



## 220-Lb. Single-Line/440-Lb. Double-Line Capacity ELECTRIC HOIST

### 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 #4584189**

**READ & SAVE THESE INSTRUCTIONS**

Thank you very much for choosing a Ironton TM 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.

This electric hoist 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

The Ironton 220-Lb. Single-Line/440-Lb. Double-Line Capacity Electric Hoist is a rugged, efficient 120V electric hoist that makes lifting easy. The hoist is ideal for light weight jobs. For small jobs it will be the ultimate labor saving device. It lifts up to 220 lb. with a single line or 440 lb. with a double line. Included is a 40 ft. x 0.125 in. diameter cable.

## Packaging Contents

- Electric Hoist
- Pulley Hook
- Lifting Hook
- Mounting Clamp
- Hardware Bag
- Owner's Manual

## Technical Specifications

Property	Specification
Voltage	120V, 60Hz
HP	5/8
AMPS	4.1
Loading Capacity	Single Line 220 lb., Double Line 440 lb.
Lifting Speed	Single Line 33 ft./Min., Double Line 16.5 ft./Min.
Lifting Height	Single Line 38 ft., Double Line: 19 ft.
Rope Diameter	1/8 in. (3.18mm)
Cable Tensile Strength	1870N/mm <sup>2</sup>
Duty Cycle	20%-10 min.
Net Weight	22.88 lb.

## 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**

#### **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 hoist 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 hoist 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.

### **CAUTION**

#### **HOIST USE AND CARE**

- Do not force the hoist. 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 Page 5 of 18 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 hoist 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

- Improper use can cause risk of fire, electric shock, or personal injury.
  - Do not exceed the rated load capacity.
  - Only operate the hoist when the load is centered under the hoist.
  - Inspect the rope before each use. Only operate the hoist when the rope is in good working condition. Do not use if it is twisted, kinked, or damaged.
  - Inspect the hoist before each use. Do not use if it is damaged or malfunctioning in any way.
  - Not intended to lift people or animals. Lifting people may result in severe injury or death.
  - Keep bystanders away. Do not control hoist under load. Do not lift loads over people.
  - Ensure rope is properly seated in its groove before operation.
  - Do not reverse wrap cable in drum. The up switch should always lift the load.
- Always leave a minimum of 4 wraps on the drum. The fastener between the cable and hoist is not rated for maximum capacity.

## Grounding

### WARNING

- This machine must be grounded while in use to protect the operator from electrical shock. This unit is equipped with an electrical cord that has an equipment grounding conductor and a grounding plug. The plug **MUST** be plugged into a matching receptacle that is properly installed and grounded in accordance with ALL local codes and ordinances.
- **DO NOT MODIFY THE PROVIDED PLUG.** If it will not fit the receptacle, have the proper receptacle installed by a qualified electrician.
- **CHECK** with a qualified electrician or service person if you do not completely understand the grounding instructions, or if you are not sure the tool is properly grounded.

### Grounded Tools: Tools with 3-Prong Plugs

Tools marked with **Grounding Required** have a 3-wire cord and 3-prong grounding plug. The plug must be connected to a properly grounded outlet. If the tool should electrically malfunction or break down, grounding provides a low resistance path to carry electricity away from the user, reducing the risk of electric shock. (See Figure A.)

The grounding prong in the plug is connected through the green wire inside the cord to the grounding system in the tool. The green wire in the cord must be the only wire connected to the tool's grounding system and must never be attached to an electrically live terminal.

Your tool must be plugged into an appropriate outlet, properly installed and grounded in accordance with all codes and ordinances. The plug and outlet should look like those in the following illustration.

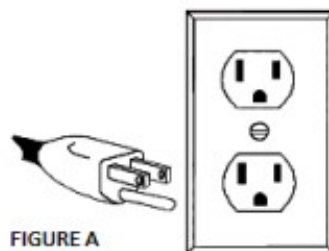


FIGURE A

### Double Insulated Tools: Tools with Two-Prong Plugs

Tools marked **Double Insulated** do not require grounding. They have a special double insulation system which satisfies OSHA requirements and complies with the applicable standards of Underwriters Laboratories, Inc., the Canadian Standard Association, and the National Electrical Code. (See Figure B.)

Double insulated tools may be used in either of the 120 volt outlets

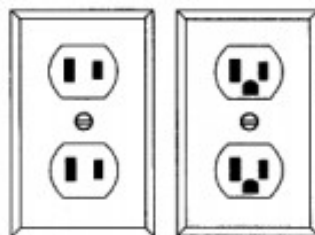


FIGURE B

## Extension Cords

### ⚠ WARNING

- **USE A PROPER EXTENSION CORD.** Make sure your extension cord is in good condition. When using an extension cord, be sure to use one heavy enough to carry the current your product will draw. An undersized cord will cause a drop in line voltage, resulting in loss of power and cause overheating.
- Be sure your extension cord is properly wired and in good condition. Always replace a damaged extension cord or have it repaired by a qualified person before using it. Protect your extension cords from sharp objects, excessive heat and damp or wet areas.

- Grounded tools require a 3-wire extension cord. Double Insulated tools can use either a 2- or 3-wire extension cord.
- As the distance from the supply outlet increases, you must use a heavier gauge extension cord. Using extension cords with inadequately sized wire causes a serious drop in voltage, resulting in loss of power and possible tool damage.
- The smaller the wire's gauge number, the greater the capacity of the cord. For example, a 14-gauge cord can carry a higher current than a 16-gauge cord. Minimum extension cord wire size is shown in the following table:

Minimum Wire Size Of Extension Cords				
Name plate AMPS	Cord Length			
	25'	50'	100'	150'
0-6	18 AWG	16 AWG	16 AWG	14 AWG
6-10	18 AWG	16 AWG	14 AWG	12 AWG
10-12	16 AWG	16 AWG	14 AWG	12 AWG
12-16	14 AWG	12 AWG	NOT RECOMMENDED	

- When using more than one extension cord to make up the total length, make sure each cord contains at least the minimum wire size required.
- If you are using one extension cord for more than one tool, add the nameplate amperes and use the sum to determine the required minimum cord size.
- If you are using an extension cord outdoors, make sure it is marked with the suffix **W-A** (**W** in Canada) to indicate it is acceptable for outdoor use.
- Make sure your extension cord is properly wired and in good electrical condition. Always replace a damaged extension cord or have it repaired by a qualified electrician before using it.
- Protect your extension cords from sharp objects, excessive heat, and damp or wet areas.

## Main Parts of Hoist

Subassembly
Electric Hoist
Mounting Clamp
Lifting Hook
Pulley Hook
Hardware Bag

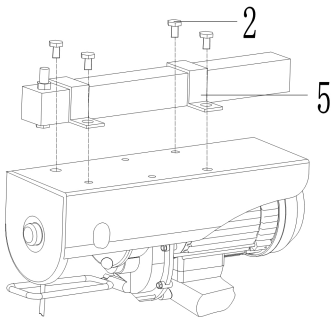
## Assembly Instructions

### WARNING

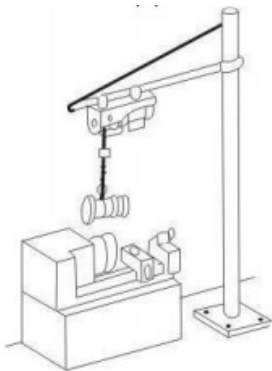
- DO NOT use any broken parts or mounting fixtures. Check for alignment and binding of moving parts, any broken parts or mounting fixtures, and any other condition that may affect proper operation.
- DO NOT use the hoist unless it is completely assembled. The hoist is delivered completely assembled and must only be mounted for use.

The hoist may be mounted on a fixed overhead pipe or beam.

1. Place the two hanging clamps (5) over the supporting structure where the hoist will be mounted. Have a person or two help hold the hoist in position under the hanging clamps so the hoist is aligned with the holes in the hanging clamps.



2. Tighten the screws (2) when the hoist is at a suitable position.

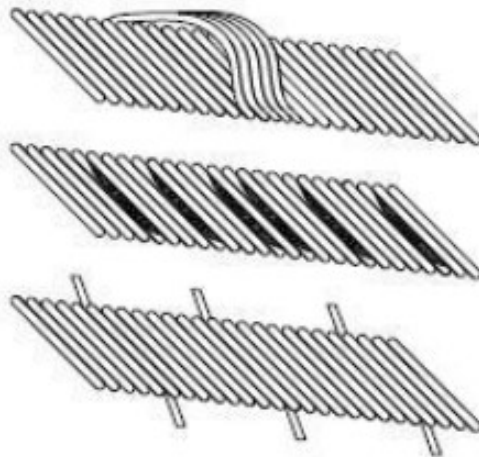


## Before Each Use

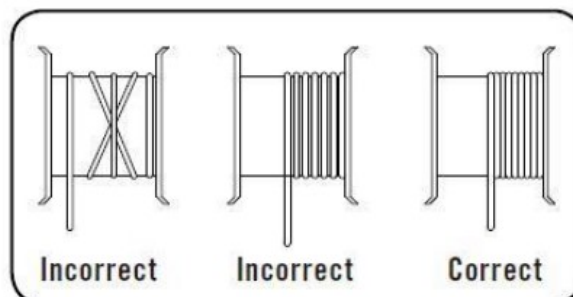
### ⚠ WARNING

- **CHECK FOR DAMAGED PARTS.** Before using any tool, any part that appears damaged should be carefully checked to determine that it will operate properly and perform its intended function.
- **WIRE ROPE.** Be sure the wire rope is in good condition and is attached properly.
- **POWER SUPPLY.** Be sure the power cord and control handle are in good condition.
- Ensure rope is properly seated in its groove before operation.

1. Always inspect the wire cable for any wear, fraying, or damage. Only wire cable in good condition should be used. If the wire cable appears worn, frayed, or damaged, **DO NOT** connect any load to use and replace immediately.



2. Inspect the wire cable to make sure it is spooled correctly. The wire cable should not be overlapping on itself or have space between the rolls or slack in it. If the wire cable is spooled incorrectly, **DO NOT** connect a load to it or use it until the wire cable has been re-spooled correctly.



## Operating Instructions

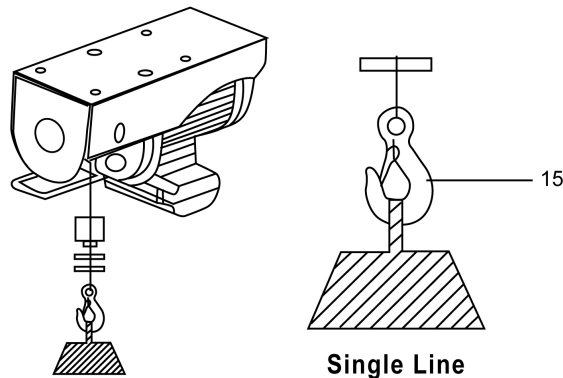
### WARNING

- Improper use can cause risk of fire, electric shock, or personal injury.
- Do not exceed the rated load capacity.
- Only operate the hoist when the load is centered under the hoist.
- Not intended to lift people or animals. Lifting people may result in severe injury or death.
- Keep bystanders away. Do not control hoist under load. Do not lift loads over people.
- Do not reverse wrap cable in drum. The up switch should always lift the load.
- Always leave a minimum of 4 wraps on the drum. The fastener between the cable and hoist is not rated for maximum capacity.

The electric hoist is rated at a 220 lb. single line and 440 lb. double line capacity.

### Single Line Operation

During single line operation, the max rated load capacity is 220 lb. (100 kg). Do not exceed the max rated load capacity. Single line loads can be connected with the support hook that comes already attached to the wire cable. The load can be directly connected to the support hook (15) using a properly rated hoisting sling, chain, or shackle. Make sure the load is directly underneath hoist and is not at an angle.

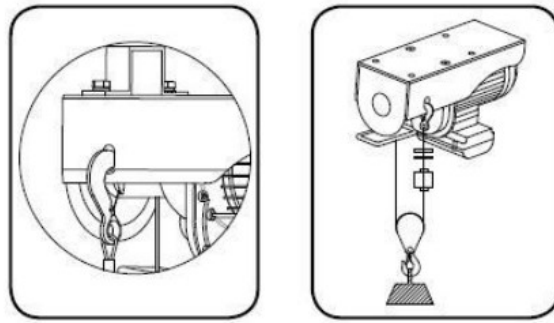


### Double Line Operation

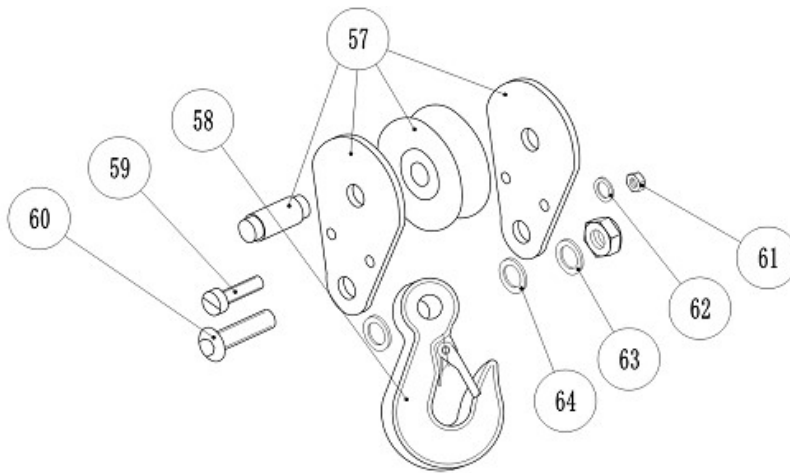
During double line operation, the max rated load capacity is 440 lb (200kg).

Do not exceed the max rated load capacity.

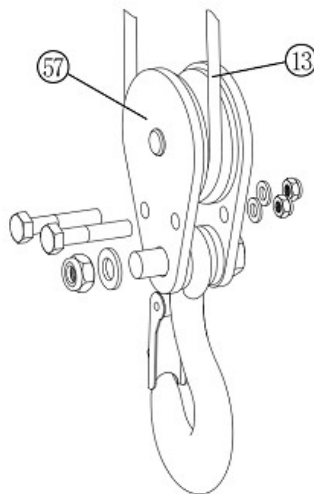
Once the support hook is securely hooked into the double line support hole and the safety clasp has been fully clasped, the pulley hook can be attached to the wire cable. Follow these steps for attaching the pulley hook to the wire cable.



1. Remove the washers (63 and 62), nuts (61), and bolts (60 and 59) from the pulley.



2. Place the pulley hook assembly (57) (without the hook attached) onto the wire cable (13) below the line blocker. Make sure the pulley hook roller is aligned on the wire cable (13) and is not in any way askew or oblongly seated on the wire.



3. Slide the bolt (59 and 60) back into the pulley (57), hook, and all of the washers (63, 64 and 62). Finally, tighten the nuts (61). See the illustration above.

**After Each Use**

 **WARNING**

- DO NOT store the wire rope where it can be of any harm.

Place the electric wire rope in a dry and clean place for future use.

Lubricate the rope occasionally with light oil. Check that it is in good condition.

**Maintenance**

 **WARNING**

- Any part of the hoist that is damaged should be properly repaired or replaced by a qualified technician.
- Lubricate the rope occasionally with light oil. Check that it is in good condition.
- Check to be sure the hoist is properly mounted. Make sure the bolts are tight.
- Periodically check the condition of the electrical cords, plugs, and controls.
- Periodically make sure the hoist limit switches function properly.

Maintain the hoist 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 handles dry, clean, and free from oil and grease. The following chart is based on a normal operation schedule.

Maintenance Interval	Maintenance Point
Before operating	Inspect the hoist for good working condition. Check the condition of the electrical cords, plugs, and controls. Check to be sure the hoist is properly mounted. Make sure the bolts are tight.
One month	Lubricate the rope occasionally with light oil. Periodically make sure the hoist limit switches function properly.

## Troubleshooting

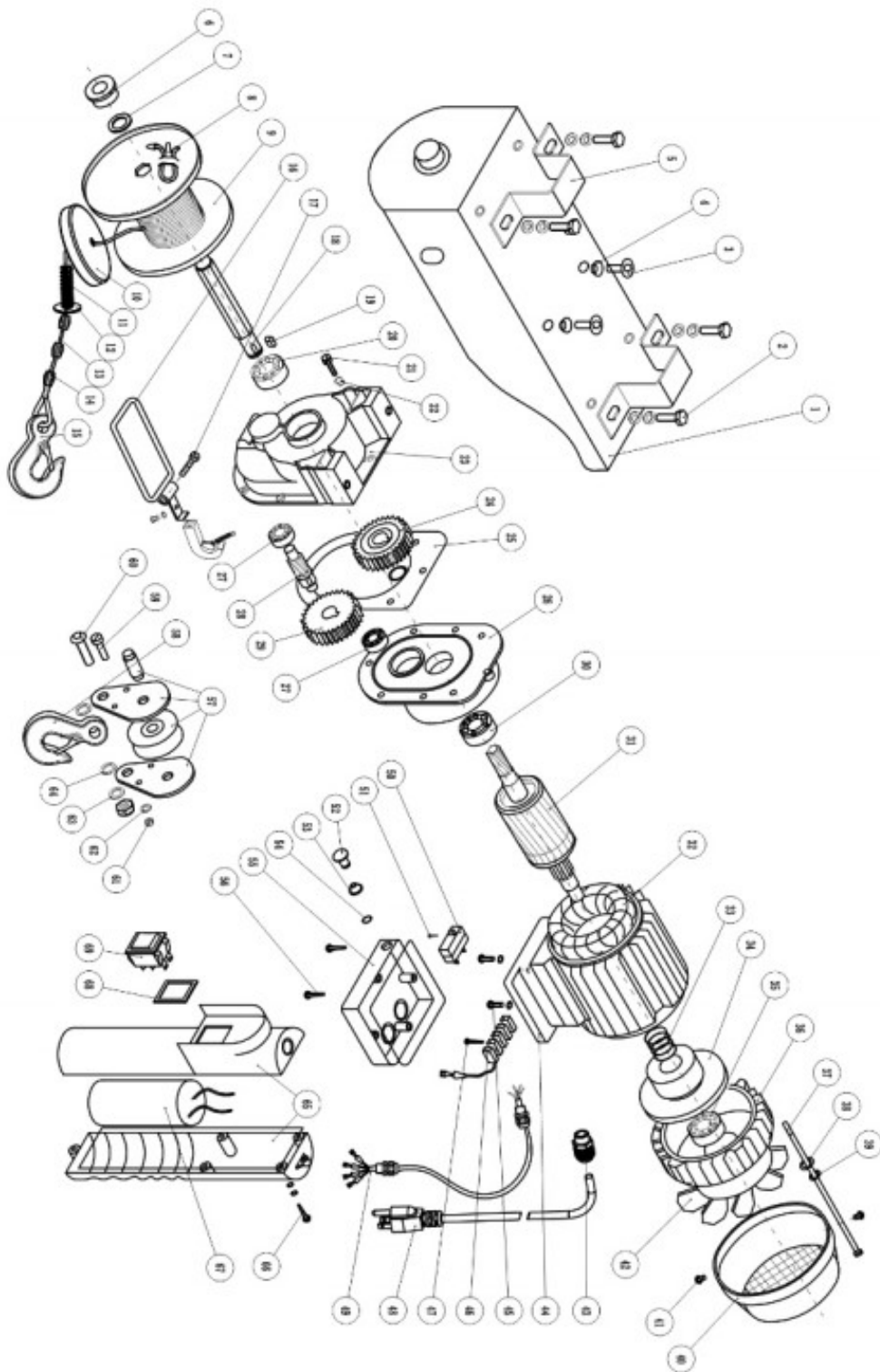
### WARNING

- Any part that is damaged should be properly repaired or replaced by a qualified technician.
- If the troubleshooting methods do not work, do not attempt to alter the product.

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
Hoist does not operate properly.	Fails to connect to the power.	Check that the plug is connected to the power.

# Parts Diagram



## Parts List

Reference	Parts List	Quantity
1	Housing cover	1
2	Screw Assembly (M8*25)	4
3	Screw (M8*18)	2
4	Lock Washer - Teeth (φ8)	2
5	Mounting clamp	2
6	Shaft ferrule	1
7	Shaft washer for Rope drum	1
8	Rope pin	1
9	Rope drum	1
10	Rope block	1
11	Spring	1
12	Washer	1
13	Steel wire rope	1
14	Rope crimp	3
15	Lifting hook	1
16	Stop bracket	1
17	Socket screw (M8x40)	1
18	Drum shaft	1
19	Flat key	2
20	Rolling bearing 6202	1
21	Outer hex bolt (M5x16)	6
22	Washer	1
23	Gear box	1
24	Small helical gear	1
25	Paper wahser	1
26	Front housing cover	1
27	Rolling bearing 6200	2
28	Gear driving shaft	1
29	Big helical gear	1
30	Rolling bearing 6202	1
31	Rotor	1
32	Stator	1
33	Brake spring	1
34	Brake assembly	1
35	Rolling bearing 6301	1
36	Back housing cover	1
37	Outer hex bolt (M5x148)	4
38	Spring washer (φ5)	10
39	Flat washer (φ5)	10
40	Fan hood	1
41	Screw (M4x6)	4
42	Fan blade	1
43	Cable jacket (M16)	3
44	Junction box cover	1
45	Screw (M4X12)	4
46	connection ending	1
47	Screw	6
48	Power cord	1

49	Controlling cable line	1
50	Limit switch	1
51	Screw	2
52	Limit button (φ8)	1
53	Button spring loop	1
54	Snap ring	1
55	Up cover of junction box	1
56	Screw	4
57	Pulley	1
58	Pulley hook	1
59	Column nut	2
60	Bolt	1
61	Locknut	2
62	Flat washer	2
63	Rubber wahser	2
64	Flat washer	1
65	Handle cover	1
66	Screw	5
67	Capacitor	1
68	Waterproof loop	1
69	Bilateral switch	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 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 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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