ACRE



Spacing 16⅝"

MODEL NO.

POINTER SETTING

Wheel Space		3	4	5	6	7	8	9	10	11	12	13	14	15	16													
Wheat	½				19	24	30	37	45	53	60	71	82	95	104	119	135											
Barley	½						10	14	17	22	26	30	35	43	50	56	63	73	84	93								
Oats	½							11	14	18	22	27	30	36	40	48	56	62	70	80	90	96	101					
Rye	½				14	19	24	30	37	44	50	59	68	78	91	104	112	126	144									
Soybeans	¾						8	10	12	17	22	27	32	39	46	55	62	69	81	88	102	116	131	146	159	170	173	
Buckwheat	½				8	10	14	18	23	29	35	41	48	57	66	76	86	98										
Sorghum or Vetch	½		3	4	6	10	13	16	21	27	32	37	44	52	59	70	78											
Alfalfa or Rape	½	1	4	6	9	13	17	23	28	34	41																	
Millet	½	4	7	10	14	19	25	31	39	47																		
Flax or Sudan Grass	½		3	5	8	11	14	18	23	30	35	42	49	56														
Fertilizer	½	1½	3	6	8	12	17	23	30	37	44	55	66	76	88	101	114	131	146	154	168	176	183	187	193	197	200	202
18-46-0																												

IMPORTANT

Seed and fertilizer charts serve only as a starting point. Rates can vary due to material size and density. See operators manual for setting and checking seed and fertilizer rates.

8000 Drill

SETTING AND CHECKING FEED RATE

The rates shown on the charts serve only as a starting point. Due to variations in material size and density the rates may vary from the chart. The following method may be used to determine a proper setting for your particular seed or fertilizer.

Setting And Checking Feed Rate Using Wheat As An Example:

1. You want to seed wheat at a rate of 76 lbs. per acre on 10" spacing.
2. Seed rate chart calls for a wheel space of $\frac{1}{8}$ " (page 17). Pointer set on 8 (page 18). This adjustment should be made before filling grain tank.
3. Make sure feed wheel cover is in place. Put grain in tank.
4. Seed far enough so you can visually check grain flowing into seed cups.

CHECKING FEED RATE

1. Measure a distance of 523 ft. (1/10 acre) and mark. Remove one hose from seed hopper on each drill. Attach a container (cloth or plastic bag) to hopper to collect seed.
2. Operate drill at intended planting speed through entire length of test track.
3. Weigh the sample in ounces (less weight of sample container). Use the following formula to determine lbs./acre for your particular shank spacing.

- I 10" spacing - oz. x 6.25 = lbs./acre
- II 12 $\frac{1}{2}$ " spacing - oz. x 5 = lbs./acre
- III 16 $\frac{5}{8}$ " spacing - oz. x 3.75 = lbs./acre

EXAMPLE

Sample and container weighs	13.6 ounces
Container weighs	- 1.5 ounces
Weight of sample only	<u>12.1 ounces</u>

4. Use formula No. I to figure pounds per acre.
 $12.1 \text{ ounces} \times 6.25 = 75.6 \text{ pounds per acre}$
5. To calibrate a seed not shown on the chart or a mix of different seeds, compare to a similar charted seed to obtain a trial setting. Recalibrate as necessary.
6. The same method may be used to determine fertilizer rates.

8000 Drill

DETERMINING SEED POPULATION

The 8000 Drill seeds 8.33' - 100" per pass.

The drill travels 5227 feet to seed 1 acre.

Following is the lineal feet of seeded row at 3 different row spacings to seed 1 acre.

10" spacing	10 rows	52270
12½" spacing	8 rows	41816
16⅝" spacing	6 rows	31362

EXAMPLES:

150,000 beans on 10" row spacing

150,000 divided by 52270 = 2.9 beans per ft.

10 ft. of row = 29 beans

150,000 beans on 12½ row spacing

150,000 divided by 41816 = 3.6 beans per ft.

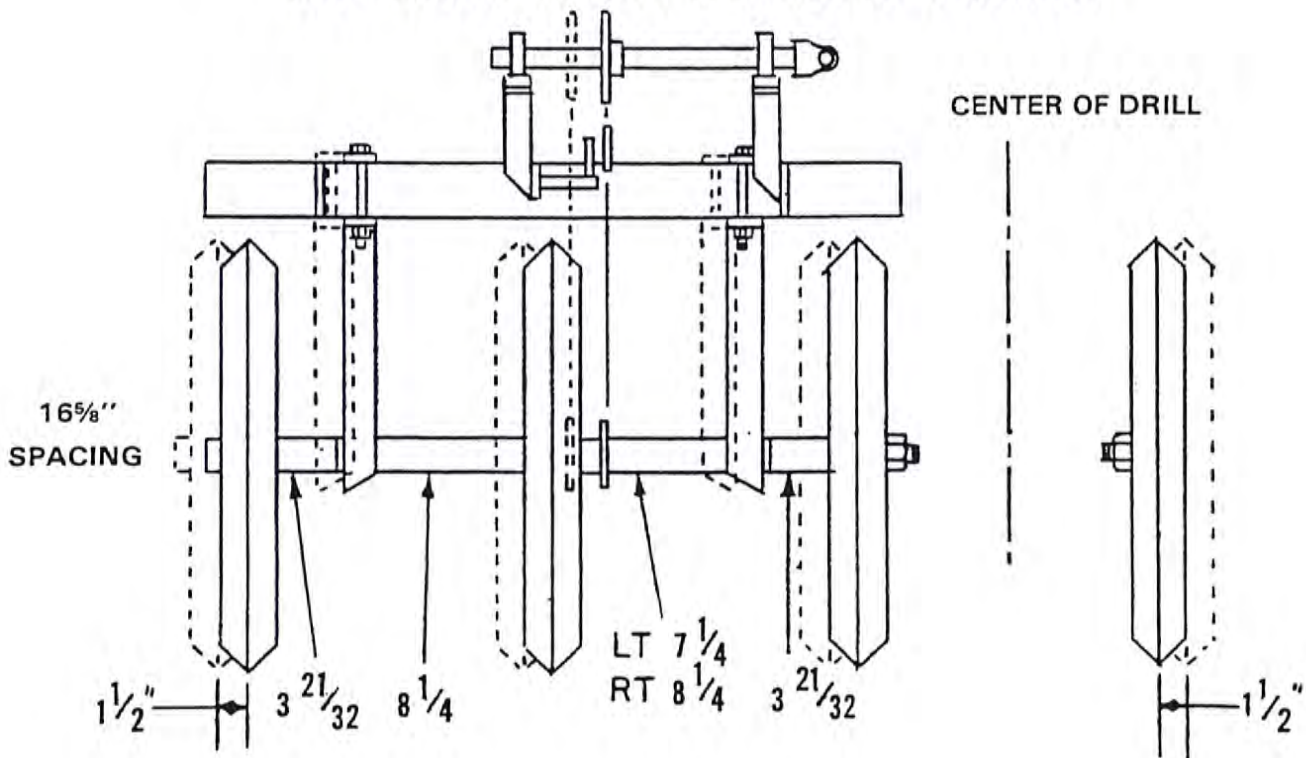
10 ft. of row = 36 beans

150,000 beans on 16⅝" row spacing

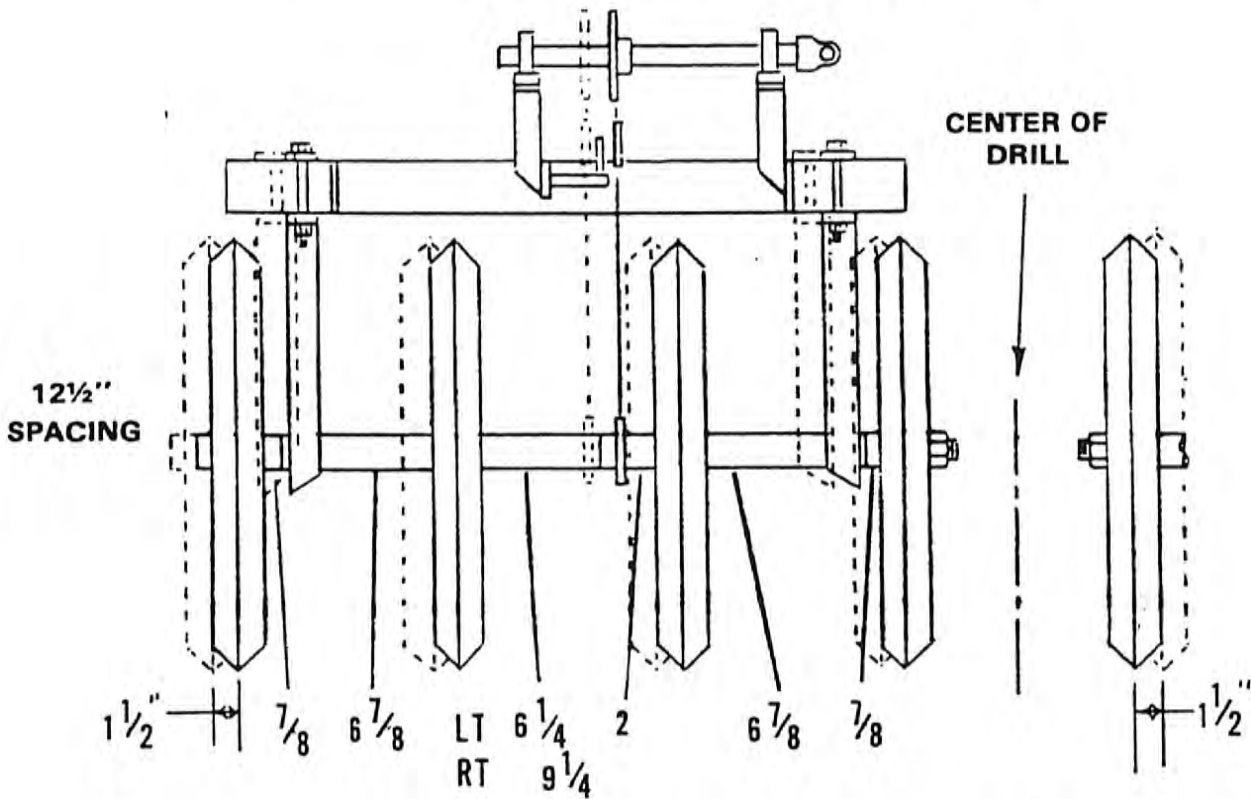
150,000 divided by 31362 = 4.8 beans per ft.

10 ft. of row = 48 beans

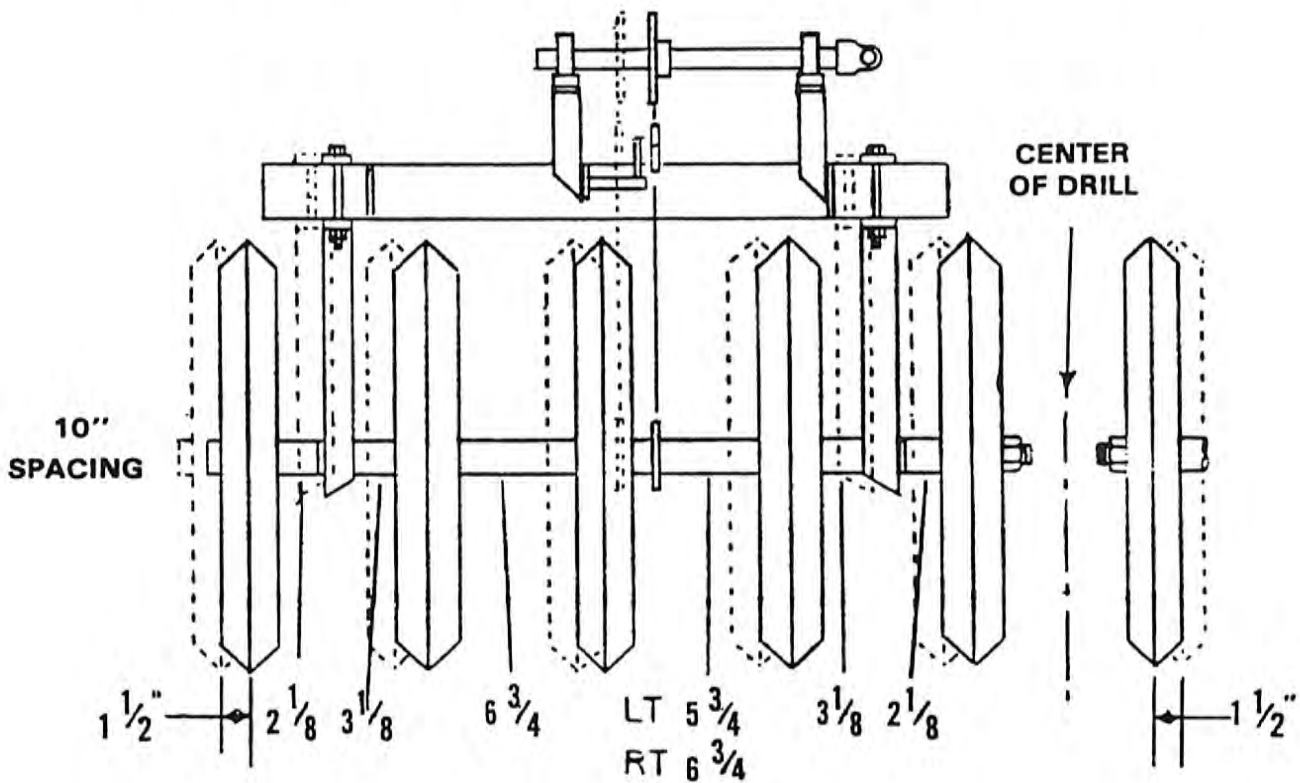
ILLUSTRATIONS SHOW GANGS MOVED LEFT AND RIGHT 1½ OFF CENTER OF FURROW



8000 SERIES PRESS WHEELS

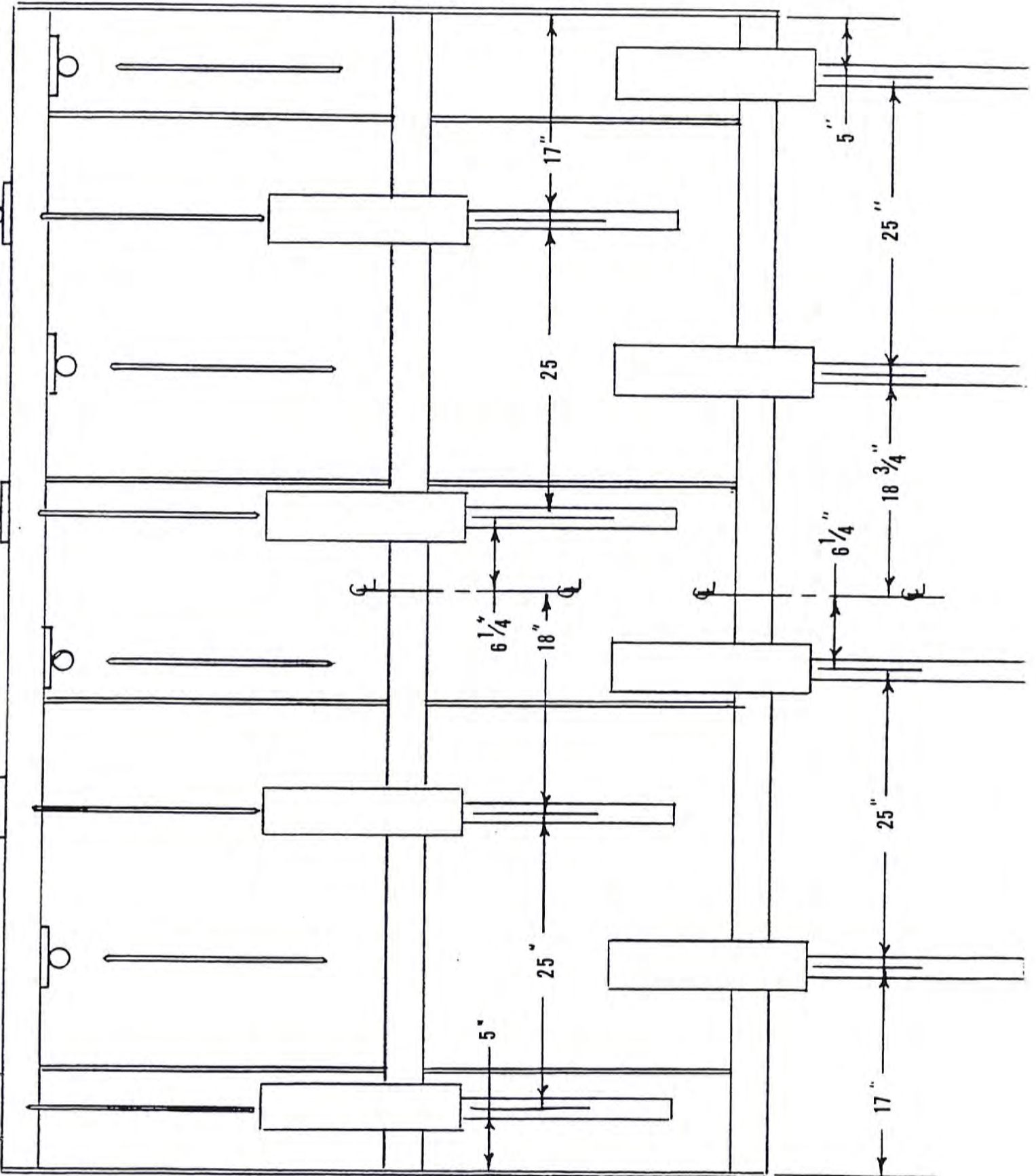


ILLUSTRATIONS SHOW GANGS MOVED LEFT AND RIGHT 1 1/2" OFF CENTER OF FURROW.



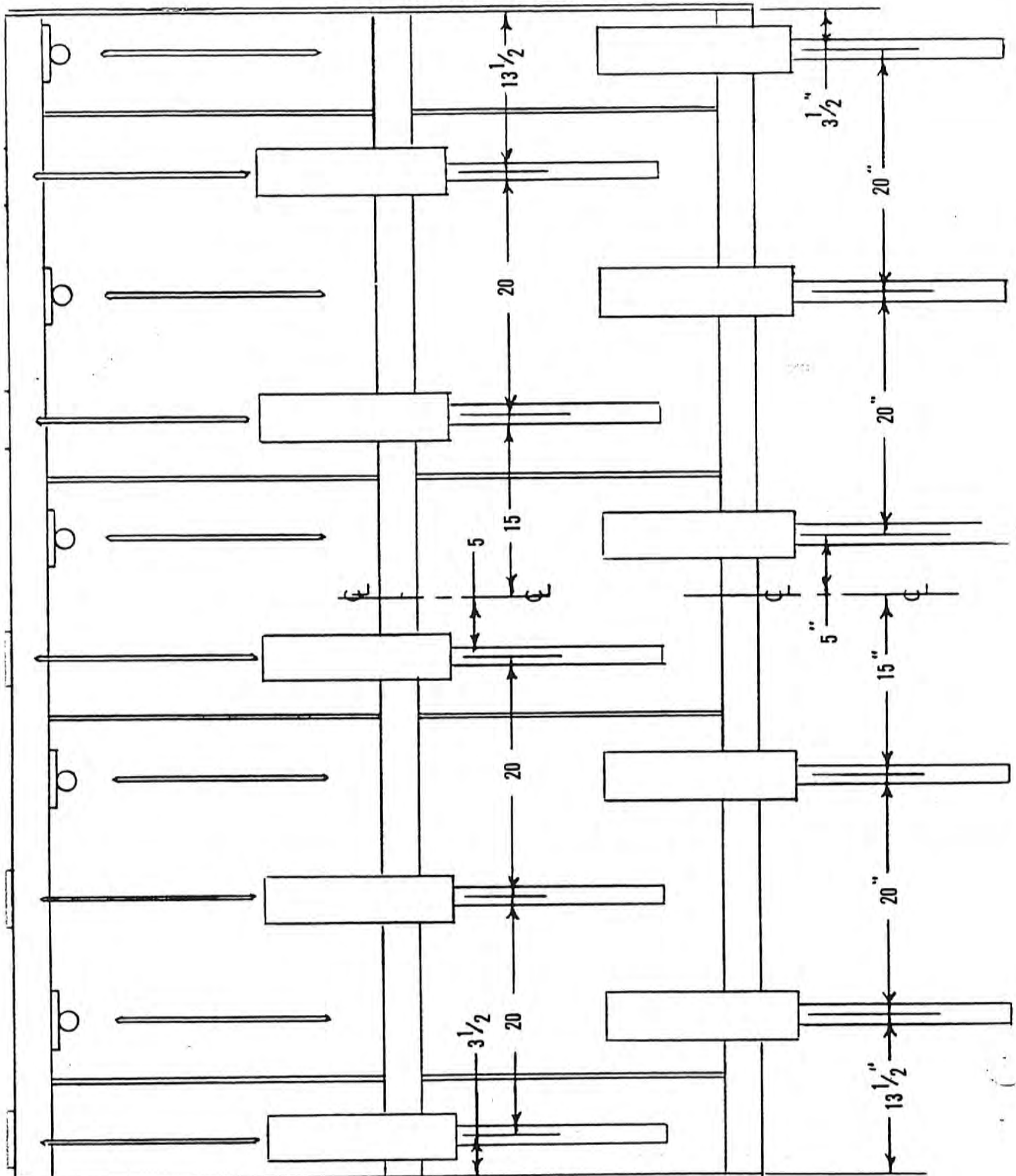
8000 SERIES 12½" SPACING

[10" and 12½" spacings require
sub frame #8300174]



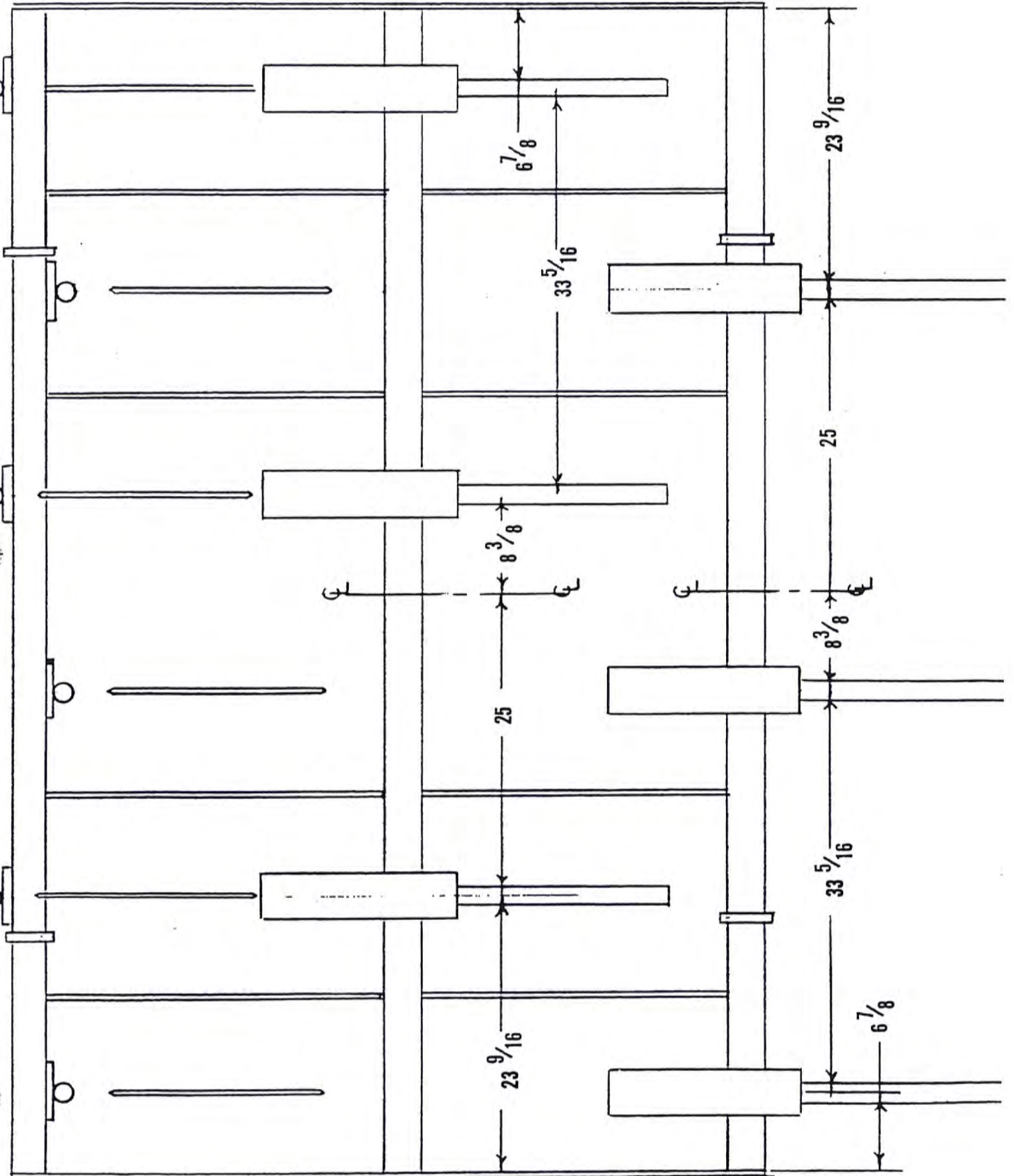
8000 SERIES 10" SPACING

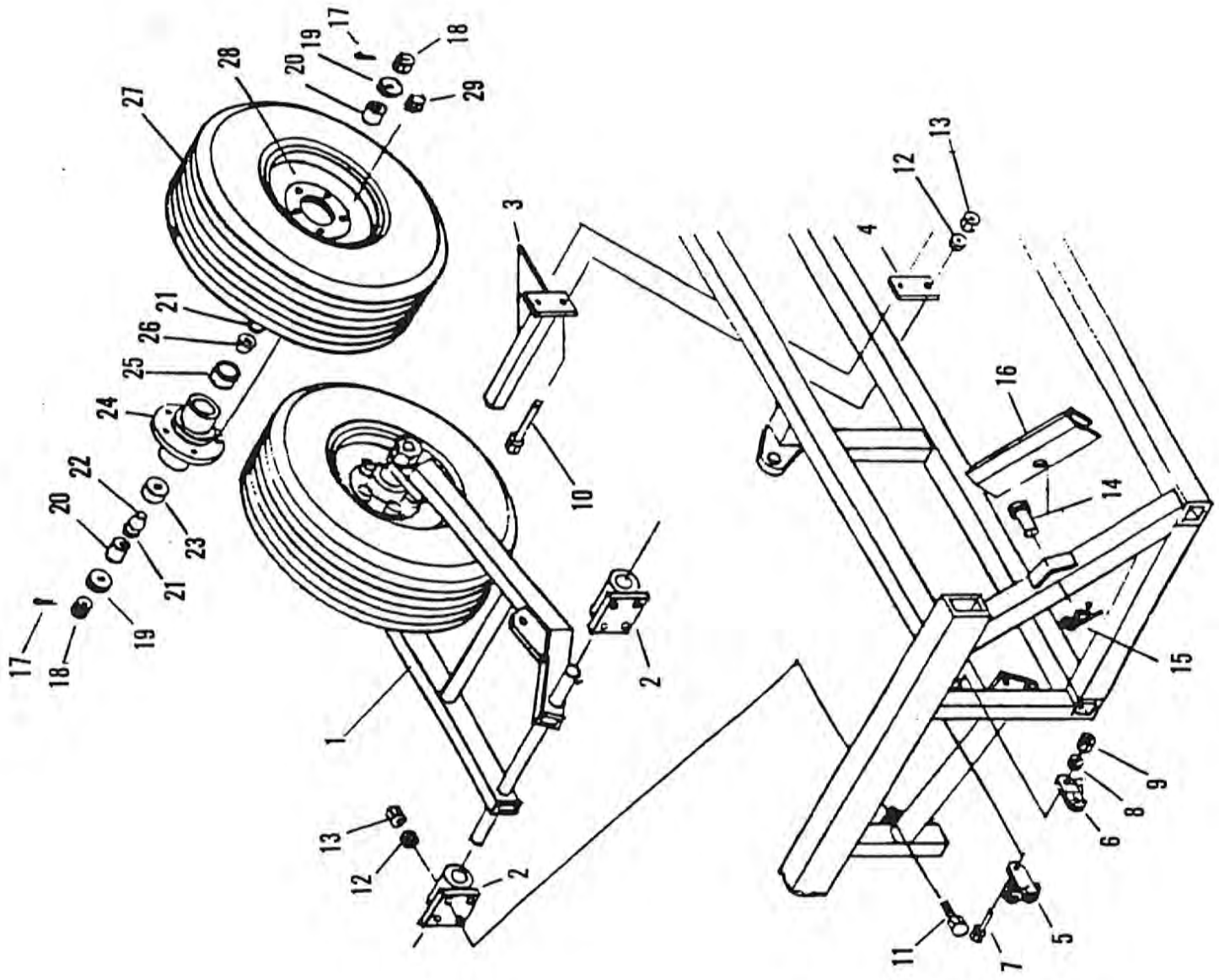
[10" and 12½" spacings require
sub frame #8300174]



8000 SERIES 16⁵/₈" SPACING

[16⁵/₈" spacing requires
sub frame #8300175]





ITEM	QTY.	DESCRIPTION
1	1	Fork Complete
2	2	Mounts
3	1	Holdup
4	1	Holdup strap
5	1	Coupler mount
6	1	Coupler mount strap
7	2	5/16 x 3 Hex bolt
8	2	5/16 Lock washer
9	2	5/16" Hex nut
10	2	1/2 x 4 1/2 Hex bolt
11	8	1/2 x 1 1/2 Hex bolt
12	10	1/2" Lock washer
13	10	1/2 Hex nuts
14	1	1 x 2 1/2 Clevis pin
15	1	3/16 Hair pin
16	1	16" Cylinder lock for 1 1/4 ram
17	2	3/16 x 2 Cotter key
18	2	1" Castle nuts
19	2	1" Flat washer
20	2	Spacers
21	2	Seals
22	1	Inner cone
23	1	Inner cup
24	1	Hub
25	1	Outer cup
26	1	Outer cone
27	1	Tire
28	1	Wheel
29	6	9/16" Wheel nuts
	1	Spindle (not shown)

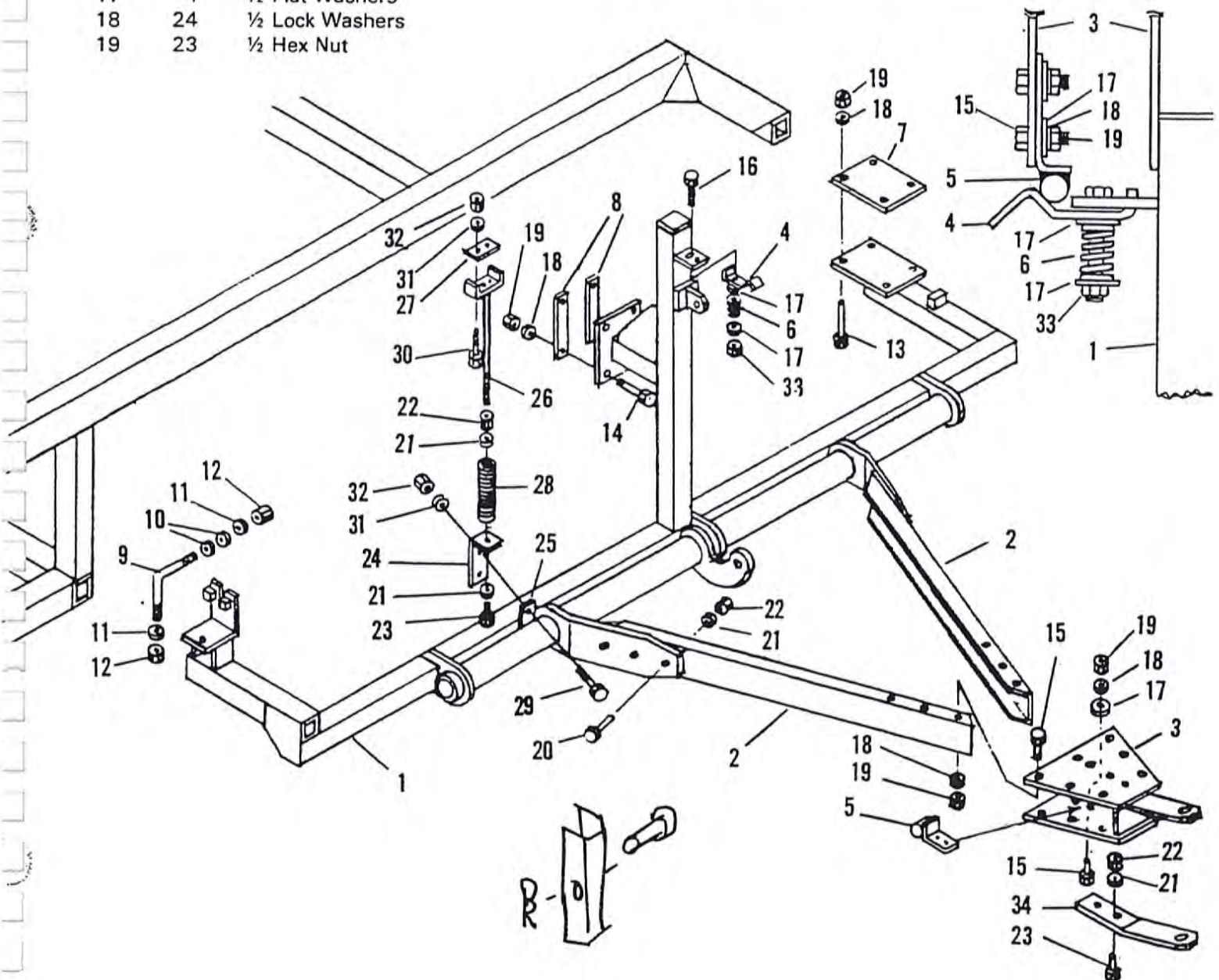
IMPORTANT

Drills hooked in series will each have (1) one transport wheel per drill. The first drill in the series with the end tow hitch has to be equipped with a heavier transport wheel (painted yellow) maintain 90 P.S.I. in this tire only.

8000 SERIES TOW HITCH

ITEM	QTY.	DESCRIPTION
1	1	Tow Hitch Main Frame
2	2	Tow Hitch Channel
3	1	Tow Hitch Hitch Plates
4	1	Tow Hitch Latch
5	1	Tow Hitch Latch Lug
6	1	Tow Hitch Latch Spring
7	1	Mounting Plate 6" x 6"
8	2	Mounting Straps 1½ x 7¾
9	1	¾ L Bolt
10	2	¾ Flat Washers
11	2	¾ Lock Washers
12	2	¾ Hex Nut
13	4	½ x 5½ Hex Bolt
14	4	½ x 5 Hex Bolt
15	14	½ x 1½ Hex Bolt
16	1	½ x 3½ Gr 5 Hex
17	4	½ Flat Washers
18	24	½ Lock Washers
19	23	½ Hex Nut

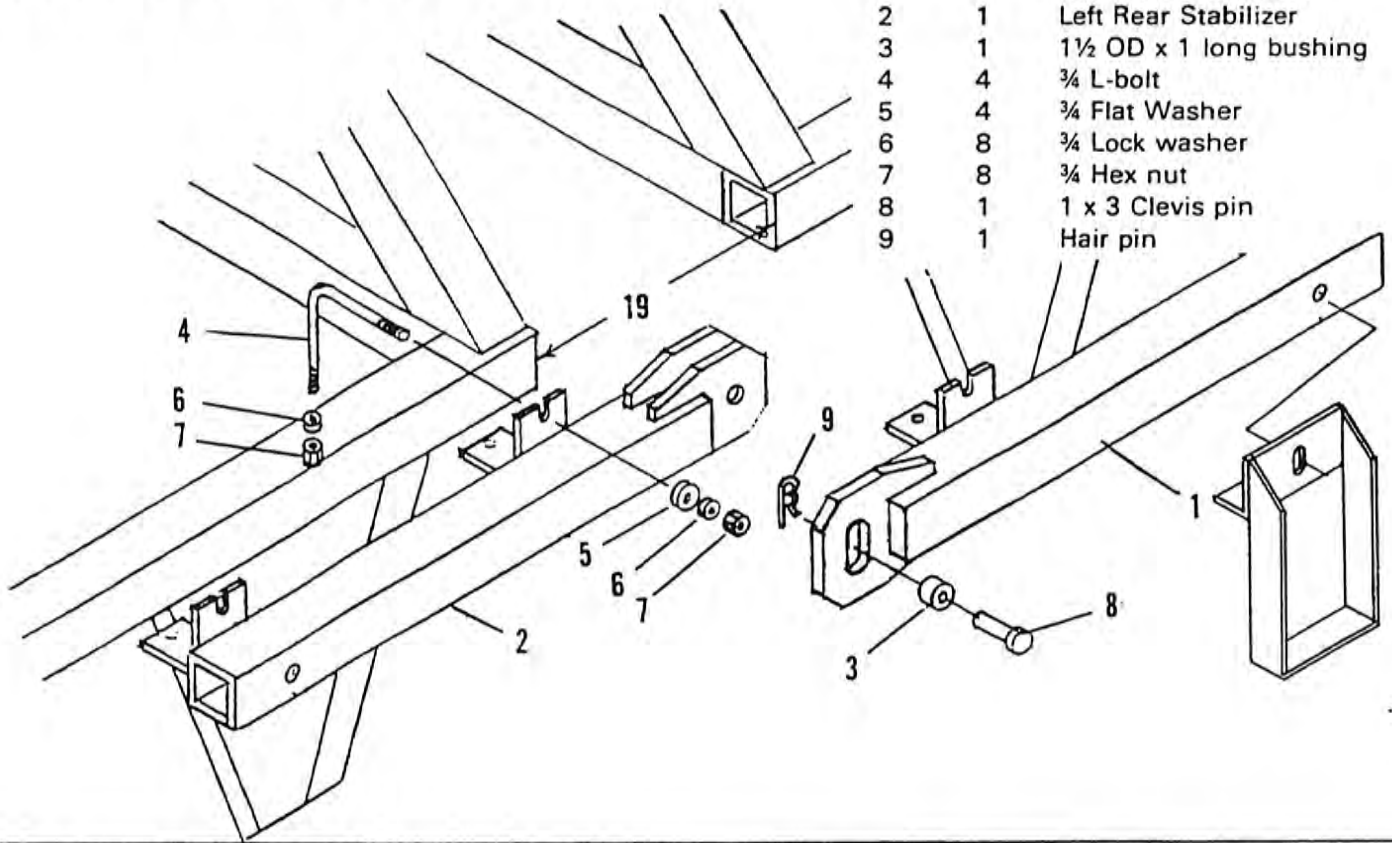
ITEM	QTY.	DESCRIPTION
20	6	¾ x 1½ Hex Bolt
21	10	¾ Lock Washer
22	9	¾ Hex Nut
23	3	¾ x 2 Hex Bolt
24	1	Hose Minder Mount
25	1	Hose Minder Mount Strap
26	1	Hose Minder Rod
27	1	Hose Minder Rod Strap
28	1	Hose Minder Spring
29	2	¾ x 4 Hex Bolt
30	2	¾ x 2 Hex Bolt
31	4	¾ Lock Nut
32	4	¾ Hex Nut
33	1	½ Lock Nut
34	1	Lower Hitch Lip



8000 SERIES DRILL

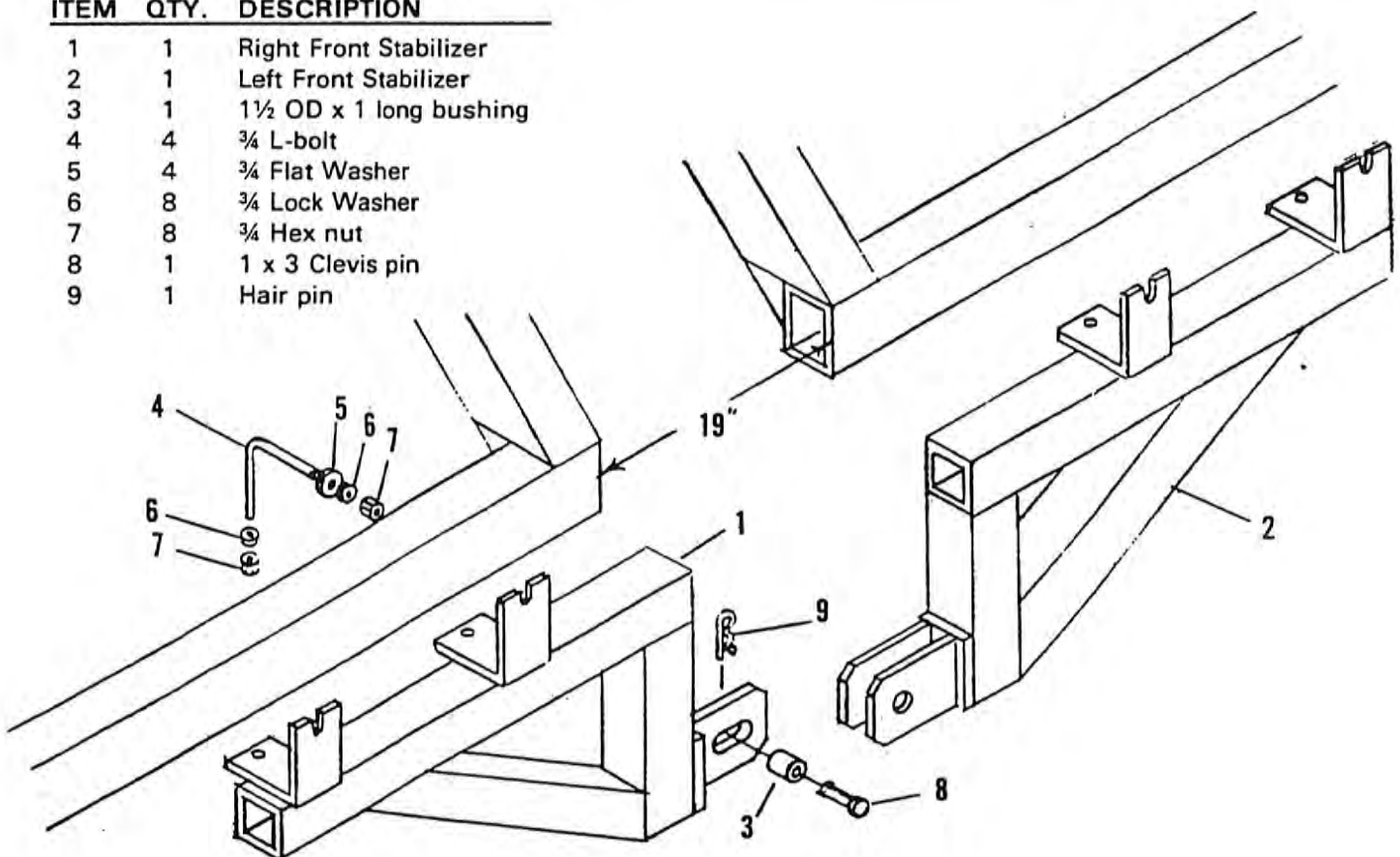
REAR STABILIZER

ITEM	QTY.	DESCRIPTION
1	1	Right Rear Stabilizer
2	1	Left Rear Stabilizer
3	1	1½ OD x 1 long bushing
4	4	¾ L-bolt
5	4	¾ Flat Washer
6	8	¾ Lock washer
7	8	¾ Hex nut
8	1	1 x 3 Clevis pin
9	1	Hair pin



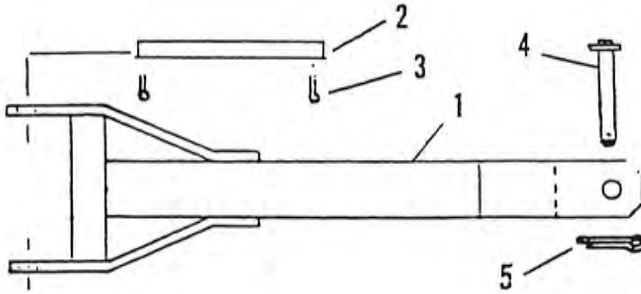
FRONT STABILIZER

ITEM	QTY.	DESCRIPTION
1	1	Right Front Stabilizer
2	1	Left Front Stabilizer
3	1	1½ OD x 1 long bushing
4	4	¾ L-bolt
5	4	¾ Flat Washer
6	8	¾ Lock Washer
7	8	¾ Hex nut
8	1	1 x 3 Clevis pin
9	1	Hair pin



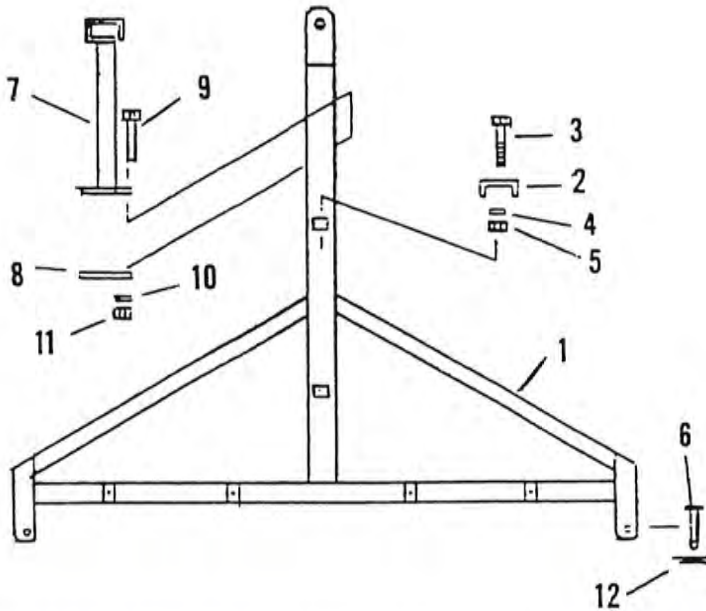
8000 DRILL HITCHES

SINGLE HITCH



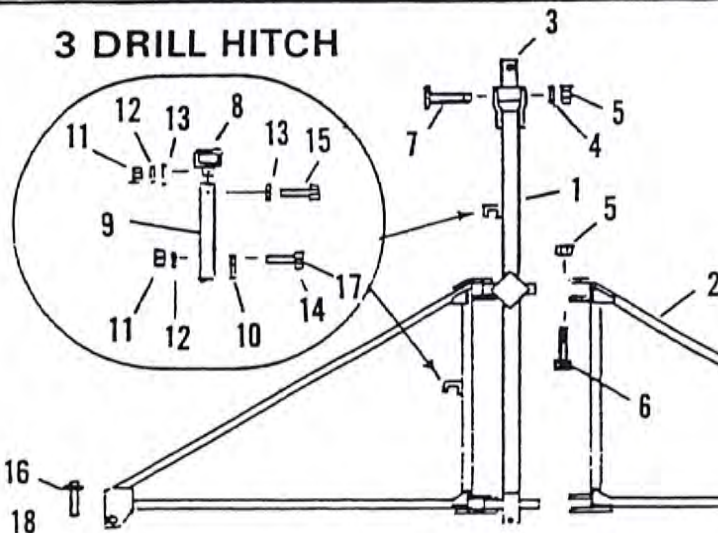
ITEM	QTY.	DESCRIPTION
1	1	Hitch
2	1	1 x 10¼ Hitch pin
3	2	¼ x 1¾ Cotter key
4	1	1 x 6 Hitch pin
5	1	¼ x 1¾ Cotter key

2 DRILL HITCH



ITEM	QTY.	DESCRIPTION
1	1	Hitch
2	6	Hose clamp
3	6	¾ x 1¾ Bolt
4	6	¾ Lock Washer
5	6	¾ Hex nut
6	2	1 x 6 Hitch pin
7	1	Hose minder
8	1	Hose minder strap
9	2	½ x 3½ Hex bolt
10	2	½ Lock washer
11	2	½ Hex nut
12	2	¼ x 1¾ Cotter keys

3 DRILL HITCH

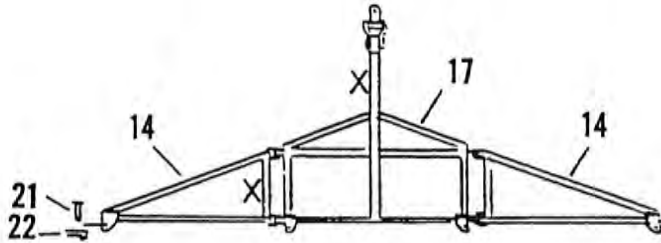


ITEM	QTY.	DESCRIPTION
1	1	3 Drill hitch center section
2	2	Hitch wing
3	1	Hitch block
4	1	2 OD x 1.028 ID ¾ thick washer
5	5	1" Nylon insert nut
6	4	1 x 6 Hex bolt
7	1	Hitch block pin
8	2	Hose minder
9	2	Hose minder channel
10	2	Hose minder strap
11	6	½ Hex nut
12	6	½ Lock washer
13	4	½ Flat washer
14	2	½ x 5½ bolt
15	2	½ x 1¼ bolt
16	3	1 x 6 Hitch pin
17	2	½ x 4 Bolts
18	3	¼ x 1¾ Cotter keys
3		Flotation Link (see page 40)

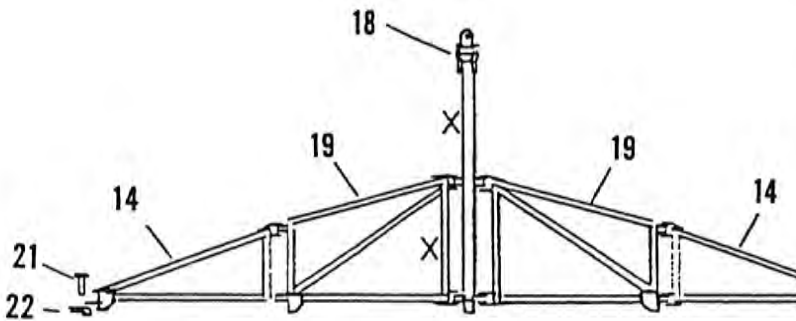
8000 DRILL HITCHES

4, 5, 6 DRILL HITCHES STANDARD PARTS

4 DRILL HITCH

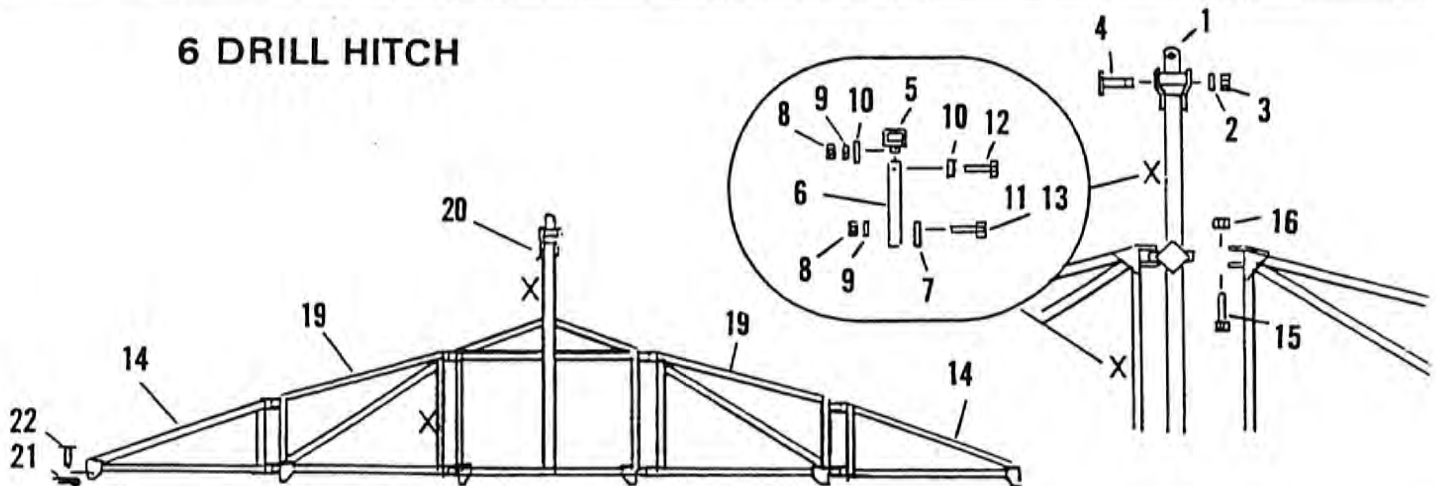


5 DRILL HITCH



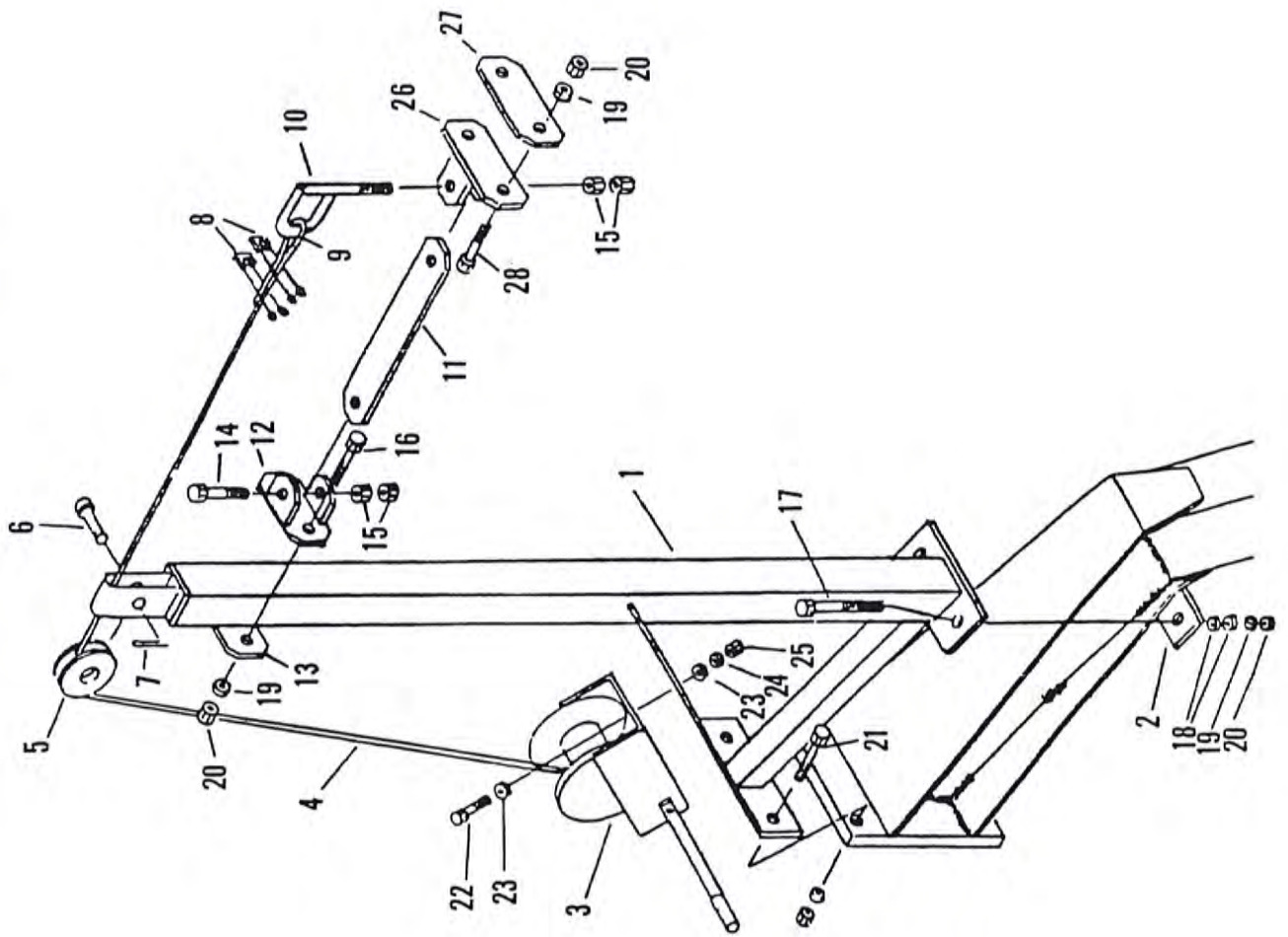
X Location of Hose Minder

6 DRILL HITCH



ITEM	QTY.	DESCRIPTION
1	1	Hitch block
2	1	2 OD x 1.028 ID 3/8" thick washer
3	1	1" nylon insert nut
4	1	Hitch block pin
5	2	Hose minder
6	2	Hose minder channel
7	2	Hose minder strap
8	6	1/2 Hex nut
9	6	1/2 Lock washer
10	4	1/2 Flat washer
11	2	1/2 x 5 1/2 bolt
12	2	1/2 x 1 1/4 bolt
13	2	1/2 x 4 bolt
14	2	Hitch wing
15	2 per	1 x 6 Hex bolt wing
16	2 per	1" nylon insert nut wing
17	1	4 Drill hitch center section
18	1	5 Drill hitch center section
19	2	5, 6 Drill hitch 2nd wing
20	1	6 Drill hitch center section
21	1 per	1 x 6 Hitch pin drill
22	1 per	1/4 x 1 3/4 Cotter key drill
	1 per	Flotation Link (see page 40) drill

8000 SERIES HITCH LIFT



HITCH LIFT 3 DRILL

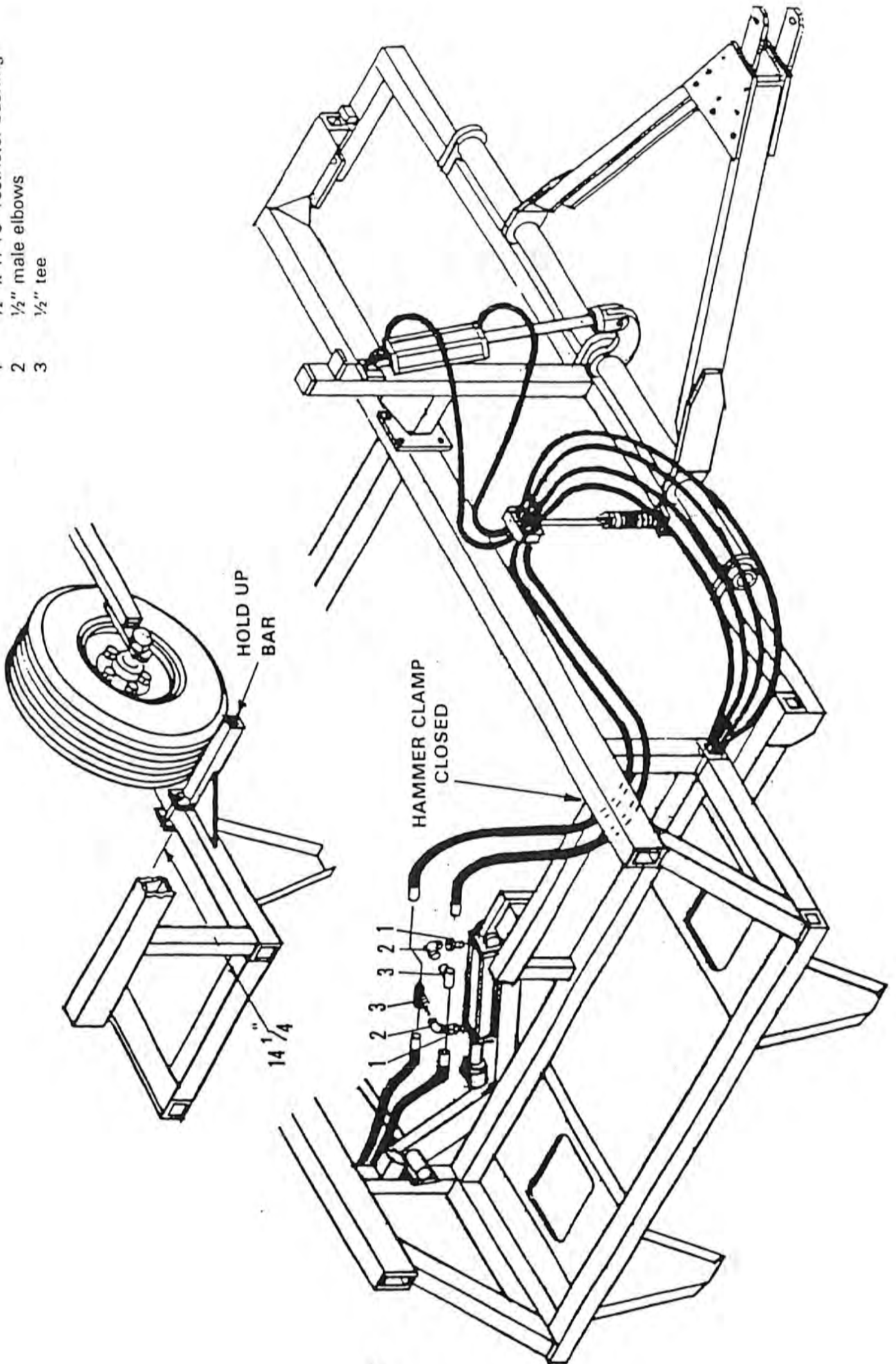
ITEM	QTY.	DESCRIPTION
1	1	LIFT FRAME
2	1	LIFT MOUNT STRAP
3	1	WINCH
4	1	1/4" CABLE 12'
5	1	CABLE SHEAVES
6	1	1/2 x 2 CLEVIS PIN
7	1	1/2 x 1 1/2 COTTER PIN
8	2	1/4" CABLE CLAMP
9		1/4 CABLE THIMBLE
10	1	1 BOLT
11	1	HOLD UP BAR
12	1	HOLD UP BAR MOUNT 4 1/2 LONG
13	1	HOLD UP BAR STRAP 4 1/2 LONG
14	1	1/2 x 3 1/2 BOLT
15	4	1/2 NUTS
16	2	1/2 x 4 BOLT
17	2	1/2 x 7 BOLT
18	4	1/2 FLAT WASHER
19	6	1/2 LOCK WASHER
20	6	1/2 HEX NUT
21	1	3/4 x 3 BOLT
22	3	1/2 x 1 BOLT
23	6	1/2 FLAT WASHER
24	3	1/2 LOCK WASHER
25	3	HEX NUT
26	1	HOLD UP BAR MOUNT 6 LONG
27	1	HOLD UP BAR STRAP 6 LONG
28	2	1/2 x 5 1/2 BOLT

4 DRILL HITCH LIFT

SAME AS ABOVE EXCEPT		
26	1	HOLD UP BAR MOUNT 4 1/2 LONG
27	1	HOLD UP BAR STRAP 4 1/2 LONG
28	2	1/2 x 4 BOLT

ITEM DESCRIPTION

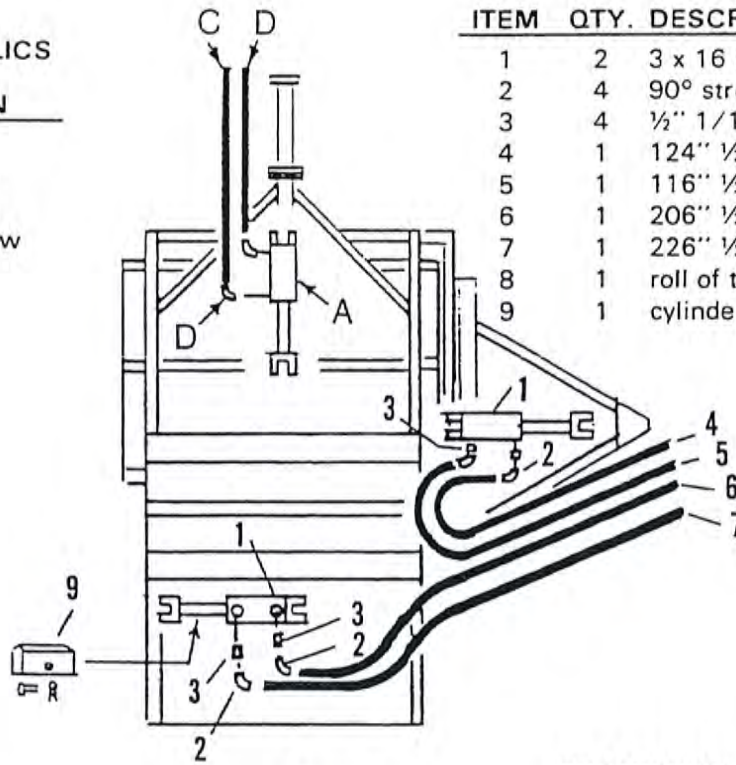
- 1 1/2" x 1/16" restrictor bushing
- 2 1/2" male elbows
- 3 1/2" tee



TRANSPORT HYDRAULICS

SINGLE DRILL
DEPTH CONTROL HYDRAULICS

ITEM	QTY.	DESCRIPTION
A	1	3 x 8 cylinder
B	1	132" 1/2" hose
C	1	144" 1/2" hose
D	2	90° street elbow

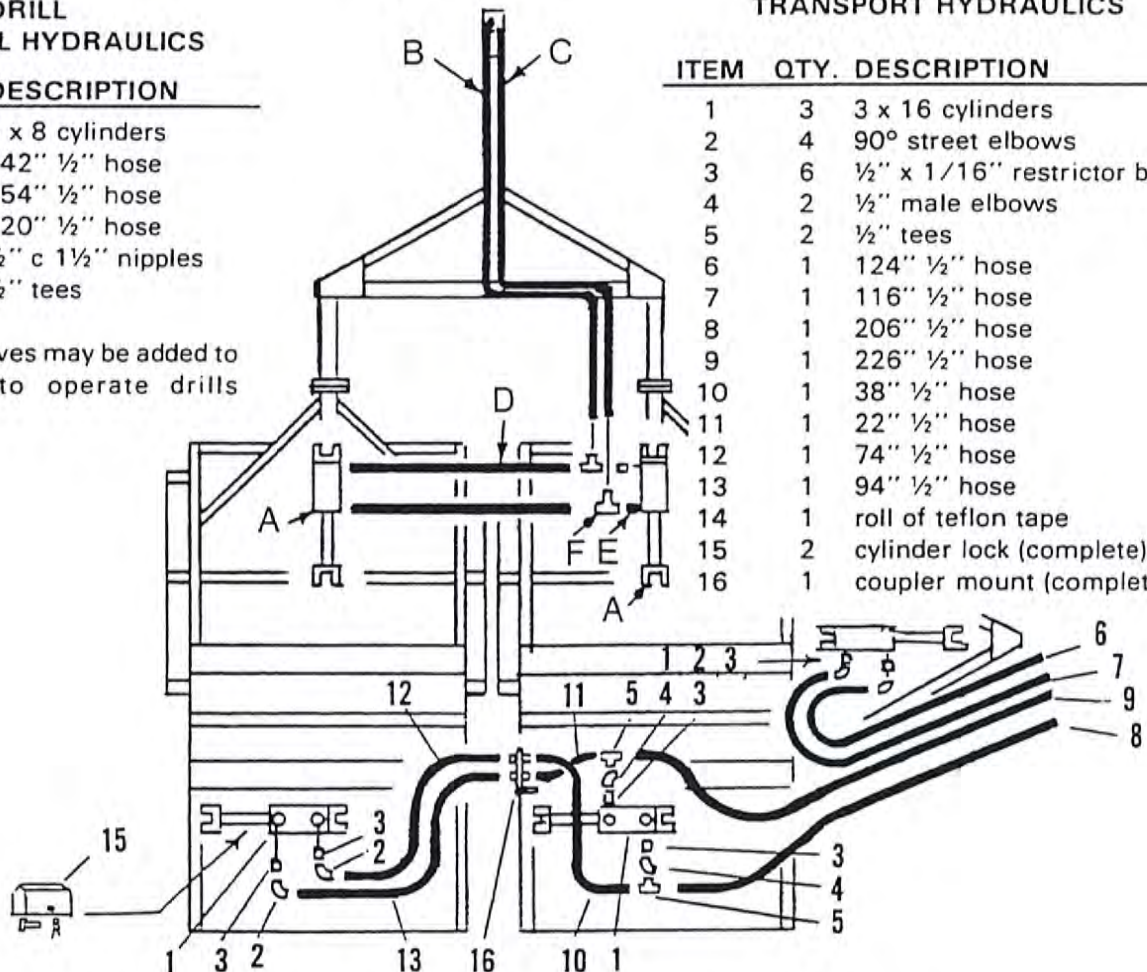


ITEM	QTY.	DESCRIPTION
1	2	3 x 16 cylinder
2	4	90° street elbow
3	4	1/2" x 1/16" restrictor bushing
4	1	124" 1/2" hose
5	1	116" 1/2" hose
6	1	206" 1/2" hose
7	1	226" 1/2" hose
8	1	roll of teflon tape
9	1	cylinder lock complete

TWO DRILL
DEPTH CONTROL HYDRAULICS

ITEM	QTY.	DESCRIPTION
A	2	3 x 8 cylinders
B	1	242" 1/2" hose
C	1	254" 1/2" hose
D	2	120" 1/2" hose
E	2	1/2" c 1 1/2" nipples
F	2	1/2" tees

NOTE: Ball valves may be added to lift cylinders to operate drills individually.



TRANSPORT HYDRAULICS

ITEM	QTY.	DESCRIPTION
1	3	3 x 16 cylinders
2	4	90° street elbows
3	6	1/2" x 1/16" restrictor bushing
4	2	1/2" male elbows
5	2	1/2" tees
6	1	124" 1/2" hose
7	1	116" 1/2" hose
8	1	206" 1/2" hose
9	1	226" 1/2" hose
10	1	38" 1/2" hose
11	1	22" 1/2" hose
12	1	74" 1/2" hose
13	1	94" 1/2" hose
14	1	roll of teflon tape
15	2	cylinder lock (complete)
16	1	coupler mount (complete)

NOTE: For coupler mount, and cylinder lock parts list, see transport wheel assembly.

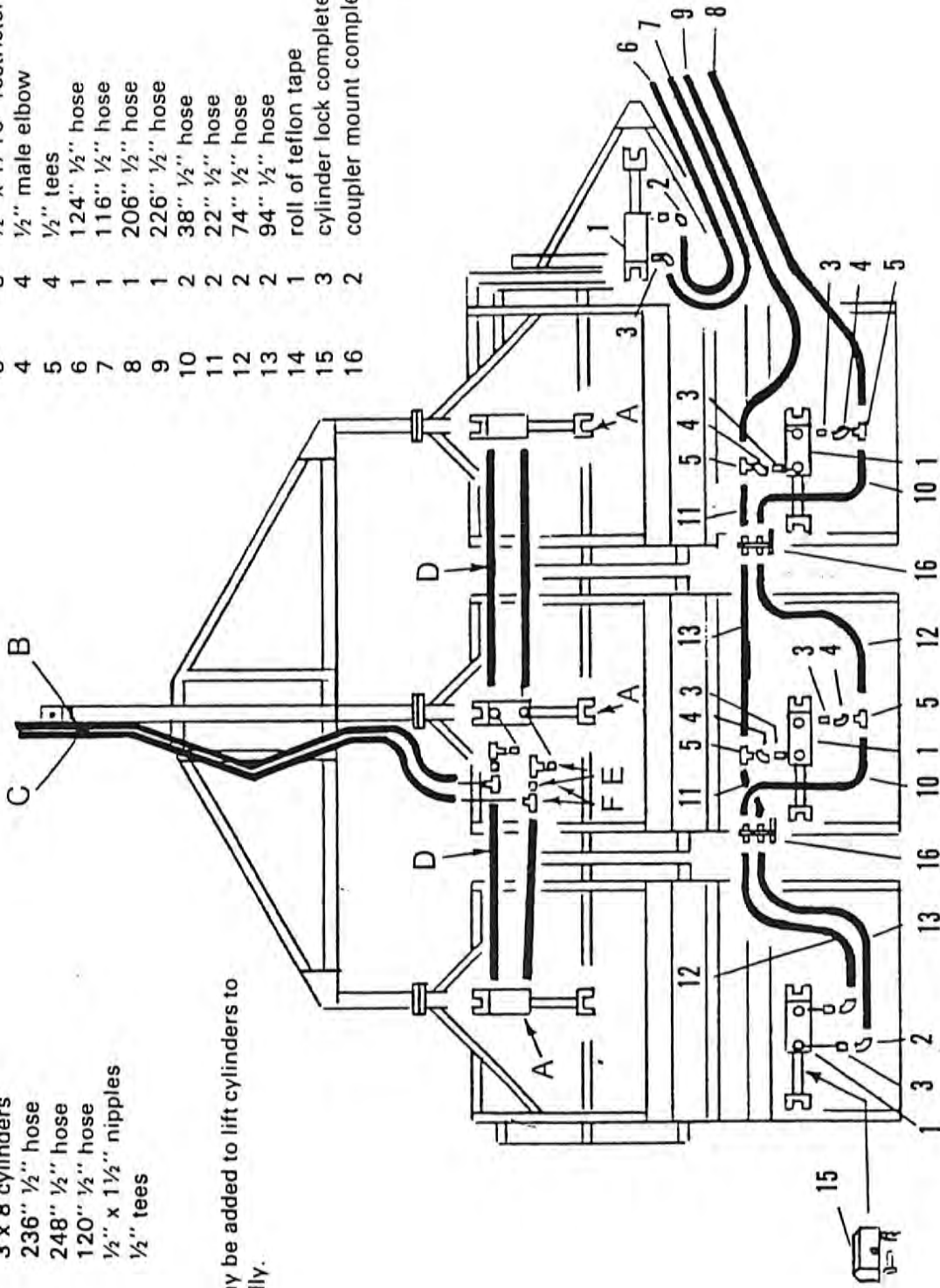
TRANSPORT HYDRAULICS

**3 DRILL
DEPTH CONTROL HYDRAULICS**

ITEM	QTY.	DESCRIPTION
A	3	3 x 8 cylinders
B	1	236" 1/2" hose
C	1	248" 1/2" hose
D	4	120" 1/2" hose
E	4	1/2" x 1 1/2" nipples
F	4	1/2" tees

NOTE: Ball valves may be added to lift cylinders to operate drills individually.

ITEM	QTY.	DESCRIPTION
1	4	3 x 16 cylinders
2	4	90° street elbows
3	8	1/2" x 1/16" restrictor bushings
4	4	1/2" male elbow
5	4	1/2" tees
6	1	124" 1/2" hose
7	1	116" 1/2" hose
8	1	206" 1/2" hose
9	1	226" 1/2" hose
10	2	38" 1/2" hose
11	2	22" 1/2" hose
12	2	74" 1/2" hose
13	2	94" 1/2" hose
14	1	roll of teflon tape
15	3	cylinder lock complete
16	2	coupler mount complete



NOTE: For coupler mount and cylinder parts list, see transport wheel assembly.

4 DRILL

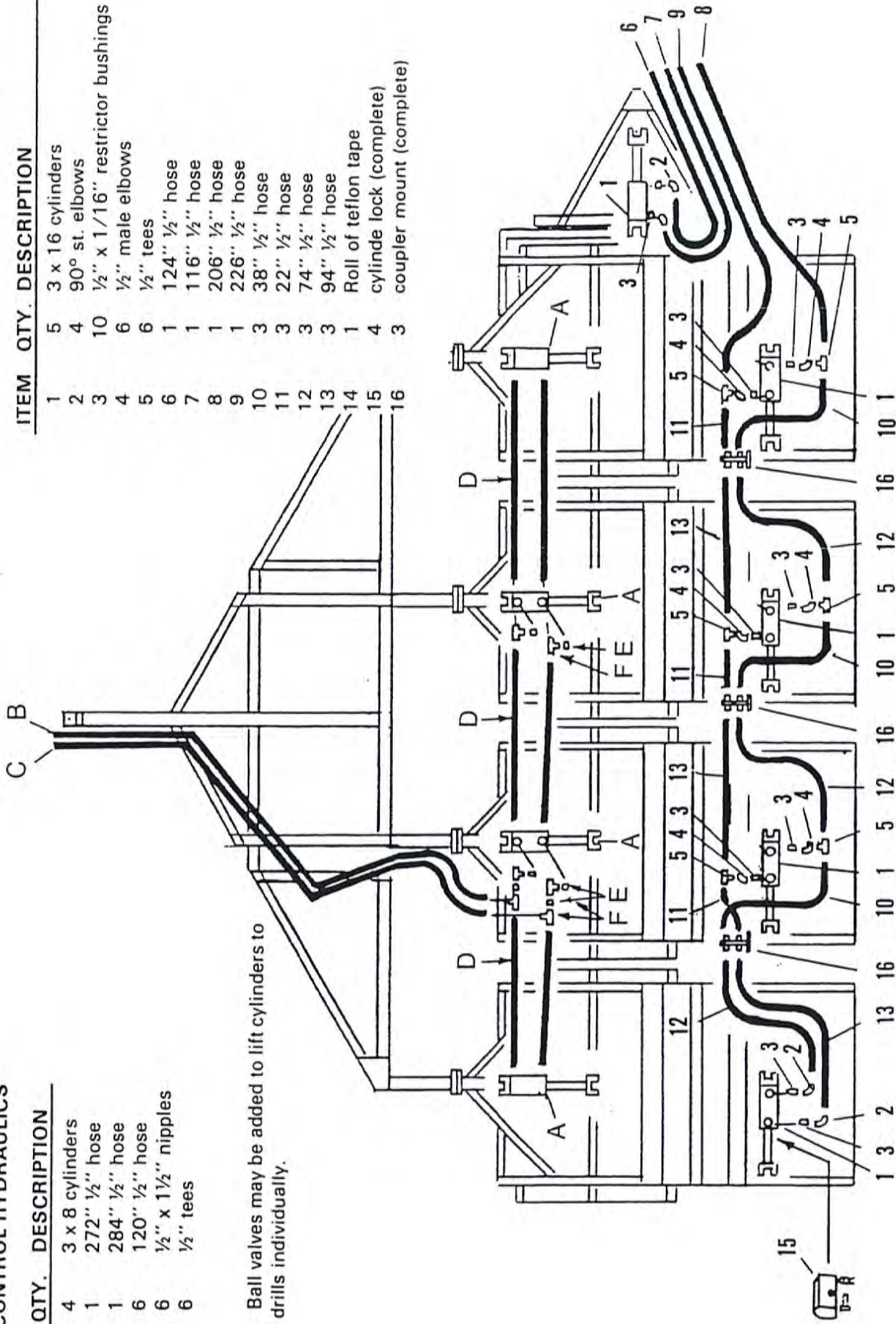
DEPTH CONTROL HYDRAULICS

ITEM	QTY.	DESCRIPTION
A	4	3 x 8 cylinders
B	1	272" 1/2" hose
C	1	284" 1/2" hose
D	6	120" 1/2" hose
E	6	1/2" x 1 1/2" nipples
F	6	1/2" tees

NOTE: Ball valves may be added to lift cylinders to operate drills individually.

TRANSPORT HYDRAULICS

ITEM	QTY.	DESCRIPTION
1	5	3 x 16 cylinders
2	4	90° st. elbows
3	10	1/2" x 1/16" restrictor bushings
4	6	1/2" male elbows
5	6	1/2" tees
6	1	124" 1/2" hose
7	1	116" 1/2" hose
8	1	206" 1/2" hose
9	1	226" 1/2" hose
10	3	38" 1/2" hose
11	3	22" 1/2" hose
12	3	74" 1/2" hose
13	3	94" 1/2" hose
14	1	Roll of teflon tape
15	4	cylinder lock (complete)
16	3	coupler mount (complete)



NOTE: For coupler mount and cylinder lock parts list, see transport wheel assembly.

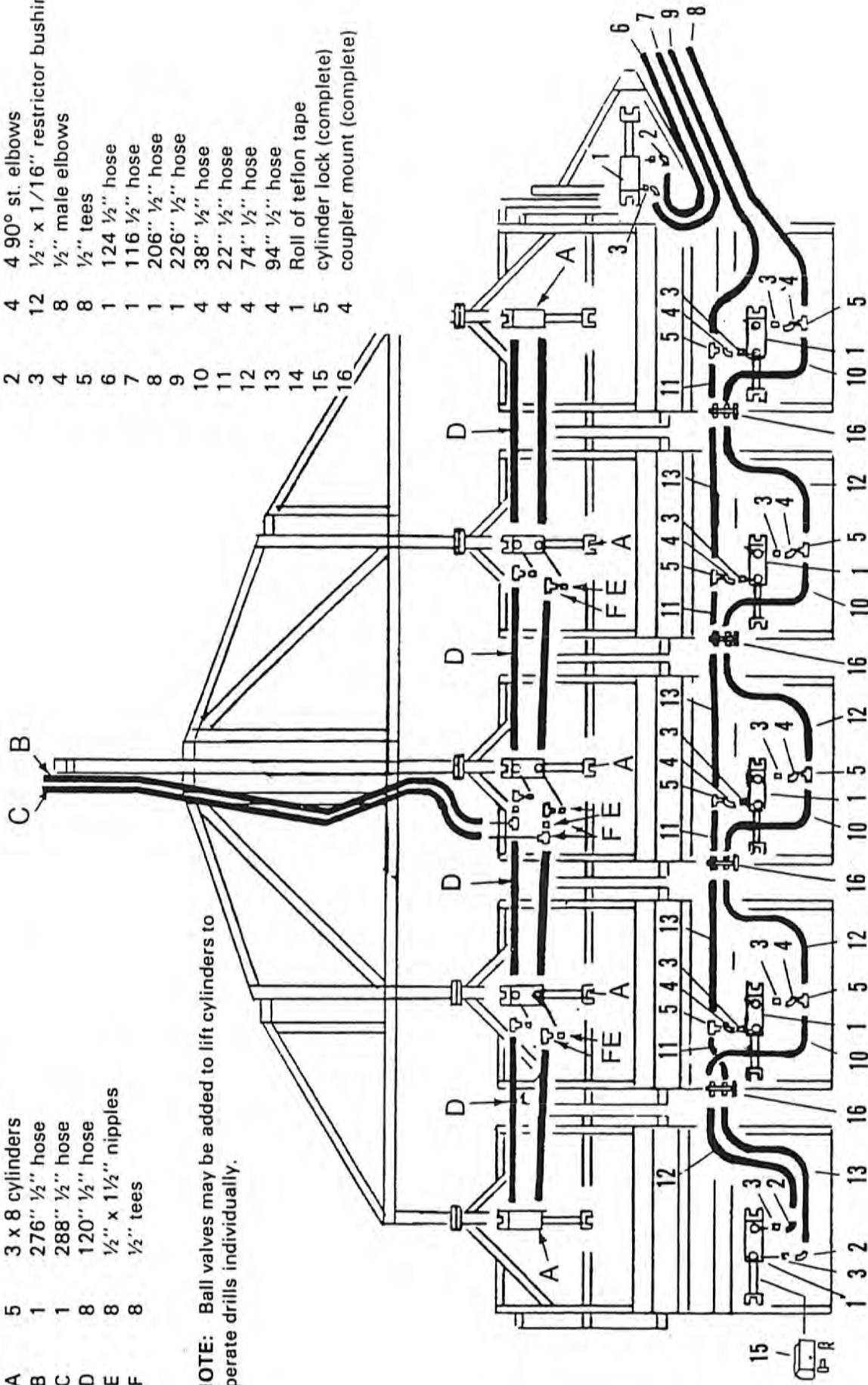
**5 DRILL
DEPTH CONTROL HYDRAULICS**

ITEM	QTY.	DESCRIPTION
A	5	3 x 8 cylinders
B	1	276" 1/2" hose
C	1	288" 1/2" hose
D	8	120" 1/2" hose
E	8	1/2" x 1 1/2" nipples
F	8	1/2" tees

NOTE: Ball valves may be added to lift cylinders to operate drills individually.

TRANSPORT HYDRAULICS

ITEM	QTY.	DESCRIPTION
1	6	3 x 16 cylinders
2	4	4 90° st. elbows
3	12	1/2" x 1/16" restrictor bushings
4	8	1/2" male elbows
5	8	1/2" tees
6	1	124 1/2" hose
7	1	116 1/2" hose
8	1	206 1/2" hose
9	1	226 1/2" hose
10	4	38 1/2" hose
11	4	22 1/2" hose
12	4	74 1/2" hose
13	4	94 1/2" hose
14	1	Roll of teflon tape
15	5	cylinder lock (complete)
16	4	coupler mount (complete)



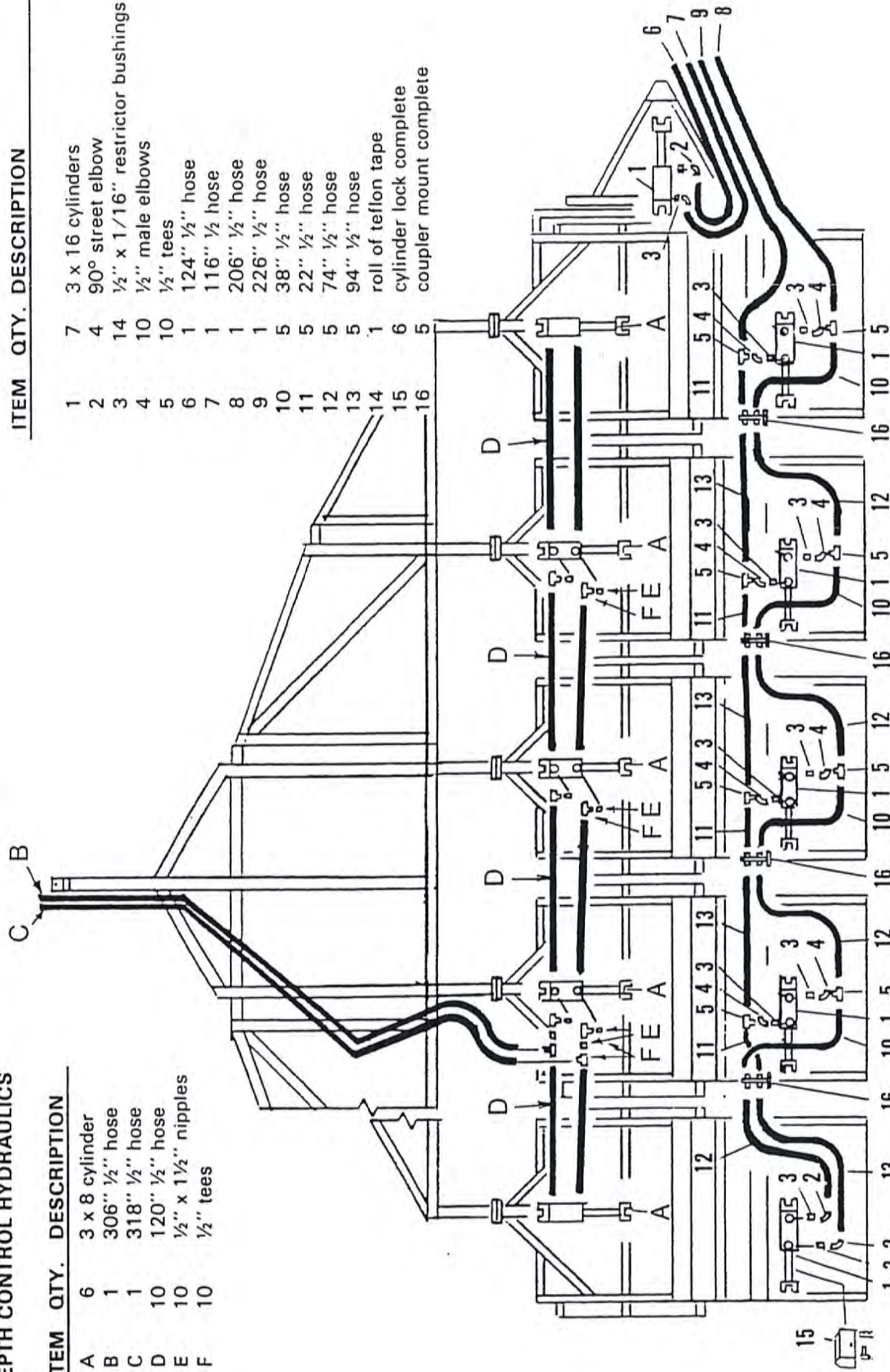
NOTE: For coupler mount, and cylinder lock parts list, see transport wheel assembly.

**6 DRILL
DEPTH CONTROL HYDRAULICS**

ITEM	QTY.	DESCRIPTION
A	6	3 x 8 cylinder
B	1	306" 1/2" hose
C	1	318" 1/2" hose
D	10	120" 1/2" hose
E	10	1/2" x 1 1/2" nipples
F	10	1/2" tees

TRANSPORT HYDRAULICS

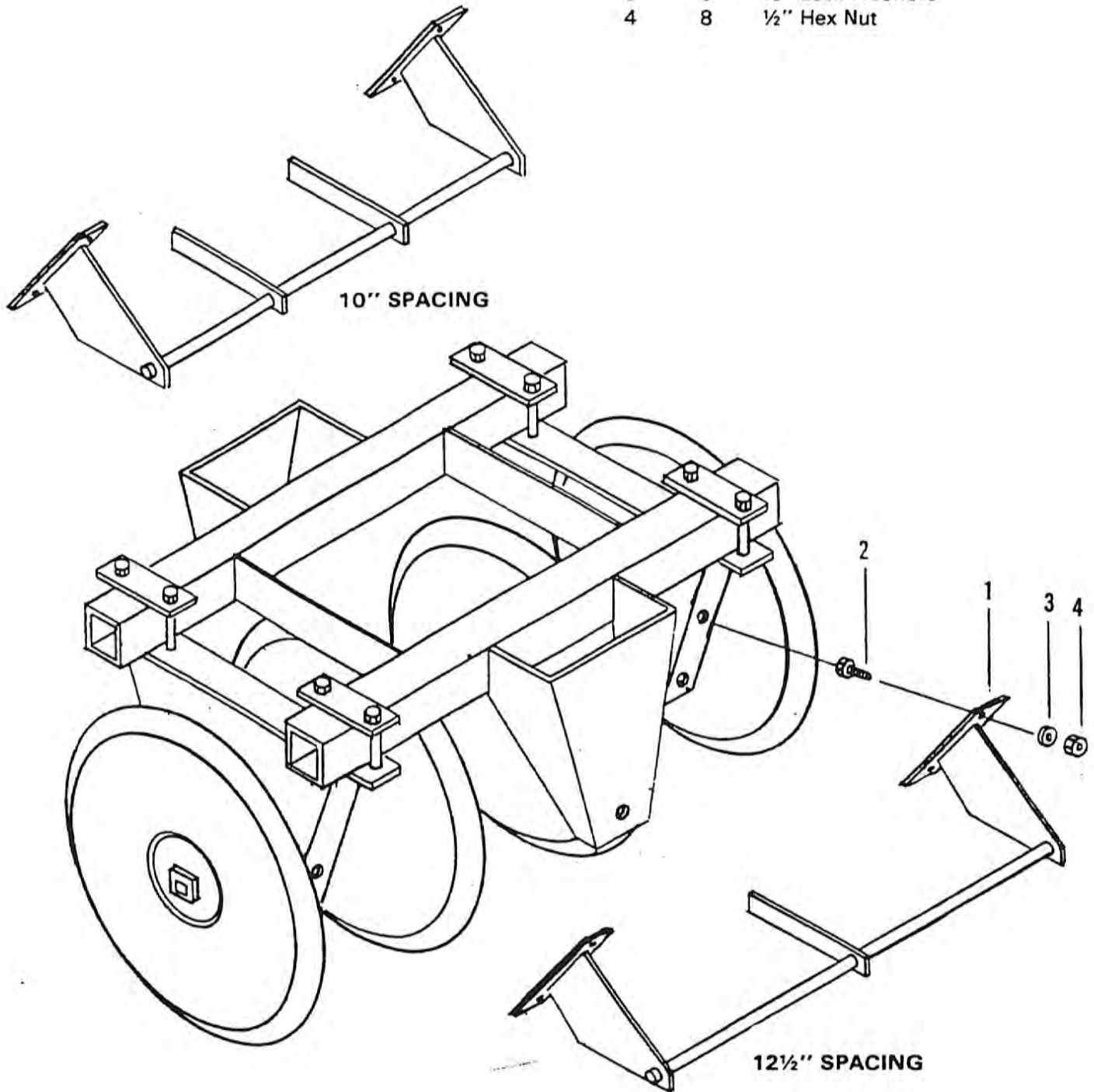
ITEM	QTY.	DESCRIPTION
1	7	3 x 16 cylinders
2	4	90° street elbow
3	14	1/2" x 1/16" restrictor bushings
4	10	1/2" male elbows
5	10	1/2" tees
6	1	124" 1/2" hose
7	1	116" 1/2" hose
8	1	206" 1/2" hose
9	1	226" 1/2" hose
10	5	38" 1/2" hose
11	5	22" 1/2" hose
12	5	74" 1/2" hose
13	5	94" 1/2" hose
14	1	roll of teflon tape
15	6	cylinder lock complete
16	5	coupler mount complete



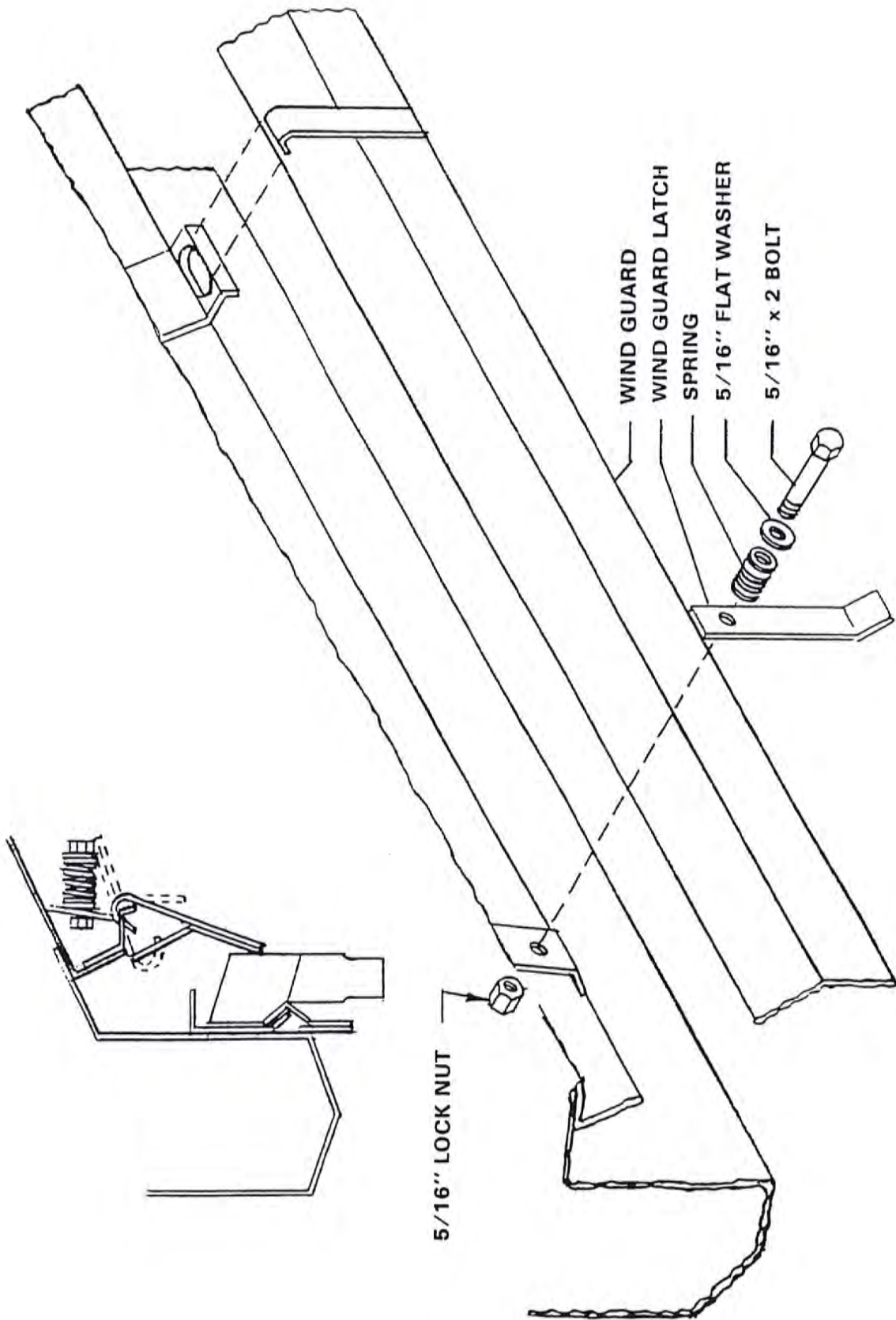
ROCK GUARD 8000 DRILL

ITEM	QTY.	DESCRIPTION
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1	2	Rock Guard
2	8	1/2" x 1 1/2" Bolt
3	8	1/2" Lock Washers
4	8	1/2" Hex Nut



8000 SERIES DRILL WINDGUARD

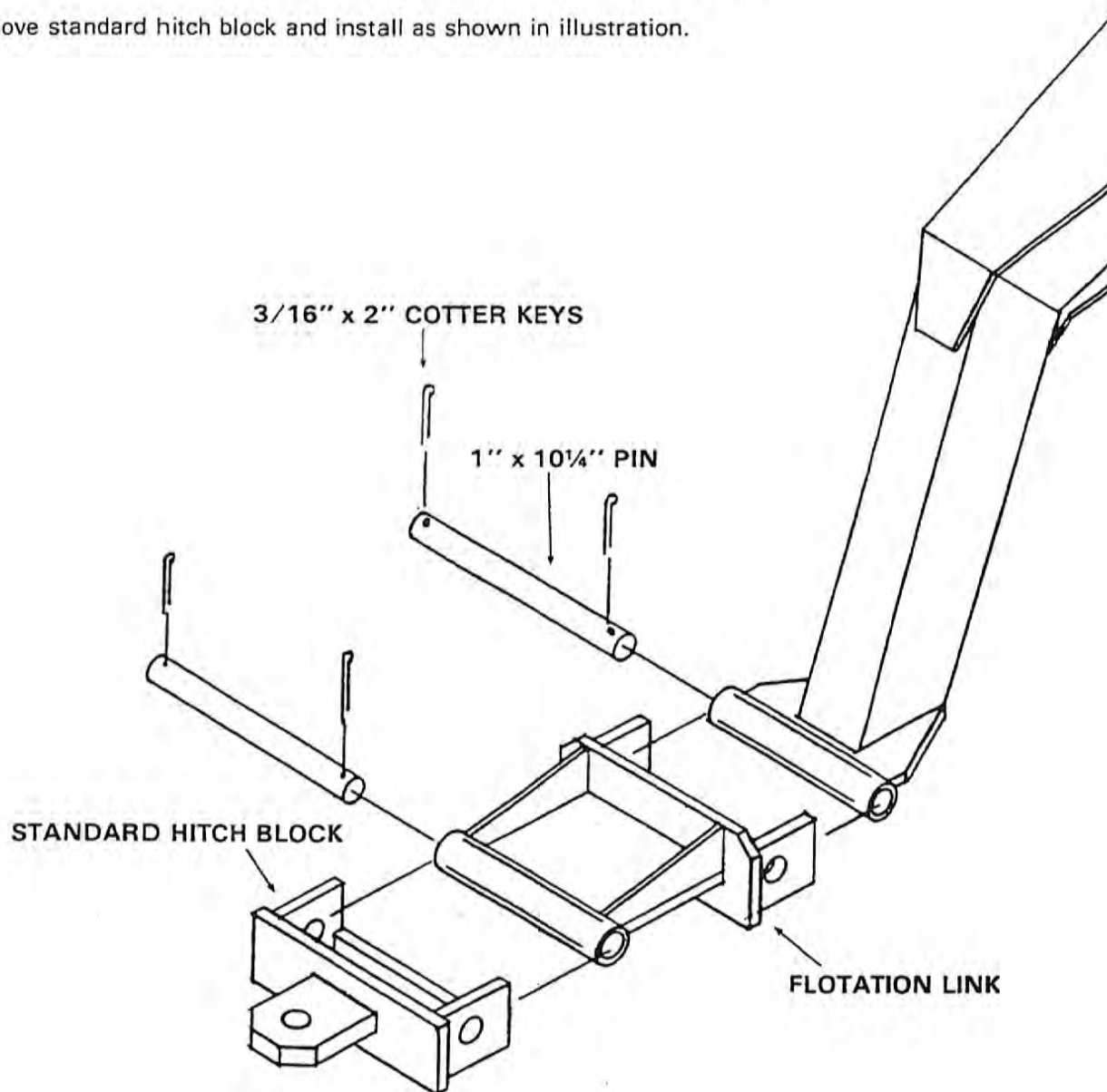


8000 DRILL

TRANSPORT FLOTATION LINK

Installing Flotation Link

Remove standard hitch block and install as shown in illustration.

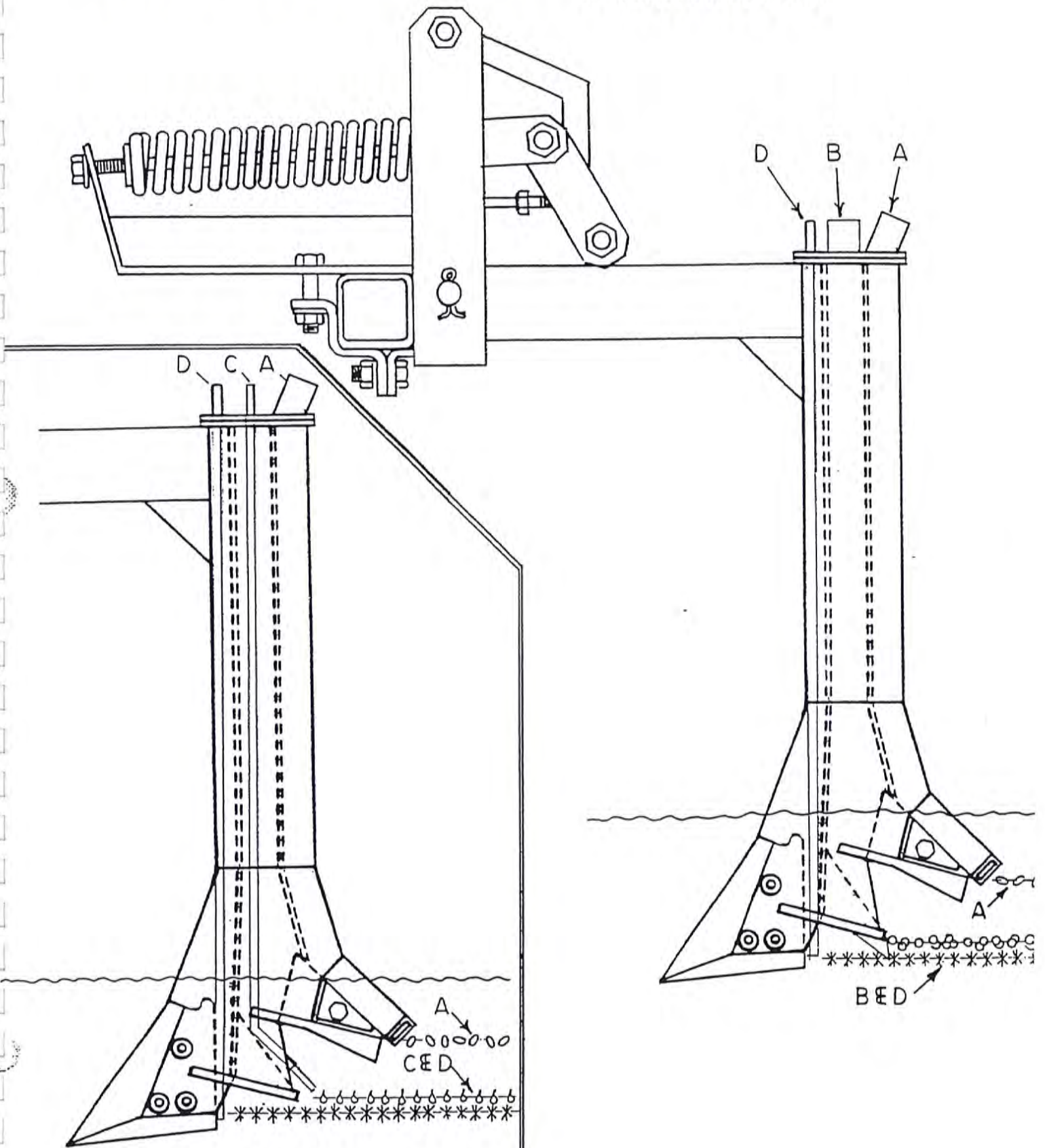


Used on multi-drill units of three (3) or more.
(1 per drill)

The purpose of the flotation link is to allow the front swivel wheels to individually float over uneven terrain without putting undue strain on any one wheel during end transport.

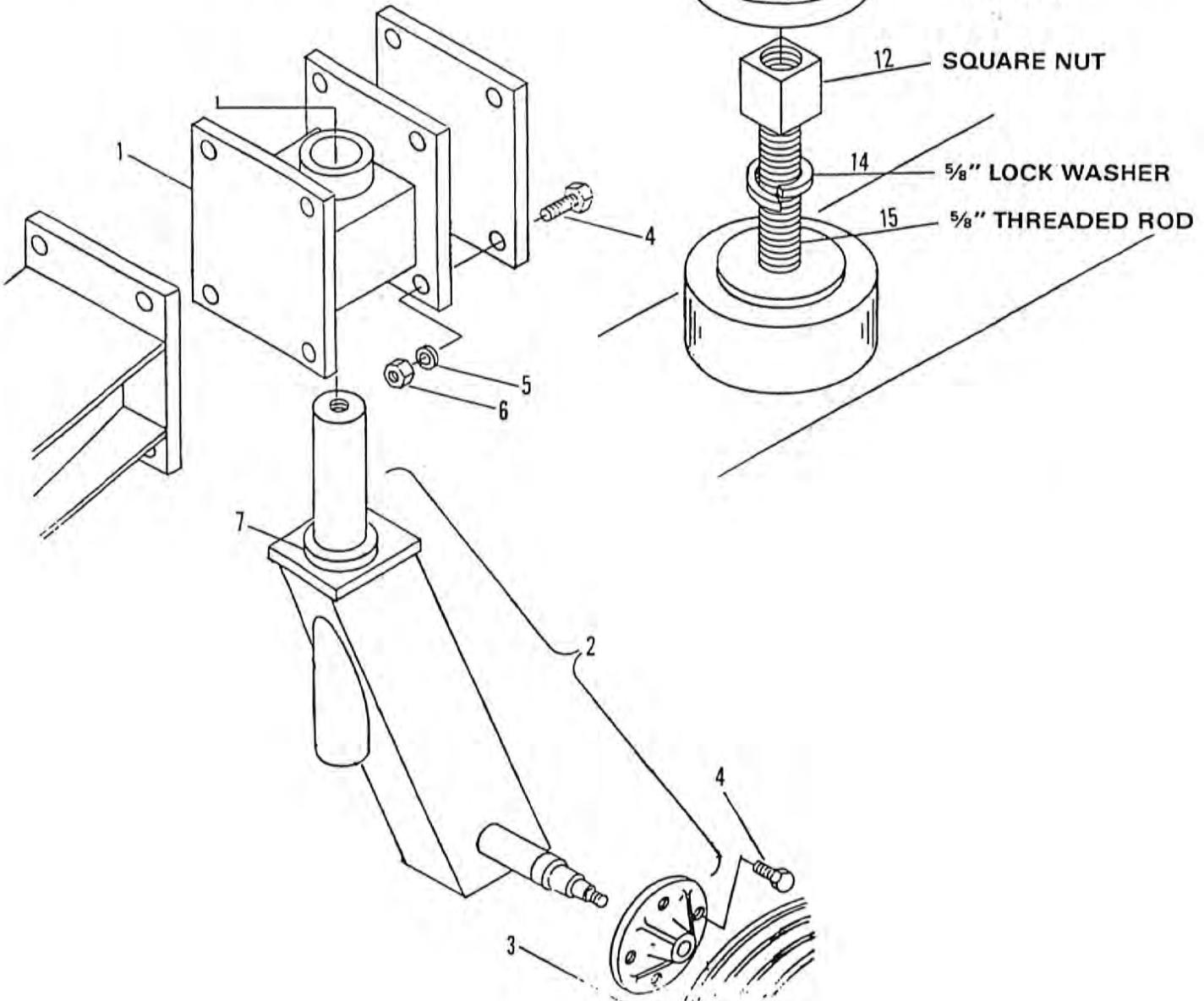
HAYBUSTER 8000 SERIES DOUBLE SHOOTER SHANK

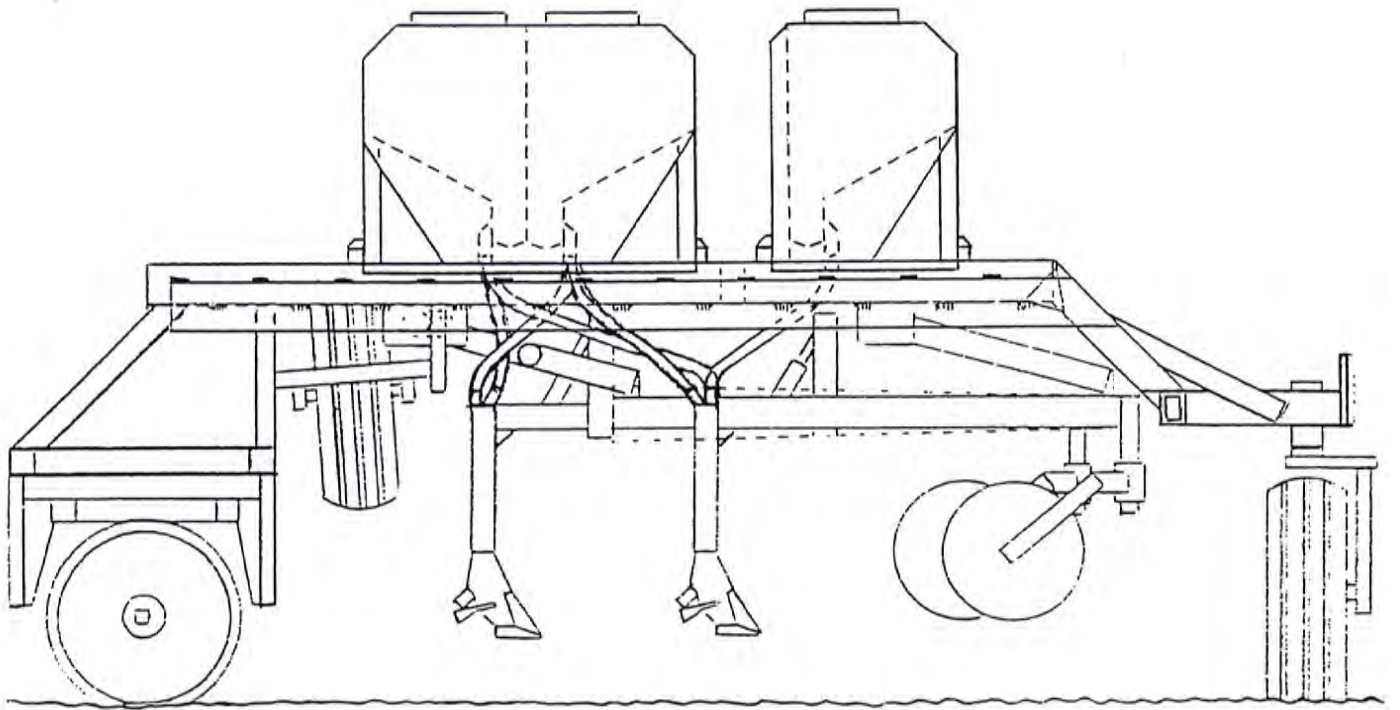
- A - SEED
- B - GRANULAR FERTILIZER
- C - LIQUID FERTILIZER
- D - ANHYDROUS GAS



ITEM QTY. DESCRIPTION

1	1	Mounting Block
2	1	Swivel wheel (Assembly)
3	2	Wheel and tire (Assembly)
4	4	3/4 x 2 1/2 G5 bolt
5	4	3/4 Lock washer
6	4	3/4 Hex nut
7	1	Thrust washer, 3 1/2" OD x 2" ID x 1/2"
8	1	2" OD x 21/32" ID x 13 Ga washer
9	1	1 7/8" OD x 1-5/16" ID bushing
10	1	Pressure plate - 3 1/2" OD
11	1	Nylatron washer 3 1/2" OD 2-9/16" ID
12	1	Sq. nut
13	1	5/8" Self-locking nut
14	1	5/8" Lock washer
15	1	5/8" Threaded rod





To increase the total amount of dry fertilizer the 8000 can carry, an additional fertilizer tank can be mounted on each drill frame. The additional tank is able to hold 1040 pounds of dry fertilizer, doubling the fertilizer capacity of the drill.

REAR MOUNTED TRANSPORT

NOTE: Single drill transport requires one left and one right transport and two 1½" x 14-3/4" cylinder mount spacers.

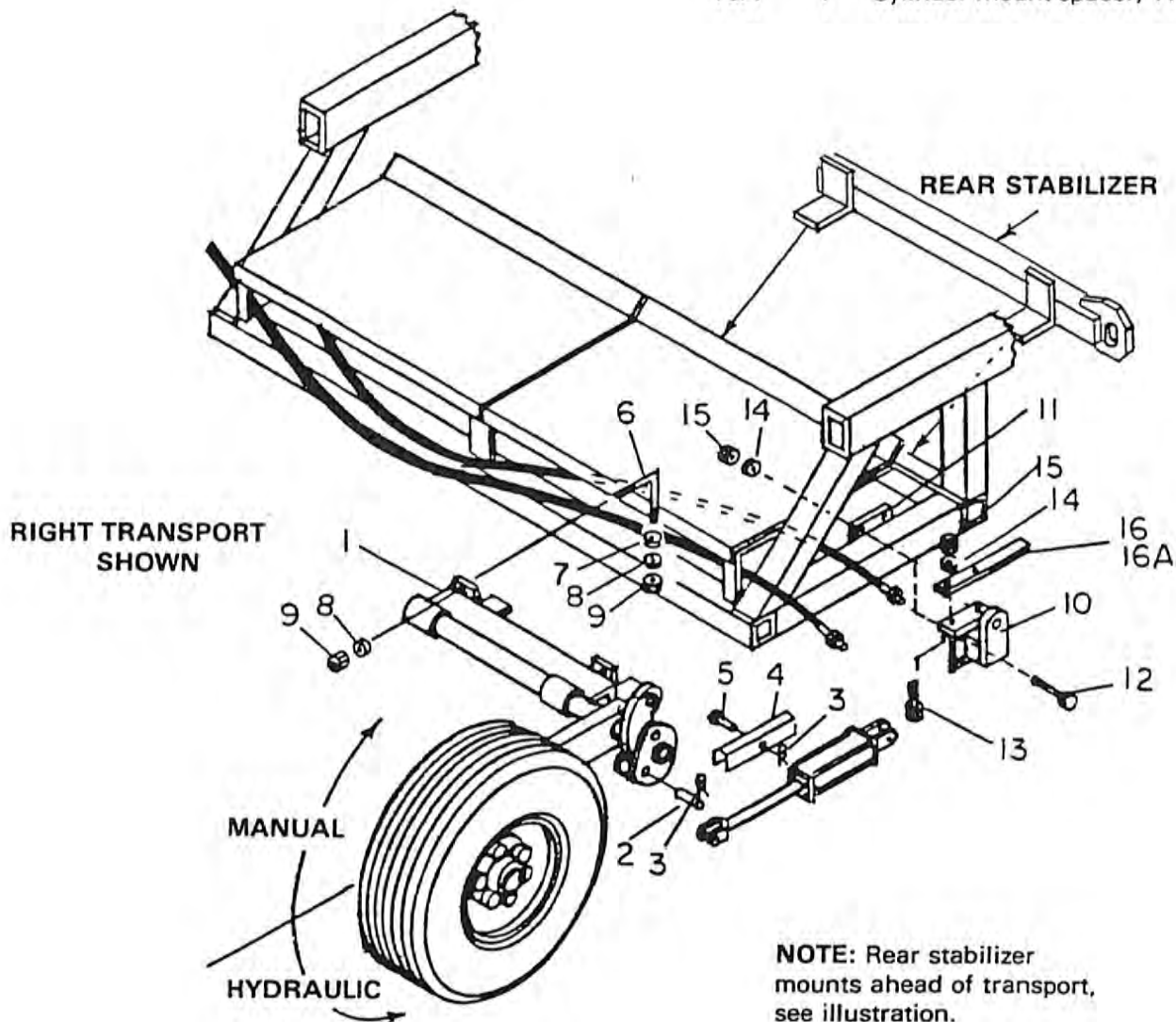
Two drill transport requires one left and two right transports with two 1½" x 14-3/4" cylinder mount spacers and one 1½" x 15¼" cylinder mount spacer for center transport only.

Three drill transport requires one left and three right transport with two 1½" x 14-3/4" cylinder mount spacer and two 1½" x 15¼" cylinder mount spacers for center transport only.

ITEM	QTY.	DESCRIPTION
1	1	Rear mounted transport assembly
2	1	1" x 3" Clevis pin
3	3	⅛" Hair pin
4	1	10¼" Hold-up bar
5	1	¾" x 3" Clevis pin
6	2	¾" L-bolts, 5¼" OD
7	2	¾" Flat washer
8	4	¾" Lock washer
9	4	¾" Hex nuts
10	1	Cylinder mount
11	1	Cylinder mount plate, 5" x 6"
12	4	½" x 4½" Hex bolt
13	2	½" x 1½" Hex bolt
14	6	½" Lock washer
15	6	½" Hex nut

SEE NOTE

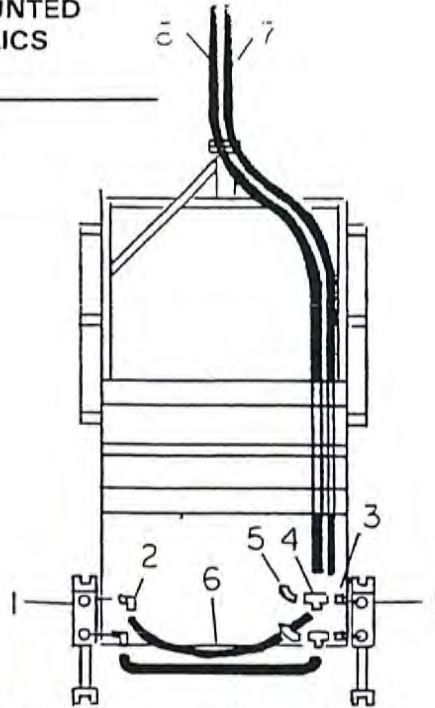
16	1	Cylinder mount spacer, 1½"x14¾"
16A	1	Cylinder mount spacer, 1½"x15¼"



NOTE: Rear stabilizer mounts ahead of transport, see illustration.

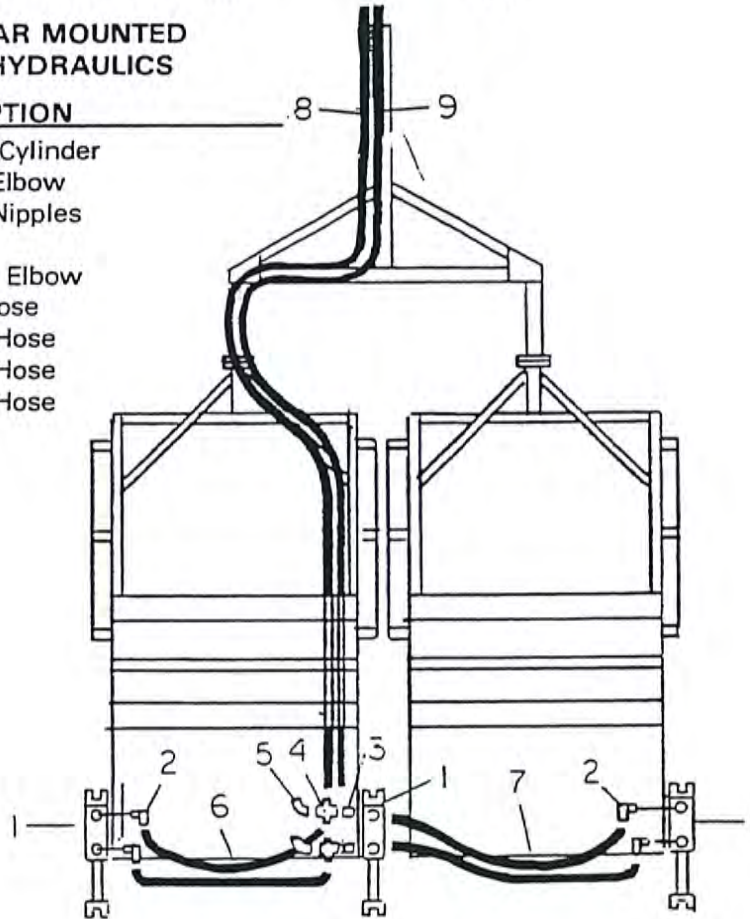
**SINGLE DRILL REAR MOUNTED
TRANSPORT HYDRAULICS**

ITEM	QTY.	DESCRIPTION
1	2	2½" x 8" Cylinders
2	2	¾" x ½" Elbow
3	2	¾" x ½" Nipples
4	2	½" Tee
5	2	½" Street elbow
6	2	96" ½" Hose
7	1	264" ½" Hose
8	1	276" ½" Hose



**TWO DRILL REAR MOUNTED
TRANSPORT HYDRAULICS**

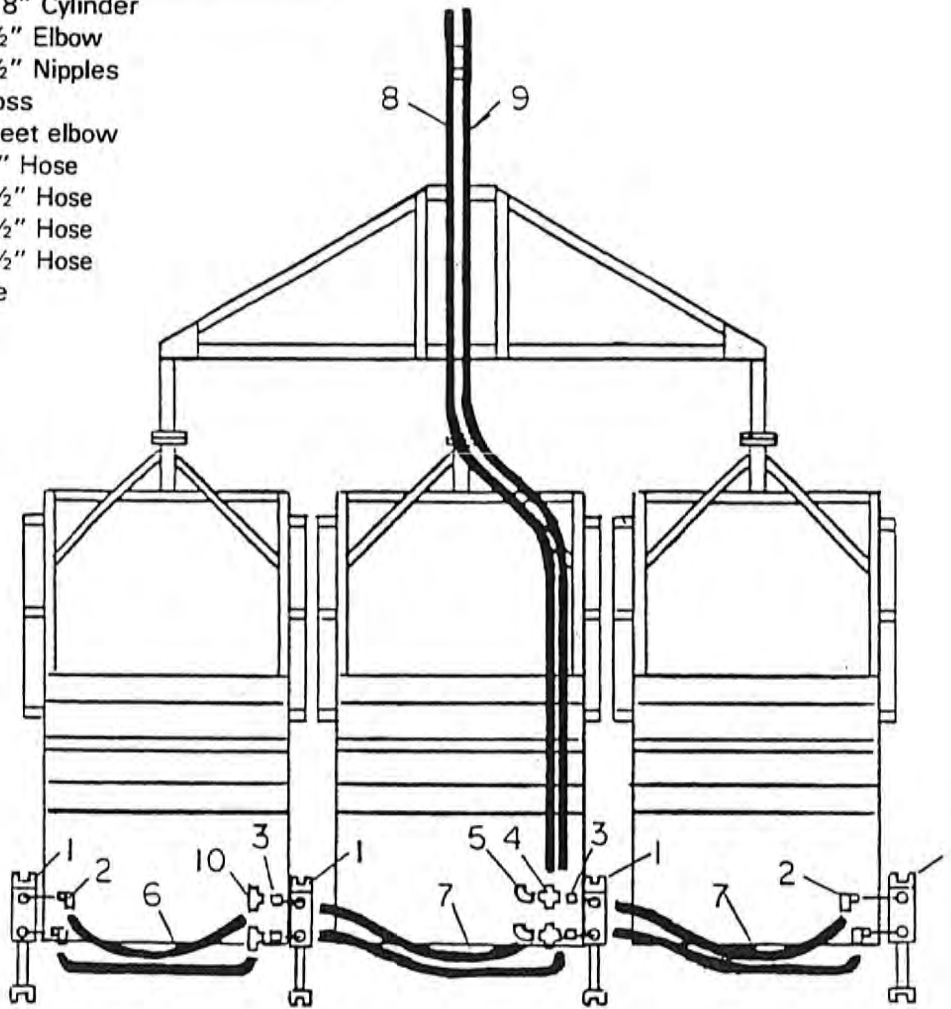
ITEM	QTY.	DESCRIPTION
1	3	2½" x 8" Cylinder
2	4	¾" x ½" Elbow
3	2	¾" x ½" Nipples
4	2	½" Cross
5	2	½" Street Elbow
6	2	96" ½" Hose
7	2	108" ½" Hose
8	1	372" ½" Hose
9	1	384" ½" Hose



**THREE DRILL MOUNTED
TRANSPORT HYDRAULICS**

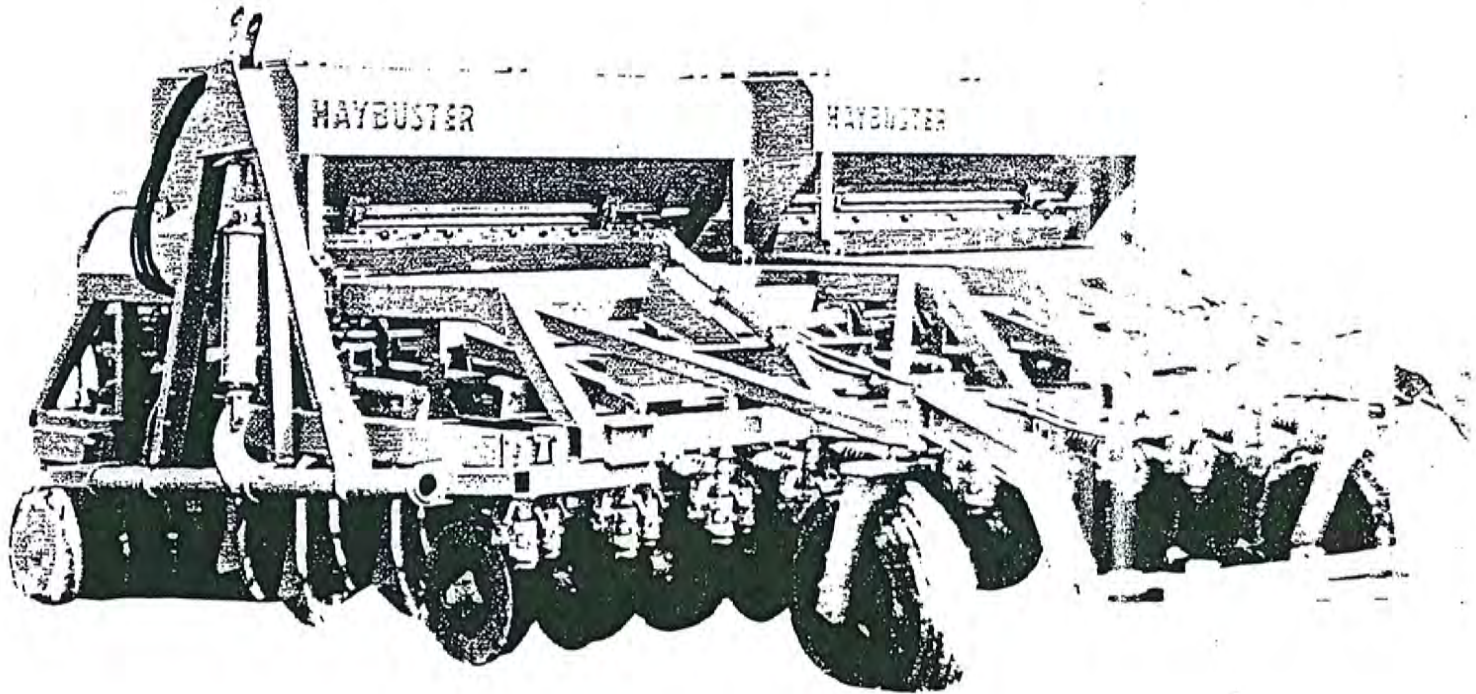
ITEM QTY. DESCRIPTION

1	4	2½" x 8" Cylinder
2	4	¾" x ½" Elbow
3	4	¾" x ½" Nipples
4	2	½" Cross
5	2	½" Street elbow
6	2	96" ½" Hose
7	4	108" ½" Hose
8	1	348" ½" Hose
9	1	336" ½" Hose
10	2	½" Tee



HAYBUSTER

8000 SERIES FERTILIZER-BANDING HOE DRILL



1984 thru _____
PARTS BOOK

8000 Drill

BASIC MODEL

Shanks: Automatic Reset w/deep banding granular fertilizer inlet tubes.
Rigid w/deep banding granular fertilizer inlet tubes.
Automatic Reset w/Anhydrous
Rigid w/Anhydrous

Optional Equipment

Shank inlet tubes: Deep banding liquid fertilizer.

Acre Counter:

Rock Guards: (Packer Wheel) 10" and 12½" Spacing

Coulters: 18" Blade - Reset Swivel
- Rigid Swivel

Hitches and Stabilizers: 1-2-3-4-5-6 Drill

Mechanical Hitch Lift: 3-4-5-6 Drill

Front Stabilizer: 2-3-4-5-6 Drill - Recommended for Hill Side Seeding

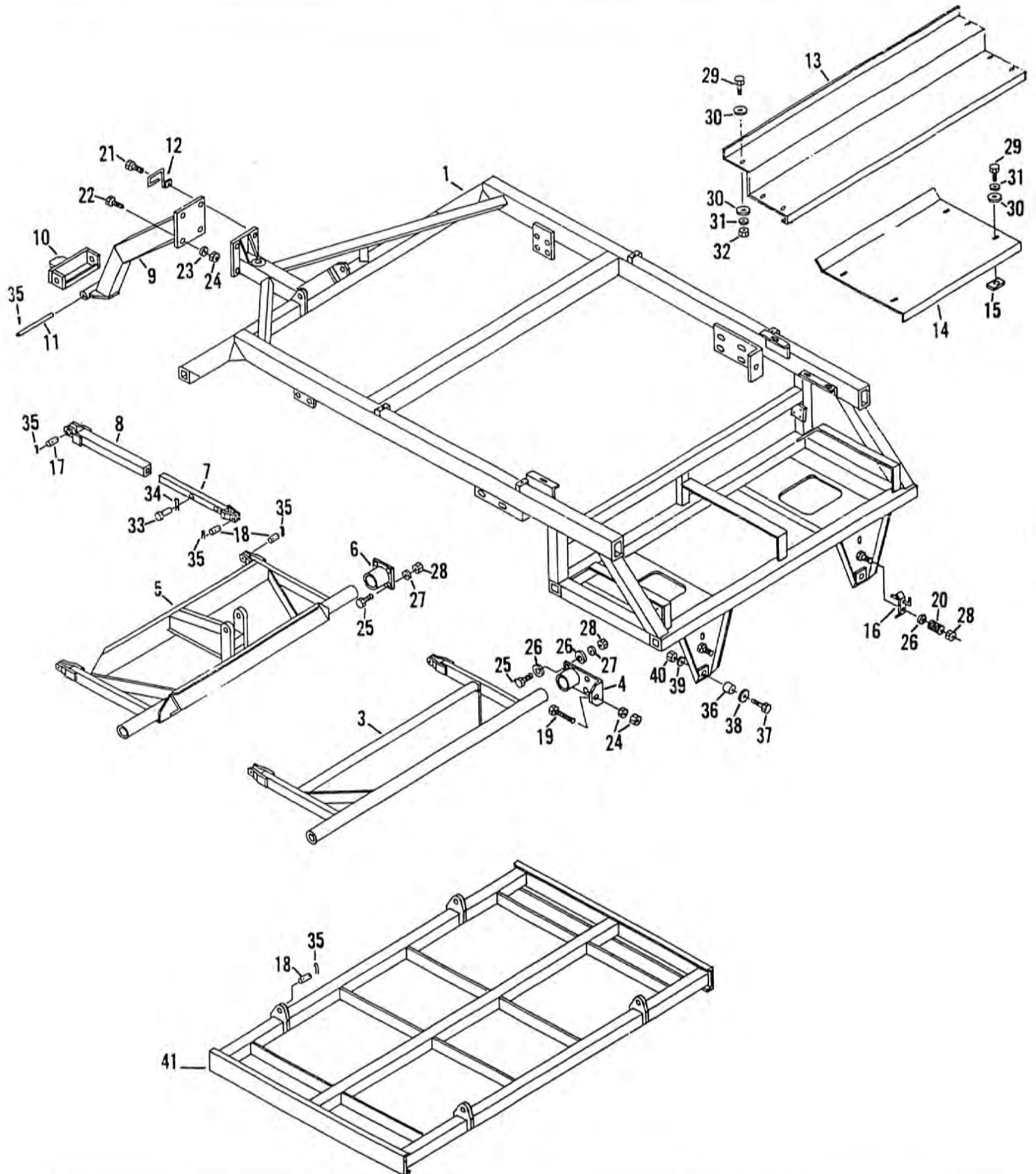
End Transport: 2-3-4-5-6 Drill - Hitch-Hydraulic Cylinder-Hose and fittings

Single Outlet Seed Tube: Single Tube and Sealer Plate

False Bottom: Increases Seed or Fertilizer capacity

1 1984 Main Frame

Serial #400 thru



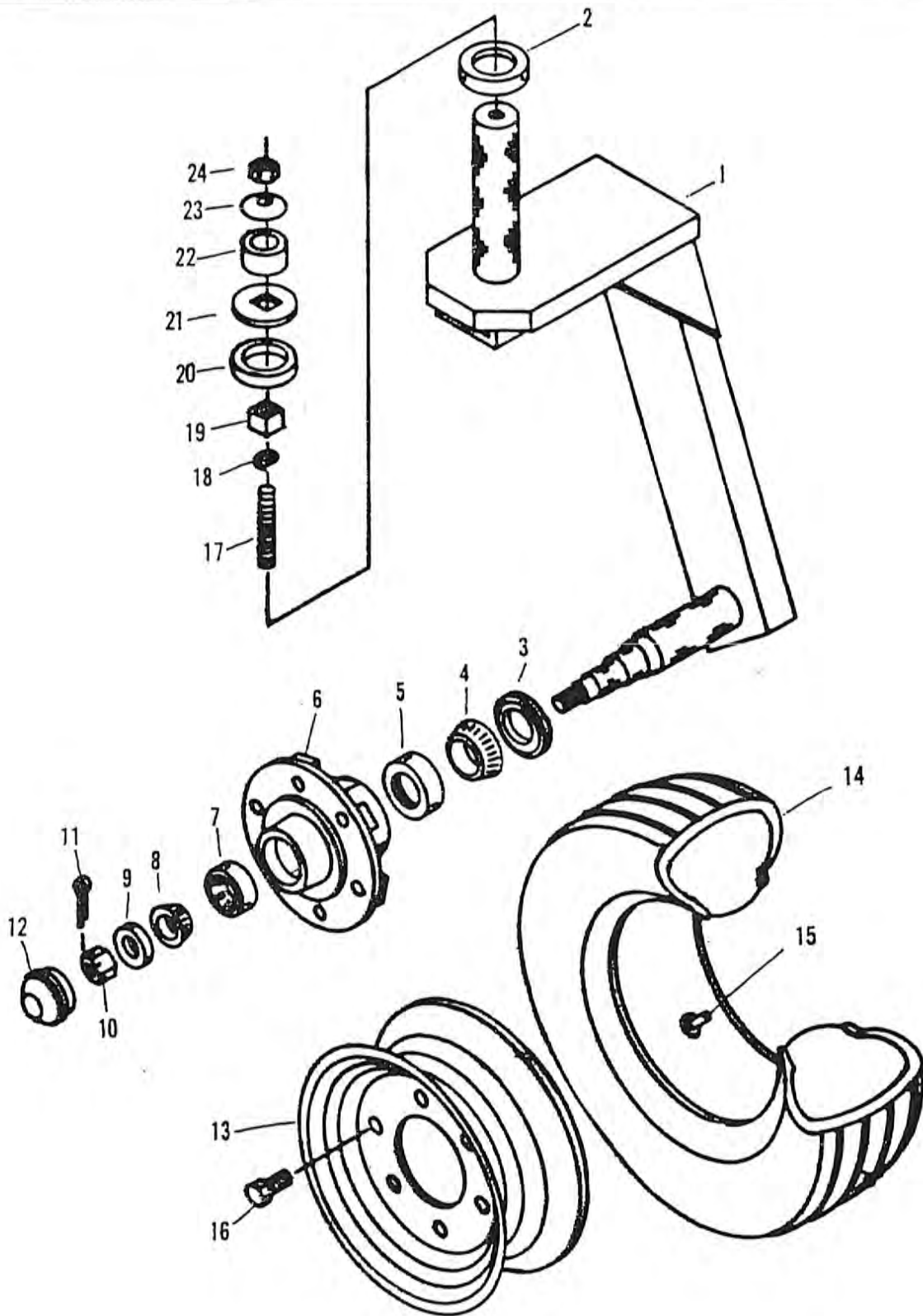
1984 Main Frame 2

Serial #400 thru

Item	Part Number	Qty.	Description
1	8300196	1	Main Frame 1984
2	8300174	1	Sub Frame 10-12½ Spacing 1984
3	8300198	1	Rear Hinge Frame 1984
4	8300199	2	Adj. Rear Pivot Bushing 1984
5	8300200	1	Front Hinge Frame 1984
6	8300201	2	Front Pivot Bushing 1983-1984
7	8300202	1	Upper Hold Up Bar 1983-1984
8	8300203	1	Lower Hold Up Bar 1983-1984
9	8300204	1	Goose Neck 1983-1984
10	8300205	1	Hitch Block 1983-1984
11	8600007	1	Hitch Block Pin 1 x 10¼ 1983-1984
12	8300206	1	Hose Minder 1983-1984
13	8300207	1	Upper Walk Way 1983-1984
14	8300208	2	Lower Walk Way 1983-1984
15	9300209	8	Lower Walk Way Latch 1983-1984
16	8300210	2	Packer Wheel Lock 1983-1984
17	8600008	1	Pin 1" x 3½" 1983-1984
18	8600009	5	Pins 1" x 2⅞" 1983-1984
19	8300211	2	Adj. Bolt ¾" x 4½" 1983-1984
20	6100002	2	Spring 1983-1984
21	4800134	1	¾ x 3 Bolt
22	4800115	3	¾ x 2½ Bolt
23	5000012	4	¾ Lock Washer
24	4900004	8	¾ Hex Nut
25	4800082	16	½ x 1½ Bolt
26	5000004	18	½ Flat Washer
27	5000006	16	½ Lock Washer
28	4900001	18	½ Hex Nut
29	4800003	14	⅜ x 1 Bolt
30	5000001	20	⅜ Flat Washer
31	5000019	14	⅜ Lock Washer
32	4900002	6	⅜ Hex Nut
33	4800046	1	¾ x 3 Letzke Pin
34	4800056	1	3/16 Hair Pin
35	4800103	14	¼ x 2 Cotter Pin
36	7500114	2	Bushings
37	4800010	2	⅝ x 2 Bolt
38	5000002	2	⅝ Flat Washer
39	5000003	2	⅝ Lock Washer
40	4900005	2	⅝ Nut
41	8300175	1	Sub Frame 16⅝" Spacing

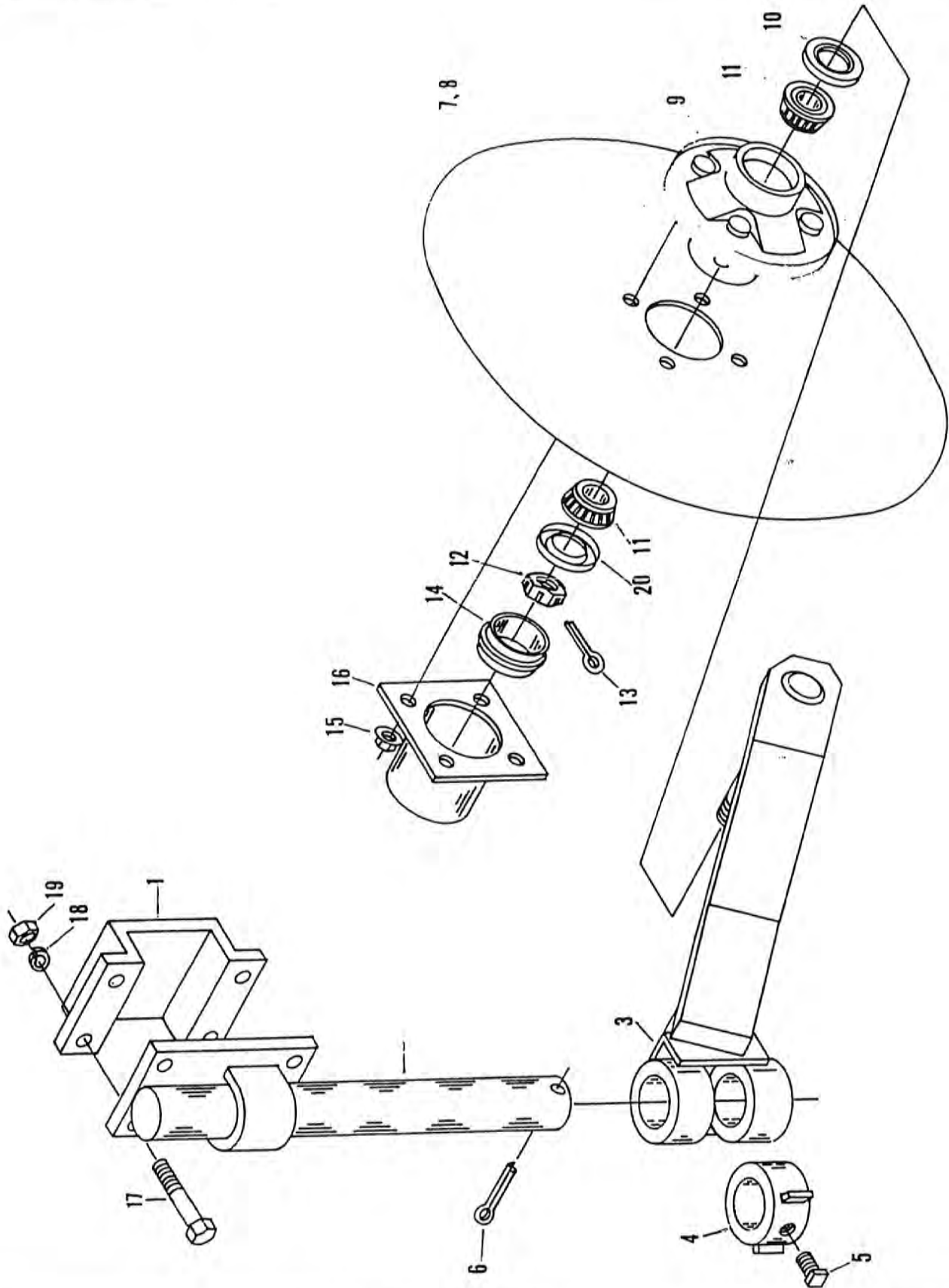
3 1984 Swivel Wheel

Serial #400 thru



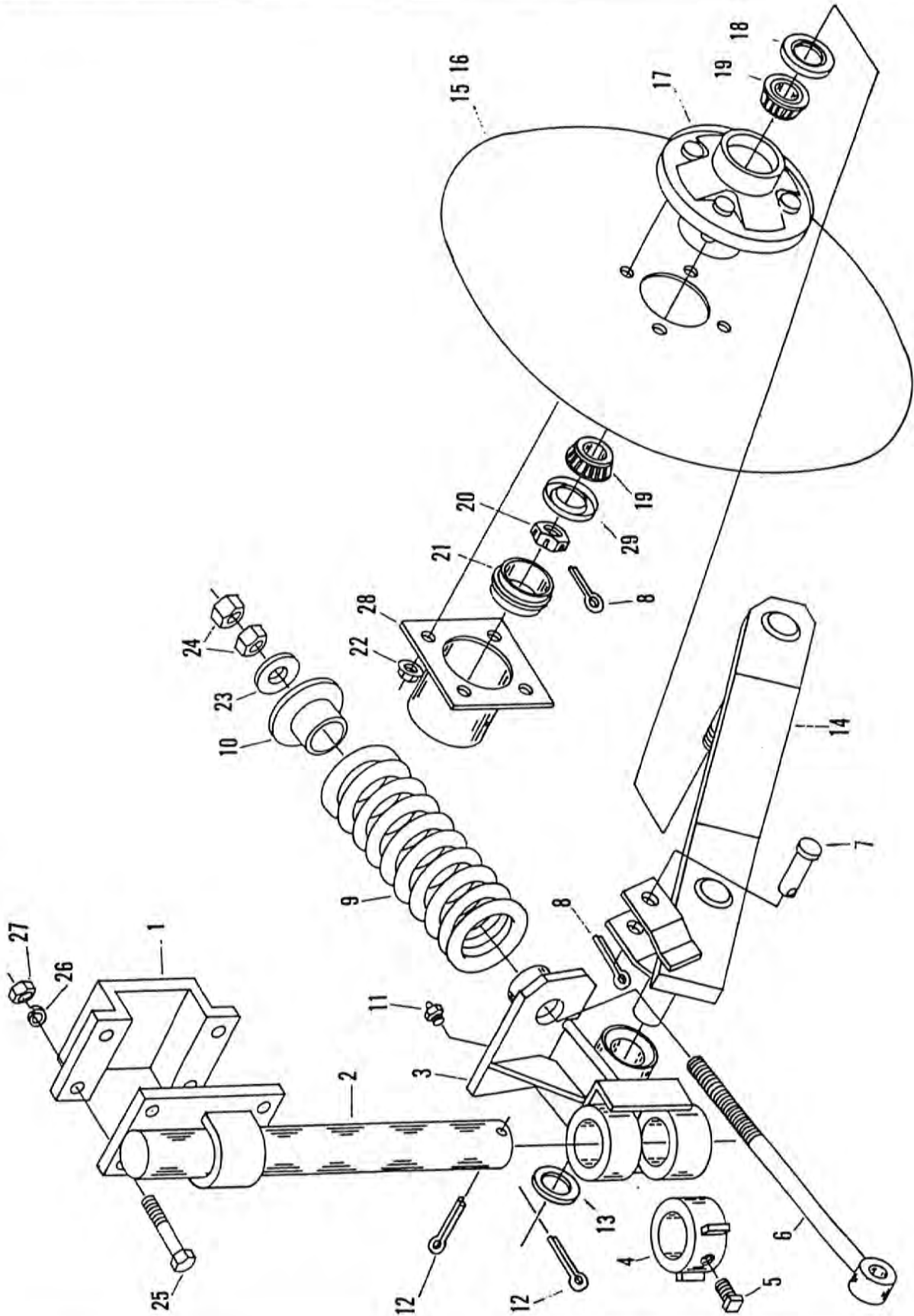
5 1984 Rigid Coupler

Serial #400 thru



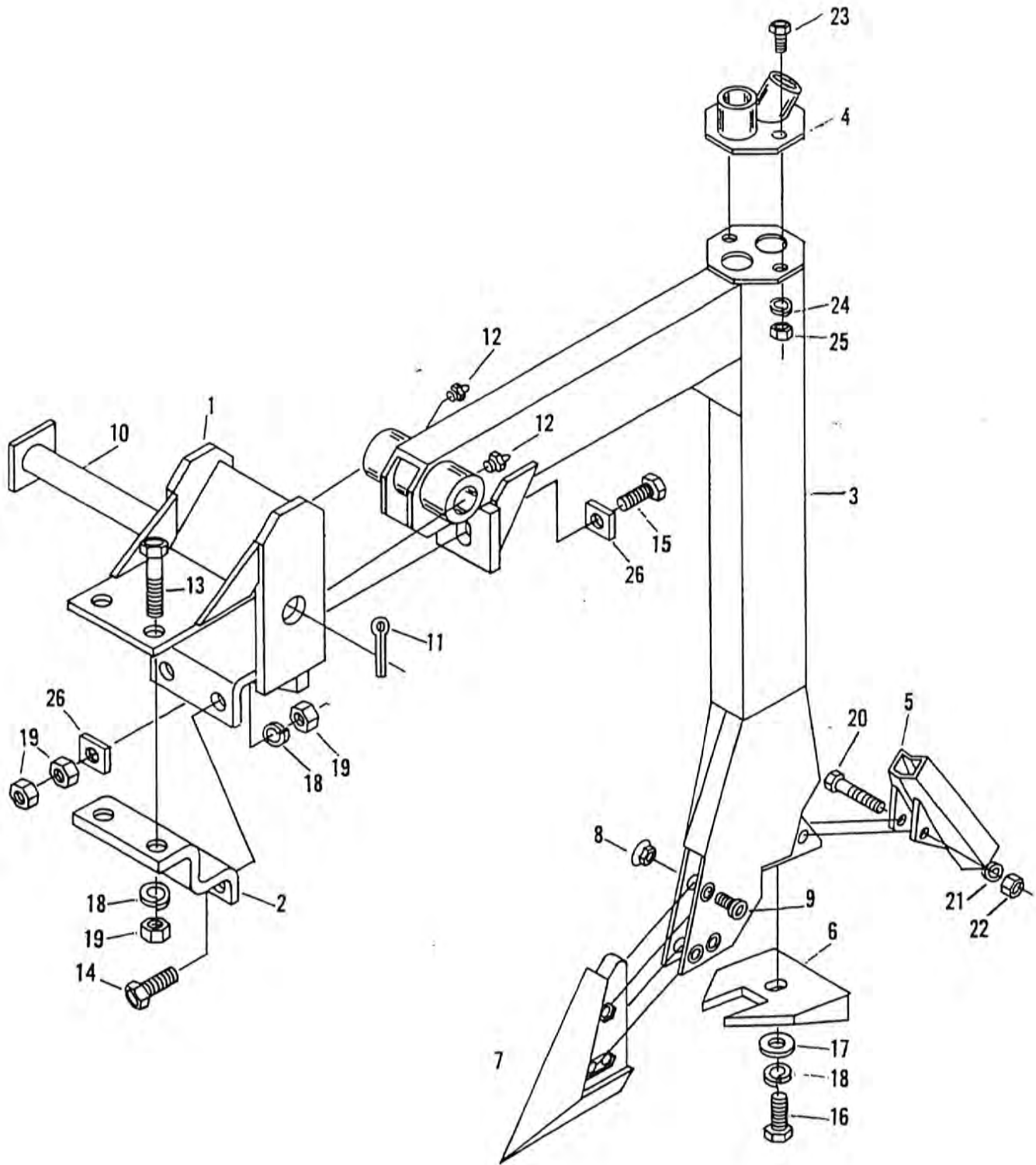
7 1984 Automatic Reset Coultter

Serial #400 thru



9 1984 Rigid Shank

Serial #400 thru



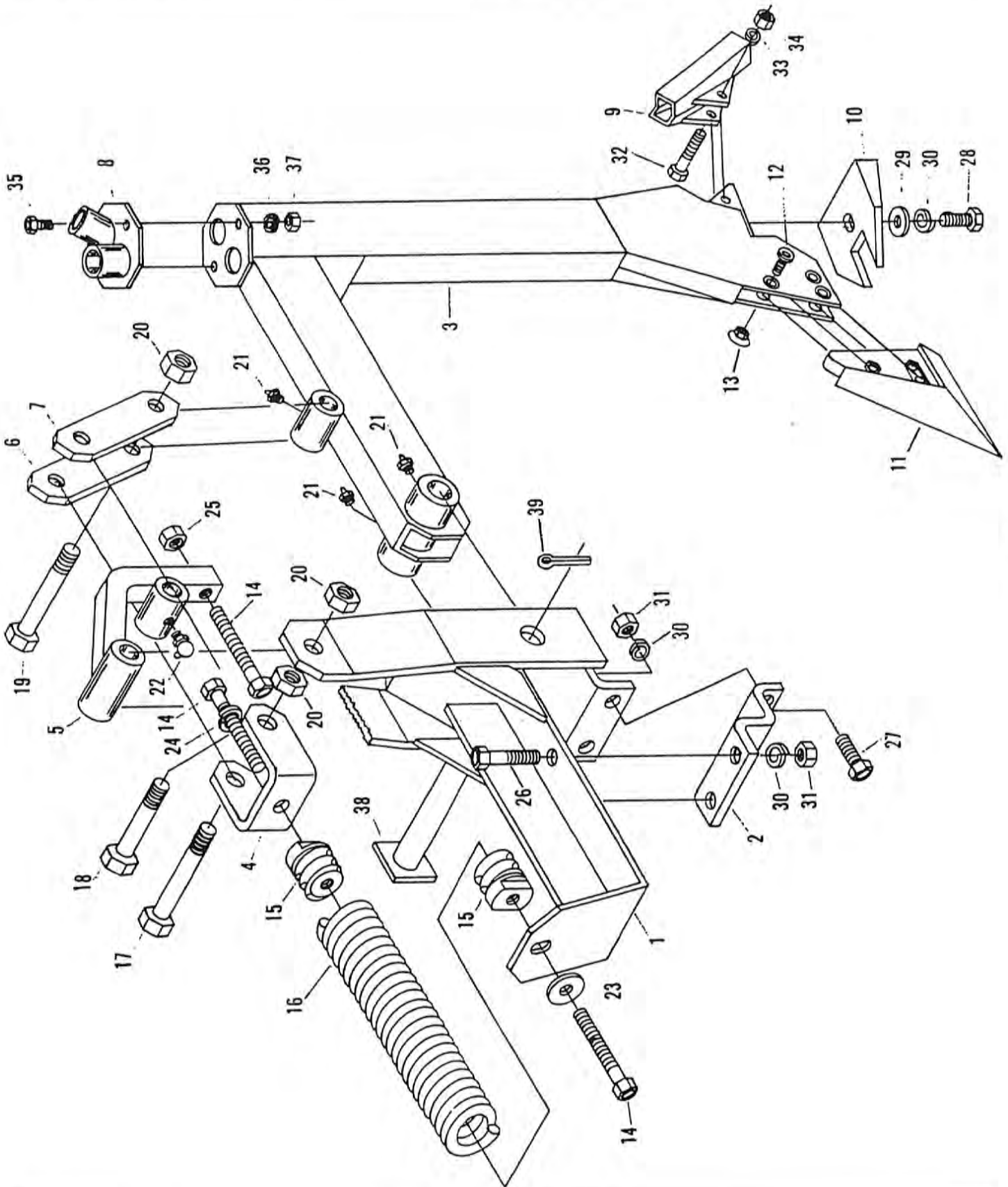
1984 Rigid Shank 10

Serial #400 thru

Item	Part Number	Qty.	Description
1	8300189	1	Rigid Shank Clamp, 1984
2	8300177	1	Lower Clamp, 1984
3	8300190	1	Rigid Shank, 1984
4	8300183	1	(Standard) Shank Inlet Tubes, 1983-1984
5	8300184	1	(Standard) Dual Outlet Seed Tubes, 1984
6	7500103	1	(Standard) Dual Outlet Sealer Plate, 1984
7	7500101	1	Point, 1983-1984
8	4800166	3	5/16 x 1" Socket Head Screw, 1983-1984
9	4900027	3	5/16 Flange Nut, 1983-1984
10	8600001	1	Pivot Pin 1" x 5 $\frac{3}{4}$ ", 1983-1984
11	4800177	1	$\frac{1}{4}$ x 1 $\frac{3}{4}$ Cotter Key
12	3800082	2	$\frac{1}{4}$ Straight Zerk
13	4800070	2	$\frac{1}{2}$ x 1 $\frac{3}{4}$ Bolt
14	4800178	2	$\frac{1}{2}$ x 1 $\frac{3}{4}$ Bolt
15	4800114	1	$\frac{1}{2}$ x 2 Grade 5 Bolt
16	4800018	1	$\frac{1}{2}$ x 1 $\frac{1}{4}$ Grade 5 Bolt
17	5000004	1	$\frac{1}{2}$ Flat Washer
18	5000006	5	$\frac{1}{2}$ Lock Washer
19	4900001	6	$\frac{1}{2}$ " Hex Nut
20	4800146	1	$\frac{3}{8}$ x 2 Bolt
21	5000019	1	$\frac{3}{8}$ Lock Washer
22	4900002	1	$\frac{3}{8}$ Hex Nut
23	4800008	2	5/16 x $\frac{3}{4}$ Bolt
24	5000022	2	5/16 Lock Washer
25	4900003	2	5/16 Hex Nut
26	8300187	2	$\frac{1}{2}$ " SQ Washer, 1983-1984

11 1984 Automatic Reset Shank

Serial #400 thru



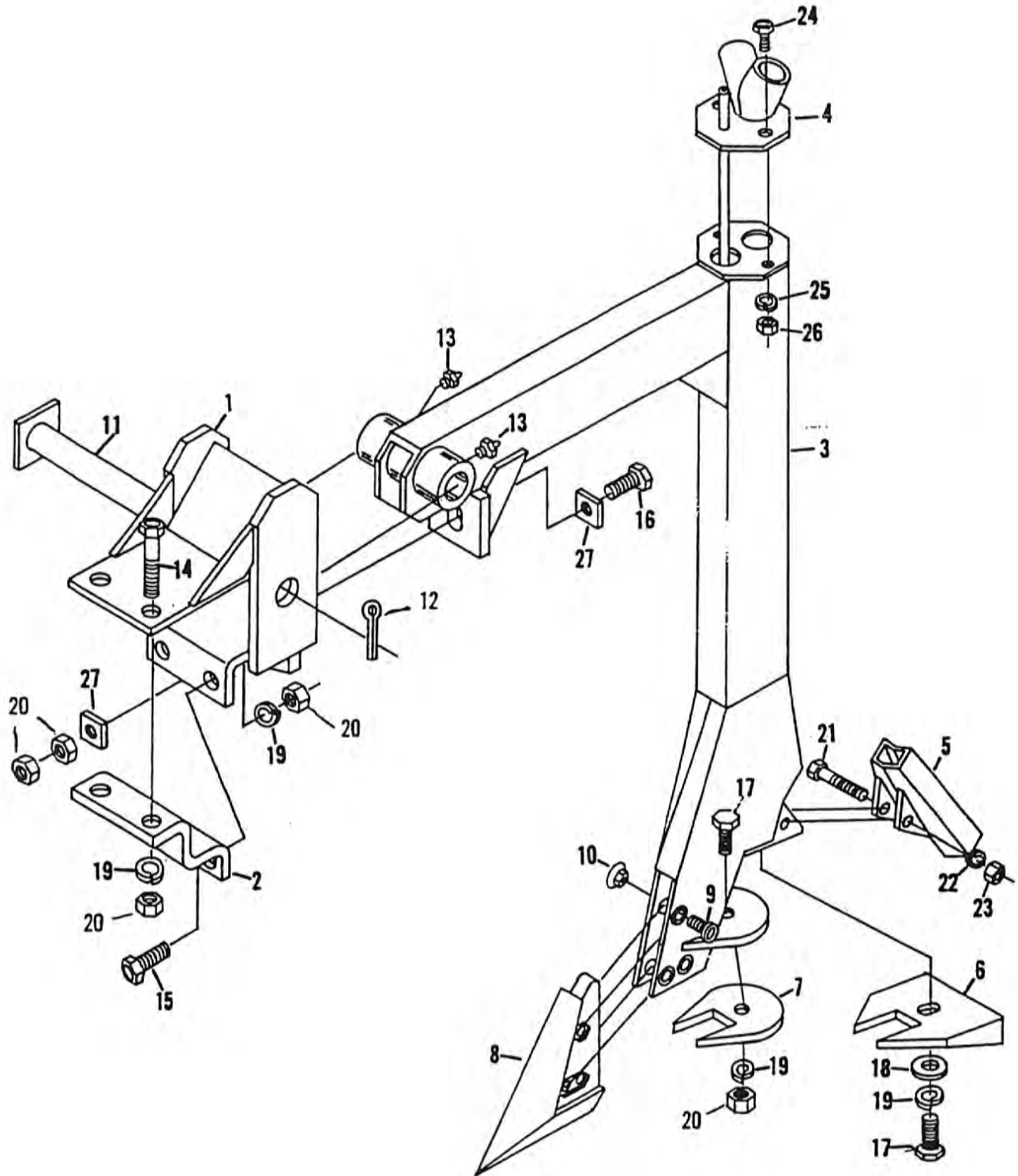
1984 Automatic Reset Shank 12

Serial No. 400 thru

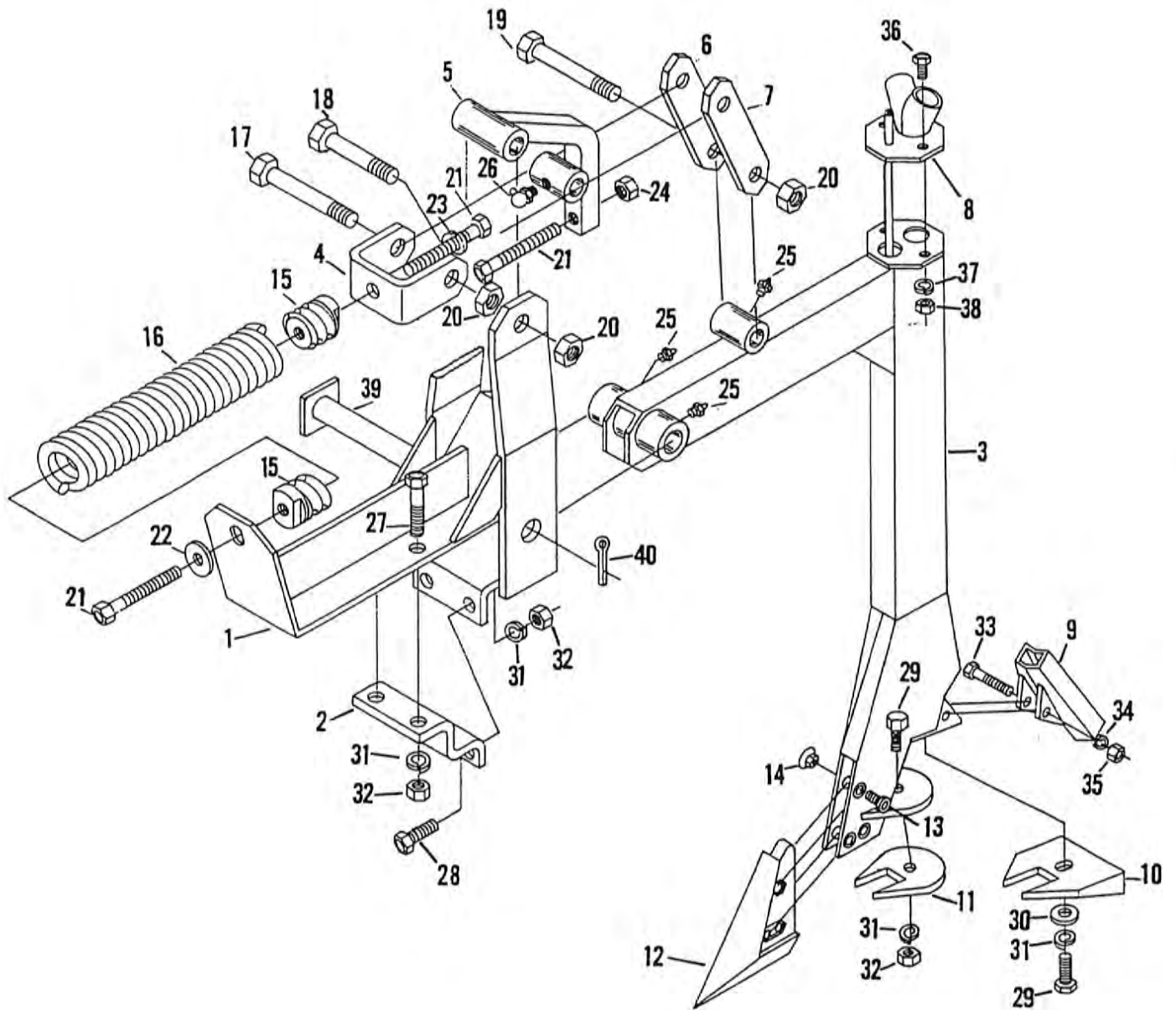
Item	Part No.	Qty.	Description
1	8300176	1	Automatic Reset Clamp, 1984
2	8300177	1	Lower Clamp, 1984
3	8300178	1	Reset Shank, 1984
4	8300179	1	Spring Yoke, 1983-84
5	8300180	1	Adjustable Link, 1983-84
6	8300181	1	Side Link, Right (with keys), 1983-84
7	8300182	1	Side Link, Left, 1983-1984
8	8300183	1	(standard) Shank Inlet Tubes, 1983-84
9	8300184	1	(standard) Dual Outlet Seed Tubes, 1984
10	7500103	1	(standard) Dual Outlet Sealer Plate, 1984
11	7500101	1	Point, 1983-84
12	4800166	3	5/16 x 1" Socket Head Screw
13	4900027	3	5/16 Flange Nut
14	4800176	3	5/8 x 4, Grade 5 Bolt, (special), 1983-84
15	7500113	2	Screw Plug, 1983-84
16	6100038	1	.500 Spring x 1 1/2" I.D. x 12 1/2" Long, 1983-84
17	4800173	1	3/4 x 4 5/8, Grade 5 Bolt (special), 1983-84
18	4800174	1	3/4 x 3 5/8, Grade 5 Bolt (special), 1983-84
19	4800175	1	3/4 x 4 3/8, Grade 5 Bolt (special), 1983-84
20	4900013	3	3/4 Top Lock Nut
21	3800082	3	1/4" Straight Zerk
22	3800083	1	1/4" 90° Zerk
23	5000002	1	5/8" Flat Washer
24	5000003	1	5/8" Lock Washer
25	4900005	1	5/8" Hex Nut
26	4800070	2	1/2" x 2 1/2" Bolt
27	4800178	2	1/2" x 1 3/4" Bolt
28	4800018	1	1/2" x 1 1/4" Grade 5 Bolt
29	5000004	1	1/2" Flat Washer
30	5000006	5	1/2" Lock Washer
31	4900001	4	1/2" Hex Nut
32	4800146	1	3/8" x 2" Bolt
33	5000019	1	3/8" Lock Washer
34	4900002	1	3/8" Hex Nut
35	4800008	2	5/16" x 3/4" Bolt
36	5000022	2	5/16" Lock Washer
37	4900003	2	5/16 Hex Nut
38	8600001	1	Pivot Pin, 1" x 5 3/4", 1983-84
39	4800177	1	1/4" x 1 3/4" Cotter Key, 1983-84

13 1984 Rigid Anhydrous Shank

Serial #400 thru



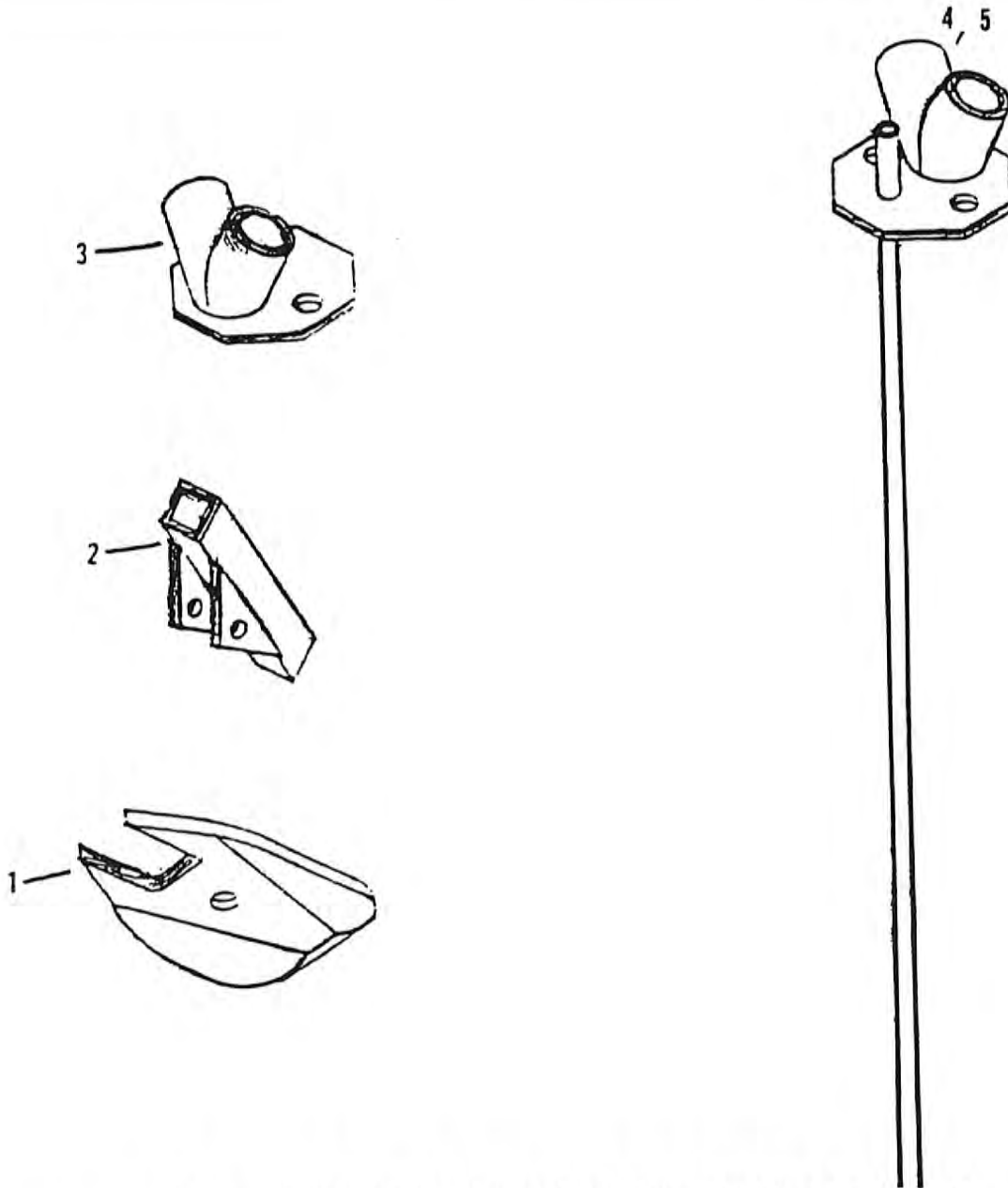
15 1984 Automatic Reset Anhydrous Shank



1984 Automatic Reset Anhydrous Shank 16

Item	Part Number	Qty.	Description
1	8300176	1	Automatic Reset Clamp, 1984
2	8300177	1	Lower Clamp, 1984
3	8300185	1	Reset Anhydrous Shank, 1984
4	8300179	1	Spring Yoke, 1983-1984
5	8300180	1	Adjustable Link, 1983-1984
6	8300181	1	Side Link Right (with Keys), 1983-1984
7	8300182	1	Side Link Left, 1983-1984
8	8300163	1	Dual Inlet with Anhydrous, 1984
9	8300184	1	(Standard) Dual Outlet Seed Tube, 1983-1984
10	7500103	1	(Standard) Dual Outlet Sealer Plate, 1983-1984
11	8300186	1	Anhydrous Sealer Plate, 1984
12	7500101	1	Point, 1983-1984
13	4800166	3	5/16 x 1" Socket Head Screw
14	4900027	3	5/16 Flange Nut
15	7500113	2	Screw Plug
16	6100038	1	.500 Spring x 1½" ID x 12½" Long
17	4800173	1	¾ x 4⅝ Grade 5 Bolt (Special)
18	4800174	1	¾ x 3⅝ Grade 5 Bolt (Special)
19	4800175	1	¾ x 4⅝ Grade 5 Bolt (Special)
20	4900013	3	¾ Top Lock Nut
21	4800176	3	⅝ x 4 Grade 5 Bolt (Special)
22	5000002	1	⅝ Flat Washer
23	5000003	1	⅝ Lock Washer
24	4900005	1	⅝ Hex Nut
25	3800082	3	¼" Straight Zerk
26	3800083	1	¼ 90° Zerk
27	4800070	2	½ x 2½ Bolt
28	4800178	2	½ x 1¾ Bolt
29	4800018	2	½ x 1¼ Grade 5 Bolt
30	5000004	1	½ Flat Washer
31	5000006	6	½ Lock Washer
32	4900001	5	½ Hex Nut
33	4800146	1	⅜ x 2 Bolt
34	5000019	1	⅜ Lock Washer
35	4900002	1	⅜ Hex Nut
36	4800008	2	5/16 x ¾ Bolt
37	5000022	2	5/16 Lock Washer
38	4900003	2	5/16 Hex Nut
39	8600001	1	Pivot Pin 1" x 5¼", 1983-1984
40	4800177	1	¼ x 1¾ Cotter Key, 1983-1984

17 Shank Option Parts

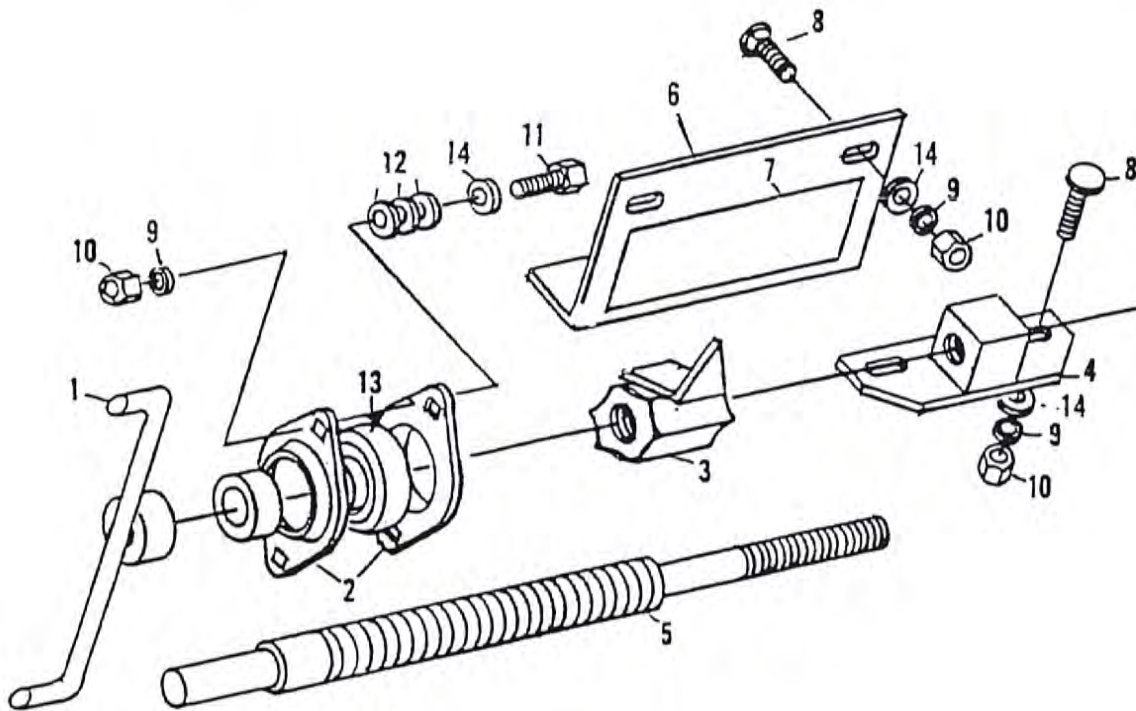


Note: Liquid fertilizer tubes and anhydrous gas tubes are different.

Item	Part Number	Qty.	Description
1	8300191		Single Outlet Sealer Plate
2	8300158		Single Outlet Tube
3	8300159		Y Inlet Tube
4	8300162		Y Inlet with Liquid
5	8300163		Y Inlet with Anhydrous

Seed & Fertilizer Setting Assembly 18

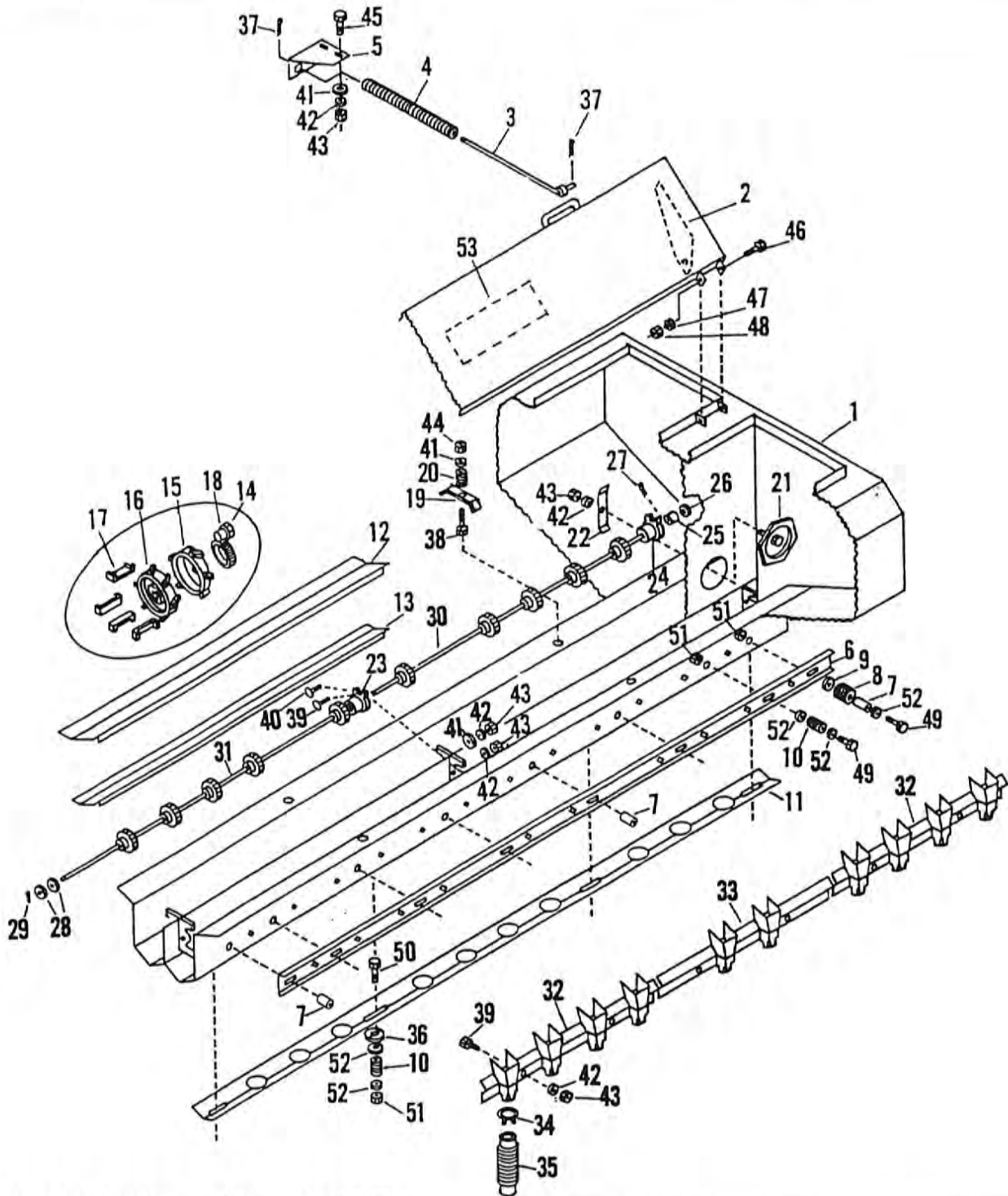
1983 Serial #300 to 399
1984 Serial #400



Item	Part Number	Qty.	Description
		Per Drill	
1	8400060	2	Calibration Handle
2	2100002	4	2 Hole Flangette
3	7500071	2	Calibration Pointer Nut
4	7500072	2	Calibration Control Plate Nut
5	7500073	2	Calibration Shaft
6	8400061	2	Calibration Scale Plate
7	6500016	1	Calibration Scale Decal - Grain
7A	6500017	1	Calibrations Scale Decal - Fertilizer
8	4800008	8	5/16" x 3/4" Carriage Bolt
9	5000022	12	5/16" Lock Washer
10	4900003	12	5/16" Hex Nut
11	4800013	4	5/16" x 1" Hex Bolt
12	5000035	16	1/4" Flat Washer
13	2000026	2	3/4" Bearing with Collar
14	5000023	12	5/16" Flat Washer

19 1984 Tank Assembly

Serial #400 thru



Item	Part Number	Qty.	Description
1	8300228	1	Tank Weldment, 1984
2	8300229	2	Tank Cover, 1984
3	8300230	4	Tank Cover Spring Rod, 1984
4	6100017	4	Tank Cover Spring
5	8300220	2	Tank Cover Spring Retainer LH, 1983-1984
	8300221	2	Tank Cover Spring Retainer RH, 1983-1984

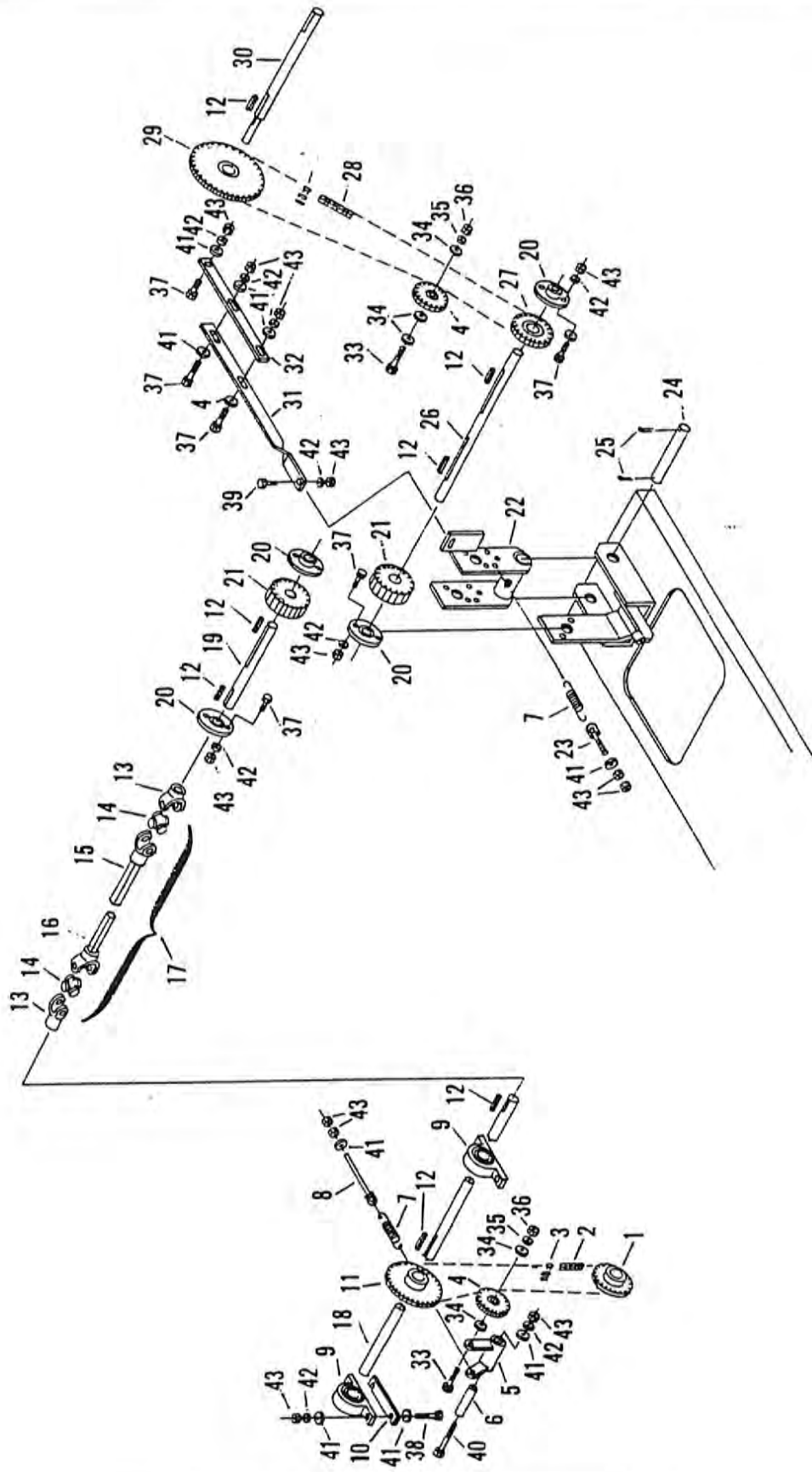
1984 Tank Assembly 20

Serial #400 thru

Item	Part No.	Qty.	Description
6	8300231	2	Control Plate 10" Spacing, 1984
	8300223	2	Control Plate 12½" Spacing, 1984
7	8400007	6	Control Plate Guide, 1983-1984
8	6100031	6	Control Plate Guide Spring, 1983-1984
9	5000033	6	Guide Washer, 1983-1984
10	6100002	18	Springs
11	8300232	2	Clean Out Plate, 1984
12	8300233	2	False Bottom, 1984
13	8300234	4	Feed Wheel Covers, 1984
14	7500006	20	Feed Wheel Complete, 1984
15	7500007	20	Feed Wheel Left Half (Marked L)
16	7500008	20	Feed Wheel Right Half (Marked R)
17	7400066	80	Wheel Retainer Clips, 1983-1984
18	7500107	20	Hose Clamp, 1984
19	8400011	4	Feed Wheel Cover Hold Down, 1983-1984
20	6100002	4	Wheel Cover Hold Down Spring
21	7400048	7	Divider Plate Plug, 1983-1984
22	7400049	7	Plug Retainer, 1983-1984
23	7500110	4	Cast Bracket with Bearing Complete, 1984
24	7500108	4	Cast Bracket
25	7500109	4	Steel Bearing with Hole, 1984
26	5000036	4	Retainer Washer, 1984
27	4800169	2	¼ x 1½ Rolled Pin, 1984
28	5000027	4	Washer 1¾ OD x 7/8 ID 1& GA
29	4800044	2	3/16 x 1½ Cotter Key
30	8600012	2	Shaft 39/8 - 5/8 C R SQ Left, 1984
31	8600013	2	Shaft 43/8 - 5/8 C R SQ Right, 1984
32	8300227	4	Seed Cup End Section, 1983-1984
33	8300235	2	Seed Cup Center Section, 1984
34	7500098	40	Hose Clamps R-24
35	7500097	20	Hoses
36	8300236	8	½" Flat Washer with 40° Brk.
37	4800044	8	5/32 x 1½ Cotter Key
38	4800156	4	¾ x 3 Hex Bolt
39	4800053	16	¾ x 1 Carriage Bolt
40	4800012	4	¾ x 1¼ Carriage Bolt
41	5000001	16	¾ Flat Washer
42	5000019	35	¾ Lock Washer
43	4900002	35	¾ Hex Nut
44	4900030	4	¾ Plastic Insert Lock Nut
45	4800003	8	¾ x 1 Hex Bolt
46	4800170	6	5/16 x 3½ Bolt
47	5000022	6	5/16 Lock Washer
48	4900017	6	5/16 Hex Nut
49	4800082	16	½ x 1½ Bolt
50	4800114	8	½ x 2 Bolt
51	4900014	24	½" Top Lock Nut
52	5000016	42	7/16 Flat Washer
53	6500025	1	Calibration Decal, Seed Chart 12½, 1984
	6500026		Seed Chart 16¾"
	6500024		Seed Chart 10"
6	8300212	2	Control Plate 16¾ Spacing, 1984

23 1984 Drive Assembly

Serial #400 thru



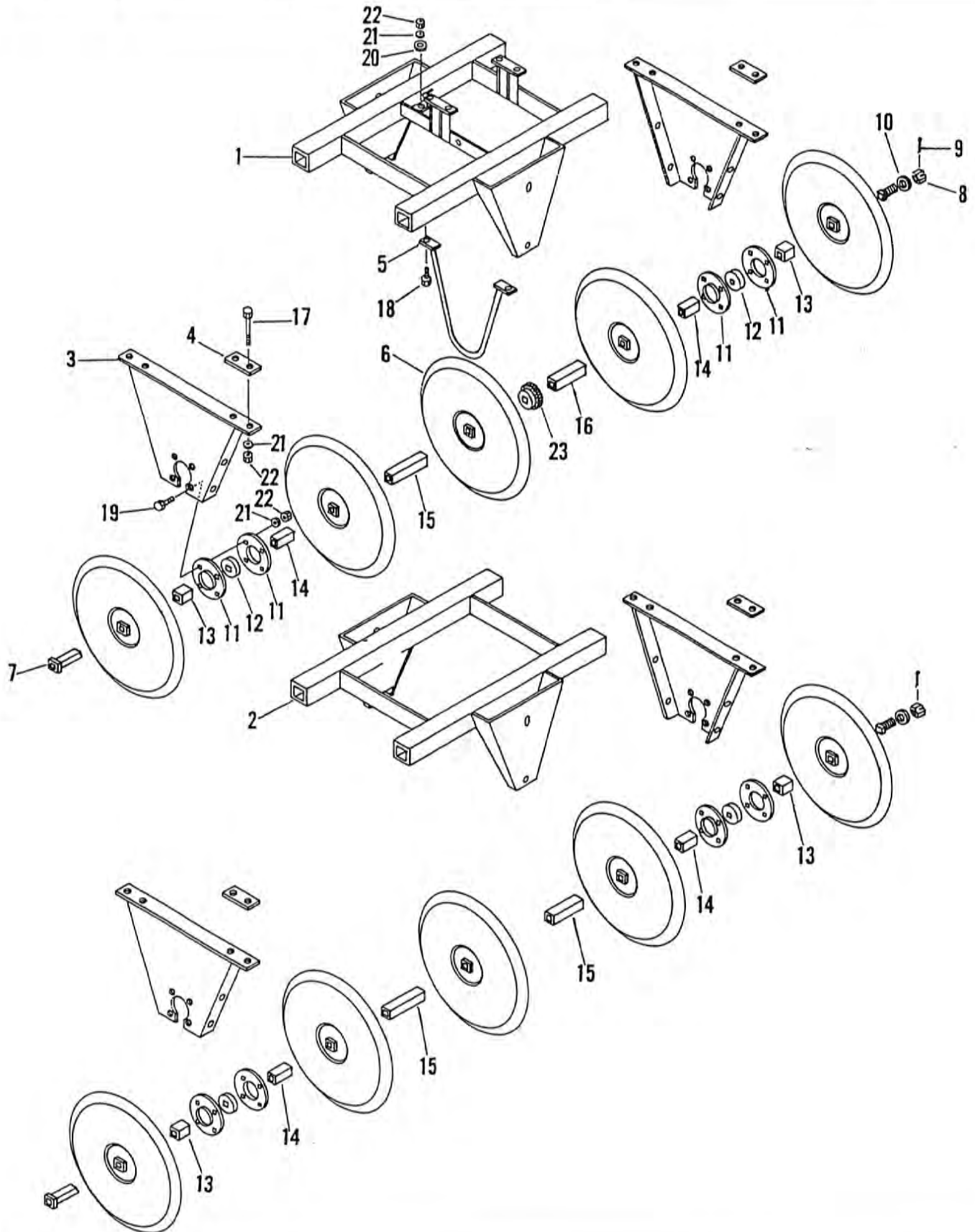
1984 Drive Assembly 24

Serial #400 thru

Item	Part Number	Qty.	Description
1	1000097	1	5018 Sprocket 1¼ SQ Hole
2	1100118	1	45 Links 2050 Chain
3	1100111	2	2050 Connector Link
4	1000039	2	Idler Sprocket 50-15-½"
5	8300164	1	Chain Tightener Pivot, 1984
6	8300165	1	Pivot Bushing, 1984
7	6100036	2	Spring
8	8300171	1	Tightener Adjustment Bolt, 1984
9	1800003	2	1" Pillow Block Bearing with Collar
10	8300166	2	Bearing Shims 7 GA, 1983-1984
11	1000090	1	5024 Sprocket 1" Bore
12	6200005	7	¼ x 1½ Keys
13	3600103	2	GRW 1" Yoke
14	3600104	2	GRW Cross and Bearing
15	3600105	1	LGW Tube with Yoke
16	3600106	1	LGW Shaft with Yoke
17	3600102	1	LGW Power Shaft Comp.
18	8600002	1	1st Counter Shaft 1" x 17", 1984
19	8600003	2	2nd Counter Shaft 1" x 9½", 1983-1984
20	1900009	4	1" Cast Flangette with Collar
21	1000096	2	15 Tooth Gear
22	8300167	1	Reverse Drive Hinge Bracket, 1983-1984
23	8300168	1	Reverse Drive Adjustment Bolt, 1983-1984
24	8600004	1	Hinge Bracket Pin, 1983-1984
25	4800172	2	½ x 2 Cotter Pin
26	8600005	1	Third Counter Shaft 1" x 17", 1983-1984
27	1000065	1	5018 1" Sprocket
28	1100119	1	67 Links 2050 Chain
29	1000012	1	5030 1" Sprocket
30	8600006	1	Acre Counter Shaft 1" x 14¾", 1984
31	8300169	1	Drive Disengaging Link with Twist, 1983-1984
32	8300170	1	Drive Disengaging Link, 1983-1984
33	4800114	2	½ x 2 Bolt
34	5000004	5	½ Flat Washer
35	5000006	2	½ Lock Washer
36	4800001	2	½ Hex Nut
37	4800098	11	¾ x 1¼ Bolt
38	4800146	4	¾ x 2 Bolt
39	4800164	1	¾ x ¾ Bolt
40	4800089	1	¾ x 4 Bolt
41	5000001	18	¾ Flat Washer
42	5000019	17	¾ Lock Washer
43	4800002	21	¾ Hex Nut

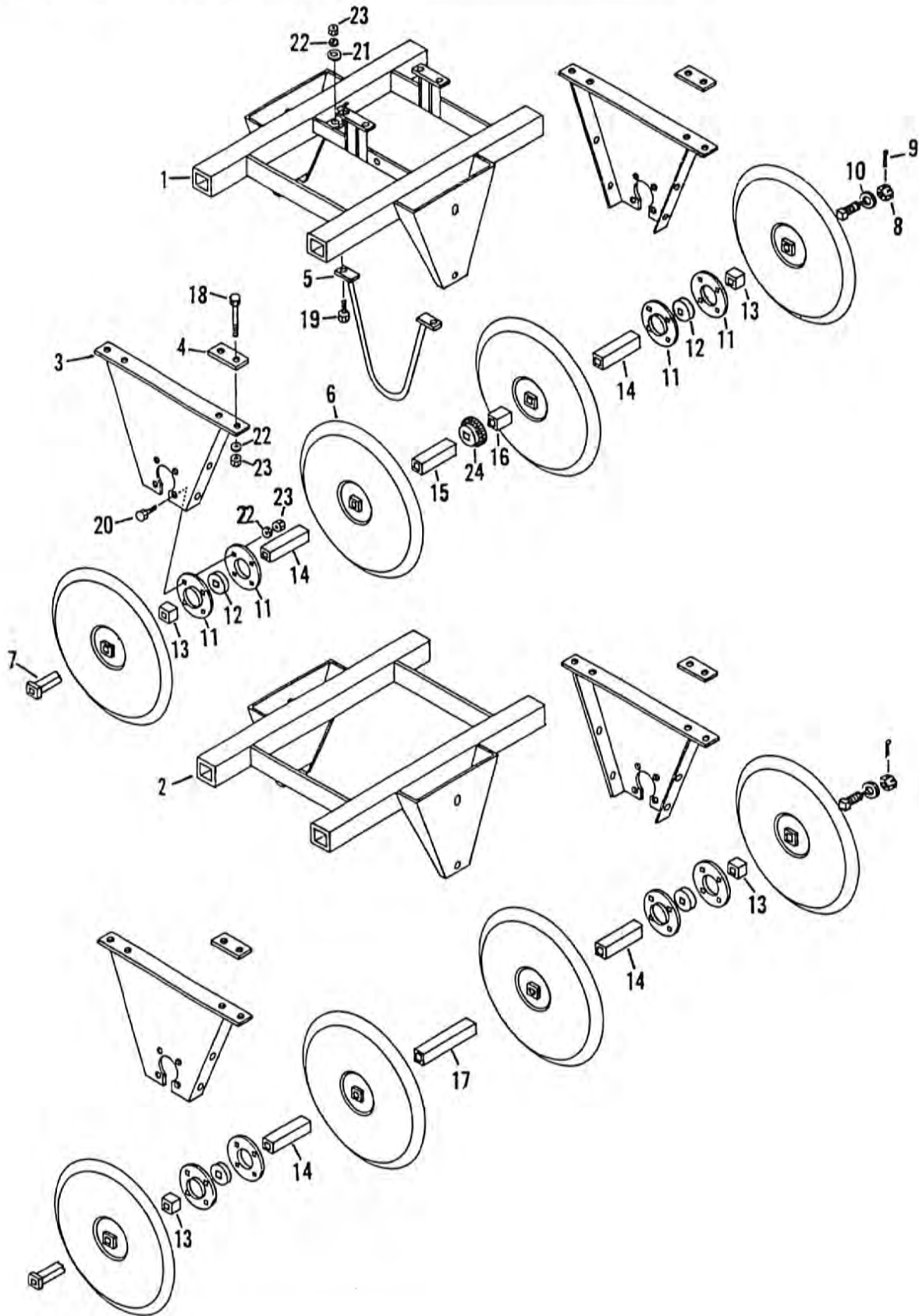
25 1984 10" Spacing Press Wheels

Serial #400 thru



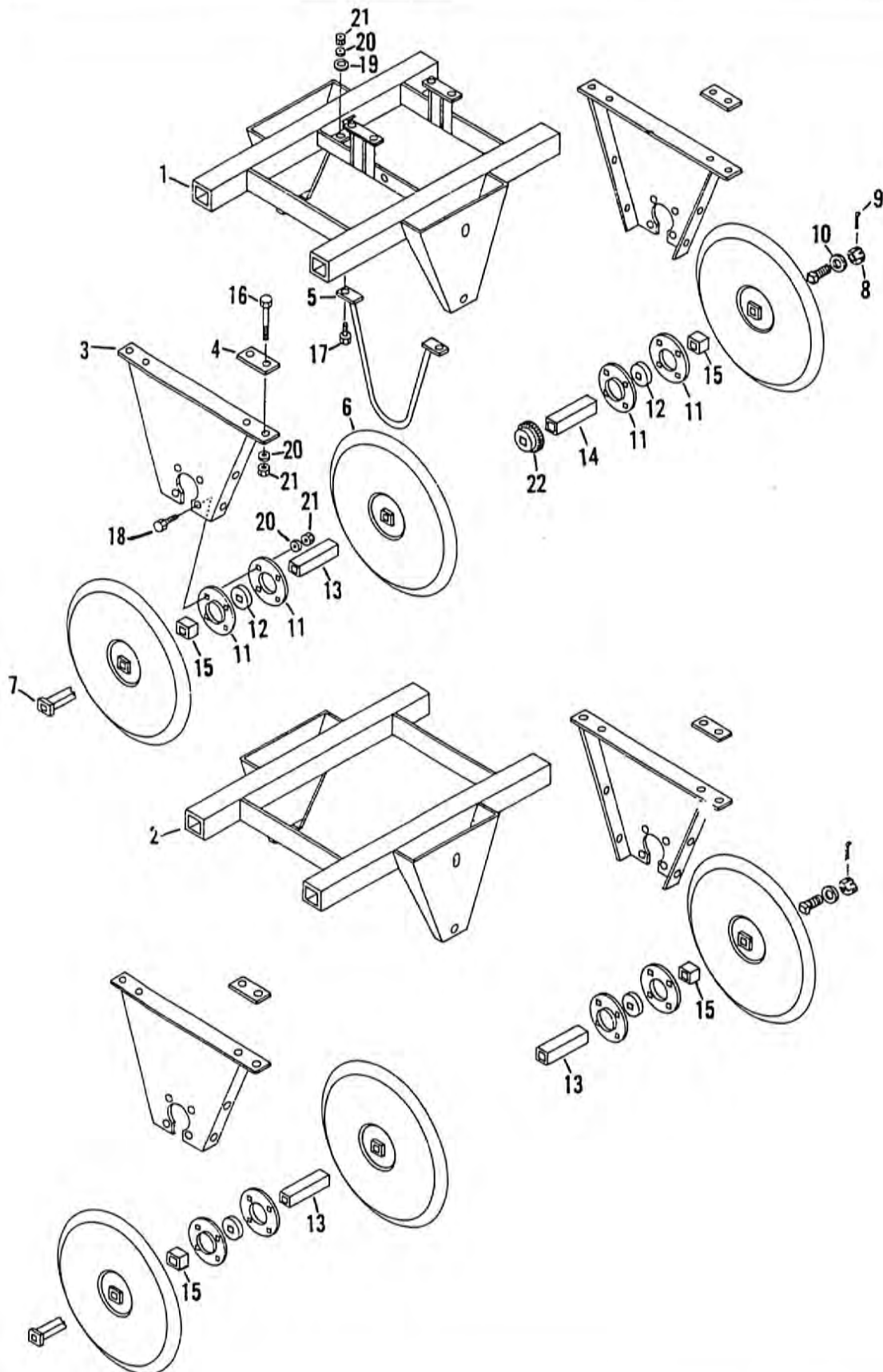
27 1984 12½ Spacing Press Wheels

Serial #400 thru



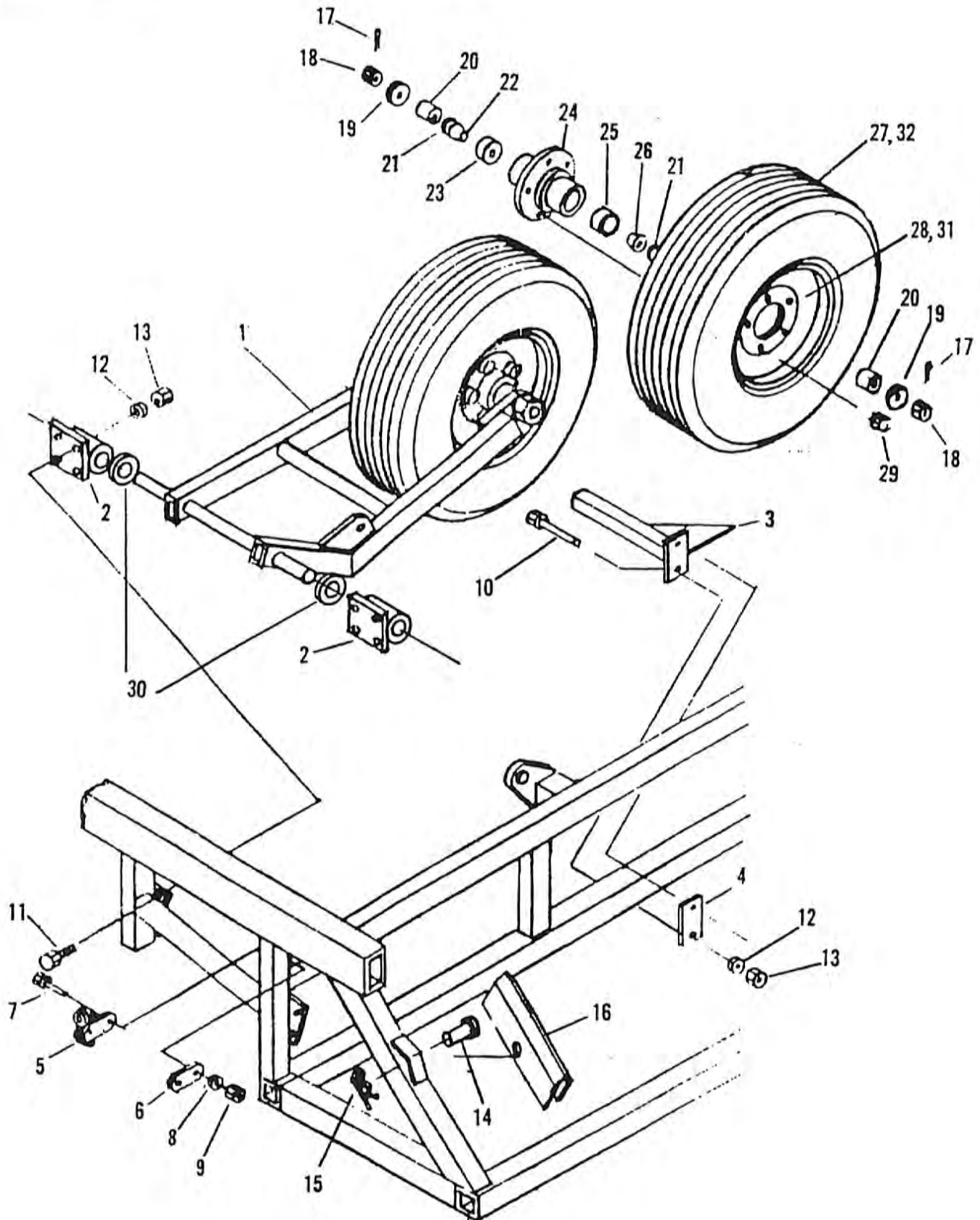
29 1984 16⁵/₈ Spacing Press Wheels

Serial #400 thru



31 1984 Transport

Serial #400 thru

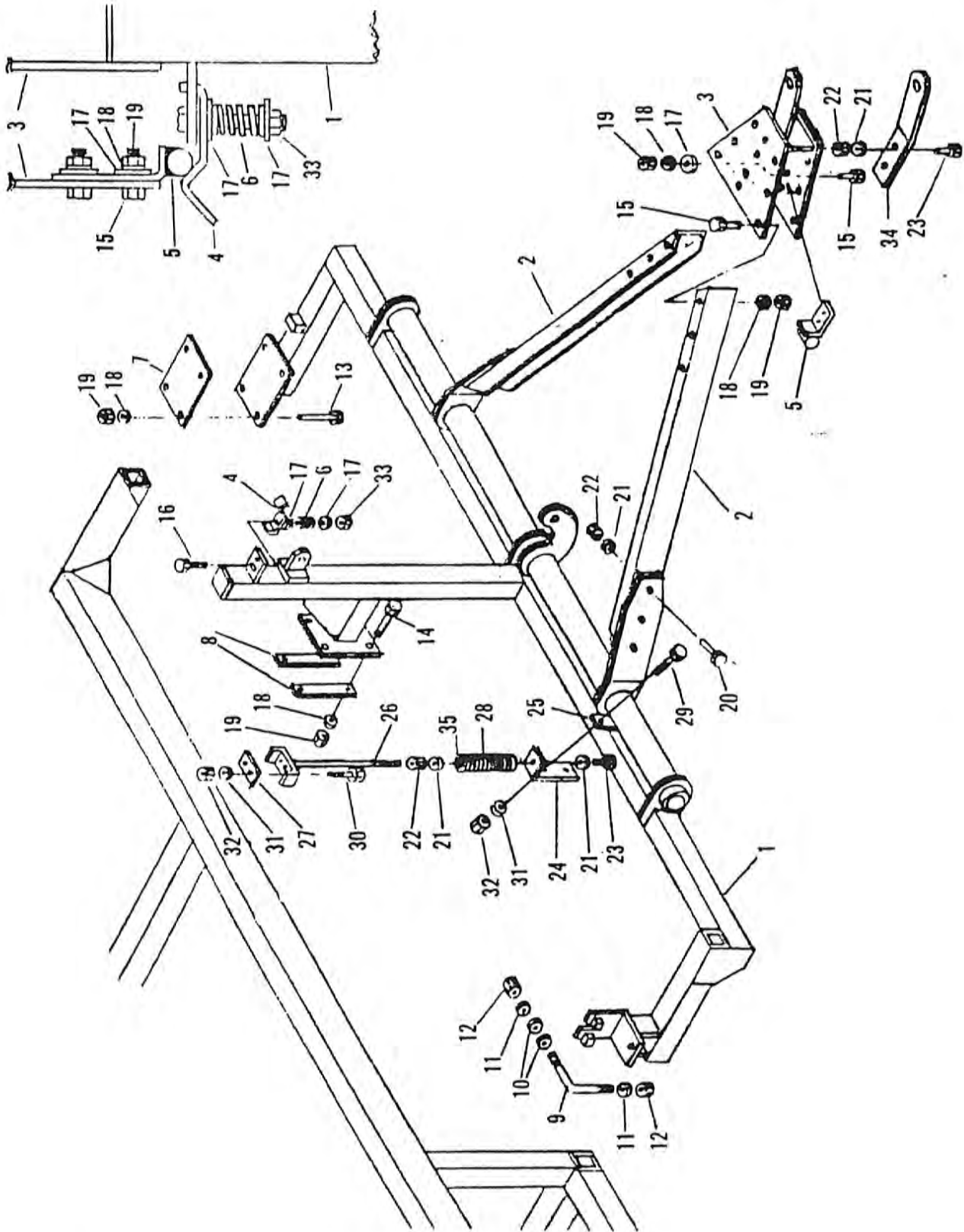


Serial #400 thru

Item	Part Number	Qty.	Description
1	8300290	1	Fork Weldment, 84
2	8300284	2	Mounts
3	8300291	1	Holdup 2½ x 5, 84
4	8300292	1	Hold Up Strap, 84
5	8300286	1	Coupler Mount
6	8300287	1	Coupler Mount Strap 2 x 4½
7	4800182	2	5/16 x 3 Hex Bolt
8	5000022	2	5/16 Lock Washer
9	4900003	2	5/16 Hex Nut
10	4800141	2	½ x 4½ Hex Bolt
11	4800082	8	½ x 1½ Hex Bolt
12	5000006	10	½ Lock Washer
13	4900001	10	½ Hex Nuts
14	4800181	1	1 x 2½ Clevis Pin
15	4800056	1	3/16 Hair Pin
16	8300288	1	16" Cylinder Lock for 1¼ Ram
17	4800157	2	3/16 x 2 Cotter Key
18	4900020	2	1" Castle Nuts
19	5000014	2	1" Flat Washer
20	2900084	2	Spacers
21	2900085	2	Seals
22	2900086	1	Inner Cone, 2788
23	2900087	1	Inner Cup 2720
24	2900088	1	Hub H-628
25	2900087	1	Outer Cup 2720
26	2900086	1	Outer Cone 2788
27	2600013	1	Tire 9.5L - 14
28	2800001	1	Wheel 14" x 8" - 6 Bolt
29	2900083	6	9/16 Wheel Nuts
30	5000008	2	1½ x 10 6A Washer
	3000018	1	Spindle (Not Shown)
31	2800021	1	Heavy Wheel 14.5 x 7
32	2600016	1	Heavy Tire 9-14.5 12 Ply
33	2900089	1	Hub H-628 6 Bolt Fork Complete

33 8000 Series Tow Hitch

1983 Serial #300 to 399
1984 Serial #400 thru



8000 Series Tow Hitch 34

1983 Serial #300 to 399

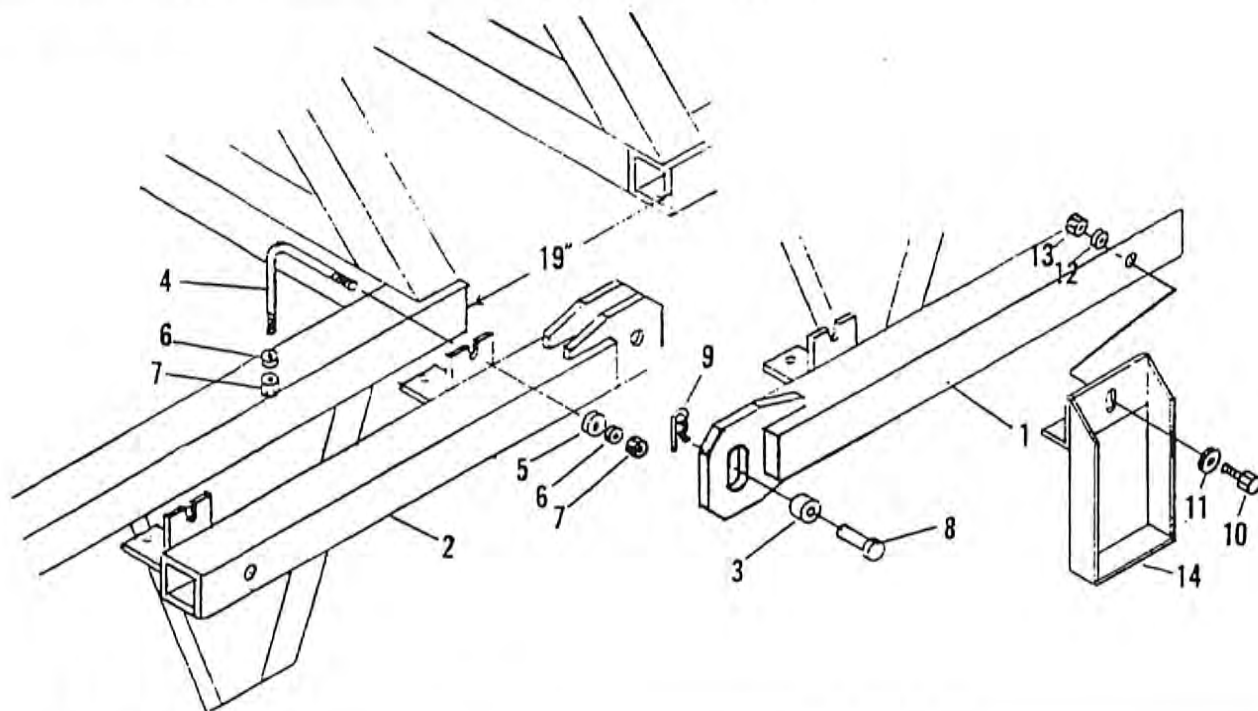
1984 Serial #400 thru

Item	Part Number	Qty.	Description
1	8300342	1	Tow Hitch Main Frame
2	8300343	2	Tow Hitch Channel
3	8300344	1	Tow Hitch Plates
4	8300345	1	Tow Hitch Latch
5	8300346	1	Tow Hitch Latch Lug
6	6100005	1	Tow Hitch Latch Spring
7	8300347	1	Mounting Plate 6" x 6"
8	8300348	2	Mounting Straps 1½ x 7¾
9	4800183	1	¾ L Bolt 5¼" x 5¼"
10	5000005	2	¾ Flat Washers
11	5000012	2	¾ Lock Washers
12	4900004	2	¾ Hex Nut
13	4800077	4	½ x 5½ Hex Bolt
14	4800041	4	½ x 5 Hex Bolt
15	4800082	14	½ x 1½ Hex Bolt
16	4800135	1	½ x 3½ Gr 5 Hex
17	5000004	4	½ Flat Washers
18	5000006	24	½ Lock Washers
19	4900001	23	½ Hex Nut
20	4800106	6	⅝ x 1½ Hex Bolt
21	5000003	10	⅝ Lock Washer
22	4900005	9	⅝ Hex Nut
23	4800010	3	⅝ x 2 Hex Bolt
24	8300349	1	Hose Minder Mount
25	8300350	1	Hose Minder Mount Strap 2½" x 4½"
26	8300351	1	Hose Minder Rod
27	8300352	1	Hose Minder Rod Strap, 1¼ x 4½
28	6100037	1	Hose Minder Spring
29	4800089	2	⅜ x 4 Hex Bolt
30	4800146	2	⅜ x 2 Hex Bolt
31	4900023	4	⅜ Lock Nut
32	4900002	4	⅜ Hex Nut
33	4900014	1	½ Lock Nut
34	8300353	1	Lower Hitch Lip
35	7500113	2	Spring End Plugs

35 Rear Stabilizer

Serial #300 to 399

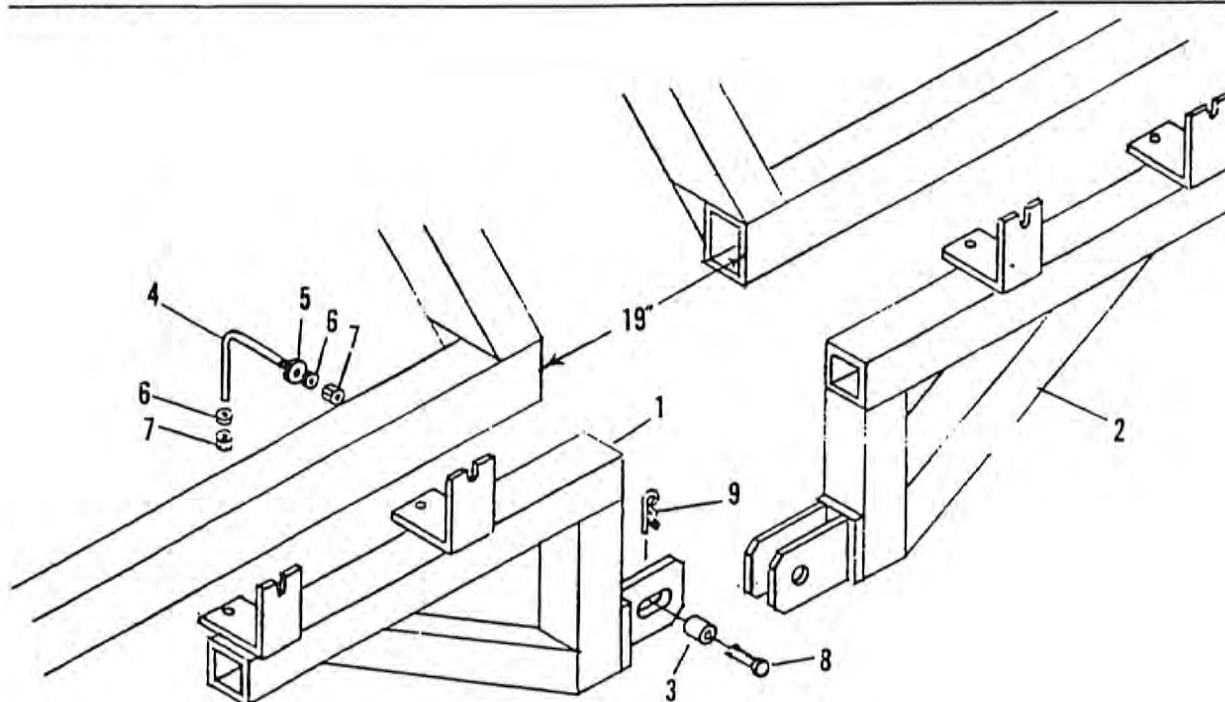
Serial #400 thru



Front Stabilizer

Serial #300 to 399

Serial #400 thru



Rear Stabilizer 36

1983 Serial #300 to 399
1984 Serial #400 thru

Item	Part Number	Qty.	Description
1	8300300	1	Right Rear Stabilizer
2	8300301	1	Left Rear Stabilizer
3	8300302	1	1½ OD x 1 Long Bushing
4	4800183	4	¾ L-Bolt 5¼ x 5¼
5	5000005	4	¾" Flat Washer
6	5000012	8	¾" Lock Washer
7	4900004	8	¾" Hex Nut
8	4800185	1	1 x 3 Clevis Pin
9	4800107	1	⅛" Hair Pin
10	4800082	1	½ x 1½ Hex Bolt
11	5000004	1	½" Flat Washer
12	5000006	1	½" Lock Washer
13	4900001	1	½" Hex Nut
14	8300303	1	Step

Front Stabilizer

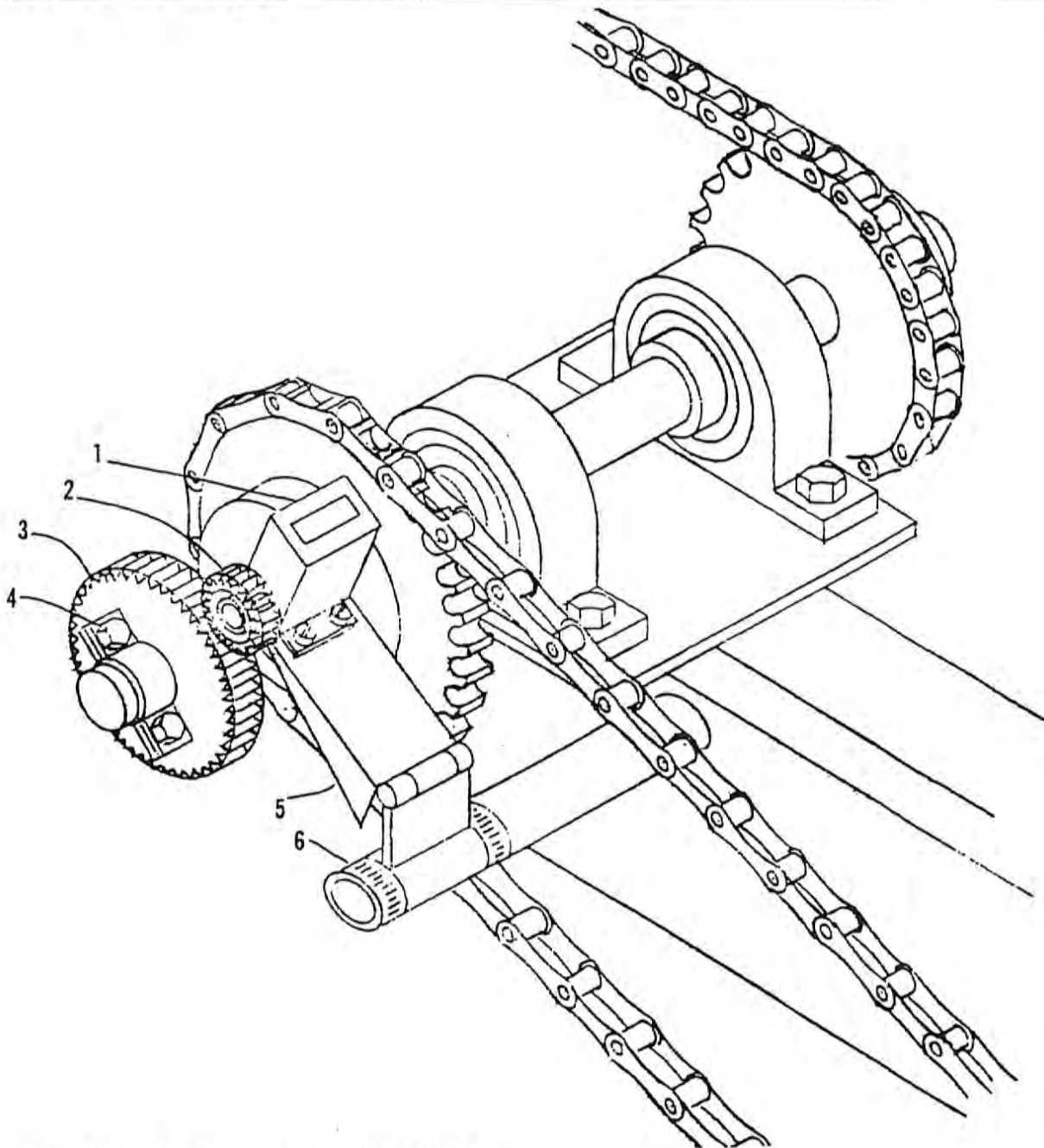
1983 Serial #300 to 399
1984 Serial #400 thru

Item	Part Number	Qty.	Description
1	8300304	1	Right Front Stabilizer
2	8300305	1	Left Front Stabilizer
3	8300306	1	1½ OD x 1¾ Long Bushing
4	4800184	4	¾ L-Bolt 6¼ x 5¼
5	5000005	4	¾" Flat Washer
6	5000012	8	¾" Lock Washer
7	4900004	8	¾" Hex Nut
8	4800185	1	1 x 3 Clevis Pin
9	4800107	1	⅛" Hair Pin

37 Acre Counter

1983 Serial #300 to 399

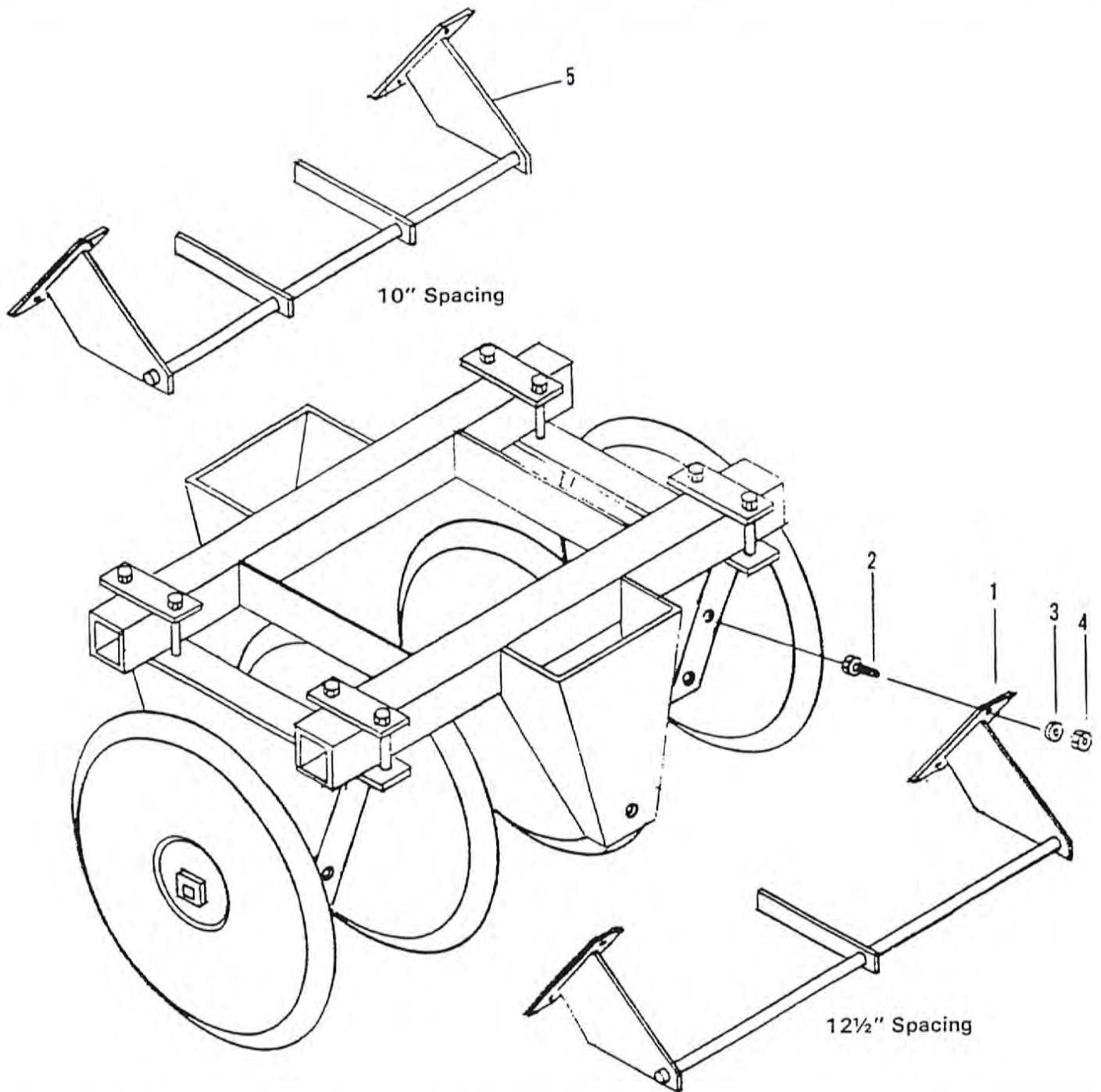
1984 Serial #400 thru



Item	Part Number	Qty.	Description
1	7500115	1	Counter
2	7500116	1	16 Tooth Gear
3	7500117	1	48 Tooth Gear
4	7500118	1	Bag of Nuts and Bolts
5	7500088	1	Hinged Leaf with Spring 4½"
6	7500046	1	Hose Clamp 5020
7	7500119	1	Complete Acre Counter Kit

1984 Rock Guard 8000 Drill 38

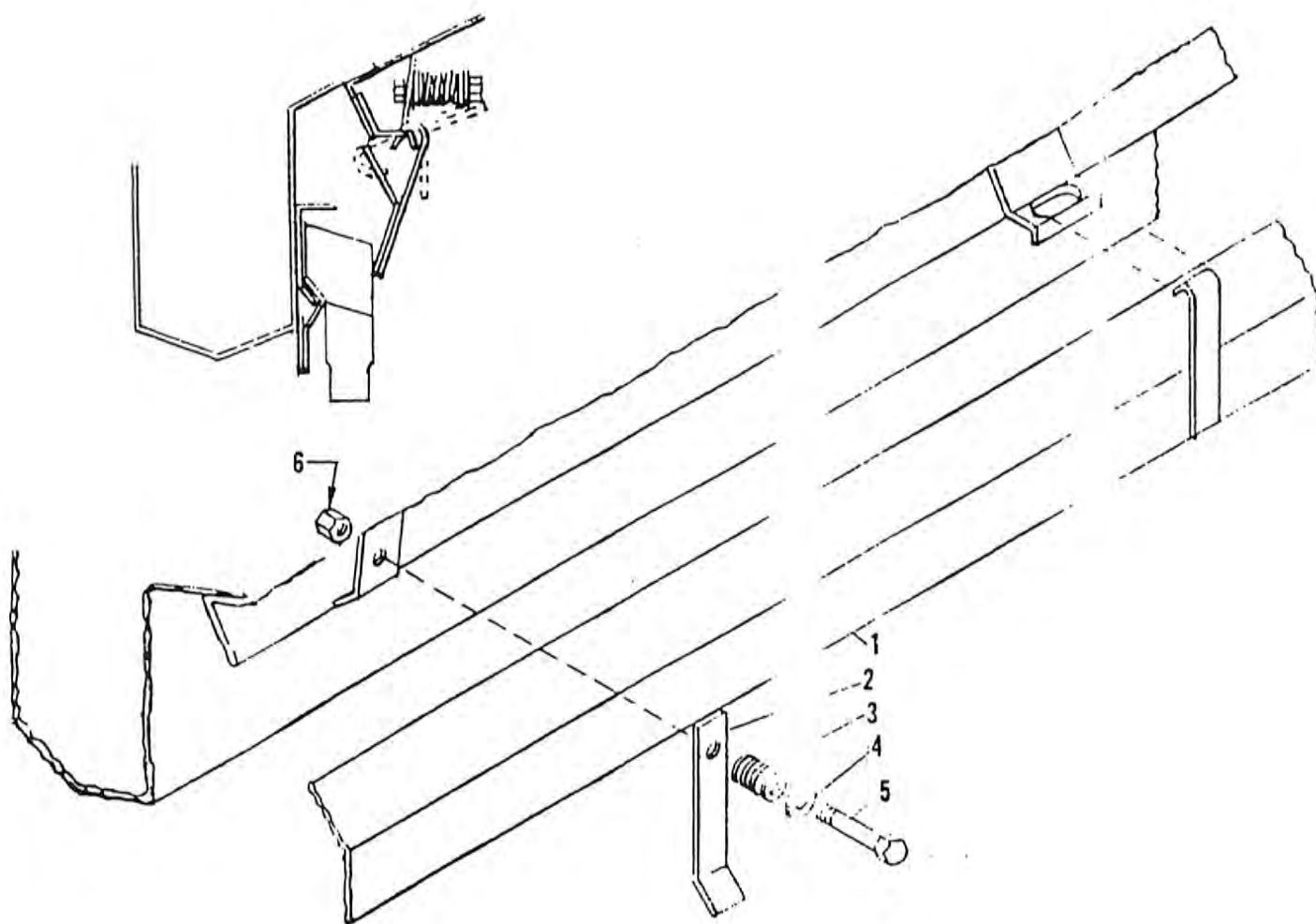
Serial #400 thru



Item	Part Number	Qty.	Description
1	8300309	2	Rock Guard 12½ Spacing, 1984
2	4800082	8	½" x 1½" Bolt
3	5000006	8	½" Lock Washers
4	4900001	8	½" Hex Nut
5	8300310	2	Rock Guard 10" Spacers, 1984

39 8000 Series Drill Windguard

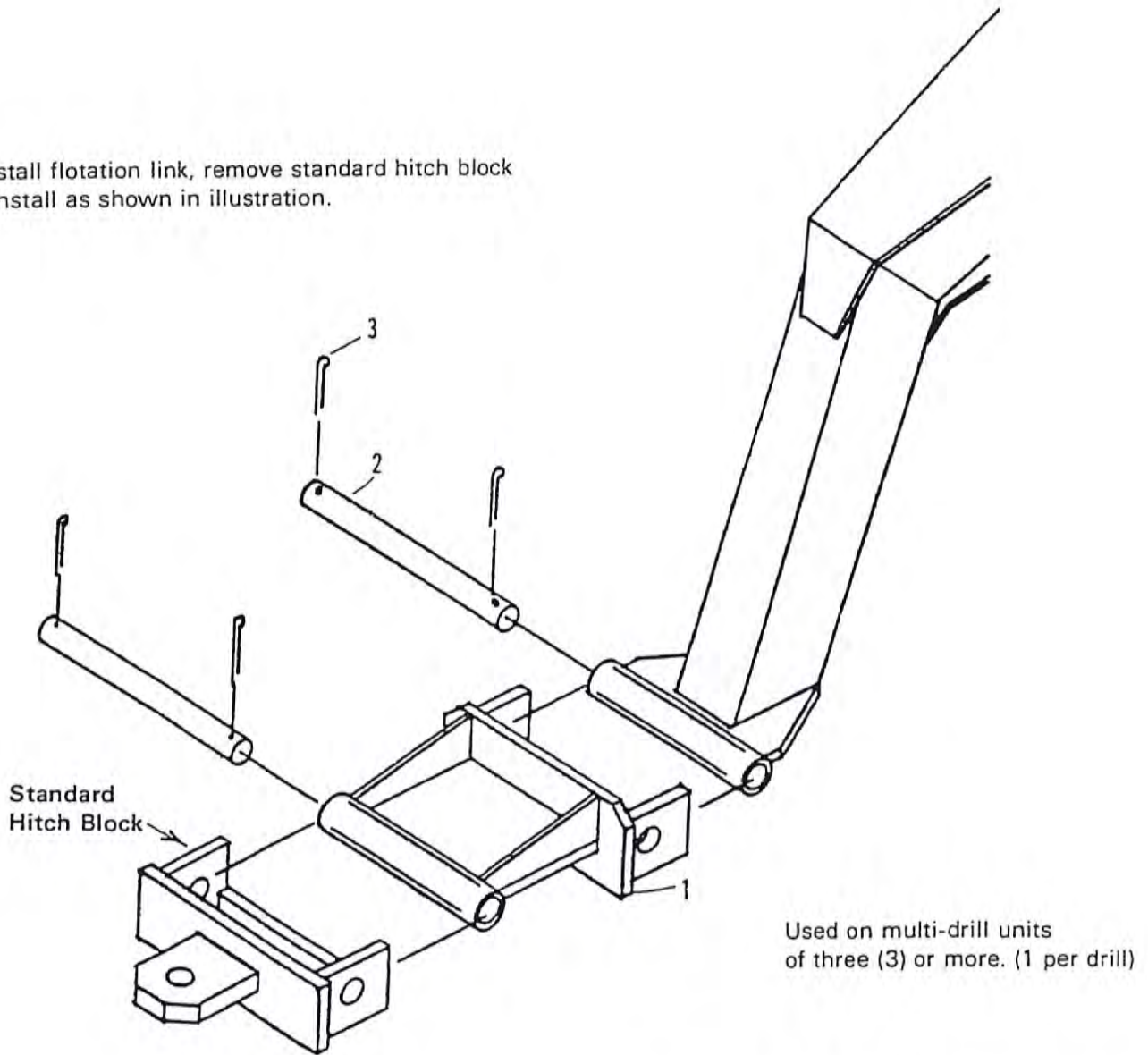
1983 Serial #300 to 399
1984 Serial #400 thru



Item	Part Number	Qty.	Description
1	8300354	2	Wind Guard
2	8300355	2	Wind Guard Latch
3	6100002	2	Spring
4	5000023	2	5/16 Flat Washer
5	4800118	2	5/16 x 2 Bolt
6	4900011	2	5/16 Lock Nut

Transport Flotation Link

To install flotation link, remove standard hitch block and install as shown in illustration.

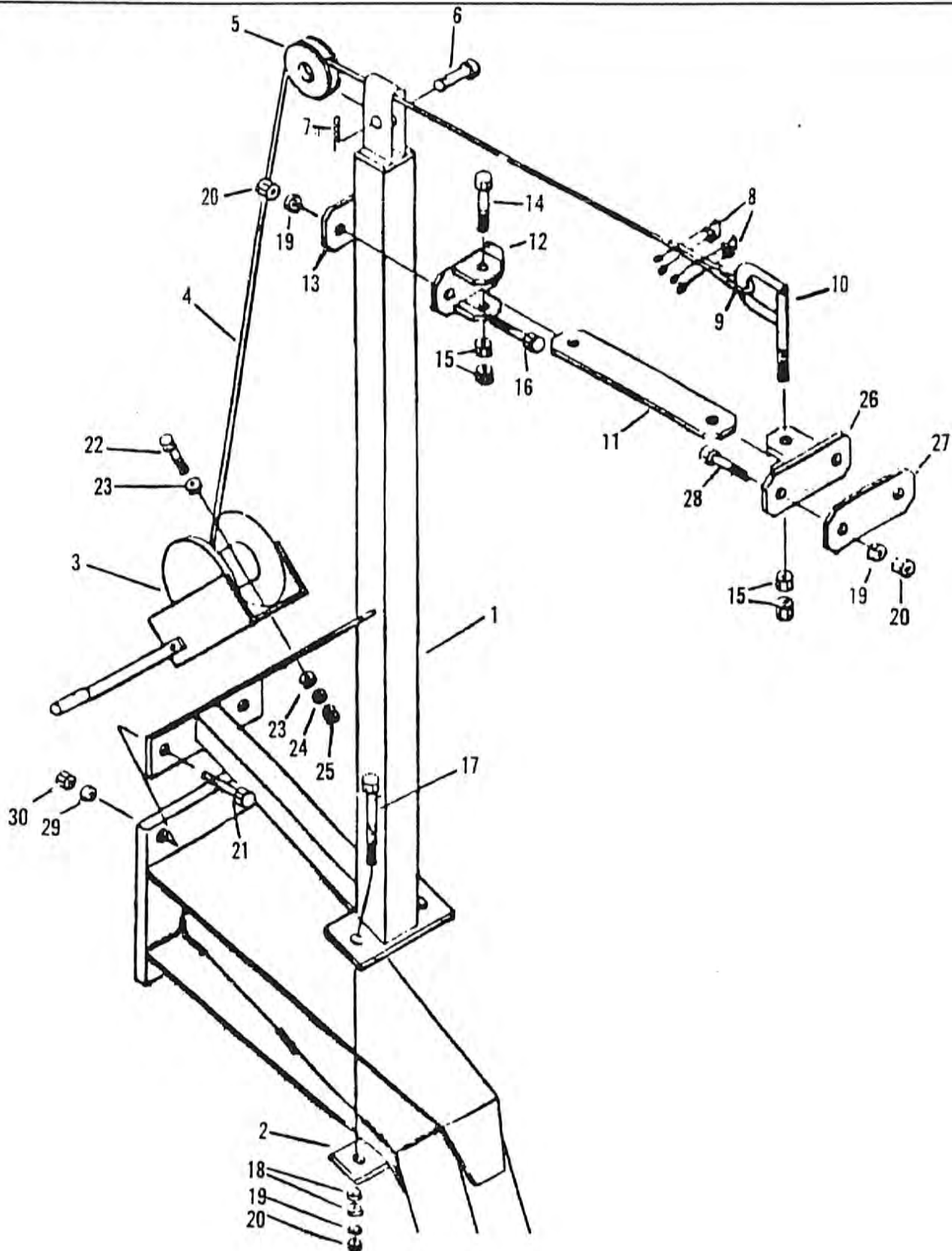


The purpose of the flotation link is to allow the front swivel wheels to individually float over uneven terrain without putting undue strain on any one wheel during end transport.

Item	Part Number	Qty.	Description
1	8300282	1	Flotation Link
2	8600007	1	1" x 10 $\frac{1}{4}$ " Pin
3	4800157	2	3/16" x 2" Cotter Keys

41 3 Drill Hitch Lift - 4 Drill Hitch Lift

1983 Serial #300 to 399
1984 Serial #400 thru



Hitch Lift 3 Drill 42

1983 Serial #300 thru 399
1984 Serial #400 thru

Item	Part Number	Qty.	Description
1	8300293	1	Lift Frame
2	8300294	1	Lift Mount Strap 2"x6"
3	5800003	1	Winch
4	5600011	1	¼" Cable 12' Long
5	5500001	1	Cable Sheaves
6	4800030	1	⅝"x2" Clevis Pin
7	4800123	1	⅛"x1½" Cotter Pin
8	4800027	2	¼" Cable Clamp
9	7500121		¼" Cable Thimble
10	8300356	1	1 Bolt
11	8300295	1	Hold Up Bar 2x11½
12	8300296	1	Hold Up Bar Mount 4½ Long
13	8300297	1	Hold Up Bar Strap 4½ Long x 2
14	4800054	1	⅝x3½ Bolt
15	4900005	4	⅝ Nuts
16	4800006	2	½x4 Bolt
17	4800080	2	½x7 Bolt
18	5000004	4	½ Flat Washer
19	5000006	6	½ Lock Washer
20	4900001	6	½ Hex Nut
21	4800017	2	¾x3 Bolt
22	4800003	3	¾x1 Bolt
23	5000001	6	¾ Flat Washer
24	5000019	3	¾ Lock Washer
25	4900002	3	¾ Hex Nut
26	8300298	1	Hold Up Bar Mount 6 Long
27	8300299	1	Hold Up Bar Strap 6 Long x 2"
28	4800077	2	½x5½ Bolt
29	5000012	2	¾" Lock Washer
30	4900004	2	¾" Nut

4 Drill Hitch Lift

1983 Serial #300 to 399
1984 Serial #400 thru

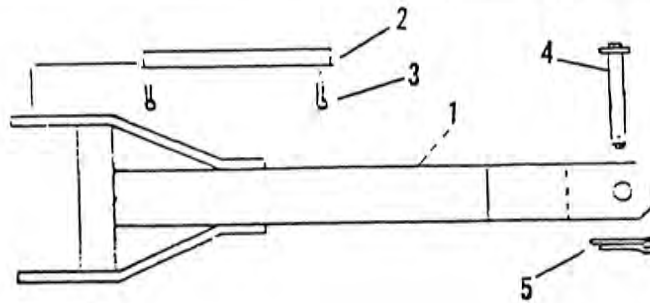
SAME AS ABOVE EXCEPT

Item	Part Number	Qty.	Description
26	8300296	1	Hold Up Bar Mount 4½ Long
27	8300297	1	Hold Up Bar Strap 4½" Long x 2"
28	4800006	2	½x4 Bolt

43 Single Hitch

1983 Serial #300 thru 399

1984 Serial #400 thru

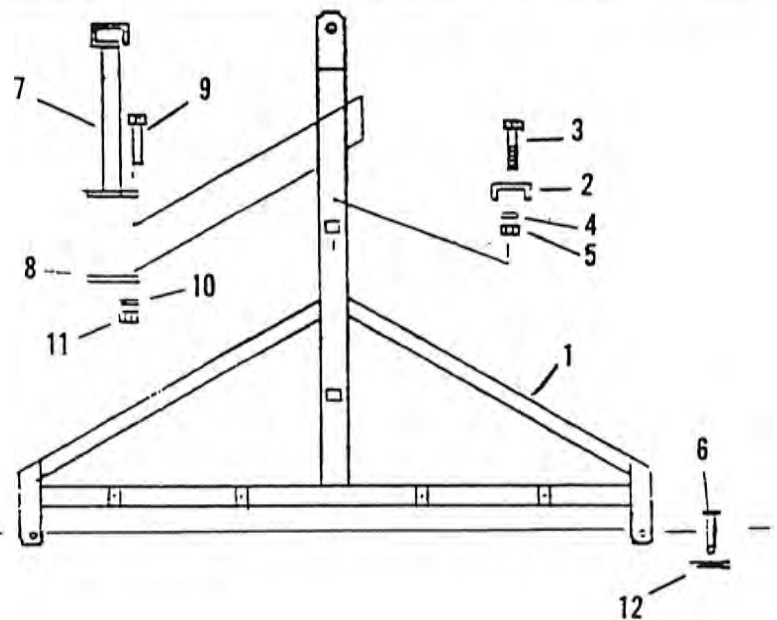


Item	Part Number	Qty.	Description
1	8300327	1	Hitch
2	8600007	1	1 x 10 $\frac{1}{4}$ Hitch Pin
3	4800177	2	$\frac{1}{4}$ x 1 $\frac{3}{4}$ Cotter Key
4	8600025	1	1 x 6 Hitch Pin
5	4800177	1	$\frac{1}{4}$ x 1 $\frac{3}{4}$ Cotter Key

2 Drill Hitch

1983 Serial #300 thru 399

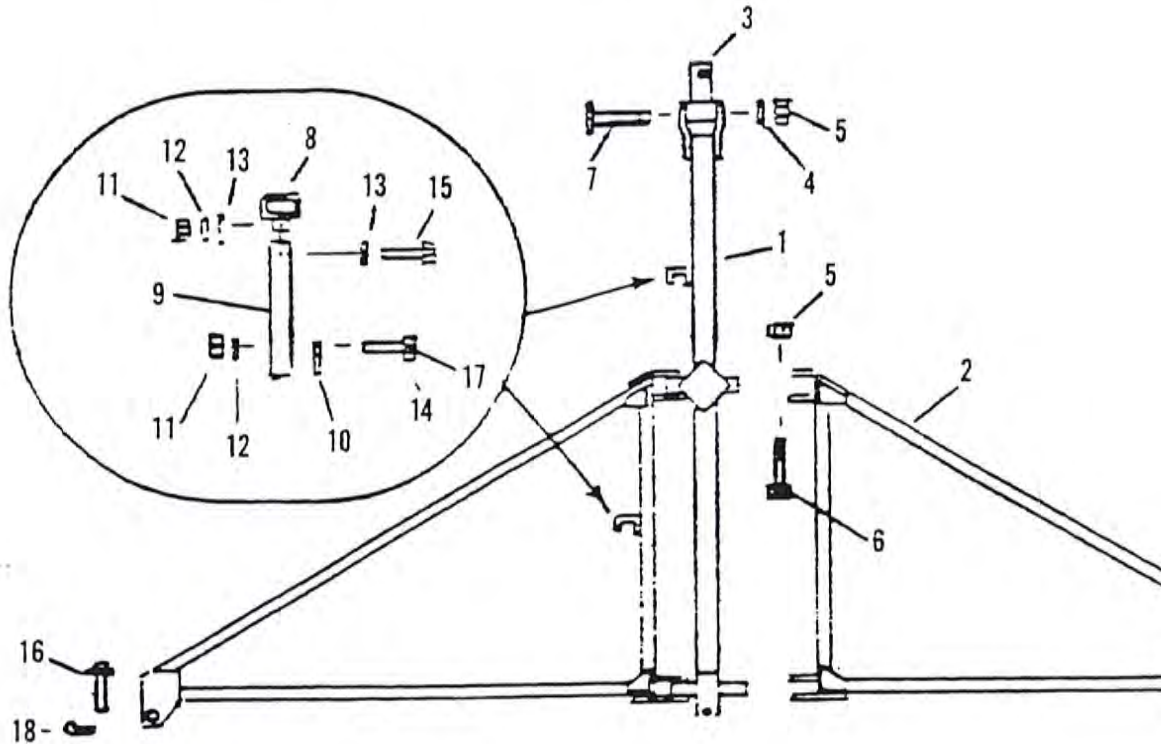
1984 Serial #400 thru



Item	Part Number	Qty.	Description
1	8300328	1	Hitch, 1984
	8300358	1	Hitch, 1983
2	8300329	6	Hose Clamp
3	4800142	6	$\frac{3}{8}$ " x 1 $\frac{3}{4}$ " Bolt
4	5000019	6	$\frac{3}{8}$ " Lock Washer
5	4900002	6	$\frac{3}{8}$ " Hex Nut
6	8600025	2	1" x 6" Hitch Pin
7	8300330	1	Hose Minder
8	8300331	1	Hose Minder Strap, 1 $\frac{1}{2}$ " x 6"
9	4800135	2	$\frac{1}{2}$ " x 3 $\frac{1}{2}$ " Hex Bolt
10	5000006	2	$\frac{1}{2}$ " Lock Washer
11	4900001	2	$\frac{1}{2}$ " Hex Nut
12	4800177	2	$\frac{1}{4}$ " x 1 $\frac{3}{4}$ " Cotter Key

3 Drill Hitch 44

1983 Serial #300 to 399
1984 Serial # 400 thru

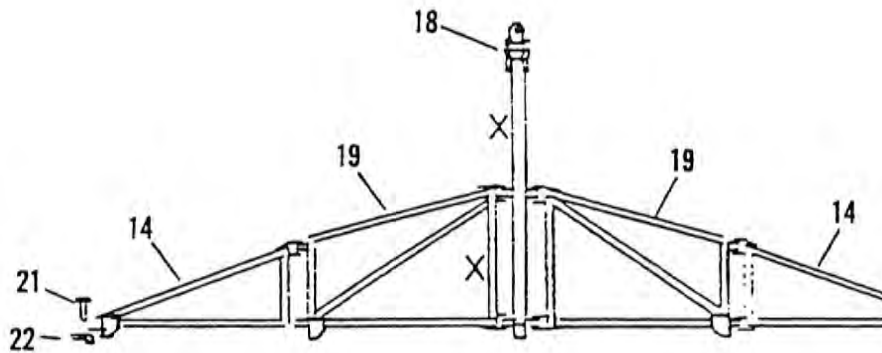
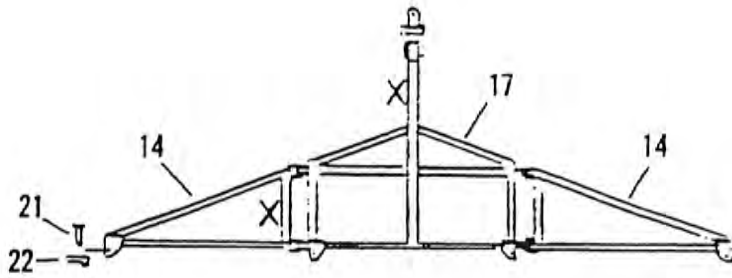


Item	Part Number	Qty.	Description
1	8300332	1	3 Drill Hitch Center Section, 1984
	8300359	3	Drill Center Section, 1983
2	8300333	2	Hitch Wing, 1984
	8300360		Hitch Wing, 1983
3	8300334	1	Hitch Block
4	8300341	1	2 OD x 1.028 ID 3/8" Thick Washer
5	4900015	5	1" Nylon Insert Nut
6	4800187	4	1" x 6" Hex Bolt
7	8600026	1	1" x 6" Hitch Block Pin
8	8300335	2	Hose Minder
9	8300336	2	Hose Minder Channel
10	8300331	2	Hose Minder Strap, 1 1/2" x 6"
11	4900001	6	1/2" Hex Nut
12	5000006	6	1/2" Lock Washer
13	5000004	4	1/2" Flat Washer
14	4800077	2	1/2" x 5 1/2" Bolt
15	4800018	2	1/2" x 1 1/4" Bolt
16	8600025	3	1" x 6" Hitch Pin
17	4800188	2	1/2" x 4" Bolts
18	4800177	3	1/4" x 1 3/4" Cotter Keys

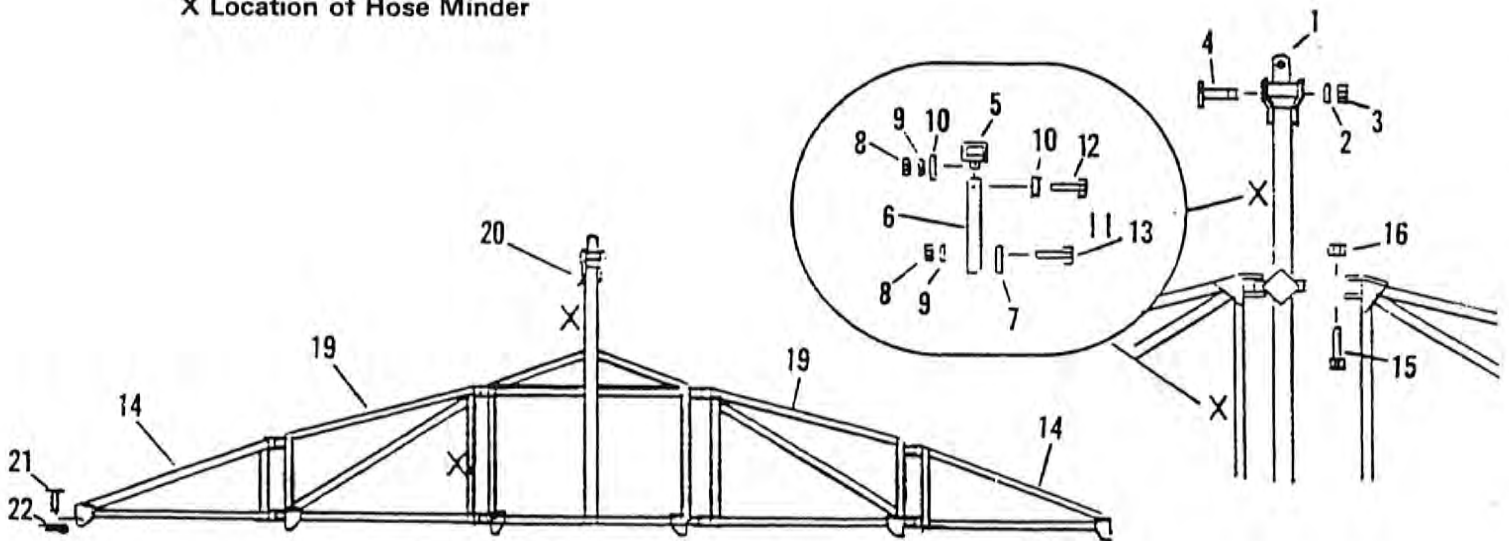
45 4, 5, 6 Drill Hitches Standard Parts

1983 Serial #300 to 399

1984 Serial #400 thru



X Location of Hose Minder

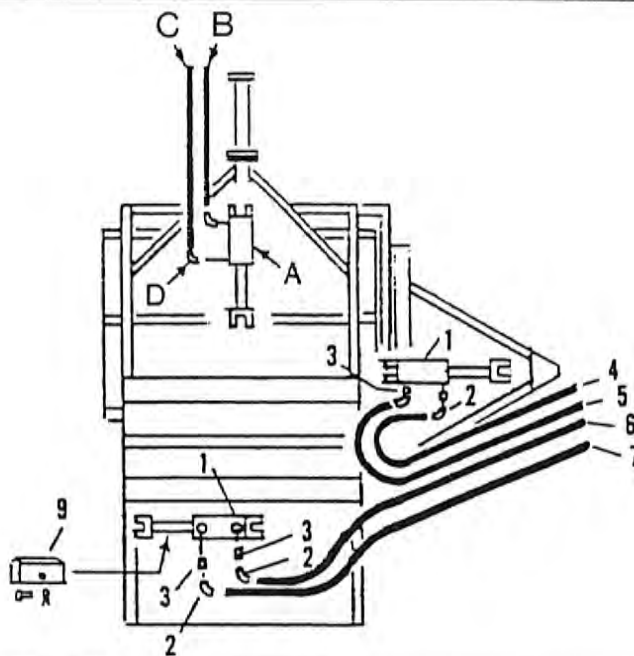


4, 5, 6 Drill Hitches Standard Parts 46

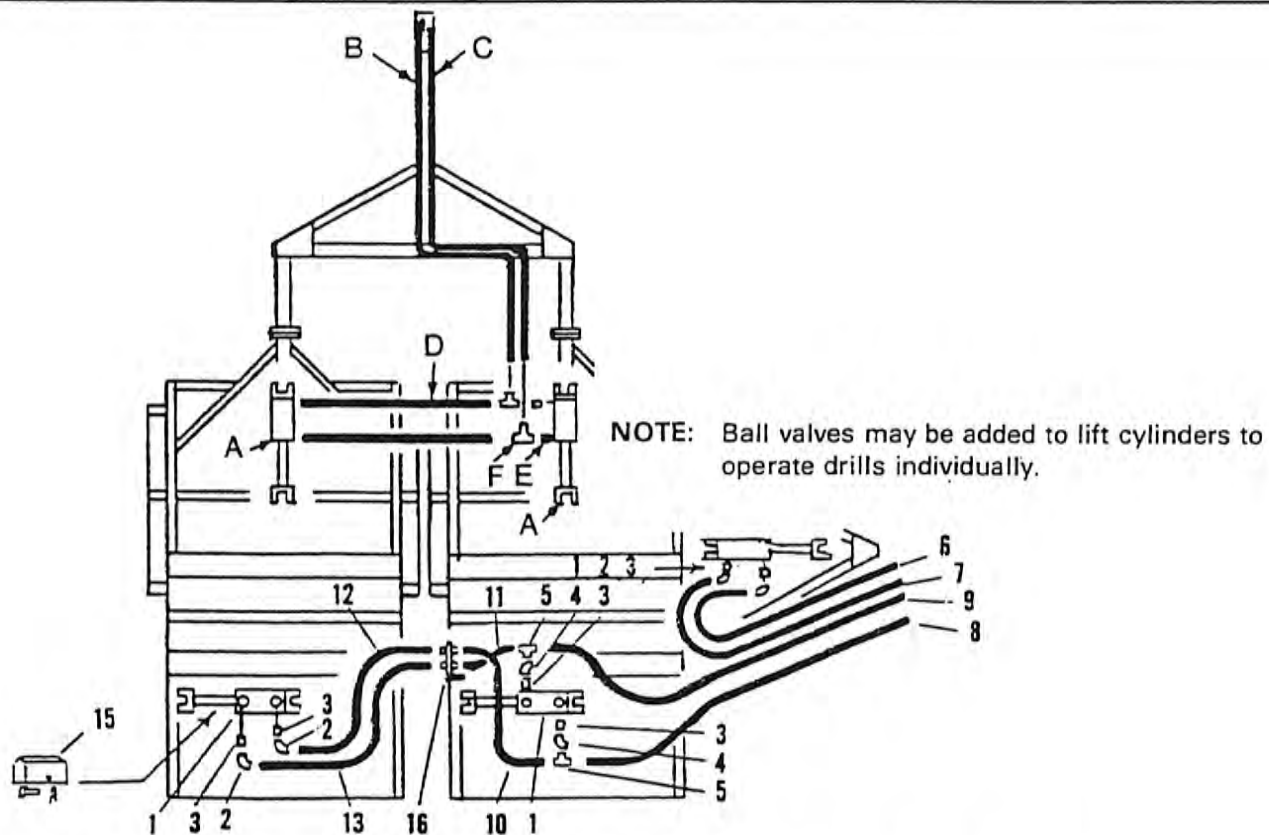
1983 Serial #300 to 399
1984 Serial #400 thru

Item	Part Number	Qty.	Description
1	8300334	1	Hitch Block
2	8300341	1	2 OD x 1.028 ID $\frac{3}{8}$ " Thick Washer
3	4900015	1	1" Nylon Insert Nut
4	8600026	1	Hitch Block Pin
5	8300335	2	Hose Minder
6	8300336	2	Hose Minder Channel
7	8300331	2	Hose Minder Strap
8	4900001	6	$\frac{1}{2}$ Hex Nut
9	5000006	6	$\frac{1}{2}$ Lock Washer
10	5000004	4	$\frac{1}{2}$ Flat Washer
11	4800077	2	$\frac{1}{2}$ x $5\frac{1}{2}$ Bolt
12	4800018	2	$\frac{1}{2}$ x $1\frac{1}{4}$ Bolt
13	4800188	2	$\frac{1}{2}$ x 4 Bolt
14	8300333	2	Hitch Wing, 1984
	8300360		Hitch Wing, 1983
15	4800187	2 per wing	1" x 6" Hex Bolt
16	4900015	2 per wing	1" Nylon Insert Nut
17	8300337	1	4 Drill Hitch Center Section, 1984
	8300361		4 Drill Hitch Center Section, 1983
18	8300338	1	5 Drill Hitch Center Section, 1984
	8300362		5 Drill Hitch Center Section, 1983
19	8300339	2	5, 6 Drill Hitch 2nd Wing, 1984
	8300363		5, 6 Drill Hitch 2nd Wing, 1983
20	8300340	1	6 Drill Hitch Center Section, 1984
	8300364		6 Drill Hitch Center Section, 1983
21	8600025	1 per drill	1" x 6" Hitch Pin
22	4800177	1 per drill	$\frac{1}{4}$ " x $1\frac{3}{4}$ " Cotter Key

47 Single Drill Transport Hydraulics



Two Drill Transport Hydraulics



NOTE: For coupler mount, and cylinder lock parts list, see transport wheel assembly.

Single Drill Transport Hydraulics 48

Item	Part Number	Qty.	Description
1	4100004	2	3 x 16 Cylinder
2	3800063	4	½" x 90° Street Elbow
3	3800061	4	½" 1/16" Restrictor Bushing
4	3700086	1	124" ½" Hose
5	3700087	1	116" ½" Hose
6	3700088	1	206" ½" Hose
7	3700089	1	226" ½" Hose
8	7500122	1	Roll of Teflon Tape
9	8300324	1	Cylinder Lock Complete

Single Drill Depth Control Hydraulics

Item	Part Number	Qty.	Description
A	4100039	1	3" x 8" Cylinder
B	3700061	1	132" ½" Hose
C	3700093	1	144" ½" Hose
D	3800063	2	90° Street Elbow

Two Drill Transport Hydraulics

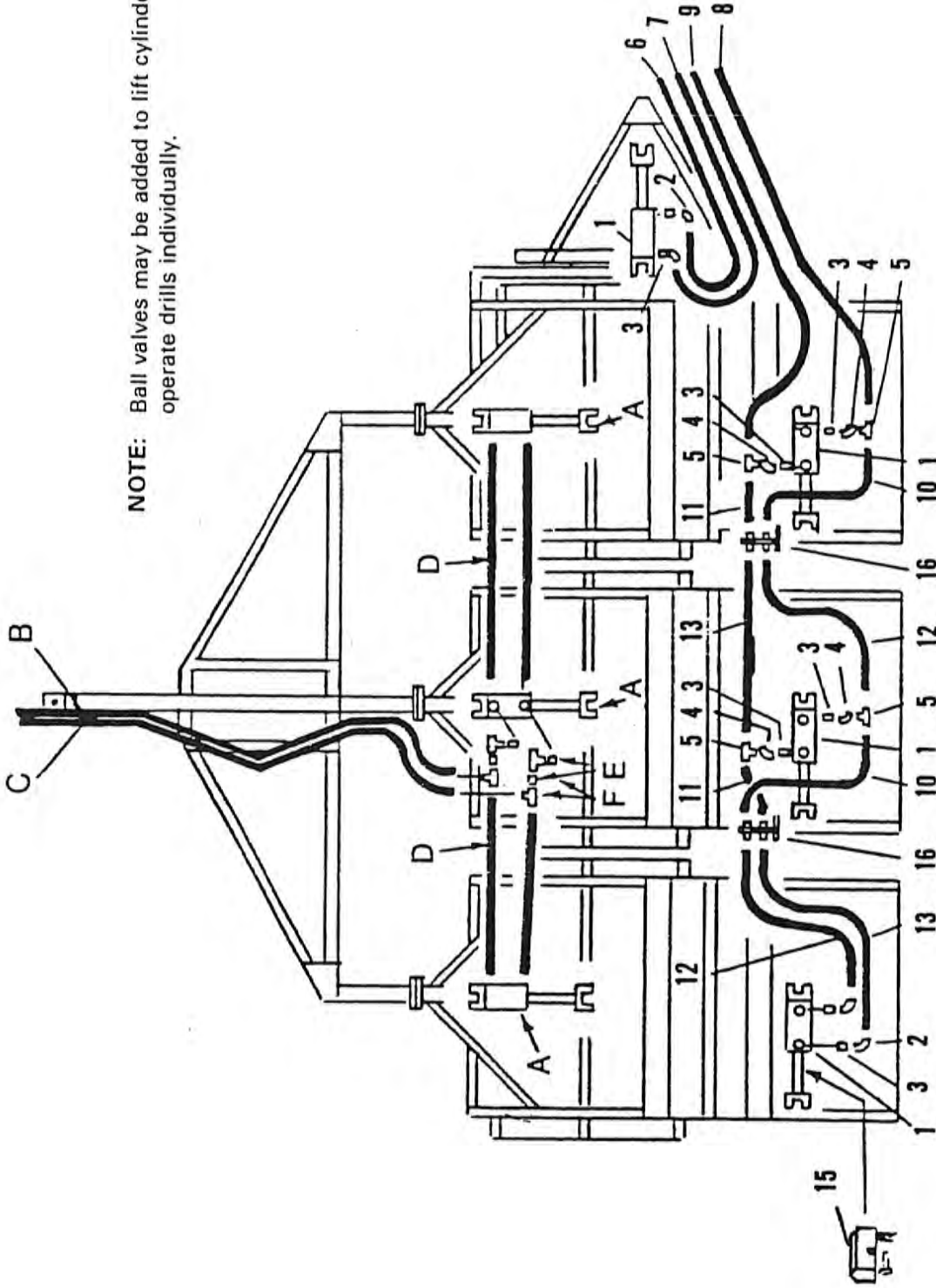
Item	Part Number	Qty.	Description
1	4100004	3	3 x 16 Cylinders
2	3800063	4	½" x 90° Street Elbow
3	3800061	6	½" x 1/16" Restrictor Bushing
4	3800085	2	½" Male Elbows
5	3800009	2	½" Tees
6	3700086	1	124" ½" Hose
7	3700087	1	116" ½" Hose
8	3700088	1	206" ½" Hose
9	3700089	1	226" ½" Hose
10	3700090	1	38" ½" Hose
11	3700091	1	22" ½" Hose
12	3700044	1	74" ½" Hose
13	3700092	1	94" ½" Hose
14	7500122	1	Roll of Teflon Tape
15	8300324	2	Cylinder Lock (Complete)
16	8300325	1	Dual Coupler Mount (Complete)

Two Drill Depth Control Hydraulics

Item	Part Number	Qty.	Description
A	4100039	2	3" x 8" Cylinders
B	3700094	1	242" ½" Hose
C	3700095	1	254" ½" Hose
D	3700024	2	120" ½" Hose
E	3800086	2	½" x 1½" Nipples
F	3800009	2	½" Tees

49 Three Drill Transport Hydraulics

NOTE: Ball valves may be added to lift cylinders to operate drills individually.



NOTE: For coupler mount and cylinder parts list, see transport wheel assembly.

Three Drill Transport Hydraulics 50

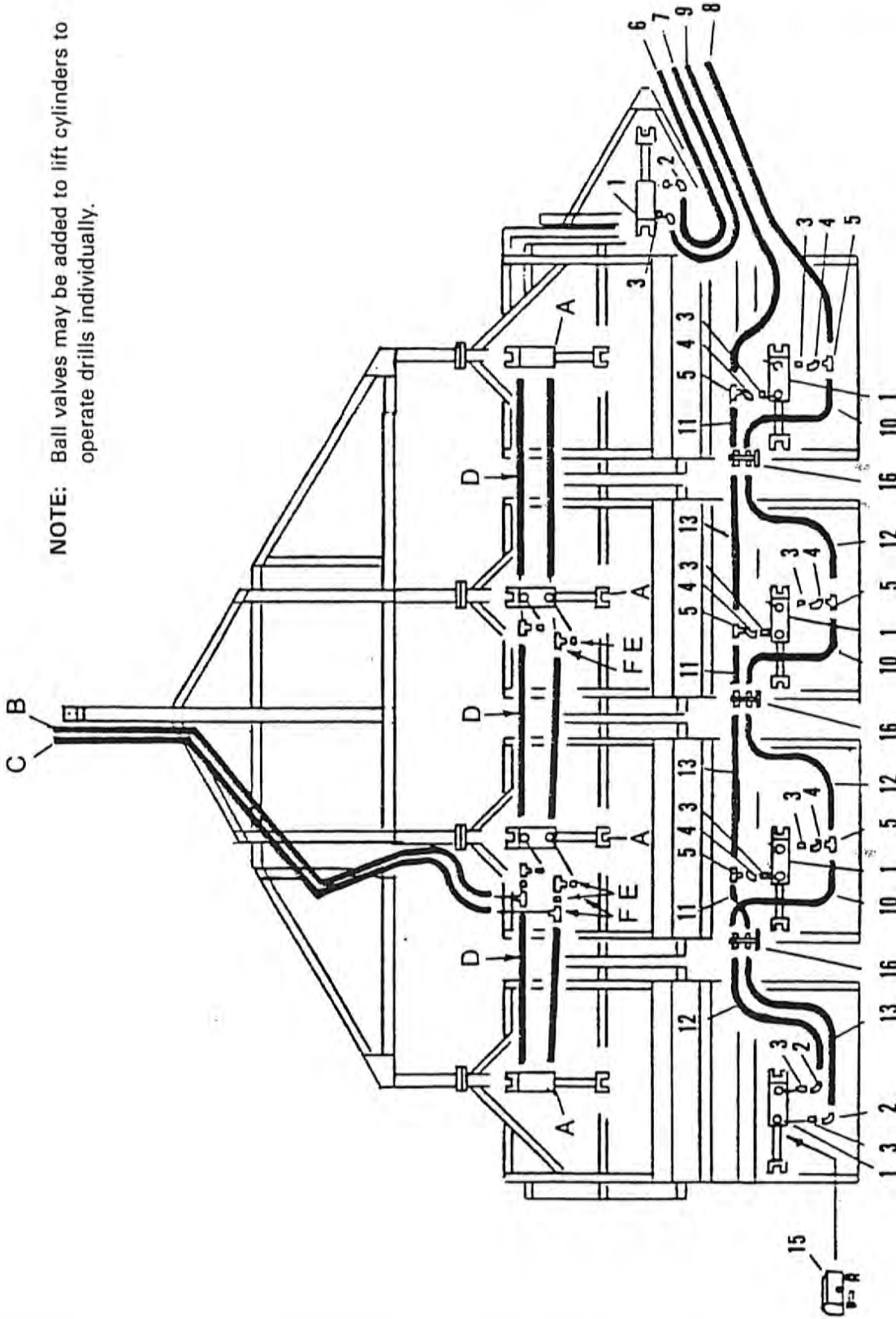
Item	Part Number	Qty.	Description
1	4100004	4	3 x 16 Cylinders
2	3800063	4	½ 90° Street Elbows
3	3800061	8	½" x 1/16" Restrictor Bushings
4	3800085	4	½" Male Elbow
5	3800009	4	½" Tees
6	3700086	1	124" ½" Hose
7	3700087	1	116" ½" Hose
8	3700088	1	206" ½" Hose
9	3700089	1	226" ½" Hose
10	3700090	2	38" ½" Hose
11	3700091	2	22" ½" Hose
12	3700044	2	74" ½" Hose
13	3700092	2	94" ½" Hose
14	7500122	1	Roll of Teflon Tape
15	8300324	3	Cylinder Lock Complete
16	8300325	2	Coupler Mount Complete

Three Drill Depth Control Hydraulics

Item	Part Number	Qty.	Description
A	4100039	3	3" x 8" Cylinder
B	3700096	1	236" ½" Hose
C	3700097	1	248" ½" Hose
D	3700024	4	120" ½" Hose
E	3800086	4	½" x 1½" Nipples
F	3800009	4	½" Tees

51 Four Drill Transport Hydraulics

NOTE: Ball valves may be added to lift cylinders to operate drills individually.



NOTE: For coupler mount and cylinder lock parts list, see transport wheel assembly.

Four Drill Transport Hydraulics 52

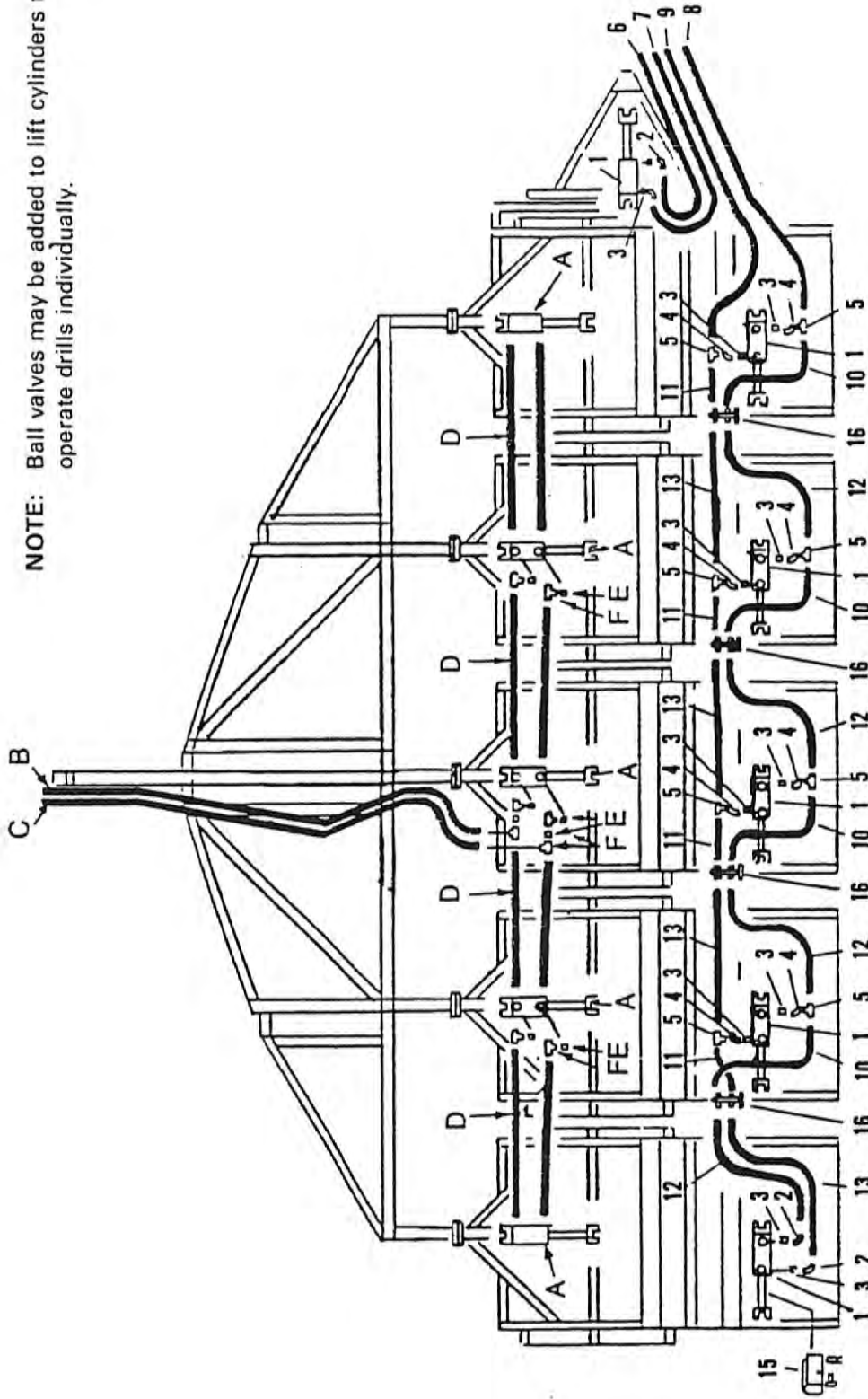
Item	Part Number	Qty.	Description
1	4100004	5	3 x 16 Cylinders
2	3800063	4	90° Street Elbows
3	3800061	10	½" x 1/16" Restrictor Bushings
4	3800085	6	½" Male Elbows
5	3800009	6	½" Tees
6	3700086	1	124" ½" Hose
7	3700087	1	116" ½" Hose
8	3700088	1	206" ½" Hose
9	3700089	1	226" ½" Hose
10	3700090	3	38" ½" Hose
11	3700091	3	22" ½" Hose
12	3700044	3	74" ½" Hose
13	3700092	3	94" ½" Hose
14	7500122	1	Roll of Teflon Tape
15	8300324	4	Cylinder Lock (Complete)
16	8300325	3	Coupler Mount (Complete)

Four Drill Depth Control Hydraulics

Item	Part Number	Qty.	Description
A	4100039	4	3" x 8" Cylinder
B	3700098	1	272" ½" Hose
C	3700099	1	284" ½" Hose
D	3700024	6	120" ½" Hose
E	3800086	6	½" x 1½" Nipples
F	3800009	6	½" Tees

53 Five Drill Transport Hydraulics

NOTE: Ball valves may be added to lift cylinders to operate drills individually.



NOTE: For coupler mount, and cylinder lock parts list, see transport wheel assembly.

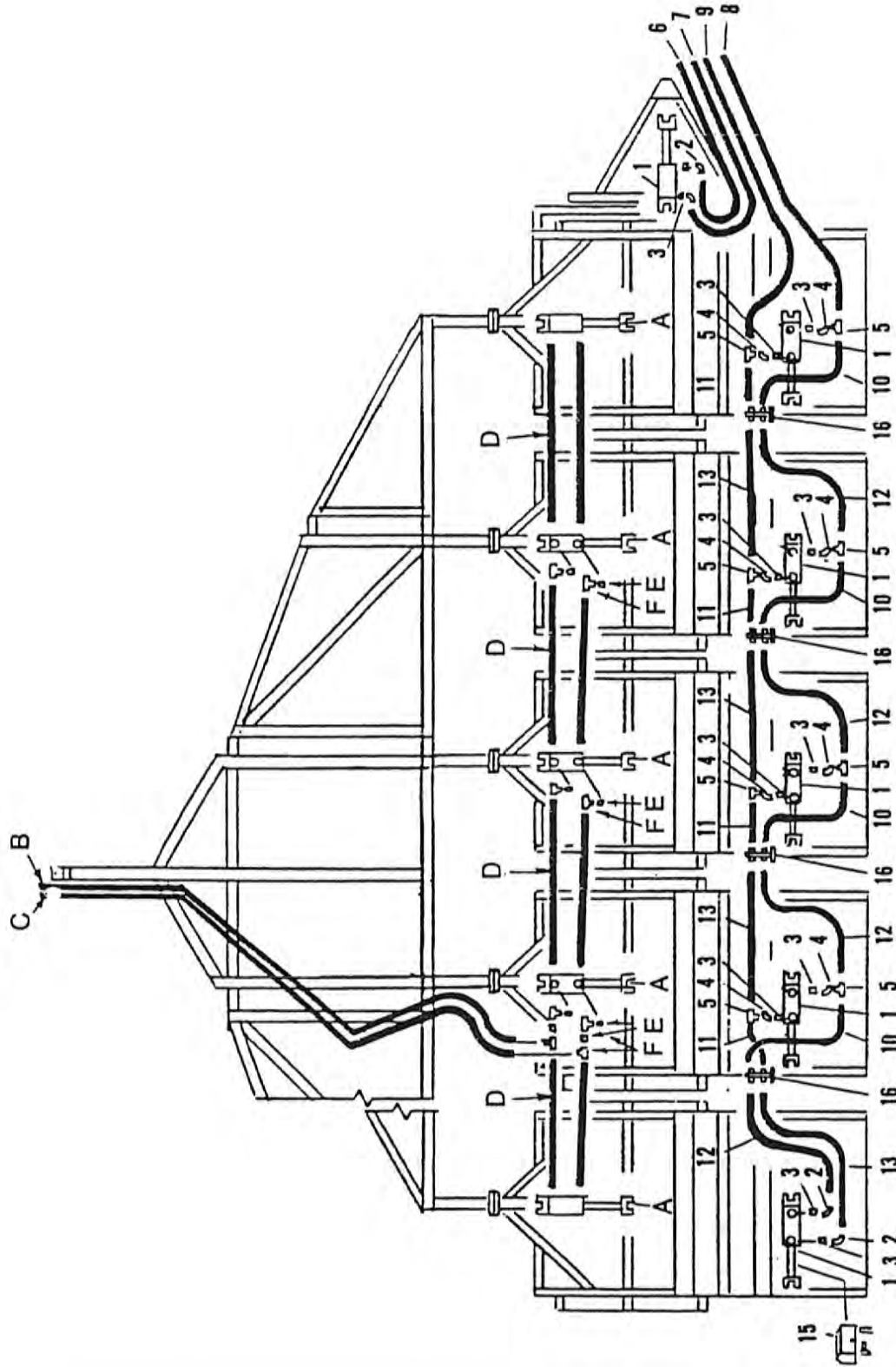
Five Drill Transport Hydraulics 54

Item	Part Number	Qty.	Description
1	4100004	6	3 x 16 Cylinders
2	3800063	4	½ 90° Street Elbows
3	3800061	12	½" x 1/16" Restrictor Bushings
4	3800085	8	½" Male Elbows
5	3800009	8	½" Tees
6	3700086	1	124" ½" Hose
7	3700087	1	116" ½" Hose
8	3700088	1	206" ½" Hose
9	3700089	1	226" ½" Hose
10	3700090	4	38" ½" Hose
11	3700091	4	22" ½" Hose
12	3700044	4	74" ½" Hose
13	3700092	4	94" ½" Hose
14	7500122	1	Roll of Teflon Tape
15	8300324	5	Cylinder Lock (Complete)
16	8300325	4	Coupler Mount (Complete)

Five Drill Depth Control Hydraulics

Item	Part Number	Qty.	Description
A	4100039	5	3" x 8" Cylinders
B	3700101	11	276" ½" Hose
C	3700102	1	288" ½" Hose
D	3700024	8	120" ½" Hose
E	3800086	8	½" x 1½" Nipples
F	3800009	8	½" Tees

55 Six Drill Transport Hydraulics



NOTE: Ball valves may be added to lift cylinders to operate drills individually.

NOTE: For coupler mount and cylinder lock parts list, see transport wheel assembly.

Six Drill Transport Hydraulics 56

Item	Part Number	Qty.	Description
1	4100004	7	3 x 16 Cylinders
2	3800063	4	½ 90° Street Elbow
3	3800061	14	½" x 1/16" Restrictor Bushings
4	3800085	10	½" Male Elbows
5	3800009	10	½" Tees
6	3700086	1	124" ½" Hose
7	3700087	1	116" ½" Hose
8	3700088	1	206" ½" Hose
9	3700089	1	226" ½" Hose
10	3700090	5	38" ½" Hose
11	3700091	5	22" ½" Hose
12	3700044	5	74" ½" Hose
13	3700092	5	94" ½" Hose
14	7500122	1	Roll of Teflon Tape
15	8300324	6	Cylinder Lock Complete
16	8300325	5	Coupler Mount Complete

Six Drill Depth Control Hydraulics

Item	Part Number	Qty.	Description
A	4100039	6	3" x 8" Cylinder
B	3700103	1	306" ½" Hose
C	3700104	1	318" ½" Hose
D	3700024	10	120" ½" Hose
E	3800086	10	½" x 1½" Nipples
F	3800009	10	½" Tees



**8000 SERIES
Supplement
1989**

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2 FEED SHAFT MONITOR KIT

SHIPPING LIST:

Item	Part No.	Qty.	Description
1	8300383	1	Monitor Cam
2	8300374	1	Monitor Arm
3	4800029	1	3/8" x 2 1/2" Bolt
4	5000001	6	3/8" Flat Washer
5	4900002	2	3/8" Hex Nuts

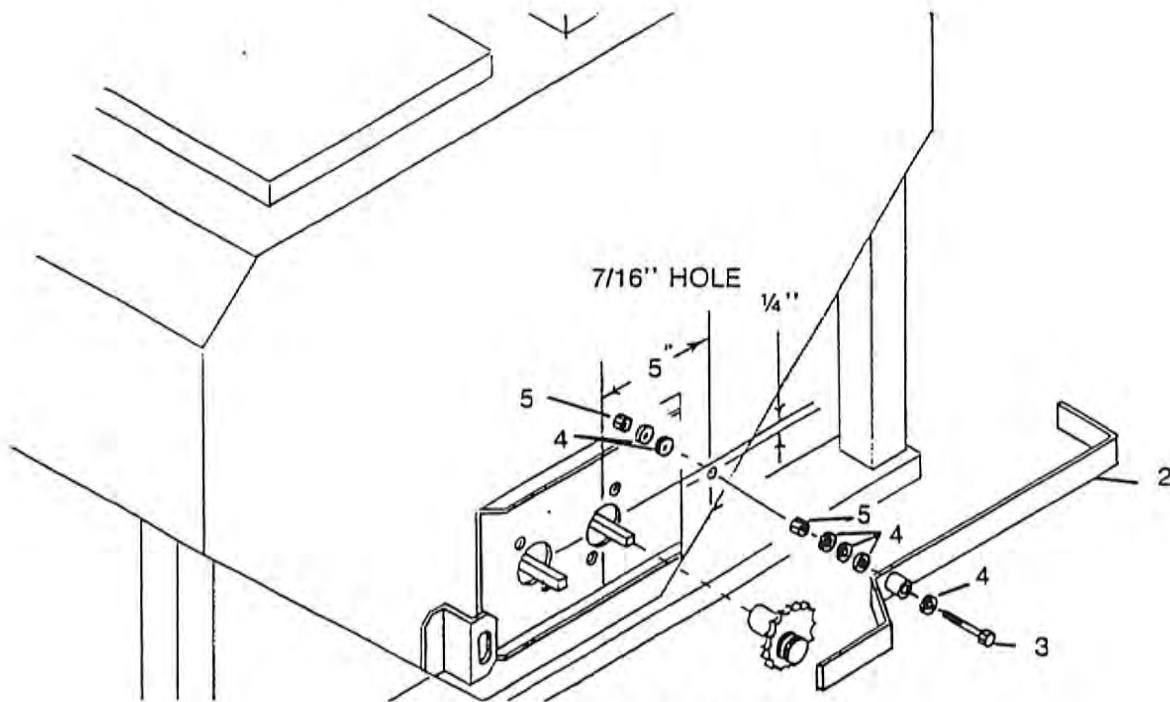


Illustration No. 2

INSTALLATION INSTRUCTIONS

- Step 1.** Remove drive shield and chain, weld monitor cam to feed shaft drive sprocket. **IMPORTANT:** When welding cam to drive sprocket, ground welder to sprocket to prevent damage to bearings. See illustration 1.
- Step 2.** Drill 7/16" hole in tank end sheet. See illustration 2.
- Step 3.** Place monitor arm under monitor cam and bolt to tank end sheet using flat washers to align monitor arm with groove in monitor cam.
- Step 4.** Reinstall drive chain and drive shield.

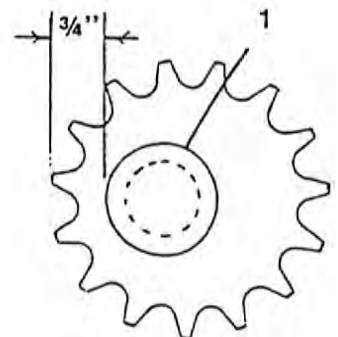
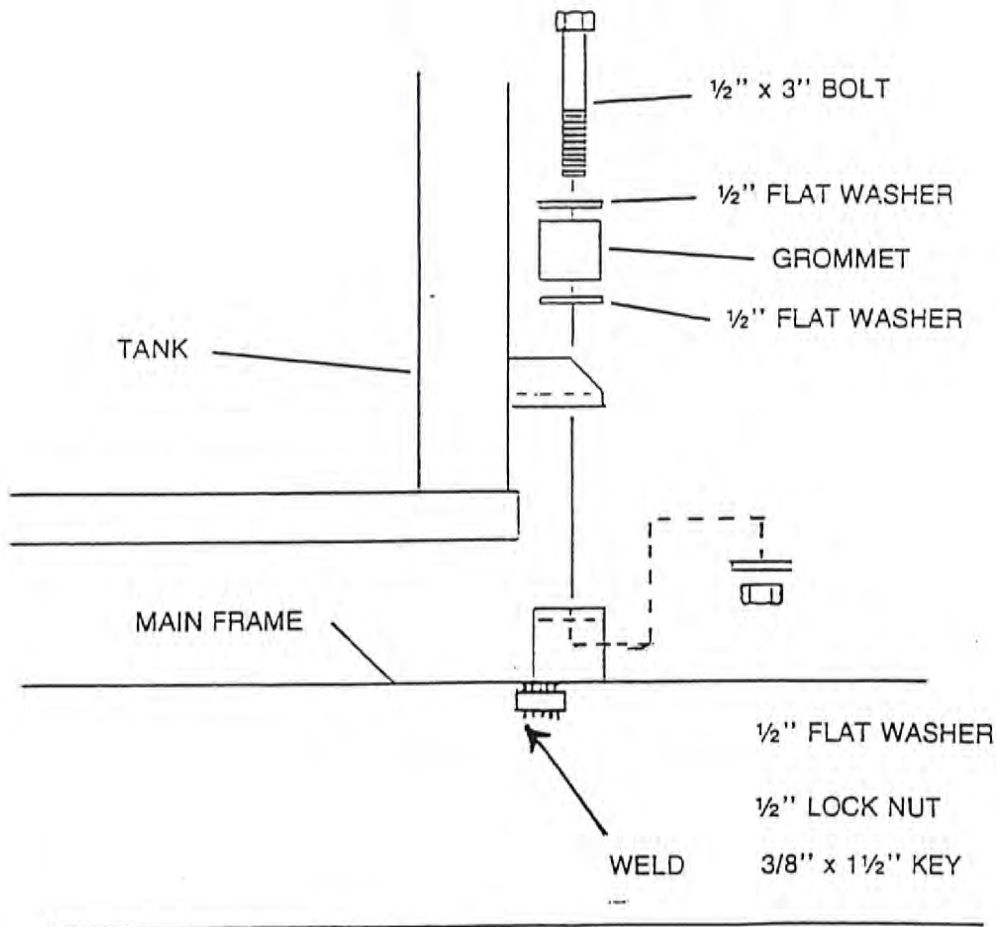


Illustration No. 1

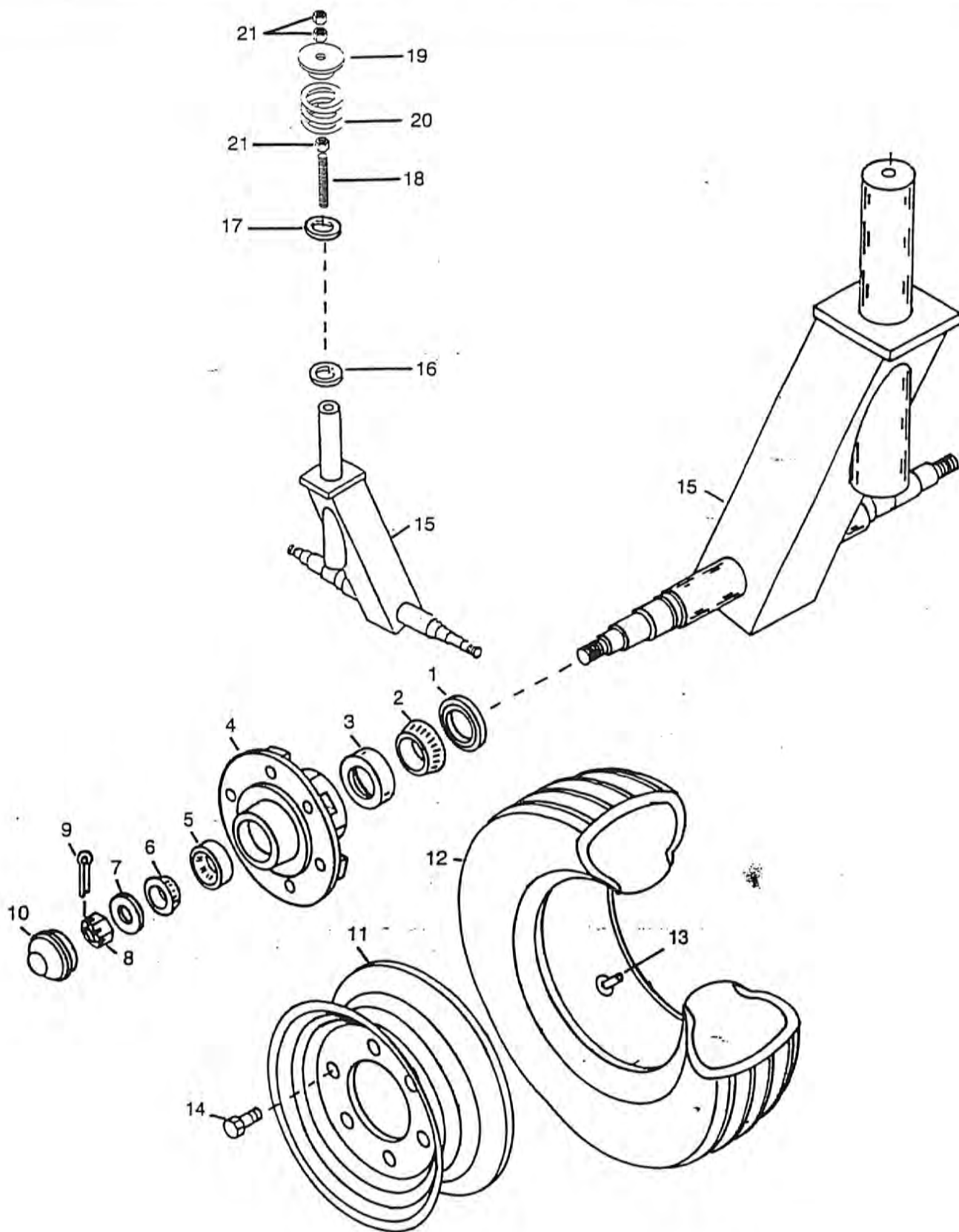
FEED SHAFT MONITOR KIT 3

Item	Part No.	Qty.	Description
1	4800068	1	1/2" x 3" Bolt
2	5000004	3	1/2" Flat Washer
3	7500134	1	Grommet
4	4900014	1	1/2" Lock Nut
5	6200007	1	3/8" x 1 1/2" Key

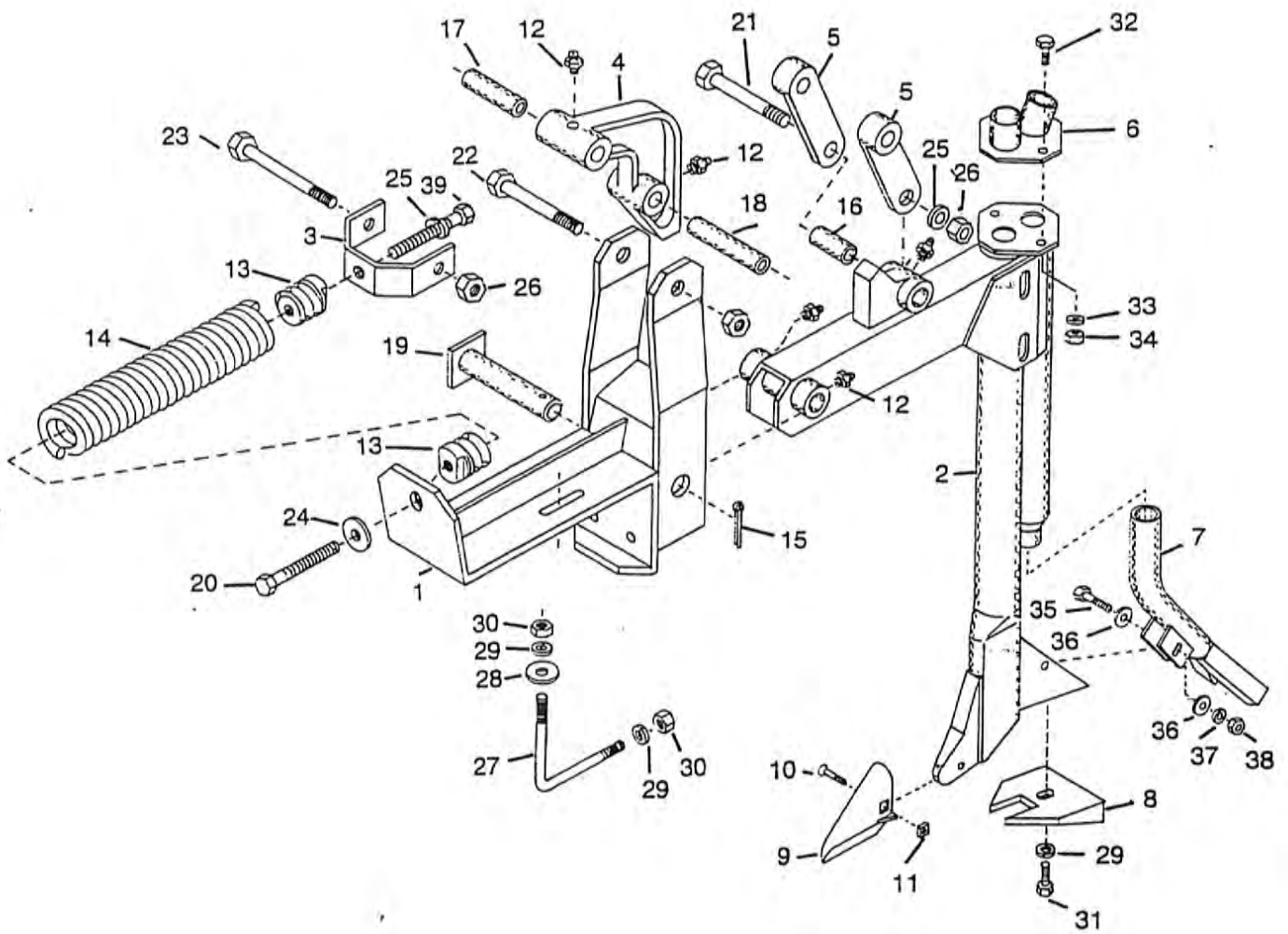


Center tank between tank mounts on main frame. Weld keys to main frame to keep tank centered. (Do not weld tank to main frame.) Install grommets as illustrated.

4 8000 DRILL WHEEL AND HUB ASSEMBLY



6 8000 DRILL WHEEL AND HUB ASSEMBLY

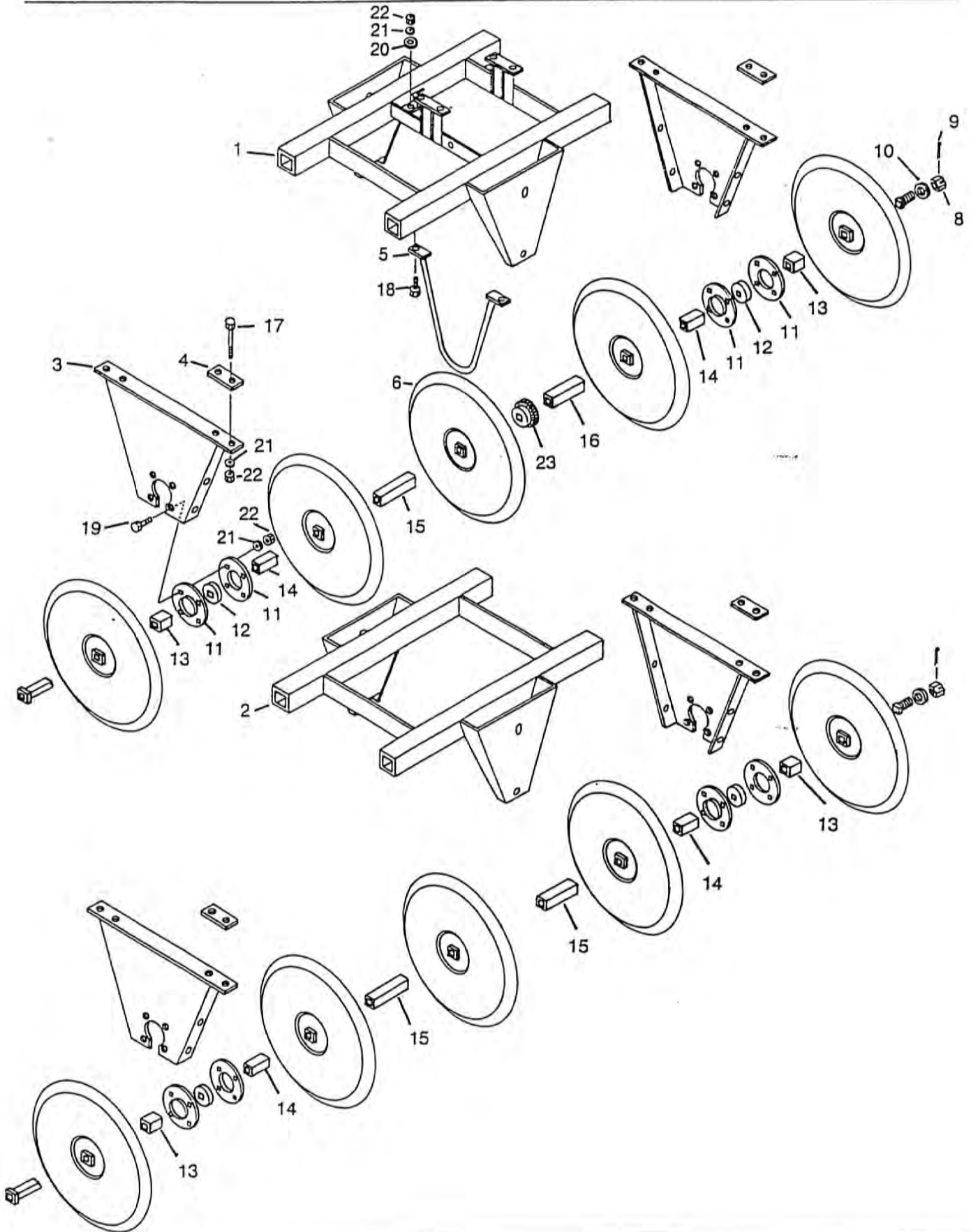


8000 DRILL WHEEL AND HUB ASSEMBLY 7

Item	Part No.	Qty.	Description
1	8300390	1	Automatic Reset Clamp
2	8300391	1	Reset Shank
3	8300392	1	Spring Yoke
4	7500205	1	Arm Casting No. 20
5	7500204	1	Link Casting No. 19
6	8300393	1	(Standard) Shank Inlet Tube
7	8800030	1	Seed Tube
8	7500161	1	Sealer Plate
9	7500163	1	Point
10	4800206	1	1/4" x 1 1/2" Socket Head Screw
11	4900038	1	1/4" SQ Nut
12	3800082	5	1/4" Straight Zerk
13	7500113	2	Screw Plug
14	6100038	1	Spring .500 x 1 1/2" I.D., x 12 1/2" Long
15	4800177	1	1/4" x 1 3/4" Cotter Pin
16	8300394	1	Bushing 1" O.D. x 7 GA 2" Long
17	8300395	1	Bushing 1" O.D. x 7 GA 3" Long
18	8300396	1	Bushing 1" O.D. x 7 GA 4" Long
19	8600001	1	Pivot Pin 1" x 5 3/4"
20	4800176	1	5/8" x 4" Bolt (Special)
21	4800100	1	5/8" x 4" Bolt
22	4800141	1	5/8" x 4 1/2" Bolt
23	4800218	1	5/8" x 5 1/2" Bolt
24	5000002	1	5/8" Flat Washer
25	5000003	4	5/8" Lock Washer
26	4900005	3	5/8" Nut
27	4800237	2	1/2" L-Bolt 5" O.D. x 5" O.D.
28	5000004	2	1/2" Flat Washer
29	5000006	5	1/2" Lock Washer
30	4900001	4	1/2" Nut
31	4800018	1	1/2" x 1 1/4" Bolt
32	4800008	2	5/16" x 3/4" Bolt
33	5000022	2	5/16" Lock Washer
34	4900003	2	5/16" Nut
35	4800142	1	3/8" x 1 3/4" Bolt
36	5000001	2	3/8" Flat Washer
37	5000019	2	3/8" Lock Washer
38	4900002	1	3/8" Nut
39	4800010	1	5/8" x 2" Bolt

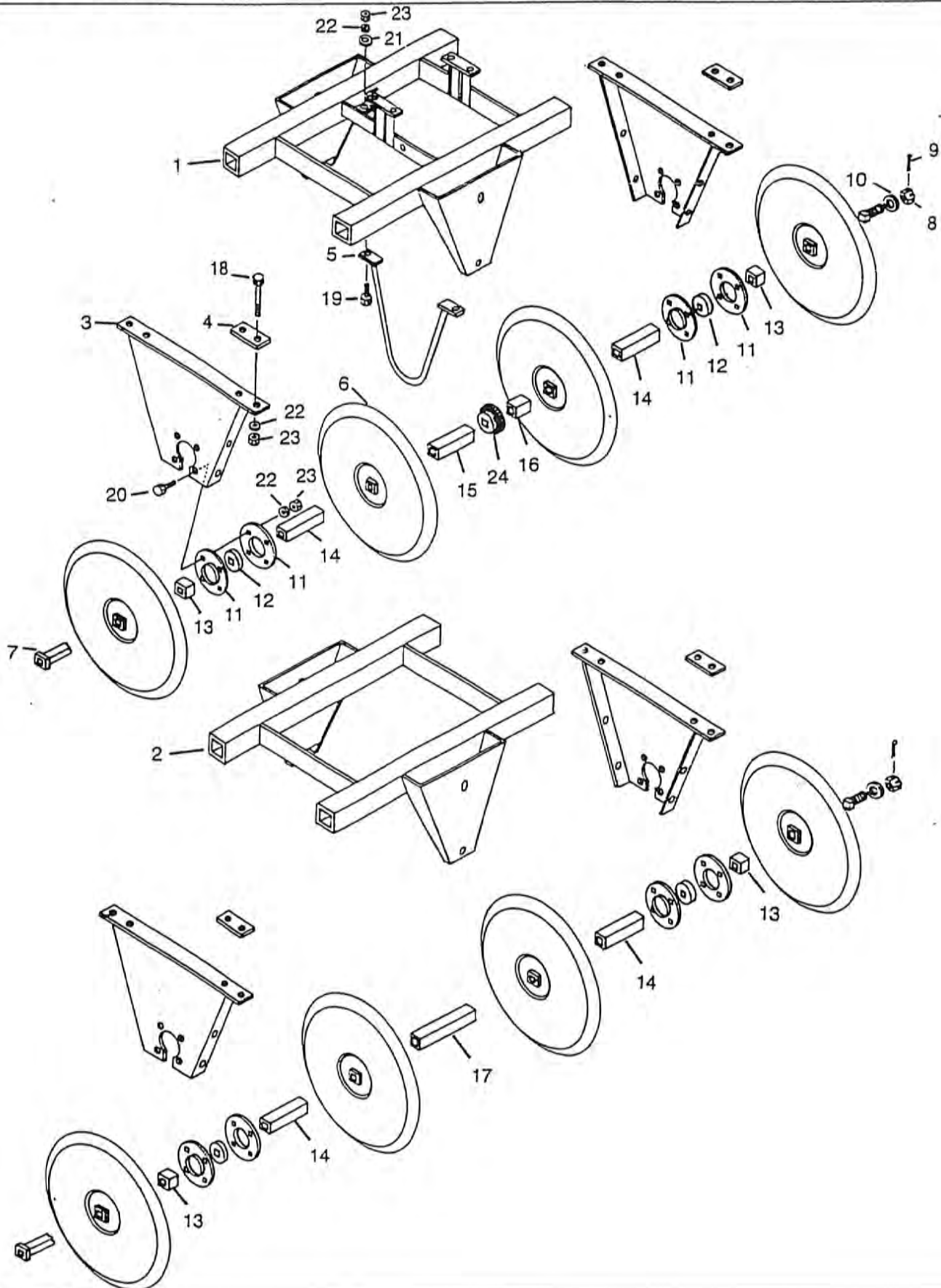
8 10" SPACING PRESS WHEELS

Serial No. 861201 thru

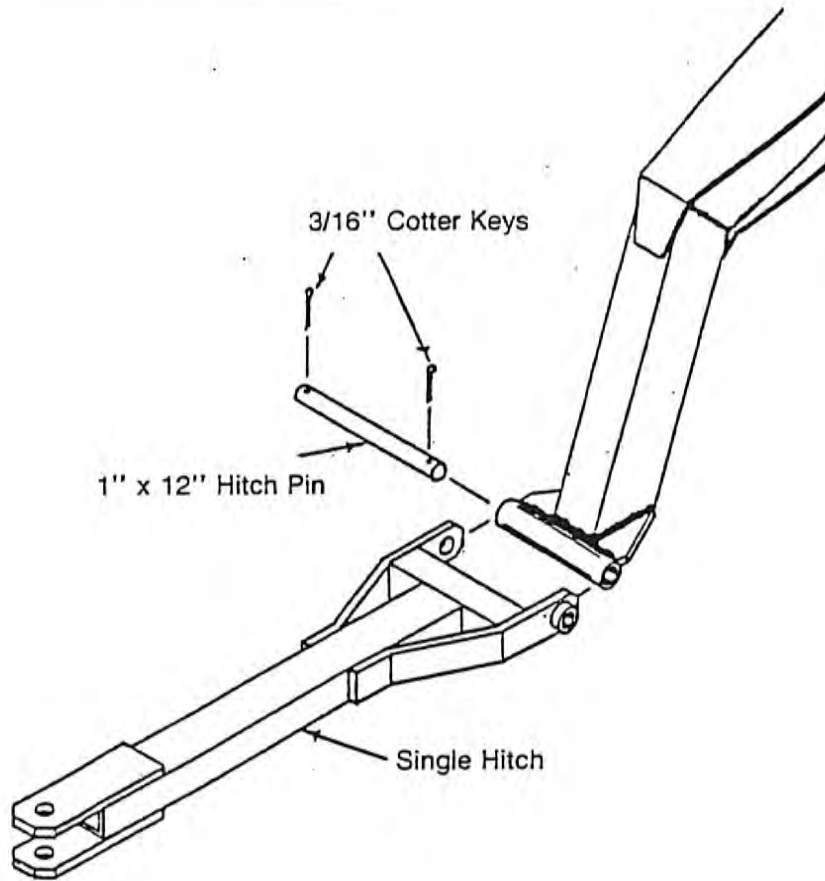


10 12½" SPACING PRESS WHEELS

Serial No. 861201 thru

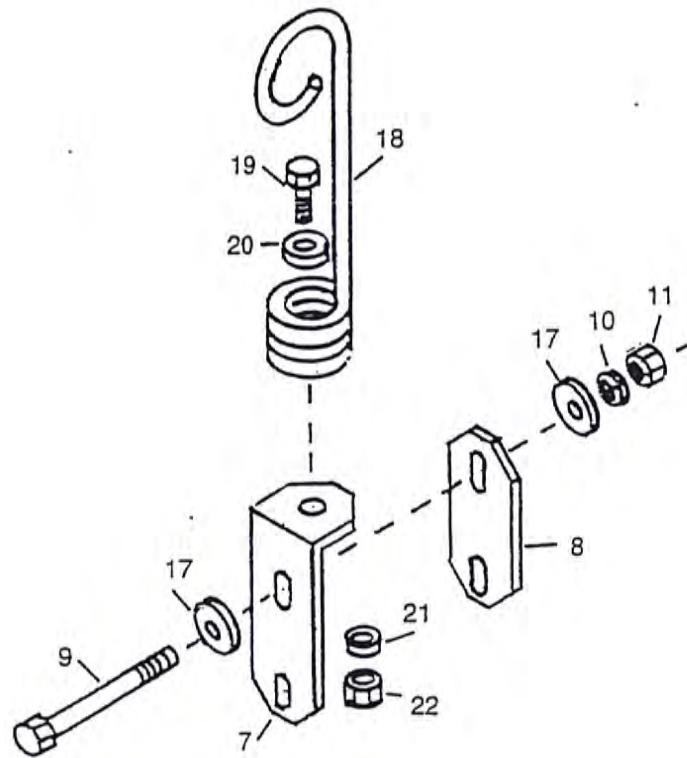


12 DRILL SINGLE HITCH



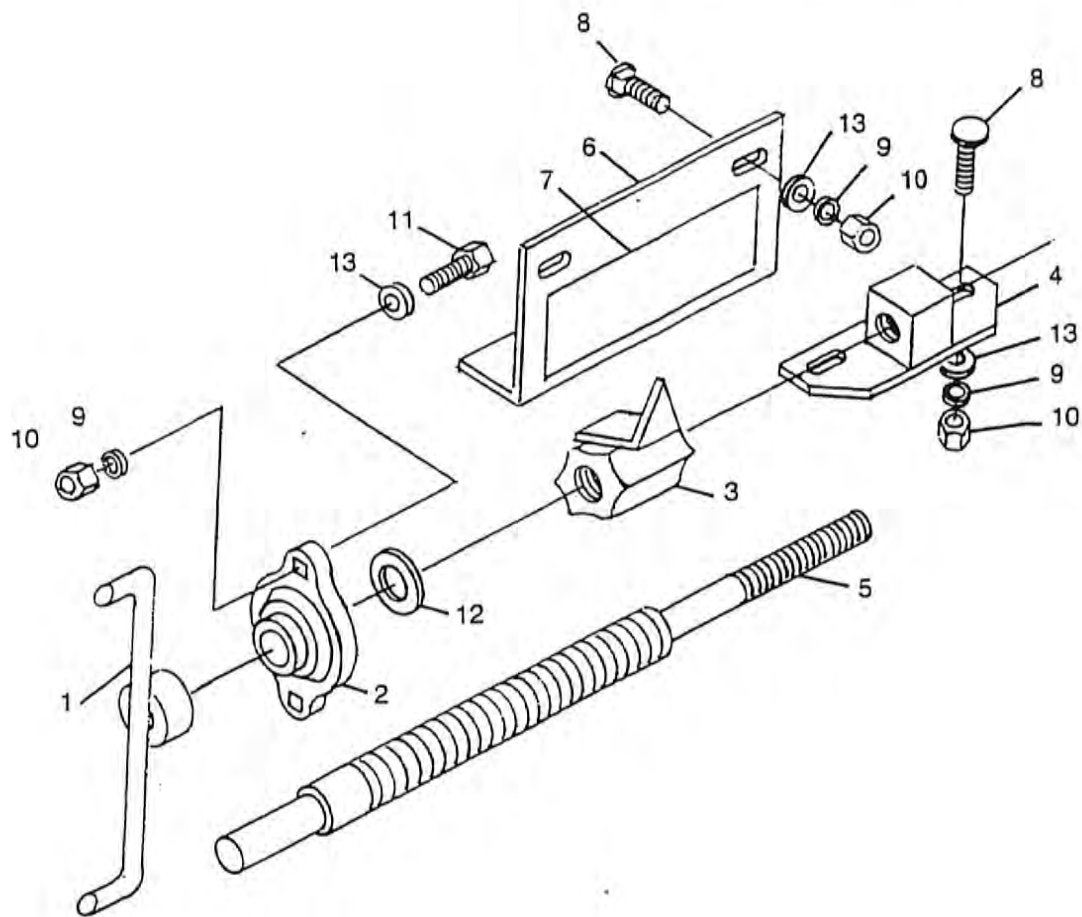
Item	Part No.	Qty.	Description
1	8300327	1	Hitch
2	8500032	1	1" x 12" Hitch Pin
3	4800157	2	3/16" x 2" Cotter Key

2, 3, 4 DRILL HITCH HOSE MINDER 13

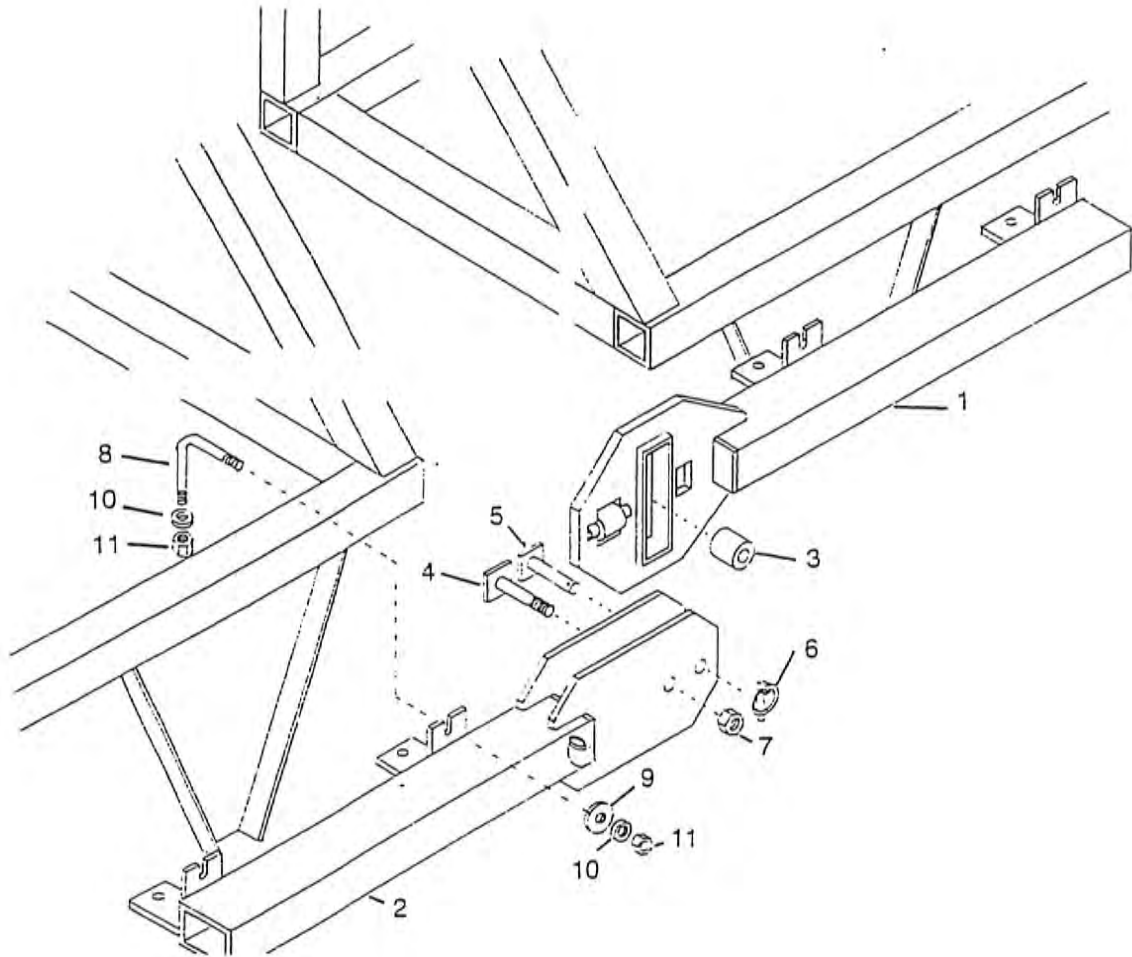


Item	Part No.	Qty.	Description
7	8800095	1	Hose Minder Mount
8	8800096	1	Hose Minder Strap
9	4800226	2	3/8" x 5 1/2" Bolt
10	5000019	2	3/8" Lock Washer
11	4900002	2	3/8" Hex Nut
17	5000001	4	3/8" Flat Washer
18	7500170	1	Hose Minder
19	4800010	1	5/8" x 2" Bolt
20	5000002	1	5/8" Flat Washer
21	5000003	1	5/8" Lock Washer
22	4900005	1	5/8" Nut

14 SEED AND FERTILIZER SETTING ASSEMBLY

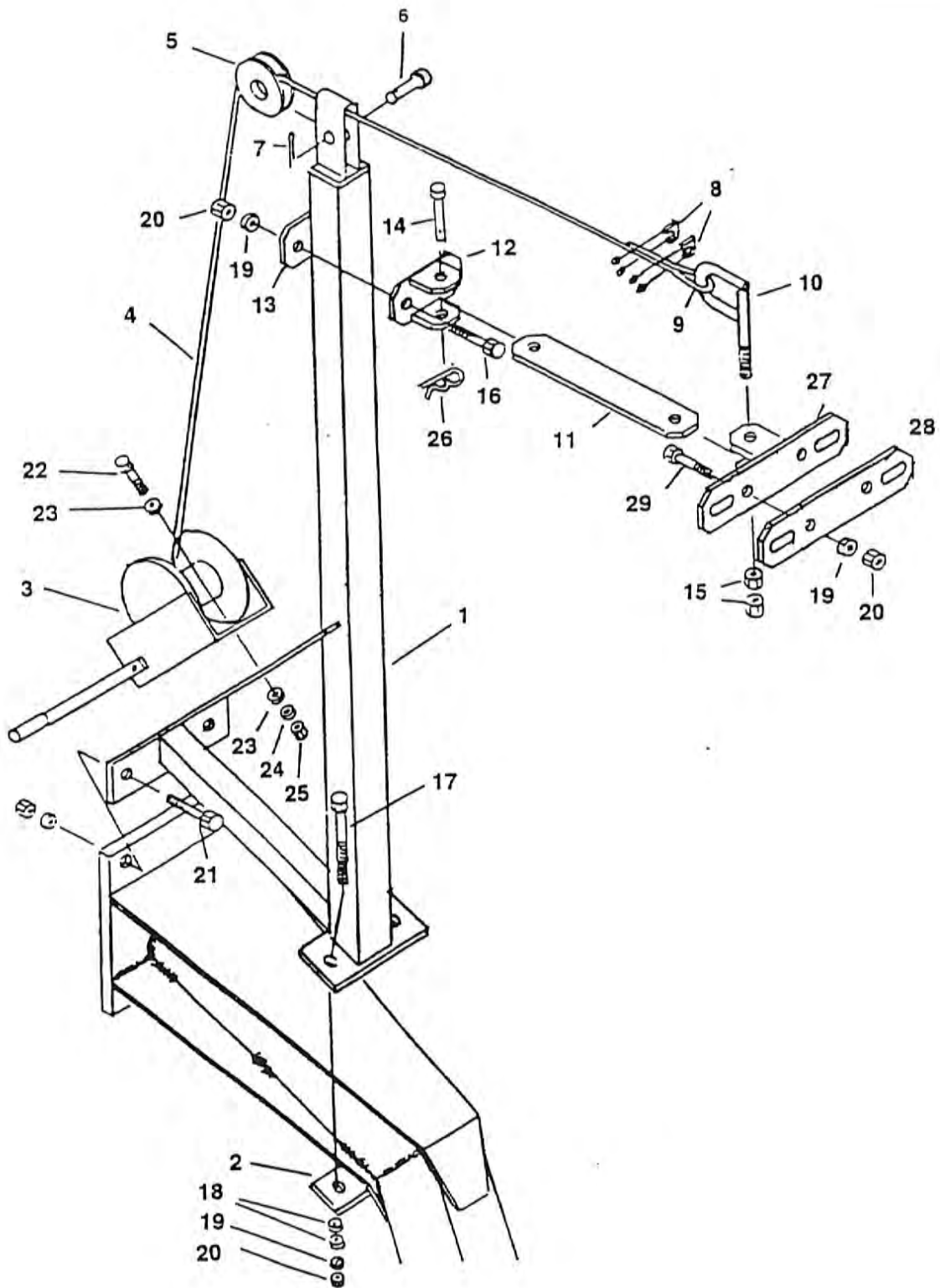


Item	Part No.	Qty.	Description
		Per Drill	
1	8400060	2	Calibration Handle
2	1900013	2	2 Hole Cast Flangette 3/4"
3	7500071	2	Calibration Pointer Nut
4	7500072	2	Calibration Control Plate Nut
5	7500073	2	Calibration Shaft
6	8400061	2	Calibration Scale Plate
7	6500016	1	Calibration Scale Decal - Grain
7A	6500017	1	Calibrations Scale Decal - Fertilizer
8	4800153	8	5/16" x 3/4" Carriage Bolt
9	5000022	12	5/16" Lock Washer
10	4900003	12	5/16" Hex Nut
11	4800013	4	5/16" x 1" Hex Bolt
12	5000039	2	1 1/4" O.D. x 13/16" I.D. x .110 Washer
13	5000023	12	5/16" Flat Washer



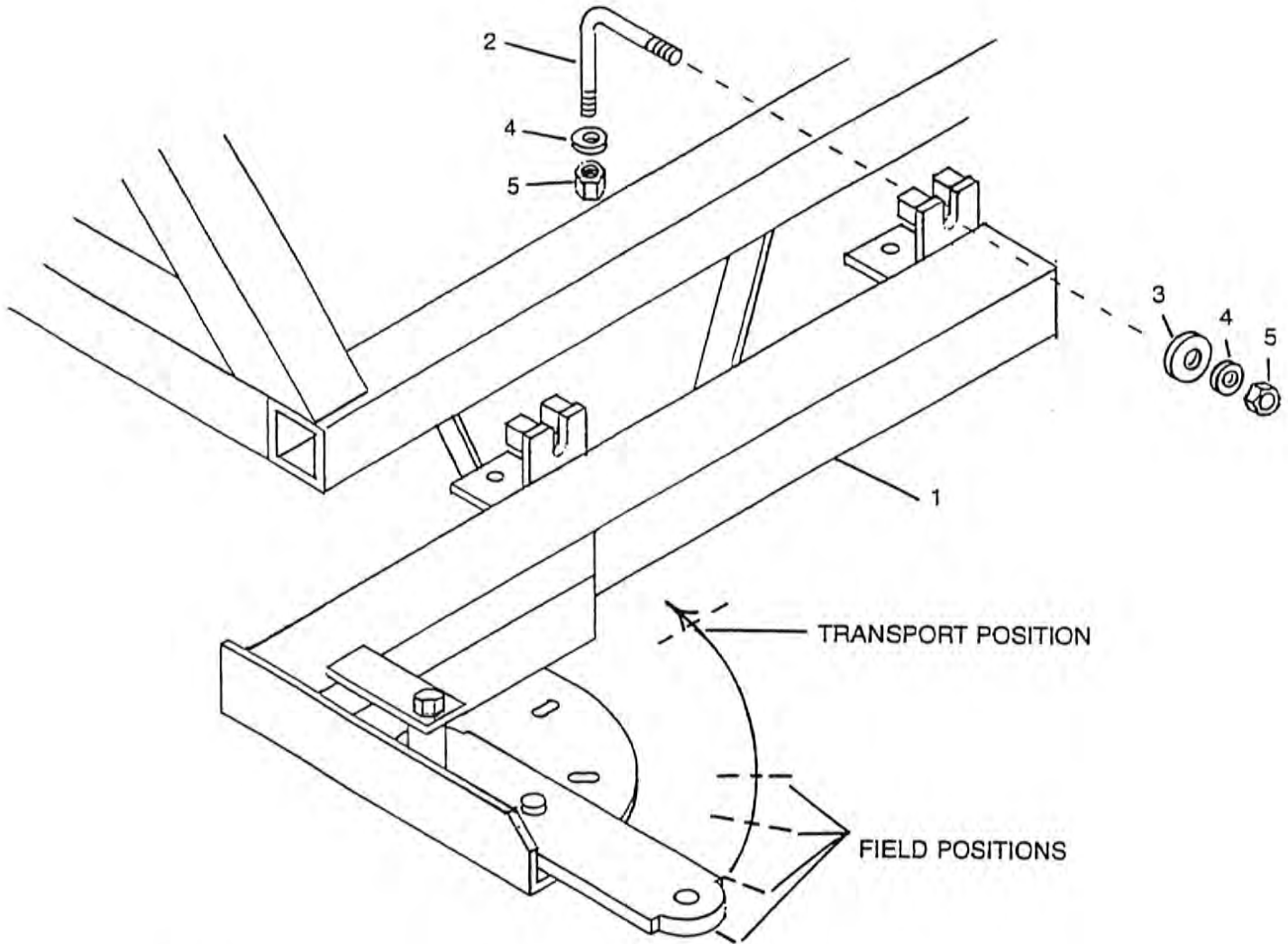
Item	Part No.	Qty.	Description
1	8300385	1	Male Stabilizer
2	8300386	1	Female Stabilizer
3	8300389	1	Roller
4	8300387	1	Roller Pin, 4 $\frac{3}{4}$ " x 1"
5	8300388	1	Transport Pin 4 $\frac{1}{4}$ " x 1"
6	4800076	1	5/16" Klik Pin
7	4900015	1	1" Lock Nut
8	4800183	4	$\frac{3}{4}$ " L-Bolt
9	5000005	4	$\frac{3}{4}$ " Flat Washer
10	5000012	8	$\frac{3}{4}$ " Lock Washer
11	4900004	8	$\frac{3}{4}$ " Hex Nut

16 HITCH LIFT



18 TWO DRILL REAR MOUNTED ANHYDROUS HITCH

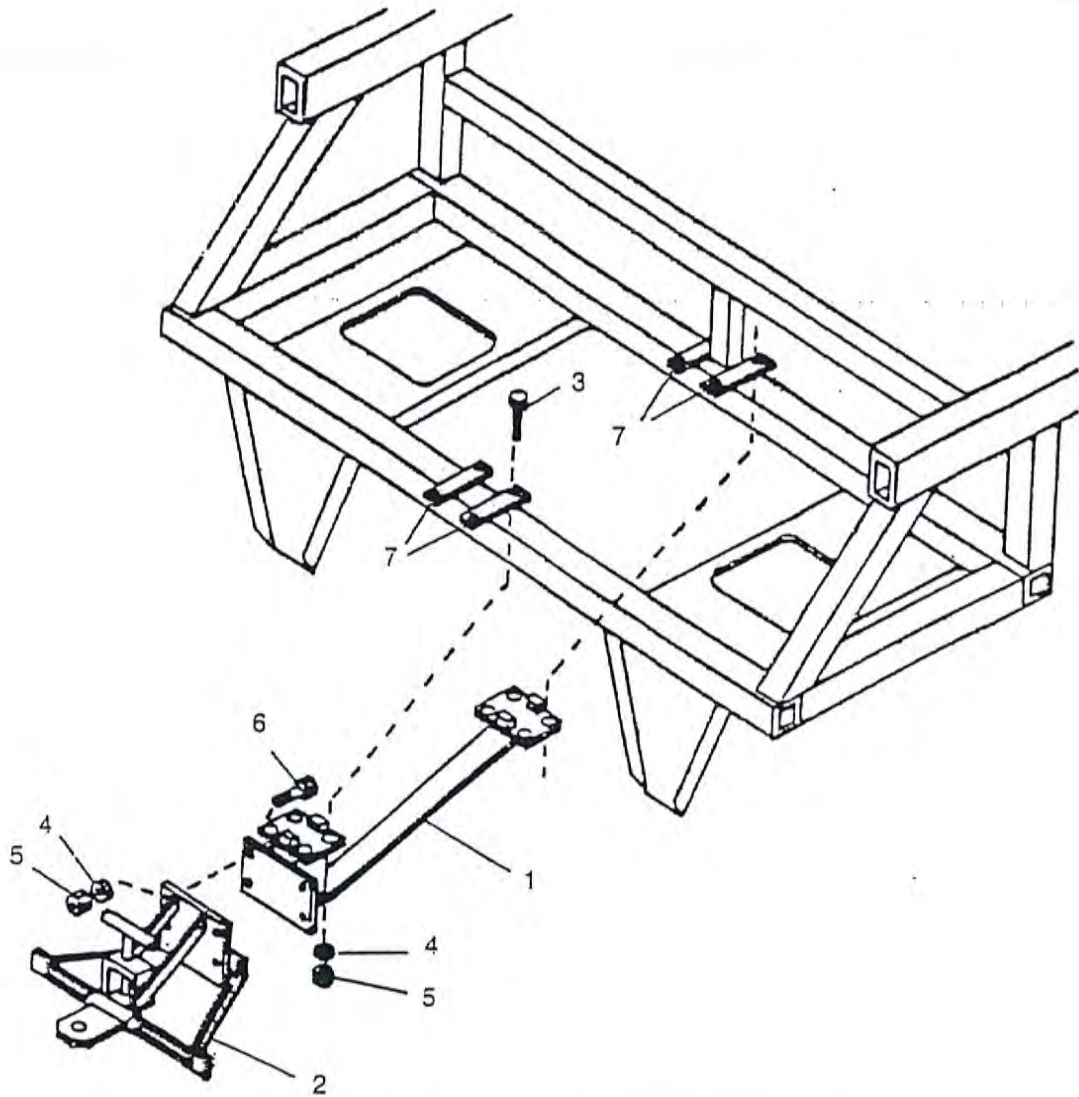
This hitch is designed to be used with the rear mounted transport. The drawbar has to be swung to the far right before lowering the rear transport wheels. The other four (4) positions allow for moving nurse tank tires off row centers.



SHIPPING LIST

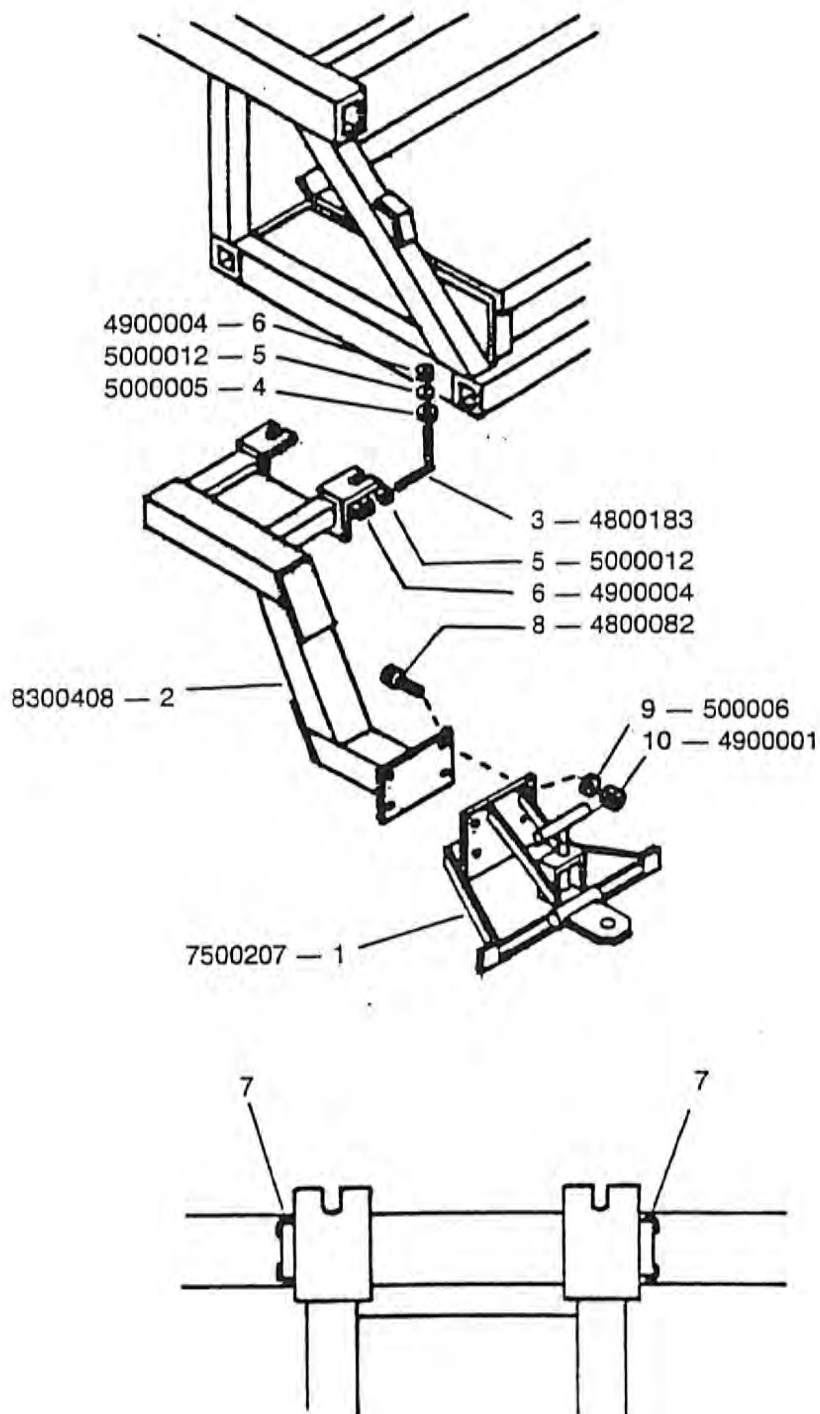
Item	Part No.	Qty.	Description
1	8300405	1	Rear Mounted Anhydrous Hitch
2	4800183	2	3/4" L-Bolt 5 1/4" x 5 1/4"
3	5000005	2	3/4" Flat Washer
4	5000012	4	3/4" Lock Washer
5	4900004	4	3/4" Hex Nut

ANHYDROUS HITCH 1, 3, 5 DRILL 19



Item	Part No.	Qty.	Description
1	8300406	1	Hitch Mount 1, 3, 5
2	7500207	1	NH 3 Universal Hitch
3	4800141	8	1/2" x 4 1/2" Bolt
4	5000006	12	1/2" Lock Washer
5	4900001	12	1/2" Hex Nut
6	4800082	4	1/2" x 1 1/2" Bolt
7	8300407	4	1 1/2" x 5" Strap

20 SIDE MOUNTED ANHYDROUS HITCH 2, 4, 6 DRILLS



NOTE: Center Anhydrous Hitch on 3 x 3 tube as shown in illustration. Weld 1/2" square keys to tube.

REAR MOUNTED TRANSPORT 21

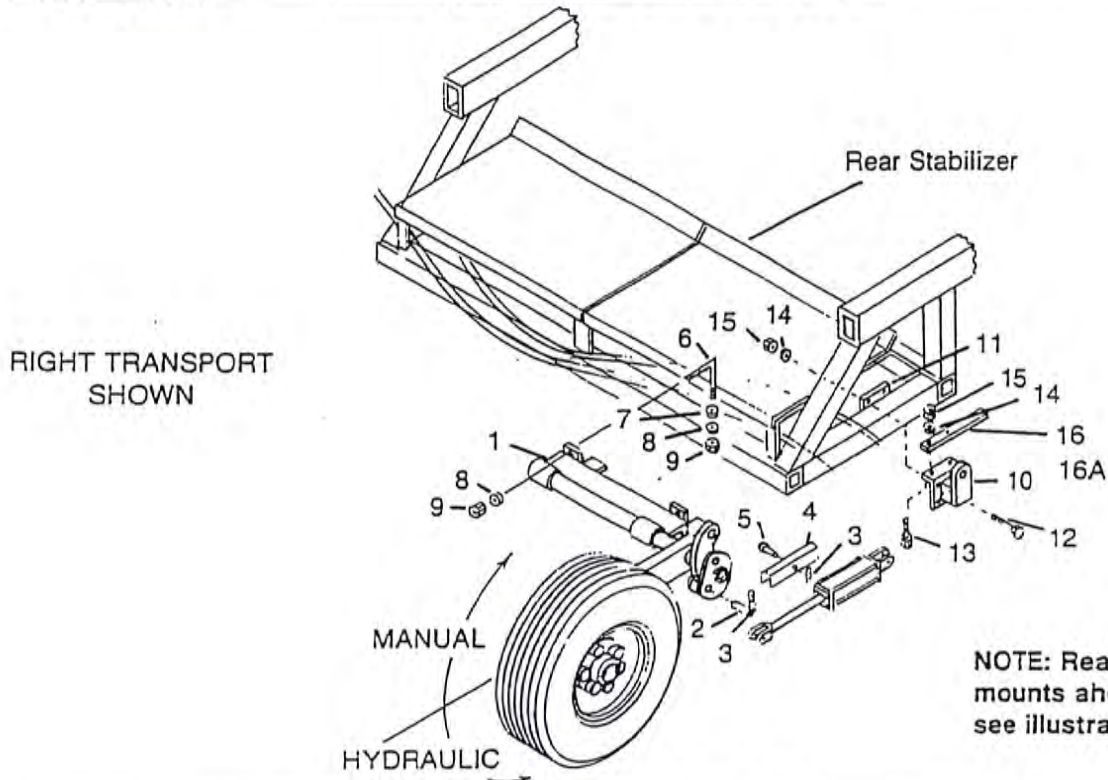
NOTE:

Single drill transport requires one (1) left and one (1) right transport and two (2) 1½" x 14¾" cylinder mount spacers.

Two drill transport requires one (1) left and two (2) right transports with two 1½" x 14¾" cylinder mount spacers and one 1½" x 15¼" cylinder mount spacer for center transport only.

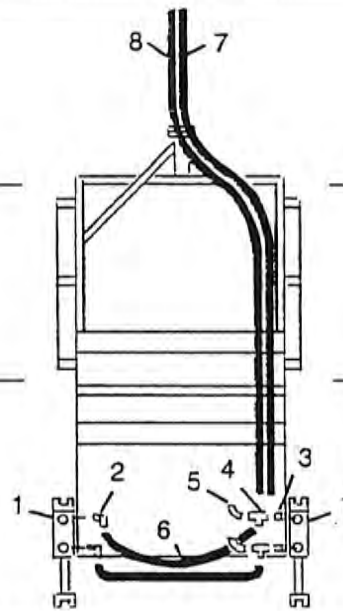
Three drill transport requires one (1) left and three (3) right transports with two 1½" x 14¾" cylinder mount spacers and two 1½" x 15¼" cylinder mount spacers for center transport only.

Item	Part No.	Qty.	Description
1	8300409	1	Rear Mounted Transport Assembly
2	4800185	1	1" x 3" Clevis Pin
3	4800107	2	1/8" Hair Pin
4	8300411	1	10¼" Hold Up Bar
5	4800046	1	¾" x 3" Clevis Pin
6	4800183	2	¾" L-Bolts 5¼" O.D.
7	5000005	2	¾" Flat Washer
8	5000012	4	¾" Lock Washer
9	4900004	4	¾" Hex Nuts
10	8300412	1	Cylinder Mount
11	8300413	1	Cylinder Mount Plate 5" x 6"
12	4800141	4	½" x 4½" Hex Bolt
13	4800082	2	½" x 1½" Hex Bolt
14	5000006	6	½" Lock Washer
15	4900001	6	½" Hex Nut
SEE NOTE			
16	8300414	1	Cylinder Mount Spacer 1½" x 14¾"
16A	8300415	1	Cylinder Mount Spacer 1½" x 15¼"



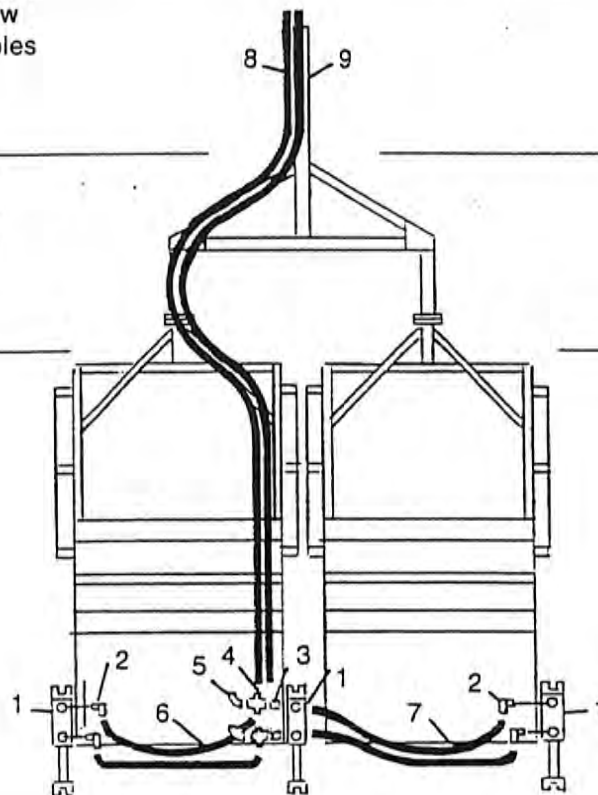
22 SINGLE DRILL REAR MOUNTED TRANSPORT HYDRAULICS

Item	Part No.	Qty.	Description
1	4100003	2	2½" x 8" Cylinders
2	3800029	2	3/8" x ½" Elbow
3	3800127	2	3/8" x ½" Nipples
4	3800009	2	½" Tee
5	3800008	2	½" ST Elbow
6	3700023	2	96" ½" Hose
7	3700155	1	264" ½" Hose
8	3700101	1	276" ½" Hose

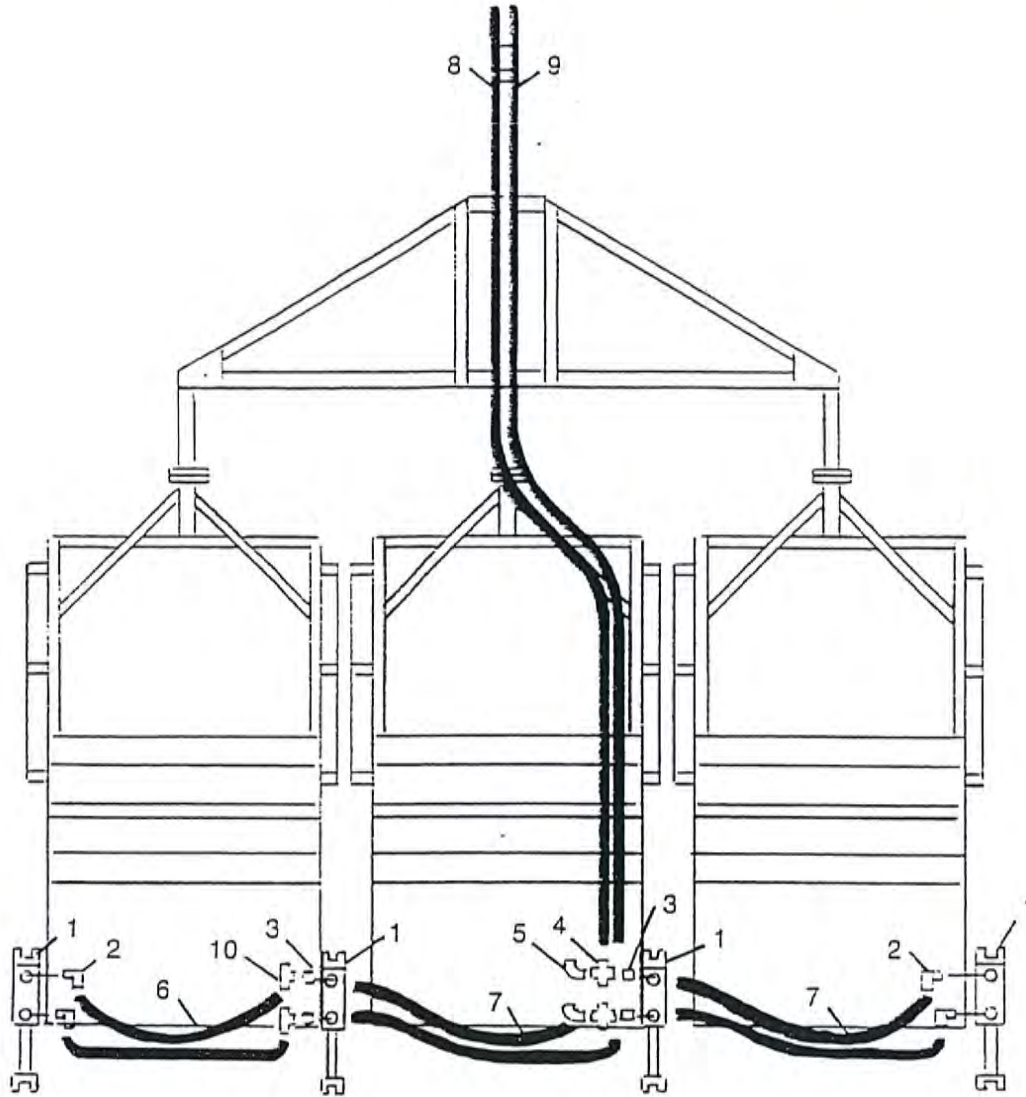


TWO DRILL REAR MOUNTED TRANSPORT HYDRAULICS

Item	Part No.	Qty.	Description
1	4100003	3	2½" x 8" Cylinder
2	3800029	4	3/8" x ½" Elbow
3	3800127	2	3/8" x ½" Nipples
4	3800096	2	½" Cross
5	3800008	2	½" ST Elbow
6	3700023	2	96" ½" Hose
7	3700027	2	108" ½" Hose
8	3700158	1	372" ½" Hose
9	3700159	1	384" ½" Hose



THREE DRILL REAR MOUNTED TRANSPORT 23 HYDRAULICS



Item	Part No.	Qty.	Description
1	4100003	4	2½" x 8" Cylinder
2	3800029	4	3/8" x ½" Elbow
3	3800127	4	3/8" x ½" Nipples
4	3800096	2	½" Cross
5	3800008	2	½" ST Elbow
6	3700023	2	96" ½" Hose
7	3700027	4	108" ½" Hose
8	3700157	1	348" ½" Hose
9	3700156	1	336" ½" Hose
10	3800009	2	½" Tee

