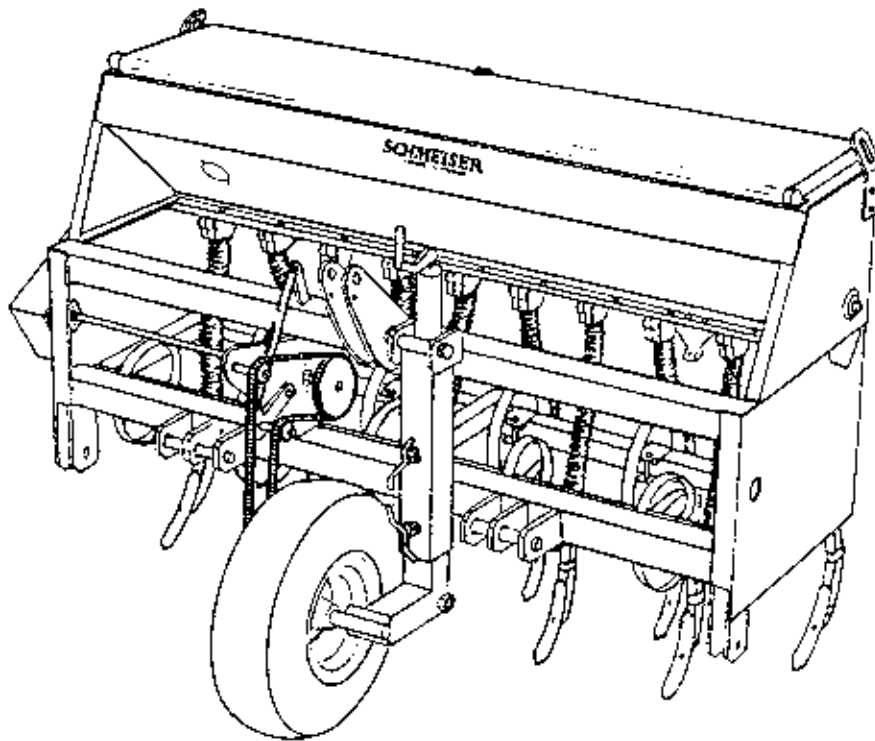


SCHMEISER S-TINE SEEDER

ASSEMBLY & PARTS MANUAL



T. G. SCHMEISER CO., INC.
P.O. BOX 1047 FRESNO, CA 93714
(209) 268-8128 FAX (209) 268-3279

VERSION 1.1

INTRODUCTION

Your Schmeiser Vineyard Drill/Seeder is designed to give you many years of dependable service. This manual has been prepared to instruct you in the safe and efficient operation of this machine. Read and study it thoroughly. Follow all instructions carefully.

Should your Vineyard Drill/Seeder require replacement parts, go to your Schmeiser dealer. Always order genuine Schmeiser replacement parts.

It is important you complete and send in your Warranty Card because it is not valid unless it is on file at Schmeiser. If you need information not contained in this manual, contact your Schmeiser dealer.

Space has been provided below for you to record your model number and serial number of your drill. Be sure to bring this information with you to your dealer when ordering parts or attachments for your drill.

Thank you for buying a Schmeiser Vineyard Drill/Seeder.

SERIAL NUMBER _____

MODEL NUMBER _____

DATE PURCHASED _____

DEALER NAME _____

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SAFETY RULES

The safe operation of any machinery is a big concern to farmers and manufacturers. We have designed our Vineyard Drill/Seeder with many built-in safety features. However, no one should operate this machine before carefully reading this Owner's Manual.

1. Never permit anyone to ride on or walk beside the Grain Drill when moving.
2. Never permit anyone to ride on tractor when Drill is being moved.
3. Never allow anyone to be near Drill when performing operating functions with the Grain Drill or tractor.
4. Never load Grain drill without being hooked-up to tractor.
5. Extra care should be taken when transporting with seed in the boxes.
6. Never back Grain Drill up when openers are in ground.
7. Reduce speed of tractor when transporting over uneven or rough terrain. Avoid all chuck holes and washboard areas in roads.
8. Reduce speed of tractor when transporting over hills or steep slopes.
9. Always set grain Drill in field position before lubrication.
10. Do **NOT** lubricate, adjust or repair the Grain Drill while it is in operation.
11. When in transport, use accessory lights and devices for adequate warning to operators of other vehicles, and use safety chains. Comply with all Federal, State and local laws when traveling on public roads.
12. Use "Slow Moving Vehicle" emblem for warning vehicles approaching from rear.
13. Do **NOT** permit smoking, sparks, or an open flame where combustible lubricants or liquids are being used.
14. When using treated grain, avoid direct contact with the seed.
15. When using compressed air to clean Drill, wear safety glasses.
16. When transporting, remember the Drill may be wider than your tractor and extreme care must be taken to allow for safe clearance.

SCHMEISER VINEYARD DRILL/SEEDER SEED RATE ADJUSTMENTS

Note: Seeding rates will vary greatly with variations in sizes of seeds. Although the seeding rates listed in this manual are based on an average seed size, we recommend that you test and adjust your Vineyard Drill/Seeder using the procedures listed below.

- 1) There are many factors which will affect seeding rates: Seed treatment, weight of seed, size of seed, surface condition of seed, tire configuration and pressure, and tire slippage. Minor adjustments will probably be needed to compensate for the above factors.
- 2) The rates listed in the seed charts are based on the gauge wheel drive having a 20.5 x 8.0 x 10 tire with the recommended tire inflation.
- 3) The large differences in seed size and treatment can cause a wide variation in actual seeding rates. The rate charts are based on average size seed. This may differ from the seed you are using. Use the seed rate charts as a guide only. Set the pounds per planted acre desired at the indicator number and complete the following procedure to calibrate the rate for specific seed.
 - a. Place several pounds of seed over three feeder cups at the outboard end of the Vineyard Drill/Seeder.
 - b. Pull the seed tubes out of these three drops.
 - c. Raise the drive wheel off the ground using a jack.
 - d. Rotate the tire to see that the drive system is working properly and that the feed cups are free from foreign matter.
 - e. Place a container under the three seed tubes to gather the seed as it is metered.
 - f. On 4 ft. wide models rotate the tire 46 times to obtain 1,000 square feet. On 6 ft. wide models rotate the tire 32 times to obtain 1,000 square feet. Be sure to check the three feeder cups to make sure each cup has plenty of seed coming into it.
 - g. Weigh the seed which has been metered. Divide by three. This will give you the ounces/pounds metered by each feeder cup. Multiply by the number of cups on your vineyard drill to arrive at the total pounds per 1,000 square feet. Now multiply by 43.56 to arrive at the total pounds per planted acre. If this figure is different than desired, set your feed cup adjustment lever accordingly.
- 4) You may want to repeat the calibration procedure if the results of your calibration vary greatly from the suggested settings contained in this manual.

REMEMBER: Tire size and field conditions will also affect seeding rates. Be certain that your Vineyard Drill/Seeder tires are 20.5 x 8.0 x 10 and that they have the proper inflation. When seeding, check the amount of seed you are using by noting area seeded, amount of seed added to box, and level of seed in seeder box. If you suspect that you are seeding more or less seed than desired, and you have accurately calibrated the Vineyard Drill/Seeder to your seed, you may need to adjust the seeding rate slightly to compensate for your field conditions.

Rates in Pounds per Planted Acre

Sprocket Combination: 15/25 x 15/33

Seed	Seed Rate Indicator Setting Number									
	10	20	30	40	50	60	70	80	90	100
	POUNDS PER ACRE									
Pearl Millet	17	34	48	64	80	95	111	129	145	161
Winter Forage #1	9	19	39	52	65	80	93	104	117	130
Westerwald Annual Ryegrass62	8	16	24	32	40	44	52	56	62	69
Crimson/Berseem	19	37	53	71	88	107	125	135	152	168
Cahaba Vetch	22	44	60	81	101	128	149	166	187	208
Cahaba/Barley Mix	20	40	60	81	101	133	155	160	180	200
Germain's Cover Crop #1	16	32	55	73	91	143	156	167	176	195
Cover Crop #2	12	24	54	72	90	119	139	154	173	192
Cover Crop #3	15	29	63	84	105	149	174	180	203	225
Annual Clover Mix	25	49	62	82	103	120	141	145	163	181
Germain's Insectary Mix	15	30	44	59	74	86	101	107	120	134
Perennial Clover	18	36	50	66	83	94	103	109	116	129
Cover Mate	6	13	19	25	31	35	41	43	48	54
Chinese Red Cowpea	23	47	73	97	122	169	198	221	249	276
Common Vetch	14	29	44	58	73	100	117	132	149	165
Purple Vetch	21	41	66	89	111	137	150	161	181	201
Woolly Pod Vetch	20	39	65	86	108	150	161	175	192	214
Buckwheat	14	27	41	54	68	88	103	113	127	142
Sudan Grass Bravo	15	29	44	59	74	86	100	109	123	136
Merced Ryegrain	19	37	53	70	88	106	124	130	146	162
Winter Forage #2	9	19	39	52	65	80	93	104	117	130

CAUTION: THESE RATES ARE APPROXIMATE ONLY. PLEASE VERIFY OUTPUT PRIOR TO FIELD USE.

Rates in Pounds per Planted Acre

Sprocket Combination: 15/25 x 15/33

Seed	Seed Rate Indicator Setting Number									
	10	20	30	40	50	60	70	80	90	100
	POUNDS PER ACRE									
	LOHSE-MILL SEEDS									
Perennial Clover	10	20	29	39	49	55	64	68	77	85
Max. Organic Bldr.	16	32	59	78	98	121	141	151	169	188
Plow Down Legumes	20	41	77	103	129	176	205	213	239	266
Beneficial Blend	23	46	68	90	113	133	155	166	187	207

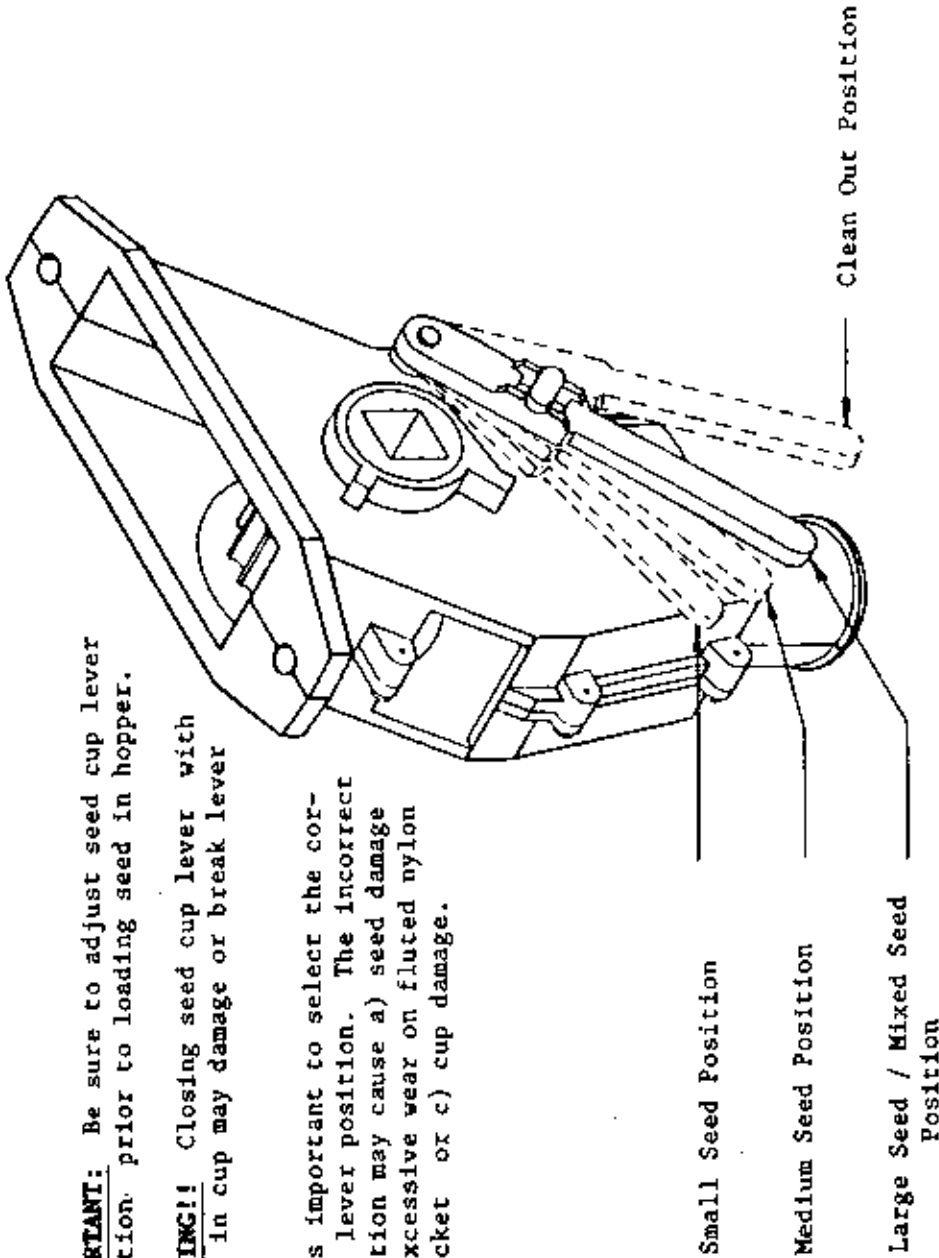
CAUTION: THESE RATES ARE APPROXIMATE ONLY. PLEASE VERIFY OUTPUT PRIOR TO FIELD USE.

SEED CUP

IMPORTANT: Be sure to adjust seed cup lever position prior to loading seed in hopper.

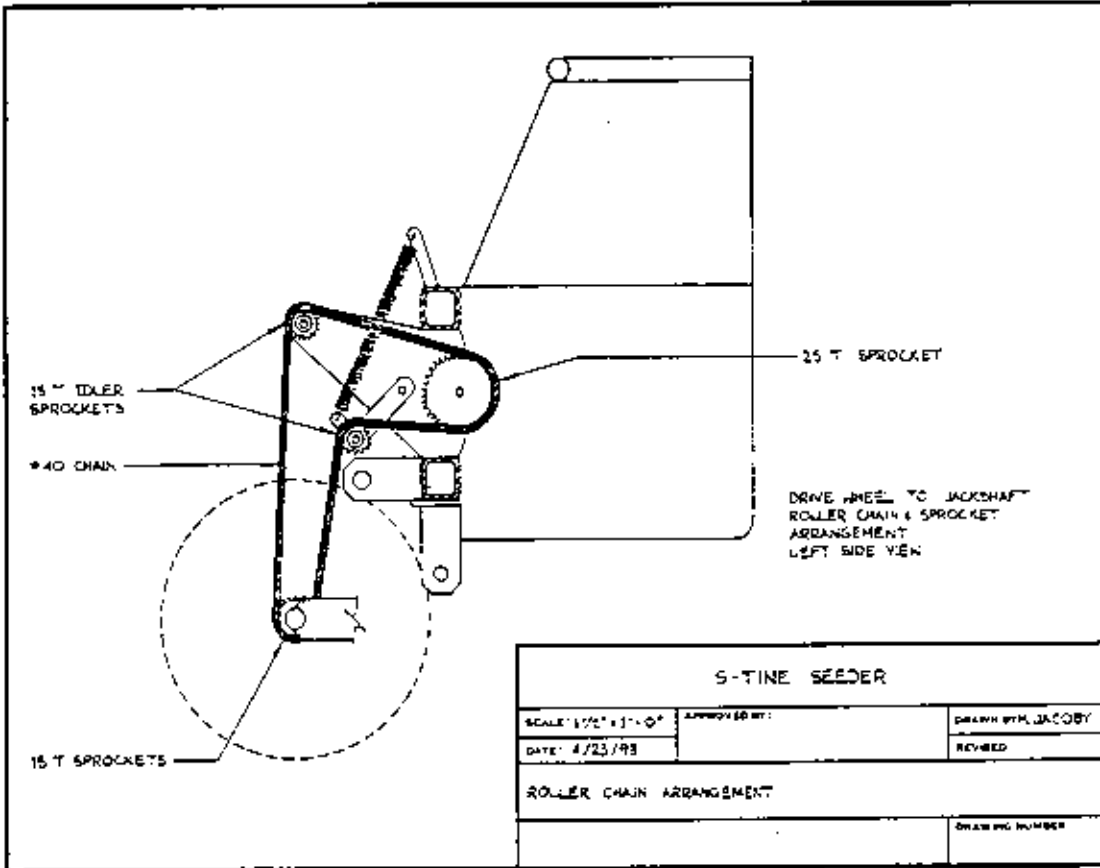
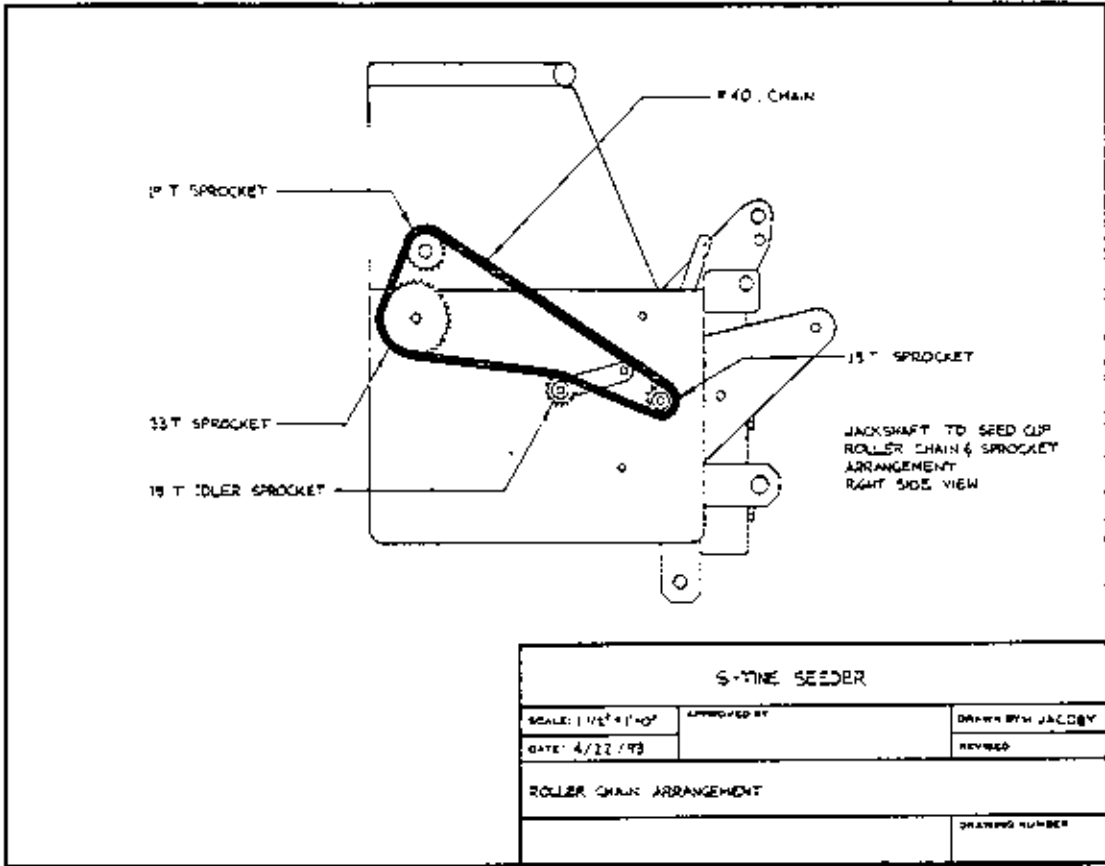
WARNING!! Closing seed cup lever with seed in cup may damage or break lever

It is important to select the correct lever position. The incorrect position may cause a) seed damage b) excessive wear on fluted nylon sprocket or c) cup damage.



VINEYARD DRILL

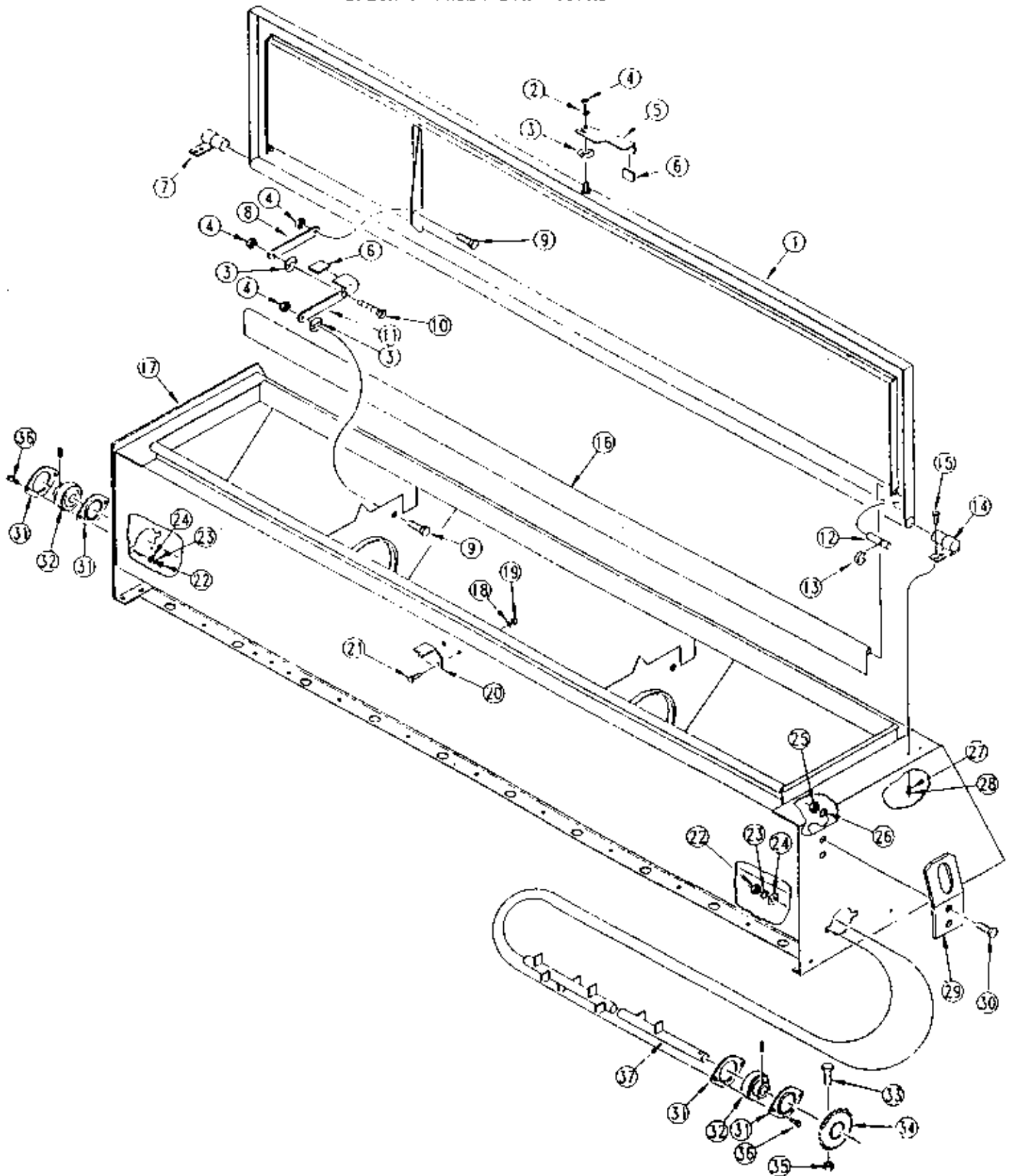
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DATE: 11/23/92		DRAWN BY: M. JACOBY	
		REVISED	
SEED FEEDER CUP - ISOMETRIC			
		DRAWING NUMBER	



VINEYARD DRILL BOX ASSEMBLY

Ref.	Part No.	Description
1.	308-002H	Overseeder Lid Weldment OS1572
	308-081H	Overseeder Lid Weldment OS1548
2.	804-036C	Washer, Flat 5/16" SAE
3.	804-058C	Washer, Wave Spring 5/16"
4.	803-084C	Nut, Hex Lock Collared 5/16"-18
5.	179-023D	Lid Latch - Handle
6.	817-033C	Lid Latch Grip
7.	179-004H	Lid Hinge Weldment - Left Hand
8.	179-022D	Lid Latch - Upper Arm
9.	802-159C	Bolt, Hex Head 5/16"-18 x 1" Long Gr 5 Plated
10.	801-024C	Screw, Countersunk 5/16"-18 x 82" x 3/4" Long Plated
11.	179-021D	Lid Latch - Lower Latch
12.	179-025D	Seed Diverter Pin
13.	800-048C	Ring, Snap External "E" 5/8" IRR #E-62
14.	179-005H	Lid Hinge Weldment - Right Hand
15.	802-017C	Bolt, Hex Head 3/8"-16 x 1" Long Gr 5 Plated
16.	308-117D	Seed Diverter OS1572
	308-175D	Seed Diverter OS1548
17.	308-164H	Seedbox OS1548
	308-165H	Seedbox OS1572
18.	804-004C	Washer, Internal Star #10 Plated
19.	803-001C	Nut, Hex #10-24 Plated
20.	179-030D	Rear Lid Latch Strike
21.	801-021C	Screw, Round Head #10-24 x 3/4" Long Plated
22.	803-008C	Nut, Hex 5/16"-18 Gr 2 Plated
23.	804-009C	Washer, Lock Spring 5/16" Plated
24.	804-010C	Washer, Flat 5/16" USS Plated
25.	803-020C	Nut, Hex 1/2"-13 Gr 2 Plated
26.	804-015C	Washer, Lock Spring 1/2" Plated
27.	804-013C	Washer, Lock Spring 3/8" Plated
28.	803-014C	Nut, Hex 3/8"-16 Gr 2 Plated
29.	308-193D	Overseeder Sling Bracket
30.	802-258C	Bolt, Hex Head 1/2"-13 x 1" Long Gr 5
31.	822-041C	Flangette 47 MST
32.	822-040C	Bearing 3/4" Bore Fafnir #RA12RRB
33.	802-167C	Bolt, Hex Head 1/4"-20 x 1 1/2" Long Gr 5
34.	202-002H	Sprocket, Speed Change 19T
35.	803-007C	Nut, Lock Dimpled 1/4"-20 Plated
36.	802-007C	Bolt, Hex Head 5/16"-18 x 3/4" Long Gr 5
37.	308-003H	Agilator Weldment OS1572
	308-085H	Agilator Weldment OS1548

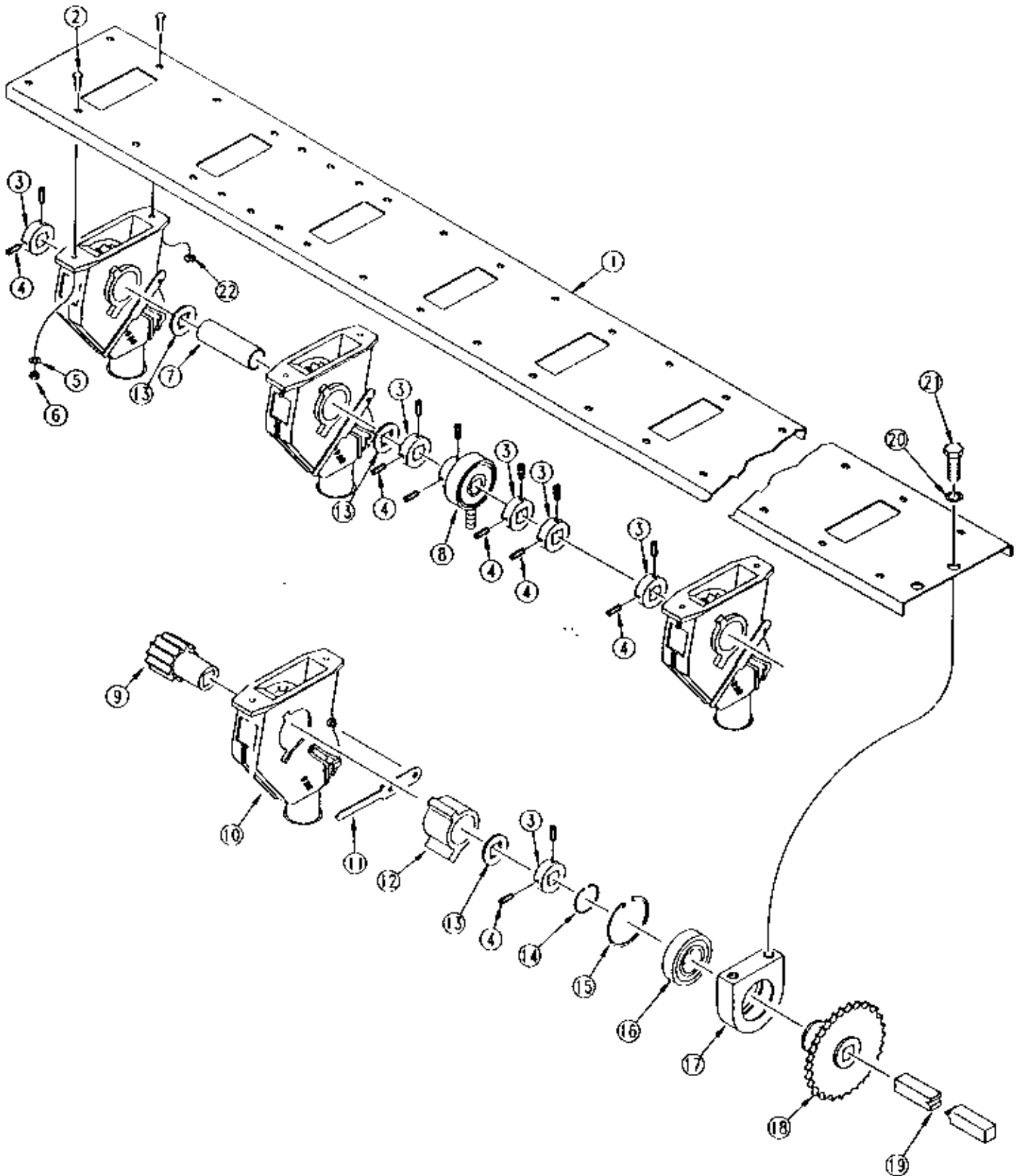
VINEYARD DRILL, BOX ASSEMBLY



FEEDER CUP ASSEMBLY

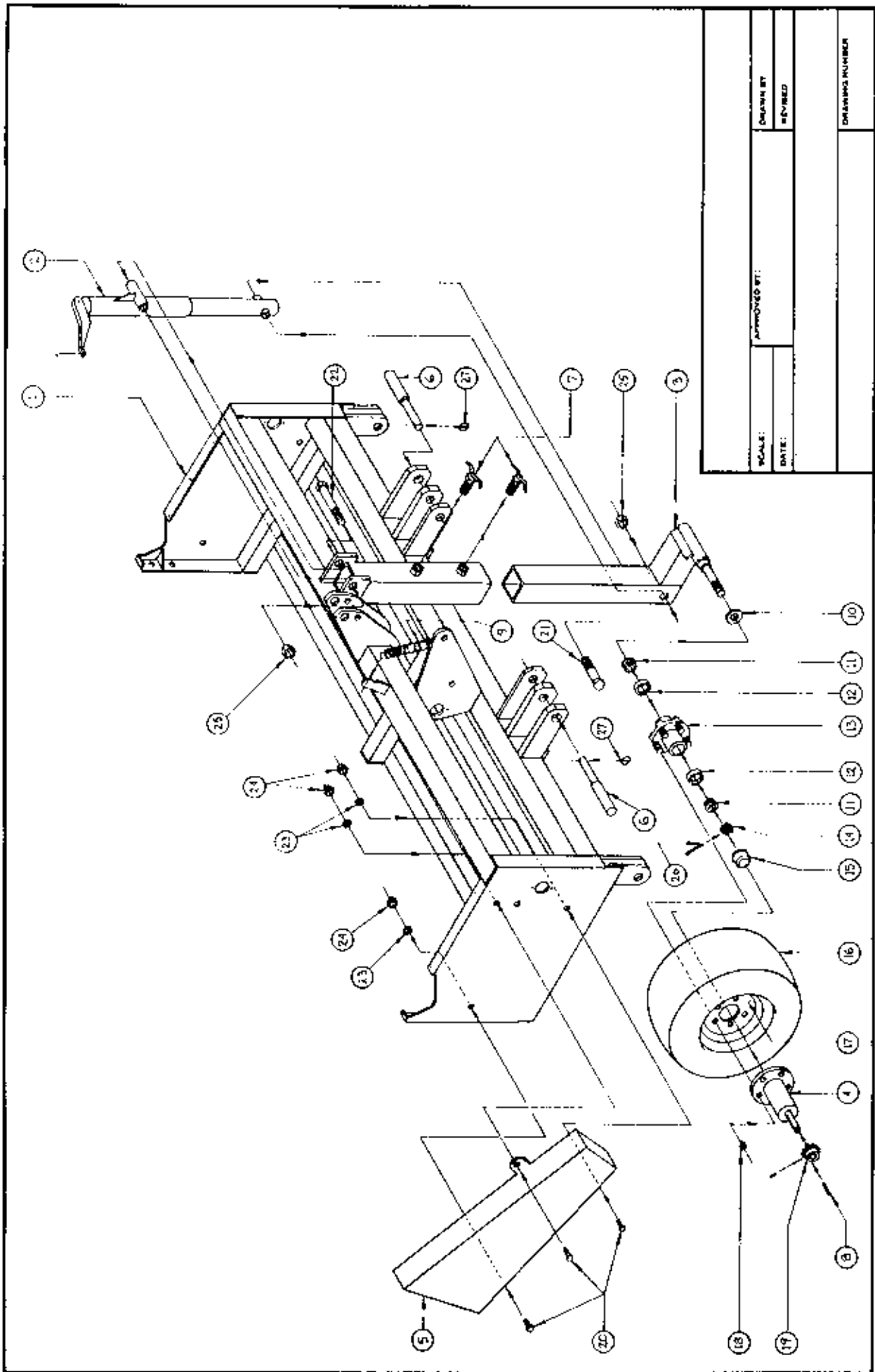
Ref.	Part No.	Description
1.	308-227D	Feeder Cup Channel
2.	802-196C	Bolt, Hex Flange 1/4"-20 x 5/8" Long
3.	182-022D	Feeder Cup Shaft Locking Collar
4.	801-035C	Screw, Set Knurled Point 5/16"-18 x 3/8" Long
5.	804-052C	Washer, Lock External Tooth 1/4"
6.	803-006C	Nut, Hex 1/4"-20 Gr 2 Plated
7.	308-234D	Spacer Tube 4.898" Long
8.	308-004S	Sprocket Shaft Adjustment Bearing Assembly
9.	308-021D	Nylon Sprocket
10.	817-016C	Seed Cup Assembly
11.	817-014C	Seed Cup Adjustment Handle
12.	308-022D	Cup Sleeve
13.	804-031C	Washer, Retaining
14.	800-004C	Ring, Snap External 1 3/16" IIR #3100-118
15.	800-005C	Ring, Snap Internal IIR #3000-X244
16.	822-059C	Bearing, Fafnir #206PP 30mm
17.	176-006D	Cup Drive Bearing Housing
18.	308-006E	Cup Drive Sprocket Weldment
19.	308-010D	Feeder Cup Shaft
20.	804-015C	Washer, Lock Spring 1/2" Plated
21.	802-032C	Bolt, Hex Head 1/2"-13 x 3/4" Gr 5
22.	803-088C	Nut, Hex Flanged Lock 1/4"-20
	176-031V	Cup Drive Bearing Housing Assembly. Includes 1 Each Of Items 15 Through 17.
	308-036S	Drive Sprocket Assembly 33 Tooth. Includes 1 Each Of Items 14 Through 18.

FEEDER CUP ASSEMBLY



MAIN FRAME, WHEEL LEG & CHAIN GUARD ASSEMBLIES

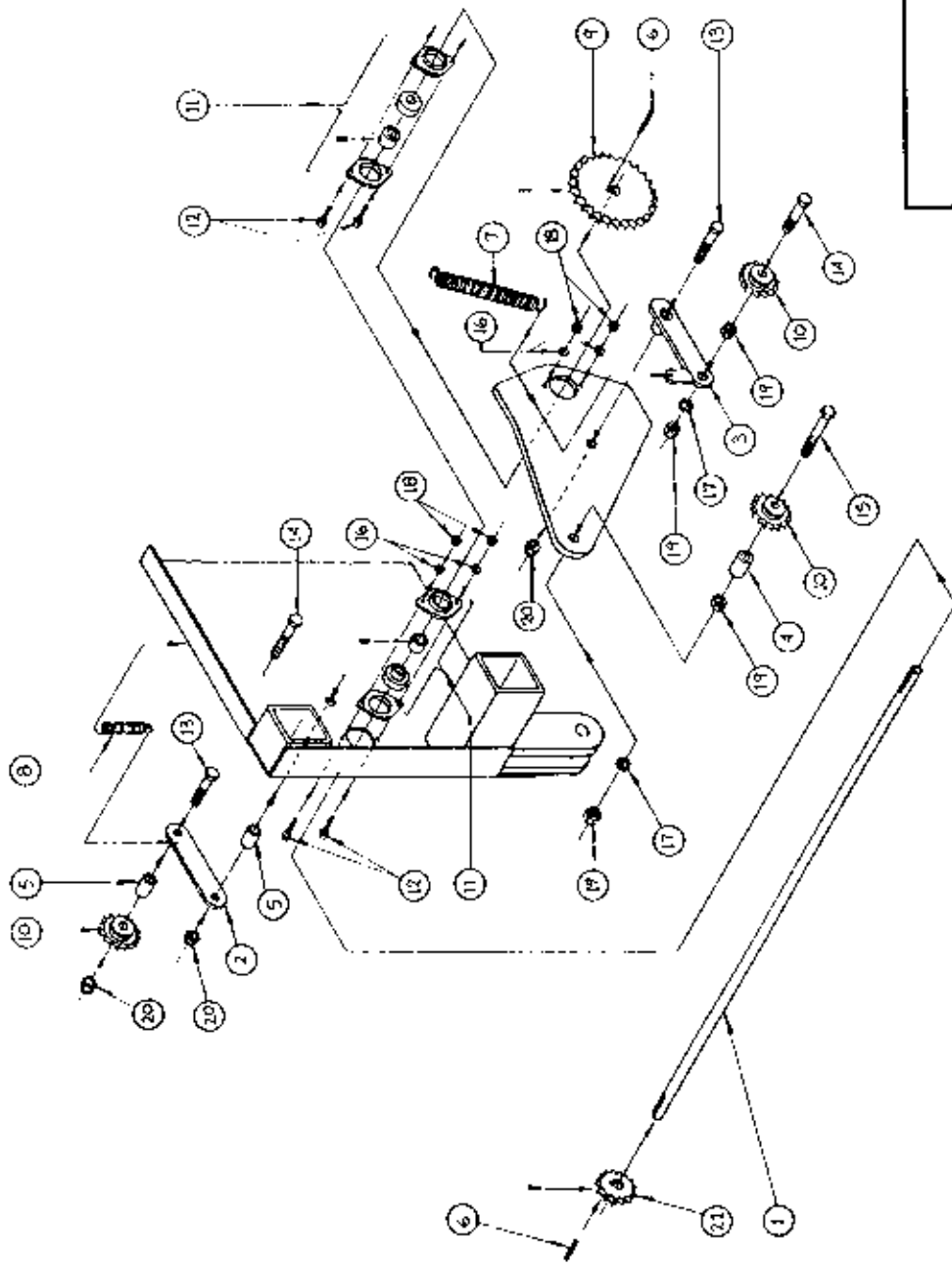
<u>REF No.</u>	<u>PART No.</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
1	STS-MF	MAIN FRAME	1
2	DDD-JS	JACK SCREW	1
3	DDD-WL	WHEEL LEG	1
4	DDD-WS	WHEEL SHAFT	1
5	STS-MF-2	CHAIN GUARD	1
6	TP3HS-15	CLEVIS PIN CAT 1 & 2	2
7	DDD-MF-18	WING NUTS	2
8	DDD-WS-5	SPROCKET KEY	1
9	DDD-MFB-1	7" TENSION SPRING	1
10	DDD-MFB-2	OIL SEAL	1
11	DDD-MFB-3	BEARING CONE	2
12	DDD-MFB-4	BEARING CUP	2
13	DDD-MFB-5	HUB, 5 STUDS	1
14	DDD-MFB-6	CASTLE NUT	1
15	DDD-MFB-7	HUB CAP	1
16	DDD-MFB-8	20.5 x 8 x 10 TIRE	1
17	DDD-MFB-9	8 x 10 WHEEL, 5 on 5	1
18	DDD-MFB-10	LUG NUTS	5
19	DDD-MFB-11	15 TOOTH SPROCKET	1
20	---	3/8" x 1" HEX HEAD Gr.5 z/p BOLTS	3
21	---	1" x 4" HEX HEAD Gr. 5 z/p BOLT	1
22	---	1" x 5 1/2" HEX HEAD Gr. 5 z/p BOLT	1
23	---	3/8" LOCK WASHERS	3
24	---	3/8" HEX NUTS	3
25	---	1" HEX NUTS	2
26	---	1/4" x 1 1/2" COTTER PIN	1
27	---	1/4" x 1-3/4" LYNCH PINS	2



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JACK SHAFT, SPROCKET, IDLER & BEARING ASSEMBLIES

<u>REF No.</u>	<u>PART No.</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
1	DDD-MF-17	MAIN FRAME JACK SHAFT	1
2	DDD-IDL-2	END PLATE TENSIONER ARM	1
3	DDD-IDL-3	CENTER TENSIONER ARM	1
4	DDD-IDL-3A	BUSHING, 15/16" LONG	1
5	STS-IDL-1	BUSHING 7/8" LONG	2
6	DDD-WS-5	SPROCKET KEY	2
7	DDD-MFB-1	7" TENSION SPRING	(1)
8	DDD-IDLB-1	2½" TENSION SPRING	1
9	DDD-MFB-12	25 TOOTH SPROCKET	1
10	DDD-IDLB-2	15 TOOTH IDLERS	3
11	DDD-MFB-13	STAMPED FLANGE BEARINGS	2
12	---	1/4" x 1" CARRIAGE SQUARE NECK BOLTS	4
13	---	1/2" x 2" HEX HEAD Gr.5 z/p BOLT	2
14	---	1/2" x 2½" HEX HEAD Gr.5 z/p BOLT	2
15	---	1/2" x 3½" HEX HEAD Gr.8 z/p BOLT	1
16	---	1/4" LOCK WASHERS	4
17	---	1/2" LOCK WASHERS	2
18	---	1/4" HEX NUTS	4
19	---	1/2" HEX NUTS	4
20	---	1/2" NYLON LOCK NUTS	3
21	DDD-MFB-14	15 TOOTH IDLER	1



S-TINE SEEDER

SCALE: 1/2" = 1'-0"

APPROVED BY: JACOBY

DATE: 3/22/93

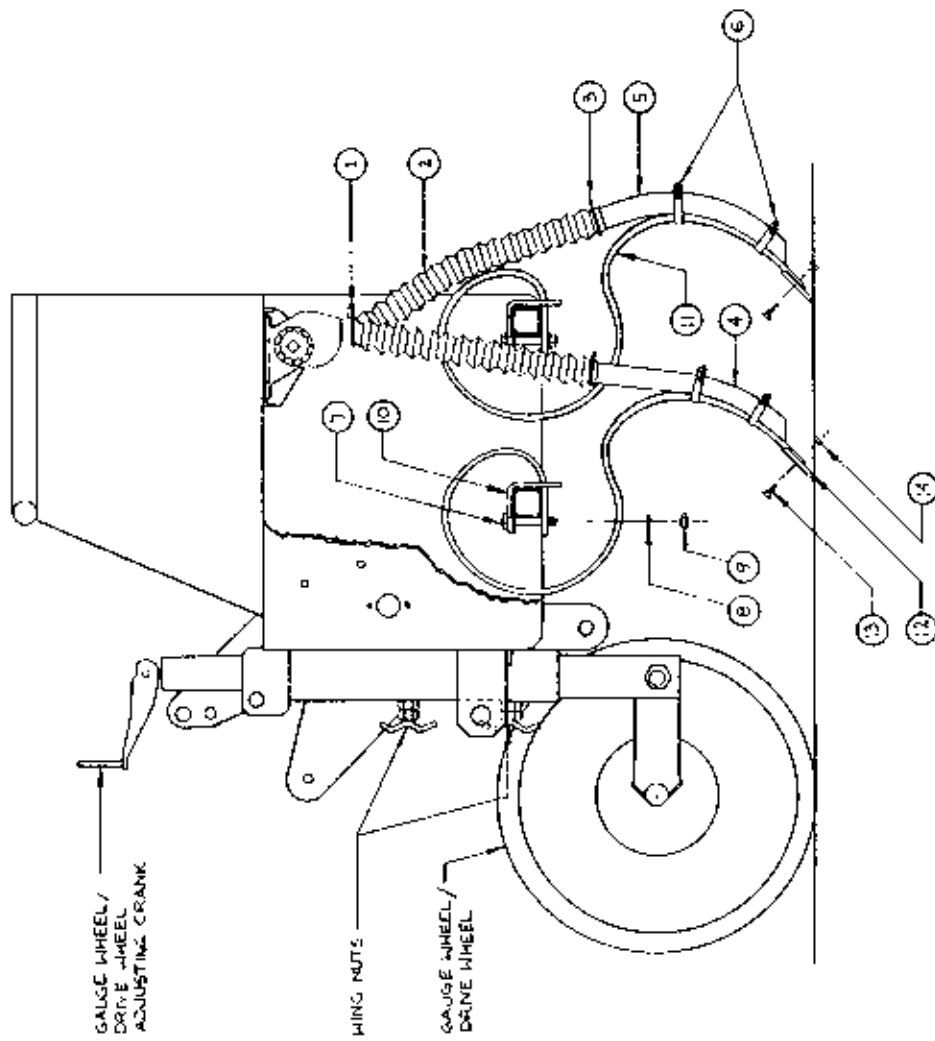
REVISED

JACKSHAFT, SPROCKET, IDLER & BEARING ASSEMBLIES

DRAWING NUMBER

S-TINE & HOSE ASSEMBLIES

<u>REF No.</u>	<u>PART No.</u>	<u>DESCRIPTION</u>	<u>QTY</u>	
			<u>6' UNIT</u>	<u>4' UNIT</u>
1	800-009C	1-5/8# HOSE CLAMP #26	10	7
2	816-028C	SEED HOSE - 33 RIBS	10	7
3	STS-BO-1	1-3/8" HOSE CLAMP	10	7
4	STS-MF-12	1" GREEN HOSE 12" LONG	5	4
5	STS-MF-14	1" GREEN HOSE 14" LONG	5	3
6	STS-BO-2	GREEN HOSE CLAMPS	20	14
7	- - -	1/2" x 3 1/2" HEX HEAD GR.5 z/p BOLT	10	7
8	- - -	1/2" LOCKWASHER	10	7
9	- - -	1/2" HEX NUT	10	7
10	STS-BO-3	2" TOOL BAR CLAMP	10	7
11	STS-BO-4	1/2" x 1 1/2" S-TINES	10	7
12	STS-BO-5	S-TINE POINTS	10	7
13	STS-BO-6	ELLIPTICAL HEAD BOLT M10 x 38	10	7
14	STS-BO-7	HEX NUT FOR M10 x 38 BOLT	10	7



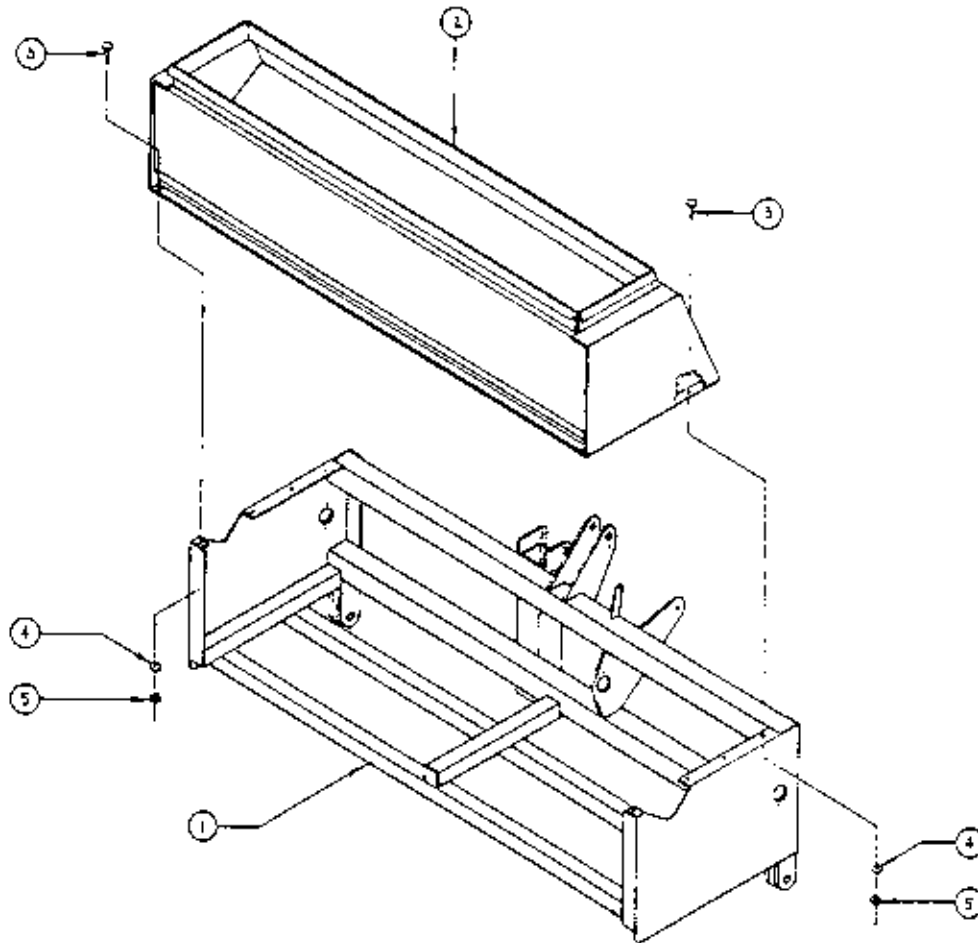
S-TINE SEEDER

SCALE: 1/2" = 1'-0"	APPROVED BY:
DATE: 6/14/93	DESIGNED BY: H. JACOBY
	REVISED:
	DRAWING NUMBER:

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SEED BOX TO MAIN FRAME ASSEMBLY

<u>REF No.</u>	<u>PART No.</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
1	STS-MF	MAIN FRAME	1
2	DDD-BXB	SEED BOX	1
3	---	3/8" x 1" HEX HEAD Gr.5 z/p BOLTS	8
4	---	3/8" LOCK WASHERS	8
5	---	3/8" HEX NUTS	8



LIMITED WARRANTY

T. G. Schmeiser Co. Inc. P.O. Box 1047, Fresno, California 93714, warrants, to the original Retail Customer, the new Schmeiser equipment identified to be free of defects in material and workmanship. Any part of said equipment that, in Schmeiser's judgement, shows evidence of such defects will be repaired without charge, provided that the failure of part(s) shall have occurred within six (6) months from the date of delivery of said equipment to the Retail Customer. Tires, Hoses, Hydraulic components and other trade accessories may be warranted by their respective manufacturers and those warranties, if any, are hereby extended to the Retail Customer. Expendable components such as points, shanks, blades, rings, teeth, and the like are excluded from this warranty.

The Retail Customer must pay the transportation cost to and from the Schmeiser Dealer's service shop for warranty service. Warranty service will be performed by the Schmeiser Dealer from whom the equipment was purchased, in his service shop and during his regularly scheduled days and hours of operation.

All Schmeiser obligations under this warranty shall be terminated if the equipment is modified or altered in ways not approved in writing by Schmeiser, if repair parts other than genuine Schmeiser repair parts have been used, or if the equipment has been subject to misuse, neglect, accident, improper maintenance or improper protection in storage.

Schmeiser reserves the right to make improvements in design or changes in specification at any time without incurring any obligation to owners of equipment previously sold.

No agent or persons has authority to alter, add to or waive the above warranties which agreed to be the only warranties, representation or promises, expressed or implied, as to the quality or performance of the products covered and which do not include any implied warranty of merchantability or fitness. In no event will Schmeiser be liable for incidental or consequential damages or injuries, including, but not limited to, loss of crops, loss of profits, rental of substitute equipment or other commercial loss.