

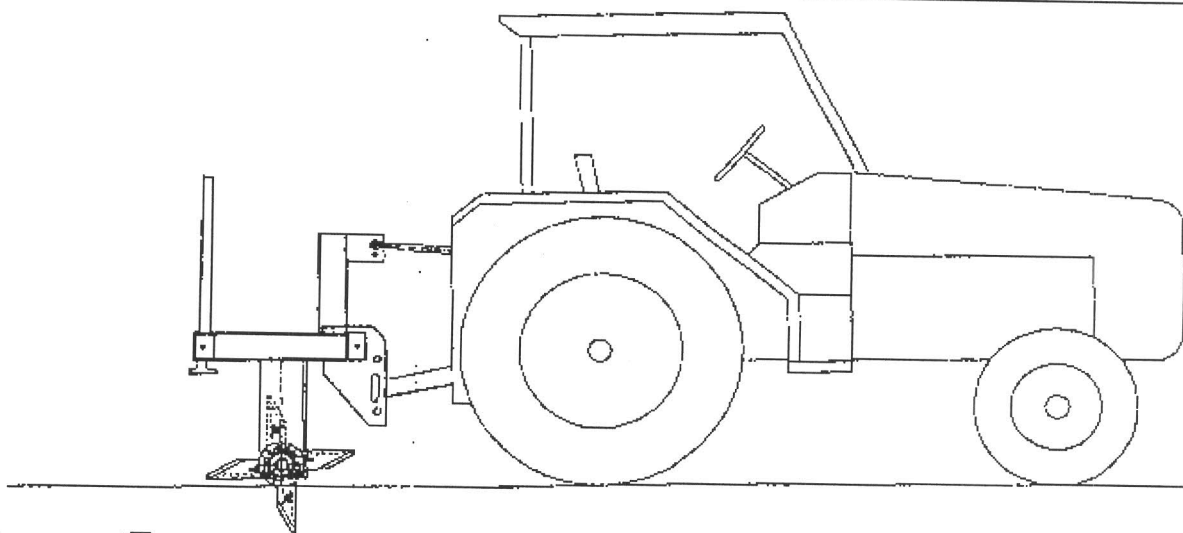
BANNERMAN

BA-600

Super-Ject Aerator

CE

Conforms to
European
Standards



Safety, Operation & Parts Manual

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Dear Owner,

Welcome to Bannerman - The home of Sports Turf Magic.

Your new **BA-600 Super-Ject aerator** is designed to meet your turf aeration requirements. The ease of operation and low maintenance will give you many trouble free hours of operation. Please make certain that you read and understand the important instructions for the assembly, adjustments, operations, safety and the maintenance contained in this manual. If there are any instructions which you do not fully understand, contact either your dealer, or Bannerman Ltd. for clarification prior to using the unit.

When in need of replacement parts, specify the model and serial number of your **Bannerman BA-600 Super-Ject aerator**. The serial plate that identifies your model number and serial number is located on the three point hitch mast. To give you many years of service, regular preventative maintenance is required. Should you require further clarification or assistance, please feel free to contact your local Bannerman dealer, or Bannerman Ltd. directly at:

Bannerman Ltd.
41 Kelfield Street ~ Rexdale, Ontario
M9W 5A3 CANADA
Phone#: 416-247-7875 ~ Fax#: 416-247-6540
CDN 1-800-325-4871 ~ USA 1-800-665-2696
info@sportsturfmagic.com
www.sportsturfmagic.com ~ www.bannerman.ca

Warranty

Bannerman Ltd. warranties all **Bannerman BA-600 Super-Ject** aerators that have been registered in our system. By receiving the Warranty Card & Declaration of Delivery Card completely filled out, via post, fax or email within 15 days of Date of Sale for Registration, or Warranty is Null & Void. Some Dealers or Distributors may do this on behalf of their customers, but it is the responsibility of the end user to make sure that the Warranty Card has been filled out and submitted to Bannerman Ltd. Warranty Cards are included in the package with this booklet, and are also able to be filled in and printed off of our website, www.sportsturfmagic.com.



Bannerman BA-600 Super-Ject aerators are covered by warranty when used properly, to be free from defects in material and workmanship under normal use and service, for a period of 90 days. This warranty does not guarantee a particular service life of the product. Service life will vary with application, operating environment, level of maintenance and other factors beyond our control.

Bannerman Ltd.'s sole responsibilities for the **Bannerman BA-600 Super-Ject** aerator or parts determined to be defective and covered by this warranty, is limited to repairing, or replacing the product or part.

Prior authorization from **Bannerman Ltd.** must be obtained, before replacing or returning part(s), or incurring any cost for labour. No charges for expense incurred in parts, labour or transportation, by unauthorized persons will be allowed under this warranty. **Bannerman Ltd.** reserves the right to request the return of any part or Bannerman assembly (with transportation charges prepaid) claimed to be covered under this warranty.

Bannerman Ltd. shall not be liable, in event, for proximate, incidental, consequential, special or other damages, including, but not limited to, damages for loss of production, loss of profit, loss of opportunity, or injury to persons or property arising out of any breach of this warranty.

There are no warranties, expressed or implied, including the warranty of merchantability, warranty of fitness for particular purpose, or any other warranty extending beyond that set forth above.

Work Safely - Follow These Rules !!

**A careful operator is the best insurance
against an accident!!**

This symbol is used to call your attention to instructions concerning your personal safety. Be sure to observe and follow these instructions.



Warning: Before handling any equipment, read this operation manual

1. Do not wear loose fitting clothing that may catch in moving parts.
2. Use extreme care when making adjustments.
3. Always use the proper tools or equipment for the job at hand.
4. When working under or around the tines, the frame must be supported.
5. When not in use the **BA-600 Super-Ject** three point hitch model attachment should have the jack legs extended down and the safety pins engaged. This will prevent the implement from tipping when detached from the tractor.
6. Prior to lowering, and unhitching the **BA-600 Super-Ject**, lower the jack leg(s) and insert the jack safety pin(s).
7. Remove all tools, parts and maintenance equipment from the weight tray after servicing the **BA-600 Super-Ject**.
8. Before and during operation the area should be check to assure that the area is clear of both obstacles, hazards and personnel.

Know where and how deep your gas, water and electrical lines are buried.

9. Extreme caution should be exercised when operation close to ditches, fences or on hill sides.
10. Do not over ballast the weight box. This will result in the loss of front steering and the tractor's stability. In extreme cases front counter balancing may be required.
11. **⚠ No riders other than the tractor operator. Never allow anyone to ride on the BA-600 Super-Ject aerator frame at any time.**
12. **⚠ Do not attempt to remove obstructions while the aerator is in motion.**
13. Hands, feet clothing and other objects must be kept away from all moving parts.
14. Always place the BA-600 Super-Ject in the "Transport Position" when moving extended distances.
15. The tractor used for the proper transportation of the unit should be equal in size and horsepower to the tractor used for field operations.
16. Drive at a reasonable speed. This will allow the operator to maintain complete control of the tractor and the implement at all times. Do not exceed 15 m.p.h. (24 k.p.h).
17. Aerator transporters are not intended for highway operation.

BA-600 Super-Ject Aerator

For shipping purposes the **Bannerman BA-600 Super-Ject** Aerator may be supplied in a knock down kit. The kit will include the tine shaft, bearings, frame and mounting hardware.

Use extreme care when handling tine shaft.

Warning: The tines are sharp. To avoid possible injury keep hands and feet away from shafts.

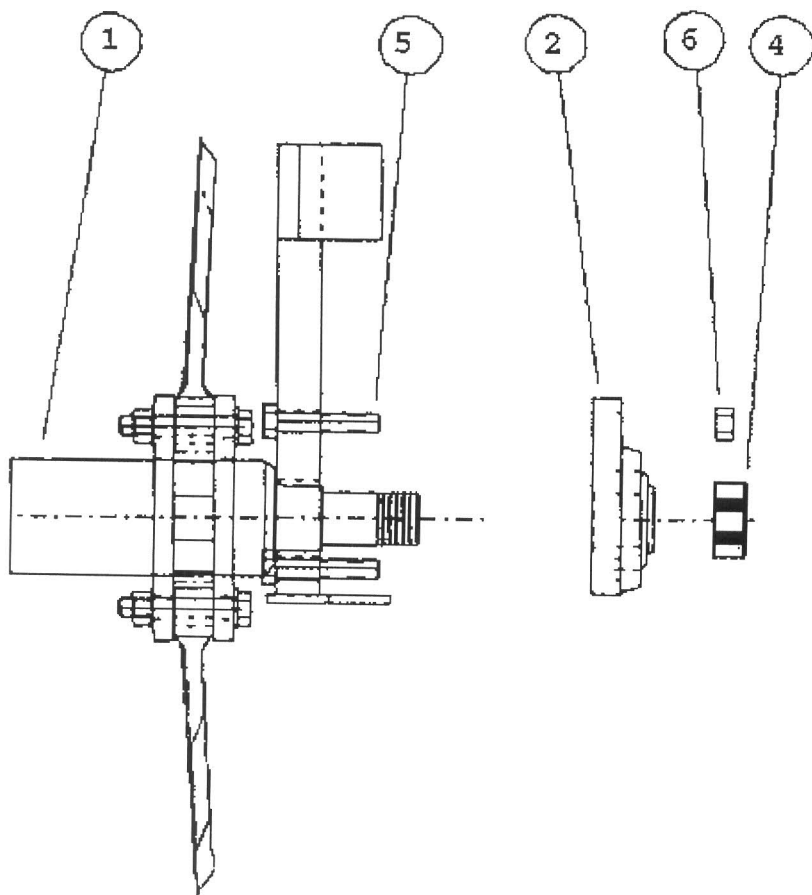
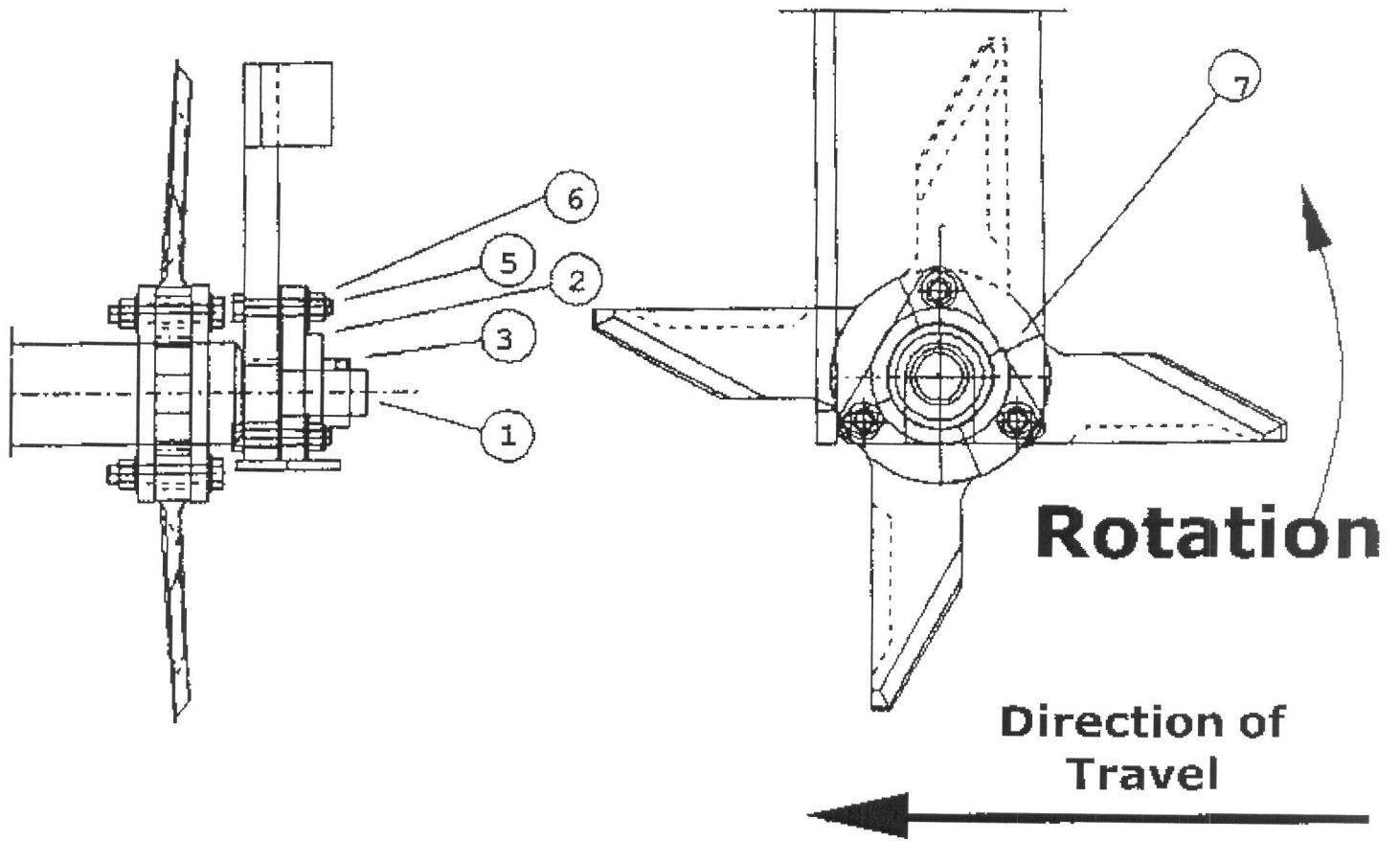
Shaft Installation Procedure Out Board Bearings (see Figure #1)

1. Identify and check that all the loose components are included in the box. Check the shaft for the identifying mark. This is stamped into the ends of the shaft.
2. Fully extend the jack legs (block under the jack legs maybe required to allow sufficient clearance when installing shafts with long tines).

3. Position the shaft into the aerator main frame, locating the tine shaft stub ends in the notches of the end plate (see Figure #1). Slip the bearing over the stub shaft. Locate the 3 holes and insert the bolts from the inside of the end plates through the bearing, secure with stover nuts and torque to 60-65 ft.lbs. Repeat the same procedure for the other end of the tine shaft. Tighten the 6 nuts and bolts and install locking collars followed by the nylon insert nuts. Make sure the eccentric locking collars are positioned over the bearing inner race. Thread the nylon insert nuts up to the locking collars. With a hammer and punch drive the eccentric locking collar on to the bearing in the same direction as shaft rotation. And tighten set screw in collar, then adjust nut to the collar and tighten securely.

Note: Position the grease fitting with the grease nipple pointing towards the rear of the aerator. (see Figure #1, item #7).

Figure #1			
#	Part #	Description	Qty.
1	08541	Shaft Assembly	1
2	08548	Bearing	2
3	08548-C	Locking Collar	2
4	08536	Jam Lock Nut	2
5	11223	1/2"-20X 2-1/2" Hex Bolt	6
6	08549	1/2"-20 Stover Nut	6
7	08036	Grease Nipple	2



Note:
Re-torque
every 8
hours
of operation

Three Point Hitch Attachment Procedure

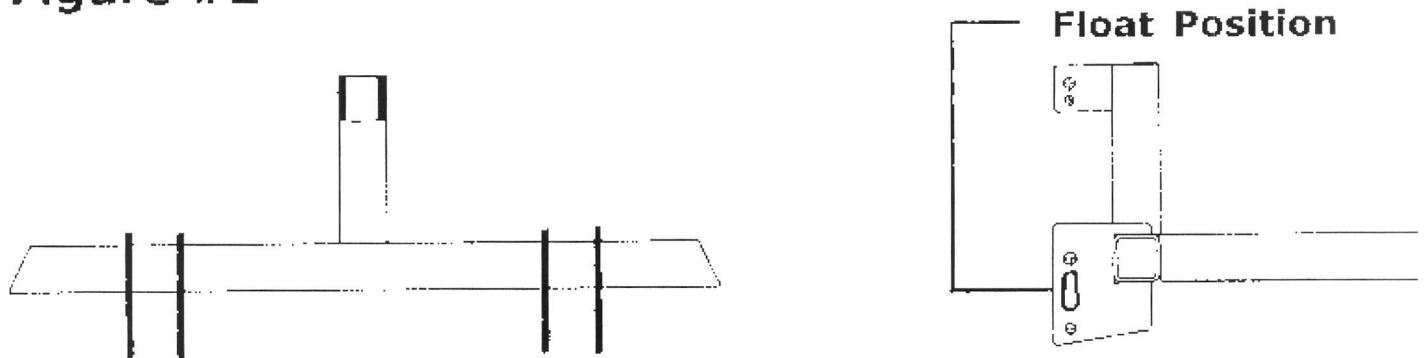
1. Prior to hitching to the BA-600 Super-Ject aerator, it must be held in an upright, level position by the jack legs.
2. Back the tractor up until the lower link arm ball joint is in side the aerator double lugs. (see Figure #2)
3. Install the proper class of link pins supplied to retain both lower link arms. Note: 7/8" Flat washers must be on both ends of the hitch pins.
4. Attach the upper link (turnbuckle or hydraulic top link) between the aerator double lugs, using the proper class of top link pin and lynch pin.
5. Once the BA-600 Super-Ject aerator is attached, adjust the lateral limiters or sway chains/bars using the turnbuckles to remove slack in the lower link arms. Make sure the unit is square to the tractor and has no side sway when raised or lowered.
6. Lift the BA-600 Super-Ject aerator hydraulically, completely retract the jack legs.
Warning: Tines are sharp. To avoid injury keep hands and feet away from the tine shafts.
7. Lower the BA-600 Super-Ject aerator to the ground, adjust the top link turnbuckle or hydraulic top link until the aerator's mast is perpendicular to the ground (see Figure #3).

Note: This adjustment will ensure that the aerator will be in the correct position, both vertical and level when operating.

8. From the rear of the BA-600 Super-Ject aerator, add ballast to the weight box until full depth tine penetration into the ground is achieved. The amount of the ballast weight required will be determined by soil type, moisture content and the amount of compaction present.

Warning: Maximum ballast weight is 300 lbs. per ft.

Figure #2



Operation Instructions

Danger: Contact with buried gas, electrical cable or irrigation pipes can result in serious injury or death. Know the locations of these underground obstructions prior to aerating an area.

1. Lower the aerator into the ground with the tines at full depth penetration (or partial penetration if so desired by the operator).
2. Drive the tractor at speeds which are safe (tractor stability

and steering ability is maintained) and comfortable for the operator. **Caution:** Excessive tractor speed or radical operation when turning can endanger vehicle operation and operator safety.

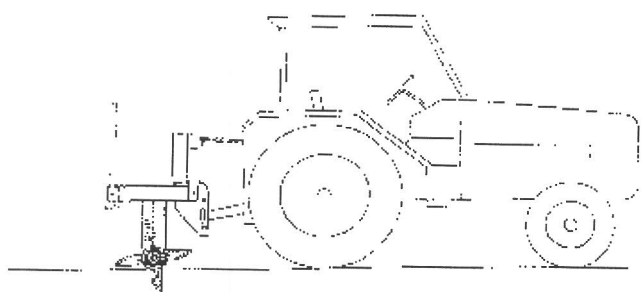
3. Do Not make sharp turns with the tines in the ground. The tines must be lifted out of the ground when making turns.
4. Severely compacted traffic areas may have to be aerated several times in 30 degrees cross section patterns.
5. When the BA-600 Super-Ject is not in use, remove the jack retaining pin, extend the leg to the maximum extension, re-insert the jack pin. Always use the extended jack legs for safe storage.

Warning: Never operate the tractor if the front steering is in adequate or light in the front end..

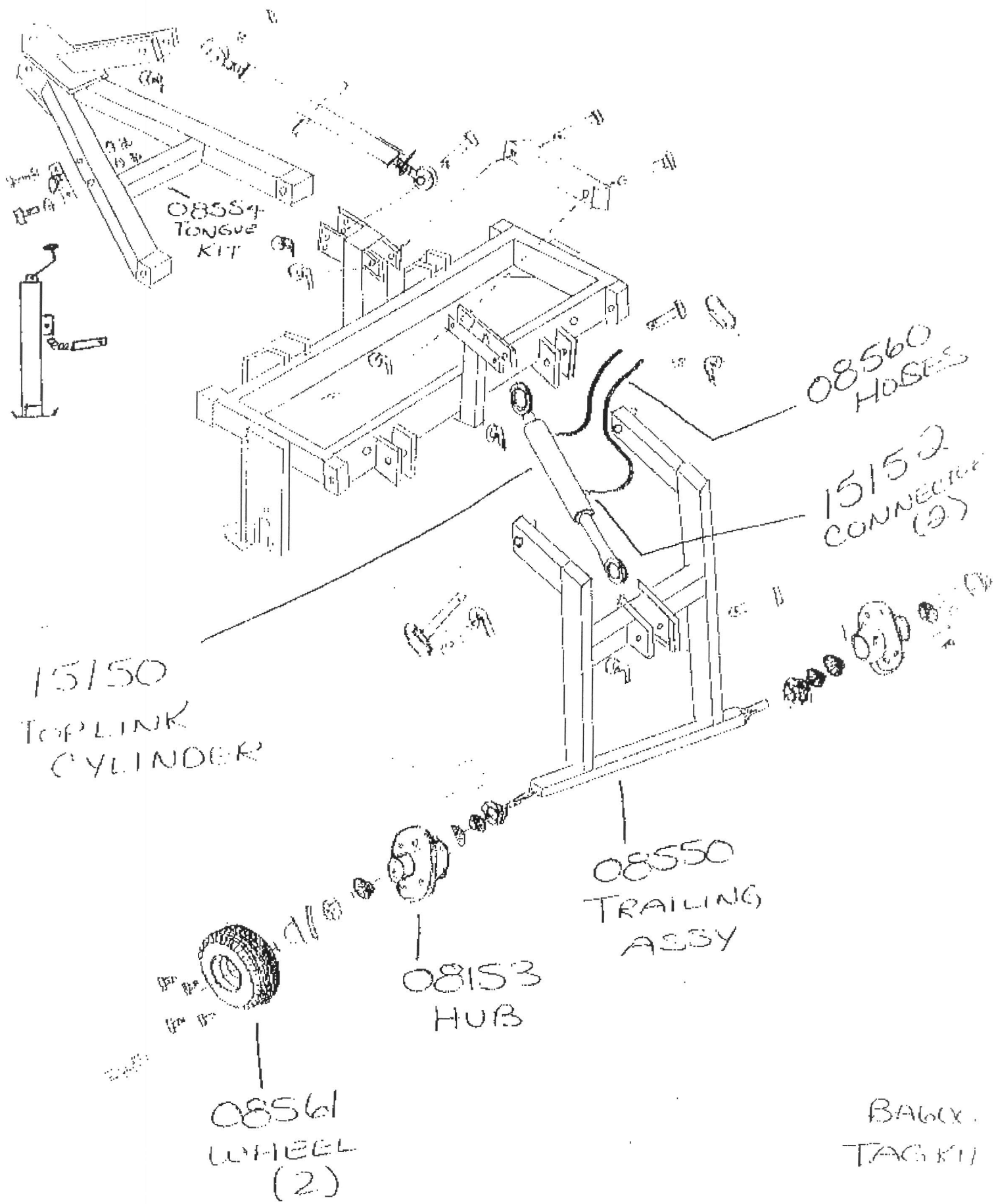
Warning: If the combined weight of the aerator and the ballast exceeds the hydraulic lift capabilities of the tractor's Three Point Hitch, then a tow behind unit is to be used.

Warning: Excessive ballast in the weight box will result in loss of tractor stability and the loss of steering ability on Three Point Hitch. In these extreme instances front counter balancing is required.

Warning: Insure that all weight used as either ballast, or counter balancing is properly secured.



In excessive stony conditions reduce ballast, operating speed, and ensure hitch arms are in "float" slots on hitch or aerator.



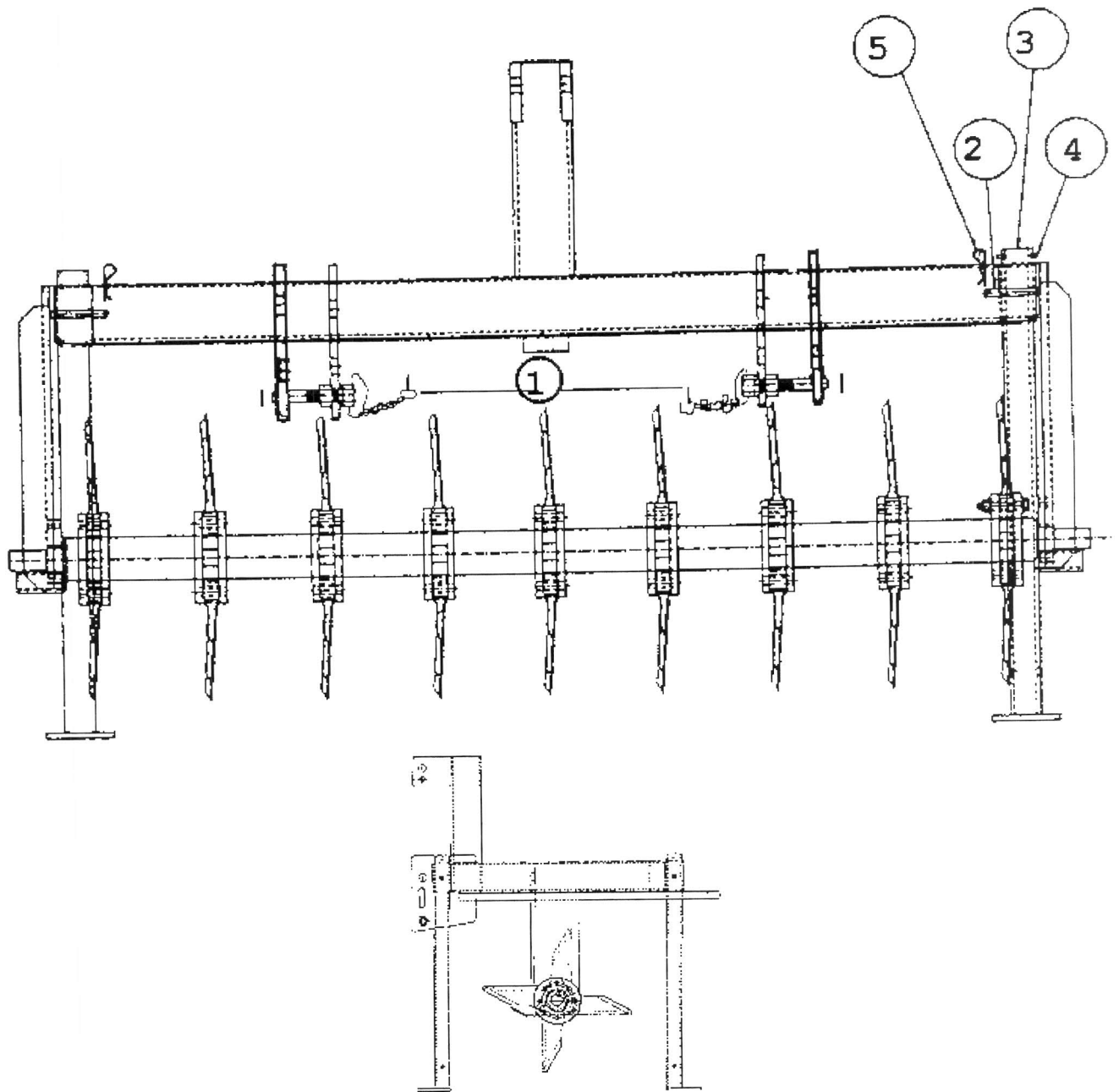
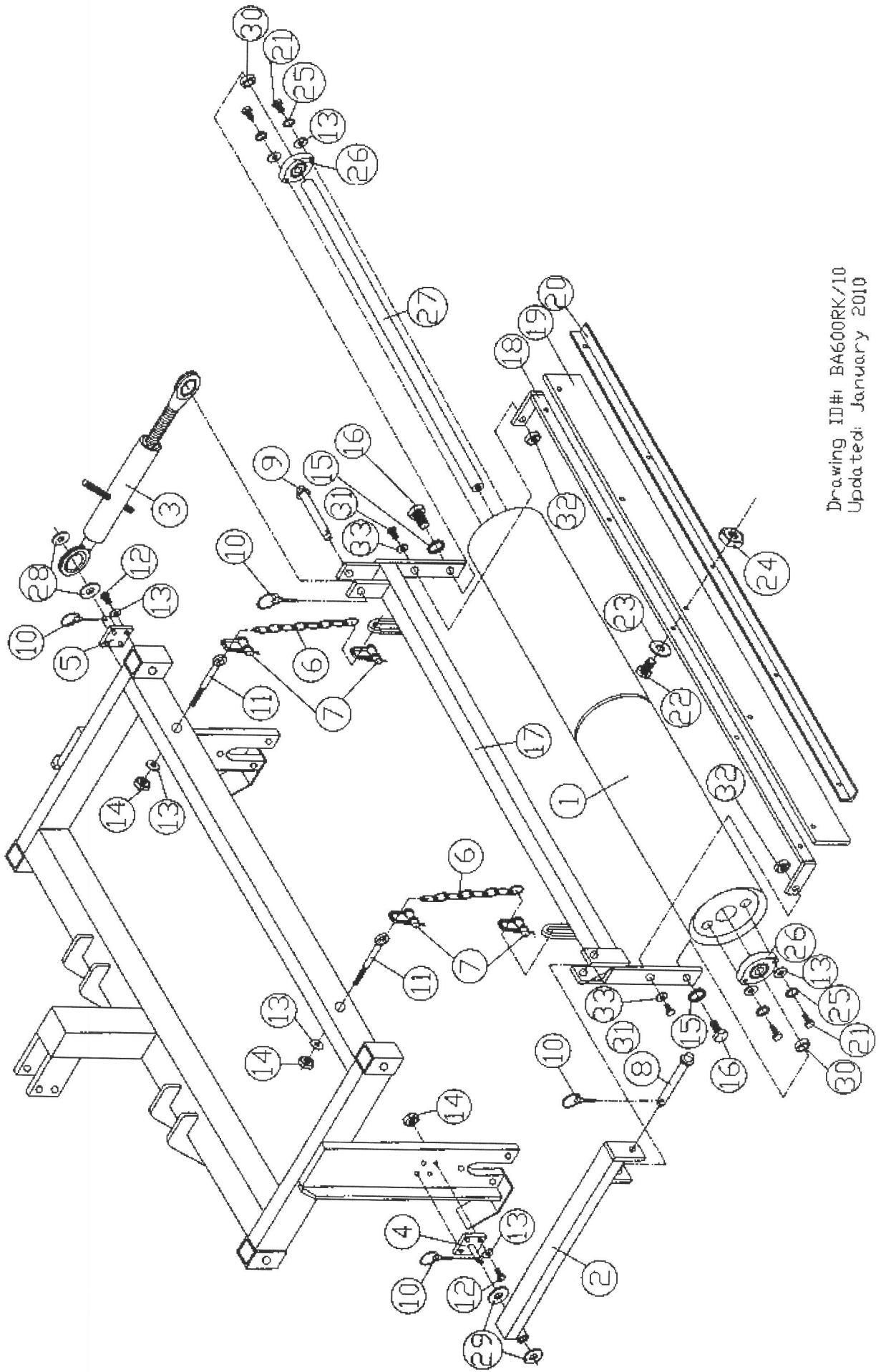


Figure #4

#	Part #	Part Description	Qty
1	15116	Hitch Pin w/chain and lynch Pin	2
2	08535	Jack Pin	4
3	08542	Jack Leg	4
4	08534	Roll Pin 1/4" X 2-3/4 Lg	4
5	08174	Hair Pin	4



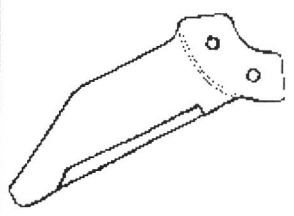
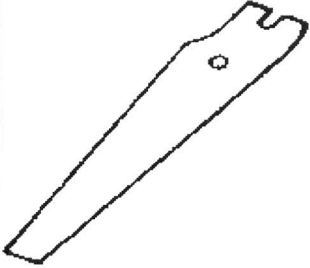
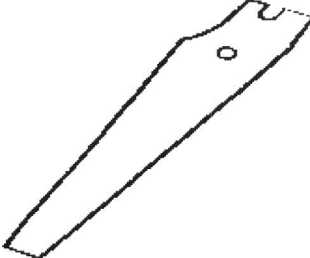
Drawing ID#: BA600RK/10
Updated: January 2010

BA-600 ROLLER KIT

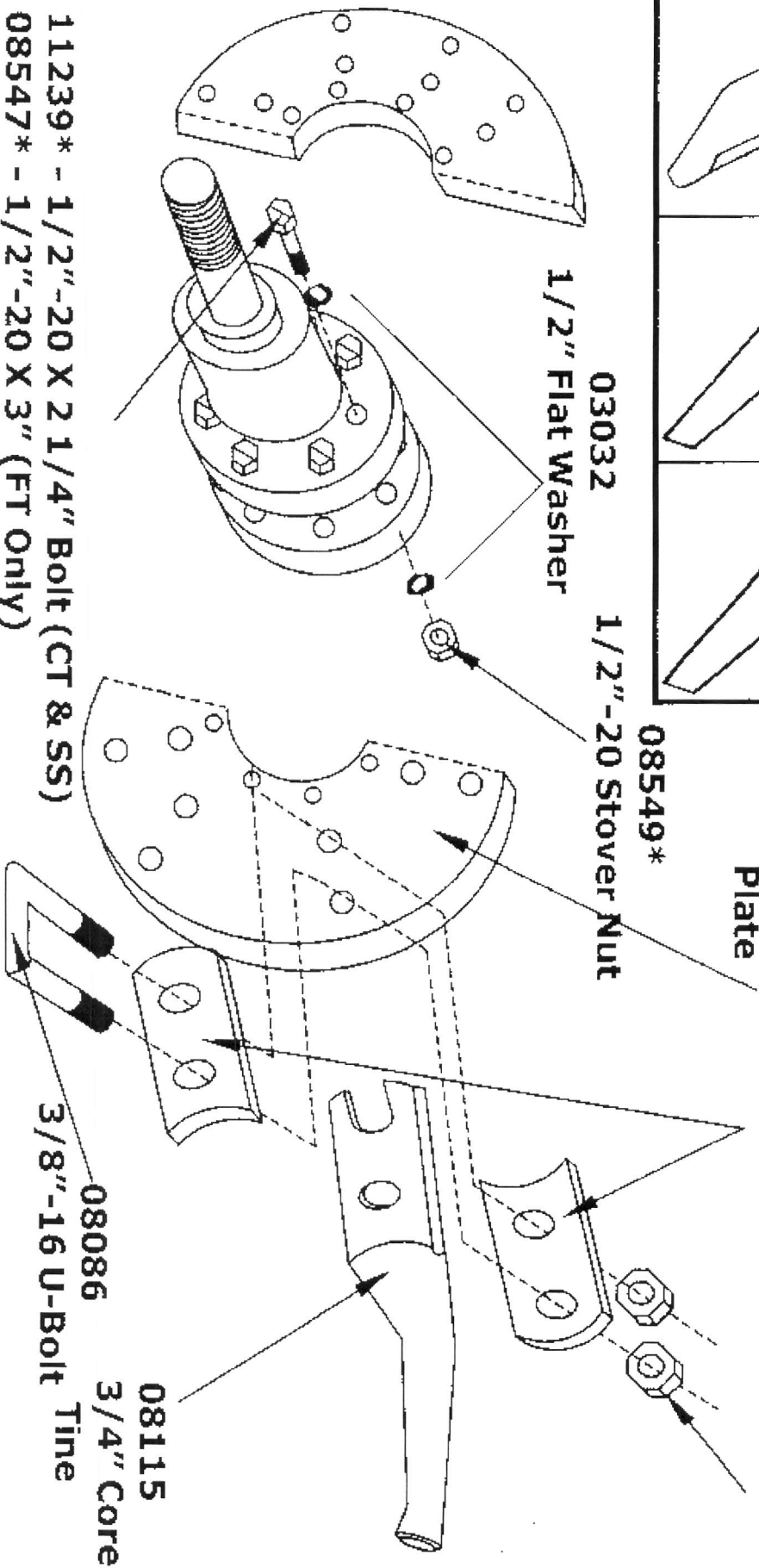
Item No.	Part No.	Part Description	Qty.
1	15096	Roller, 3' Half	2
2	08518	Roller Arm	1
3	08175	Link - Adjusting	1
4	08517	Pivot Assembly 7/8"	1
5	08516	R/H Pivot Block	1
6	08520	Chain, Suspension 5/16" X 16 Link	2
7	08171	Chain, Shackle	4
8	08173	Pin, Long	1
9	08152	Pin, Short	1
10	15045	Pin, Lynch	4
11	08176	Bolt, Eye 3/8"-16	2
12	08083	Bolt, 3/8"-16 X 2.25" HHC	8
13	02024	Washer, 3/8" Flat SAE	14
14	03022	Nut, Nylon Insert 3/8"-16	10
15	15042	Washer, 3/4" Lock	2
16	15041	Bolt, 3/4"-10 X 2" HHC	2
17	08519	Frame, BA-600 Roller	1
18	08166	Bracket - Scraper	1
19	08168	Rubber - Scraper	1
20	08167	Scraper - Clamp	1
21	03016	Bolt, 3/8"-16X1" HHC	4
22	03057	Bolt, 5/16"-18 X 1.5	8
23	02005	Washer, 5/16" SAE	8
24	02004	Nut, Nylon Insert 5/16"-18	8
25	03057	Washer, 3/8" Lock	4
26	15027	Bearing, Roller	2
27	08164	Shaft Roller	1
28	06037	Washer, 3/4" Flat SAE	2
29	11258	Washer, 7/8" Flat SAE	2
30	15019	Collar - Roller	2
31	11225	Bolt - 1/2"-13 X 1.75" HHC	2
32	03024	Nut - 1/2"-13 Nylon Insert	2
33	03032	Washer - 1/2" Flat SAE	2



**BA-600
Super-Ject
Aerator**

<p>08543 Fracture Time</p> 	<p>08544 Slitter/Slicer 5mm</p> 	<p>08545 Slitter/Slicer 8mm</p> 
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11239* - 1/2"-20 X 2 1/4" Bolt (CT & SS)
08547* - 1/2"-20 X 3" (FT Only)



08546
Tine Mounting
Plate

08085
Saddles

08087
3/8"-16
Flange Nut

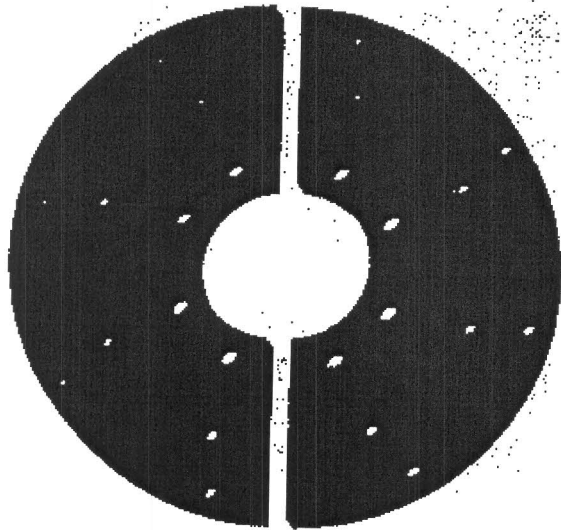
08549*
1/2"-20 Stover Nut

03032
1/2" Flat Washer

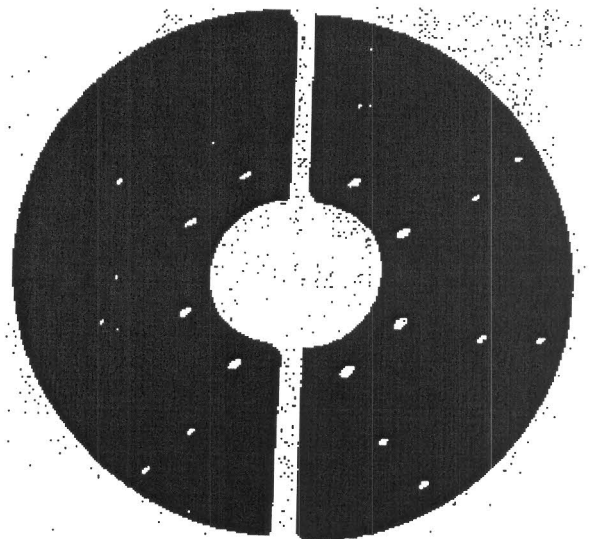
08115
3/4" Core

08086
3/8"-16 U-Bolt

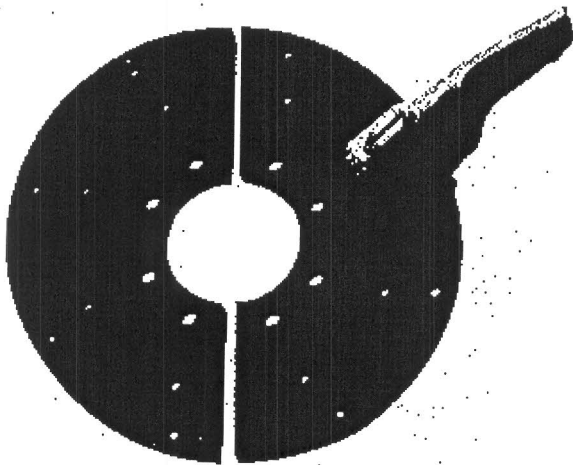
BA-600 Super-Ject Aerator Core Tine Kit Plate and Tine Installation



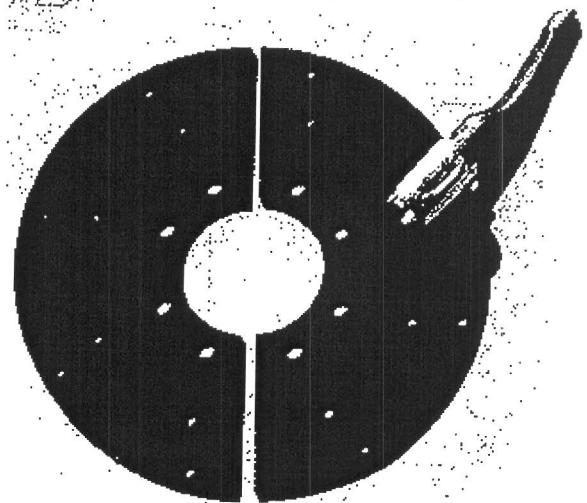
Right Way
(notice the hole pattern)



Wrong Way
(notice hole pattern)



Right Way
(Plates are Correct and Tine is placed in the right direction)



Wrong Way
(Plates are Correct and Tine is placed in the wrong direction)