



## 4000 PSI Surface Cleaners

Owner's Manual



**#49429**



**#49430**

**⚠ 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.

Items #49429 & #49430

**SAVE THESE INSTRUCTIONS**

Thank you very much for choosing a NorthStar™ product!

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

Serial Number/Lot Date Code: \_\_\_\_\_

Purchase Date: \_\_\_\_\_

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

These 4000 PSI Surface Cleaners are designed for certain applications only. Northern Tool and Equipment cannot be responsible for issues arising from modification or use of these products in an application for which they were not designed. We strongly recommend that these products not be modified and/or used for any application other than that for which they were designed. If you have questions about a particular modification or application, DO NOT use these products until you have first contacted the distributor to determine if the product can or should be modified or used in such an application.

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

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## Intended Use

The NorthStar 4000 PSI Surface Cleaners are used for the high-pressure cleaning needs of driveways, concrete floors, parking lots, roofs, warehouses, boat ramps, garage floors, boat decks, and other flat surfaces. The benefits of using these products are clear: effective, shorter working times, enormous energy savings and a long useful life due to the high industrial quality.

## Technical Specifications

### #49429 - 20" Cleaner

Property	Specification
Bearing	Sealed
Maximum Flow	8.0 GPM
Rated Pressure	4000 PSI
Minimum Pressure	1000 PSI
Deck Diameter	20"
Inlet	3/8" NPT-F
Nozzle	925020M (2)
Maximum Temperature	180° F
Ship Weight	19.0 lbs

### #49430 - 22" Cleaner

Property	Specification
Bearing	Grease Zerk
Maximum Flow	8.0 GPM
Rated Pressure	4000 PSI
Minimum Pressure	1000 PSI
Deck Diameter	22"
Inlet	3/8" NPT-F
Nozzle	925020M (2)
Maximum Temperature	180° F
Ship Weight	28.0 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 surface cleaner. Always be aware of the environment and ensure that the surface cleaner is used in a safe and responsible manner.
- Do not allow persons to operate or assemble the surface cleaner until they have read this manual and have developed a thorough understanding of how it works.
- Do not modify this surface cleaner 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 surface cleaner in confined work areas may put you dangerously close to other cutting tools and rotating parts.
- Do not use the surface cleaner where there is a risk of causing a fire or an explosion; e.g., in the presence of flammable liquids, gases, or dust. The product can create sparks, which may ignite the flammable liquids, gases, or dust.
- Do not allow the product to come into contact with an electrical source. The surface cleaner is not insulated and contact will cause electrical shock.
- Keep children and bystanders away from the work area while operating the surface cleaner. Do not allow children to handle the product.
- 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 surface cleaner. Do not use the surface cleaner while you are tired or under the influence of drugs, alcohol, or medication. A moment of inattention while operating the surface cleaner 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 surface cleaner 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.
- Remove keys or wrenches before connecting the surface cleaner to an air supply, power supply, or turning on the tool. A wrench or key that is left attached to a rotating part of the tool may cause personal injury.
- Secure the work with clamps or a vise instead of your hand when practical. This safety precaution allows for proper tool operation using both hands.

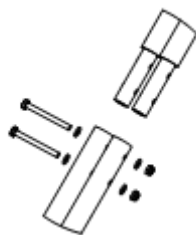
## **Specific Operation Warnings**

## **⚠ WARNING**

- DO NOT exceed the rated PSI capacity.
- Keep body parts clear of nozzle heads and away from the skirt while operating the machine.
- DO NOT lift the surface cleaner from the surface or point nozzle heads at people while operating.
- Wear the proper safety gear including ANSI Z87.1 approved safety glasses.
- Use only on hard level surfaces.
- No alterations should be made to this product.
- Only attachments and/or adapters supplied by the manufacturer shall be used.
- Not for use by or around children.

## Assembly

1. Bolt the two halves of the handle together with the two M6 x 60mm bolts, nylon nuts, and four washers.



2. Connect the handle to the brackets on the deck with the two 55mm pins and rings.
3. Apply thread sealant to the hose's male threads and connect the hose to the swivel on the deck.
4. Again, using thread sealant, attach the in-line filter to the inlet of the gun.

## Before Each Use

- Check for damaged parts before each use. Carefully check that the surface cleaner will operate properly and perform its intended function. Replace damaged or worn parts immediately. Never operate the surface cleaner with a damaged part.

## Operating Instructions

### **⚠ WARNING**

- Do not leave the cleaner unattended when it is pressurized.
- Do not turn the cleaner over when it is pressurized and connected to an operating pressure washer. Avoid high-pressure spraying water that could cause serious personal injury.
- Do not allow the machine to remain stationary on soft, porous surfaces, like wood.
- Striking any raised obstacle during operation will damage the machine. If contact does occur and results in vibration when operating machine, STOP using the machine and replace the spray bar. Continued operation could result in serious injury or damage to the machine.

1. Connect the inlet filter (D40014 on cleaner #49429; D40015 on #49430) to the FSC gun inlet.



2. Connect the cleaner to a non-operating pressure washer.

3. Turn the water on and open the valve. Open the trigger gun for flow of water through the nozzles. The nozzles must have flowing spray. If not, remove the tips, clean them, and reassemble the nozzles making sure that the groove of the nozzle is parallel to the spray bar. Use thread sealant when reinstalling the nozzles.
4. Start the pressure washer. The surface cleaner is ready for operation.
5. Walk slowly behind the machine, cleaning as you go. If striping occurs, slow down your pace.
6. Periodically check the weep hole on the bottom of the swivel. Water will seep slowly; if water shoots out, stop and replace the seals. The swivel assembly can then be rebuilt.
7. For maximum effectiveness, keep the spray tips clean. If the machine vibrates, stop and clean the spray tips.

### **After Each Use**

Inspect the cleaner after each use. Clean it and prepare it for the next use.

- Clean out any dirt or foreign material from under the housing and casters. Use a cloth or sponge to wash the surface cleaner and rinse with tap water.
- Check for loose parts and any damages.

When storing the cleaner for an extended time, it's best to drain as much water from the unit as possible. Disconnect the cleaner from the pump and stand the handle upright. Clamp the gun trigger open and let the water run out. Shop air can also be used in the gun inlet to force out the water.

Store the unit in a dry, secure place out of the reach of children. Inspect the cleaner for good working condition prior to storage and before re-use.



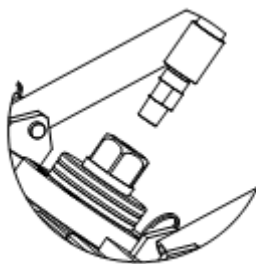
## Maintenance

**The surface cleaner does not require maintenance.**

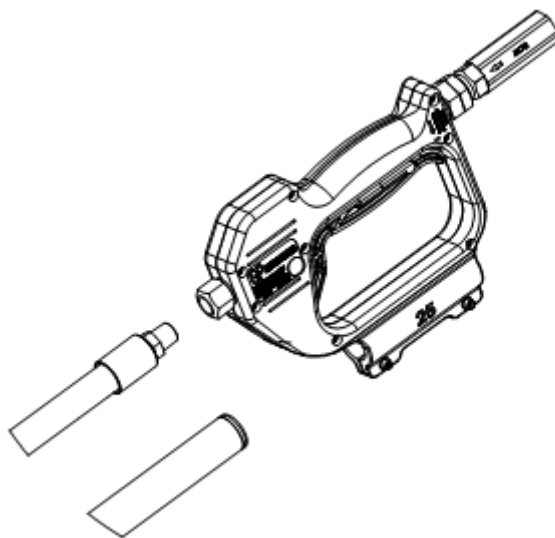
**Replacing the nozzles:** Disconnect the FSC from the pump. Turn the FSC deck upside down and use a 9/16" combination wrench to unscrew the nozzles. Do not let any debris fall into the open nozzle ports. Apply thread sealant to the new nozzle threads and thread into the nozzle ports. Tighten securely making sure the nozzle slot is parallel to the rotating arm.



**Replacing the hose:** Disconnect the FSC from the pump. Unscrew the hose from the swivel using a suitable wrench. Thread the hose out of the hose guides on the handle.

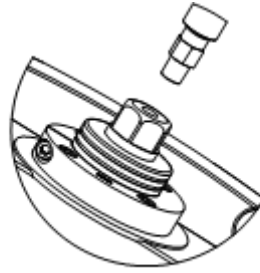


Loosen the two socket head cap screws on the gun using a 4mm allen wrench and slide the gun toward the end of the handle until the gun outlet with the hose is exposed. Disconnect the hose from the gun.

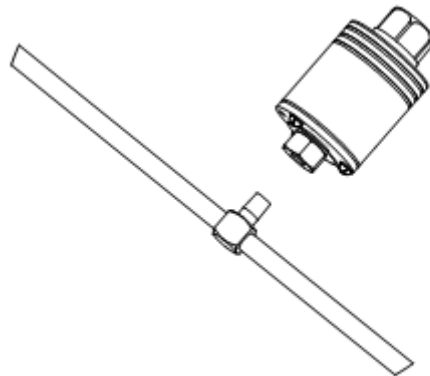


The new hose can now be attached to the FSC. Use thread sealant on both hose threads and assemble the hose in the reverse order that it was disassembled.

**Replacing the swivel:** Disconnect the FSC from the pump then disconnect the hose from the swivel. Use a 6mm allen wrench to loosen the socket head cap screw on the collar holding the swivel.



The swivel can drop out of the bottom of the FSC deck. Remove the rotating arm using two wrenches. If a vice is handy, hold the rotating arm while turning the hex on the swivel outlet.



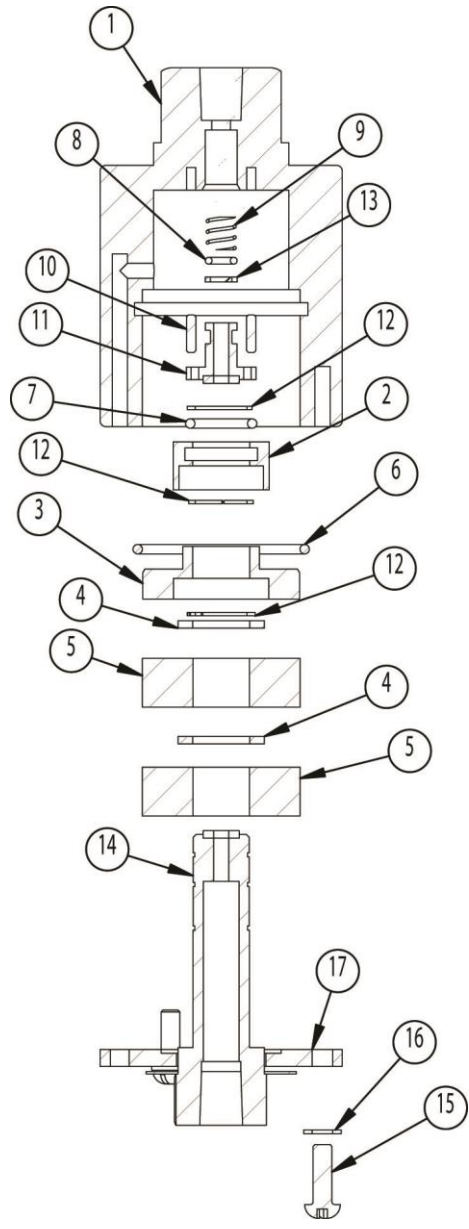
Installing the new swivel in the FSC is the reverse process of removing the old one. Use only identical replacement parts with the cleaner. Parts that may be suitable for one tool may create a risk of injury when used with another tool. Never use a part that has a lower operating pressure than the tool itself.



## #49429 Parts List

Item No.	Part No.	Description	Qty.
1	2103221	Swivel	1
2	2660312	Deck, GP, 20"	1
3	2530009	Arm, Rotary, Assy, 20"	1
4	2630010	Plate, Retaining	1
5	2540023	Collar, Split	1
6	2200055	SHCS, M8 X 30	4
7	2200054	SHCS	1
8	2540021	Handle, Lower	1
9	2540037	Handle, FSC, Upper	1
10	2660047	Grip, Handle	1
11	2660046	Plug, Handle	1
12	2660059	Brush Assy, 20"	1
13	DCG4000FSC	Gun, FSC	1
14	2702000	Hose, FSC	1
15	2200053	Nut, M8X1.25, SS	4
16	D10009	Plug, 3/8 X 3/8-M	1
17	D10004	QC, 3/8 X 3/8 NPT-M	1
18	2540020	Block, Handle	2
19	2200047	Bolt, M6	8
20	2203406	Washer, M6	8
21	2200026	Nut, Nylon, M6	2
22	2202010	Pin, 55MM, W/ Ring, SS	2
23	2200058	HHCS, M6 X 60	2
24	2200018	Washer, M6	4
25	2203507	Washer	1
26	D40015	Filter, In-Line, SST	1
27	2103016	Nozzle	2
28	2604013	Label, Logo, 150X70	1
29	2604008	Label, Spec, 5X2	2

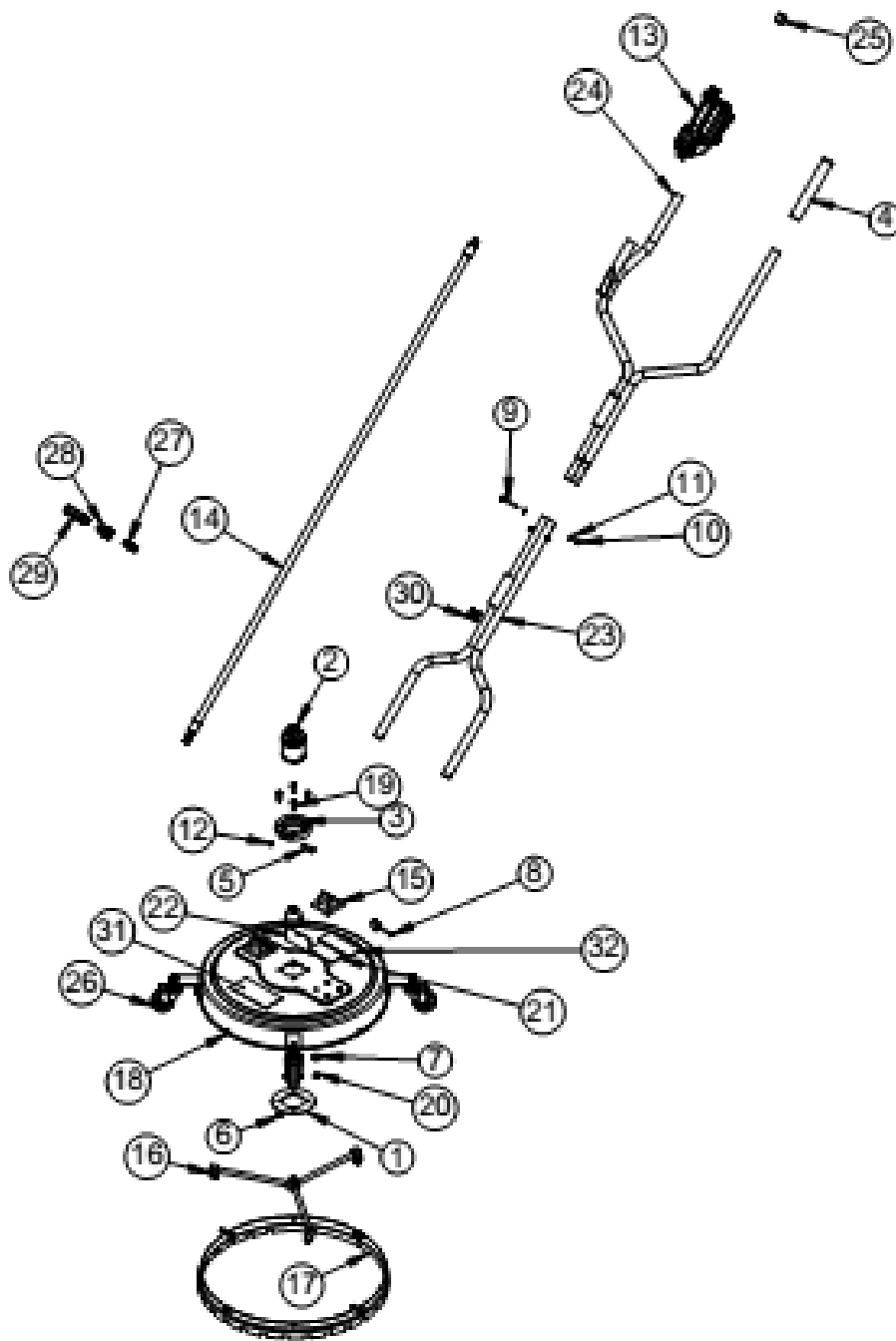
# #49429 Swivel Parts Diagram



## #49429 Swivel Parts List

Item No.	Part No.	Description	Qty.
1	2500011	Housing	1
2	2520030	Retainer, Bearing	1
3	2520029	Retainer, Bearing	1
4	2520027	Spacer, Bearing	2
5	2640015	Bearing	2
6	2701012	O-Ring	1
7	2701011	O-Ring	1
8	2701010	O-Ring	1
9	2720007	Spring	1
10	2530008	Pin	2
11	2530007	Stem, Small	1
12	2520029	Snap Ring	3
13	2710000	Back-up Ring	1
14	2520113	Stem	1
15	2200092	Screw, M5x16	3
16	2200050	Washer	3
17	2500012	Retainer, Bearing	1

# #49430 Parts Diagram

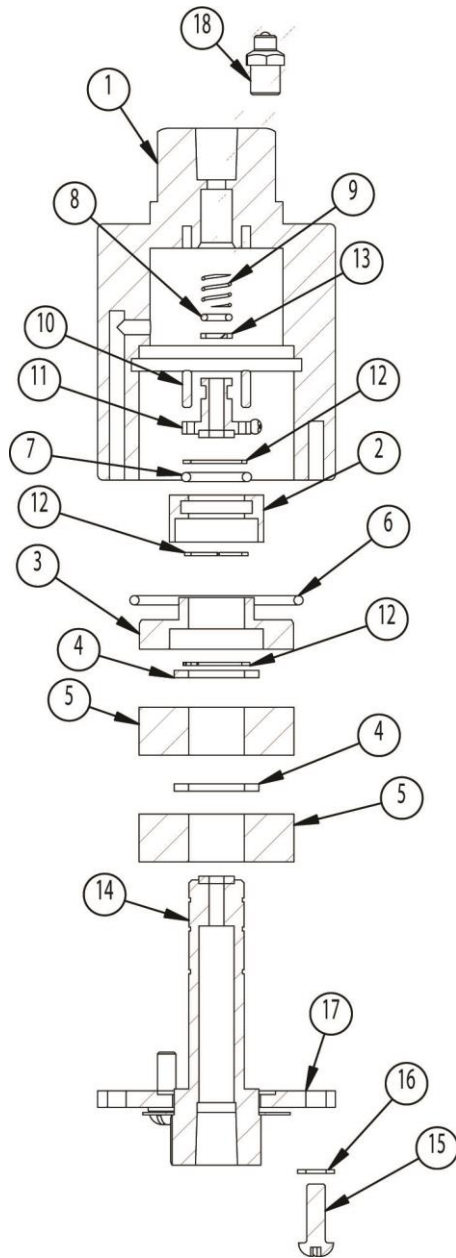


## #49430 Parts List

Item No.	Part No.	Description	Qty.
1	2630010	Plate, Retaining	1
2	2103226	Swivel	1
3	2500017	Collar, Split	1
4	2660047	Grip, Handle	1
5	2200055	SHCS, M8 X 30	1
6	2200053	Nut, M8 X 1.25, SS	4
7	2203406	Washer, M6	8
8	2202010	Pin, 55MM, W / Ring, SS	2
9	2200058	HHCS, M6 X 60	2
10	2200026	Nut, Nylon, M6	2
11	2200018	Washer, M6	4
12	2203507	Washer	1
13	DCG4000FSC	Gun, FSC	1
14	2702000	Hose, FSC	1
15	2500016	Block, Handle	2
16	2103224	Arm, Rotary, FSC	1
17	2103223	Assy, Brush	1
18	2540070	Deck, FSC, SST	1
19	2200093	SHCS	4
20	2200094	Bolt, M6	8
21	2400007	Label, Grease	1
22	2400013	Label, Swivel	1
23	2550161	Handle, Lower	1
24	2550160	Handle, FSC, Upper	1
25	2660224	Plug, Handle	1
26	2103228	Caster Kit, SS	1
27	D10079	Plug, 3/8 X 3/8-M	1
28	D10075	Coupler, 3/8 X 3/8-M	1
29	D40015	Filter, In-Line, SST	1
30	2660297	Grommet, FSC Handle	2
31	2604013	Label, Logo, 150X70	1
32	2604012	Label, Spec, 5X2	1



# #49430 Swivel Parts Diagram



## #49430 Swivel Parts List

Item No.	Part No.	Description	Qty.
1	250014	Housing	1
2	2520030	Retainer, Bearing	1
3	2520028	Retainer, Bearing	1
4	2520027	Spacer, Bearing	2
5	2640004	Bearing	2
6	3701012	O-Ring	1
7	2701011	O-Ring	1
8	2701010	O-Ring	1
9	2720007	Spring	1
10	2530008	Pin	2
11	2530007	Stem, Small	1
12	2520029	Snap Ring	3
13	2710000	Back-up Ring	1
14	2520113	Stem	1
15	2200092	Screw, M5 x 16	3
16	2200050	Washer	3
17	2500018	Retainer, Bearing	1
18	2640012	Zerk, Grease	1

## Troubleshooting

### ⚠ WARNING

- Do not turn the cleaner over when it is pressurized by connection to an operating pressure washer to avoid high-pressure spraying water that could cause serious personal injury.

If the surface cleaner's rotating arm is not spinning, ensure that the cleaner is not pressurized then tilt it upward so you can see the underside of the deck. If a nozzle is not spraying, it's plugged and needs to be cleaned. The best way to unclog a plug is to remove the nozzle (9/16" wrench) and tap it on a hard surface (being careful not to damage the threads). It may be necessary to unclog the nozzle by running a thin wire through the tip.

Seal the threads before replacing the nozzle. Teflon tape can often clog a nozzle so be sure tape does not get into the nozzle flow path. A light duty liquid or paste thread sealant is the best way to seal the threads (photo).



## 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, description, and reference number.
- 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 NorthStar product purchased will be free from material defects in both materials and workmanship, normal wear and tear excepted, for a period of **2 years** 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, replace product components without charge to you. No returns will be accepted. 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.



Distributed by:

Northern Tool & Equipment Company, Inc.

Burnsville, Minnesota 55306

[www.northerntool.com](http://www.northerntool.com)

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