



Power Trowel

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# 5898307

READ & 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 (if applicable): _____

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.

This product is designed for certain applications only. Northern Tool and Equipment is not responsible for issues arising from modification or improper use of this product such as 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

Power Trowel is used for the purpose of finishing concrete surface, by rotating four blades around surface equally and flatly on the process of concrete surface hardening.

Packaging Contents

- Power Trowel Body(1)
- Operation Manual for plate compactor(1)
- Operation Manual for engine (1)
- Goggle (1)
- Belt A640(1)
- Fuel Hose(1)
- Spark Plug Sleeve(1)
- A Pair of Gloves(1)
- Handle(Long)(1)
- Handle(Upper)(1)
- Air Filter Element(1)
- Ribbon 5-200 (4)
- Ribbon 6-300(2)

Technical Specifications

Manufacturer model	HP-S100H
Overall length(Inch)	79
Overall width(Inch)	38.6
Overall height(Inch)	39.4
Diameter blade(Inch)	36
Blade dimensions	5.9×13.4inch
Blade number	4
Blade revolutions	60 ~ 130RPM
Operating Weight(Lbs)	180.4
Engine Model	HONDA GX160
Type	Air-cooled 4-cycle petrol engine
Displacement	163 cc
Max. output	3.6 kW/3600 rpm 4.9 PS/3600 rpm
Lubricating oil type	SAE 10W-30
Lubricant capacity	0.58 L (580 cc)
Fuel tank capacity	3.1 L

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. This product will be safer and do a better job 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

PROP 65

- This product can expose you to chemicals including lead, which is known to the State of California to cause cancer. For more information, go to www.p65warnings.ca.gov.
- Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to the state of California to cause cancer, birth defects, or other reproductive harm. Some examples of these chemicals are:
 - - lead from lead-based paints,
 - - crystalline silica from bricks and cement and other masonry products, and
 - - arsenic and chromium from chemically-treated lumber.
- Your risk from these exposures varies depending on how often you do this type of work. To reduce your exposure to these chemicals, work in a well-ventilated area, and work with approved safety equipment, such as dust masks that are specially designed to filter out microscopic particles.
- Handling power cords on corded products may expose you to lead, a chemical known to the state of California to cause cancer and birth defects or other reproductive harm. Wash your hands after handling.

⚠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 product in confined work areas may put you dangerously close to cutting tools and rotating parts.
- Do not use the product 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 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 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 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.
- Remove keys or wrenches before connecting the tool 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.

⚠CAUTION

PRODUCT USE AND CARE

- Do not force the product. Products are safer and do a better job when used in the manner for which they are designed. Plan your work and use the correct product for the job.
- Check for damaged parts before each use. Carefully check that the product will operate properly and perform its intended function. Replace damaged or worn parts immediately. Never operate the product with a damaged part.

- Do not use a product with a malfunctioning switch. Any power tool that cannot be controlled with the power switch is dangerous and must be repaired by an authorized service representative before using.
- Disconnect the power/air supply from the product and place the switch in the locked or off position before making any adjustments, changing accessories, or storing the tool. Such preventive safety measures reduce the risk of starting the tool accidentally.
- Store the product when it is not in use. Store it in a dry, secure place out of the reach of children. Inspect the tool for good working condition prior to storage and before re-use.
- Use only accessories that are recommended by the manufacturer for use with your product. Accessories that may be suitable for one product may create a risk of injury when used with another tool. Never use an accessory that has a lower operating speed or operating pressure than the tool itself.
- Keep guards in place and in working order. Never operate the product without the guards in place.
- Do not leave the tool running unattended.

Specific Operation Warnings

⚠ WARNING

WARNING OF RISK:

Do not use machine except finishing the surface of concrete on the process of hardening.

Do not release your hand freely in operation. Serious accident may occur by rotating handle freely. Power Trowel starts self-turning from the body as the center axle, until engine speed slows down enough and the clutch is disengaged.

Operate machine after confirming no other worker stands in the range of handle turning.

Power Trowel can move every direction(forward, backward, turning right and left) by operator's handling, and keep any other worker away from machine except operator. Exposed trowel blades turning in operation are also dangerous.

Be careful in touch with or to handle its worn blade for edge sharpness like a knife.

STRUCTURE:

Worm Reduction Gear is located under Engine Base. Input Shaft of Worm Reduction Gear is connected to Output Shaft of Engine through Centrifugal Clutch and V-belt.

And Output Shaft of Worm Reduction Gear is connected to Blade Base to fix 4 pieces of Blade Arms with Blades.

Throttle Lever and Shifter Handle are fixed to Handle to operate machine, and Engine Stop Switch is also located to Blower Housing in Engine.

POWER TRANSMISSION:

Output Shaft of Engine is connected to Input Shaft of Worm Reduction Gear through Centrifugal Clutch and V-belt.

Rotating power is being transferred to Blade Axle by changing the direction of rotating and reducing R.P.M.

Blade Base fixed to Blade Shaft is attached with Blade Arm and Blade, of which revolution is adjusted by Throttle Lever of Engine.

Blade angle can be adjusted through Slide Arm and Slide Pulley, by turning Shifter Handle.

General Precautions:

Do not operate the machine

If you do not feel well due to overwork or illness.

If you are taking any medicine.

If you are under the influence of alcohol

Read this manual carefully and handle the machine as described to ensure safe work.

For details about the engine, refer to the separate manual for the engine.

Decals on the machine (operation method labels, warning labels, etc.) are very important for your safety.

Keep the machine clean so that the decals can be read all the time.

Replace a decal if it become illegible.

Make sure you understand the structure of the machine well.

For safe work, always wear protective gear (helmets, safety shoes, ear plugs, etc.) and work in appropriate clothes.

Always check the machine before your work to make sure it is in normal condition.

It is very dangerous if children come into close contact with the machine.

Have the utmost concern about how and where to store the machine.

Keep it in a designated place.

We does not accept any responsibility to accidents caused by remodeling or rework done on the machine.

CHECK WORKING CONDITION

Always keep away from workers and obstacles and be sure to be safety when starting and operating machine.

For working in slab concrete, there are steel bars come up unexpectedly. It is very dangerous accident or serious damage if the rotating blade hits prongs lower than Guard Ring.

CHECK WORKING LOCATION

The exhaust gas from the engine contains toxic gases such as carbon monoxide and is very hazardous.

Do not run the machine in an unventilated location such as indoors or inside a tunnel.

During operation, keep its exhaust gas away from operator as well as other workers nearby.

The exhaust outlet of machine keeps minimum 1m far from house wall and facility.

Unventilated operation may cause serious addiction and accident for workers nearby.

Precautions Before Starting

Check function and looseness for safety work before operation.

Check each part such like Covering, Safety parts, Throttle Lever, Stop Switch, etc.

Check fuel and engine oil. Tighten bolts and nuts securely.

Refueling Precautions

Stop engine for refueling, and wait until it cools down.

Take the machine to a clear flat location without any combustibles nearby.

Keep the level of fuel added. Be careful not to spill the fuel. Wipe well if any spill occurs.

Do not fill to the rim due to potential spillage.

After adding the fuel, tightly close the tank cap

Precautions During Work

When starting engine, keep Throttle Lever at idle position.

Do not put your foot under Guard Ring anytime during operation. Use machine only by skillful operator or his assistance. Watch your foot, and keep stable stance anytime to make operation in well balance

After starting engine, do not keep your hand away from machine handle

If released your hand and centrifugal clutch was not enough disconnected, machine handle rotates itself from the center of machine and it is very dangerous. If operator is apart from machine or move machine for transportation, be sure to stop engine.

Touching with rotating parts (Blade, V-belt, etc.) is very dangerous. Be careful for the operation at inclined area, which becomes difficult in control. In the operation at steep area, it may cause engine burning.

Fire Risk

Do not put the dangerous substances such like grease, celluloid, explosive, etc., and flammable ones like paper and lumber. Damp a fireignitable.

Burn Injury Risk

Be careful of burn injury risk keeping away from the parts at high temperature, especially engine itself and muffler just after stopping engine and in operation.

Stop Operation When Trouble Happens

If you are aware of machine conditions being worse or in trouble, stop operation immediately to check and repair.

Fire accident may happen.

Stop Engine

Be sure to stop engine if you are apart from machine or transport machine to other place.

Transportation and Storage Precautions

Stop engine during transportation.

For lifting, use only one point hoisting hook, and do not lift any other part.

Use a sufficiently strong wire rope.

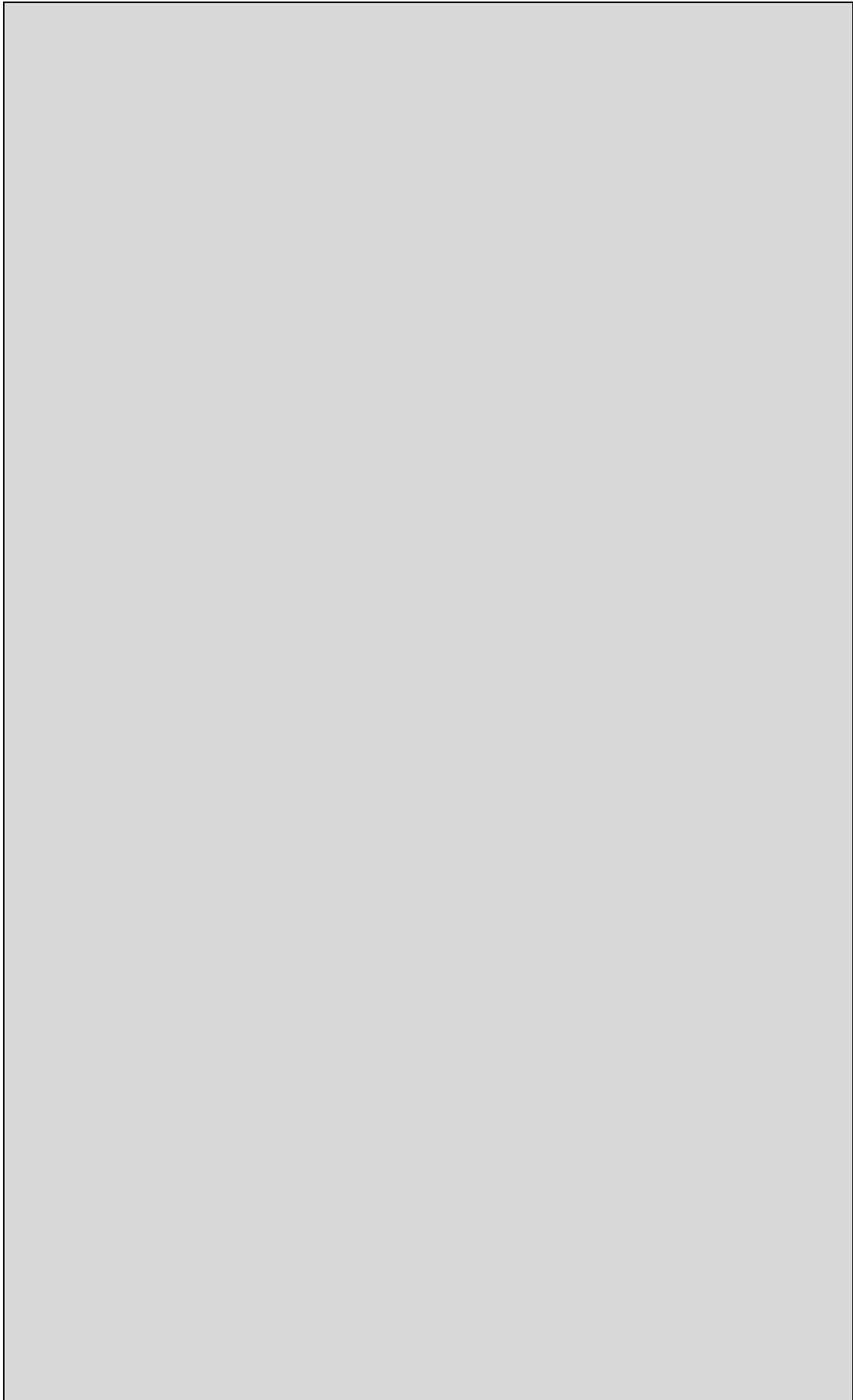
During transportation, fix fuel tank cap and plug for engine oil to avoid from leakage. Close fuel cock, and drain fuel for safety transportation.

Securely fix machine to prevent it from moving or falling during transportation.

Main Parts of **Product**



01	Throttle Lever Assembly
02	Shifter Handle
03	Safety Grip Handle
04	Handle(Long)
05	Belt Cover
06	Blade Arm assy
07	Blade
08	Blade Cover
09	Engine Stop Switch
10	Engine Fuel Cap
11	Engine Air Filter
12	Engine Muffler

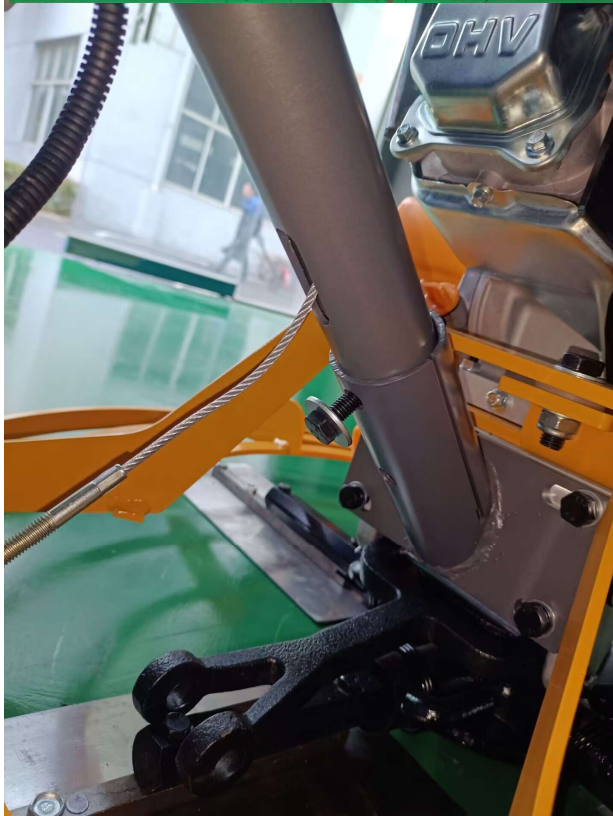
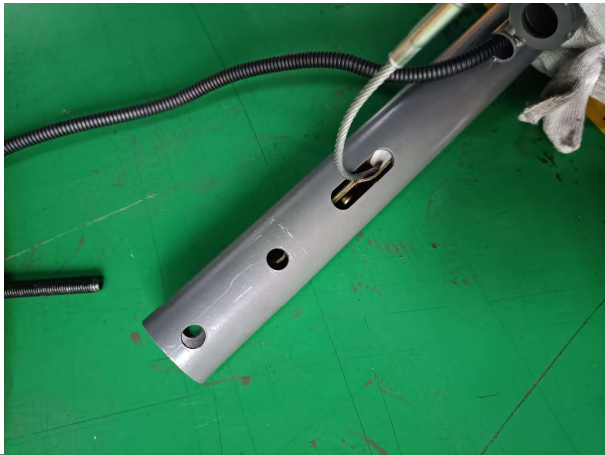


Assembly Instructions

⚠WARNING

Step 1

Insert the Handle(Long) into the Handle Bracket of the main body. It is required to align the fixing hole of the steel rope bracket in the Handle(Long) with the holes of the Handle(Long) and the Handle Bracket. Use M10*80 external bolts fix the Handle(Long) to the Handle Bracket of the main body.



Step 2

Adjust the Limit Bolt in the Handle(Long) to the Lowest Position, Insert the Cable Pin into the Fork, Lift up the Fork, insert the cable into the cable pin, straighten the cable, then use two nut M8 to lock them (tighten the Bolt and the nut)



Step 3

Use Outside Hexagon Bolt M10*120 and Locked Alu. Nut M10 to Fix the Handle(Upper) to the Handle(Long)



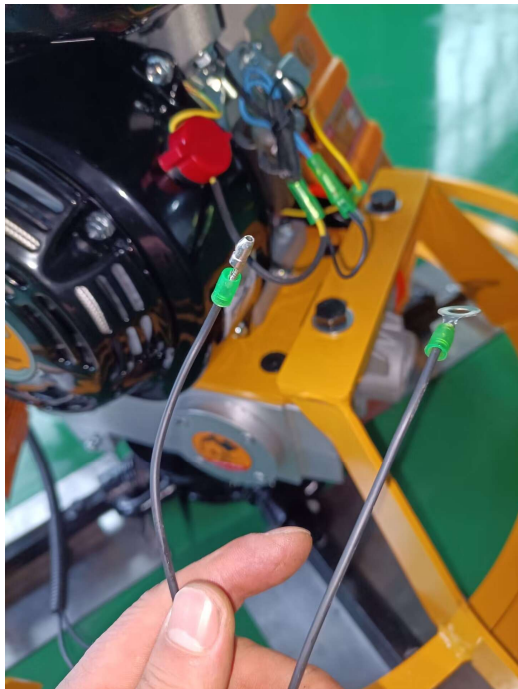
Step 4

Fix the Throttle lever Assembly on the Handle(Upper)



Step 5

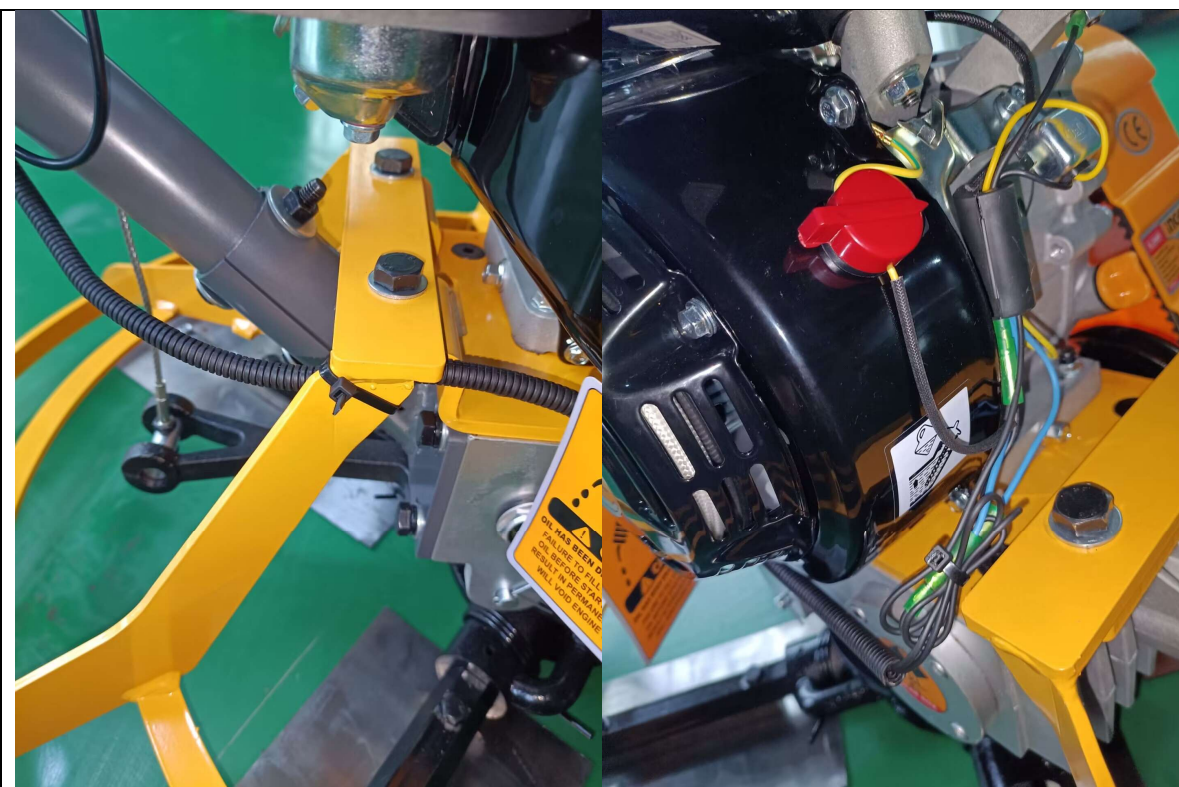
Connecting the Power-Off line together,Fix the other Line(O) to the engine Body





Step 6
Use Ribbon to tighten the Line as the Photo show





Before Each Use

⚠ WARNING

Engine

Recommended Fuel

The trowel engine requires fresh, clean, regular, unleaded gasoline. Fuel containing water or dirt will damage the fuel system. Consult to engine owner's manual for complete fuel specifications

DANGER: Adding fuel to the tank should be done only when the engine is stopped and has had an opportunity to cool down to avoid a risk of an explosion or fire from a fuel spill. In the event of a fuel spill, **DO NOT** attempt to start the engine until the fuel residue has been completely wiped up, and the area surrounding the engine is dry.

Before starting

Read and understand the safety and operating instruction manual of the engine.

Check:

Oil level in engine; refill if necessary.

Fuel level; refill the tank if necessary.

Condition of fuel lines.

Condition of air filter.

The spark plug

Trowel

Check all the bolts, nuts and belts and tighten any if necessary.

Check the belt tension.

Check the condition of the blades. Repair or replace any blades that are damaged or bent.

Check the general condition of the trowel and its components and clean any foreign material (dirt, fragments, etc.) from the trowel that may be thrown off and cause injury.

Operating Instructions

⚠WARNING

Operators must be trained in the use of the power trowel and maintain practiced skill. It is dangerous to operate this machine improperly or by an untrained person. An operator should read and understand the manual and follow its directions.

This power trowel is equipped with an engine stop switch. Test the switch each time the engine is started. NEVER disable or disconnect the switch. It is provided for operator safety. Injury may result if it is disabled, disconnected, or improperly maintained.

In an emergency situation, stop the engine immediately with the engine stop switch. In normal conditions, do not stop the engine when the power trowel is at high speed or the engine temperature will rise suddenly, possibly causing engine parts to jam or the oil to deteriorate.

Start the Engine

1. Open the fuel valve on the engine.
2. Close the choke lever on the engine. A warm engine may not need to be choked.
3. Close the engine stop switch (set it to ON) .
4. Pull the starter rope to start the engine.
5. Open the choke and allow the engine to warm up at slow speed for 5 minutes.
6. Test the engine stop switch. If it is working properly, the engine will stop.
7. Perform steps 3 and 4 again to restart the engine to use the power trowel.

Operation

1. While firmly grasping the power trowel handle and with the engine stop switch closed, pull the throttle lever back toward the operator to increase the speed of the engine and start the blades turning.
2. Use the handle to move the power trowel: to move left, apply a slight upward pressure on the handle, to move right, press down slightly; to move forward, twist handle clockwise; to move backward, twist handle counterclockwise; to rotate in one spot, hold handle in a neutral position

3. A good practice to finish concrete is move the trowel from side to side while moving backward.

Stop the Engine

1. If the engine has been running for a while and is hot, push the throttle lever fully toward the trowel to minimize the engine speed then let the engine idle for a few minutes.
2. Release the engine stop switch to stop the engine.
3. Close the fuel valve. See engine the instruction manual for further information.

After Each Use

⚠WARNING

Check that the compactor engine is turned off and cooled before attempting any maintenance, cleaning, or inspection. Performing maintenance on an operating compactor can cause injury.

1. Wash the trowel with water immediately after use so concrete does not dry on the machine, taking care to not get the engine or electrical controls wet.
 2. Clean the engine cylinder cooling fins. A broom or old brush are good tools to remove concrete before it becomes solid.
 3. Apply a thin coat of diesel fuel to the blades and blade arms to prevent rust.
- . Refer to the engine manufacturer's instruction manual for additional information about engine maintenance.

Storage

If storing the trowel for an extended period of time (more than 30 days) or transporting it:

1. Clean the trowel as described above
 2. Remove the blades.
 3. Drain the fuel tank and run the engine briefly until the fuel in the carburetor is completely consumed.
 4. Clean or replace the air filter.
 5. Change the engine oil. Follow the procedures described in the engine manual for engine storage.
 6. Store the trowel and blades separately in a clean, dry area
 7. Cover the trowel and blades completely with a cloth or tarp.
- . If transporting the power trowel, lift it using a proper lifting crane when moving it on and off a truck. Lifting the trowel by hand may cause personal injury due to its heavyweight.

Maintenance

⚠WARNING

Check that the trowel engine is turned off and cooled before attempting any maintenance, cleaning, or inspection. Performing maintenance on an operating compactor can cause injury.

1. Check looseness of Bolt & Nut, oil leakage, V-belt and the movement of Lever & Cable.
2. Grease-up each 4 points of Blade Base, Slide Pulley, Universal Joint adjustable with Blade Pitch, Slide Bolt, etc.
3. Change lubricants in Gear Box.

Use Automobile Gear Oil SAE 140 (GL-5 class) of which contents at 500cc.

1st	50 hours from the beginning
2nd	250 hours after 1st replacement
The later or	Every 1,000 hours

4. Refer to Engine Instruction Manual for inspection and maintenance.

Maintain the product by adopting a program of conscientious repair and maintenance in accordance with the following recommended procedures. It is recommended that the general condition of any tool be examined before it is used. Keep your tool in good repair. Keep all cutting tools sharp and clean. Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control. Keep handles dry, clean, and free from oil and grease. Also refer to the engine manufacturer's instruction manual for additional information about engine maintenance. The following chart is based on a normal operation schedule.

Maintenance Interval	Maintenance Point
Daily before operating	Check and tighten the external hardware Check and adjust the belt tension Check the fuel level Check the engine oil level (see the engine manual) Inspect the fuel lines Inspect the air filter and replace it if needed Check the spark plug
After the first 20 operating hours	Check and adjust the belt tension Change the engine oil (see the engine manual)

After the first 50 operating hours or every week	<ul style="list-style-type: none"> Check and adjust the belt tension Clean the air filter and replace if needed Change the engine oil (see the engine manual) Check and clean the spark plug
After the first 100 operating hours or every month	<ul style="list-style-type: none"> Clean the fuel strainer Change the engine oil (see the engine manual)
After the first 300 operating hours or every year	<ul style="list-style-type: none"> Change the grease in gear operating parts Check and adjust the valve clearance Clean the cylinder head Change the engine oil (see the engine manual)

Because the above is use time in normal condition, please shorten it by a use condition. Please change fuel pipes in two years.

Troubleshooting

⚠️WARNING

To avoid risk of severe injury, turn off the engine and allow it to cool before performing any maintenance, cleaning, or inspection.

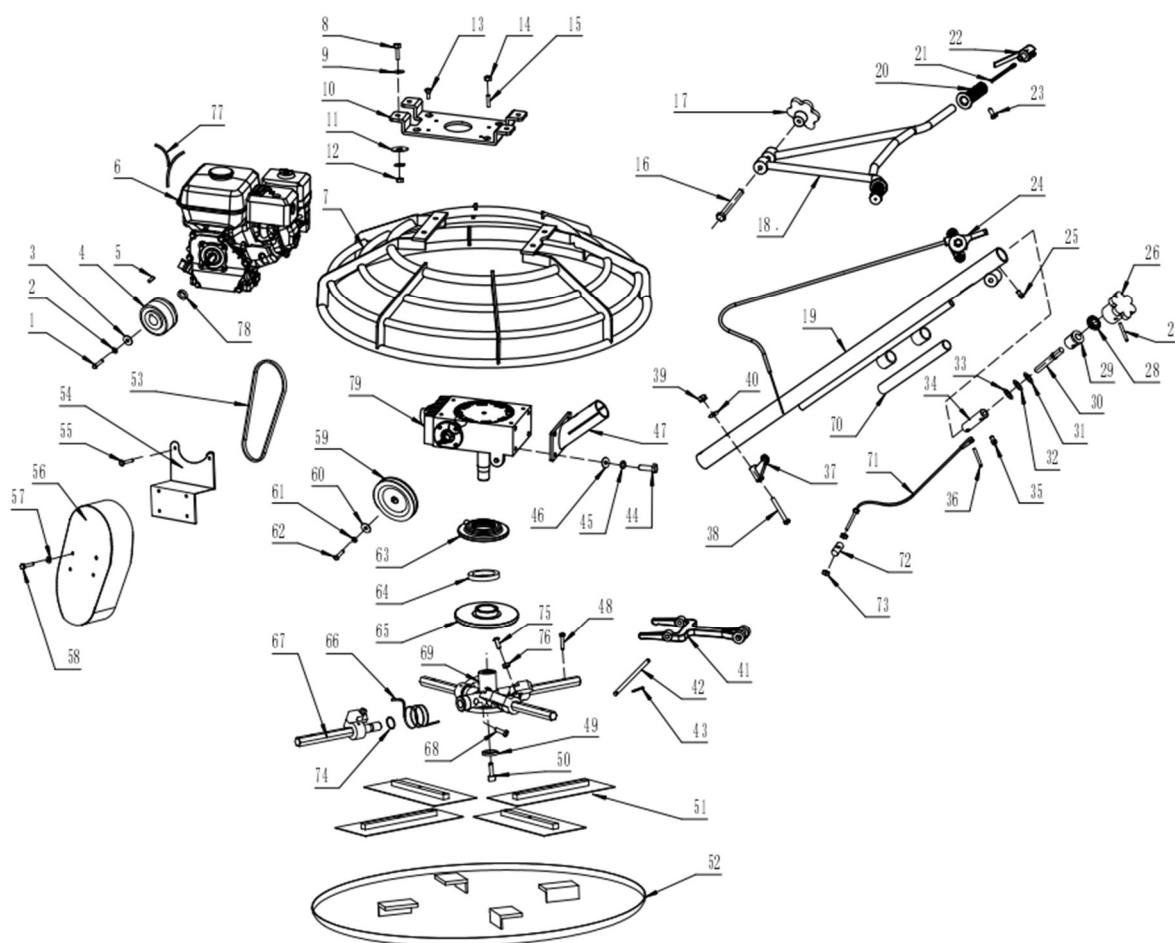
Check the list below before addressing the problems to servicing personnel including local dealer. If the problem continues after the following troubleshooting, call your local dealer for future assistance.

Use the table below to troubleshoot problems before contacting service personnel or your local dealer. If the problem continues after troubleshooting, call your local dealer for assistance.

Failure	Possible Cause	Corrective Action
	<ul style="list-style-type: none"> . Engine throttle control does not completely open 	<ul style="list-style-type: none"> . Open the engine throttle control completely
	<ul style="list-style-type: none"> . Throttle control does not adjusted correctly 	<ul style="list-style-type: none"> . Adjust the throttle control correctly
	<ul style="list-style-type: none"> . The cement is too wet for finishing 	<ul style="list-style-type: none"> . Dry the cement before operation
	<ul style="list-style-type: none"> . Drive belt is loosened up or worn out, slipping on pulleys 	<ul style="list-style-type: none"> . Adjust/replace the belt. or check whether the

Trowel does not develop its full speed (poor performance)		engine mounting bolts are tightened
	. Warm gear binding	. Check grease and wear of gear. Add /change grease.
	. Automatic clutch/ pulley are loosened up.	. Check status of contact. Add lubricant or replace the clutch
	. Air filter clogged with dust, reducing engine performance	. Clean/replace the air filter .
	. Engine speed is too low	. Check engine speed with tachometer. Adjust/repair engine to run at correct speed. . Note: Refer to engine manual.
Engine running, but no blade rotation	. Engine throttle is not opened	. Drive belt is loosened or broken. Adjust/replace it
	. Clutch damage	. Inspect / replace clutch
	. Engine speed is too low	. Check and adjust engine speed
	. Too much oil in exciter	. Adjust the oil level in exciter correctly
Trowel jumps or works unevenly.	. Cement surface is too hard	. Wet cement (if possible)
	. V-belt is loose or worn out	. Adjust/replace the V-belt

Parts Diagram 1



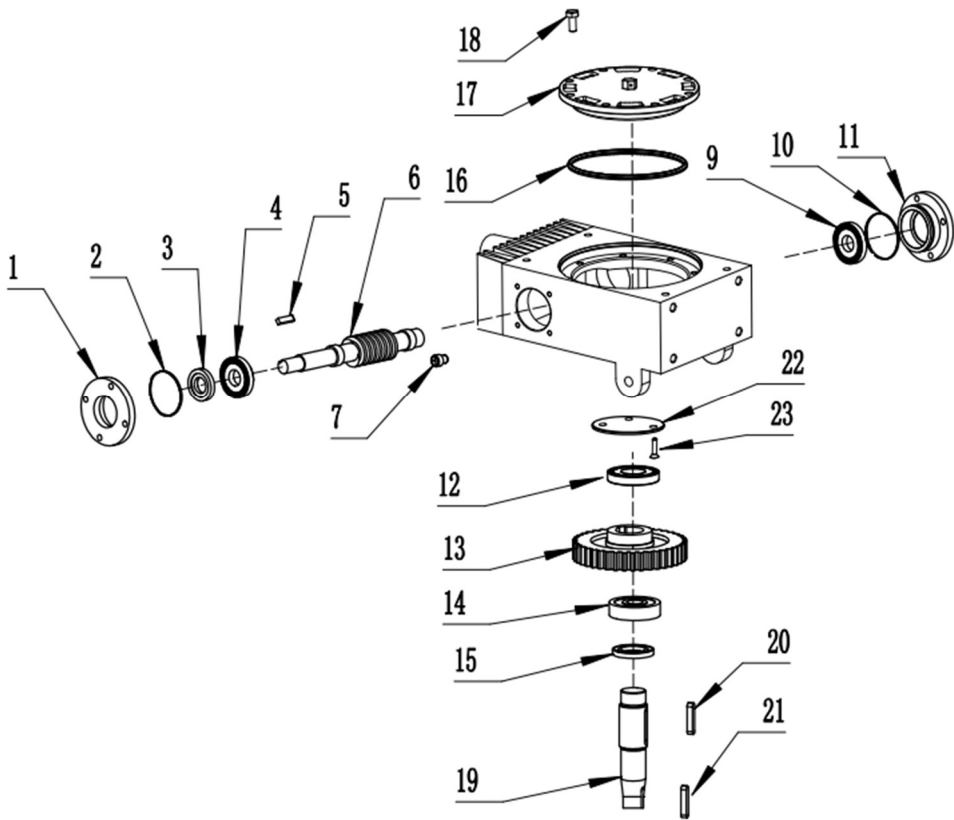
Parts List 1

Reference	Part Number	Part Description	Quantity
1	589830701	Outside Hexagon Bolt 5/16-20-50	1
2	589830702	Spring Gasket Ø8	1
3	589830703	Conical flat Gasket Ø8*30	1
4	589830704	Clutch	1
5	589830705	Key 4.75*50	1
6	589830706	Honda GX160	1
7	589830707	Blade Cover	1
8	589830708	Outside Hexagon Bolt M12*40	4
9	589830709	Flat Gasket Ø12	8
10	589830710	Engine base	1
11	589830711	PU Pad M12*40*4	4
12	589830712	Locked Nut M12	4
13	589830713	Countersunk inner Hexagon Bolt M10*20	4
14	589830714	Locked Nut M8	4
15	589830715	Double End Bolt M8*40	4
16	589830716	Outside Hexagon Bolt M10*120	1
17	589830717	Locked Alu. Nut M10	1
18	589830718	Handle(Upper)	1

Reference	Part Number	Part Description	Quantity
19	589830719	Handle(Long)	1
20	589830720	Plastic Handle	2
21	589830721	contact switch With wire	1
22	589830722	Safety Grip Handle	1
23	589830723	Round head cross screw M6*10	1
24	589830724	Throttle lever Assembly	1
25	589830725	Inner Hexagon bolt M8*10	1
26	589830726	Shifter Handle	1
27	589830727	spring column pin 6*45	1
28	589830728	Plane Bearing 51104	1
29	589830729	Screw fixing sleeve	1
30	589830730	Adjusting screw	1
31	589830731	Wave washer 18*1.5	1
32	589830732	Flat Gasket Ø18	1
33	589830733	Circlip Ø18	1
34	589830734	Adjusting Sleeve	1
35	589830735	Inner Hexagon bolt M6×8	2
36	589830736	spring column pin 6*35	1
37	589830737	Rope bracket	1
38	589830738	Outside Hexagon Bolt M10*80	2
39	589830739	Locked Nut M10	2
40	589830740	Flat Gasket Ø10	4
41	589830741	Fork	1
42	589830742	Fork Shaft	1
43	589830743	Split Pin Ø3*30	2
44	589830744	Outside Hexagon Bolt M10*25	4
45	589830745	Spring Gasket M10	4
46	589830746	Flat Gasket Ø10	4
47	589830747	Handle Bracket	1
48	589830748	Outside Hexagon Bolt M8*40	8
49	589830749	Main shaft washer	1
50	589830750	Inner Hexagon bolt M12*30	1
51	589830751	Blade	4
52	589830752	Pan(Optional)	1
53	589830753	Belt	1
54	589830754	Belt Cover Bracket	1
55	589830755	Round head cross screw M8*16	2
56	589830756	Belt Cover	1
57	589830757	Enlarged Flat Gasket Ø6	4
58	589830758	Inner Hexagon bolt M6*16	4
59	589830759	Pulley for worm gear box	1
60	589830760	Enlarged Flat Gasket Ø8*30	1
61	589830761	Spring Gasket Ø8	1
62	589830762	Outside Hexagon Bolt M8*20	1
63	589830763	Tray	1
64	589830764	Plane Bearing 51113	1
65	589830765	Slide Plate	1
66	589830766	torsional spring	4
67	589830767	Blade Arm assy	4
68	589830768	Outside Hexagon Bolt M10*20	4
69	589830769	Blade base	1
70	589830770	Moving Bar	1
71	589830771	Regulating cable 1020mm	1
72	589830772	Regulating cable Pin	1

Reference	Part Number	Part Description	Quantity
73	589830773	Nut M8	2
74	589830774	"O" Ring 30*3.1	4
75	589830775	Half moon head Bolt M8×30	4
76	589830776	Nut M8	4
77	589830777	Power Off Connection	1
78	589830778	Clutch Cushion	1
79	589830779	Worm Gear Box Assy	1

Parts Diagram 2



Parts List 2

Reference	Part Number	Part Description	Quantity
1	58983077901	Cover(Open)	1
2	58983077902	"O" Ring 50*2.65	1
3	58983077903	Oil Seal 20*40*10	1
4	58983077904	Tapered roller bearing 30304	1
5	58983077905	Key 5*25	1
6	58983077906	Worm	1
7	58983077907	Inner Hexagon Bolt M6*20	8
8	58983077908	Gear Box	1
9	58983077909	Bearing 6304	1
10	58983077910	"O" Ring 50*2.65	1
11	58983077911	Cover(Shut Off)	1

Reference	Part Number	Part Description	Quantity
12	58983077912	Tapered roller bearing 30207	1
13	58983077913	Turbo	1
14	58983077914	Bearing 6207	1
15	58983077915	Oil seal 35*56*10	1
16	58983077916	"O" Ring 132*2.65	1
17	58983077917	Gear Box cover	1
18	58983077918	Countersunk inner Hexagon Bolt M8*20	8
19	58983077919	Output Shaft	1
20	58983077920	Key 10*30	1
21	58983077921	Key 8*35	1
22	58983077922	Cover(Oil seal)	1
23	58983077923	Countersunk cross Bolt M6*12	3

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 information will be required: item description, item model number, item serial number/item lot date code, and the replacement part reference number.
- The distributor reserves the rights to make design changes and 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 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.



Distributed by:

Northern Tool & Equipment Company, Inc.

Burnsville, Minnesota 55306

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