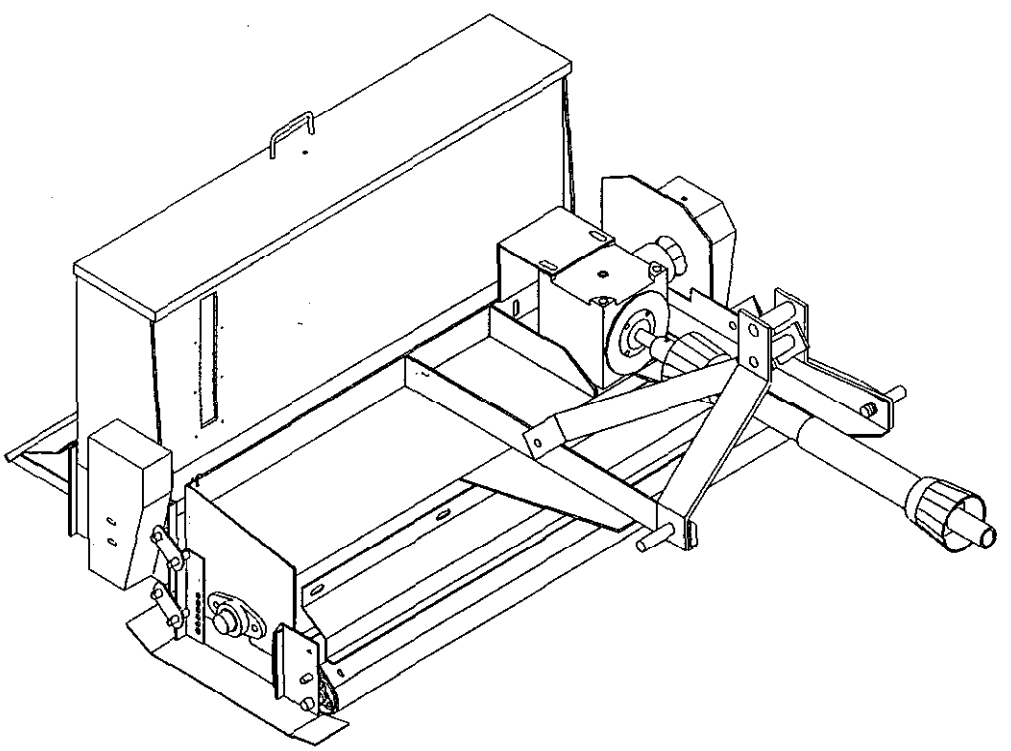
FORM NO. 95-4864

TORO®

MODEL NO. 44830 - 70001 & UP
MODEL NO. 44831 - 70001 & UP
MODEL NO. 44835 - 70001 & UP

OPERATOR'S MANUAL

AEROTHATCH 83/SEEDER 93



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FOREWORD

Thank you for buying a high quality Toro turf care product. To get the best performance from this machine, operate and maintain it according to the instructions in this manual.

Toro also wants to stress the importance of safety. You and anyone else using or maintaining this machine are strongly urged to read this manual, especially all the safety instructions.

DANGER, WARNING and CAUTION, used with the triangular safety alert symbol, highlight safety messages. Always read and understand these messages because they relate to personal injury and your safety.

If you ever need help or have questions about your new Toro turf care product, contact your local Authorized Toro Distributor. The Toro Distributor has a complete supply of replacement parts, a full line of accessories and a professional service staff to support you. Keep your Toro all Toro. Buy genuine Toro parts and accessories.

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SAFETY INSTRUCTIONS

The safety alert symbol means CAUTION, WARNING or DANGER - "personal safety instruction". Read and understand the instruction because it has to do with safety. Failure to comply with the instruction may result in personal injury.

BEFORE OPERATING

1. Read and understand the contents of this manual before starting and operating the machine. Become familiar with all controls and know how to stop quickly. A free replacement manual is available by sending complete Model and Serial Number to:

The Toro Company
8111 Lyndale Avenue South
Minneapolis, Minnesota 55420

2. Do not allow children to operate the machine. Do not allow adults to operate the machine without proper instruction.

3. Never operate the machine while under the influence of drugs or alcohol.

4. Keep all shields and safety devices in place. If a shield, safety device or decal becomes damaged, malfunctioning or illegible, repair or replace it before operation is commenced. Also, tighten loose nuts, bolts to ensure machine is in safe operating condition. This includes all shields on the PTO.

5. Before each use, be sure all bolts and nuts are tight. Check the general condition of the PTO and chain.

6. Do not alter this equipment in any manner which may cause hazardous conditions.

WHILE OPERATING

DANGER

ROTATING BLADES, DISCS OR TINES CAN CAUSE SERIOUS INJURY

- Keep hands and feet out of blades, discs or tines while engine is running.
- Keep bystanders out of area of operation.
- Stop engine before servicing machine

7. Using the machine demands attention, and to prevent loss of control:

A. Operate only in daylight or when there is good artificial light.

B. Drive slowly.

C. Watch for hole or other hazards.

D. Look behind machine before backing up.

SAFETY INSTRUCTIONS (Continued)

E. Do not drive close to a sand trap, ditch, creek or other hazard.

F. Reduce speed when making sharp turns and when turning on a hillside.

G. Avoid sudden stops and starts.

8. Operator must be skilled and trained in how to drive on hillsides. Failure to use caution on slopes or hills may cause loss of control possibly resulting in personal injury or death.

9. If engine stalls or machine loses headway and cannot make it to the top of a slope, do not turn machine around. Always back slowly straight down the slope.

10. Do not carry passengers on the machine or tractor and keep everyone away from the areas of operation.

11. Before getting off the tractor seat:

A. Place the tractor in neutral position and put the engine in idle position.

B. Set the parking brake and disengage the PTO.

C. Shut the engine off and remove key from ignition switch. Wait for all movement to stop before getting off tractor seat.

12. ALWAYS follow all safety precautions in the tractor's operator manual pertaining to attachments.

MAINTENANCE

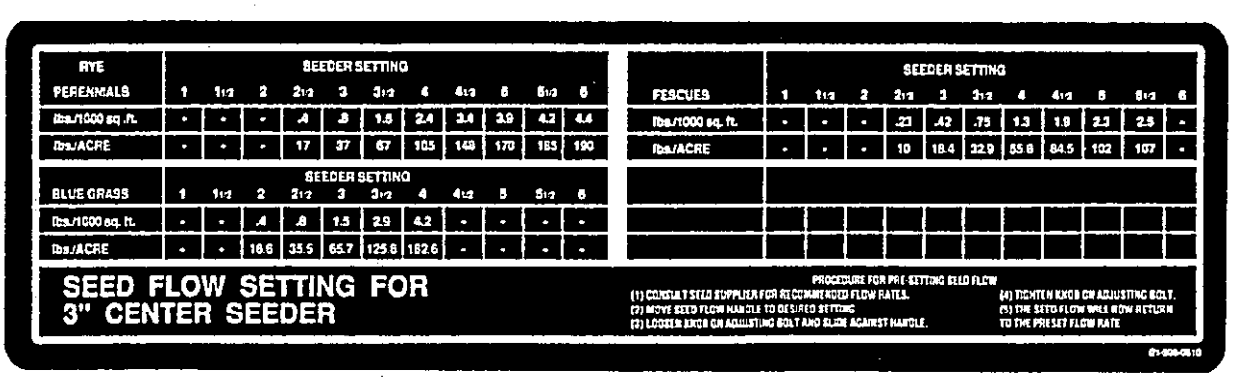
13. Remove the key from the tractor's ignition switch to prevent accidental starting of the engine when servicing, adjusting or storing the machine.

14. If major repairs are ever needed or assistance desired, contact an Authorized TORO Distributor.

15. Make sure machine is in safe operating condition by keeping nuts, bolts and screws tight.

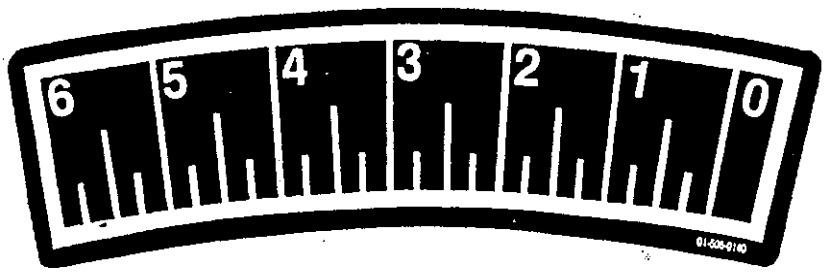
SAFETY AND INSTRUCTION DECALS

The following safety and instruction decals are installed on the unit. Replace any decals that becomes damaged or illegible. Part numbers for decals are listed below and in your Parts Catalog. Order replacements from your Authorized Toro Distributor.



ON SEED BOX (Seeder 93)
(Part No. 01-506-0610)

SAFETY AND INSTRUCTION DECALS (Continued)



ALIGNED WITH POINTER (Seeder 93)
(Part No. 01-506-0140)



ON HITCH ARM (Aerothatch 83)
(Part No. 01-506-0130)



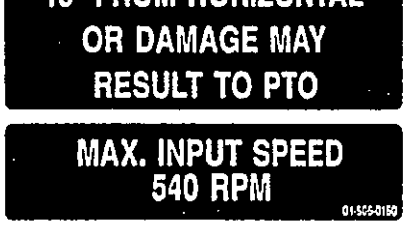
NEAR BEARINGS &
GREASE POINTS
(Part No. 58-6520)



ON ROLLER SHIELDS (Aerothatch 83)
ON REAR GUARD (Seeder 93)
(Part No. 01-506-0340)



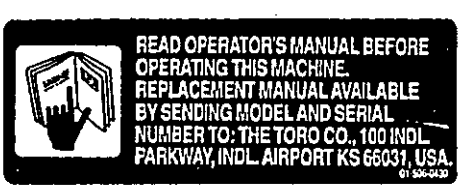
ON SEED BOX LID (Seeder 93)
(Part No. 01-506-0100)



ON MAIN FRAME (Aerothatch 83)
(Part No. 01-506-0160)



ON CHAIN GUARDS
(Part No. 01-506-0050)



ON MAIN FRAME (Aerothatch 93)
ON SEED BOX LID (Seeder 93)
(Part No. 01-506-0430)

SPECIFICATIONS

AEROTHATCH 83

AERATING/THATCH SWATH: 48", blade tip to blade tip. Offset mounting covers the tire tread.

HITCH: Standard 3 point hitch.

DRIVE: PTO to gearbox, sealed bearing and sprocket, #H80 chain to blade shaft.

GEARBOX: Heavy duty 65 HP rated gearbox features right angle drive with extended output shaft, reverse blade operation can be achieved by reverse mounting of the gearbox.

BEARINGS: 1-1/4", High speed, sealed and self aligning.

BLADES: **3" center** - (16) 12 ga. 10 pt. (Optional: 7 ga and 10 ga., 10 pt.)

1" center - (43) 12 ga. 10 pt.

BLADE SHAFT: 1-1/2" sq., high carbon steel.

BLADE DEPTH: 0-3" in 1/4" increments.

GUARDS: Safety shield in front and rear of blades, standard.

FRAME: All welded steel construction.

SKID SHOES: Steel with 1/4" plate iron brace and gussets.

ROLLER: Full width, 3-1/2" diameter roller with sealed bearings. Roller is integral with the skid shoes, also, incorporates a spring loaded wiper for full width of roller.

DIMENSIONS: Width - 60"
Length - 57"
Height - 36"(with 3 pt. hitch)

SHIPPING WEIGHT: 550 lbs.

SEEDER 93

FRAME: All welded steel construction.

SEEDING WIDTH: Swath 48"

DRIVE: Ground power, chain connector.

BEARINGS: Self sealed throughout.

SEED HOPPER: 100 lbs. capacity.

SEED AUGER: 1" round shaft with 16 augers welded at 83°angles.

SEED TUBES: Delivers seed to 16 grooves.

FEED OPENINGS: Adjustable to apply the desired rate.

DIMENSIONS: Height - 33"
Length - 13"
Width - 56"

SHIPPING WEIGHT: 300 lbs.

SET UP INSTRUCTIONS

ATTACH AEROTHATCH TO TRACTOR

IMPORTANT: The maximum PTO speed is 540 RPM. Do not operate at a faster speed because the blades, sprockets, gearbox and PTO will be damaged.

1. Connect the PTO half (1- 3/8" splined slip clutch) to the tractor. When new, the spring lock lever on the end of the PTO is hard to operate. Apply grease and move the lever until it snaps in and out freely. In the correct position the lever will spring back out and lock the two shafts together.

⚠ CAUTION

The spring lever must be locked into position before operating.

Failure to lock the spring lever will result in the PTO disconnecting from the tractor.

2. Lower the three point hitch arms on the tractor.

3. Position the Aerothatch so that the three point hitch arms of the tractor line up with the main arms of the aerothatch.

4. Connect the two halves of the PTO and slowly slide the Aerothatch toward the tractor.

5. Line up the three point arms and the stabilizer arm of the tractor with the Aerothatch. Secure all arms with the tractor hardware.

6. Slowly, lower and raise the unit to check the PTO length and proper ground clearance. Measure the distance from the bottom of the Aerothatch to the ground. It should be between 14" and 22". On some tractors it may be necessary to shorten the PTO shaft. To shorten:

A. Lift the aerothatch until the two halves are fully contracted. Determine how much needs to be cut off to raise the aerothatch to the proper ground clearance.

B. Remove the tractor PTO half from the implement half.

C. Cut the pre-determined amount off with a handsaw.

D. Replace the PTO half on the tractor. Lock the spring lever into place.

E. Lift the aerothatch up and re-check PTO length.

F. Repeat steps B through D if the PTO length is still too long.

AEROTHATCH 83 BLADE DEPTH SETTINGS (Fig. 1)

The blade thatching depth is adjustable from 0-3 inches. Settings are made by moving the skid shoes up or down on the holes in the frame at 1/4" increments.

To Set:

1. Remove the 1/2" x 1- 1/2" bolts attaching the skids to the frame.

2. Move the skid up or down until desired depth is reached. Moving the skids up allows a deeper setting and moving them down allows a shallow setting.

3. Replace the bolts attaching the skids to the frame. Secure tightly.

4. Repeat the procedure on the opposite side.

IMPORTANT: Always set both skids at the same depth. Uneven skid height will cause a variance in cutting depth across the blade shaft.

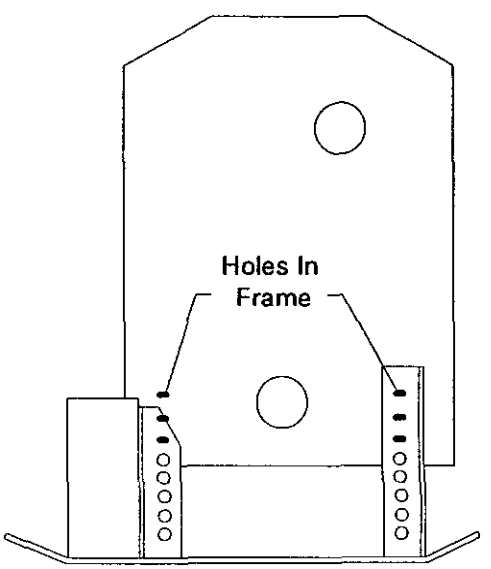


Figure 1

SET UP INSTRUCTIONS (Continued)

ATTACHING SEEDER TO AERTOTHATCH (Fig. 2)

The Aerothatch and Seeder are attached from the factory if ordered together. If ordered separately:

1. Remove the Seeder (A) from the skid.

2. Remove the Rear Guard from the rear of the Aerothatch. Store this guard to replace if the Seeder is taken off in the future.

3. Position the Seeder so the attaching pins (E) are in line with the rear skids of the Aerothatch.

4. Attach the Seeder Box Mounts (C) and secure with the presto pins (D).

5. Attach the chain (B) of the Seeder to the Aerothatch (F). Secure with presto pins (D).

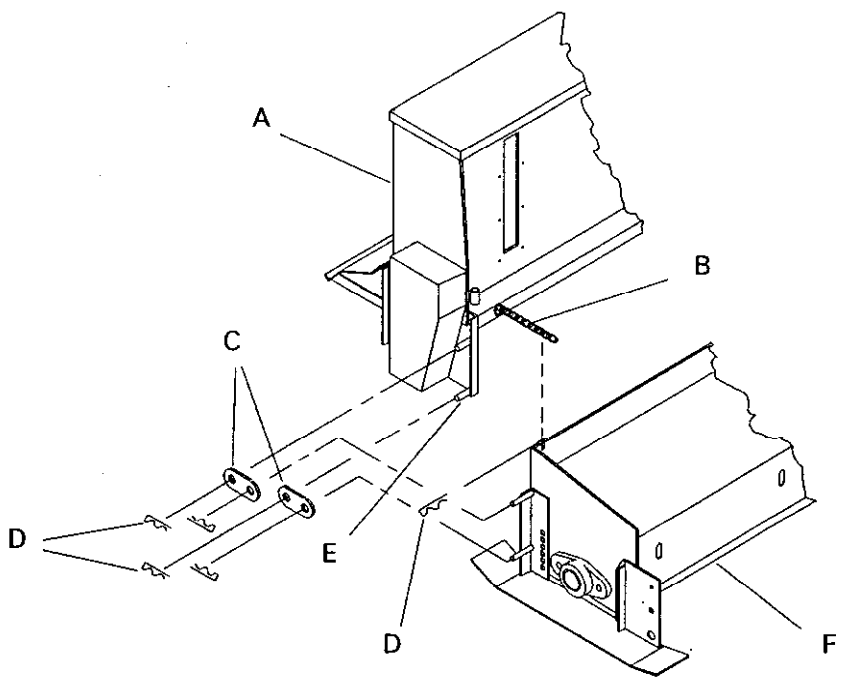


Figure 2

INSTALLING REMOTE SEED HANDLE (Fig. 3)

1. Attach the Rear Cable Bracket (Item 12 on illustrated parts list) to the cable and tighten nuts.

2. Attach the cable to the Seeder Handle. Fasten with the pin provided.

3. Slide the handle fully open and lock with knob. Close the cable until it is fully closed.

4. Install the Rear Cable Bracket (item 12) to the back as shown. Use fasteners shown on illustrated parts list and tighten.

5. Install the Cable Bracket (Item 7) to the side of the Seed Box as shown in the illustrated parts list. Tightened fasteners.

6. Route the Cable to the Cable Bracket and install using the "U" clamp. Tighten nuts.

7. Install the Cable Bracket (Item 7) to the corner of the gearbox as shown in the parts list.

8. Route Cable to the Cable Bracket and install. See parts lists.

9. Attach the Handle Mount Plate (Item 2) on top of the 3 point hitch arms using the existing bolts and nuts. Set in one of the three positions that is most comfortable to the operator. Tighten hardware.

SET UP INSTRUCTIONS (Continued)

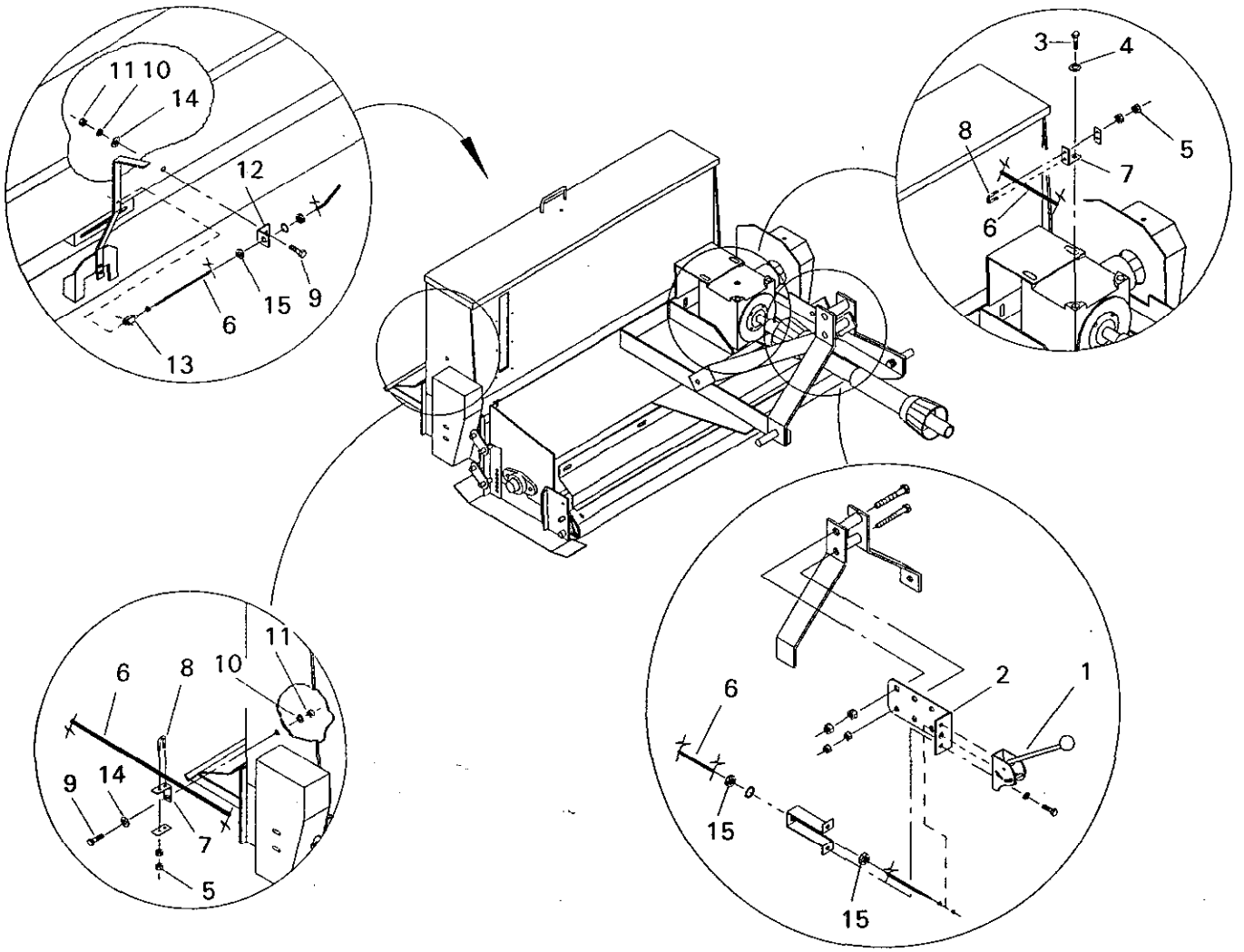


Figure 3

Ref. No.	Part No.	Description	No. Used
1	01-359-0250	Remote Handle	1
*	01-359-0360	Adapter - Clevis	1
2	93-004-0861	Handle Mount Plate	1
3	325-4	Capscrew - Hex Hd.	1
4	3253-7	Lock Washer	1
5	3217-5	Hex Nut	4
6	01-359-0230	Cable Assembly	1
7	93-004-0851	Cable Bracket	2

Ref. No.	Part No.	Description	No. Used
8	01-170-0040	Cable Bracket w/nuts	2
9	323-6	Capscrew - Hex Hd.	2
10	3253-5	Lock Washer	2
11	3217-7	Hex Nut	2
12	93-004-0841	Rear Cable Bracket	1
13	01-359-0240	Cable Clevis	1
14	3256-4	Flat Washer	2
15	3220-2	Jam Nut	3

DETERMINING SEED FLOW SETTINGS

DANGER

ROTATING AUGER WILL CAUSE SERIOUS INJURY

- **Never** put hands or feet inside the seed box while engine is running.

The Aeroseeder 93 is designed to plant 16 rows of seed, spaced 3" apart, 1/2" to 2" below the surface.

Each swath of the seeder can be calculated at 48".

For any calculation involving seed, the weight and size of individual seed must be taken into account. For instance, the approximate number of seed per pound for these varieties of seed are as follows:

RYE ..... 235,000/LB.
BLUEGRASS..... 1,800,000/LB.
FESCUE ..... 515,000/LB.

Also the sizes of the seed vary greatly. To allow for the differences of size and weight of different varieties of seed, a study of seed flow rates for TORO SEEDERS was made. Data was collected and used to tabulate the following charts.

	SEEDER SETTING										
RYE, PERENNIALS	1	1-1/2	2	2-1/2	3	3-1/2	4	4-1/2	5	5-1/2	6
lbs./1000 sq. ft.	—	—	—	.4	.8	1.5	2.4	3.4	3.9	4.2	4.4
lbs./ACRE	—	—	—	17	37	67	106	148	170	185	190

	SEEDER SETTING										
BLUEGRASS	1	1-1/2	2	2-1/2	3	3-1/2	4	4-1/2	5	5-1/2	6
lbs./1000 sq. ft.	—	—	.4	.8	1.5	2.9	4.2	—	—	—	—
lbs./ACRE	—	—	16.6	35.5	65.7	126.6	182.6	—	—	—	—

	SEEDER SETTING										
FESCUES	1	1-1/2	2	2-1/2	3	3-1/2	4	4-1/2	5	5-1/2	6
lbs./1000 sq. ft.	—	—	—	.23	.42	.76	1.3	1.9	2.3	2.5	—
lbs./ACRE	—	—	—	10	18.4	32.9	56.8	84.6	102	107	—

SEED FLOW SETTINGS FOR 3" CENTER SEEDERS

PROCEDURE FOR PRE-SETTING SEED FLOW

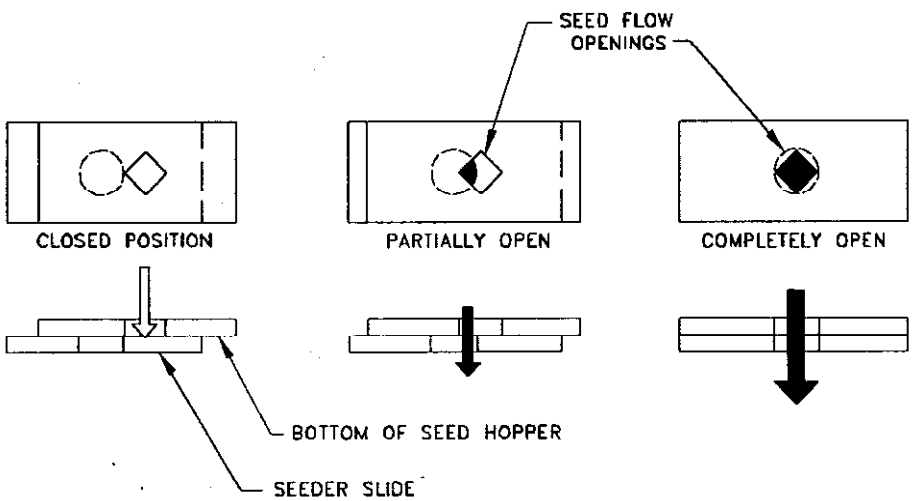
(1) Consult Seed Supplier For Recommended Flow Rates.
(2) Move Seed Flow Handle To Desired Set
(3) Loosen Knob On Adjusting Bolt And Slide Against Handle.
(4) Tighten Knob On Adjusting Bolt.
(5) The Seed Flow Will Now Return To Preset Flow Rate.

The data shown in the charts is provided only as a guide. It is advisable to experiment to find the setting and seed quantity based on your machine and your variety or mixture of seed.

If you are using a mixture, the relative seed size of the different grasses should be taken into account.

Generally speaking, it is best to adjust the opening for the largest size seed. If guess work is involved, it is best to over-seed slightly than to under-seed.

The rate of seed that will flow is determined by the position of the holes in the bottom of the seeder box to the holes in the seeder slide. Below are simplified drawings to illustrate how this mechanism works.



DETERMINING SEED FLOW SETTINGS (Continued)

SETTING SEED FLOW (Fig. 4)

1. Move the seed flow handle (A) to desired setting.

2. Loosen the black knob (B) and slide against handle.

3. Tighten knob.

4. When the remote handle is in the "OFF" position the handle (A) should stop against the bolt (C). In the "ON" position the handle will move against the black knob to allow the desired setting.

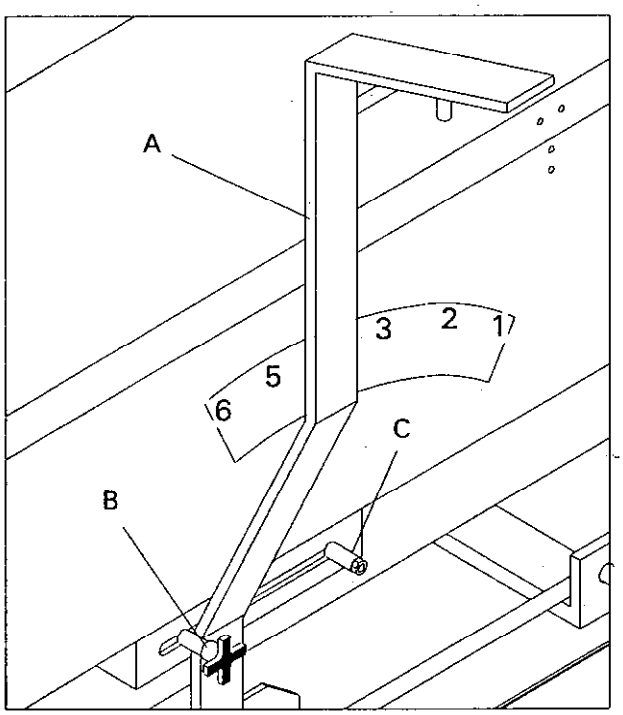


Figure 4

CALCULATING LBS. OF SEED NEEDED FOR 1000 SQ. FT.

Area In Terms Of Square Ft. Method:

To calculate seed quantities needed for an area, a proportion is set up using the information from the charts:

EXAMPLE:

An area of land 200' x 75' is to be seeded in Fescue at a setting of 5.

1. Determine the area in square feet:

200' x 75' =15,000sq.ft.

2. Refer to charts (column titled Lbs/1,000 Sq. Ft.)

Fescue: 2.3 lbs. for 1,000 sq. ft. at a setting of 5.

3. Set up a proportion:

2.3 lbs./1,000 sq. ft. =x lbs./15,000 sq. ft.

4. Cross multiply:

(2.3 lbs.)x(15,000 sq. ft.) =(x lbs.)x(1,000sq. ft.)

36,000 sq. ft./1,000 sq. ft. =(x lbs.)

36 lbs. = x

CALCULATING LBS. OF SEED NEEDED - ACRES METHOD

Area In Terms Of Acres Method:

If you know the area to be seeded in terms of acres or fractions of an acre, it is a simple matter to find the number of pounds required.

EXAMPLE:

5-1/2 acres to be planted in Bluegrass at a setting of 4.

1. Refer to charts (column titled Lbs./Acre)

Bluegrass: 182.6 lbs./acre at a setting of 4.

5.5 acres x 182.6lbs. =1004.3 lbs. TOTAL

NOTE: A large area in terms of square feet can be converted to acres by dividing by 43,560 (the number of square feet in an acre).

OPERATING INSTRUCTIONS

IMPORTANT: The maximum PTO speed is 540 RPM. Do not operate at a faster speed because the blades, sprockets, gearbox and PTO will be damaged.

1. Start tractor engine and run at a low RPM. Using the tractor's hydraulics raise the Aerothatch high enough to clear the ground.

2. With the tractor engine at idle, engage PTO and gradually increase PTO speed to 540 RPM.

3. Select tractor forward speed.

4. With tractor moving forward at 3 to 5 MPH, gradually lower the unit to cutting position.

5. If seeding, turn the remote handle to the "ON" position.

IMPORTANT: NEVER engage the PTO with the blades in the ground because the blades, chain, sprockets and PTO will be damaged.

6. Always operate in a straight line. **NEVER** attempt to make turns with the unit in the cutting position.

7. When making turns, raise the unit high enough to clear the ground.

8. If extremely dry or hard soil is encountered , tractor speed and/or blade cutting depth should be reduced.

IMPORTANT: 3 MPH is the recommended operating speed. 5 MPH can be used if thatching depths are shallow (1/4" to 1") or if the soil is loose and free of compaction.

LUBRICATION

BEARINGS (Fig. 5)

The Aerothatch 83 has two self sealing bearings that must be lubricated with a No. 2 Lithium based grease.

The Seeder 93 has four self sealing bearings that must be lubricated with a No. 2 Lithium based grease.

IMPORTANT: Lubricate the bearings as often as necessary to maintain a slight leakage on the seals. Too much grease can cause overheating.

DRIVE CHAIN (Fig. 5)

1. There is a drive chain on the blade shaft of the Aerothatch 83 and a drive chain on the disc shaft on the Seeder 93. Always maintain a heavy coat of grease on the drive chains.

PTO (Fig. 5)

1. Grease the PTO fittings weekly or every 40 operating hours. Use a No. 2 Lithium based grease.

GEARBOX (Fig. 5)

1. Check lubricant level in gearbox every 40 hours of operation. Add good quality transmission oil, 80-90 weight. Fill gearbox to level of side filler plug. Oil should seep from opening when plug is removed. Change oil in the gearbox after the first 100 hours of operation. Thereafter, change oil every 2500 hours or every six months which ever comes first.

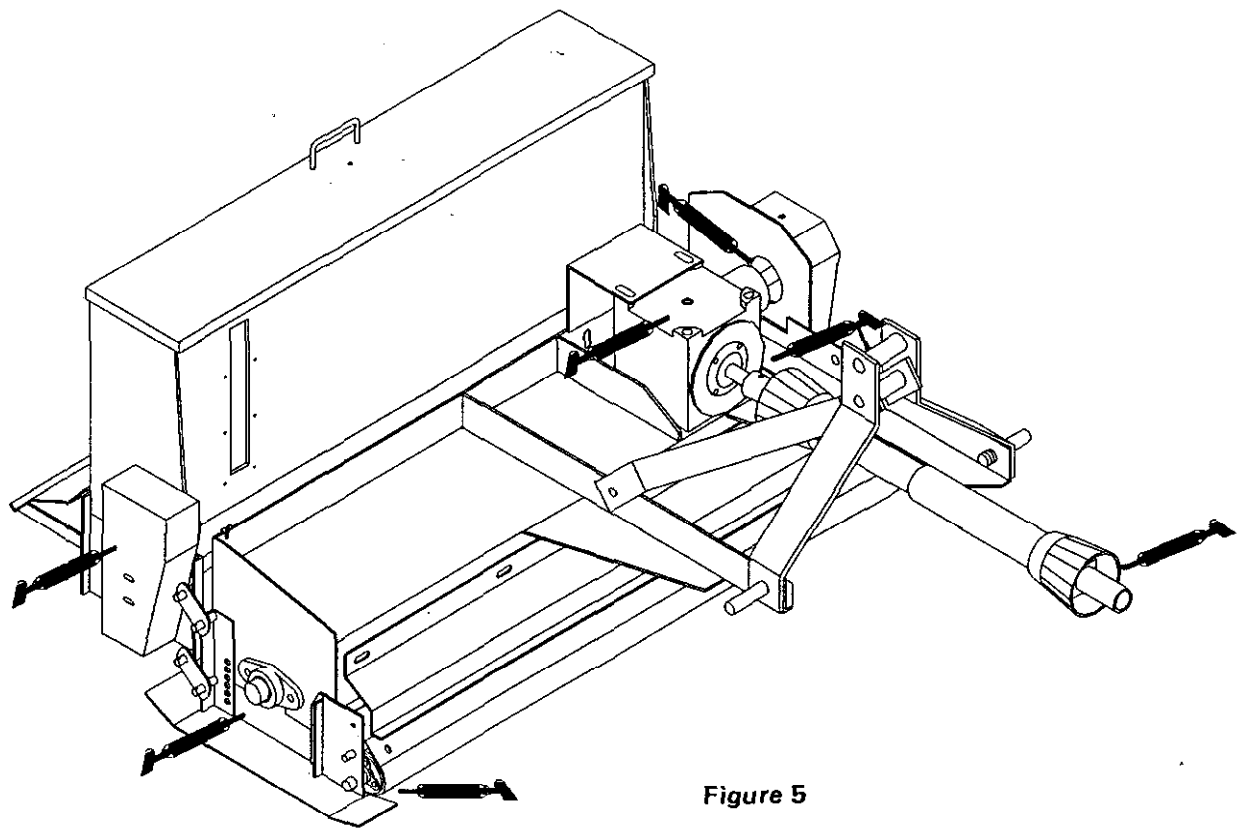


Figure 5

MAINTENANCE

DRIVE CHAIN ADJUSTMENT

Both drive chains are adjusted to allow a 1/8" deflection with 5 lbs of force. Do not over tighten the chain because it will wear rapidly. If chain is to loose, the sprocket will wear.

AEROTHATCH 83 Chain Adjustment (Fig. 6)

A. Remove the chain guard.

B. Loosen the nuts on the bolts connecting the gearbox to the frame.

C. Turn the adjustment bolt to adjust the chain. Turn clockwise to tighten, counterclockwise to loosen.

D. Tighten the four bolts and the nuts on the gearbox.

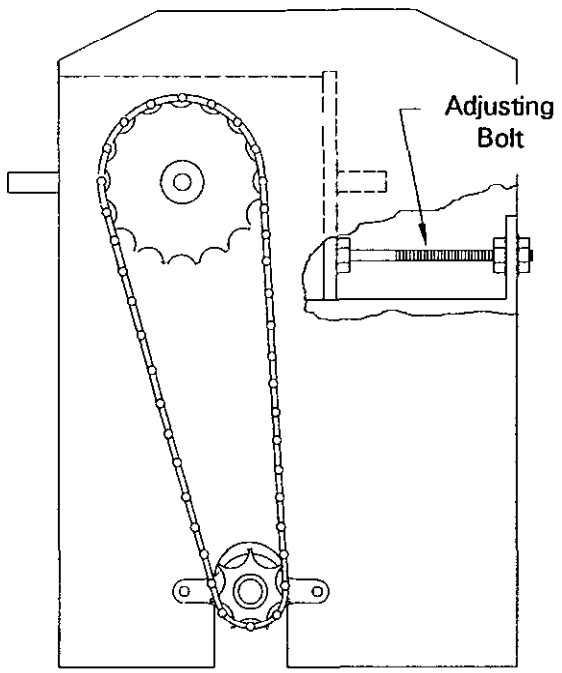


Figure 6

BLADE/DISC ALIGNMENT (Fig. 7)

When replacing the blade or disc shaft, use the dimensions shown as a reference to keep the disc shaft in line with the blade shaft.

This is very important when seeding, allowing the seed to fall into the blade groove for maximum germination.

When aligning the two shafts, it is much easier to try and line the blade shaft up with the disc shaft.

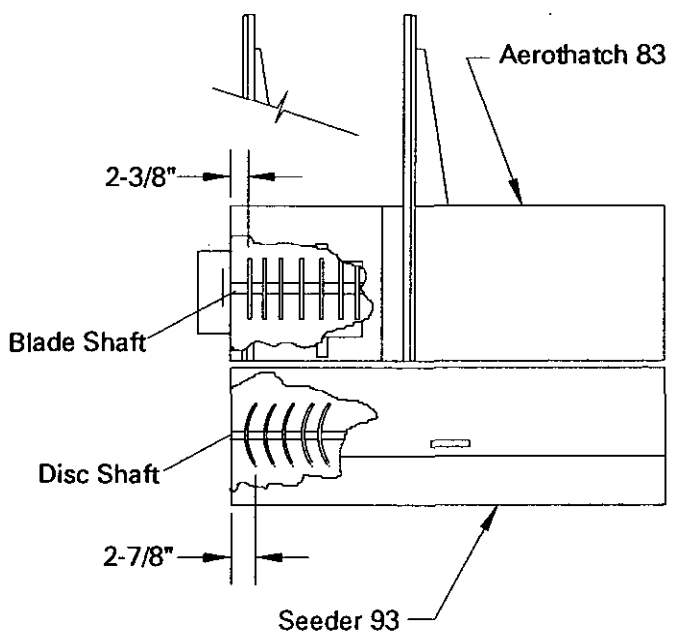


Figure 7

TROUBLE SHOOTING - AEROTHATCH 83

CONDITION	CAUSE	CORRECTION
EXCESSIVE VIBRATION	• Blades too deep (extremely dry soil).	• Change blade depth.
	• PTO speed too low.	• Bring PTO speed up to 540rpm.
	• Check for missing blades.	• Replace blades.
	• Blade shaft bent.	• Bring PTO speed down as low as possible and watch rotation of blade shaft for wobble or turn off aerator and set on level surface then measure from floor to blade, rotate shaft to several positions, measure, compare dimensions. Replace blade shaft if necessary.
	• Jam nut on end of the blade is loose.	• Make sure there is no damage, then tighten nut.
	• Ground speed of tractor is too fast.	• Slow down tractor until vibration stops.
BLADES QUIT TURNING	• Broken chain.	• Replace chain.
	• Loose chain.	• Adjust Drive Chain Tension.
	• Check if sprocket is turning, a key may be sheared.	• Replace key.
	• Check blades on shaft, they may be rounded off.	• Replace the blades.
GEARBOX OUTPUT SHAFT QUITS TURNING	• Key on input shaft, inside the gearbox, may have been sheared.	• Replace key.
GEARBOX GRINDS	• Check oil level. Remove side filler plug. Oil should seep from opening.	• Fill with 80-90 weight oil.
	• Gear teeth or bearings inside gearbox damaged.	• Replace any worn or damaged parts.
BLADES CUTTING AT DIFFERENT DEPTHS	• Skid shoes adjusted incorrectly.	• Adjust Blade Depth.
	• Blades worn unevenly. Once blades are worn to a diameter of 10", they should be replaced.	• Replace worn blades.
	• Check jam nut on end of shaft, it may be loose.	• Make sure no damage has been done then tighten nut.

TROUBLE SHOOTING - SEEDER 93

CONDITION	CAUSE	CORRECTION
SEEDER SHAFT NOT TURNING	• Broken chain.	• Replace chain.
	• Loose chain.	• Slide bearing on seed shaft upward to tighten, downward if tension is too tight.
	• Check if sprocket turns with shaft, a key may be sheared on sprocket.	• Replace key.
DISC SHAFT NOT TURNING	• Hand turn disc shaft if possible. Check agitator shaft, may be clogged causing disc to lockup.	• Unclog the seed shaft
	• Check the seeder tubes, they may be rubbing and binding on the disc.	• Loosen bolts for seed tubes. Keeping the center in the same position, rotate the tube until it no longer hits.
	• Check the bearings, they may be froze up or pitted.	• Replace the bearings.
SEED NOT DROPPING	• Make sure the handle is turned on.	• Move handle to desired setting.
	• When moving the handle, make sure slide is moving with the handle.	• Linkage rod may need to be adjusted.
	• Rotate the seeder disc shaft by hand. Make sure agitator shaft is turning, seed may be clogged.	• Clean out clogged seed.
SEED NOT DROPPING IN BLADE OR DISC SLOT	• Disc may not be lined up with blade shaft.	• Adjust blade/disc alignment.
	• Check to see if the angle on seed tube is close enough to the disc to follow the curve. The end may be too far away.	• Loosen bolts for seed tubes. Keeping the center in the same position, rotate the tube until the end is inside the arc of the disc but not hitting.
	• May be too much play back and forth between the two units.	• When lifted up off the ground, manually move the 93 side to side, there should be no more than 3/8" play. Then check the mounts that mount the two units together, the holes may be worn causing too much play. Replace the mounts if necessary.

STORAGE

1. Thoroughly clean the Aerothatch and Seeder.

2. Clean all remaining seed from inside the seed hopper.

3. Check all fasteners. Tighten as necessary.

4. Grease or oil all grease fittings and bearings. Wipe off excess lubricant.

5. Check the tension and condition of the drive chains. Adjust the tension if necessary and apply a heavy coat of grease to the chains.

6. Fill the gearbox with oil. See Lubrication section.

IDENTIFICATION AND ORDERING

MODEL AND SERIAL NUMBER

The AEROTHATCH 83 and SEEDER 93 have two identification numbers for each unit: a model and serial number. The numbers on the AEROTHATCH 83 are stamped on a plate riveted to the main frame by the gearbox. The SEEDER 93 plate is riveted to the top of the seed hopper. In any correspondence concerning the AEROTHATCH or SEEDER, supply model and serial numbers to be sure that the correct information and replacement parts are obtained.

To order replacement parts from an authorized TORO Distributor, supply the following information.

1. Model and serial numbers of the machine.

2. Part number, description and quantity of parts desired.

Note: Do not order by reference number if a parts catalog is being used; use the part number.

NOTES

MAINTENANCE RECORD

Date								

The Toro Commercial Products Two Year Limited Warranty

The Toro Company warrants your 1996 or newer Toro Commercial Product ("Product") purchased after January 1, 1997, to be free from defects in materials or workmanship for the period of time listed below. Where a warrantable condition exists, Toro will repair the Product at no cost to you including diagnosis, labor, parts, and transportation. This warranty begins on the date the Product is delivered to the original retail purchaser.

Warranty Duration: Two years or 1500 operational hours*, whichever occurs first.

***Product equipped with hour meter**

Owner Responsibilities:

As the Product owner, you are responsible for required maintenance and adjustments stated in your Owner's Manual. Failure to perform required maintenance and adjustments can be grounds for disallowing a warranty claim.

Instructions for Obtaining Warranty Service:

You are responsible for notifying the Commercial Products Distributor or Authorized Commercial Products Dealer from whom you purchased the Product as soon as you believe a warrantable condition exists.

If you need help locating a Commercial Products Distributor or Authorized Dealer, or if you have questions regarding your warranty rights or responsibilities, you may contact us at:

Toro Commercial Products Service Department
8111 Lyndale Avenue South
Minneapolis, MN, 55420–1196
Telephone: (612) 888–8801
Facsimile: (612) 887–8258
E–Mail: Commercial.Service@Toro.Com

Maintenance Parts:

Parts scheduled for replacement as required maintenance ("Maintenance Parts"), are warranted for the period of time up to the scheduled replacement time for that part.

Items/Conditions Not Covered:

Not all product failures or malfunctions that occur during the warranty period are defects in materials or workmanship. The items / conditions listed below are not covered by this warranty:

- Product failures which result from the use of non–Toro replacement parts, or from installation and use of add–on, modified, or unapproved accessories are not covered.
- Product failures which result from failure to perform required maintenance and/or adjustments are not covered.
- Product failures which result from operating the Product in an abusive, negligent or reckless manner are not covered.
- This warranty does not apply to parts subject to consumption through use unless found to be defective. Examples of parts which are consumed, or used up, during normal Product operation include, but are not limited to, blades, reels, bedknives, tines, spark plugs, castor wheels, tires, filters, belts, etc.
- This warranty does not apply to failures caused by outside influence. Items considered to be outside influence include, but are not limited to, weather, storage practices, contamination, use of unapproved coolants, lubricants, additives, or chemicals, etc.
- This warranty does not apply to normal "wear and tear" items. Normal "Wear and Tear" includes, but is not limited to, damage to seats due to wear or abrasion, worn painted surfaces, scratched decals or windows, etc.

Other Legal Disclaimers:

The above remedy of product defects through repair by an authorized distributor or dealer is the purchaser's sole remedy for any defect. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Except for the Emissions warranty referenced below, if applicable, there is no other express warranty. All implied warranties of merchantability and fitness for use are limited to the duration of the express warranty.

Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

The Toro Company is not liable for indirect, incidental or consequential damages in connection with the use of the Product, including any cost or expense of providing substitute Product or service during periods of malfunction or non–use.

Some states do not allow the exclusion of incidental or consequential damages, so the above exclusion may not apply to you.

Note to California residents: The Emissions Control System on your Product may be covered by a separate warranty meeting requirements established by the U.S. Environmental Protection Agency (EPA), or the California Air Resources Board (CARB). The hour limitations set forth above do not apply to the Emissions Control System Warranty. Refer to the California Emission Control Warranty Statement printed in your Owner's Manual or contained in the engine manufacturer's documentation for details.