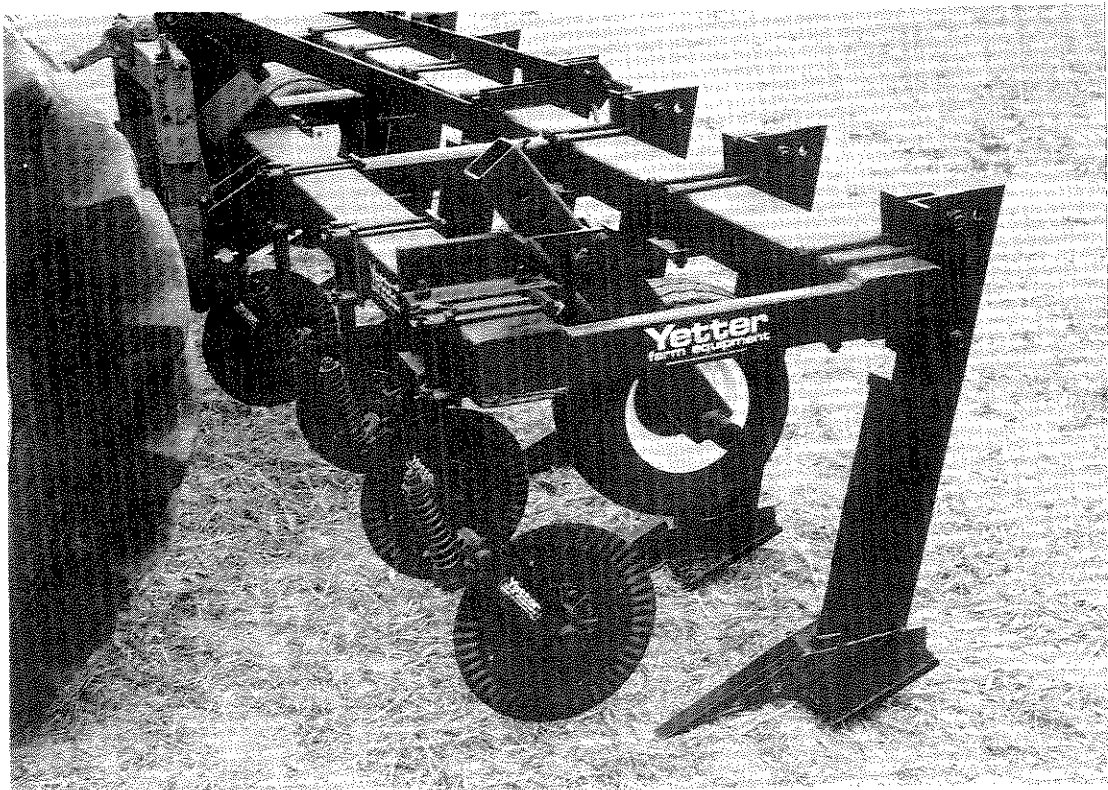


Yetter
... for land's sake

OPERATOR'S MANUAL

MODEL 1100 SUBSOILER



YETTER MANUFACTURING CO.
FOUNDED 1930

Colchester, IL 62326-0358 • (309) 776-4111
Toll Free 800/447-5777
309/776-3222 (Fax)

Yetter



FOREWORD

You've just joined an exclusive but rapidly growing club.

For our part, we want to welcome you to the group and thank you for buying a Yetter implement.


We hope your new Yetter implement will help you achieve both goals — increase your productivity and increase your efficiency so that you may generate more profit.

This operator's manual has been designed into six major sections.

Foreword, Safety Precautions, Assembly Instructions, Hook up and Preparation, Field Operation, Service and Maintenance.

It is important the owner/operator knows the implement model number. Write the model number in the space provided and use it in all correspondence when referring to the implement.

Throughout the manual references may be made to left side and right side. These terms are used as viewed from the operator's seat facing the front of the tractor.

 This **SAFETY ALERT SYMBOL** indicates important safety messages in the manual. When you see this symbol, be alert to the possibility of **PERSONAL INJURY** and carefully read the message that follows.

The word **NOTE** is used to convey information that is out of context with the manual text. It contains special information such as specifications, techniques, reference


information and other information of a supplementary nature.

The word **IMPORTANT** is used in the text when immediate damage will occur to the machine due to improper technique or operation. Important will apply to the same information as specified by note only of an immediate and urgent nature.

It is the responsibility of the user to read the operator's manual and comply with the safe and correct operating procedure as pertains to the operation of the product and to lubricate and maintain the product according to the maintenance schedule in the operator's manual.

The user is responsible for inspecting his machine and for having parts repaired or replaced when continued use of the product would cause damage or excessive wear to the other parts.

It is the user's responsibility to deliver his machine to the Yetter dealer who sold him the product, for service or replacement of defective parts which are covered by the warranty policy.

 If you are unable to understand or follow the instructions provided in this publication, consult your local Yetter dealer or contact:

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WARRANTY POLICY

Yetter Manufacturing warrants all products manufactured and sold by it against defect in material. This warranty being expressly limited to replacement at the factory of such parts or products as shall appear to be defective after inspection. This warranty does not obligate the Company to bear cost of labor in replacement of parts. It is the policy of the Company to make improvements without incurring obligations to add them to any unit already sold. No warranty is made or authorized to be made, other than herein set forth. This warranty is in effect for 1 year after purchase.

Model No. _____ Dealer _____

Yetter Manufacturing warrants its own products only and cannot be responsible for damage to equipment on which mounted.

NOTE: Warranty is void if the following horsepower limitations are exceeded:

8 ft. frame	150
11 ft. frame	200
16 ft. frame	280

INTRODUCTION

A subsoiler is designed to break up hard layers of soil. A "hard pan" will develop in most soil types after years of repeated tillage operations such as plowing, chiseling or discing. For maximum yield potential it is necessary to break up the impervious layers below the normal tillage depth to improve root and water penetration.

The Yetter Subsoiler has been designed to work in various conditions. The point is narrow so that a "ridged" finish is not left after subsoiling. The narrow point allows inter row ripping in a growing crop (SEE FIG. 1) aiding water infiltration.

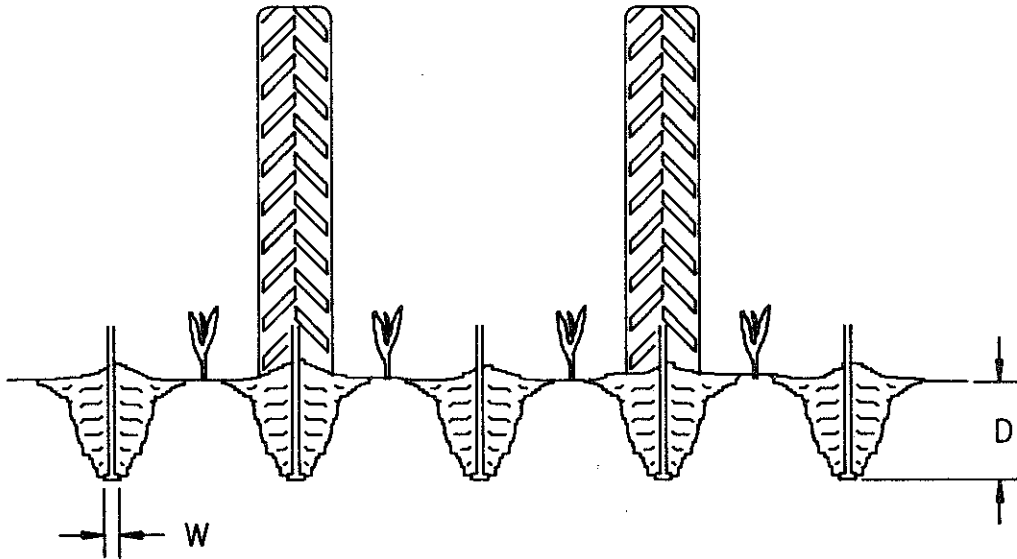


FIG. 1

For maximum soil disturbance, in fall tillage, "wings" may be attached to the foot to increase the cross-section of soil disturbed (SEE FIG. 2). Subsoiling is most effective when the operating depth is 2"-3" below the hard-pan layer.

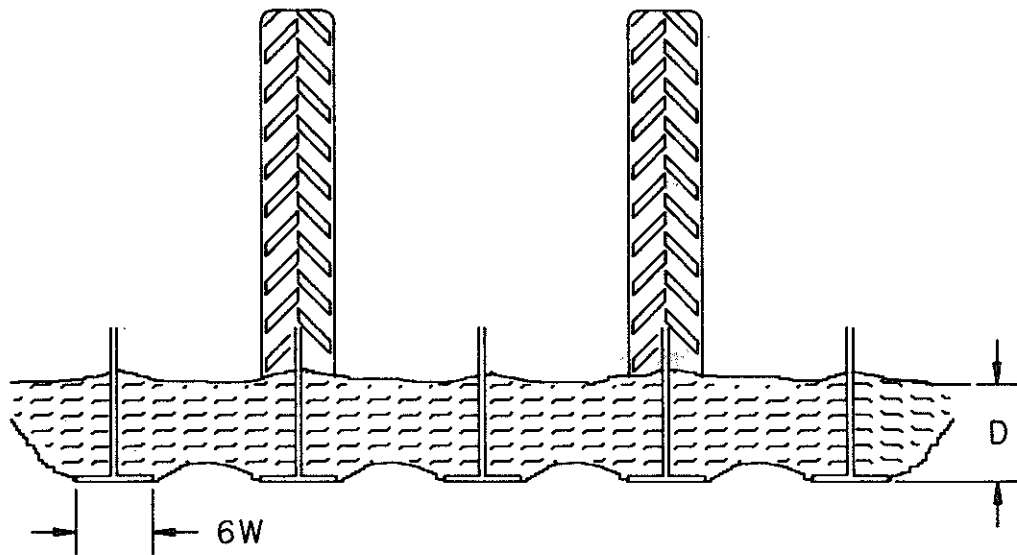


FIG. 2

Always remember that the point and/or wings can only lift a certain amount of soil and that it is possible to operate too deep (SEE FIG. 3). Operating too deep merely "slots" the field and wastes time and fuel. In ideal conditions, with the correct use of "wings", it is possible to disturb almost all the soil across the machine and leave a relatively even surface, although somewhat rough. In trashy conditions it may be necessary to use disc coulters to slice through the trash and aid the flow of crop residue between the legs. By using extra coulters, spread 6-8" either side of the leg coulters, it is possible to slice the surface and reduce the size of the chunks of soil in extremely dry conditions.

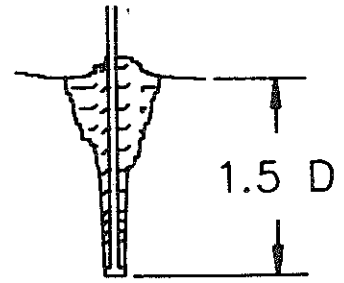
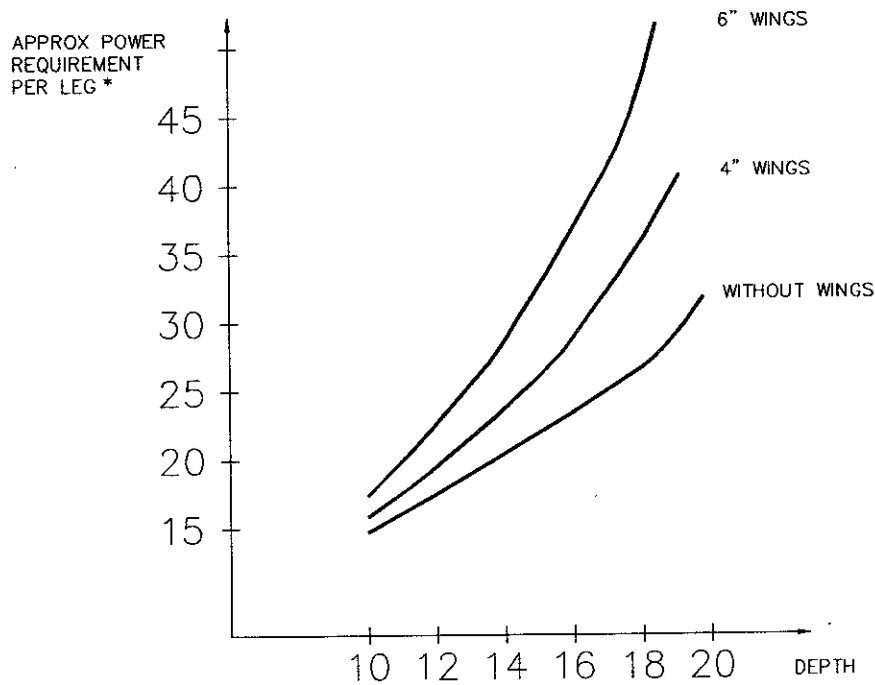
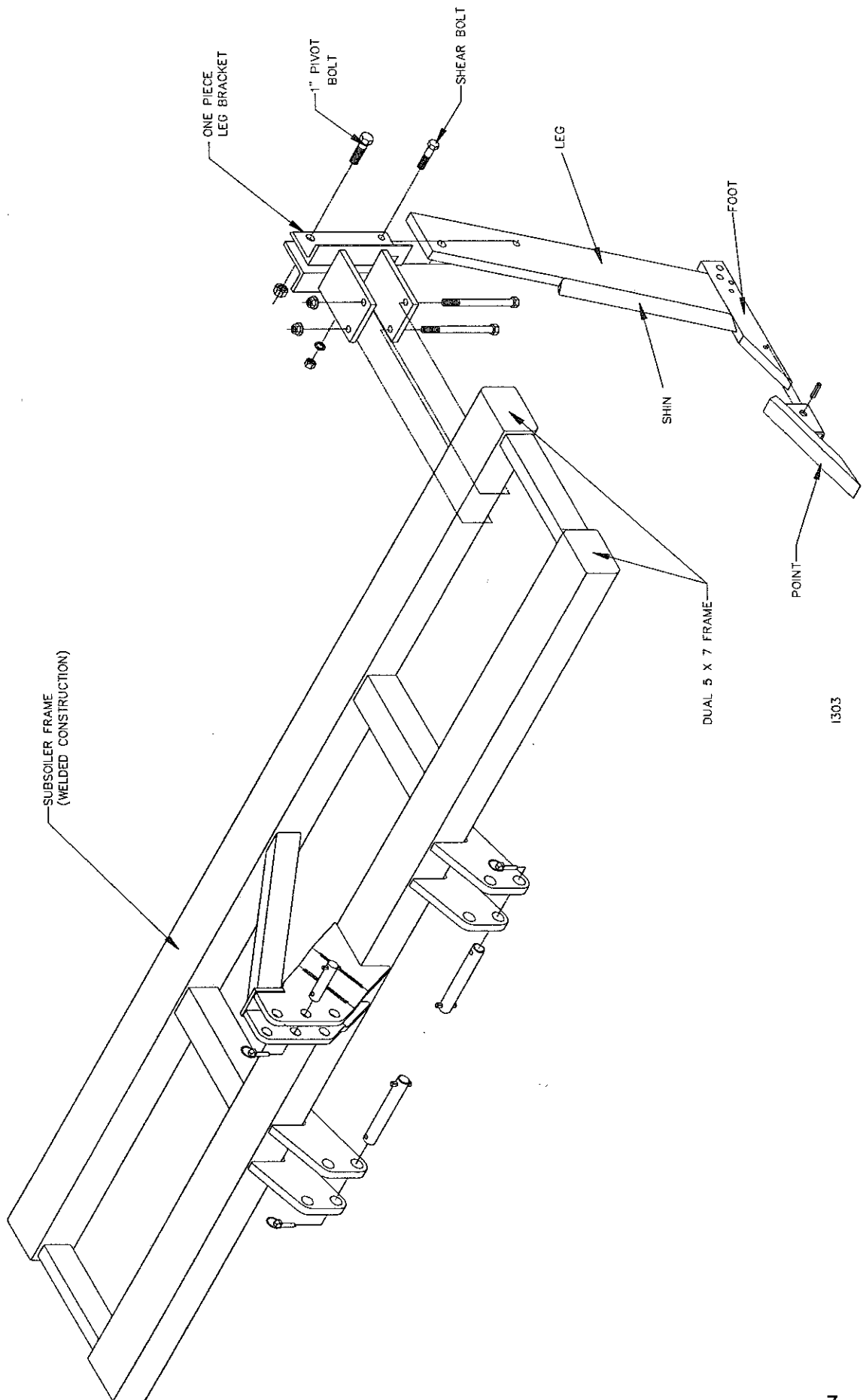


FIG. 3

In hard, dry conditions, or situations where the soil has not been deep loosened ever or recently, it may be necessary to make two passes over the ground to achieve the depth of loosening desired due to excessive power requirements.



* AT 5 MPH IN AVERAGE SOIL
 DEPENDS ON SOIL TYPE, SPEED, AND NUMBER OF LEGS
 THIS IS NON SPECIFIC INFORMATION, FOR GUIDANCE ONLY



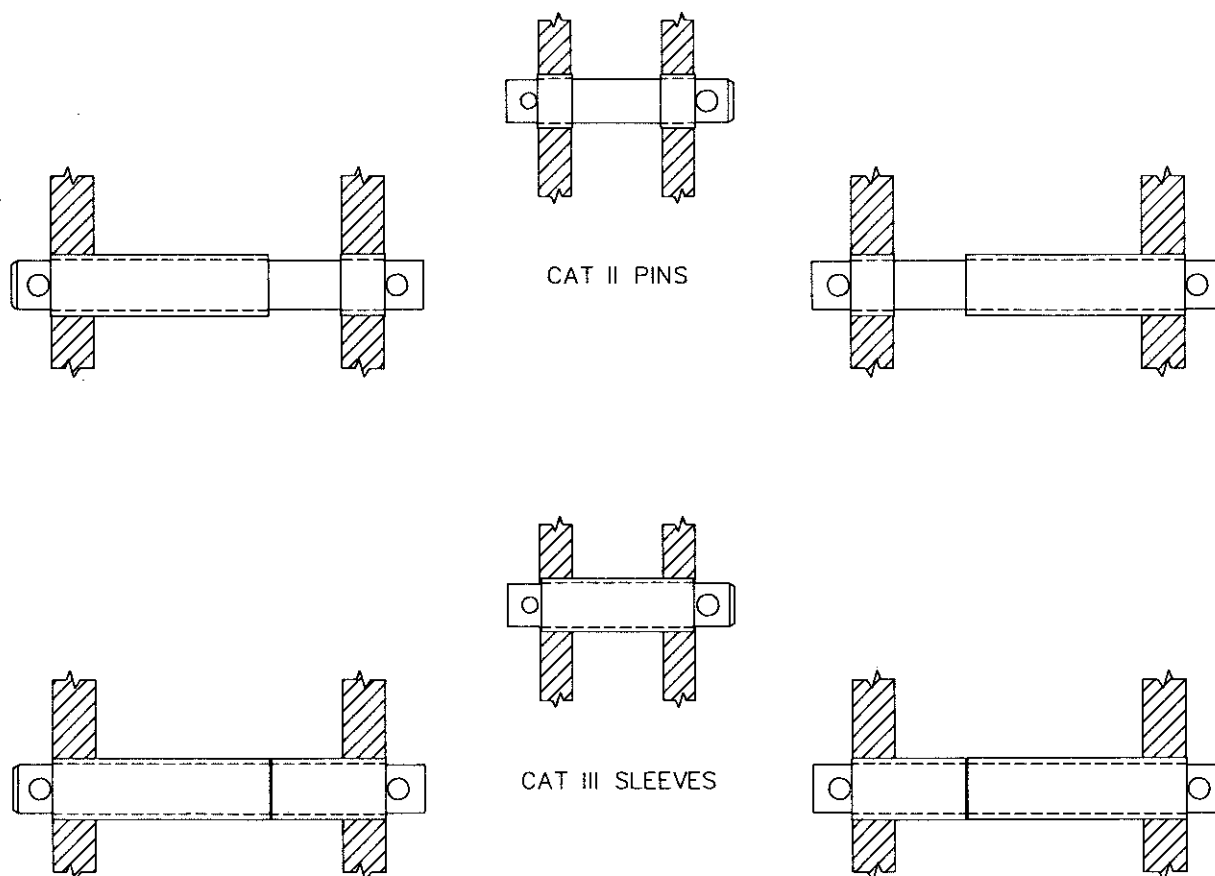
1303

SUBSOILER FRAME ASSEMBLY

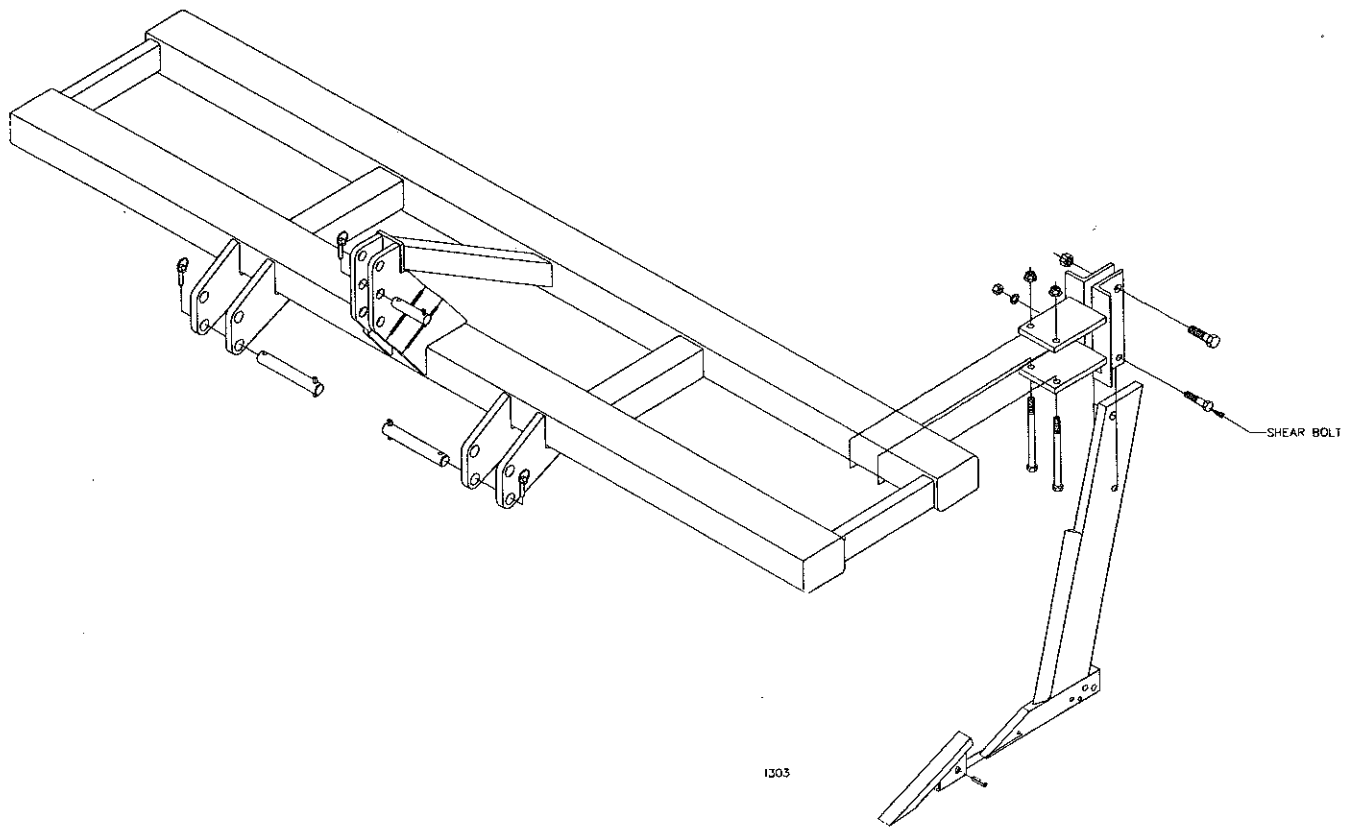
1. To attach the Subsoiler frame to tractors with CAT II, CAT III or CAT III N Quick Coupler or CAT III lift arms, use the 1000-100 hitch pins bag.

For attachment to CAT II lift arms, use 1000-102 CAT II hitch pins bag. As assembled in this bag, the pin assemblies are for CAT II lift arms. Extra sleeves are provided to use these pins for Quick Couplers if necessary.

NOTE: Use 1-7/16" pins whenever possible.



2. Raise frame on tractor 3 pt. and level the frame from side to side by adjusting the lift link on the tractor. Lower the frame onto stands placed at each end of the toolbar. Stands should be 33"-36" tall.
3. Find center of toolbar and mark with chalk. Measure from this mark and chalk mark the positions of the subsoiler legs according to number and spacing desired.



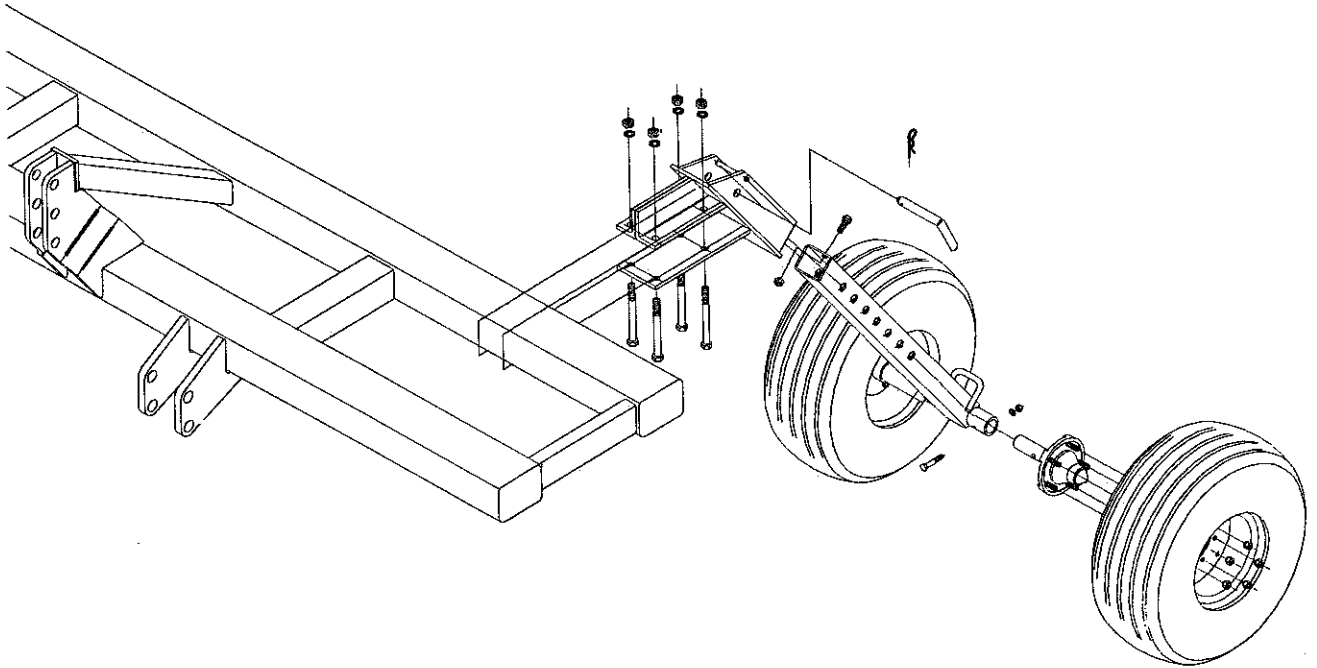
4. Remove contents of 1100-111 subsoiler leg parts box. Loosely attach the leg bracket with the $3/4 \times 7-1/2$ " bolts with bolt coming up through bottom of bracket as shown. Center this assembly on the required chalk mark. With aid of an assistant or hoist, lift subsoiler leg into position and place $1 \times 3-1/2$ bolt through the leg bracket. Tighten 1" locknut until snug tight. Place shear bolt through leg and leg bracket.
5. To complete the leg assembly, check location and squareness of leg on subsoiler frame and tighten the two $3/4 \times 7-1/2$ " bolts through the leg bracket.
6. Assemble other legs onto frame as required.
7. Assemble rear parking stand to center section of frame with $3/4 \times 7 \times 7$ " U-bolts. See page 20.

 **DANGER:** Do not unhook machine without lowering the rear parking stand.

DEPTH WHEELS ASSEMBLY

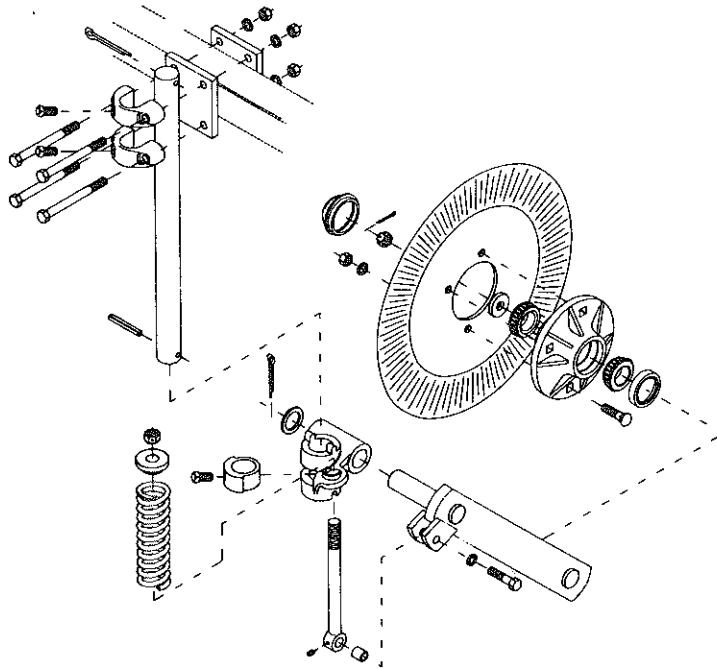
1. Attach depth wheel bracket to toolbar with 3/4 x 7" bolts. Position bracket so that wheel and tire will clear the leg when shear bolt breaks.
2. Insert the depth wheel tube through the bracket from underneath and place the 1/2 x 1" bolt in the hole at the top end of the depth wheel tube.
3. Pin the depth wheel into place using the Lift wheel pin.
4. Insert spindle into mounting tube and secure with 1/2 x 3" bolt and locknut.
5. Mount tire and wheel assembly to hub.

NOTE: Use flat side of wheel nuts against wheel for wheel rims not having countersunk holes.



1306

RESIDUE CUTTING COULTER ASSEMBLY

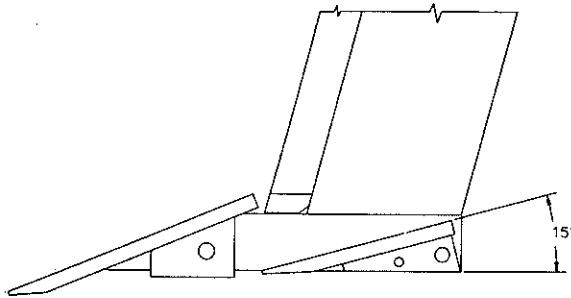


1. Mount a set of clamp plates to the bar at each coultter location using (4) 1/2 x 10" bolts, lockwashers and (2) shank clamp castings as shown on page 12. Before tightening be sure to square every set of clamp plates to the tool bar.
2. Insert a locking collar casting into the pivot casting of the spring loaded coultter arm assembly. Drive roll pin through bottom hole of the shank for a retainer.
3. Tighten the 5/8" square head set bolt into the locking collar (max. 100 ft. lb. torque) so that this collar just carries the weight of the coultter instead of the roll pin carrying the weight.
4. Slide the shank up through the shank clamp casting and retain by installing a 5/16" x 2-1/2" cotter pin in the top hole of the shank. Set coultter depth by loosening setscrews in clamp castings and slide shank to desired position.
5. Mount coultter blade to the coultter hub using (4) 1/2 x 1-1/2" carriage bolts, lockwashers and nuts. Rotate the blade and check for wobble. If blade wobble is excessive check for burrs on hub mounting surface and remove them.

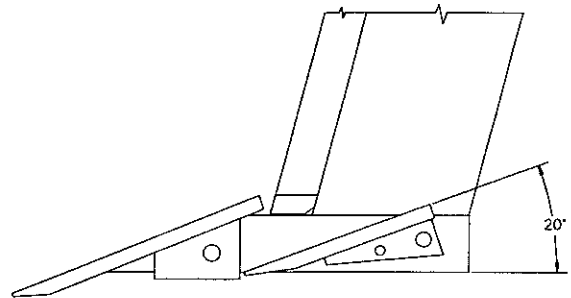
NOTE: Do not allow the roll pin to set into the notch of the casting since that will lock the coultter from pivoting

'LIFT' WING ASSEMBLY

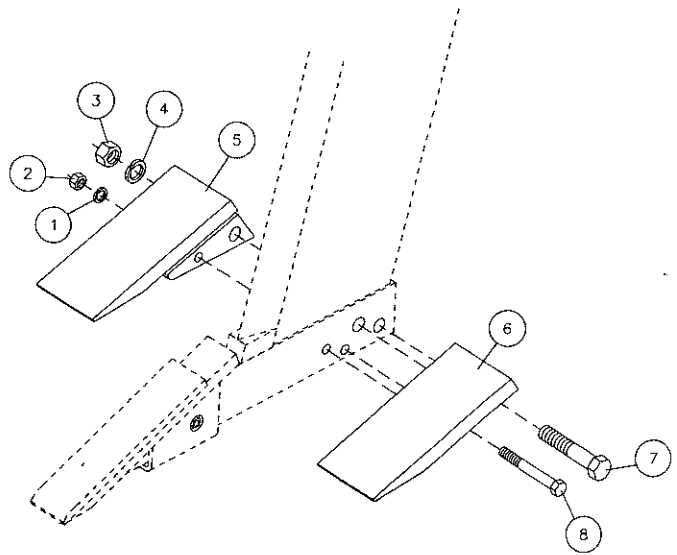
NOTE: Two sets of mounting holes are provided on the foot for mounting the wings. The lower pair of holes set the wings at 15°. The upper pair of holes set the wings at 20° for maximum soil shatter and loosening.



MJ 13



Assemble pair of wings onto foot using one 1/2 x 3-1/2" and one 3/4 x 3-1/2" bolt.



HOOK-UP & PREPARATION FOR USE


A. SUBSOILER

Inspect whole implement for loose or broken parts. Tighten or replace as necessary. Check tire pressure of gauge wheels if equipped (25 PSI).

B. TRACTOR 3 PT. MOUNTED

The **Subsoiler** may be attached to tractors having CAT II, CAT III or CAT III N Quick Coupler or directly to CAT III lift arms. To use with smaller tractor equipped with CAT II lift arms, use 1000-102 CAT II hitch pin bag. After subsoiler is attached to tractor and raised clear of ground, pin the rear parking stand in the raised position.

Sway blocks should be set to permit side sway in the down (operating) position and eliminate side sway in the raised (transport) position.


 **CAUTION:** It is important to set sway blocks to allow side sway on four wheel drive tractors to prevent damage to implement due to minor steering corrections.

Top link and lift links need to be adjusted correctly so that the points clear the ground sufficiently for safe transport.

If so equipped, the lift links should be set to float when the implement is equipped with gauge wheels—SEE TRACTOR OPERATOR'S MANUAL. Lift links should be pinned in no float position when implement is not equipped with gauge wheels.

Rear wheel weights may be necessary to achieve satisfactory traction to use this implement correctly. Consult Tractor Operator's Manual for details on ballast.

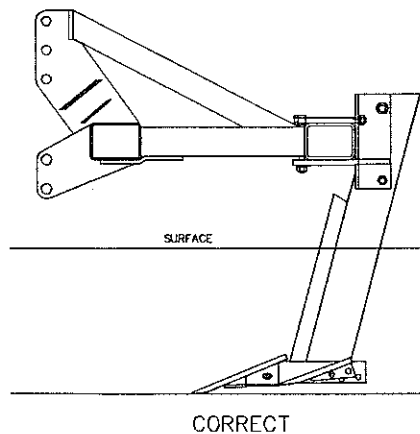
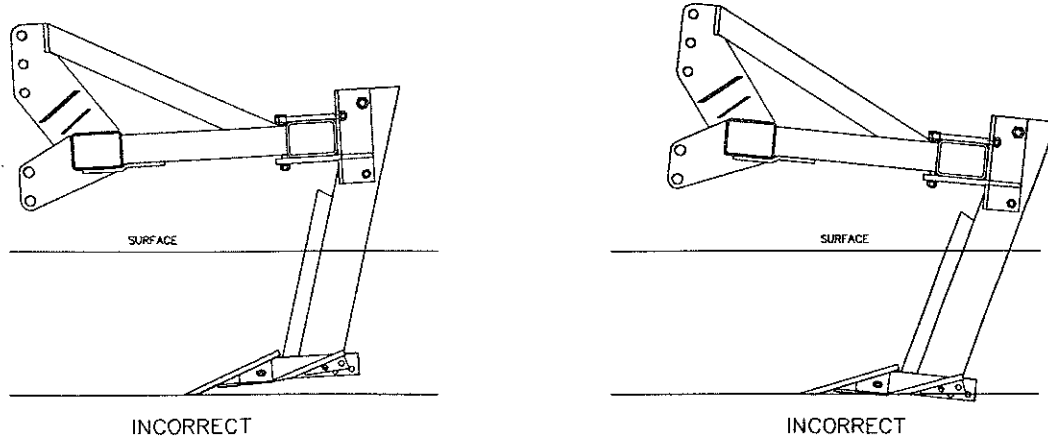
Front ballast may be necessary for safety and stability of two wheel drive tractors. All tractors require adequate front end weight for satisfactory performance of the 3-pt. hitch draft sensing system. Consult Tractor Operator's Manual.

 **CAUTION:** Additional ballast may be needed for transporting heavy integral implements. When implement is raised, drive slowly over rough ground.

Draft Control. The draft control should be set at "0" or "position" during hook-up. In the field, draft control is used to improve traction and minimize rockshaft control level adjustments.

Correct setting of the draft control will reduce wheelspin and ensure maximum tractor performance. Use tractor hydraulics to control depth, do not rely 100% on depth wheels for depth control.

Level the Subsoiler from front to rear by adjusting the center link. Observe the Subsoiler frame while operating under load.



S333



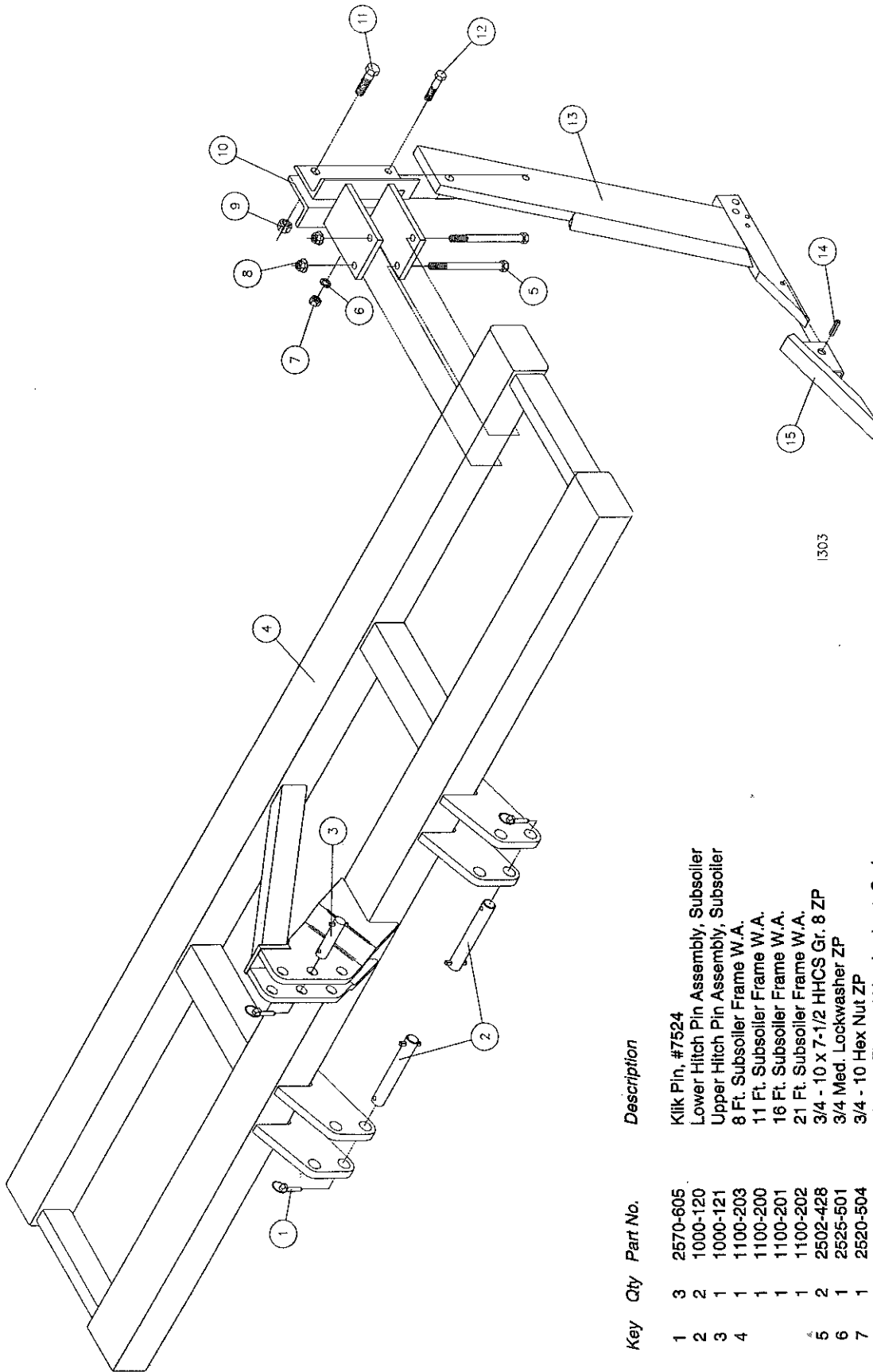
WARNING: Never clean, lubricate or adjust a machine that is in motion.

Draft Control Correct setting of the draft control will improve traction and minimize the need for rockshaft adjustments to maintain even subsoiling depth. **Correct use of the draft control is essential for maximum performance.** Consult Tractor Operator's Manual.

Residue Cutting Coulters. In trashy conditions it may be necessary to install coulters in front of each leg to cut the trash and allow trouble free operation.

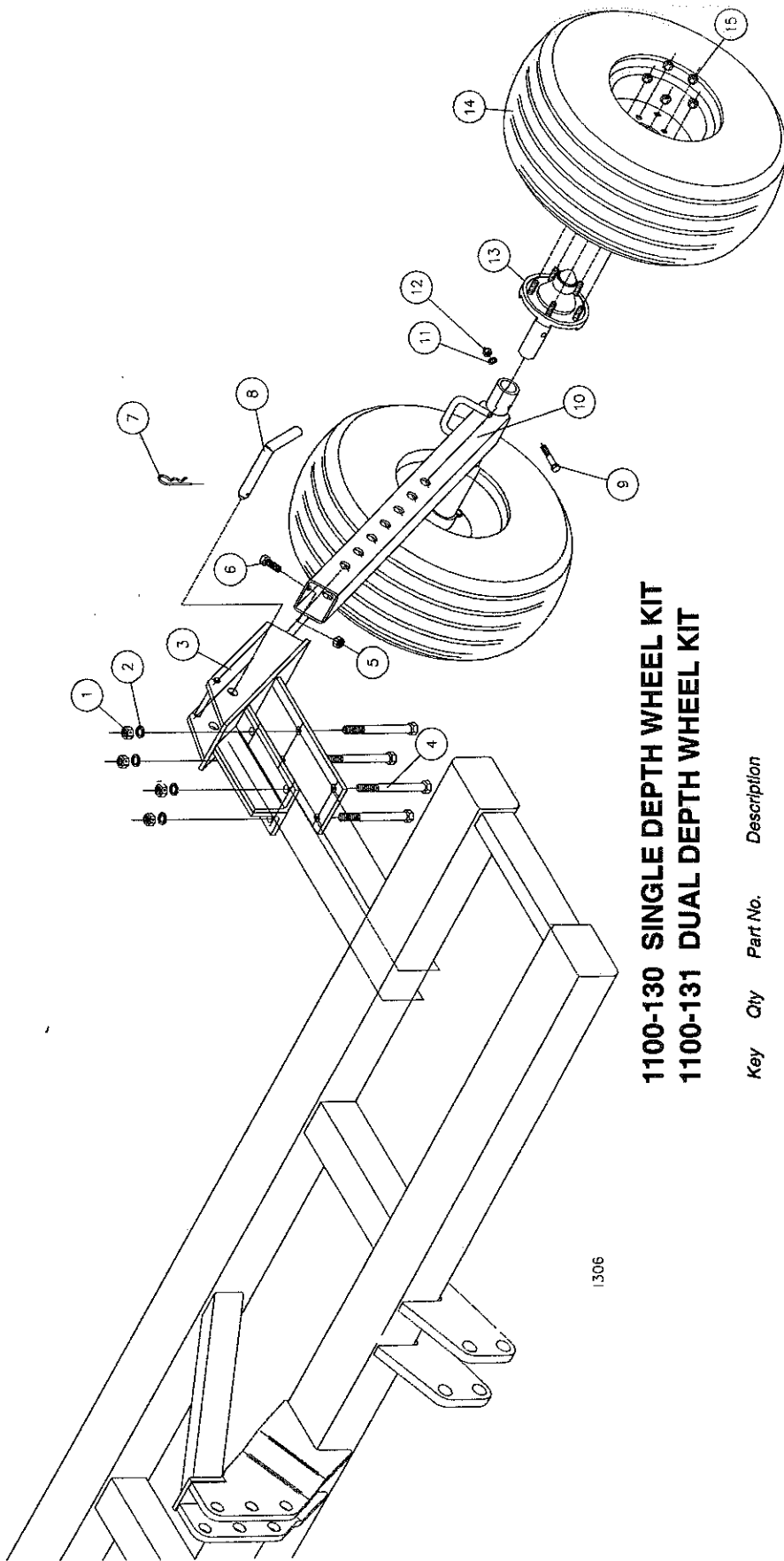
Lift Wings may be used to improve the soil loosening effect. The wings may be installed in two different positions depending on the loosening and soil disturbance required and available tractor power.

NOTE: Use of wings not recommended for inter-row ripping of crops!



1303

Key	Qty	Part No.	Description
1	3	2570-605	Klik Pin, #7524
2	2	1000-120	Lower Hitch Pin Assembly, Subsoiler
3	1	1000-121	Upper Hitch Pin Assembly, Subsoiler
4	1	1100-203	8 Ft. Subsoiler Frame W.A.
	1	1100-200	11 Ft. Subsoiler Frame W.A.
	1	1100-201	16 Ft. Subsoiler Frame W.A.
	1	1100-202	21 Ft. Subsoiler Frame W.A.
5	2	2502-428	3/4 - 10 x 7-1/2 HHCS Gr. 8 ZP
6	1	2525-501	3/4 Med. Lockwasher ZP
7	1	2520-504	3/4 - 10 Hex Nut ZP
8	2	2520-520	3/4 - 10 Flanged Hex Locknut, Cad.
9	1	2520-562	1 - 8 Lock Hex Nut ZP
10	1	1100-205	Leg Bracket W.A.
11	1	2502-767	1 - 8 x 3 1/2 HHCS Gr. 5 ZP
12	1	2502-505	3/4 - 10 x 3 1/2 HHCS Gr. 2 ZP
13	1	1100-206	Leg W.A.
14	1	2530-219	1/2 x 2 Roll Pin, Black
15	1	1000-212	Point W.A.

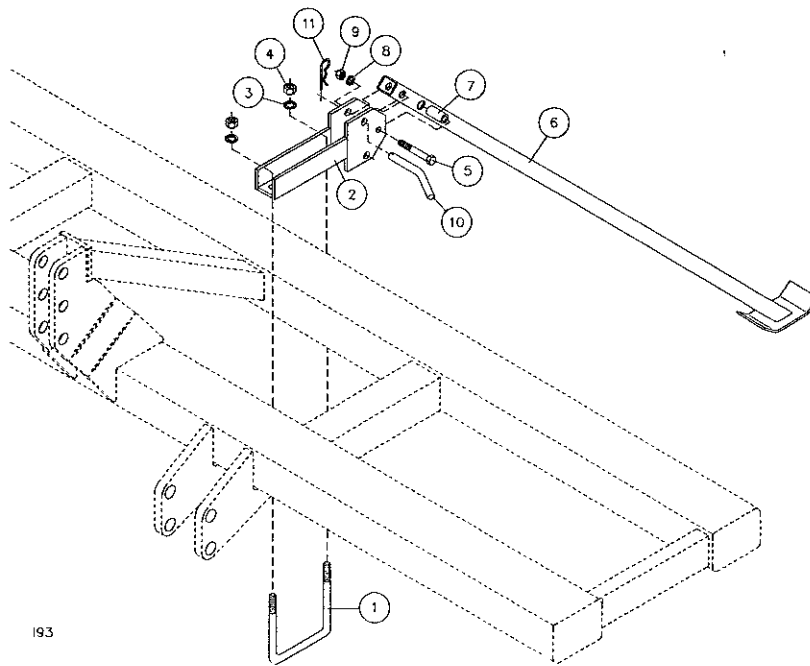


1306

1100-130 SINGLE DEPTH WHEEL KIT
1100-131 DUAL DEPTH WHEEL KIT

Key	Qty	Part No.	Description
1	8	2520-504	3/4-10 Hex Nut ZP.
2	8	2525-501	3/4 Med. Lockwasher ZP.
3	2	1100-207	Depth Wheel Brkt. W.A.
4	8	2502-509	3/4-10 x 7 HHCS Gr. 5 ZP.
5	2	2520-357	1/2-13 Lock Hex Nut ZP.
6	2	2502-292	1/2-13 x 1 HHCS Gr. 5 ZP.
7	2	2570-449	5/32" Hairpin Cotter
8	2	6600-382	Lift Wheel Pin, ZP.
*9	2	2502-313	1/2-13 x 3 HHCS Gr. 5 ZP.
10	2	1100-208	Depth Wheel Tube W.A.
*11	2	2525-352	1/2 Med. Lockwasher ZP.
*12	2	2520-352	1/2-13 Hex Nut ZP.
*13	2	3400-374	Hub And Spindle
*14	2	1100-118	20.5 Tire & Rim Assembly, 5 Bolt
*15	10	2520-360	1/2-20 Wheel Hex Nut

* Quantity Doubled For 1100-131 Dual Depth Wheel Kit

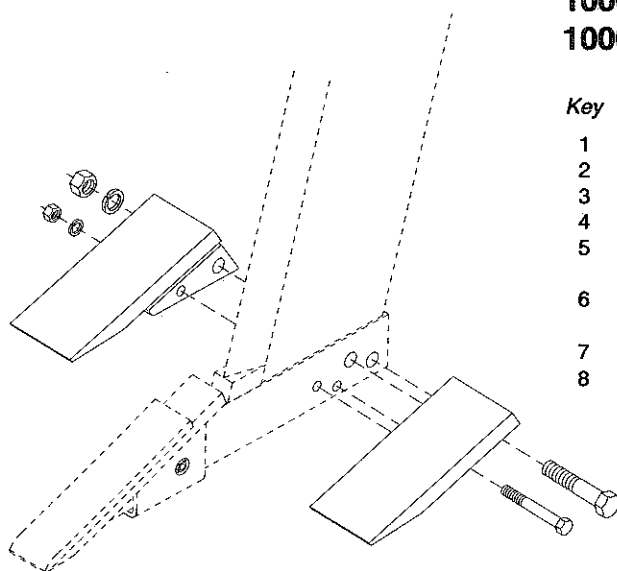


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1000-138 REAR PARKING STAND ASSEMBLY

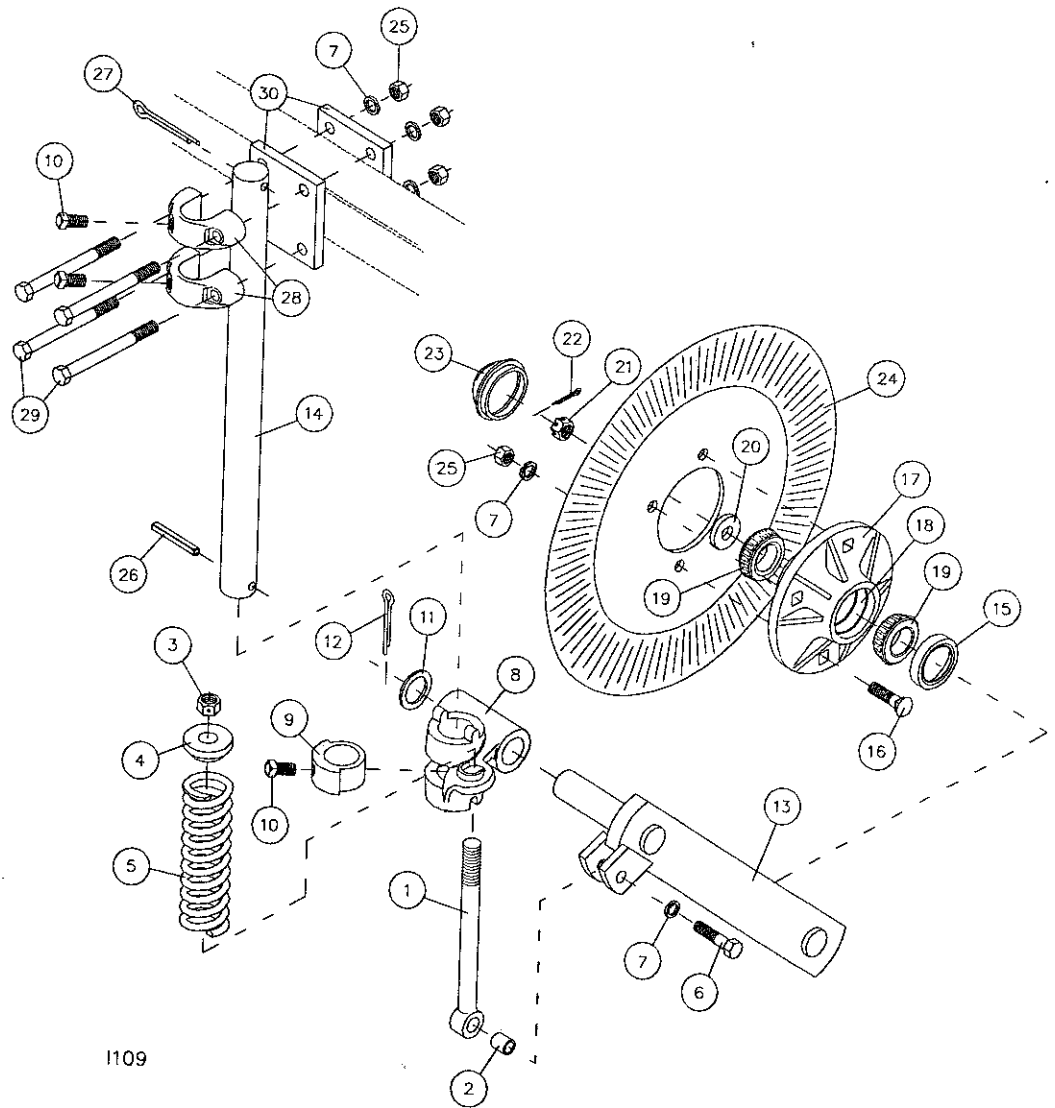
Key	Qty	Part No.	Description
1	1	2570-477	3/4 x 7 x 7" U-Bolt
2	1	3500-229	Rear Parking Stand Brkt.
3	2	2525-501	3/4 Med. Lockwasher ZP.
4	2	2520-504	3/4-10 Hex Nut ZP.
5	1	2502-336	5/8-11 x 4 HHCS Gr. 5 ZP.
6	1	3500-230	Rear Parking Stand W.A.
7	1	3500-384	Pivot Bushing, Park Stand
8	1	2525-451	5/8 Med. Lockwasher ZP.
9	1	2520-452	5/8-11 Hex Nut ZP.
10	1	3500-333	Stand Pin
11	1	2570-465	Hairpin Cotter ZP.

1000 - 124 4" WINGS KIT 1000 - 126 6" WINGS KIT



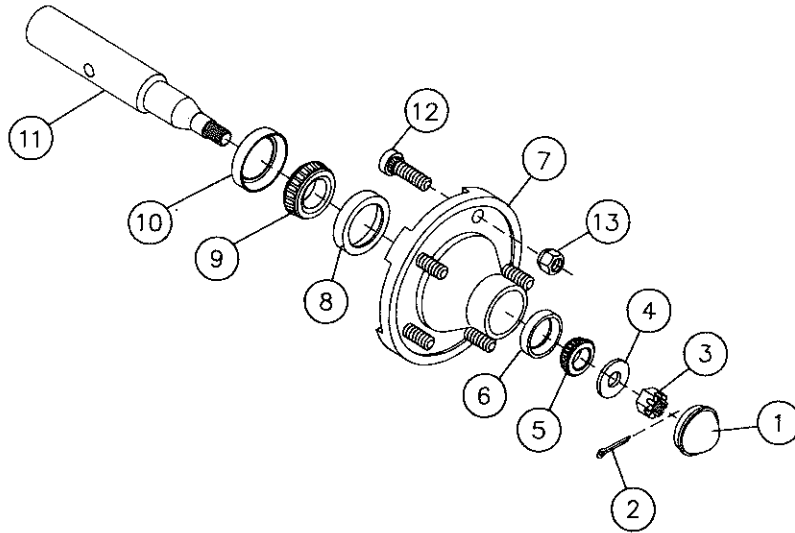
Key	Qty	Part No.	Description
1	1	2525-352	1/2 Med. Lockwasher ZP
2	1	2520-352	1/2-13 Hex Nut ZP
3	1	2520-504	3/4-10 Hex Nut ZP
4	1	2525-501	3/4 Med. Lockwasher ZP
5	1	1000-213	4" Wing W.A., R.H.
		1000-215	6" Wing W.A., R.H.
6	1	1000-214	4" Wing W.A., L.H.
		1000-216	6" Wing W.A., L.H.
7	1	2502-401	3/4-10 x 3 1/2 HHCS GR. 5 ZP
8	1	2502-316	1/2-13 x 3 1/2 HHCS GR. 2 ZP

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1109

1	1	2570-125	Pressure Rod Assembly (incl. No. 15)
2	1	2990-309	Pressure Rod Bushing
3	1	2520-515	3/4-10 Lock Hex Nut ZP.
4	1	2555-112	2910 Spring Bushing Casting
2910-311	5	2550-708	2910 Spring Bushing Casting
5	1	2550-708	2910 Spring Bushing Casting
6	1	2502-317	7/16 Wire x 2-1/8 O.D. x 1-1/4 I.D. Comp. Sprg.
7	10	2525-352	1/2-13 x 1-3/4 Hex Hd. Capsc. Gr. 5 ZP.
8	1	2990-311	1/2 Med. Lockwasher ZP.
9	1	2910-301	Coulter Pivot Casting
10	3	2503-379	Locking Collar
11	1	2526-561	5/8-11 x 1 Sq. Hd. Cup Point Setscr. ZP.
12	1	2531-151	1-17/64 I.D. x 1-7/8 O.D. x 14 Ga. Mach. Bush.
13	1	2990-202	1/4 x 1-3/4 Cotter Pin, Black
14	1	3010-303	Arm W.A. (2991)
15	1	2550-115	Straight Coulter Shank 22"
16	4	2505-339	Seal
17	1	2900-102	1/2-13 x 1/2 Car Bolt Gr. 5 ZP.
18	2	2550-029	Hub Sub-Assembly
19	2	2550-027	Cup (Pre-Assembly, W/No. 18)
20	1	2526-449	Cone
21	1	2520-461	5/8 Flatwasher, 11/16 I.D. x 1-3/4 O.D. x 1/4±
22	1	2531-102	5/8-18 Slotted Hex Nut, Black
23	1	2570-375	1/8 x 1-1/4 Cotter Pin, Black
24	1	2571-076	Hub Cap
25	8	2520-352	20" Ripple Coulter Blade
26	1	2530-208	(To Be Used Only With 2990-202 Arm)
27	1	2531-161	1/2-13 Hex Nut ZP.
28	2	2990-360	3/8 x 2-1/2 Roll Pin ZP.
29	4	2502-376	5/16 x 2-1/2 Cotter Pin ZP.
30	2	2975-367	Clamp Casting Drilled
			1/2-13 x 10 Hex Hd. Capscrew Gr. 5 ZP.
			Clamp Plate, 5" Sq. Bar.



HUB AND SPINDLE ASSEMBLY 3400-374

Ref.	Qty.	Part No.	Description
1	1	2570-308	Hub Cap
2	1	2531-108	5/32" x 1-1/4" Cotter Pin Black
3	1	2520-469	5/8" - 18 Slotted Hex Nut Black
4	1	2526-452	5/8" SAE Flatwasher Black
5	1	2550-012	Cone W.G. (LM-11949)
6	1	2550-013	Cup W.G. (LM-11910)
7	1	2570-309	Hub 4" Pilot 5-1/2" Dia. Bolt Circle
8	1	2550-029	Cup (LM-67010)
9	1	2550-027	Cone (LM-67048)
10	1	2550-115	Seal (104078)
11	1	3400-378	1-5/8" Dia. Spindle (104989), 2570-310
12	5	2570-190	1/2" - 20 x 1-1/2" Hub Bolt, Black
13	5	2520-360	1/2" - 20 Wheel Hex Nut

TROUBLESHOOTING

<i>Problem</i>	<i>Cause</i>	<i>Remedy</i>
Poor depth control	Tractor set up incorrect. Subsoiler set up incorrect.	Adjust draft control. Check leveling side to side and front to rear. Use depth wheels.
Poor penetration	Tractor set up incorrect. Subsoiler not level front to rear. Worn or broken points.	Adjust draft control. Adjust center link (shorter). Replace.
Unequal depth of legs	Gauge wheels not adjusted correctly. Lift links on tractor not equal.	Check both adjusters set same. Check lift links on tractor.
Wear on foot	Subsoiler not level front to rear. Point worn.	Adjust center link (shorter). Replace point.
Excessive shear bolt breakage	Angle brackets not clamping the leg. Too many rocks.	Shear bolts must be tight. Operate shallower.
Excessive power requirement	Operating too deep. Subsoiler not level front to rear. Wings too wide. Soil too tough.	Reduce depth. Adjust center link (lengthen). Use 4" instead of 6" or remove. Reduce depth.
Wheelspin	Tractor hydraulic system incorrectly set. Insufficient axle weight.	Adjust sensitivity of draft control to obtain correct weight transfer. Add rear wheel weights or fluid to tires.

NOTES

Our name Is getting known

Just a few years ago, Yetter products were sold primarily to the Midwest only. Then we embarked on a program of expansion and moved into the East, the South, the West, and now north into Canada. We're even getting orders from as far away as Australia and Africa.

So, when you buy Yetter products . . . you're buying a name that's recognized. A name that's known and respected. A name that's become a part of American agriculture and has become synonymous with quality and satisfaction in the field of conservation tillage.

Thank you

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