

BANNERMAN



**BA-4M
MINI
AERATOR**

OPERATOR'S MANUAL & PARTS BREAKDOWN

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Bannerman Ltd.

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www.sportsturfmagic.com

March 3, 2014

Dear Owner,

Welcome to Bannerman, the Home of Sports Turf Magic.

Your new **BA-M4 Mini Aerator** is designed to improve your total grooming performance. 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 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 equipment. The serial plate that identifies your model number and the 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 assistance, please feel free to contact your local Bannerman dealer or Bannerman directly.

Regards,

George Bannerman

George Bannerman
Corporate Secretary

BA-M4 Mini Aerator

E C Declaration of Conformity



Gordon Bannerman Ltd., 41 Kelfield Street, Rexdale, Ontario, Canada M9W 5A3. As manufacturer certifies that the machinery stipulated below complies with all the relevant provisions of the:

EC Machinery Directive 98/37/EC and other relevant directives

and the National Laws and Regulations adopting this directive.

Manufacturer : Gordon Bannerman Ltd.
Machine description : Lawn Aerator
Type : Bannerman BA-4 Air-Ject Aerator
Serial No. :- _____

Harmonised standards applied: (including parts/clauses of):

EN 292 pt 1, EN 292 pt 2, EN 294 1992, BSEN 563:1994

Together with all relevant National Technical Standards and Specifications as applicable: -
(Including parts/clauses of):

"Responsible" Person empowered to sign: George Bannerman Mr George Bannerman
Position in Company: - Corporate Secretary

Date: Oct 15/2002

Warranty Statement

Bannerman Ltd. warranties all **Bannerman BA-M4 Mini Aerator**, when properly assembled and PDI'd, 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 products. Service life will vary with application, operating environment, level of maintenance and other factors beyond our control.

Bannerman Ltd.'s sole responsibility for the **Bannerman BA-M4 Mini 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!!

Be sure to pay proper attention to these 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. Gasoline/Petrol is highly flammable
 - Do not smoke while refueling the engine.
 - Do not refuel while the engine is running.
 - Do not touch a hot exhaust.
 - Do not operate in close proximity to children or animals.
 - Do not allow persons under the age of 16 years to operate this machine.
 - Do not operate this machine while under the influence of alcohol or drugs.
 - Do not operate this machine on a steep gradient.
 - Never operate this machine without the safety guards in place.
 - Keep hands and feet clear of the moving tines at all times.
 - Take care when adding or removing weights.
 - Wear protective safety clothing i.e. safety footwear, ear protectors, gloves, safety goggles etc.
 - Always start this machine at idle speed.
 - Before starting to aerate check the ground for obstructions such as underground cables, pipes, bricks, tree roots, etc.

BA-M4 Mini Aerator

Specifications

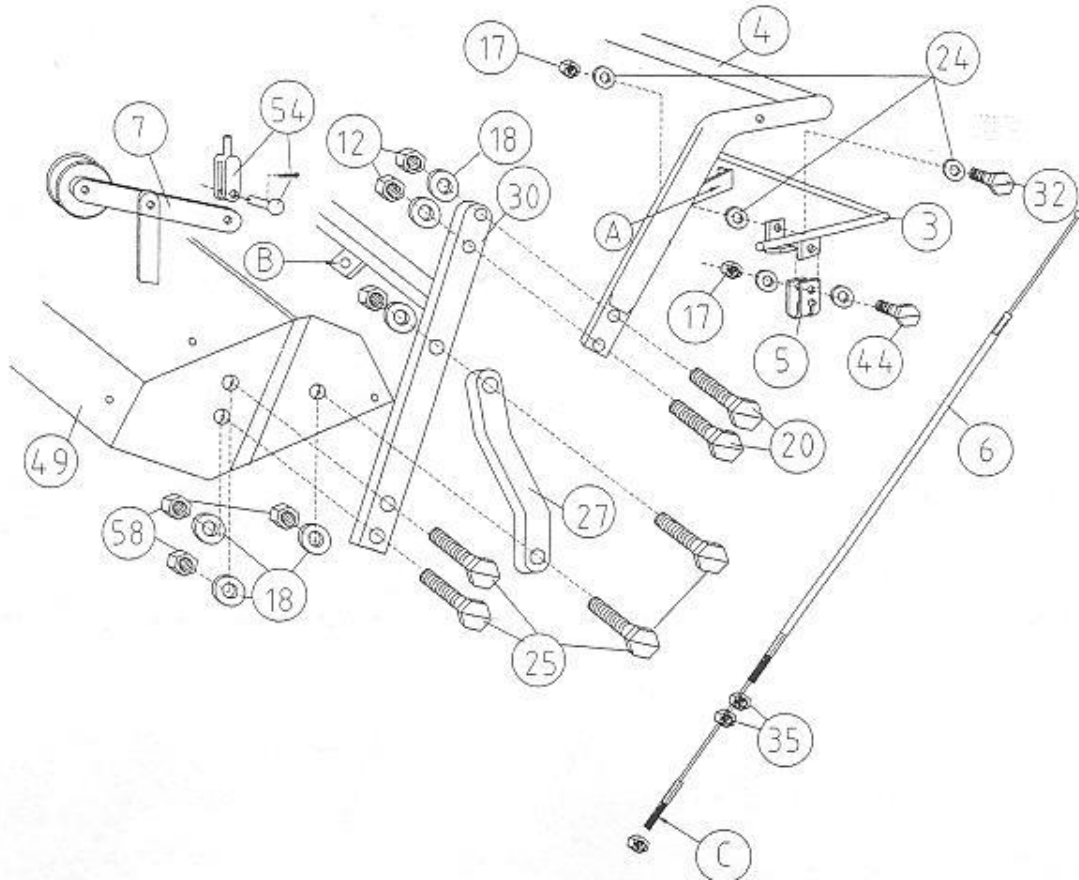
Power Supply	OVH four stroke Honda Gasoline/Petrol Engine	
Transmission	Engine Reduction Box	
Fuel	Unleaded	
Engine Oil	10W40	
Weight:	225 lbs.	100 Kg
Working Width:	15 inches	cm
Vibration:	Dominant axis 8.7 m/sec²	
Recommended tire pressure	8 PSI	

Noise Reading at Operator Station	
(A) Weighted sound pressure	84.9 dB (A)
(C) Peak weighted sound pressure	117.7 dB (C)
GUARANTEED sound powerLevel Lwa 96dB (A)	

BA-M4 Mini Aerator

Assembly

1. Install the lower handle to the main frame using 8 of the 3/8" X 1" bolts, 8 of the 3/8" nuts, and 16 of the 3/8" flat washers which are provided. Tighten later.
2. Install the lower handle support bars – tighten fasteners on either side of the handle. Tighten all nuts and bolts securely.
3. Install the upper handle using 4 of the 5/6" bolts, 4 of the 5/16" locknuts, and 8 of the 5/16" flat washers.
4. Assemble clutch handle bar on to the upper handle using 2 of the 1/4" X 1-3/4" bolts, 6 of the 1/4" flat washers and 2 of the 1/4" lock nuts. Next install the ball clevis #5 to the clutch handle bar using 1 of the 1/4" X 1" bolts, 1 of the 1/4" lock nuts. All pieces must move freely. Attach the clutch cable #6 to the clevis #53 and #5.

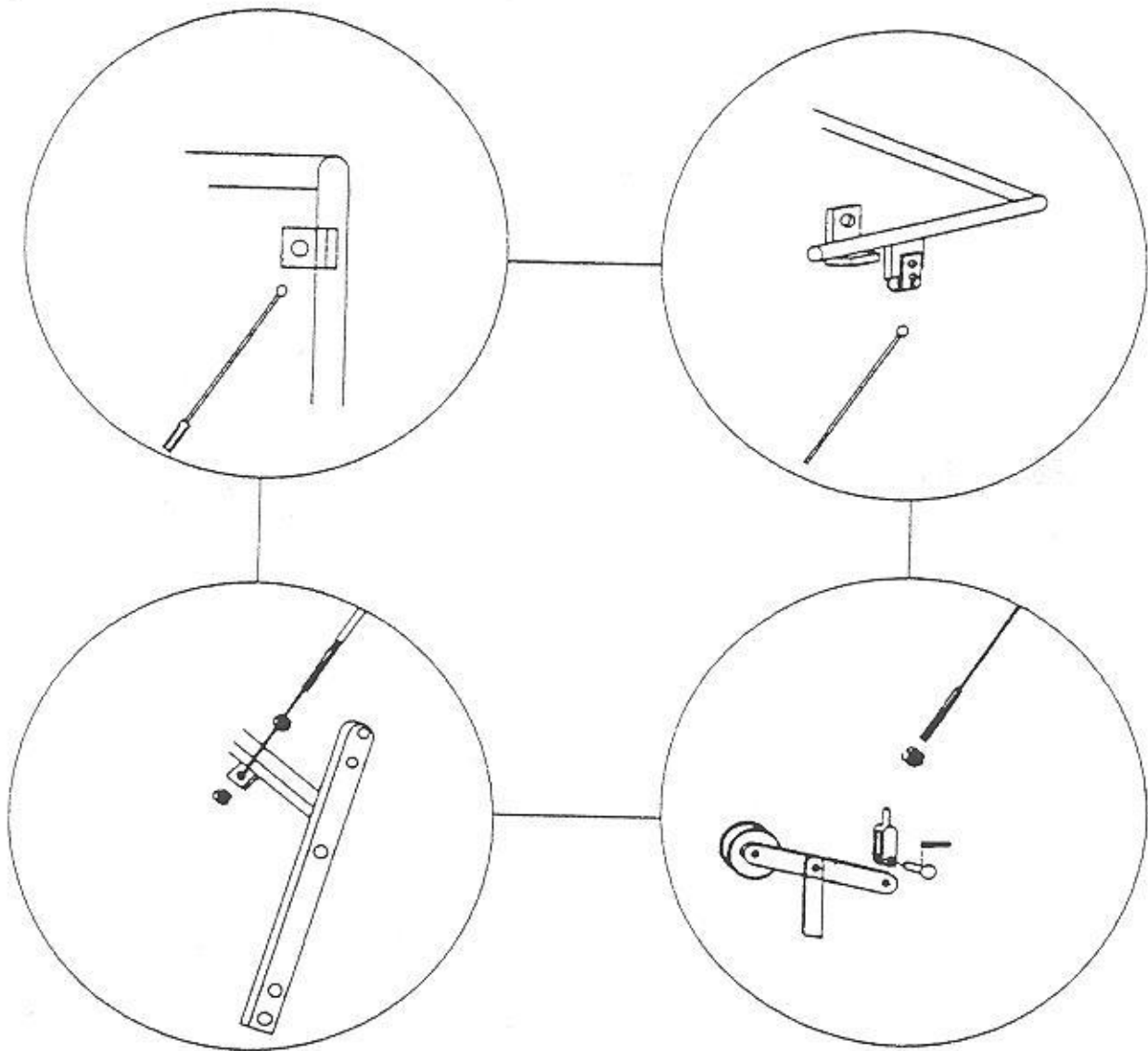


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Clutch Adjustment

The BA-M4 Mini Aerator is equipped with a belt tightening clutch.

1. Squeeze the clutch control bar up towards the handle as far as possible. This causes the idler pulley to press down and tighten the V-belt. Proper tension is obtained when the belt does not slip when the tines are placed in the ground. If the V-belt slips under load, release the clutch cable and turn the threaded cable stud clockwise two or three rotations to shorten the clutch cable. Note: Over tightening of the V-belt may cause damage to other components including the belt itself. It may become necessary to back the clutch cable all the way off (see fig. 3) and loosen the engine mounting bolts and slide the engine back 1/4" and tighten the bolts securely.

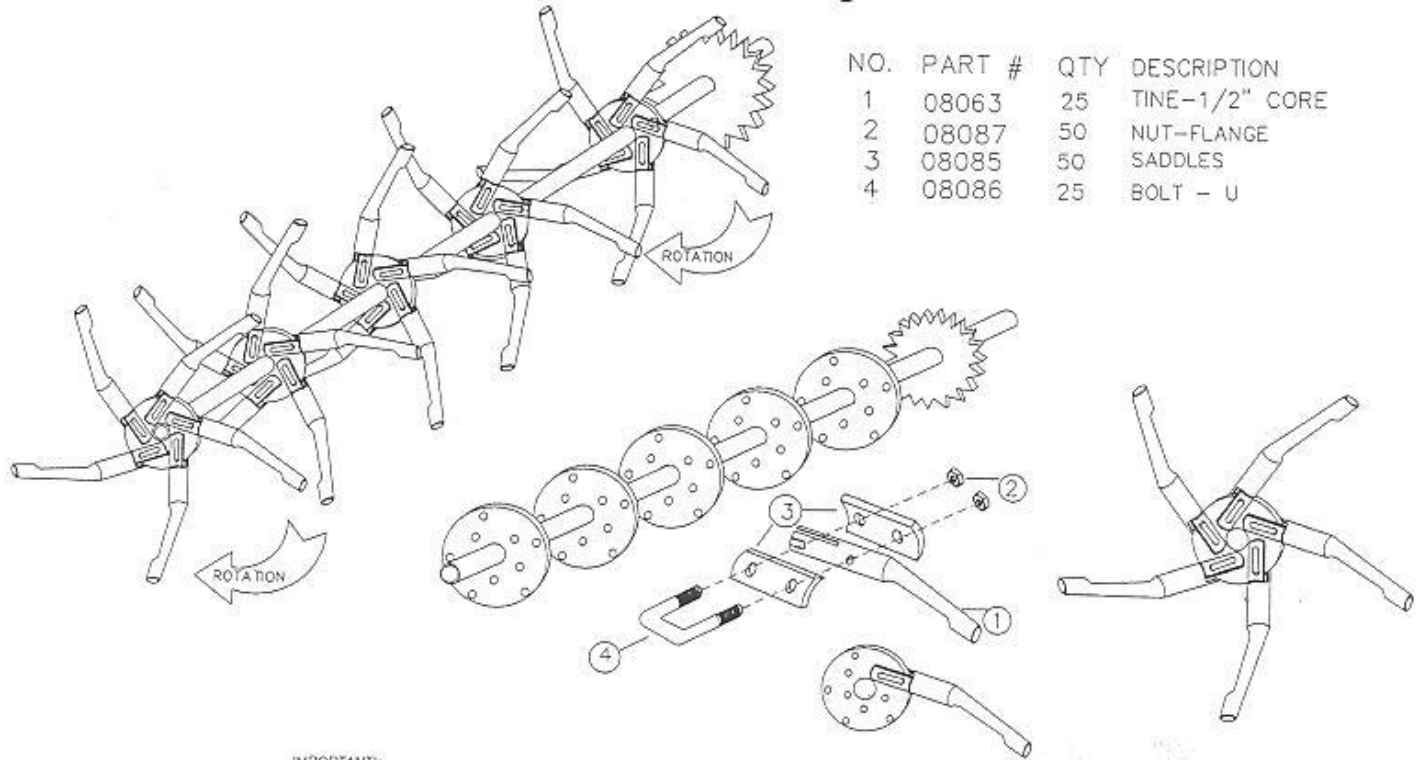


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Tine Installation

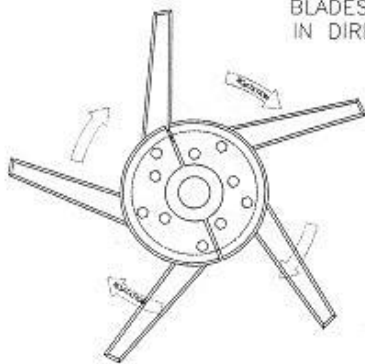
Tines are supplied in the carton. (20 Core Tines, 20 Slitter Slicer, or 15 Fracture Tines). These are attached to the 5 disc reel as follows:

1. Attach the tines to the reel using the bolts and nuts provided - check direction of tines and tighten securely. The open side of the core tine faces toward the back of the machine when in the ground.



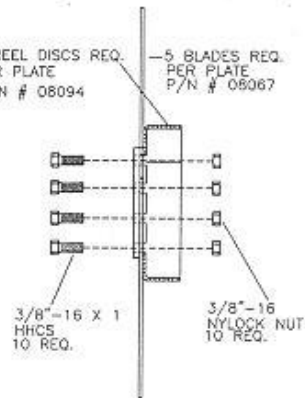
NO.	PART #	QTY	DESCRIPTION
1	08063	25	TINE-1/2" CORE
2	08087	50	NUT-FLANGE
3	08085	50	SADDLES
4	08086	25	BOLT - U

IMPORTANT:
BLADES TO BE MOUNTED
IN DIRECTION SHOWN.

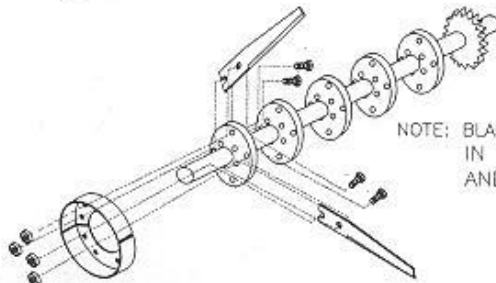


2 REEL DISCS REQ.
PER PLATE
P/N # 08094

5 BLADES REQ.
PER PLATE
P/N # 08067



NOTE: BLADES ARE TO BE MOUNTED
IN BETWEEN SITTER DISCS
AND REEL ASSEMBLY PLATES ON SHAFT.



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Engine

Proper engine operation and maintenance instructions have been provided with this unit by the engine manufacturer. It is important to read and maintain this manual. Engine difficulty, if any, should be reported to an authorized engine manufacturers' service centre. Warranty of this engine and engine accessories are also provided by the engine manufacturer.

Operation

Read these instructions carefully.

Check the fuel and oil levels before starting the engine.

Switch on the fuel supply and ignition.

Start the engine by pulling the recoil starter on the engine, if necessary use the choke located under the air filter.

Tilt the machine backward (toward the operator) until the aerator tines are free of the ground.

Engage the operator presence control clutch.

Tilt machine forward (away from the operator) until aeration tines make contact with the ground.

The rear wheels of the aerator are not powered, however, the rotating action of the tine reel will pull the machine forward.

Add or remove weights from the front of the machine to obtain the desired depth of penetration.

It is recommended to lift the wheels of the unit off of the ground when in operation to ensure total weight on the tines to reach maximum depth of aeration.

At the end of the strip of turf to be aerated, disengage the clutch and tilt the machine backward onto the wheels lifting the aeration tines out of the ground, turn the machine reengage the operator presence control clutch, tilt the machine forward and continue.

The tines are not to be in contact with the turf in a turn. Damage sustained by turning in the turf is not covered by warranty.

In dry conditions it is not advisable to use the aerator.
Use only for aerating turf.

After every use always clean the machine, ensuring that the core tines are free of soil, and lightly oil the inside and outside of the core tines with a vegetable oil.

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Service

Before attempting any maintenance or removal of the guards, stop the engine, switch off the fuel supply and remove the spark plug lead from the spark plug. Two 6mm nuts and bolt hold the metal belt guard in place.

Fit only genuine components to this machine.

After every use always clean the machine, ensuring that the core tines are free of soil, and lightly oil the inside and outside of the core tines with a vegetable oil. This ensures the cores are ejected easily when operated the next time, resulting in better penetration of the turf.

Check that the tine fixing u-bolt and nuts are tightened correctly.

To replace tines, loosen and remove the flange nuts, remove the saddles and the u-bolt from the tine, slide the tine forward. The install new tines reverse this operation.

Lubrication

1. There are 3 grease fitting on this aerator; one near the centre of the tine reel, and one on each wheel, we suggest that these points be lubricated after each day's operation.
2. Oil the chain and check its tension.
3. Grease wheel bearings.
4. Oil clutch lever and belt tightening pivot bar.

NOTES: