2200-Lb. Electric Chain 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 #72642

READ & 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, 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**.

Table of Contents

Intended Use

The Strongway 2200-Lb. Electric Chain Hoist lifts and lowers loads all with the push of a button. This portable hoist has a handheld remote control with an emergency stop switch allowing the hoist to be controlled from up to $19^{1/2}$ feet away. The heat-treated drop-forged hooks swivel 360º for easy rigging.

Packaging Contents

- Control cable
- Power cable
- Chain bag
- Owner's Manual

Technical Specifications

Property	Specification
Power	110V-115V, 1400 Watts
Load Capacity	2200 lb.
Duty Cycle	30%
Chain Length	9.75 ft.
Required Head Room	18.50 in.
Remote Length	19.5 ft.
Motor Output	1.8 HP
Product Weight	63.93 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

PROP 65

This product can expose you to chemicals including lead, which is known to the State of California to cause cancer or birth defects or other reproduction harm. For more information, visit www.p65warnings.ca.gov.

⚠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

ELECTRIC 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 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.

Specific Operation Warnings

⚠WARNING

- To prevent serious injury or property damage, read and understand this owner's manual before operating.
- Do not exceed the rated load capacity of 2200 lb.
- To avoid injury, make sure the structure has sufficient strength to withstand several times the hoist and its rated load amount.
- Do not lift people, animals, or loads above people or animals.
- Only operate the hoist when the load is centered under the hoist.
- Inspect the hoist before each use. Do not use if it is damaged or malfunctioning in any way.
- Examine each chain link for damage or weak links before use. Do not operate a hoist with twisted, kinked, or damaged chain.
- Do not use chain hoist as a sling.
- Do not support load on hook tip.
- Do not operate if restricted from forming a straight line from hook to hook in the direction of loading.
- Do not pull chain at an angle.
- Keep bystanders away while hoist is loaded.
- Not for use by or around children.

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.

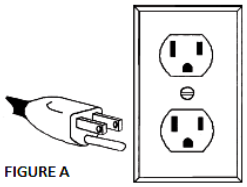


FIGURE A

Assembly Instructions

⚠WARNING

- Check and be sure the load chain is in proper working condition.
- Check that all fasteners and joints are tight and secure.
- Check that all external wiring is in proper working condition.

Connecting to the Electrical Supply

Before connecting the unit, check that the power cable plug corresponds with 110V.

Power Supply System

To insure proper operation, to avoid damage to the hoist and electrical system, and to reduce the risk of electrical shock or fire, the branch circuit supplying power to the hoist must:

- Proper grounding provides a path with the least resistance for the electrical current to reduce

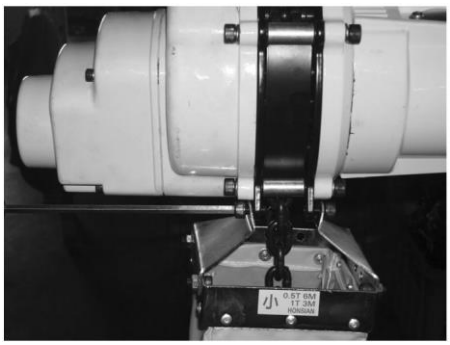
the risk of electrical shock. The standard power cord is equipped with a three-prong plug, used with 110V unit. Make sure that the receptacle opening that receives the longest prong is properly grounded.

- Have ample capacity to prevent excessive voltage drop during starting and operation. When determining the size of branch circuit components and conductors, special consideration should be given to the starting current amps and the length of the conductors. As a minimum, the system should be rated for 20 amps and the system should have #14 AWG or larger wiring.
- Include slow-blow type fuses or inverse trip time circuit breakers to permit the hoist to start and accelerate the load.

Chain Container

- For installations where the slack chain hanging from the hoist may be questionable or hazardous, the use of a chain container is recommended.
- Do not attempt to store more chain in the chain container than what is specified for the hoist or serious damage to hoist may result and hazardous conditions may be created.

Installing a Standard Chain Container



1. Remove both bolts from the chain container mounting bracket.
2. Attach the chain container to the bracket.
3. Reinsert the bolts.

Before Each Use

⚠WARNING

- To avoid injury: Make sure that the structure has sufficient strength to withstand several times the hoist and its rated load amount.
- Inspect the hoist before each use. Do not use if it is damaged or malfunctioning in any way.
- Examine each chain link for damage or weak links before use. Do not operate a hoist with twisted, kinked, or damaged chain.
- Verify and correct all chain irregularities prior to operating the hoist.

Testing and Operational Checks

On completion of installation, but before the hoist is put into regular service, the following procedure should be followed:

1. Check that the hoist is properly installed to either a fixed position or trolley, whichever applies.
2. If hoist is installed on a trolley, ensure that:
    - The trolley is properly installed on the beam.
    - The stops for the trolley are correctly positioned and securely installed on the beam.
3. Isolate the power supply.
4. Check that all mechanical and electrical joints and connections are tight and secure.
5. Check that all nuts, bolts, and split pins (cotter pins) are securely fastened.
6. Confirm proper operation:
    - Before operating, read and become familiar with this manual.
    - Before operating, be sure there are no interferences with the full range of the hoist (and trolleys) operation.
7. Switch on the power supply.
8. Run lightly, without load, throughout the full operation of the hoist. Check that the hoist runs smoothly.
9. Check the operation of the hoist brake and run under light-load and full-load conditions.

Inspection Methods and Criteria

This section lists items that require inspection. Disassembly for further inspection would be required if frequent or periodic inspection results indicate. Such disassembly and further inspection should only be performed by a certified or qualified person trained in the disassembly and re-assembly of the hoist.

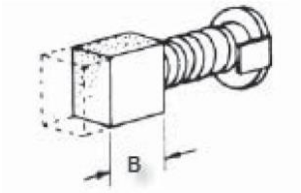
Table 1-1 Hoist Inspection Methods and Criteria

Item	Method	Criteria	Action
Functional Operating Mechanisms	Visual, Auditory	Mechanisms should be properly adjusted and should not make unusual sounds when operated.	Repair or replace as required
Braking System Operation	Function	Braking distance with rated capacity should not exceed approximately five chain links.	Repair or replace as required
Hooks (surface condition)	Visual	Should be free of significant rust, weld splatter, deep nicks, or gouges.	Replace
Hooks (yoke assembly)	Visual	Should be free of significant rust, weld splatter, nicks or gouges. Holes should not be elongated, fasteners should not be loose and there should be no gap between mating parts.	Tighten or replace as required

Item	Method	Criteria	Action
Hooks (bent shank or neck)	Visual	Shank and neck portions of hook should be free of deformations.	Replace
Hooks (hook latches)	Visual, Function	Latch should not be deformed. Attachment of latch to hook should not be loose. Latch spring should not be missing and should not be weak. Latch movement should not be stiff when depressed and released latch should snap smartly to its closed position.	Replace
Hooks (swivel bearing)	Visual, Function	Bearing parts and surfaces should not show significant wear. They should be free of dirt, grime and deformations. Hook should rotate freely with no roughness.	Clean/lubricate, or replace as required
Load Chain (surface condition)	Visual	Should be free of rust, nicks, gouges, dents and weld spatter. Links should not be deformed or show signs of abrasion. Surfaces where links bear on one another should be free of significant wear.	Replace
Load Chain (lubrication)	Visual, Auditory	Entire surface of each link should be coated with lubricant and free of dirt/grime. Chain should not emit cracking noise when hoisting a load.	Clean/ lubricate
Load Chain (reeving)	Visual	Chain should be reeved properly through load sheave. Chain, cushion rubbers, washers, and stoppers should be installed properly.	Reeve/ Install chain properly
Chain Container	Visual	Container should not be damaged. Brackets should not be deformed or missing.	Replace
Housing and Mechanical Components	Visual, Auditory, Vibration, Function	Hoist components including load blocks, suspension housing, chain attachments, clevises, yokes, suspension bolts, shafts, gears, bearings, pins and rollers should be free of cracks, distortion, significant wear and corrosion. Evidence of same can be detected visually or via detection of unusual sounds or vibration during operation.	Replace
Bolts, Nuts, and Rivets	Visual, Check with proper tool	Bolts, nuts and rivets should not be loose.	Tighten or replace as required
Motor Brushes	Measure, Visual	The “B” dimension should not be less than minimum value listed in Table 1-2.	Replace
Cushion Rubber	Visual	Should be free of significant deformation.	Replace

Item	Method	Criteria	Action
Contactor Contacts	Visual	Contacts should be free of significant pitting or deterioration.	Replace
Pendant (switches)	Function	Depressing and releasing push buttons should make and break contacts in switch contact block and result in corresponding electrical continuity or open circuit. Push buttons should be interlocked either mechanically or electrically to prevent simultaneous energization of circuits for opposing motions (example: up and down.)	Repair or replace as necessary
Pendant (wiring)	Visual	Wire connections to switches in pendant should not be loose or damaged.	Tighten or repair
Pendant (housing)	Visual	Pendant housing should be free of cracks and mating surfaces of parts should seal without gaps.	Replace
Pendant (cord)	Visual, Electrical Continuity	Surface of cord should be free from nicks, gouges, and abrasions. Each conductor in cord should have 100% electrical continuity even when cord is flexed back and forth. Pendant cord strain relief cable should absorb the entire load associated with forces applied to the pendant.	Replace

Table 1--2 Motor Brush Dimensions



Capacity (ton)	"B" Dimension (mm)
	Discard
½ to 1	8
1 to 2	8

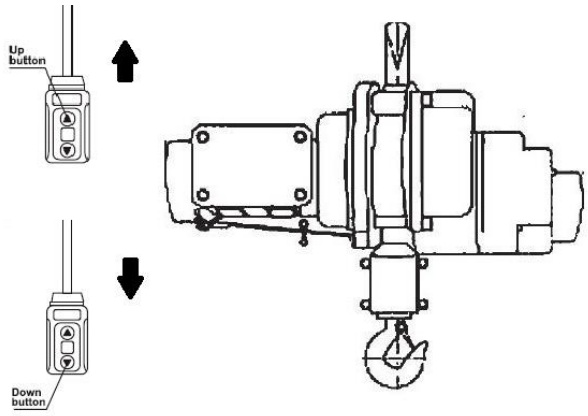
Operating Instructions

⚠WARNING

- Do not exceed rated load capacity of 2200 lb.
- Do not lift people, animals, or loads above people or animals.
- Only operate the hoist when the load is centered under the hoist.
- Do not use chain hoist as a sling.
- Do not support load on hook tip.
- Do not operate if restricted from forming a straight line from hook to hook in the direction of loading.
- Do not pull chain at an angle.

Lifting and Lowering Loads

To lift a load, press the ↑ button. To lower a load, press the ↓ button. When the button is released, the drum will stop moving. The emergency button should be used in case of emergencies.



Mounting the Hoist

Hang the hoist from its intended support. The structure used to support the hoist must have sufficient strength to withstand several times the load amount. If you are not sure of the weight the structure can hold, consult a registered engineer and the local building codes.

Load Chain

The chain should feed smoothly into and away from the hoist and hook block (1 ton). If the chain binds, jumps, or is noisy, first, clean and lubricate the chain. If trouble persists, inspect chain and mating parts for wear, distortion, and other damages.

Hook and Eye Suspension Hoists

The suspension point should be of a correct size to admit the top hook or eye of the hoist and allow it to rest properly on the saddle. It must be adequate to support the hoist while it is being operated at its maximum capacity (safe working load).

Chain Inspection

1. First, clean chain with a non-caustic, non-acid type solvent and make a link by link inspection for nicks, gouges, twisted links, weld splatter, corrosion pits, striations (minute parallel lines), cracks in weld areas, wear, and stretching.A chain with any of these defects must be replaced before use.
2. When checking the chain for wear, check the part of the chain that goes through the lift wheel of the hoist most often. Check the interlink area of the chain links for the point of maximum wear. Measure and record the stock diameter at this point of the link. Be sure to measure the stock diameter in the same area on a link that does not pass through the lift wheel. Compare these two measurements. If the stock diameter of the worn link is 0.010 inches or more than the stock diameter of the unworn link, the chain must be replaced.
3. Check the chain for stretch with a vernier caliper. Select an unused, unstretched section of chain, then measure and record the length. Measure and record the same length on a worn section of the chain. Obtain the amount of stretch and wear by subtracting the measurement of the unworn section from the worn section. If the result is greater than 0.145 inch, the chain must be replaced.
4. Use only a “knife-edge” caliper to eliminate the possibility of false reading by not measuring full pitch length.
5. These chains are heat-treated and hardened and should never be repaired. Do not use replaced chain for other purposes such as lifting or pulling. Load chain may break suddenly without visual deformation. For this reason, cut replaced chain into short lengths to prevent use after disposal.

Cutting the Chain

The load chain is hardened and is difficult to cut. The following methods are recommended when cutting a length of new chain from stock or cutting off worn chain. (Always wear eye protection when cutting the load chain.)

1. Use a 7” minimum diameter by 1/8” thick abrasive wheel (or type recommended by your wheel supplier) that will clear the adjacent links.
2. Use a grinder and nick the link on both sides, then secure the link with a vise and break off the chain link with a hammer.

After Each Use

⚠WARNING

- Do not use motor oils containing unknown carcinogenic materials.
- To avoid health problems, never use used motor oils as a chain lubricant. Only use the clean grease as a lubricant for the load chain.

Lubrication

Loaf Chain

The full length of the chain must be lubricated, including where the chain passes over the chain wheel(s). Ensure that the contact points between the links (the chain saddles) are adequately lubricated. A small amount of lubrication will greatly increase the life of the load chain. DO NOT allow the chain to run dry. Keep the chain clean and lubricate the chain at regular intervals with clean grease. Normally, weekly lubrication and cleaning is sufficient, but under hot and dirty conditions, it may be necessary to clean the chain at least once daily and lubricate the chain several

times between cleanings. When lubricating the chain, apply sufficient lubricant to obtain natural run-off and full coverage, especially in the interlink area.

Gearbox

For ambient temperature of approximately 50°F to 122°F, a gear oil of Mm²/S at 104°F, with mild high-pressure additives should be used. IDEMITSU racing gear 140 GL-5 is the oil that should be used.

Maintenance

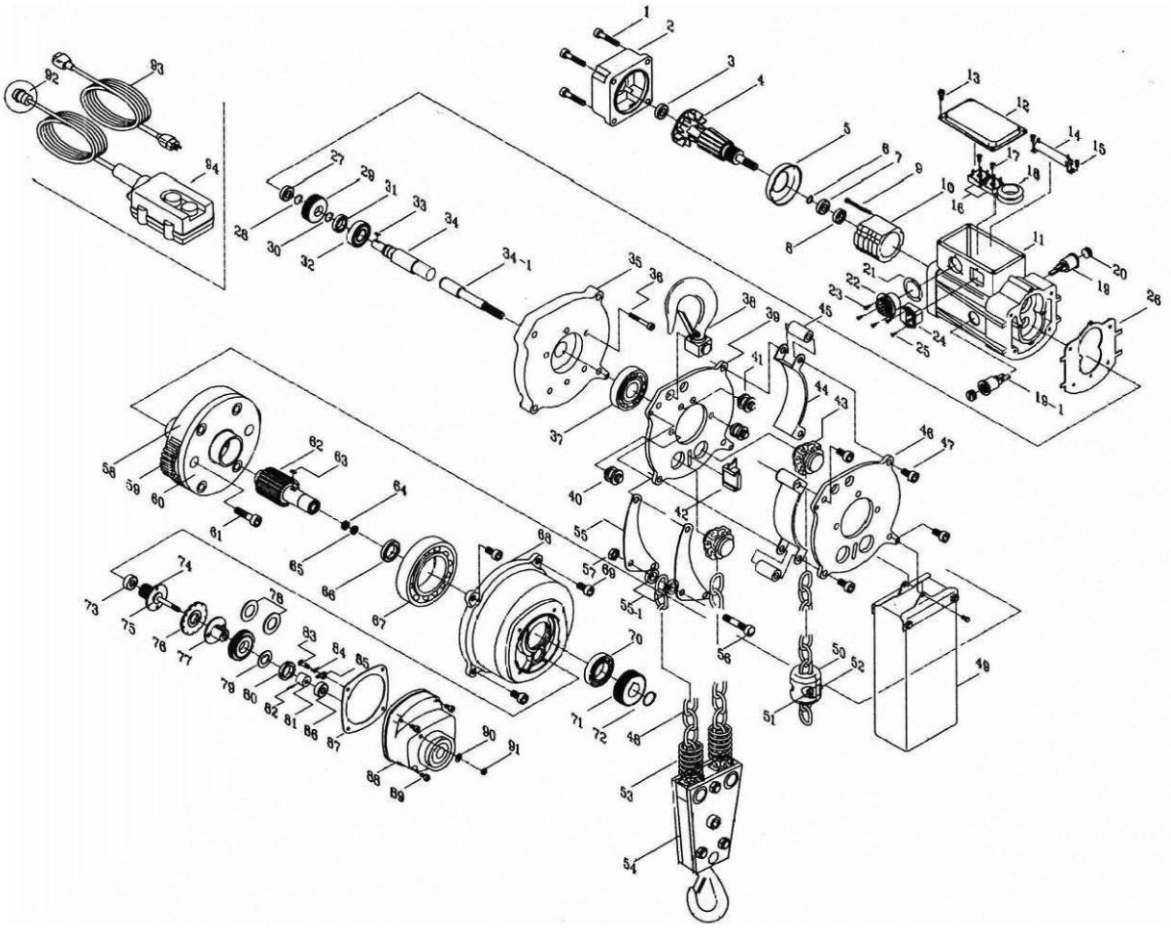
Maintenance Interval	Maintenance Point
Daily before operating	• Check the control cables, the strain relief elements, the operation of the slipping clutch (if fitted), the control pendant housing for damage, and the electrical switch gear and wiring. • Be sure there is a tight fit for the bolts on the load hook assembly. • Check the ends of the chain and the chain bag to ensure they are secure. • Check the oil level and change the oil before each session (if needed).
After the first 50-200 operating hours	• Check the suspension eye and the suspension hook assembly. • Check the fittings for the bolts on the load hook assembly. • Check the hooks for cracks, deformation, pitting and wear, and secure connections. • Check the brakes, brake stroke, brake disc, and adjust them as required. • Lubricate chain, under normal and heavy usage and lubricate chain sprocket bearing and check the bolts for secure fits.

Troubleshooting

Failure	Possible Cause	Corrective Action
Hoist will not operate	Loss of power	Check circuit breakers, switches, fuses, and connections on power cable.
	Wrong voltage or frequency	Check voltage and frequency of power supply against the rating on the nameplate of the motor.
	Hoist over load	Reduce load to within rated capacity of hoist.
	Improper, loose, or broken wire in the hoist electrical system	Shut off power supply, check wiring connections on hoist control panel, and inside push button pendant.
	Brush wear	Inspect both motor brushes and replace if necessary.
	Fuses burned out	Replace fuses.
	Motor burned out	Replace motor frame/stator, shaft/rotor, and any other damaged parts.
Hoist lifts but will	Faulty switch in pendant	Check electrical continuity. Check electrical

Failure	Possible Cause	Corrective Action
not lower		connections. Replace or repair as needed.
	Broken conductor in pendant cord	Check the continuity for each conductor in the cable. If one is broken, replace the entire cable.
Hoist lowers but will not lift	Hoist overload	Reduce load to within rated capacity of hoist.
	Worn friction clutch	Repair by a qualified person trained in the repair of hoist and proper friction clutch adjustment procedures. Replace as needed.
	Broken conductor in pendant cord	Check the continuity for each conductor in the cable. If one is broken, replace the entire cable.
	Faulty switch in pendant	Check electrical continuity. Check electrical connections. Replace or repair as needed.
	Low voltage in hoist's power supply	Determine cause of low voltage and bring to within plus or minus 5% of the voltage specified on the motor nameplate. The voltage should be measured at the hoist contractor.
Hoist will not lift rated load or does not have the proper lifting speed	Hoist overload	Reduce load to within rated capacity.
	Low voltage in hoist's power supply	Determine cause of low voltage and bring to within plus or minus 5% of the voltage specified on the motor nameplate. The voltage should be measured at the hoist contractor.
	Faulty friction clutch	If abnormal operation or slippage occurs, do not attempt to disassemble or adjust the mechanical load brake with the friction clutch. Replace the worn or malfunctioning mechanical load brake with the friction clutch as an assembly with a new, factory adjusted part.
Load drifts excessively when hoist is stopped	Motor demagnetized	Motor demagnetizing is generally caused from using the hoist beyond its duty rating. Replace the stator assembly and reduce usage to comply with the duty rating stated.
	Improper gear oil	Replace oil with the correct gear oil.
Hoist operates intermittently	Loose connection in circuit	Check all wires and terminals for bad connections. Replace as needed.
	Collectors making poor contact	Check movement of spring loaded arm, weak spring, connections, and shoe. Replace as needed.
	Broken conductor in pendant cord	Check for intermittent continuity in each conductor in the pendant cord. Replace the entire pendant cord if continuity is not constant.

Parts Diagram



Parts List

Reference	Part Number	Part Description	Quantity
1	72642-01	Screws 5*20	4
2	72642-02	Motor cover	1
3	72642-03	Bearing 638Z	1
4	72642-04	Rotor	1
5	72642-05	Air guiding iron cover	1
6	72642-06	Spring	1
7	72642-07	Bearing 6001Z	1
8	72642-08	Oil seal	1
9	72642-09	Screws 5*70	2
10	72642-10	Stator	1
11	72642-11	Main body base	1
12	72642-12	Wiring box	1
13	72642-13	Screws 5*8	4
14	72642-14	Resistor	1
15	72642-15	Screws 5*8	2
16	72642-16	Bridge type rectifier	2
17	72642-17	Screws 5*16	2
18	72642-18	Rubber band	1
19	72642-19	Base of carbon brush	2
19-1	72642-19-1	Carbon	2
20	72642-20	Carbon brush cover	2
21	72642-21	Rubber washer	1
22	72642-22	Control cable socket	1
23	72642-23	Screws 3*16	3
24	72642-24	Power supply input term	1
25	72642-25	Screws 3*16	2
26	72642-26	Insulated sheet	1
27	72642-27	Bearing 6000Z	1
28	72642-28	Fixing spring	1
29	72642-29	First section gear	1
30	72642-30	Fixing spring	1
31	72642-31	Oil seal	1

Reference	Part Number	Part Description	Quantity
32	72642-32	Bearing 6201Z	1
33	72642-33	Key	1
34	72642-34	First section gear shaft	1
34-1	72642-34-1	First section gear shaft	1
35	72642-35	Gear cover	1
36	72642-36	Screws 5*20	6
37	72642-37	Bearing 6007Z	1
38	72642-38	Upper hook	1
39	72642-39	Left main body sheet	1
40	72642-40	Chain guiding wheel	2
41	72642-41	Upper chain guiding wheel	2
42	72642-42	Chain pawl device	1
43	72642-43	Chain guider	2
44	72642-44	Main body cover	2
45	72642-45	Fixing rod of main body	4
46	72642-46	Ring main body sheet	1
47	72642-47	Screws 8*30	2
48	72642-48	Chain	1
49	72642-49	Chain bag	1
50	72642-50	Chain stopping block	1
51	72642-51	Latch	2
52	72642-52	Nuts, washer	2
53	72642-53	Chain guiding spring	1
54	72642-54	Lower hook	1
55	72642-55	Chain sheet iron	1
56	72642-56	8mm latch	1
57	72642-57	Nuts, washer	1
58	72642-58	Chain guider	1
59	72642-59	Gear shaft	2
60	72642-60	Fixing base of gear shaft	1
61	72642-61	Screws 8*16	4
62	72642-62	Third section gear shaft	1
63	72642-63	Key	1

Reference	Part Number	Part Description	Quantity
64	72642-64	Oil seal	1
65	72642-65	Bearing 1212	1
66	72642-66	Oil seal	1
67	72642-67	Bearing 6011Z	1
68	72642-68	Gear Box	1
69	72642-69	8mm nut	4
70	72642-70	Bearing 6006Z	1
71	72642-71	Third section gear	1
72	72642-72	Fixing spring	1
73	72642-73	Bearing 6000Z	1
74	72642-74	Third section gear shaft	1
75	72642-75	Keyless gear	1
76	72642-76	Pawl brake lining	1
77	72642-77	Brake depressor (lower)	1
78	72642-78	Compressed spring	2
79	72642-79	Washer	1
80	72642-80	Torque limited nuts	1
81	72642-81	Brake depressor (upper)	1
82	72642-82	Fixing pin	1
83	72642-83	Bolt	1
84	72642-84	Click spring	1
85	72642-85	Back stopper	1
86	72642-86	Bearing 6000Z	1
87	72642-87	Gasket	1
88	72642-88	First layer gear box	1
89	72642-89	Screw 5*60	4
90	72642-90	Washer	1
91	72642-91	Nut	1
92	72642-92	Control plug	1
93	72642-93	Power cable set	1
94	72642-94	Cable set of control 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.

Distributed by:
Northern Tool & Equipment Company, Inc.
Burnsville, Minnesota 55306
www.northerntool.com

Made in Taiwan