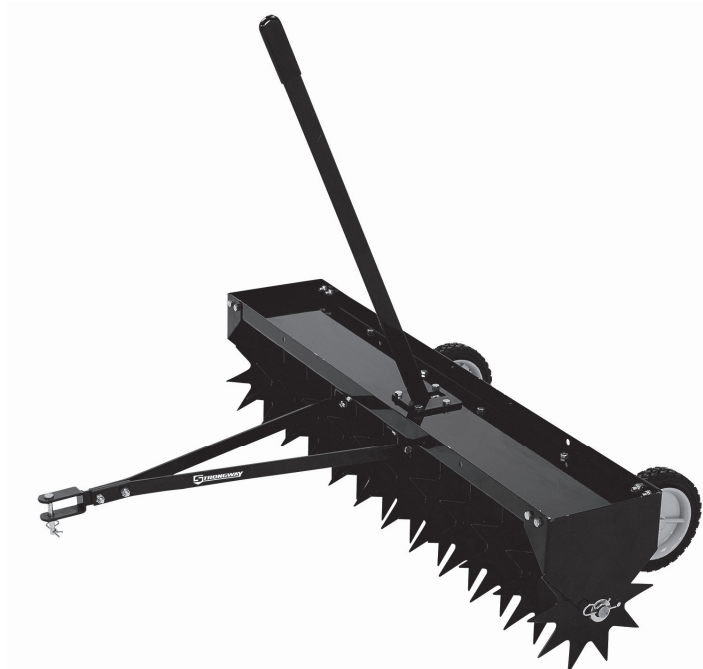




42in. Spike Aerator

Owner's Manual



! WARNING: Read carefully and understand all ASSEMBLY AND OPERATION INSTRUCTIONS before operating. Failure to follow the safety rules and other basic safety precautions may result in serious personal injury.

Item # 49178

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SAVE THESE INSTRUCTIONS

Thank you very much for choosing a Strongway product!

For future reference, please complete the owner's record below:

Serial Number/Lot Date Code: _____

Purchase Date: _____

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

This Aerator is designed for certain applications only. Northern Tool and Equipment cannot be responsible for issues arising from modification or use of this product in an application for which it was not designed. We strongly recommend that this product not be modified and/or used for any application other than that for which it was designed.

For technical questions, please call **1-800-222-5381**.

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Intended Use

This Spike Aerator has 120 spike tines that can penetrate up to 2" into the ground to allow water and nutrients to reach plant's roots in compacted soil. Additional weight up to 70 lbs. can be added for deeper penetration.

Technical Specifications

Property	Specification
Working width	42 inches
Spike quantity	120
Spike length	9 inches
Additional weight (maximum)	70 lbs

Important Safety Information

⚠ WARNING

- Read and understand all instructions. Failure to follow all instructions may result in serious injury or property damage.
- The warnings, cautions, and instructions in this manual cannot cover all possible conditions or situations that could occur. Exercise common sense and caution when using this tool. Always be aware of the environment and ensure that the tool is used in a safe and responsible manner.
- Do not allow persons to operate or assemble the product until they have read this manual and have developed a thorough understanding of how it works.
- Do not modify this product in any way. Unauthorized modification may impair the function and/or safety and could affect the life of the product. There are specific applications for which the product was designed.
- Use the right tool for the job. DO NOT attempt to force small equipment to do the work of larger industrial equipment. There are certain applications for which this equipment was designed. It will do the job better and more safely at the capacity for which it was intended. DO NOT use this equipment for a purpose for which it was not intended.
- Industrial or commercial applications must follow OSHA requirements.

⚠ WARNING

WORK AREA SAFETY

- Inspect the work area before each use. Keep work area clean, dry, free of clutter, and well lit. Cluttered, wet, or dark work areas can result in injury. Using the aerator in confined work areas may put you dangerously close to other cutting tools and rotating parts.
- Do not allow the aerator to come into contact with an electrical source. The tool is not insulated and contact will cause electrical shock.
- Keep children and bystanders away from the work area while operating the tool. Do not allow children to handle the aerator.
- Be aware of all power lines, electrical circuits, water pipes, and other mechanical hazards in your work area. Some of these hazards may be hidden from your view and may cause personal injury and/or property damage if contacted.

⚠ WARNING

PERSONAL SAFETY

- Stay alert, watch what you are doing, and use common sense when operating the tool. Do not use the tool while you are tired or under the influence of drugs, alcohol, or medication. A moment of inattention while operating the tool may result in serious personal injury.
- Dress properly. Do not wear loose clothing, dangling objects, or jewelry. Keep your hair, clothing and gloves away from moving parts. Loose clothes, jewelry, or long hair can be caught in moving parts. Air vents on the tool often cover moving parts and should be avoided.
- Wear the proper personal protective equipment when necessary. Use ANSI Z87.1 compliant safety goggles (not safety glasses) with side shields, or when needed, a face shield. Use a dust mask in dusty work conditions. Also use non-skid safety shoes, hardhat, gloves, dust collection systems, and hearing protection when appropriate. This applies to all persons in the work area.
- Do not overreach. Keep proper footing and balance at all times.
- Do not use the tool when tired or under the influence of drugs, alcohol or medication.

⚠ CAUTION

AERATOR USE AND CARE

- Do not force the aerator. Aerators do a better and safer job when used in the manner for which they are designed. Plan your work and use the correct aerator for the job.
- Check for damaged parts before each use. Carefully check that the aerator will operate properly and perform its intended function. Replace damaged or worn parts immediately. Never operate the aerator with a damaged part.
- Store the aerator when it is not in use. Store it in a dry, secure place out of the reach of children. Inspect the aerator for good working condition prior to storage and before re-use.
- Use only accessories that are recommended by the manufacturer for use with your aerator. Accessories that may be suitable for one aerator may create a risk of injury when used with another aerator.
- Do not leave the aerator tow vehicle running unattended.
- Inspect the aerator damage or excessive wear before each use. If you find damage, do not use the aerator.

Specific Operation Warnings

⚠ WARNING

CRUSHING AND LACERATION HAZARD

- The Aerator is heavy. Be careful when moving or lifting as hands, fingers, feet, and other body parts can be crushed.
- The Aerator has sharp spikes. Keep hands clear as these spikes can cut.
- DO NOT exceed the aerator's maximum speed of 5 MPH. Exceeding this speed may result in loss of control during transport or braking.
- Do not exceed the Spike Aerator load capacity.
- Distribute the load evenly.
- Use the Spike Aerator on flat and level surfaces capable of supporting the Spike Aerator and its maximum load. Pulling or pushing a load on slanted or uneven surfaces can result in loss of control.
- Never allow riders on equipment.
- Keep bystanders at least 20 feet away while operating.
- Operate from tractor seat only.
- Lower equipment to ground, stop engine, remove key and set brake before dismounting tractor.
- DO NOT use if equipment is damaged. Repair equipment before continuing use.
- Keep seat belt securely fastened while operating. Falling off can result in impalement or being run over.
- Do not exceed the load capacity of 70 pounds.
- Sharp points can cause injury. Be cautious when replacing spike disks.
- Store out of reach of children. Not for use by or around children.
- If equipped, parking stands must be functional, kept in good repair, and stored on the unit. Park and store on a hard, level surface.
- Remove any loaded weight after use.

FALLING OFF CAN RESULT IN IMPALEMENT OR BEING RUN OVER

- Tractor must be equipped with Roll Over Protection Structure (or ROPS CAB) and a seat belt. Keep foldable ROPS system in "locked up" position at all times.
- Keep seat belt securely fastened.
- Never allow riders on equipment.
- Raised equipment can drop and crush.
- Before working underneath, follow all instructions and safety rules in operator's manual and securely block all corners of equipment with jack stands.
- Secure blocking prevents equipment dropping from mechanical component failures.

FALLING OFF OR FAILING TO BLOCK SECURELY CAN RESULT IN SERIOUS INJURY OR DEATH

Assembly

Step 1 Hardware Needed:

8 – Hex Bolt, 5/16" x 1" (Q)

8 – Nylon Nut, 5/16"(S)

Step 1: Install the End Plates (D) to the **inside** slots at each end of the Tray (A) using two Hex Bolts (Q) and two Nylon Nuts (S) per End Plate. Make sure you leave the rear hole open on each End Plate, as the plate must be rotatable for the axle assembly.

Do not tighten.

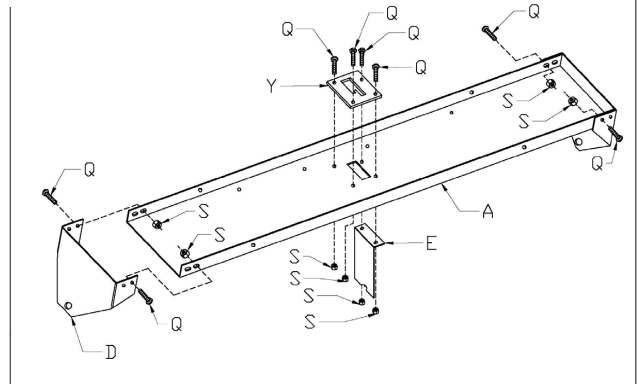
See Figure 1.

Attach the Axle Support Bracket (E) and the Tray Steel Bracket (Y) to the Tray (A) using four Hex Bolts (Q) and four Nylon Nuts (S).

Do not tighten.

See Figure 1.

Figure 1



Step 2 Hardware Needed:

6 – Hex Bolt, 5/16" x 1" (Q)

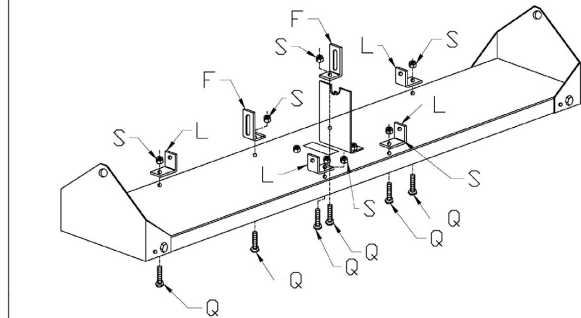
6 – Nylon Nut, 5/16"(S)

Step 2: Turn the Tray (A) upside down as shown in Figure 2 so that the rear of the tray (four holes in the bottom) is facing you. Attach the two Hitch Arm Mount Brackets (F) and four Angle Brackets (L) to the bottom of the Tray using six Hex Bolts (Q) and six Nylon Nuts (S).

Do not tighten completely.

See Figure 2.

Figure 2



Step 3 Hardware Needed:

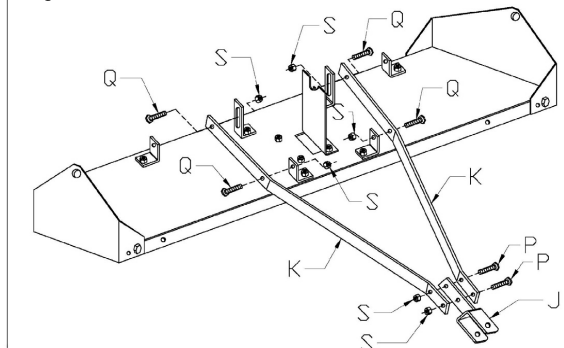
4 – Hex Bolt, 5/16" x 1" (Q)

2 – Hex Bolt, 5/16" 1-1/4" (P)

6 – Nylon Nut, 5/16" (S)

Step 3: Attach the two Hitch Arms (K) to the Hitch Arm Mount Brackets (F) and inner Angle Brackets (L) using four Hex Bolts (Q) and four Nylon Nuts (S). Attach the Hitch Bracket (J) between the Hitch Arm Mount Brackets (F) using two Hex Bolts (P) and two Nylon Nuts (S). See Figure 3.

Figure 3



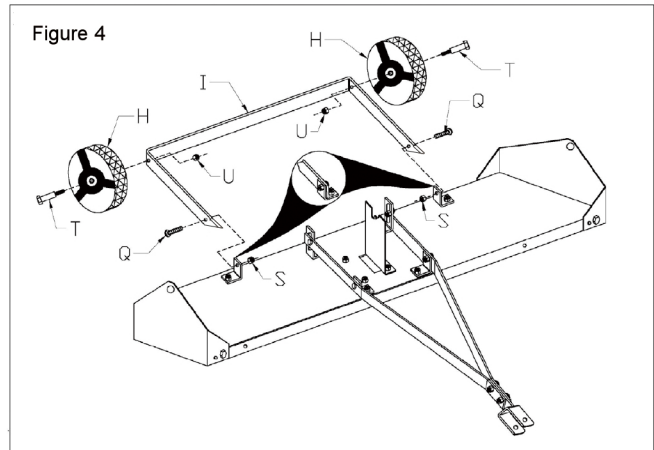
Step 4 Hardware Needed:

- 2 – Hex Bolt, 5/16" x 1" (Q)
- 2 – Nylon Nut, 5/16" (S)
- 2 – Bolt, 3/8" x 2-1/2" (T)
- 2 – Nylon Nut, 3/8" (U)

Step 4: Attach the Wheel Mount Bracket (I) to the outer Angle Brackets (L) using two Hex Bolts (Q) and two Nylon Nuts (S). Tighten and then loosen the nuts 1/4 turn.

Attach the two Wheels (H) to the Wheel Mount Bracket (I) using two Bolts (T) and two Nylon Nuts (U). See Figure 4.

Tighten the nuts attaching the Angle Brackets (L) to the Tray (A). See Figure 4.



Step 5 Hardware Needed:

- 2 – Flat Washer, 3/4" (V)
- 5 – Long Spacer (N)
- 5 – Short Spacer (O)

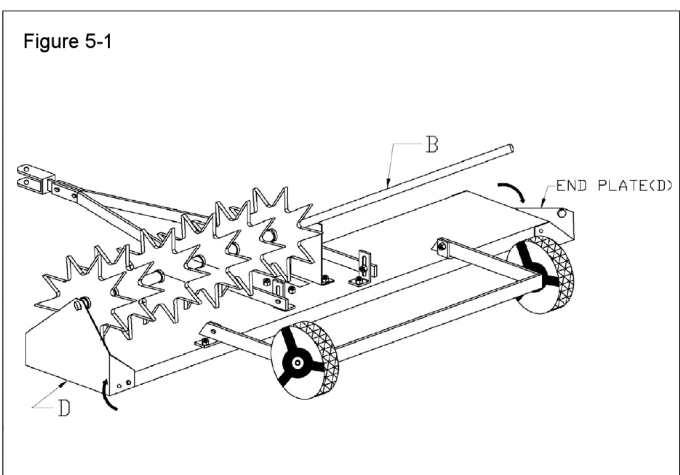
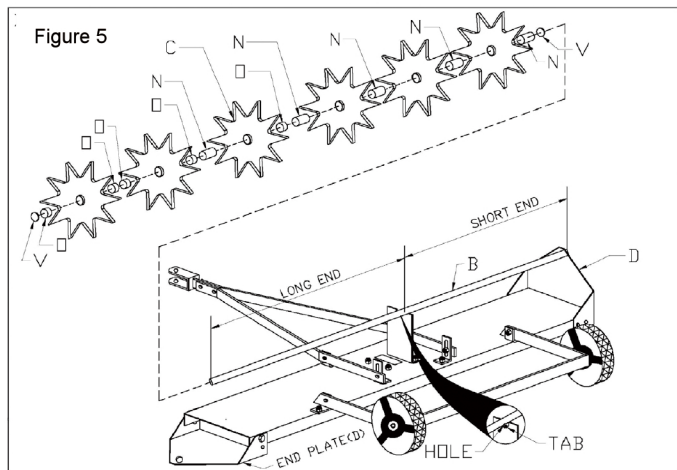
Step 5 Long End: Pivot the End Plate (D) on your left side down out of the way. Place the short end of the Axle (B), measured from the middle blind hole, through the End Plate (D) on your right side. Fit the middle hole in the Axle (B) down onto the tab on the Axle Support Bracket (E). See Figure 5.

Assemble the following parts in sequence on to the long end of the Axle (B). See Figure 5.

1. Flat Washer (V), Long Spacer (N), and Spike Disk (C).
2. Long Spacer (N) and Spike Disk (C).
3. Long Spacer (N) and Spike Disk (C).
4. Long Spacer (N), Short Spacer (O) and Spike Disk (C).
5. Long Spacer (N), Short Spacer (O) and Spike Disk (C).
6. Two Short Spacers (O) and Spike Disk (C).
7. Short Spacer (O) and Flat Washer (V).

Step 5: Pivot the End Plate (D) on your left side up onto the end of the Axle. See Figure 5-1.

Pivot the End Plate (D) on your right side down out of the way. See Figure 5-1.

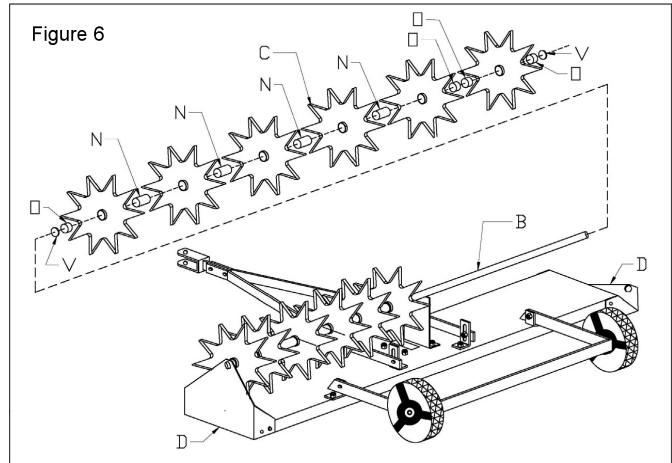


Step 6 Hardware Needed

- 2 – Flat Washer, 3/4" (V)
- 4 – Long Spacer (N)
- 4 – Short Spacer (O)

Step 6 Short End: Assemble the following parts in sequence on to the short end of the Axle (B). See Figure 6.

1. Flat Washer (V), Short Spacer (O), and Spike Disk (C).
2. Long Spacer (N) and Spike Disk (C).
3. Long Spacer (N) and Spike Disk (C).
4. Long Spacer (N) and Spike Disk (C).
5. Long Spacer (N) and Spike Disk (C).
6. Two Short Spacers (O) and Spike Disk (C).
7. Short Spacer (O) and Flat Washer (V).



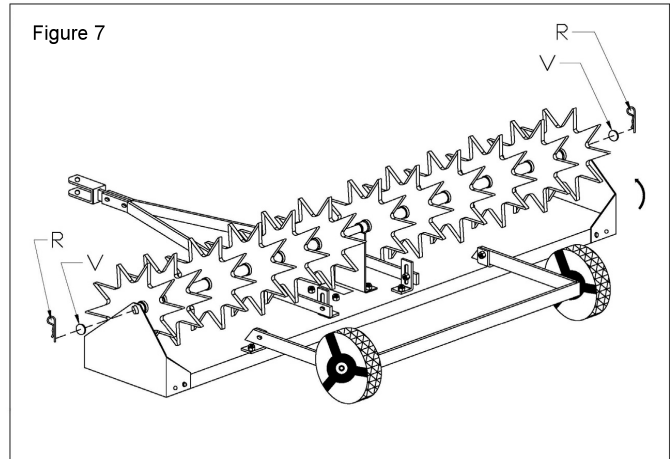
Step 7 Hardware Needed

- 2 – Flat Washer, 3/8" (V)
- 2 – Hair Cotter Pin (R)

Step 7: Pivot the End Plate (D) up onto the end of the Axle (B). See Figure 7.

Put one Flat Washer (V) on the end of the Axle (B). Insert a Hair Cotter Pin (R) into the hole at the end of the Axle (B). See Figure 7.

Repeat Step 7 for the other end of the Axle (B). See Figure 7.



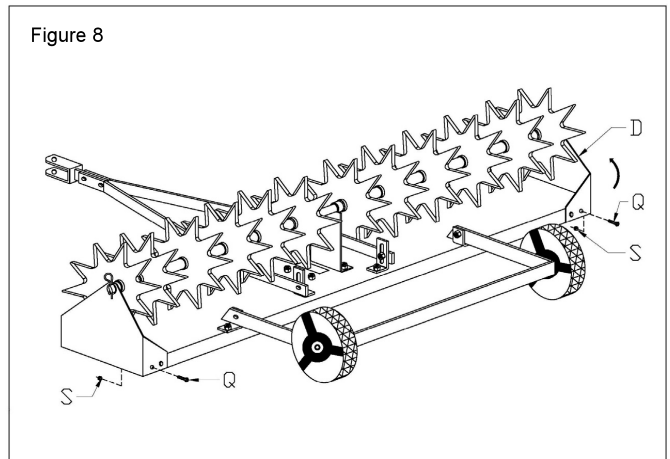
Carefully tip the tray over onto its side for the following instructions:

Step 8 Hardware Needed

- 4 – Hex Bolt, 5/16" x 1" (Q)
- 4 – Nylon Nut, 5/16" (S)

Attach four Hex Bolts (Q) and four Nylon Nuts (S) to the holes that were left empty at the corners of the Tray. **Tighten** all eight corner bolts. See Figure 8.

Square up the Axle Support Bracket with the Tray. **Tighten the Hex Bolts and Nylon Nuts assembled in Step 1 and Step 2.**



Step 9 Hardware Needed

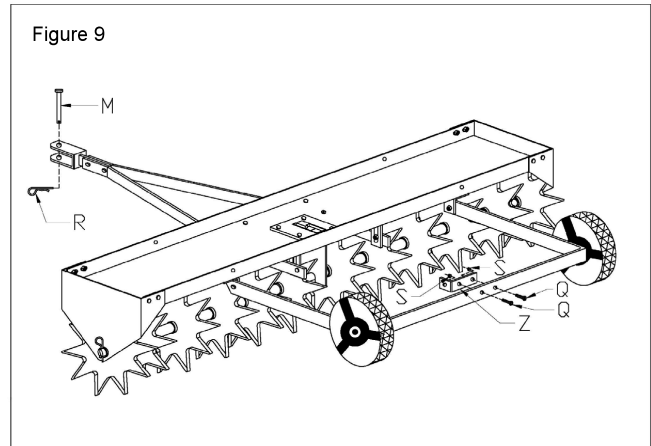
2 – Hex Bolt, 5/16" x 1" (Q)

2 – Nylon Nut, 5/16" (S)

Step 9: Attach the Lift Handle Bracket (Z) to the Wheel Mount Bracket (I) using two Hex Bolts (Q) and Nylon Nuts (S).

Tighten the nuts that attach the Angle Brackets (L) to the Tray (A).

Put Hitch Pin (M) through Hitch Bracket (J) and Secure with Hair Cotter Pin (R).



Step 10 Hardware Needed

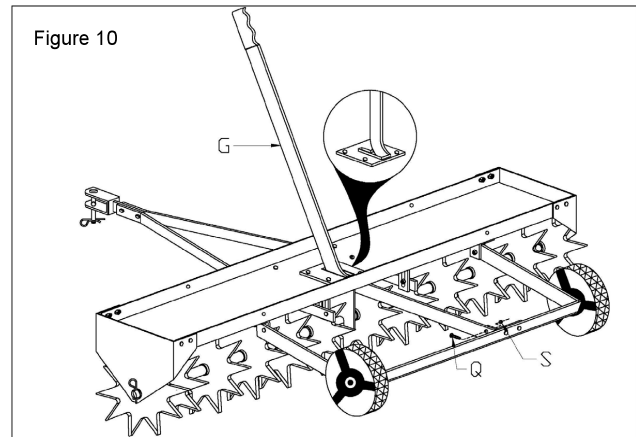
1 – Hex Bolt, 5/16" x 1" (Q)

1 – Nylon Nut, 5/16" (S)

Step 10: Attach the Lift Handle (G) to the Lift Handle Bracket (Z) using one Hex Bolt (Q) and one Nylon Nut (S).

Tighten securely.

See Figure 10.

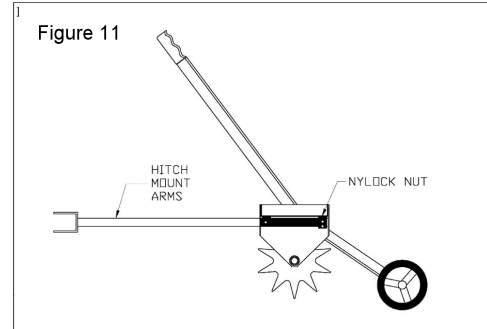


Before Each Use

- Always check for damaged or worn-out parts.
- Apply lubricating oil at each spike disk bearing and axle bearing before each use.
- Check hardware for tightness before each use.

Operating Instructions

- If adding additional weight, be sure weight is secured to the Tray.
- Tray openings allow access to Tines for cleaning and service only, they are not be used in any other application.
- To level the Tray after the aerator is attached to the towing vehicle's hitch, loosen nylon nuts holding the hitch mount arms to the brackets at the rear of the tray. Make the tray as level as possible and then tighten the nuts. See Figure 11.
- The Tray may be raised to the transport position by moving the Lift Handle backward and over, so that it rests on the notch.
- The Tray may be lowered to the working position by moving the Lift Handle over and forward.
- Start the towing vehicle's engine with controls in neutral and then place throttle at a slow engine speed. Engage the shift lever in the lowest possible forward speed and then lower the aerator, allowing the spike points to enter the ground. Increase speed as conditions permit.
- Aerate in the straightest line possible.
- Make overlapping passes to increase the density of the spike point pattern.
- To prevent damage to the lawn, do not make sharp turns while spike points are engaged in the ground.
- Aerate in an up and down direction on the slopes.
- If the ground is extremely hard and dry, it should be watered down for one to two hours prior to use of the aerator.
- Do not aerate if the ground is too wet and muddy.



After Each Use

- Apply a light coat of oil on the spike disks after each use to prevent rusting.
- Store aerator in a dry, secure place out of the reach of children.

Maintenance

Maintain your aerator. It is recommended that the general condition of any aerator be examined before it is used. Keep your aerator in good repair by adopting a program of conscientious repair and maintenance in accordance with the recommended procedures found in this manual.

- Keep all cutting tools sharp and clean. Properly maintained cutting tools with sharp cutting edges are less likely to bend and are easier to control.
- Keep handles dry, clean, and free from oil and grease.

Parts List

Part No.	Description	Qty.	Part No.	Description	Qty.
A	Tray	1	N	Spacer, Long	9
B	Axle	1	O	Spacer, Short	9
C	Spike Disk	12	P	Hex Bolt, 5/16" x 1-1/4"	2
D	End Plate	2	Q	Hex Bolt, 5/16" x 1"	27
E	Axle Support Bracket	1	R	Hair Cotter Pin	3
F	Hitch Arm Mount Bracket	2	S	Nylon Nut, 5/16"	29
G	Lift Handle	1	T	Bolt, 3/8" x 2-1/2"	2
H	Wheel	2	U	Nylon Nut, 3/8"	2
I	Wheel Mount Bracket	1	V	Flat Washer, 3/4"	6
J	Hitch Bracket	1	X	Split Plastic Bearing	24
K	Hitch Arm	2	Y	Tray Steel Bracket	1
L	Angle Bracket	4	Z	Lift Handle Bracket	1
M	Hitch Pin	1			

Replacement Parts

- For replacement parts and technical questions, please call Customer Service at **1-800-222-5381**.
- Not all product components are available for replacement. The illustrations provided are a convenient reference to the location and position of parts in the assembly sequence.
- When ordering parts, the following will be required: model number, serial number/lot date code, and description.
- The distributor reserves the rights to make design changes and/or improvements to product lines and manuals without notice.

Limited Warranty

Northern Tool and Equipment Company, Inc. ("We" or "Us") warrants to the original purchaser only ("You" or "Your") that the Strongway product purchased will be free from material defects in both materials and workmanship, normal wear and tear excepted, for a period of **one year** from date of purchase. The foregoing warranty is valid only if the installation and use of the product is strictly in accordance with product instructions. There are no other warranties, express or implied, including the warranty of merchantability or fitness for a particular purpose. If the product does not comply with this limited warranty, Your sole and exclusive remedy is that We will, at our sole option and within a commercially reasonable time, either replace the product or product component without charge to You or refund the purchase price (less shipping). This limited warranty is not transferable.

Limitations on the Warranty

This limited warranty does not cover: (a) normal wear and tear; (b) damage through abuse, neglect, misuse, or as a result of any accident or in any other manner; (c) damage from misapplication, overloading, or improper installation; (d) improper maintenance and repair; and (e) product alteration in any manner by anyone other than Us, with the sole exception of alterations made pursuant to product instructions and in a workmanlike manner.

Obligations of Purchaser

You must retain Your product purchase receipt to verify date of purchase and that You are the original purchaser. To make a warranty claim, contact Us at 1-800-222-5381, identify the product by make and model number, and follow the claim instructions that will be provided. The product and the purchase receipt must be provided to Us in order to process Your warranty claim. Any returned product that is replaced or refunded by Us becomes our property. You will be responsible for return shipping costs or costs related to Your return visit to a retail store.

Remedy Limits

Product replacement or a refund of the purchase price is Your sole remedy under this limited warranty or any other warranty related to the product. We shall not be liable for: service or labor charges or damage to Your property incurred in removing or replacing the product; any damages, including, without limitation, damages to tangible personal property or personal injury, related to Your improper use, installation, or maintenance of the product or product component; or any indirect, incidental or consequential damages of any kind for any reason.

Assumption of Risk

You acknowledge and agree that any use of the product for any purpose other than the specified use(s) stated in the product instructions is at Your own risk.

Governing Law

This limited warranty gives You specific legal rights, and You also may have other rights which vary from state to state. Some states do not allow limitations or exclusions on implied warranties or incidental or consequential damages, so the above limitations may not apply to You. This limited warranty is governed by the laws of the State of Minnesota, without regard to rules pertaining to conflicts of law. The state courts located in Dakota County, Minnesota shall have exclusive jurisdiction for any disputes relating to this warranty.



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