

Please read and save these instructions. Read carefully before attempting to assemble, install, operate or maintain the product described. Protect yourself and others by observing all safety information. Failure to comply with instructions could result in personal injury and/or property damage! Retain instructions for future reference.

Electric Powered Hoist

Description

Electric Hoist Model H500 has a double line capacity of 500 lbs., Model H800 has a double line capacity of 800 lbs. and Model H880 has a double line capacity of 880 lbs. Light duty hoists are used for lifting and lowering loads vertically in light industrial or Do-It-Yourself applications. These hoists are not intended for heavy industrial or production applications requiring continuous operation. The hoists lift freely suspended (unguided) loads on an intermittent basis.

⚠ WARNING Do not use this equipment to lift, support, or otherwise transport people and animals, or to suspend loads over people.

Unpacking

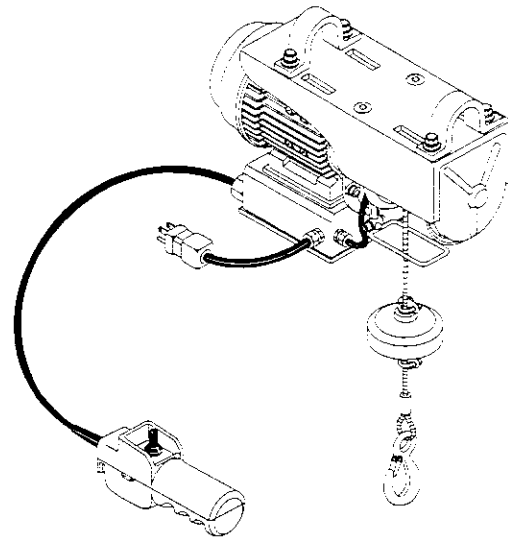
When unpacking, inspect carefully for any damage that may have occurred during transit. Check for loose, missing or damaged parts. Make sure any loose fittings, bolts, etc., are tightened before putting unit into service.

General Safety Information

Read instruction manual carefully before installing and operating the hoist.

All persons operating or maintaining these hoists should be familiar with the information presented here and are urged to read American National Standard (ANSI) B30.16 Safety Standard for Overhead Hoists.

⚠ WARNING Do not use hoist in an explosive atmosphere.



Specifications

	H500	H800	H880
Max. Rated Load (Single Line/Double Line)	250/500 lbs.	400/800 lbs.	400/880 lbs.
Lifting speed (Single Line/Double Line)	36/18 fpm	36/18 fpm	36/18 fpm
Max. Lift	40 ft.	40 ft.	40 ft.
HP	1/3	1/2	1/2
Power supply	115V, 1 phase, 60 HZ	115V, 1 phase, 60 HZ	115V, 1 phase, 60 HZ
Amp draw (no load)	4	5	5
Duty cycle	6 min/hr	10 min/hr	10 min/hr
Control cord length	6 ft.	6 ft.	6 ft.
Power cord length	12"	12"	12"
Limit switches	Upper paddle	Upper paddle	Upper paddle
Headroom	9"	10-1/8"	10-1/8"
Height	7 7/8"	9"	9"
Width	5 1/4"	5-1/2"	5-1/2"
Length	13"	16"	16"
Weight	23 lbs.	28 lbs.	28 lbs.

- Before starting hoist, operator should be familiar with operating controls, procedures and warnings.
- Do not remove or obscure the warning decals on the hoist.
- Do not use hoist to pull loads horizontally, vertical lift only.
- Not for outdoor use or use in wet areas.
- Units must be plugged into a 115 volt, 60 Hz, 3-wire grounded outlet.

Electric Powered Hoist

▲ WARNING *The green (or green and yellow) conductor in the cord is the grounding wire. Never connect the green wire to a live terminal. This equipment should be grounded while in use to protect operator from electric shock.*

- Where a 2-prong wall receptacle is encountered, it must be replaced with a properly grounded 3-prong receptacle installed in accordance with the National Electrical Code and local code and ordinances.

▲ WARNING *All electrical work should be done by a qualified electrician!*

- A 3-prong to 2-prong grounding adapter is available for connecting plugs as shown in Figure 1 (See Figures 2 & 3).
- Do not use a 3-prong to 2-prong grounding adapter unless permitted by local and national codes and ordinances. (A 3-prong to 2-prong adapter is not permitted in Canada.) Where permitted, the rigid green tab or terminal on the side of the adapter must be securely connected to a permanent electrical ground such as a properly grounded cover plate screw, a properly grounded water pipe, a properly grounded outlet box, or a proper ground wire system (See Figure 3). Many cover plate screws, water pipes and outlet boxes are not properly grounded.

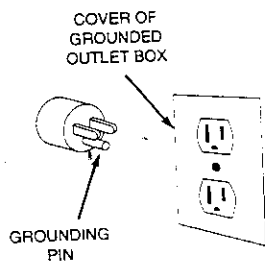


Figure 1

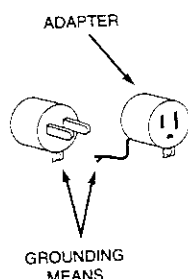


Figure 2

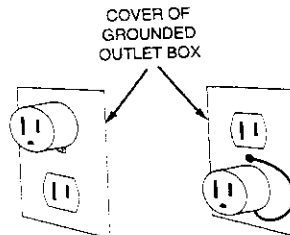


Figure 3

To ensure a proper ground, the grounding means must be tested by a qualified electrician.

- Use only 3-wire extension cords that have 3-prong, grounding-type plugs and 3-pole receptacles that accept the equipment plug.

IMPORTANT: REPLACE OR REPAIR DAMAGED OR WORN CORDS IMMEDIATELY.

- Make sure hoist limit switches and brake are functioning properly at all times. Never disconnect the brake or limit switches.
- Do not use limit switches as routine operating stops. These switches are emergency devices only.
- Do not use hoist load limiting device to measure the load.
- Do not operate hoist if hook does not stop 1-2 inches after push button is released.
- Use hook latches wherever possible and make sure latch is closed. Do not apply the load to the hook latch or the tip of a hook.
- Use only properly sized load slings or other sling attachments and properly seat them in the hook saddle. **DO NOT USE HOIST CABLE AS A SLING OR WRAP HOIST CABLE AROUND THE LOAD.**
- DO NOT** reverse wrap cable on drum. The "up" switch position

should always lift the load.

- ALWAYS** leave a minimum of four wraps of cable on the drum. The cable fastener on this or any hoist or winch is not capable of holding the rated capacity.

▲ WARNING *Worn or damaged cable can break and cause serious injury or damage. Inspect the entire cable before beginning each job.*

- The hoist cable must be replaced if any one of the following occurs:
 - Broken wires
 - Any kinking, crushing, or birdcaging.
 - Any evidence of heat damage.
 - Cable diameter reduction equal to or exceeding one third the original diameter.
- Be certain wire rope is not twisted, kinked, damaged or worn. Apply lubricant to the wire rope as recommended.

▲ CAUTION *Supporting structure and load attaching devices must have a load rating at least equal to that of the hoist.*

- Do not allow the cable or hook to be used as a ground for welding. Protect cable or hook from touching a live welding electrode, weld spatter or other damaging contaminants.
- Do not attempt to lengthen the cable or repair damaged cable.
- Do not use if any binding does not allow equal loading on all supporting ropes.
- Make sure the load is free to move and clear all obstructions.

▲ WARNING *Motors may ignite a flammable gas or*

Models H500, H800 and H880

vapor. **Never operate or repair near a flammable gas or vapor. Never store flammable liquids or gases in the vicinity of the hoist.**

24. Warn personnel of an approaching load. Make sure all persons stay clear of suspended load.
25. Keep hands clear of cable spool.
26. Do not lift more than the rated load.

▲WARNING *Do not lift loads over people or leave a suspended load unattended.*

27. Be certain load is centered under hoist to avoid any swinging of load.
28. Maintain firm footing when operating hoist. Do not allow your attention to be diverted.
29. Take up slack carefully, check load balance, lift a few inches and check load holding action before continuing.
30. Keep brake surface and lining free of grease.
31. Inspect regularly, and keep accurate maintenance records. Permit only qualified personnel to adjust or repair hoist.
32. Do not use damaged or malfunctioning hoist until all necessary adjustments or repairs have been made.

▲WARNING *Make certain power supply is disconnected before attempting to service, relocate, or perform any maintenance. If power disconnect point is out-of-sight, lock it in the open position and tag to prevent unexpected application of power.*

33. Make certain load is removed from hoist before performing any service.
34. Only qualified electrician or service person should perform any electrical

troubleshooting or maintenance.

35. Use only Powerwinch replacement parts with this hoist.

Installation

▲WARNING *Hoist is not suitable for use in outdoor locations or areas containing explosive dust, vapors, or gases. Do not use hoist in or around wet areas. The installation area must provide safe operating conditions for the operator, including sufficient room for the operator and other personnel to stand clear of the load at all times.*

1. Attach the hoist to supporting structure using the brackets and bolts provided. Failure to use the supplied anchoring hardware will void the warranty.
2. Make sure any mounting point for the hoist is structurally strong enough for many times the hoist rated capacity.
3. If supporting the hoist in roof trusses, make sure to distribute the load over more than one or two trusses by extending the support.
4. Make certain the hoist is not free to swing or turn in the mountings.
5. Intended for use on 115V, single phase, 60Hz power supply. Voltage at the hoist should be within plus or minus 10% of 115V.
6. Equipped with 3-prong, grounding-type plug to minimize shock hazards. It must be plugged into a properly installed and grounded receptacle to maintain this protection.
7. A heavy duty, three prong extension cord must be used if required to plug in the hoist. An extension cord which is too small will restrict power to the hoist and reduce lifting capacity.
8. Pushbutton station, brake and limit switches should be tested by the

operator before beginning a job. If these controls do not operate properly, they should be repaired or replaced before operations are started.

LIMIT SWITCH

1. Before placing hoist in operation, check for proper upper limit switch operation.
2. Push UP button.
3. While hook is moving upward, raise limit switch paddle (See Figure 4).
4. Hook should stop immediately.
5. Do not operate hoist if limit switch is not operating properly.

BRAKE OPERATION

1. Run hoist with light load a few times before lifting the rated load.
2. Check for load hook drift with rated load on hook.
3. Hook should stop within 1-2 inches when pushbutton is released.
4. Occasionally, the brake element will become swelled within the motor cavity due to exposure to excessive humidity during long periods of non-use.

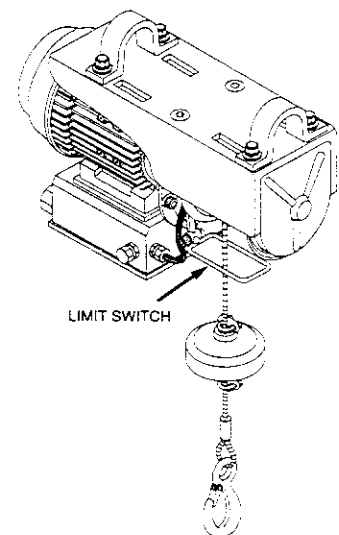


Figure 4 - Limit Switch Location

Electric Powered Hoist

To loosen, follow these steps:

- a. Remove the shroud and the fan from the rear of the motor assembly (See Figure 5).

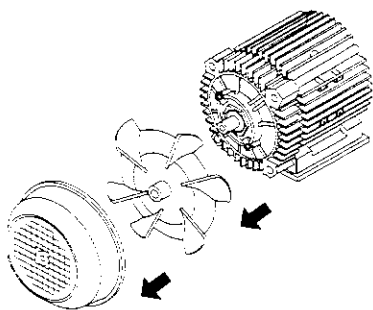


Figure 5 - Removing Shroud and Fan

- b. Place a phillips head screwdriver in the hole at the end of the motor shaft. (See Figure 6).

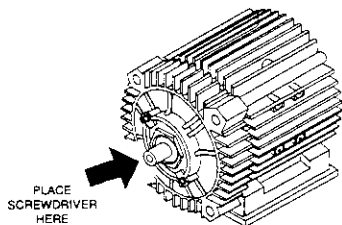


Figure 6 - Position Screwdriver

- c. Tap on the end of the screwdriver several times with a hammer to loosen the brake element.
 - d. Replace the fan and shroud before operating hoist.
6. Do not operate hoist if brake is not operating properly. If hook does not stop within 1-2 inches when pushbutton is released, it may be necessary to have the brake assembly adjusted by an authorized service center only.

Operation

These hoists are designed for intermittent duty only. Total on-time should not exceed 6 minutes per hour and no more than 30 starts per hour.

The motor will automatically cut off if it becomes overheated. After it has cooled sufficiently, operation of the hoist can be resumed.

Hoist capacity is rated with the last layer of cable on spool. If the hoist cannot lift the full distance, lighten the load to meet the rated capacity of the unit.

1. Inspect cable for any damage and mounting for tight connections before every operation.
2. Align hoist directly over load. Do not side pull.
3. Never operate hoist with fewer than four wraps of cable remaining on the drum.
4. Engage the hook to the load or attaching device. Make sure load is well seated before proceeding to lift load.
5. Make sure the hook goes up when the switch is up. If the hook comes down when the switch is up, the cable is wound backwards on the drum. Push up on the switch until the entire cable is unwound. With the switch in the UP position, keep tension on the cable as it winds onto the drum.
6. Slowly tighten the cable while keeping hand pressure on the cable to insure straight winding.
7. Stand clear of the load and lift load just clear of its supports. Stop to check for proper brake operation.
8. Lift and lower load smoothly by pushing the switch in the proper direction. Avoid jogging of controls or quick reversing.
9. Do not reverse wind cable on drum. If hoist runs in direction opposite than indicated on push button, the cable may be reverse wound. STOP using hoist IMMEDIATELY and rewind cable in proper direction.

Inspect hoist for damage.

10. Limit switch is an emergency device. DO NOT use to stop the hoist in normal operation.
11. Unhook the load after reaching desired position.
12. Do not run the hoist more than 6 minutes per hour and no more than 30 starts per hour. If motor overheats, it will not be able to lift the load. Stop operation and allow the motor to cool to room temperature. Then, resume operation at a reduced duty cycle.

PULLEY BLOCK AND HOOK

Using the pulley block doubles the capacity, however, the line speed is cut in half (See Figure 7).

1. Place cable between tear drop plates at open end.
2. Insert hook eye between tear drop plates aligning hook eye and holes in plates. Cable should run between hook eye and pulley wheel between plates.
3. Place the hex bolt through the tear drop plates and the hook eye.
4. Install the hex locknut on the bolt (rounded edge must be on the outside of the nut) and tighten securely.

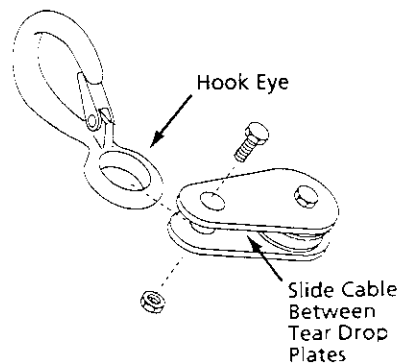


Figure 7

Models H500, H800 and H880

DOUBLE LINE - H500

1. Insert cable hook into the hole on the front of the frame and tighten securely (See Figure 8).
2. Attach the pulley block hook to the load. The unit is ready for use.

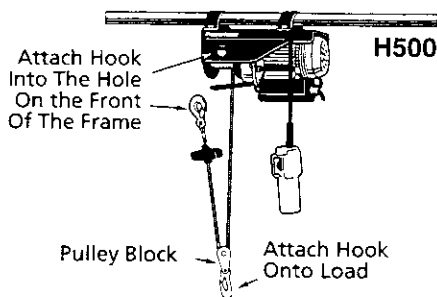


Figure 8

DOUBLE LINE - H800/H880

1. Insert the threaded chain connector into the hole on the front of the frame and tighten securely (See Figure 9).
2. Place cable hook through chain connector.
3. Attach the pulley block hook to the load. The unit is ready for use.

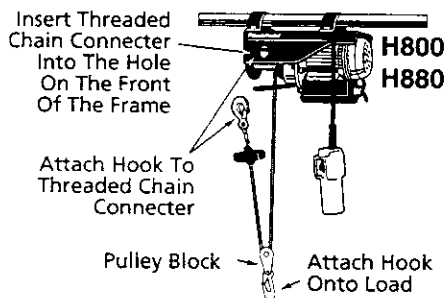


Figure 9

Maintenance

⚠ WARNING *Disconnect power from the hoist before attempting to install, service, relocate or perform any maintenance.*

INSPECTION

Inspection procedures are divided into three general classifications based upon the intervals at which inspection should be performed. Deficiencies should be carefully examined and corrected. The intervals between inspections will vary due to operating conditions. If the hoist is used more than 40 hours per week or under adverse environmental conditions, it should be inspected more frequently.

DAILY INSPECTION

Inspect the following items daily before operating hoist:

1. Check cable for wear, broken wires, kinks, or twists.
2. Check hooks for deformation, cracks or chemical damage. Hooks having more than 7/8" throat opening should be replaced (See Figure 10).
3. Check pushbutton station, brake, and limit switch for proper operation (See "LIMIT SWITCH").
4. Check pushbutton cord and power cord for cuts or other damage.
5. Make sure hoist is securely mounted.

Normal "X"5/8"
Reject "X"7/8"

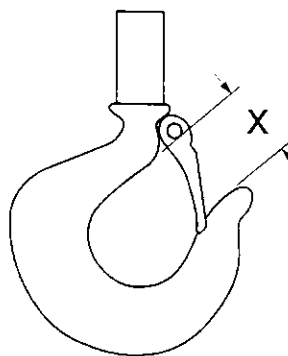


Figure 10 - Checking hook opening

QUARTERLY INSPECTION

Inspect all items under daily inspection in addition to the following items at 90 day intervals:

1. Check for loose bolts, screws and nuts.
2. Inspect for worn, corroded, cracked, or distorted parts.
3. Check electrical parts, limit switch, and push button station.
4. Check entire length of cable for wear or damage. Any of the following conditions should be considered as grounds for cable replacement.
 - a. More than four broken wires in any one inch section of cable.
 - b. Kinked, crushed, or otherwise distorted cable.
 - c. Corrosion, chemical or heat damage.
 - d. More than one broken wire at the end connection point.

ANNUAL INSPECTION

Inspect all items under daily and quarterly inspection in addition to the following items annually:

1. Check hooks for cracks by means of a magnetic particle test or other crack detecting test methods.
2. Inspect for worn, corroded, cracked, or distorted parts including pins, bearings, shafts, keys, and gears.
3. Inspect supporting structure and trolley (if used) for continued ability to support the imposed loads.

ROUTINE MAINTENANCE

Regular inspection and lubrication are the only routine maintenance items required.

CABLE REPLACEMENT (H500)

To replace the cable, use the following steps:

1. Unbolt the frame mounting screws

Electric Powered Hoist

on top of the hoist. Remove the steel frame gently from the gearbox. Be careful not to lose or damage the bushing that supports the cable spool (See Figure 11).

2. Pull the cable loop and key out of the slot on the end of the cable drum. Remove the old cable.
3. Insert the end of the new cable through the holes in the side of the spool away from the motor. Pull enough cable through to push cable through the tapered slot and create a loop as shown (See Figure 12).
4. Put the key into the loop of cable and slide key tightly into tapered slot until secure (See Figure 13).
5. Apply a small amount of grease to the drum bushing before reassembly of the unit.

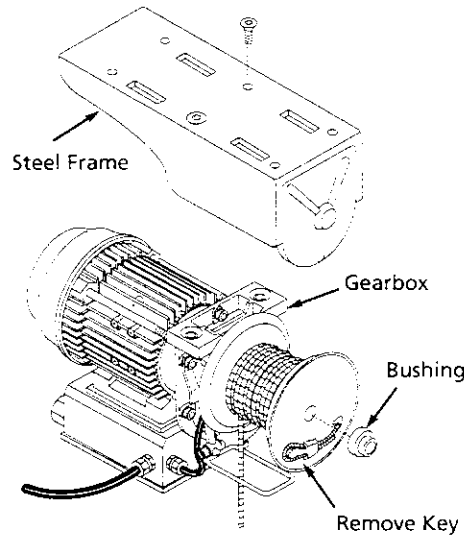


Figure 11 - Removing Frame



Figure 12 - Forming Loop

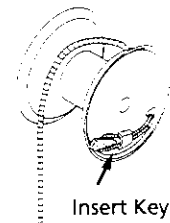


Figure 13 - Inserting Key

CABLE REPLACEMENT (H800 & H880)

1. Unbolt the frame mounting screws on top of the hoist. Remove the steel frame gently from the gearbox. Be careful not to lose or damage the bushing that supports the cable spool (See Figure 14).
2. Unwind any cable that may be left on the drum. The cable is held onto the drum by a cable clamp which is fastened to the end of the cable.
3. Work the clamp out of the slot by twisting and pushing the cable. Remove the clamp and then pull the cable out of the hole.
4. Insert the new cable through the small hole and then bring it up through the slot (See Figure 15).
5. Fasten the cable clamp onto cable and then push the assembly back into the slot (See Figure 16).

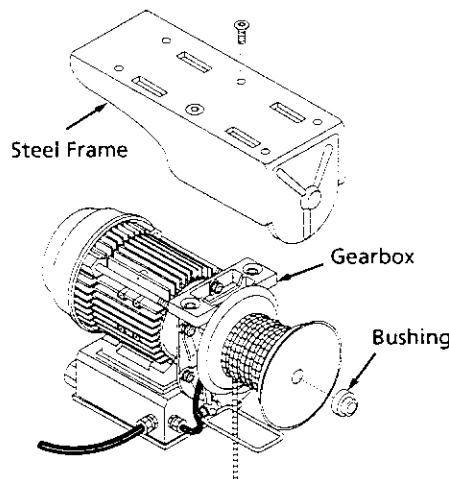


Figure 14 - Removing Frame

6. Apply a small amount of grease to the drum bushing before reassembly of the unit.

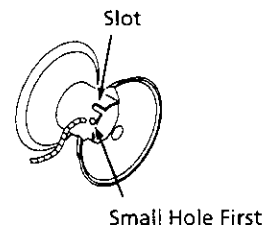


Figure 15 - Inserting New Cable

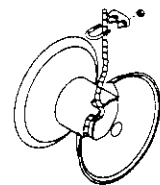


Figure 16 - Installing Cable Clamp

Models H500, H800 and H880

LUBRICATION

GEARS:

The gear housing is adequately lubricated at assembly and filled with NLGI #1 grease. If relubrication becomes necessary, use approximately 3/4 cup of light, semifluid grease.

▲ CAUTION

Keep brake surface and brake lining

free of grease.

CABLE

Wipe clean with a cloth periodically and apply a light coat of oil using WD40 or Whitmore's Wire Rope Spray.

LIMITED WARRANTY

A. This Limited Warranty is given by the Powerwinch Division of the Scott Fetzer Company (the "Company") to the original purchaser (the "Purchaser") of a Powerwinch Product (the "Product") specified in this manual. This Limited Warranty is not transferable to any other party.

B. Responsibilities of the Company under this Limited Warranty:

1. Repair or replace (at the discretion of the Company) any part or parts of the Product found by the Company to be defective within a one (1) year period from the date of purchase.
2. The Company will pay the transportation charge for shipment back to the Purchaser of any Product received for legitimate Warranty repair.

C. Responsibilities of the Purchaser under this Limited Warranty:

1. Complete (fully and accurately) and return to the Company, the Warranty card included in the box. Otherwise, Purchaser will have to show dated proof of purchase to qualify for service under the provisions of the Limited Warranty.
2. Promptly notify the Seller or the Company of any claim hereunder.
3. At the Option of the Company, return the Product to the Company for inspection. Authorization must be given prior to any Product return. Call the Company at 1-800-243-3097 or write the Company at 100 Production Drive, Harrison, OH 45030, for authorization and complete instructions on how to return the Product directly to the Company.
4. Use reasonable care in maintenance, operation, use and storage of the Product in accordance with the instructions contained in the Owner's Manual.
5. Have Warranty work performed by a dealer or representative approved by the Company.
6. Except as noted in B.2., transportation charges are the responsibility of the Purchaser.

D. This Limited Warranty covers:

1. Defects in workmanship or materials.
2. Any part or parts of the Product sold or manufactured by the Company.

E. This Limited Warranty does not cover:

1. Any failure that results from improper installation of the Product.
2. Any failure that results from accident, Purchaser's abuse, neglect, modification, improper maintenance, or failure to operate and use the Product in accordance with the instructions provided in the Owner's Manual supplied with the Product.
3. Any cable replacement other than a break. Cable is a wear item and will fray and twist during normal use.

F. There is no other express warranty. Implied warranties, including those of merchantability and fitness for a particular purpose, are limited to one (1) year from date of purchase. This is the exclusive remedy and any liability for any and all incidental or consequential damages or expenses whatsoever is excluded. Some states do not allow limitations on how long an implied warranty lasts, or do not allow exclusion or limitation of incidental or consequential damages, the above limitations may not apply to you.

This Limited Warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Powerwinch reserves the right to alter specifications on any product without notice.

Models H500, H800 and H880

Troubleshooting Chart

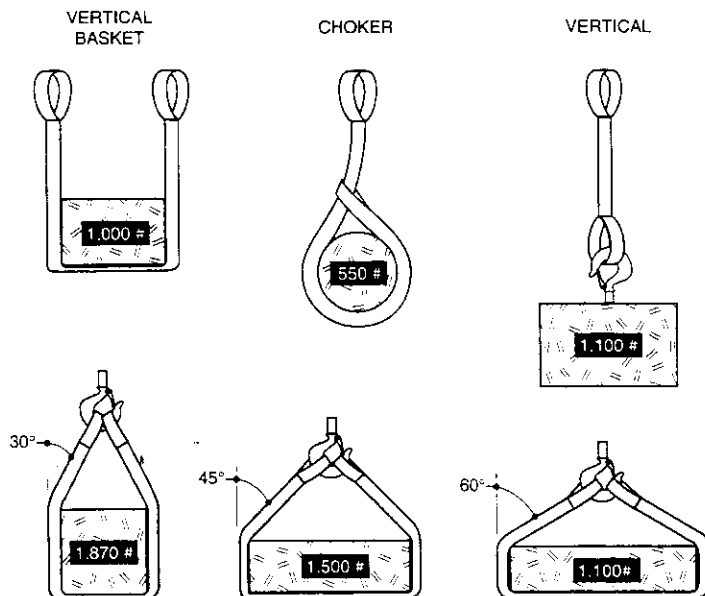
Symptom	Possible Cause(s)	Corrective Action
The hoist shuts off during operation	Either the load is too heavy for the capacity or the motor is overheated	Reduce load or allow hoist to cool for period of time.
The load slips down after the hoist is off.	The brake is improperly adjusted or worn.	Allow an authorized service center to adjust the brake or replace the brake lining.
The hoist will lower but not lift a load	The load is too heavy or the safety switch is jammed.	Check of the hoist will raise the cable without load. If not, the safety switch is malfunctioning.
The hoist emits a buzzing noise when actuated and the cable does not move.	There is an electrical short or the brake air gap is incorrect.	Allow an authorized service center to repair the hoist. The brake air gap must be 0.3mm.
Hoist runs in wrong direction when pushbutton is operated.	Cable may be reverse wound.	Run cable off drum and then back on in proper direction. Check for damage to limit switch and drum area.

Using Lifting Slings

The illustrations below show the various configurations and maximum allowable weight for each method. Information is

based on tables found in ANSI section B30.9. It is recommended that these standards are read before attempting to use lifting slings.

The following chart shows the allowable chemical environment when using polyester lifting slings.



	OK	NO
Soap and Detergents	X	
Water and Sea Water	X	
Lubricating Oils	X	
Crude Oils	X	
Dry Cleaning Solvents	X	
Ethers		X
Bleaching Agents	X	
Alcohols	X	
Acids	+	
Hydrocarbons	X	
Halogenated Hydrocarbons	X	
Ketones	X	
Aldehydes		X
Weak Alkalis	X	
Strong Alkalis	*	

+ Disintegrated by concentrated sulfuric acid

* Degraded by strong alkalis at elevated temperatures