



LAWN PLUG AERATOR 60" WIDTH USER'S MANUAL



WARNING: Read carefully and understand **RULES FOR SAFE OPERATION** and instructions before operating. Failure to follow the safety rules and other basic safety precautions may result in serious personal injury.

Item# 250281

For technical questions and replacement parts, please call 1-800-222-5381.

Thank you very much for choosing a NORTHERN TOOL + EQUIPMENT CO., INC., Product! For future reference, please complete the owner's record below:

Model: _____ Purchase Date: _____

Save the receipt, warranty and these instructions. It is important that you read the entire manual to become familiar with this product before you begin using it.

This machine is designed for certain applications only. Northern Tool + Equipment strongly recommends this machine is not modified and/or used for any application other than that for which it was designed. If you have any questions relative to a particular application, DO NOT use the machine until you have first contacted Northern Tool + Equipment to determine if it can or should be performed on the product.

TO THE CUSTOMER

This manual contains valuable information about your new aerator. It has been carefully prepared to give you helpful suggestions for operating, adjusting, and servicing.

Keep this manual in a convenient place for quick and easy reference. Study it carefully, only by proper care and operation can you expect to receive the service and long life designed and built into this aerator.

GENERAL SAFETY RULE



EQUIPMENT SAFETY GUIDELINES

Safety of the operator is one of the main concerns in designing and developing a new piece of equipment. Designers and manufacturers build in as many safety features as possible. However, every year many accidents occur which could have been avoided by a few seconds of thought and a more careful approach to handling equipment. You, the operator, can avoid many accidents by observing the following precautions in this section. To avoid personal injury, study the following precautions and insist those working with you, or for you, follow them.

In order to provide a better view, certain photographs or illustrations in this manual may show an assembly with a safety shield removed. However, equipment should never be operated in this condition. Keep all shields in place. If shield removal becomes necessary for repairs, replace the shield prior to use.

Never use alcoholic beverages or drugs which can hinder alertness or coordination while operating this equipment. Consult your doctor about operating this machine while taking prescription medications.

Review the safety instructions with all users annually. This equipment is dangerous to children and persons unfamiliar with its operation. The operator should be a responsible adult familiar with farm machinery and trained in this equipment's operations. **Do not allow persons to operate or assemble this unit until they have read this manual and have developed a thorough understanding of the safety precautions and of how it works.**

To prevent injury or death, use a tractor equipped with a Roll-Over Protective System (ROPS).

Never exceed the limits of a piece of machinery. If its ability to do a job, or to do so safely, is in question –**DON'T TRY IT.**

Do not modify the equipment in any way. Unauthorized modification may impair the function and/or safety and could affect the life of the equipment.

In addition to the design and configuration of this implement, including Safety Signs and Safety Equipment, hazard control and accident prevention are dependent upon the awareness, concern, prudence, and proper training of personnel involved in the operation, transport, maintenance, and storage of the machine. Refer also to Safety Messages and Operation Instructions in each of the appropriate sections of the Tractor and Aerator Manuals. Pay close attention to the Safety Signs affixed to the Tractor and the Aerator.



RULES FOR SAFE OPERATIONS

Remember, any power equipment can cause injury **if** operated improperly or the user does not understand how to operate the equipment.

LOOK FOR THIS SYMBOL  TO POINT OUT IMPORTANT SAFETY PRECAUTIONS. IT MEANS ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED.

CAUTION: VEHICLE BRAKING AND STABILITY MAY BE AFFECTED WITH THE ADDITION OF AN ACCESSORY OR AN ATTACHMENT. BE AWARE OF CHANGING CONDITIONS ON SLOPES.

Exercise caution at all times when using power equipment.

1. Read this owner's manual carefully for operating and service instructions before attempting to assemble or operate this equipment. Be thoroughly familiar with the proper use of this equipment.
2. Read the vehicle owners manual and vehicle safety rules, and know how to operate the vehicle before using this equipment.
3. Never allow children to operate the tractor or aerator attachment, and do not allow adult's to operate without proper instructions.
4. This aerator attachment has sharp points. Always handle with care and wear substantial foot wear when operating this aerator.
5. Do not allow anyone to ride or sit on aerator attachment frame or on towing vehicle.
6. Keep the area of operation clear of all persons, particularly small children, and also pets.
7. Always begin with the transmission in first (low) gear and engine at low speed, and gradually Increase speed as conditions permit.
8. Vehicle braking and stability may be affected with the attachment of this equipment. Be aware of changing conditions on slopes. Refer to safety rules in the vehicle owner's manual concerning safe operation on slopes.
9. Always operate up and down a slope, never across the face of a slope.
- 10 This equipment should be operated at reduced speed on rough terrain, along creeks and ditches and on hill sides, to prevent tipping and loss of control. Do not drive too close

to a creek or a ditch.

11. Do not tow this equipment on a highway or any other public thorough fare.

12 Follow the maintenance instructions as outlined in this owner's manual.

ASSEMBLY

STEP 1: Push/insert one plastic split bearing into each side of the spool assembly. Repeat for each spool assembly.

STEP 2: Attach one wheel bracket to the middle hole of the axle shaft. Note the wheel bracket ring should point towards the shortest side of the axle. Attach the wheel bracket using a 1/4" x 1-9/16" hex bolt and 1/4" lock nut. **Fully tighten connection.** Next, insert from the short side of the axle a 5/6" x 1-3/16" hex bolt into the hole on the wheel bracket closet to the axle. (smaller hole) Attach 5/16" lock nut to the bolt. **Do not fully tighten until later step.**

STEP 3: Assemble below items onto short side of the axle shaft in the following order. Take note of the direction of plugger knives.

1. Start with one double spool (knives facing inward)
2. 1.61" Spacer
3. Middle Base
4. 1" Spacer
5. Double spool (knives facing outward)
6. Single spool assembly
7. 1" Spacer

STEP 4: Assemble these items onto long side of the axle shaft in the following order. Take note of the direction of plugger knives.

1. Start with 1" Spacer
2. 7/8" Flat Washer
3. Middle Brace
4. 7/8" Flat Washer
5. 1.61" Spacer
6. Double spool assembly (knives facing outward)
7. 1.61" Spacer
8. Middle Base
9. 1" Spacer
10. Double spool assembly (knives facing inward)
11. Single spool assembly

STEP 5: Start by rotating the wheel bracket in the middle of the axle shaft so it is pointing upward. Next, attach an end plate to one side, followed by 7/8" flat washer, followed by a wheel bracket. Wheel bracket ring faces inward. Fasten wheel bracket to axle shaft using 1/4" x 1-9/16" hex bolt and 1/4" lock nut. **Fully tighten connection.** Repeat for opposite

side.

STEP 6: Insert 1/2" x 4-7/16" hex bolt through wheel assembly, install 1/2" hex nut on 1/2" x 4-7/16" hex bolt, tighten nut on bolt until it's hard tight, **then loosen hex nut 1/2 turn.** Attach assembled wheel and 1/2" hex bolt on to wheel bracket and fasten with a 1/2" lock nut. Repeat for opposite side. **Make certain wheels spin freely after assembly.**

STEP 7: Attach hitch bracket to the tongue using 5/16" x 1" hex bolt and 5/16" lock nut. Next, insert hitch pin through hitch bracket and the tongue secure with cotter pin. **Fully tighten connections.**

STEP 8: Attach the tongue to the top tray with the large opening of the tray slot facing forward. Attach tongue using the top tray holes to right side holes of tongue connection (view from front), use 5/16" x 1-3/16" bolt, 2 spacers per bolt, and 5/16" lock nut. For left side holes of tongue connection use 5/16" x 1" bolt and 5/16" lock nut, no spacers. For holes left of tray slot (viewing from front) use 5/16" x 1-3/16" hex bolt, two 1/4" spacers per bolt, and 5/16" lock nut. **Fully tighten all connections.**

STEP 9: Position top tray between end plates by leaning the top tray into the end plates. Temporarily attach right end plate to the top tray using two 5/16" x 7/8" bolts. Swing middle brace into position and fasten to top tray using 5/16" lock nuts. **Do not fully tighten until final step.**

STEP 10: Attach both end plates to the top tray using 5/16" x 7/8" hex bolt, 5/16" flat washer and 5/16" lock nut for each corner (two connection per corner). Repeat for each corner. **Do not fully tighten until final step.**

STEP 11: Place the lift handle through the large opening in the tray slot. Attach the lift handle to the wheel bracket smaller hole using the 5/16" x 3/16" nut you pre-assembled earlier in step 2. Attach the lift handle to larger hole using a 5/16" x 1-3/16" hex bolt. Shoulder spacer, and 5/16" lock nut. **Fully tighten connections.**

STEP 12: Carefully place the aerator upright on the wheels. Lock the lift handle by moving into large offset hole in front of tray slot. Make following adjustments for correct alignment of the lift handle and the offset slot.

1. Adjust the tray side to side until the lift handle rests against the right side (viewing from back) of the offset hole in the top tray.
2. Re-straighten end plates with top tray then fully tighten all 8 corner connections, making sure lift handle is still resting against the right side of the offset hole.
3. Re-straighten the middle brace under the top tray, if necessary and then fully tighten the connections on the middle brace. Make sure handle still rests against right side of offset hole. Lift handle should have to be forced over to tray slot for lowering. **Fully tighten connections and check that all connections are tight.**

OPERATION

Aerating involves cutting small holes in the soil to create small reservoirs that bring oxygen, fertilizer and water down into the root zone. For best performance of the spike aerator attachment, the following lawn preparation and aerator operation is recommended.

Spike points are sharp. Exercise caution at all times when spike points are rotating or

when points are being handled.

1. To level the spike tray after the aerator is attached to the tractor hitch, loosen the lock washers and hex nuts holding the hitch mount arms to the brackets at the rear of the tray, make the tray as level as possible and then retighten the nuts.
2. The spike tray may be raised to the transport position by pushing the lift handle backward.
3. The spike tray may be lowered to the working position by moving the lift handle forward.
4. Mow the lawn and remove loose clippings prior to use of the aerator.
5. Start the tractor engine with controls in neutral and then place throttle at a slow engine speed.
6. Engage the shift lever in lowest possible forward speed and then lower the aerator, allowing spike points to enter the ground. Increase speed as conditions permit.
7. Aerate in the straightest line possible.
8. Make overlapping passes to increase density to the spike point pattern.
9. To prevent damage to lawn, do not make sharp turns while spike points are engaged in ground.
10. Aerate in an up and down direction on slopes
11. To increase depth of spike point penetration, add weight to the tray as necessary. The tray holds concrete blocks or patio blocks at approximately 35 lbs. each. Secure the weight with straps or wire using the tray flange.
12. If the ground is extremely hard and dry, it should be sprinkled or watered down for one to two hours prior to the aerator.
13. Do not aerate if the ground is too wet or muddy.

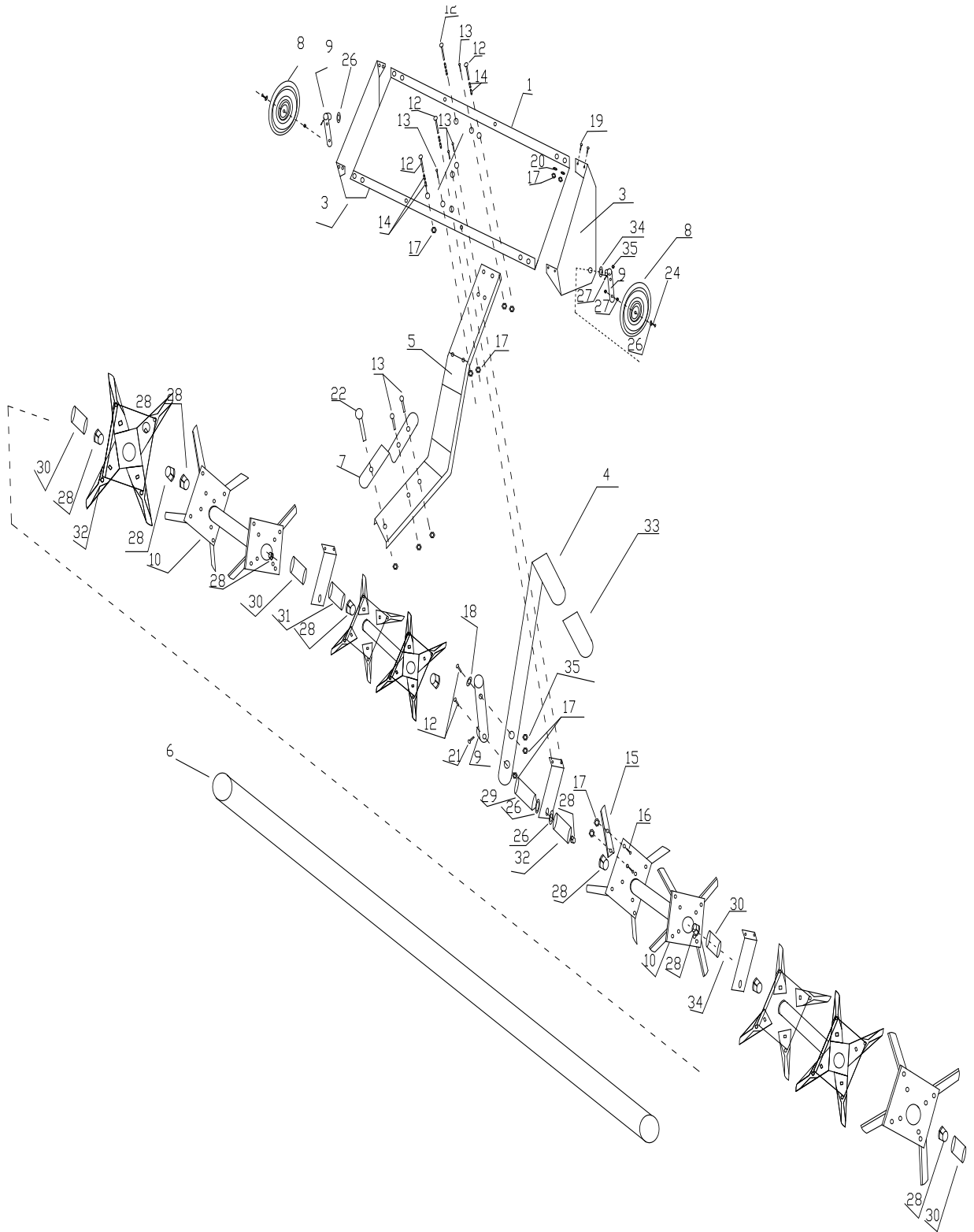
MAINTENANCE

1. Before each use check all nuts and bolts for tightness.
2. Lubricate wheels as needed. (Normal lubricant is applicable.)
3. If rust appears on shield or spikes, sand lightly and coat with enamel paint.
4. Store in a dry area and coat exposed metal with right oil when not in use. (Normal grease oil is applicable.)
5. Spike points can be periodically sharpened with a small grinder to maintain good soil penetration. Points should be removed for sharpening.

STORAGE & SAFETY

1. Store the unit in an area away from human activity. Do not permit children to play on or around the stored unit.
2. Make sure all parked machines are on a hard, level surface and engage all safety devices.
3. If blocking is used, make sure it is solid and secure before leaving area.

DIAGRAM



PARTS LIST

| No. | Description | Qty. | No. | Description | Qty. |
|-----|-----------------------------|------|-----|-----------------------|------|
| 1 | Top Tray | 1 | 18 | Shoulder Spacer | 1 |
| 2 | Middle Brace | 3 | 19 | Hex Bolt 5/16"x 7/8" | 16 |
| 3 | End Plate | 2 | 20 | Flat Washer 5/16" | 20 |
| 4 | Lift Arm | 1 | 21 | Hex Bolt 1/4"x1-9/16" | 3 |
| 5 | Tongue | 1 | 22 | Hitch Pin | 1 |
| 6 | Axle Shaft | 1 | 23 | Cotter Pin | 1 |
| 7 | Hitch Bracket | 1 | 24 | Hex Bolt 1/2"x4-7/16" | 2 |
| 8 | Wheel Assembly | 2 | 25 | Lock Nut 1/2" | 2 |
| 9 | Wheel Bracket | 3 | 26 | Flat Washer 7/8" | 4 |
| 10 | Double Spool | 4 | 27 | Hex Nut 1/2" | 2 |
| 11 | Lock Pin | 1 | 28 | Split Plastic Bearing | 12 |
| 12 | Hex Bolt 5/16"x1-3/16" | 6 | 29 | Lock Nut 1/4" | 3 |
| 13 | Hex Bolt 5/16"x1" | 8 | 30 | Spacer Tube 1" L. | 5 |
| 14 | Space 1/3" L. | 8 | 31 | Spacer Tube 1-1/2" L. | 3 |
| 15 | Aerator Plugger Knife | 40 | 32 | Single Spool | 2 |
| 16 | Carriage Bolt 5/16"x7/8" | 80 | 33 | Handle Grip | 1 |
| 17 | Lock Nut 5/16" | 110 | 34 | | |



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