

# Mechanical Transplanter

## Parts List and Operating Manual

For Models 33 & 33-6000

10--Inside chain guard .....	384 --10 Tooth spacing sprocket .....	604-89--Water adjustment bracket (after '88) .
11--63 Link direct drive chain .....	385--11 Tooth spacing sprocket.....	605--Water trip rod .....
12--Direct tire & rim .....	386--Direct drive (drawbar) shaft.....	605L--Water trip rod and ball (after 2000).....
14--Outside chain guard .....	386P--Shaft clip pin.....	606--1-1/4" Valve housing w/tee (before '88).
15--Chain guard clip pin .....	387--Marker blade.....	606-89--1-1/2" Water pump housing(after '88)
18--Unit chain tightener bracket.....	392--Hose Clamp.....	607--Water trip spring (before '88) .....
19--Chain tightener pipe bearing - short.....	393--Hose nipple .....	607L--Long water trip spring .....
22--Unit chain tightener arm.....	394--Water hose 1" (per ft.) .....	609--Cap w/rubber seat (before '88) .....
22AL--Left axle for 22 planter .....	396D--Disc less pockets for 8 or 10 pockets ..	609-89--1-1/2" Cap w/rubber seat after '88 ....
22AR--Right axle for 22 planter .....	396D 12--Disc less pockets for 12 pockets.....	610--Air valve float ball (before '88) .....
23--Washer to hold spring .....	407--Roller water trip .....	610S--Solid air valve float ball .....
24--Chain tightener pipe bearing - long .....	408--Dirt shield .....	611--Nylon water valve seat .....
26--Pipe spacer .....	415--Sprocket drive pins .....	612--Ball valve with brass pin (before 2000)..
27--Sprocket jackshaft.....	415L--Longer sprocket pin .....	612L--Ball valve w/brass pin (after 2000).....
30--Wheel chain tightener pipe bearing .....	416--3/4" Oilite bearing .....	613--Water valve spout .....
31--Drive frame of unit end .....	416R--3/4" Reamed out bearing for coulters....	616--#603 Cam spring before '88 .....
32--Wheel chain tightener spring.....	419--1/2" Pin for 420R & 421L tighteners .....	616S--#603 Cam spring to use with 603W .....
32S--Steel drive chain (21 Links) .....	420R--Chain tightener RH .....	630--55 Gallon barrel hoop (each) .....
32F--Steel drive chain (per ft.) .....	421L--Chain tightener LH .....	632--14" Coulters blade w/bearing .....
33--Wheel chain tightener arm .....	422--Yoke for marker pipe .....	632-12--12" Coulters blade with hub .....
33PF--Planter frame.....	423--Spring hook for markers .....	633--Coulters blade hub .....
35--Lift chain .....	428--Top bracket for uprights .....	633PS--Coulters pipe spacer (3-5/8") .....
38--Wheel hub w/sprocket .....	434--7/8" Oilite wheel bearing .....	633PS 1000--Coulters pipe spacer (4-3/4").....
39--Drive frame of toolbar end .....	436B--L-bolt for pocket guides .....	634--Cultivator tooth only .....
40--Left clamp less U-bolt .....	436DRL--Disc pocket guides (pair) .....	634U--Cultivator U-bolt .....
41--34 Link direct drive chain .....	436RL--Reg. pocket guides (pair) .....	635--Cultivator/gauge wheel clamp .....
42--Right clamp less U-bolt .....	436RLX--Model 33-6000 guides .....	637--Fiberglass seat bracket.....
43--Bushing for clamp .....	445--Double neoprene gripper.....	639A--Adjustable packing wheel & hub .....
44--Chain lift plate .....	450--Pocket frame .....	639AH--Adjustable packing wheel hub .....
48--Right 4x7 direct drive clamp .....	452--Pocket attaching bolt .....	639AL--Adjustable packing wheel l/hub .....
49--Left 4x7 direct drive clamp .....	452D--Bolt to attach pocket to #396 disc .....	639WAL--Wide adjustable packing wheel l/hub
51S--Steel drive chain (per ft.) .....	453--1/4x2" Upright after 1992 .....	639AHDD--Direct drive adjustable hub .....
308--2" Washer for drive sprocket.....	454--Galvanized spring holder .....	641--Wide plant stand (each) .....
313--1/4x1-1/2" Cotter pin.....	460N--Floating clamp for #22C .....	642--Plastic cover for #605 .....
328--3/4" Flange block bearing .....	460N 4x7--Floating clamp for 4x7 .....	643--Clamps for row knockers.....
329--Pipe spacer between uprights .....	462--11 Tooth wheel sprocket .....	643 4x7--Clamp for 4x7 row knocker.....
348--3/4" Lower shaft for 33-6000.....	475--Shoe for peat pot planter.....	643T--Clamp for 2-1/2" row knocker .....
348PP--Lower shaft for Model 33.....	476--Peat pot pocket.....	649R--Rear Shoe Brace for 395R .....
355--Lower sprocket .....	477--Peat pot pocket spring.....	649F--Front Shoe Brace for 395R .....
355T--Top sprocket for Model 33-6000 .....	478--Peat pot pocket extension.....	649D--Diagonal Shoe Brace for 395R .....
355DD--14 Tooth sprocket for direct drive .....	482B--Bolt for pocket extension.....	658--Row Knocker Blade Only .....
356--7/8" Packing wheel axle (before '90).....	482N--Nut for pocket extension.....	659--OE 65 bracket only .....
356C--Packer wheel axle cotter pin.....	482W--Washer for pocket extension.....	661--Left side arm of OE-71.....
362--Nylon bushing for lower shaft .....	520--Chain tightener arms.....	662--Right side arm of OE-71.....
373--Chain tightener spring .....	521--Roll pin .....	668--B855 barrel mount base bracket.....
374S--Pocket attachment link .....	522--Clip pin .....	668T--Barrel mount saddle.....
375--Water trip .....	523--Clevis pin for 520 arm .....	669--B850 barrel mount base bracket.....
375W--Water trip washer .....	524--Cotter pin.....	673--OE 65 1000 Bracket Only.....
376--Tension spring (8 pocket) .....	529--Scraper blade (ea) .....	675--Tray for peat pot planter.....
376S--Tension spring (10 & 12 pocket) .....	529W--Wide wheel scraper blade .....	676--"T" support for tray.....
377S 6--Chain for 6 pocket chain.....	529WP--Wide wheel scraper plastic only.....	677--Bracket for tray support and scraper.....
377S 8--Chain for 8 pocket chain .....	530--Scraper mounting bracket .....	715--3/8" U-bolt for D.D. and coulters .....
377S 10--Chain for 10 pocket chain .....	533--Wheel scraper complete .....	725--1/2" U-Bolt for OE-78 Clamps & Cult. ....
377S 12--Chain for 12 pocket chain .....		726--L Seat Bracket (after 1983) .....
378--5/16" U-bolt.....		726U--1/2" U-bolt for toolbar clamps .....
379--Upper conveyor sprocket .....		727--1/2" U Bolt for L-Seat Bracket .....
380--Upper sprocket shaft .....		735--3/4" U Bolt for 460N Clamp .....
380T--Top sprocket shaft (after 1992) .....		740--7/8" U Bolt for A-Frames, 1000 & 6000 ..
381 6--6 Tooth spacing sprocket.....		837L--5/16" Lg. J-Bolt for foot rest & 800 .....
381--7 Tooth spacing sprocket.....		1000AL--Axle for #1000 - Left Side .....
381--7 Tooth idler sprocket.....		1000AR--Axle for #1000 - Right Side .....
382--8 Tooth spacing sprocket.....		1000B--Double Disc Bearing(before 1992) .....
383--9 Tooth spacing sprocket.....		1000BJD--Double Disc Bearing(after 1992).....

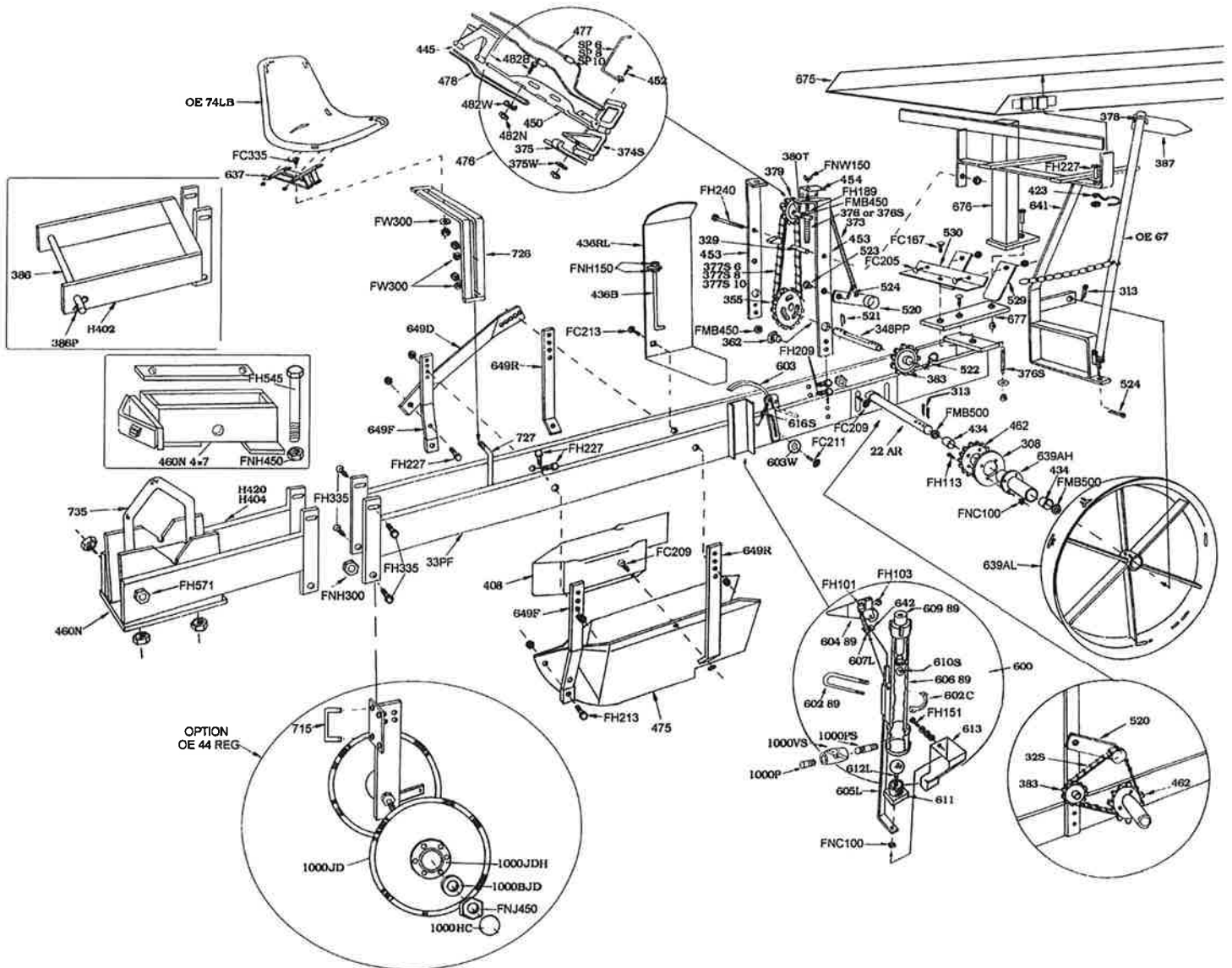
### Water Valve Parts

600--Water valve complete .....
602--1-1/4" U-bolt (before '88) .....
602-89--1-1/4" U-bolt w/nuts (after 1988) .....
602C-- U-bolt clamp .....
603--Water valve rocker & cam.....
603W--Washer for water cam spring .....
603D--#603 for pocket disc .....
604--Water adjustment bracket (before '88) .....

1000HC--Double Disc Hub Cap .....  
 1000JD--Double Disc with Hub.....  
 1000JDH--Hub with Fasteners for 1000JD.....  
 1000P--Single Thread Nipple .....  
 1000PS--3/4" Close Nipple .....  
 1000VS--Water Valve Shut Off.....  
 9017--Gauge wheel tire and rim.....  
 9020--Right gauge wheel bracket.....  
 9021--Left gauge wheel bracket.....  
 FC167--5/16x2" Carriage bolt.....  
 FC205--3/8x3/4" Carriage bolt.....  
 FC209--3/8x1" Carriage bolt.....  
 FC211--3/8x1-1/4" Carriage bolt.....  
 FC213--3/8x1-1/2" Carriage bolt.....  
 FC335--1/2x1-1/2" Carriage bolt.....

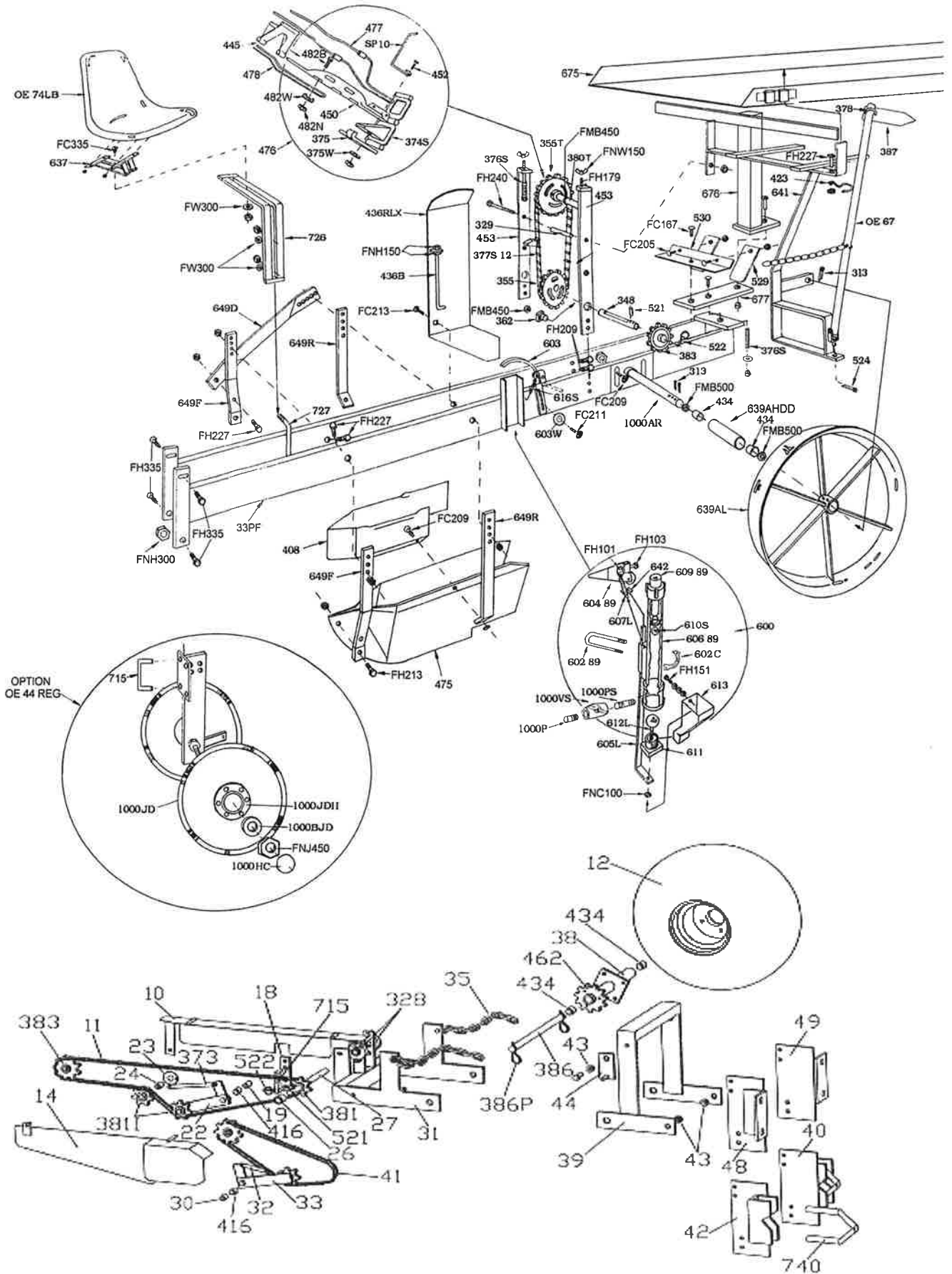
FC343--1/2x2-1/2" Carriage bolt.....  
 FH101--1/4x1/2" Hex head cap screw.....  
 FH103--1/4x5/8" Hex head cap screw.....  
 FH113--1/4x1-1/2" Hex head cap screw.....  
 FH151--5/16x1/2" Hex head cap screw.....  
 FH179--5/16x3-5/8" Hex head cap screw.....  
 FH189--5/16x5-1/2" Hex head cap screw.....  
 FH209--3/8x1" Hex head cap screw.....  
 FH213--3/8x1-1/2" Hex head cap screw.....  
 FH227--3/8x3-1/4" Hex head cap screw.....  
 FH240--3/8x5-1/2" Hex head cap screw (sp)..  
 FH335--1/2x1-1/2" Hex head cap screw.....  
 FH339--1/2x2" Hex head cap screw.....  
 FH343--1/2x2-1/2" Hex head cap screw.....  
 FH363--1/2x6" Hex head cap screw.....

FH545--3/4x9" Hex head cap screw.....  
 FH571--7/8x4-1/2" Hex head cap screw.....  
 FH649--1x9-1/2" Hex head cap screw.....  
 FMB450--3/4" Machinery bushing.....  
 FMB500--7/8" Machinery bushing.....  
 FNC100--1/4" Centerlock hex nut.....  
 FNH150--5/16 Finished hex nut.....  
 FNH300--1/2" Finished hex nut.....  
 FNH450--3/4" Finished hex nut.....  
 FNJ450--3/4" Jam nut.....  
 FNW150--5/16" Wing nut.....  
 FW300--1/2" USS flat washer.....  
 SP-V3--Spacing bar support for 6 pocket.....  
 SP-6--Separating bar for 6 pocket chain.....  
 SP-8--Separating bar for 8 pocket chain.....  
 SP-10--Separating bar for 10 & 12 pocket chain.....



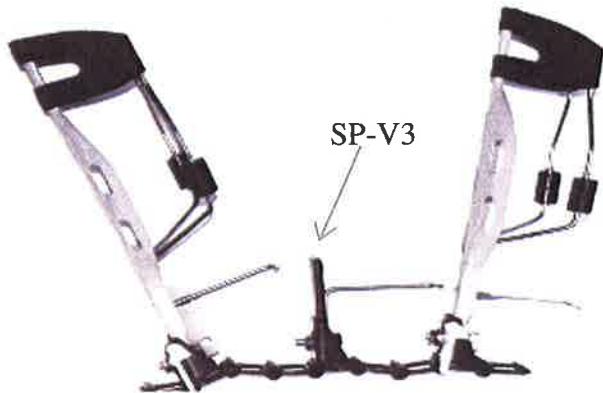
# Model 33

# Model 33-6000



<b>CHAIN SPACING CHART FOR REAR DRIVE UNITS</b>					
No. of teeth on sprocket	7	8	9	10	11
No. of pockets on chain 10 Pockets	Sets 12" 30.48cm	Sets 14" 35.56cm	Sets 16" 40.64cm	Sets 18" 45.72cm	Sets 20" 50.8cm
8 Pockets	16" 40.64cm	18" 45.72cm	20" 50.8cm	22" 55.88cm	24" 60.96cm
6 Pockets	20" 50.8cm	22" 55.88cm	24" 60.96cm	26" 66.04cm	28" 71.12cm
5 Pockets	24" 60.96cm	28" 71.12cm	32" 81.28cm	36" 91.44cm	40" 101.6cm
4 Pockets	32" 81.28cm	36" 91.44cm	40" 101.6cm	44" 111.76cm	48" 121.92cm
3 Pockets	40" 101.6cm	44" 111.76cm	48" 121.92cm	52" 132.08cm	56" 142.24cm
2 Pockets	64" 162.56cm	72" 182.88cm	80" 203.2cm	88" 223.52cm	96" 243.84cm

Use for Models 22, 22C, 33, 122, 222, & CT-5



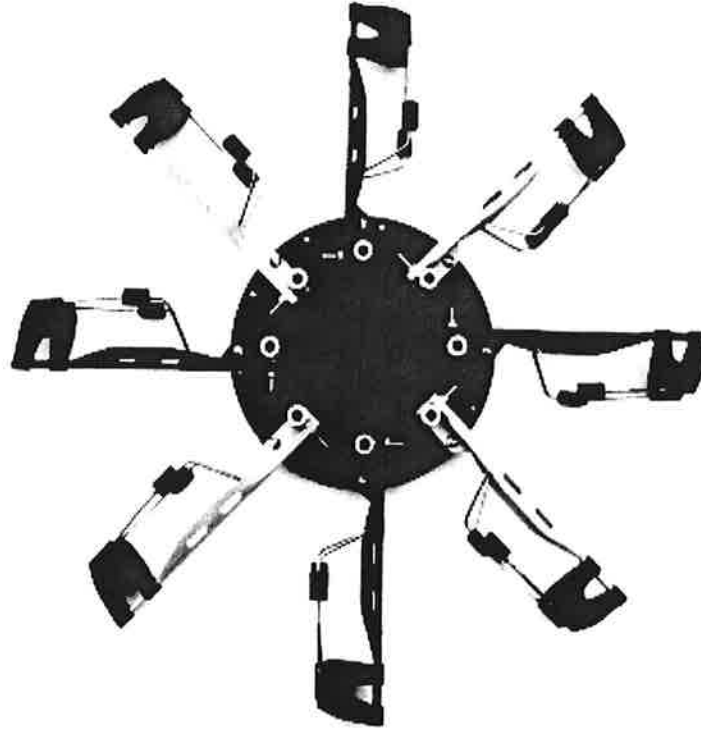
**SP-V3 SPACING BAR SUPPORT**

For a 12 pocket chain being used as 6 pocket chain (Model 1000)

<b>SPACING CHART FOR DIRECT DRIVE UNIT W/ 12 POCKET CHAIN</b>						
Sprocket on OUTSIDE of Jackshaft	Sprocket on INSIDE of Jackshaft	Number of Teeth on Sprocket on Unit				
		7	8	9	10	11
7	11	6" 15.2cm	6-1/2-7" 17.8cm	7-1/2-8" 20.3cm	8-1/2" 21.6cm	9" 22.8cm
7	7	9" 22.8cm	10-1/2" 26.7cm	13" 33cm	15" 38.1cm	16" 40.6cm
8	7	10-1/2" 26.7cm	12-1/2" 31.7cm	14" 35.5cm	15" 38.1cm	16" 40.6cm
9	7	12" 30.5cm	13-1/2" 34.3cm	15" 38.1cm	17" 43.2cm	18-1/2" 47cm
10	7	13" 33cm	14" 35.5cm	15-1/2" 39.4cm	17-1/2" 44.5cm	20-1/2" 52cm
11	7	15" 38.1cm	18" 45.7cm			

Double any of the above spacings by using every other pocket (6 pocket).  
Make sure HITCH and UNIT are level or parallel to the ground when planting.

Use for Models 1000 & 33-6000

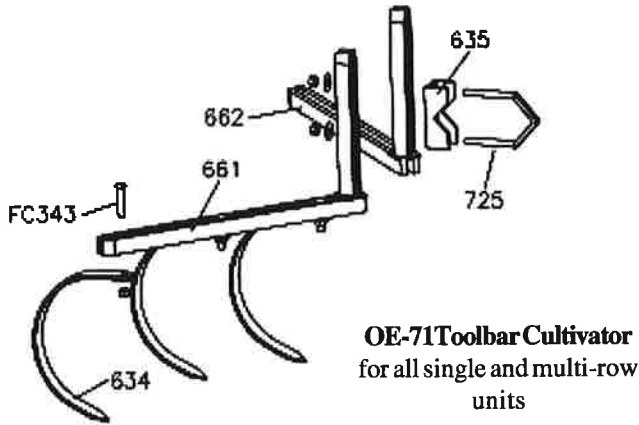


8 pocket disc (shown above with V-3 style pockets), 10 pocket, and 12 pocket disc available.

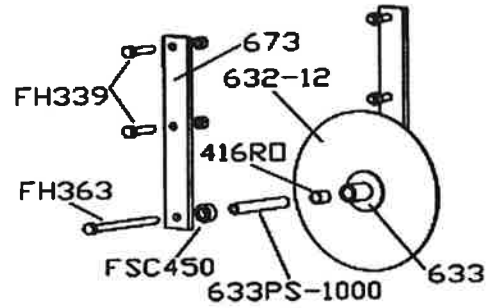
<b>DISC SPACING CHART FOR REAR DRIVE UNITS</b>					
<b>No. of teeth on sprocket</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>
<b>No. of pockets on disc</b>	<b>Sets</b>	<b>Sets</b>	<b>Sets</b>	<b>Sets</b>	<b>Sets</b>
<b>24 R-2 Pockets</b>	2" 5.08cm	2-1/2" 6.35cm	3" 7.62cm	3-1/2" 8.89cm	4" 10.16cm
<b>20 R-2 Pockets</b>	3" 7.62cm	3-1/2" 8.89cm	4" 10.16cm	4-1/2" 11.43cm	5" 12.7cm
<b>16 R-2 Pockets</b>	4" 10.16cm	4-1/2" 11.43cm	5" 12.7cm	5-1/2" 13.97cm	6" 15.24cm
<b>12 V-3 Pockets</b>	4-1/2" 11.43cm	5" 12.7cm	5-1/2" 13.97cm	6" 15.24cm	6-1/2" 16.51cm
<b>10 V-3 Pockets</b>	5-1/2" 13.97cm	6-1/4" 15.875cm	7" 17.78cm	7-3/4" 19.685cm	8-1/2" 21.59cm
<b>8 V-3 Pockets</b>	7" 17.78cm	7-3/4" 19.685cm	8-1/2" 21.59cm	9-1/4" 23.495cm	10" 25.4cm
<b>6 V-3 Pockets</b>	9" 22.86cm	10" 25.4cm	11" 27.94cm	12" 30.48cm	13" 33.02cm
<b>5 V-3 Pockets</b>	11" 27.94cm	12-1/2" 31.75cm	14" 35.56cm	15-1/2" 39.37cm	17" 43.18cm
<b>4 V-3 Pockets</b>	14" 35.56cm	15-1/2" 39.37cm	17" 43.18cm	18-1/2" 46.99cm	20" 50.8cm
<b>3 V-3 Pockets</b>	18" 45.72cm	20" 50.8cm	22" 55.88cm	24" 60.96cm	26" 66.04cm

Use for Models 122, 22, 22C, 222, 33, SU-3, & 500

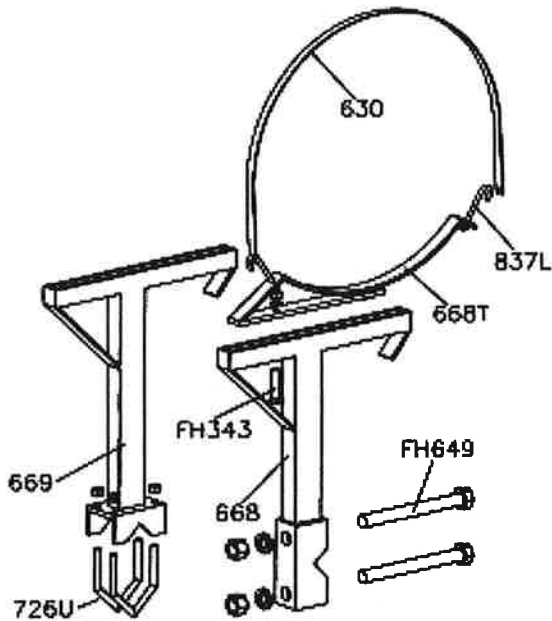
# Optional Equipment



**OE-71 Toolbar Cultivator**  
for all single and multi-row units

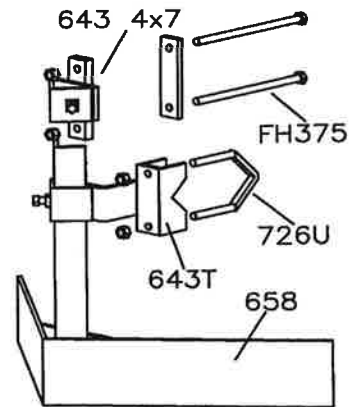


**OE-65-1000 Single Disc Opener Assembly**  
for the Model 33-6000

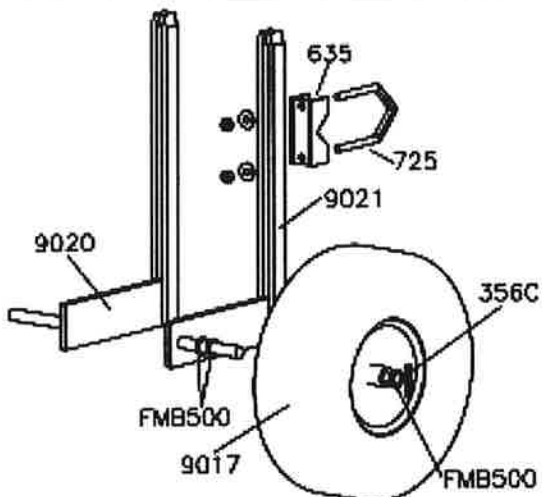


**B850 Toolbar Barrel Mount**  
for non Direct Drive units  
(Models 22C & 122)

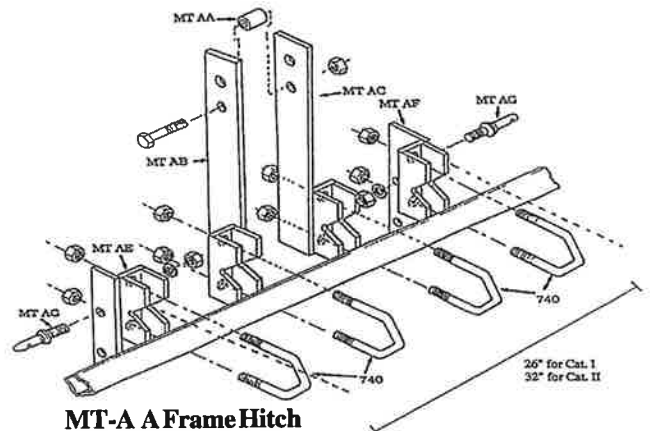
**B855 Toolbar Barrel Mount**  
for Direct Drive units  
(Model 1000)



**OE-66T Row Knocker**  
for 2-1/2" diamond toolbar  
**OE-664x7 Row Knocker**  
for 4x7" toolbar



**OE-78 Toolbar Gauge Wheels**



**MT-A A Frame Hitch**

# General Operating and Maintenance Instructions

**REGULATING PLANT SETTING DEPTH:** All new operators should take care to see that the plants are placed well down in the pockets so that the plant is held firmly. The depth for setting of plants can be regulated by the distance that root is extended out of the pocket.

**CHAIN UNITS:** Make sure the upper conveyor sprocket isn't over tightened, causing the chain to become stretched between the upper and lower sprockets. This will put unnecessary friction on the unit perhaps causing the packing wheels to slip on rear drive units. Tighten the wing nuts equally so the chain runs level.

**ADJUSTING AND SETTING SHOE:** Whenever any adjustment is made, be sure to get the shoe directly square and straight in front of the opening of the wheels so the pockets travel through the middle of the shoe. The shoe can be adjusted ahead or back with brace fastened on the right side of the unit frame. In loose, dry soil, the shoe should be set back and closer to the packing wheels or ahead and away from the packing wheels in heavy, wet soil. **KEEP SHOE CLEAN** at all times. Don't allow soil to build up on sides or trash in front of the shoe as this will cause the shoe to make a wider furrow, and the packing wheels will be unable to bring the soil back in around the plants. It may be necessary to add a coulter to the unit to cut this trash if it's a problem. Also, make sure the soil is worked deeper than the penetrating depth of the shoe. Hard pan soil under the shoe will cause the unit to ride up and lose its traction.

**CAUTION: PULL UNIT FORWARD ONLY.** Backing up causes damage to pockets and can plug shoe up with dirt.

**ADJUSTING WATER VALVE:** The water valve has a ball check tripped from below. The reservoir allows water supply to build up between plants. There is a float in the top of this reservoir to automatically close when filled. This air allows water to drop quickly as it is tripped by each plant. The **AMOUNT OF WATER IS CONTROLLED BY SIMPLY ADJUSTING THE BALL VALVE** to regulate the amount of water you want by each plant. Be careful, too much water in dry fluffy soil can cause the plant to float to the top of the furrow. The rocker arm and cam which is bolted onto frame of planter for tripping valve has a slot in it for adjusting timing of water. When rocker is moved up, the water will trip sooner. When moved down, it will trip later.

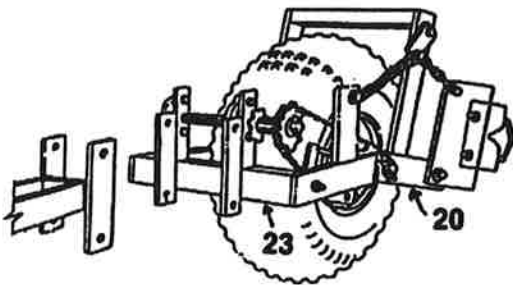
**AIR VALVE FLOAT:** Once each season the cap at the top of valve should be removed to check condition of the air valve float. This small ball can be floated to the top with water or pulled out with a piece of wire for inspection. This float is the critical to the operation of this valve. It and the rubber at the top should be replaced if not in good condition.

**INSTALLING NEW BOTTOM CHECK BALL:** Remove the valve from planter. Then remove bottom spout and the adjustable slide on trip rod. Unscrew plastic seat from tee. New check ball with stem can then be easily inserted. Do not tighten nut on stem completely, but leave enough play for the ball to wobble, allowing it to self center itself in the plastic seat.

**MAKE SURE THE WATER IS DRAINED OUT OF THE VALVE AT THE END OF EACH SEASON OR IT WILL FREEZE AND DESTROY THE INSIDE OF THE VALVE!**

## Float Wheel Direct Drive Operating Instructions

For Models 1000, 525, 550, & 33-6000



Run the float wheel with only 4 to 5 pounds of pressure during operation. Plant spacing can be changed slightly by increasing or decreasing the tire pressure.

Be sure to run the planting unit level with the soil. Then check that the toolbar is in the middle of the hitch so that frame members #23 and #20 are **STRAIGHT IN LINE**. Do not run the front frame (#20) up as this will take weight off from the wheel. For toolbars that are not adjustable for height you may have to use the lower holes on the front clamp plates to get the frame to run straight.

The hitch and wheel will float freely and sense uneven soil conditions if set properly. **DO NOT TIGHTEN LIFT CHAINS.** They must be loose when planting. If you can not lift the units high enough, raise the lower arms on your tractor by cranking them up. Do not tighten the chains.

For some unusual spacings, an extra link or two may be added to the drive chains.

If more weight is needed on the back of the unit for proper packing, use the optional OE-73 weight bracket.

# Safety Precautions

1. Make sure tractor is stopped and in neutral with the transplanter lowered to the ground before getting on and off the unit.
2. No operator is allowed to be on the unit as it is raised and lowered.
3. No operator is allowed on the transplanter as it is transported to or from the field.
4. All operators must be seated before movement begins and remain seated until the transplanter is completely stopped.
5. Never leave the transplanter in the raised position.
6. Keep all shields and guards in place when operating the transplanter.
7. Never attempt repairs or maintenance while the transplanter is in motion.
8. Never put the tractor in reverse while the transplanter is on the ground.
9. Follow all safety instructions supplied by the tractor manufacturer to which the transplanter is mounted.

## **MACHINE IMPROVEMENTS**

*MECHANICAL TRANSPLANTER CO. IS ALWAYS STRIVING TO MAKE IMPROVEMENTS ON THEIR LINE OF EQUIPMENT. MECHANICAL TRANSPLANTER CO. RESERVES THE RIGHT TO MAKE IMPROVEMENTS AND CHANGES AT ANY TIME WITHOUT INCURRING OBLIGATIONS TO MAKE SUCH CHANGES OR ADDITIONS TO EQUIPMENT PREVIOUSLY SOLD.*

## **Limited Warranty**

Mechanical Transplanter Company warrants each item of new equipment manufactured by Mechanical to be free from defects in material and workmanship under normal use and service.

The obligation of Mechanical Transplanter Company under this LIMITED WARRANTY is limited to repairing or replacing as Mechanical may elect, and any parts that prove, in Mechanical's judgment, to be defective in material and workmanship within the first season's use or 45 consecutive days after initially placing equipment in operation, whichever occurs first. Any outside work or alterations without Mechanical's written approval will render the LIMITED WARRANTY void.

Mechanical's obligation specifically excludes any liability for consequential damages, such as loss of profits, delays, expenses, damage to goods or property used in connection with or processed in or by the product sold, or damage to the product sold from whatsoever cause, whether or not such loss is due to negligence of selling dealer of Mechanical Transplanter Company.

This limited warranty shall not apply to any item or machine which shall have been operated in a manner not recommended by the Company nor which shall have been repaired, altered, misused, damaged in an accident, neglected, tampered with or used in any way which in the Company's opinion adversely affects its performance and results.

No person is authorized to give any other warranties or to assume any other liability on behalf of Mechanical Transplanter Company, unless made in writing by Mechanical.

This limited warranty covers repair or replacement of Mechanical Transplanter Co. equipment only and does not cover crop loss, downtime, labor, damage to other equipment, etc.

This limited warranty does not apply to exterior finishes, tires, chain links, bearings, or any other items sold by Mechanical Transplanter Co., but warranted by the original manufacturer except to the extent of their individual manufacturer's warranty.

THIS LIMITED WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WARRANTIES OF MERCHANT ABILITY AND FITNESS FOR PARTICULAR PURPOSE ARE EXCLUDED, AS ARE ALL OTHER REPRESENTATIONS TO THE USER-PURCHASER, AND ALL OTHER OBLIGATIONS OR LIABILITIES, INCLUDING LIABILITY FOR INCIDENTAL AND CONSEQUENTIAL DAMAGES, ON THE PART OF MECHANICAL OR THE SELLER.

**Mechanical Transplanter Company, LLC**

**1150 Central Avenue \*Holland, Michigan 49423**

**Phone: 616-396-8738 or 800-757-5268 Fax: 616-396-3619**

**[www.mechanicaltransplanter.com](http://www.mechanicaltransplanter.com) [mtc@mechanicaltransplanter.com](mailto:mtc@mechanicaltransplanter.com)**