

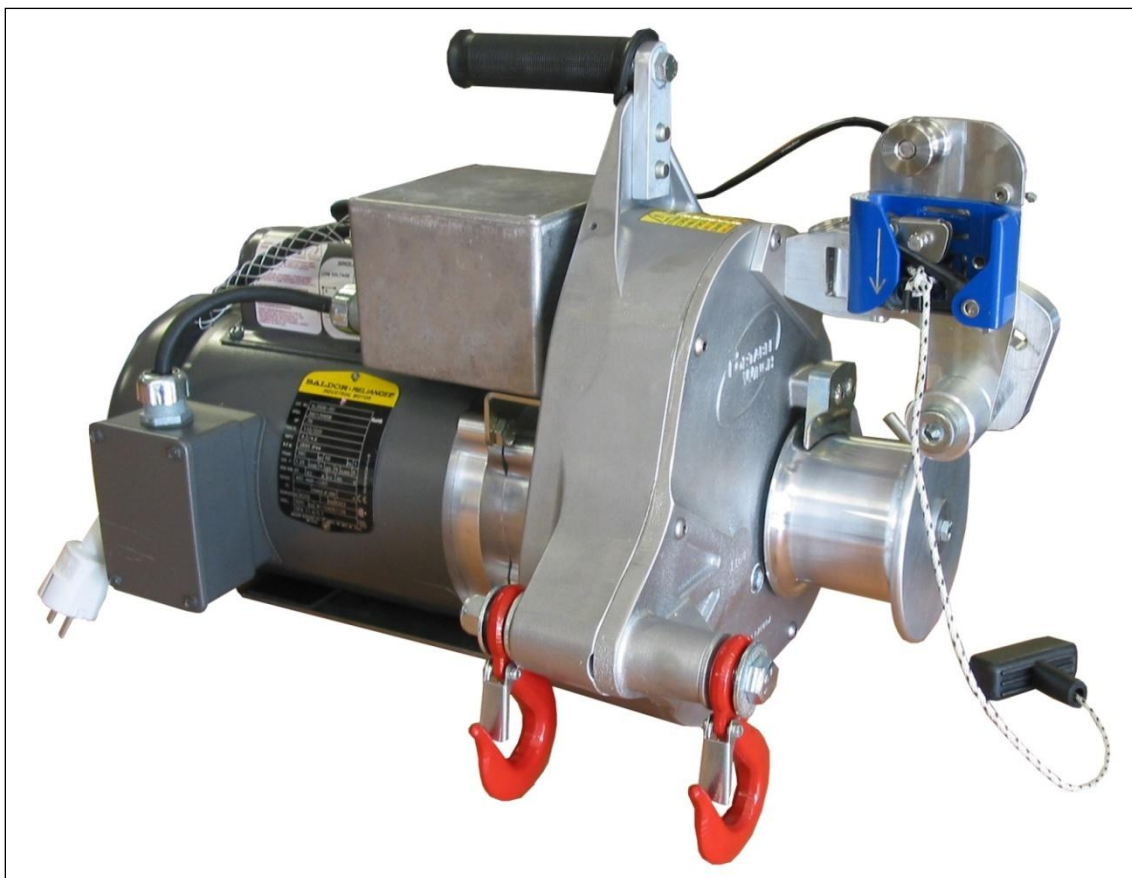


**READ
CAREFULLY
BEFORE USE**

Portable Winch Co.

***PORTABLE ELECTRIC CAPSTAN WINCH
PCT1800-50Hz-P***

USER MANUAL



Model: PCT1800-50Hz-P

Maximum pulling capacity (single line) : 820 kg (1800 lb)

Rated pulling force (single line) : 455 kg (1000 lb)

Lifting capacity : 250 kg (550 lb)

Summary

Introduction – p. 3

1.0 Safety guidelines – p. 3

1.1 Safety messages – p. 4

1.2 Labels – p. 4

1.3 Safety information – p. 5

2.0 Before first use – p. 7

2.1 Upon receiving the winch – p. 7

2.2 Capstan drum – p. 7

3.0 Winch usage – p. 9

3.1 Working cycle – p. 9

3.2 Rope – p. 9

3.2.1 Rope type – p. 9

3.2.2 Rope maintenance – p. 10

3.2.3 At the end of the rope – p. 10

3.2.3.1 Eye splice end – p. 10

3.2.3.2 Bowline knot – p. 10

3.3 Installation of the different types of anchors – p. 11

3.3.1 With polyester sling (provided with the winch) – p. 11

3.3.2 With the winch support plate – p. 12

3.3.2.1 With square tubing 50 mm (2") – p. 12

3.3.2.2 With the Heck-Pack for 50 mm towing ball and adaptor – p. 12

3.3.3 With the tree/pole mount with anchor strap (PCA-1263) – p. 13

3.3.3.1 With the winch support plate – p. 13

3.3.3.2 With the vertical pull winch support – p. 14

3.4 Wrapping the rope on the capstan drum – p. 15

3.5 Moving a load – p. 16

3.5.1 Lifting a load – p. 16

3.5.1.1 Lifting charts – p. 17

3.5.1.2 Sending the rope back down – p. 19

3.6.1 Pulling a load – p. 19

3.7 If the Portable Electric Capstan Winch doesn't work – p. 19

4.0 Maintenance – p. 20

4.1 Cleaning – p. 20

4.2 Lubrication – p. 20

4.3 AC Electric Engine – p. 21

4.4 Storage – p. 21

5.0 Complementary information – p. 21

5.1 Accessories – p. 21

5.2 Warranty – p. 21

5.3 Serial number localization – p. 21

5.4 Technical data – p. 22

5.5 Periodical tests – p. 22

5.6 CE Declaration of conformity – p. 23

5.7 Exploded view and parts list – p. 24

5.8 Electrical plans – p. 27

5.9 Manufacturer – p. 28

Annexe I. Examining the rope – p. 29

Introduction

Portable Winch Co. wishes to thank you for purchasing a PCT-1800 *Portable Electric Capstan Winch*. This manual was written to help you make the best use of your new electric winch and to use it in the most secure way. **Read it carefully before using the electric winch.** For any problems or questions please refer to an authorized Portable Winch Co. dealer or contact us directly.

⚠ WARNING NOTE TO THE USER: PLEASE REFER TO THIS MANUAL AND THE BALDOR ELECTRIC MOTOR LEAFLET FOR GENERAL INFORMATION.

1.0 Safety guidelines

The PCT-1800 *Portable Electric Capstan Winch* is designed to pull **non-rolling objects**, usually at a plus or minus 45 degree angle from the horizontal. It can also be used to **lift** objects. It is equipped with a rope grabbing system that can hold a load in position and will restart under tension.

⚠ DANGER A RAPIDLY LOWERING LOAD WILL NOT BE RESTRAINED BY THE ROPE BLOCKING SYSTEM.

⚠ WARNING THE USE OF A PULLING DEVICE IMPLIES SERIOUS INJURY OR EVEN DEATH OR PROPERTY DAMAGE. DO NOT UNDER-ESTIMATE THE POTENTIAL DANGER.

⚠ CAUTION THE MANUFACTURER IS NOT RESPONSIBLE FOR DAMAGE CAUSED BY THE FAILURE OF THE REQUIREMENTS CONTAINED IN THIS DOCUMENT AND THE FAILURE TO FOLLOW SAFETY REGULATIONS.

In particular, the USER has the obligation to verify :

- a) If the electrical plug is equipped with a ground compatible with the connector;
- b) If the electrical system is adequate;
- c) The execution of safety measures for the prevention of falls.

⚠ WARNING NEVER SURPASS THE RATED PULLING FORCE :
PULLING : 455 KG (1000 LB) SINGLE LINE.
LIFTING : 250 KG (555 LB) SINGLE LINE.


⚠ WARNING DO NOT USE THE WINCH WITHOUT USING THE ROPE BLOCKING SYSTEM.

⚠ WARNING THE WINCH MUST NOT RECEIVE ANY BACKLASHES.

⚠ WARNING NEVER USE THE WINCH WITHOUT PROPER TRAINING AND SUPERVISION. REMEMBER THAT THE **FIRST CAUSE OF AN ACCIDENT IS HUMAN ERROR**. BE SURE THAT ALL OPERATORS HAVE THE NECESSARY TRAINING.

1.1 Safety messages

Your safety and the safety of others are very important. You will find important safety messages in this manual. **Read them carefully.**

These security messages are warning you of potential injuries to either you or others. Every safety message is preceded by a warning symbol  and one of the following terms: DANGER, WARNING or CAUTION.

These indicator words mean:






 DANGER YOU WILL BE MORTALLY OR SEVERELY INJURED IF YOU DO NOT FOLLOW THESE INSTRUCTIONS.

 WARNING YOU COULD BE MORTALLY OR SEVERELY INJURED IF YOU DO NOT FOLLOW THESE INSTRUCTIONS.

 CAUTION YOU COULD BE INJURED IF YOU DO NOT FOLLOW THESE INSTRUCTIONS.

1.2 Labels

The warning label is positioned on the right side of the winch housing.

<p>1</p>   <p>LIRE MANUEL READ MANUAL</p>	<p>2</p>  <p>LOW STRECH ROPE CORDE À FAIBLE ÉLASTICITÉ</p> <p>FORCE DE RUPTURE MIN. : MIN. BREAKING FORCE: 2300 kg</p> <p>MIN 12 mm MAX 13 mm</p>	<p>3</p>  	<p>4</p>  
<p>PORTABLE WINCH CO. 1 888 388-PULL (7855) www.portablewinch.com</p>			
<p>1170, Thomas-Tremblay Sherbrooke QC J1G 5G5 CANADA Tel : + 1 819 563 2193</p>		<p>Modèle / Model: PCT1800 Force de tire : 820 kg Pulling force: Vitesse de treuillage : 12 m/min Winching speed:</p>	
<p></p>		<p>No. de série : 0000 Serial number: Année de fabrication : 2011 Year manufactured:</p>	

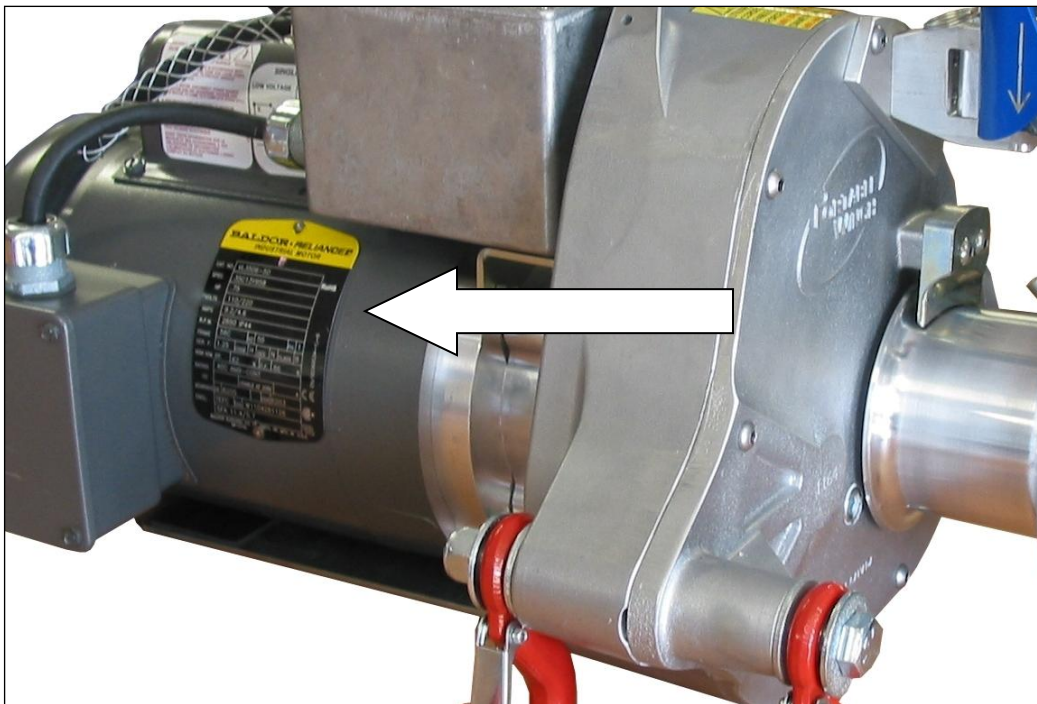
- 1) Read carefully this manual and the Baldor Electric motor pamphlet prior to using the winch.
- 2) Only use low stretch rope.
 - a. Minimum diameter : 12 mm (1/2")
 - b. Maximum diameter : 13 mm (1/2")
- 3) Never place your hands near the drum when in use.
- 4) Never use the winch to lift people.

DANGER

UTILISER SEULEMENT / *USE ONLY*
CORDE PORTABLE WINCH ROPE
FAIBLE ÉLASTICITÉ / *LOW STRETCH*
FORCE RUPTURE MIN.: **3150 kg**
MIN. BREAKING FORCE:
DIAMÈTRE MIN.-MAX.: **12 mm**
MIN.-MAX. DIAMETER:

It is **IMPERATIVE** to use **ONLY**
Portable Winch Co.
double braided polyester rope
12-13 mm (1/2") diameter
with a minimal breaking
strength of 3150 kg (6945 lb).

The nameplate of the motor is riveted directly on the engine.



1.3 Safety information

⚠ WARNING DO NOT LET CHILDREN USE THE *PORTABLE ELECTRIC CAPSTAN WINCH*. KEEP CHILDREN AND ANIMALS AWAY FROM THE WORK AREA.

⚠ WARNING NEVER LET SOMEONE WITHOUT TRAINING USE THE *PORTABLE ELECTRIC CAPSTAN WINCH*. MAKE SURE THE USER KNOWS ABOUT THE SAFETY AND USAGE PROCEDURES AND HAS READ THIS MANUAL AND THE BALDOR ENGINE USER MANUAL.

⚠ WARNING INFORM ALL USERS OF THE SAFETY GUIDELINES AND USAGE PROCEDURES.

⚠ WARNING FAMILIARIZE YOURSELF WITH THE PRODUCT AND THE SAFETY GUIDELINES BEFORE WORKING WITH THE WINCH.

⚠ WARNING MAKE SURE THAT YOUR CLOTHES ARE NOT GOING TO GET CAUGHT INTO THE WINCHES MOBILE PARTS.

⚠ CAUTION REPLACE ANY SAFETY LABELS THAT ARE DAMAGED, ILLEGIBLE OR MISSING.

⚠ WARNING NEVER PUT YOUR HANDS ON THE CAPSTAN DRUM, THE ROPE GRABBING SYSTEM, THE ROPE GUIDE OR THE FRONT PULLEY WHEN THE ENGINE IS RUNNING.

⚠ WARNING ALWAYS KEEP BYSTANDERS OUTSIDE THE WORKING AREA.

⚠ DANGER NEVER PULL ROLLING OBJECTS THAT MIGHT ROLL OUT OF YOUR CONTROL.

⚠ WARNING NEVER PULL FIXED OR BLOCKED LOADS.

⚠ WARNING AVOID SHORT PULSES TO THE MOTOR.

ALWAYS BEGIN MOVEMENT OF THE LOAD WITH THE SLOWEST SPEED. THE ROPE MUST BE UNDERTENSION WHEN THE LOAD BEGINS TO MOVE.

⚠ WARNING DO NOT PULL A SUSPENDED LOAD SIDEWAYS.

⚠ WARNING ONLY USE THE 12-13 MM (1/2") DOUBLE BRAIDED POLYESTER ROPE PROVIDED BY PORTABLE WINCH CO.

⚠ WARNING ALWAYS USE THE WINCH HORIZONTALLY BY USING A PULLEY OR A VERTICAL PULL SUPPORT TO REDIRECT THE ROPE VERTICALLY.

⚠ WARNING FOR ANY INSTALLATION, THE TOTAL RESISTANCE IS DETERMINED BY THE WEAKEST LINK. IT IS THEREFORE IMPORTANT TO USE THE RIGHT ACCESSORIES BASED ON THE WORK TO BE DONE. FOR LIFTING IT IS RECOMMENDED TO HAVE A **SAFETY FACTOR OF 10:1** FOR ALL ACCESSORIES.

⚠ DANGER IT IS STRICTLY FORBIDDEN TO :

- LIFT LOADS WITH A WEIGHT SUPERIOR TO THE RATED PULLING CAPACITY; TO LIFT LOADS THAT PREVENT THE OPERATOR FROM SEEING OR THAT MAY COME INTO COLLISION WITH OTHER MOVING LOADS OR ADJACENT FIXED STRUCTURES;
- USE THE WINCH TO LIFT PEOPLE;
- ALLOW PEOPLE TO PASS UNDER A SUSPENDED LOAD;
- LIFT LOADS POORLY ALIGNED;
- LEAVE SUSPENDED LOADS UNATTENDED;
- ALLOW OTHER PEOPLE TO USE THE WINCH.

2.0 Before first use

2.1 Upon receiving the winch

Inspect the box to detect any apparent damage. If there is damage or missing parts, inform the carrier immediately.

2.2 Capstan drum

Your *Portable Electric Capstan Winch* is equipped with a 85 mm (3-3/8") diameter capstan drum and a 127 mm (4-5/8") safety lip.

If you wish to use the 57 mm (2-1/4") diameter capstan drum (non-included), you will need to purchase it as well as the 117 mm (4-5/8") diameter safety lip.

Follow the instructions to change the drum and safety lip. You will find the images for steps 1 to 9 on the next page.

The tools required are :

- A 4 mm (5/32") Allen key included with the winch;
- A 11 mm (7/16") key or adjustable key (non- included).

- 1) With the 4 mm (5/32") Allen key remove the rope guide (figure 2);
- 2) With the 11 mm (7/16") key unscrew the 1/4"-20 x 2-1/4" hex bolt that holds the safety lip (figure 3);
- 3) Remove the hex bolt, the flat washer, the safety lip and the spacer (figure 4);
- 4) Remove the drum (figure 5). If needed, you may push it forward with two screwdrivers. Be sure not to lose the shaft key; (NOTE : Prior to installing the new drum be sure to clean the surface).
- 5) Insert the drum (figure 6). The shaft key must remain in place;
- 6) Insert the flat washer in the hex bolt, then the safety lip and then the spacer. Then screw it all into the axle (figure 7);
- 7) With the 11 mm (7/16") key tighten the hex bolt (figure 8);
- 8) With the 4 mm (5/32") Allen key install the rope guide (included with the drum) by tightening the two (2) screws into their designated holes. (figure 9).
- 9) **NOTE : Make sure that the rope guide doesn't touch the drum.**

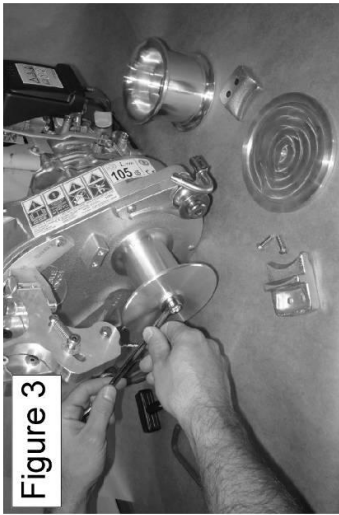


Figure 3



Figure 6

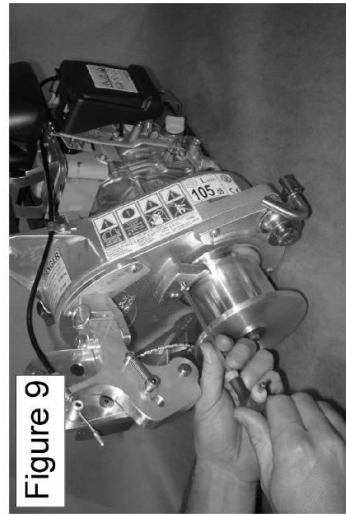


Figure 9

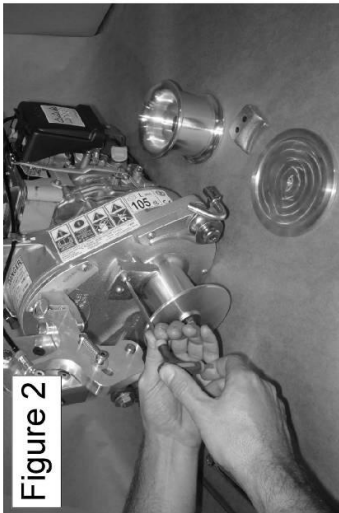


Figure 2



Figure 5

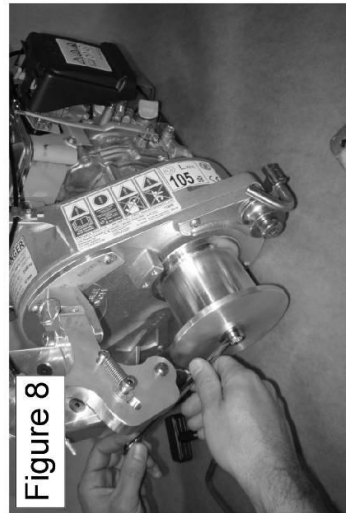


Figure 8



Figure 1

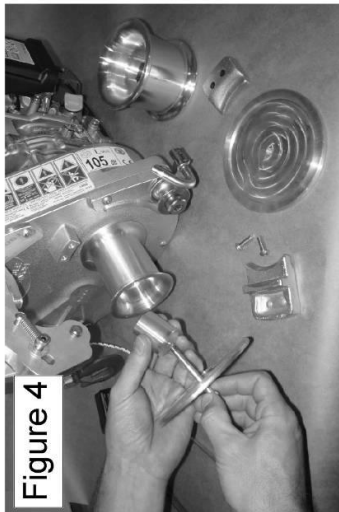


Figure 4



Figure 7

3.0 Winch usage

⚠ WARNING MOST WINCHING SITUATIONS PRESENT **POTENTIAL DANGERS!**

The winch must be plugged into grounded plug. The use of an extension cord can cause a loss of power at full capacity. As listed on the product label, make sure the voltage and current type are respected. Units 115V-60hz require 20 amps while the units 220V-50hz require 10 amps.

IMPORTANT NOTE: You must release the tension to the rope before restarting to pull. Do not start under tension.

3.1 Working cycle

This winch is designed for intermittent use. The engine manufacturer recommends an engine duty cycle of 25%. So, to get a maximum lifetime out of the engine, it should only be used for fifteen (15) minutes period every hour. This data varies depending on the loads pulled or lifted. Light loads can be lifted or pulled continuously without affecting the life of the engine.

3.2 Rope

3.2.1 Rope type

Only use a low stretch double-braided polyester rope with a diameter of 12-13 mm (1/2") and a minimum breaking strength of 3150 kg (6945 lb) with this winch. Please contact us for other rope types suitability.

⚠ WARNING **DO NOT USE 3-STRAND POLYPROPYLENE YELLOW ROPE!**

- Polypropylene and polyethylene ropes are dangerous for winching because of their great elasticity and low melt point.
- Make sure the rope is not damaged and that it offers an adequate resistance to pull the load.

⚠ WARNING **STRETCH EQUALS DANGER!**

- A stretched rope can recoil and bring your hand or body towards the winch causing severe injuries.
- A stretched rope can also move the load in an unpredictable or dangerous way.
- All ropes stretch: a longer one more than a shorter one. The more you pull, the more it stretches.
- Be careful when letting go of a rope under tension. A stretched rope can recoil and cause serious burns as the rope leaves your hand.

⚠ CAUTION **ALWAYS WEAR GLOVES.**

⚠ WARNING **ALWAYS STAND TO THE SIDE OF THE WINCHING LINE.**

⚠ DANGER DO NOT WRAP THE ROPE AROUND YOUR HANDS OR YOUR BODY! ALSO BEWARE OF THE ROPE ACCUMULATION ON THE GROUND, BE SURE TO KEEP YOUR FEET OUT OF IT.

3.2.2 Rope maintenance

The rope and its ends should be inspected regularly to detect wear. Please refer to *CI 2001 Document - FIBER ROPE INSPECTION AND RETIREMENT CRITERIA* from the Cordage Institute available at www.ropecord.com for the procedure and criteria of scrapping the rope.

You will find a chart located at page 29 of this manual to better help you register your observations.

⚠ CAUTION IF THE ROPE IS DIRTY, WASH IT. A DIRTY ROPE WILL GET DAMAGED QUICKLY AND CAUSE PREMATURE WEAR TO THE PARTS IN WHICH IT COMES INTO CONTACT.

3.2.3 At the end of the rope

3.2.3.1 Eye spliced end

You must attach the load to the end of the rope. Even if a bowline knot may sometimes be sufficient, we **strongly recommend** the use of a rope with spliced ends (see figure) to which you can install the appropriate hardware with a sufficient safety factor rating for your application.



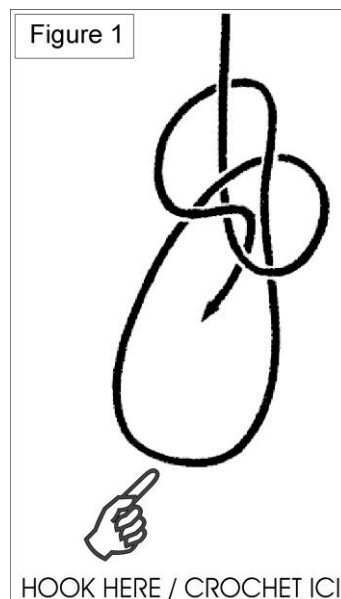
NOTE: Verify your local regulations in this matter.

⚠ WARNING IMPORTANT FACTOR : MOST KNOTS REDUCE THE CAPACITY OF THE ROPE BY 50% OR MORE.

3.2.3.2 Bowline knot

For pulling applications, we recommend the installation of a hook with a bowline knot (figure 1), because it can be undone easily when you need to change the hook. Moreover, this type of knot retains about 70% of the capacity of the rope – whereas most knots reduce it by 50% or more.

Even better, the double bowline knot (figure 2) will retain about 75% of your rope's capacity.



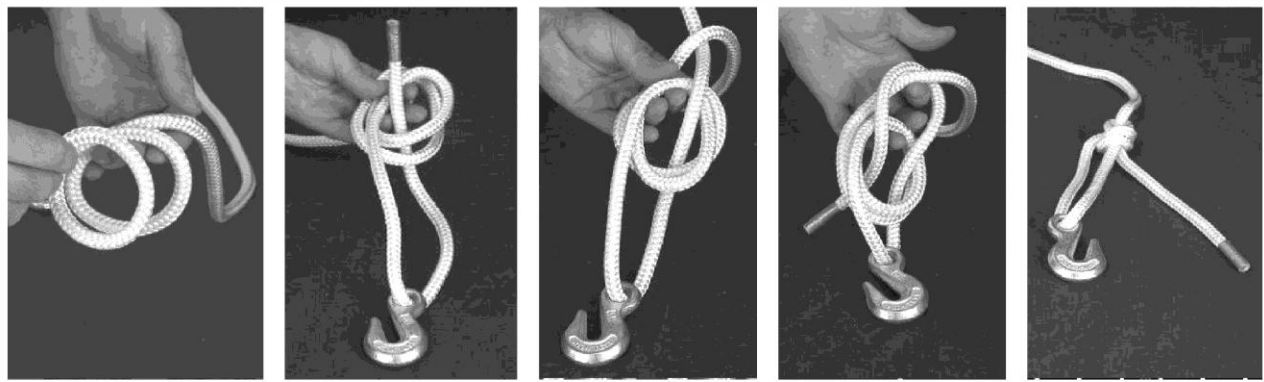


Figure 2

3.3 Installation of the different types of anchors

Since the winch can be used in many different applications, Portable Winch Co. offers various anchoring systems. The winch can be anchored to a fixed object by using the polyester sling included or with optional anchoring systems listed in this section. The rope end is tied to the object you want to move.

3.3.1 With polyester sling (provided with the winch)

Go around the anchor point with the sling. Insert each end of the sling in one of the safety hooks located on the winch (figure 1).

⚠ CAUTION

AVOID INSTALLING THE SLING ON SHARP EDGES THAT MIGHT DAMAGE IT. WHETHER YOU ARE USING A POST, A TREE OR A STUMP, ALWAYS INSTALL THE SLING NEAR THE ANCHOR'S BASE (FIGURE 1).

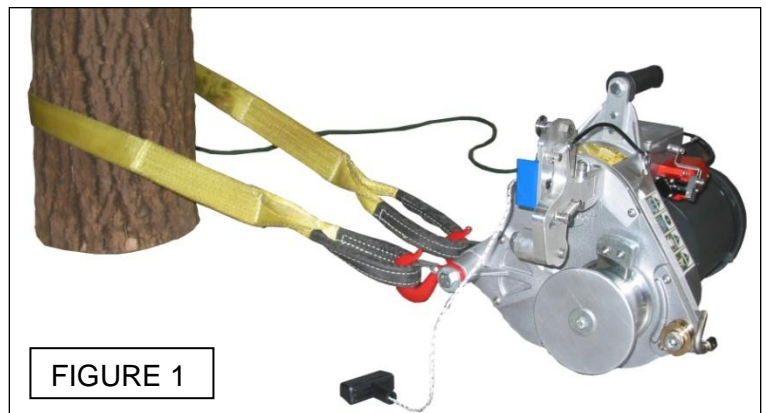


FIGURE 1

⚠ CAUTION

USING A STUMP AS AN ANCHOR POINT MEANS PAYING SPECIAL ATTENTION IN ORDER TO PREVENT THE SLING FROM SLIPPING OVER IT.

⚠ WARNING

MAKE SURE THE ANCHOR POINT IS STRONG ENOUGH TO RESIST THE PULL WITHOUT BREAKING OR BEING DAMAGED.

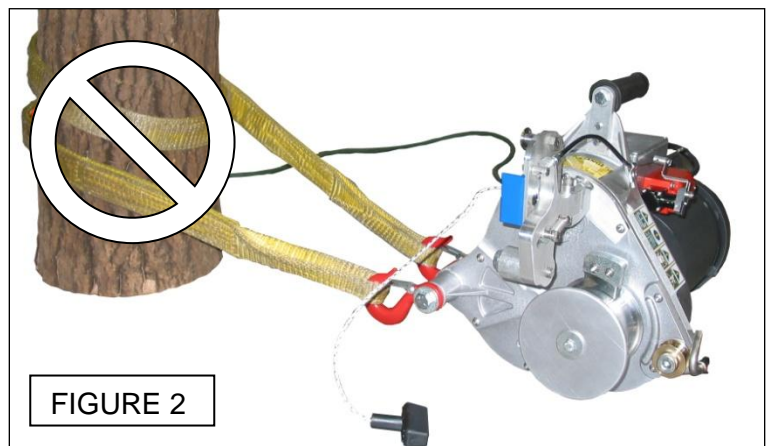


FIGURE 2

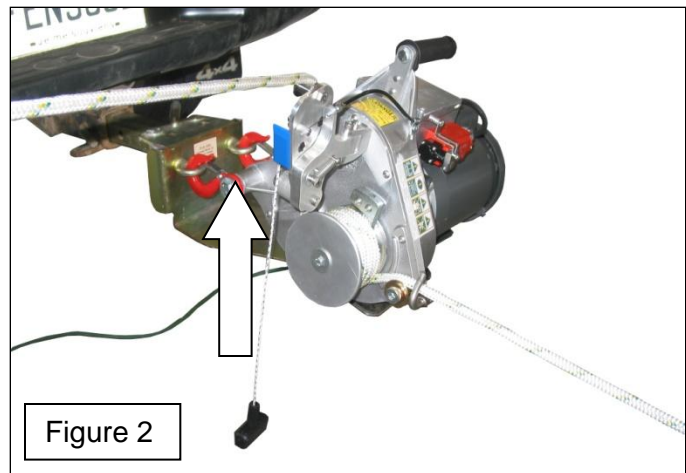
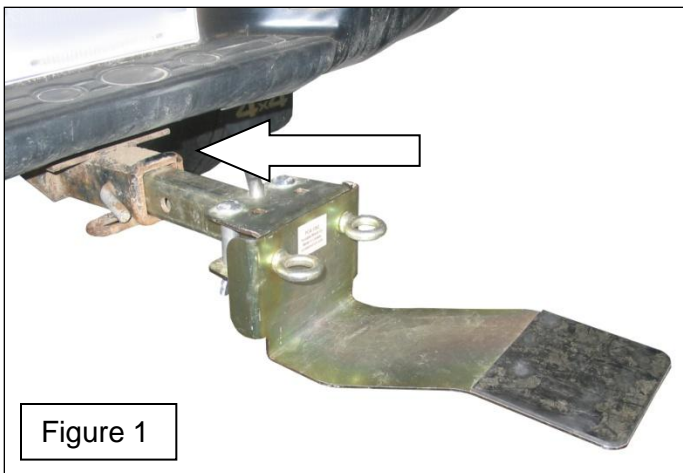
Position the winch in line with the load. When the winch is under tension, it will try to align itself with the load. The friction of the sling against the anchor point could prevent correct alignment. If that is the case, release the tension on the rope and position the sling on the anchor point so that the tension is equally distributed on both winch anchor hooks.

⚠ CAUTION **DON'T DO THIS!** WHEN YOU ANCHOR THE WINCH, MAKE SURE THAT YOU **DO NOT** DO A COMPLETE WRAP AROUND THE ANCHOR POINT (FIGURE 2 ON PREVIOUS PAGE). THIS SET-UP WILL PREVENT PROPER ALIGNMENT OF THE WINCH WITH THE LOAD AND WILL PUT UNEVEN TENSION ON THE WINCH ANCHOR HOOKS.

3.3.2 With the winch support plate (PCA-1268)

3.3.2.1 With square tubing 50 mm (2") (PCA-1267)

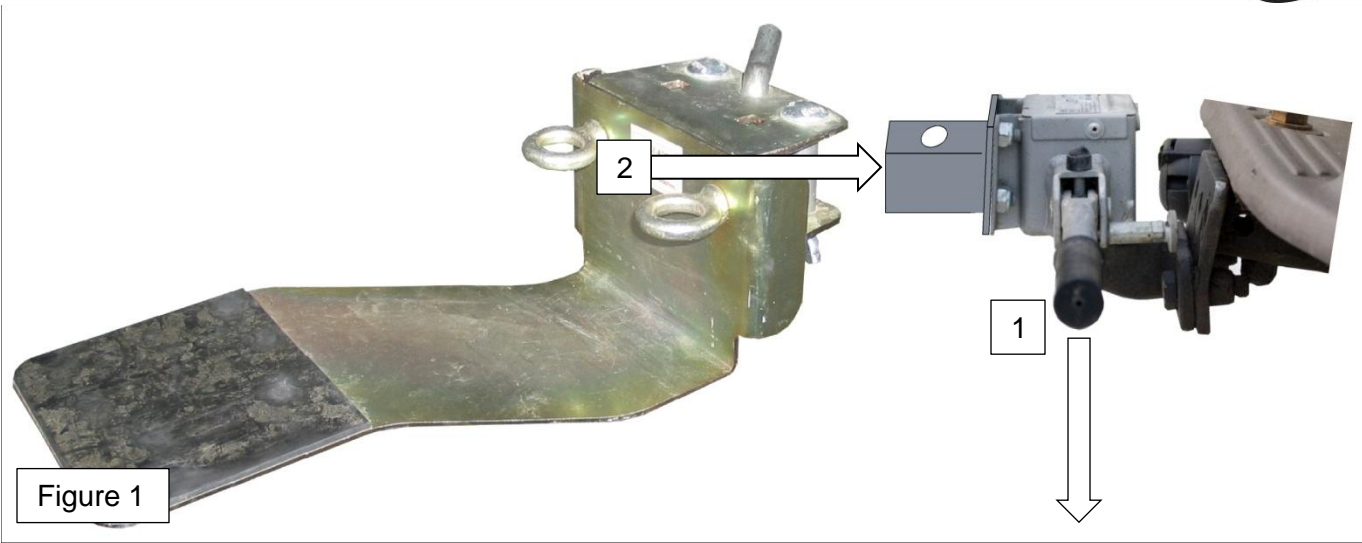
- 1) Slide the square tubing into the vehicle's receiver and secure it with both the bent pin and the "R" pin (figure 1);
- 2) Attach the winch anchor hooks to the eye bolts (figure 2);
- 3) Wrap the rope around the drum and start winching. The winch will align itself automatically with the load.



⚠ CAUTION MAKE SURE THE ANCHORING VEHICLE'S HAND BRAKE IS ON AND WORKING PROPERLY. POSITION BLOCKS BEHIND THE WHEELS TO PREVENT ROLL BACK.

3.3.2.2 With the Heck-Pack for 50 mm towing ball (PCA-1266) and adaptor (PCA-1265)

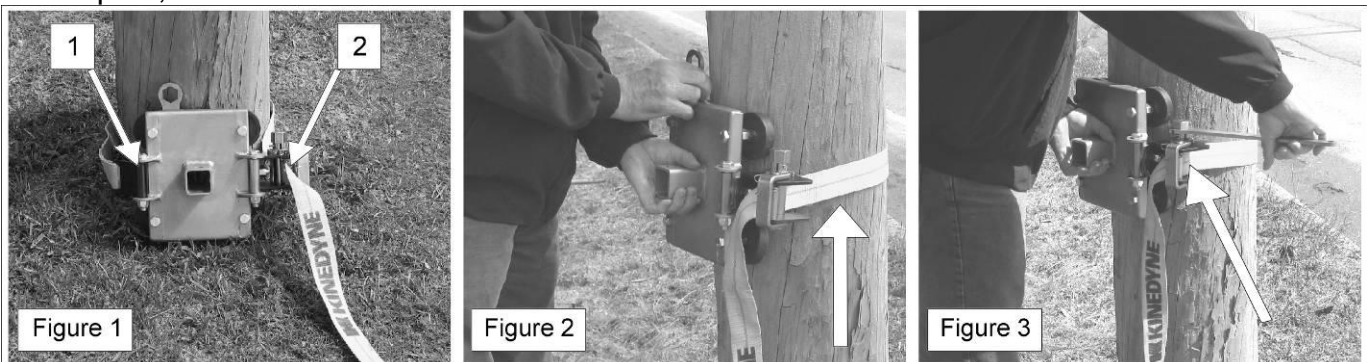
- 1) Insert the Heck-Pack on the ball and fasten it down with the lever (figure 1, no. 1);
- 2) Slide the support plate onto the bolted adaptor and fasten it down with the bent pin and "R" pin (figure 1, no 2);
- 3) Attach the winch anchor hooks to the eye bolts (as listed in section 3.3.2.1);
- 4) Wrap the rope around the drum and start winching. The winch will align itself automatically with the load.



3.3.3 With the tree/pole mount with anchor strap (PCA-1263)

To use this system with the winch support plate (PCA-1268) or the vertical pull winch support (PCA-1264), you must first install the tree/pole mount. To do this, follow the steps below :

- 1) Place the tree/pole mount at the base of the tree or pole. Insert the sling's hook into the anchor point on the left (figure 1, no 1); then feed the sling's end through the ratchet system (figure 1, no 2)
- 2) Slide the whole set-up upward to the desired height (figure 2);
- 3) Tighten the sling with the wrench supplied (figure 3) while making sure the rubber pads are properly positioned. The pads should offer maximum contact surface with the tree or pole;



3.3.3.1 With the winch support plate (PCA-1268)

NOTE : The winch shown in the following pictures is not the Portable Electric Capstan Winch but the installation and it's functions remain the same.

After the installation of the tree/pole mount (section 3.3.3), follow these steps :

- 1) Insert the winch support plate and fasten it down with the bent pin and "R" pin (figure 1);
- 2) Attach the winch anchor hooks to the eye bolts (figure 2, no 2);
- 3) Wrap the rope around the drum and start winching. The winch will align itself automatically with the load. (figure 3).

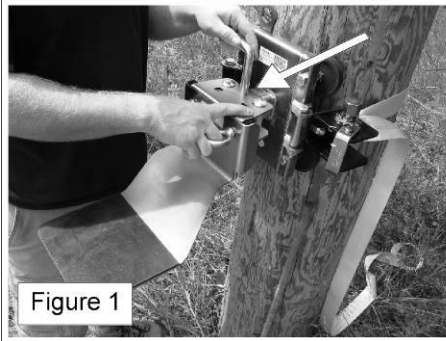


Figure 1

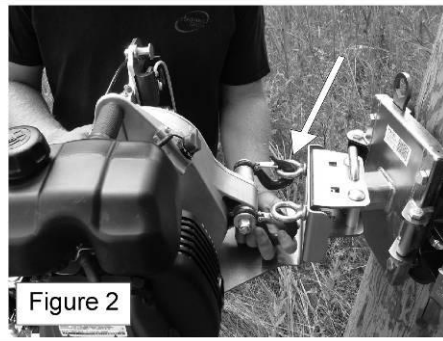


Figure 2



Figure 3

⚠ WARNING

AFTER PULLING FOR A FEW SECONDS, RELEASE THE TENSION AND CHECK THE SOLIDITY OF THE INSTALLATION AND TIGHTEN THE SLING AGAIN.

3.3.3.2 With the vertical pull winch support (PCA-1264)

After the installation for the tree/pole mount (section 3.3.3), follow these steps :

- 1) Install the vertical support onto the square tubing and align the holes (figure 1);
- 2) Install the pulley. Tighten the nut with your fingers until it touches the support. Then reenforce it with the "R" pin (figure 2);
- 3) Attach the winch anchor hooks to the eye bolts (figure 3);
- 4) Wrap the rope around the drum and align the vertical support pulley with the rope axe (figure 4) and start to pull (figure 6).

⚠ WARNING

DO NOT GO OVER THE FRONT BRASS PULLEY (FIGURE 5) AS THIS CAUSED TOO MUCH FRICTION AND WILL REDUCE THE ABILITY TO LIFT. PASS THE ROPE UNDER THE FRONT BRASS PULLEY. IN THIS SETUP, THE FRONT BRASS PULLEY IS NOT USED.



Figure 1

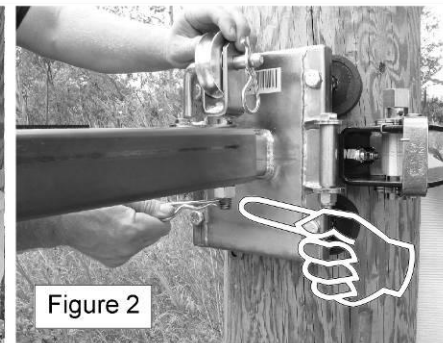


Figure 2

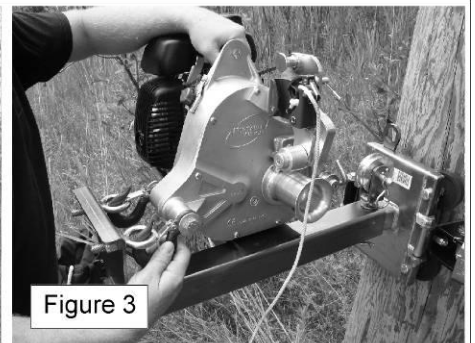


Figure 3

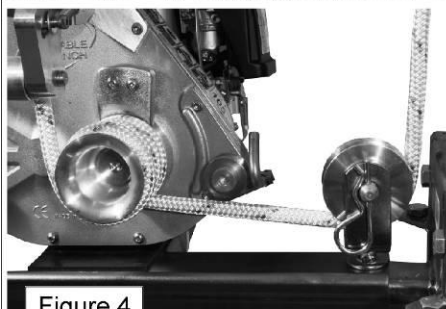


Figure 4

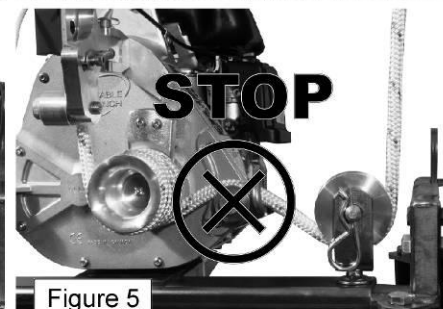


Figure 5



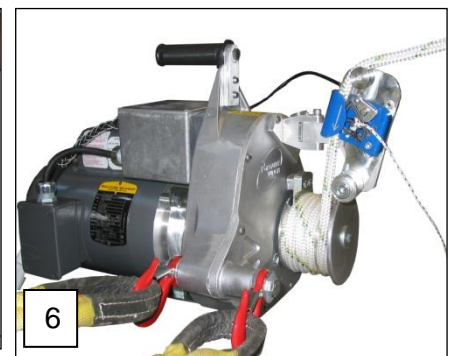
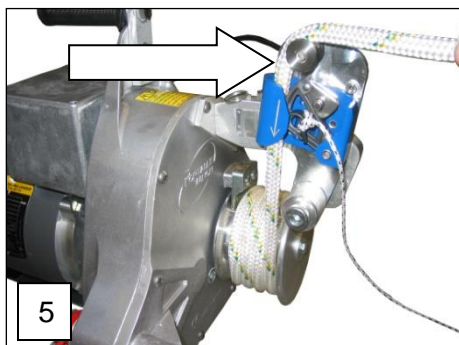
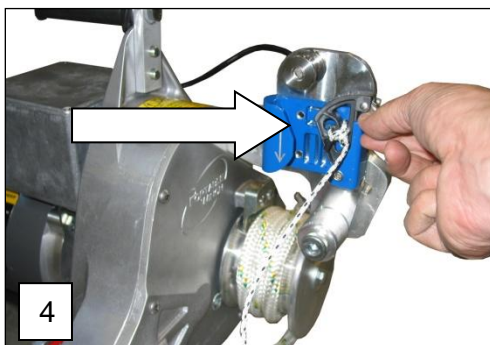
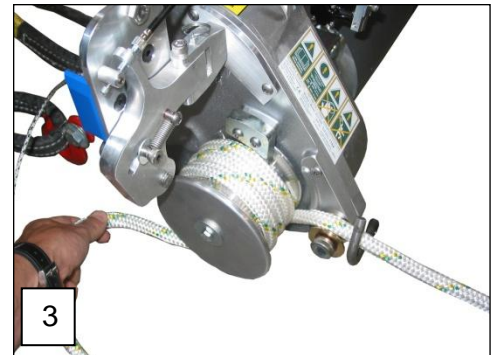
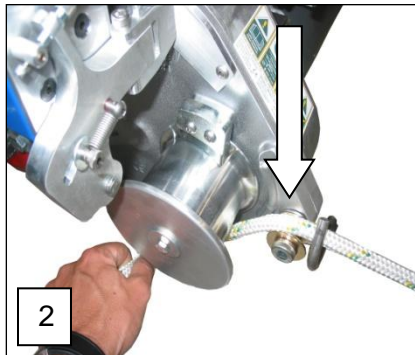
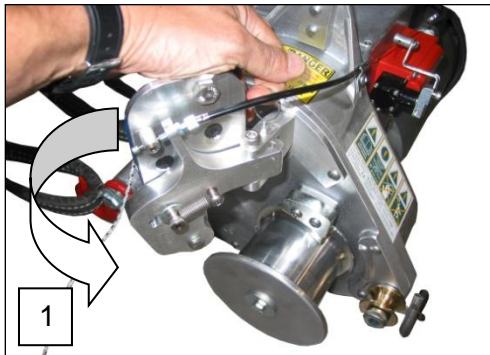
Figure 6

⚠ WARNING

AFTER PULLING FOR A FEW SECONDS, RELEASE THE TENSION AND CHECK THE SOLIDITY OF THE INSTALLATION AND TIGHTEN THE SLING AGAIN.

3.4 Wrapping the rope on the capstan drum

- 1) Open rope grabbing system and lock in place with spring pin (figure 1);
- 2) Position rope over front brass pulley (except when using vertical pull winch support (see section 3.3.3.2)) (figure 2) and wrap rope around drum (figure 3);
- 3) Insert rope into camming device by pulling the spring-loaded cam lever upwards (figure 4). This will give enough room to insert the rope. Make sure the rope goes over the stainless steel knob (figure 5). The cam should be seated against the rope and will automatically hold a load if the rope end is let go.
- 4) As you pull the rope, the throttle will engage and load will move (figure 5 & 6). NOTE: It is necessary to pull the rope horizontally to get the load started. To stop load movement, stop pulling on rope. Gently pull on the rope until the rope slack is taken up and the tension begins to rise. Stop pulling to stop the engine. Look at your installation to make sure everything works as planned. If everything is ok, start pulling.



3.5 Moving a load

⚠ WARNING THE KEY TO SAFE USAGE OF THE WINCH IS COMMON SENSE.

⚠ WARNING CHECK WINCH POSITION, ROPE CONDITION, SOLIDITY OF THE ANCHOR POINT, KNOTS, CARABINERS OR SHACKLES IN ORDER TO PREVENT INJURIES OR MATERIAL DAMAGE.

⚠ WARNING INSTALL THE ROPE IN SUCH A WAY THAT IT DOES NOT RUB AGAINST OTHER OBJECTS. TRY TO SET-UP THE ROPE SO THAT THE FRONT OF THE LOAD IS SLIGHTLY LIFTED. DO NOT PULL DOWNWARDS OR THROUGH AN OBSTRUCTION.

⚠ GENERALLY, IF THE ROPE TOUCHES THE GROUND WHILE PULLING, YOUR INSTALLATION IS INCORRECT.

⚠ CAUTION ALWAYS WEAR **GLOVES**.

⚠ WARNING NEVER PUT YOUR HANDS ON THE CAPSTAN DRUM, THE ROPE GRABBING SYSTEM, THE ROPE GUIDE OR THE FRONT PULLEY WHEN THE ENGINE IS RUNNING.

⚠ WARNING BE SURE THAT YOUR ANCHOR AND FRONT BRASS PULLEY (IN FRONT) ARE ALIGNED WITH THE ROPE.

⚠ WARNING WHILE WINCHING, POSITION YOURSELF AWAY FROM THE WINCH IN ORDER TO SEE BOTH THE WINCH AND THE LOAD. PULL HORIZONTALLY ON THE ROPE. THE TENSION YOU EXERT ON THE ROPE WILL KEEP THE WINCH LEVELED.

⚠ DANGER DO NOT WRAP THE ROPE AROUND YOUR HANDS OR YOUR BODY! ALSO BEWARE OF THE ROPE ACCUMULATING IN FRONT OF YOU; MAKE SURE YOUR FEET DO NOT GET TANGLED IN IT.

⚠ WARNING CAREFULLY WATCH THE CAPSTAN DRUM DURING THE OPERATION AND MAKE SURE THAT THE ROPE DOES NOT CROSS OVER ON IT. IF IT HAPPENS, RELEASE THE TENSION ON THE ROPE AND STOP THE ENGINE WHILE UNDOING THE CROSS OVER.

3.5.1 Lifting a load

⚠ WARNING PRIOR TO LIFTING A LOAD, **IT IS IMPERATIVE** TO EVALUATE ITS APPROXIMATE WEIGHT.

⚠ WARNING NEVER SURPASS THE RATED PULLING FORCE : 250 KG (555 LB) IN SINGLE LINE.

3.5.1.1 Lifting charts

When lifting, you should evaluate the approximate weight of the load to assess the minimum number of turns of rope required on the drum to lift it. You will find below two charts according to the diameter of the capstan drum used on your winch.

These charts are used to determine the number of turns of rope needed to raise and lower a load. The friction on the drum increases with the number of turns of rope and the weight of the load. Too many turns can prevent the lowering of a load.

85 mm (3-3/8") Drum (included with the winch)

Number of turns on a 85 mm (3-3/8") drum	Weight			
	Kilograms		Pounds	
	From	To	From	To
1	⚠ WARNING Never only make one turn ⚠ WARNING			
2	1 kg	80 kg	2 lb	110 lb
3	81 kg	170 kg	111 lb	374 lb
4	171 kg	250 kg	375 lb	550 lb

57 mm (2-1/4") Drum (sold separately)

Number of turns on a 57 mm (2-1/4") drum	Weight			
	Kilograms		Pounds	
	From	To	From	To
1	⚠ WARNING Never only make one turn ⚠ WARNING			
2	1 kg	80 kg	2 lb	175 lb
3	81 kg	170 kg	176 lb	375 lb
4	171 kg	450 kg	376 lb	1000 lb

⚠ WARNING YOUR PORTABLE ELECTRIC CAPSTAN WINCH IS EQUIPPED WITH A ROPE GRABBING SYSTEM. THE SYSTEM IS NOT DESIGNED TO STOP A LOAD THAT IS LOWERING AT GREAT SPEEDS. DAMAGES MAY OCCUR TO THE ROPE AND/OR THE GRABBING SYSTEM IF THE SYSTEM IS STRAINED. THIS CAN ALSO LEAD TO CATASTROPHIC FAILURE.

⚠ DANGER YOUR PORTABLE ELECTRIC CAPSTAN WINCH WAS NOT DESIGNED TO LOWER HEAVY LOADS ON LONG DISTANCES. THE FRICTION CREATED BY THE ROPE ON THE CAPSTAN DRUM GENERATES INTENSE HEAT WHICH CAN DAMAGE OR MELT THE ROPE. YOU SHOULD TRYOUT THE SYSTEM TO KNOW ITS LIMITS. YOU CAN ALSO USE A BLOCK AND TACKLE SYSTEM ON THE LOAD TO REDUCE THE FRICTION ON THE DRUM.

⚠ CAUTION EVERY TIME YOU LOWER A LOAD, IT IS IMPERATIVE TO VERIFY THE STATE OF THE ROPE.

⚠ WARNING NEVER USE THE WINCH WITHOUT THE ROPE GRABBING SYSTEM.

⚠ WARNING THE WINCH MUST NEVER RECEIVE BACKLASHES.

⚠ WARNING BE CAREFUL NOT TO TANGLE THE ROPE ON THE DRUM WHEN LOWERING A LOAD. IF IT HAPPENS, PULL THE ROPE TO START THE ENGINE AND LIFT THE LOAD UNTIL THE ROPE IS FULLY UNRAVELLED.

⚠ CAUTION DO NOT TOUCH THE CAPSTAN DRUM IMMEDIATELY AFTER USAGE SINCE IT BECOMES VERY HOT AND WILL BURN.

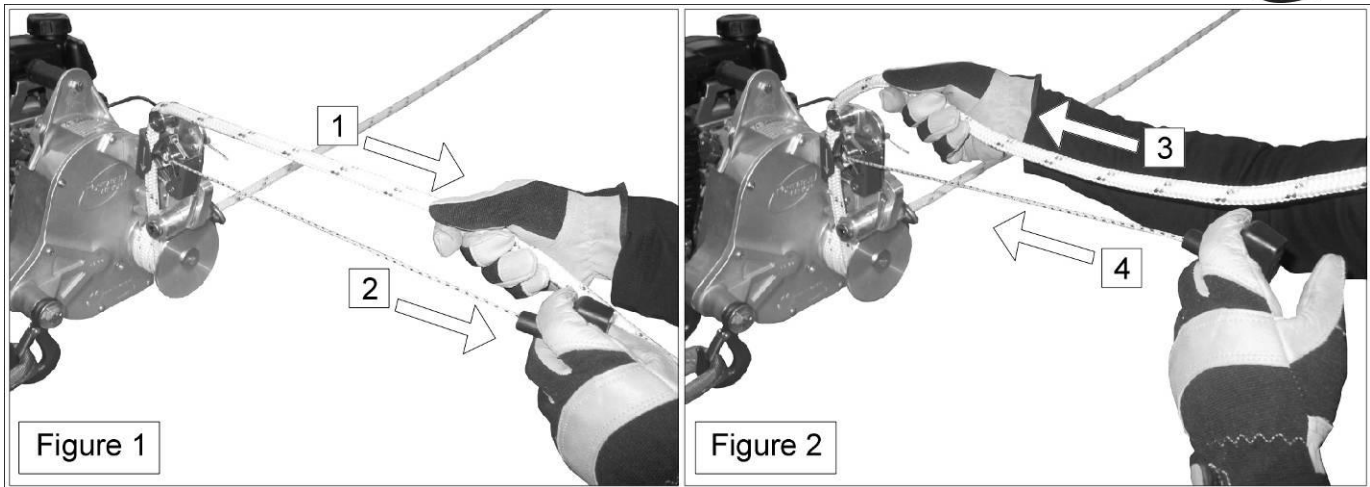
When you stop lifting with the *Portable Capstan Electric Winch*, the rope grabbing system engages, therefore, holds a load in position and keeps the rope under tension. To release it, follow these steps:

1. Pull horizontally (and gently) on the rope to engage the throttle (figure 1, no. 1), this will release the tension applied by the rope grabbing system on the pulling rope;
2. Pull gently on small rope handle attached to the rope grabbing system (figure 1, no. 2); this will disengage the system;

⚠ WARNING YOU MUST NOT FULLY RELEASE THE ROPE BLOCKING SYSTEM SO THAT IF THERE IS AN EMERGENCY, YOU WILL ONLY HAVE TO RELEASE THE HANDLE TO MAINTAIN THE LOAD INTO POSITION

⚠ WARNING NEVER LET THE ROPE SLIDE, ESPECIALLY WHILE A LOAD IS BEING SUSPENDED.

3. Slowly payout the main rope (push it towards the winch if necessary - this may occur if you have four wraps of rope on the drum and a light load) while keeping the rope grabbing system slightly open (figure 2, no. 3);
4. Let the rope grabbing system rope go, this will re-engage the system so you can let go the main rope and grab it further (figure 2, no. 4);
5. Repeat steps 1 to 4 until the load is at desired position or completely lowered;
6. Let the rope grabbing system rope go, this will re-engage the system if needed;
7. If needed, stop the engine with the on/off switch.



3.5.1.2 Sending the rope back down

While lifting objects, you may want to send the rope back down. Since there is no reverse on the winch and friction is in cause, simply disengage the rope grabbing system, remove the rope from the capstan drum to eliminate friction and let the rope back down. If the rope does not come down, you may have to attach a small rope to it (prior to lifting) in order to pull it back down.

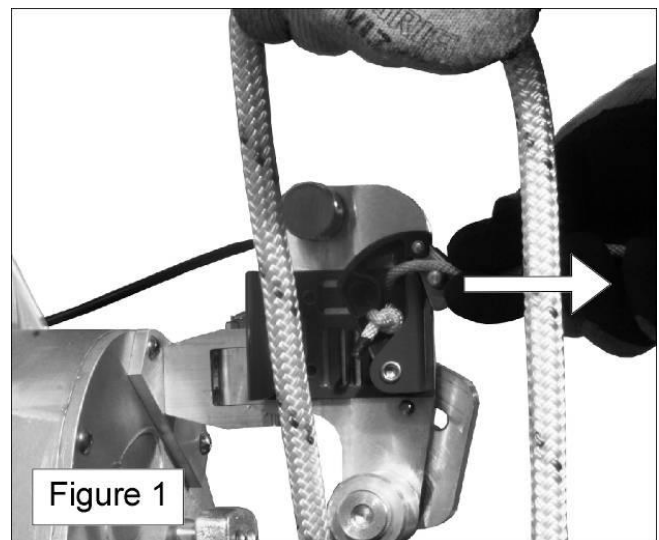
3.6.1 Pulling a load

To pull a load, follow the steps found in section 3.4. However, when pulling a load on the ground that does not risk falling or rolling back, you may want to disengage the rope grabbing system. If you do not and the load get stuck, you may have trouble getting some slack since the rope will already be stretched to its maximum and the rope grabbing system will be very hard to disengage.

⚠ WARNING IF THERE IS A RISK OF THE LOAD FALLING OR ROLLING BACKWARDS, DO NOT DISENGAGE THE ROPE GRABBING SYSTEM.

Using the winch without the rope grabbing system allows you to release the tension and benefit from the elasticity of the rope to restart pulling and let the engine reach its maximum revolution (RPM).

To disengage the rope grabbing system, open the spring-loaded cam upwards and let it rest on the frame of the rope grabbing system (figure 1 on previous page). To reengage it, lift it upward again and bring it back towards the pulling rope.



3.7 If the Portable Electric Capstan Winch doesn't work

⚠ DANGER PRIOR TO INSPECTING OR REPAIRING THE WINCH, BE SURE TO UNPLUG IT.

If the winch does not work, check the power source. Make sure the voltage and/or the frequency used is correct. Disconnect the wire from the electrical outlet and remove the lid of the control box. Make sure there are no unconnected wires, poorly connected relays or loosened screws. If the unit still does not work, contact a qualified electrician or your dealer.

4.0 Maintenance

When the unit is outside, make sure to thoroughly cover the engine and controls against the weather or ground water. When the electric winch is running, make sure it is free of obstructions. Periodic inspections must be made for damage or cuts to the various components which may require replacement.

4.1 Cleaning

Once your job is done, you should clean and dry your winch.

CAUTION

INSPECT THE WINCH, HOOKS, ROPE, KNOTS AND ANY OTHER COMPONENTS TO DETECT ANY DAMAGE OR SIGNS OF WEAR.

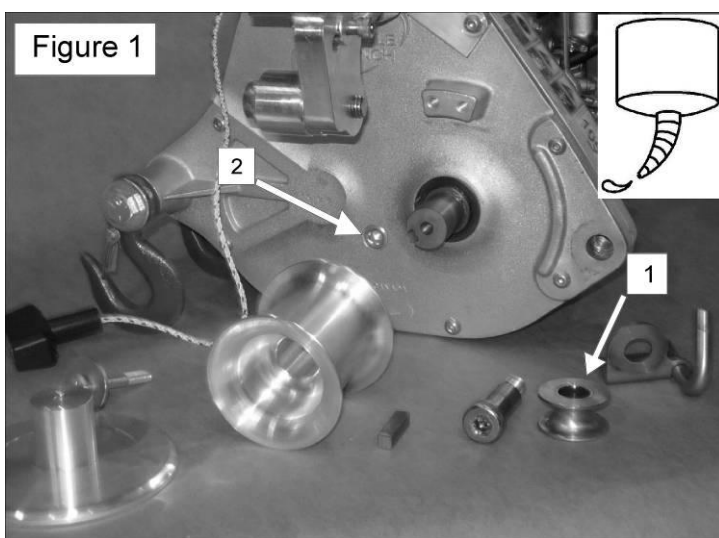
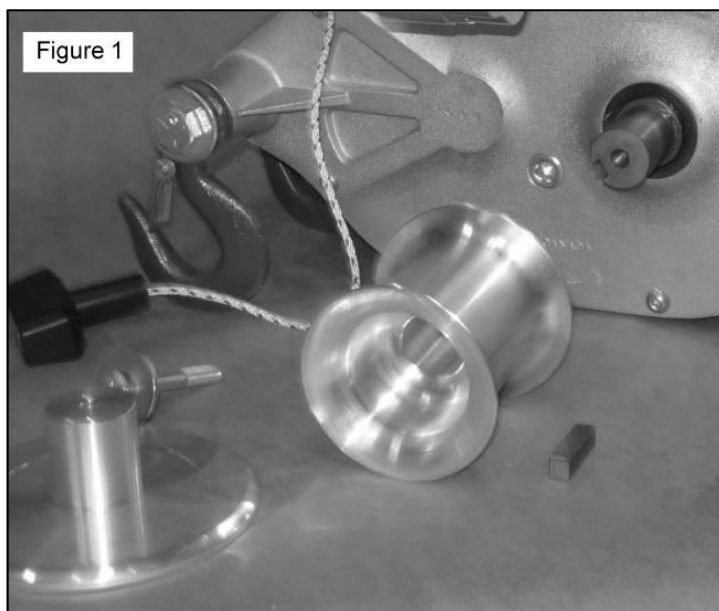
Periodically remove and clean the drum near the shaft (Figure 1 above), because debris can damage the seal. Coat the shaft with a little oil to prevent corrosion.

4.2 Lubrication

The front pulley (figure 1, no 1) must turn freely. Lubricate it regularly with light oil. Dirt and grime lodged between the pulley and the shaft may prevent it from turning freely. If required, disassemble it to clean the shaft. Use an 8 mm hex key.

The gearbox is lubricated at the factory and SHOULD not require additional lubrication or maintenance. If there is appearance of a leak, check oil level by placing the winch on a level surface and remove the oil plug (figure 1, no 2). Use an 8 mm hex key.

Lean it toward you; some oil should leak out of the hole. If needed, you can add type SAE80W90EP gear box oil.



4.3 AC Electric Engine

Follow the instructions found in the fact sheet of the Baldor electric engine to maintain it properly.

4.4 Storage

Always store your Portable Electric Capstan Winch in a horizontal position and a dry place.

5.0 Complementary information

5.1 Accessories

A complete line of accessories is available. We invite you to visit our web site regularly at www.portablewinch.com for updates and new products.

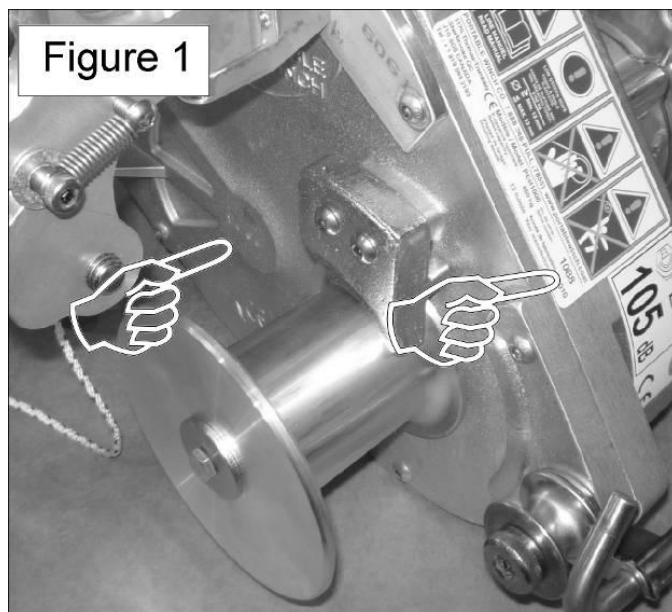
5.2 Warranty

The winch and accessories from Portable Winch Co. are guaranteed for one (1) year against manufacturer defects under normal conditions and this, from the date of invoice. This warranty does not cover electrical components or rope. Portable Winch Co. will replace or repair, at its option, all defective products.

If you have a defective product, please contact us or your retailer and we will take care of it immediately. All warranted or non-warranted services must be done by an authorized Portable Winch Co. dealer.

5.3 Serial number localization

The winch serial number is indicated on the safety warning label located on the right side of the winch housing and also engraved on the cover of the winch, to the left of the capstan drum (figure 1).



5.4 Technical data

- AC Electric Motor: 230 VAC – 50 Hz – 1 ph – 3/4 hp
- Gear box: Aluminum alloy: gear ratio 110:1
- Capstan drum : 85 mm (3-3/8")
- Maximum pulling force : 820 kg (1800 lb)
- Rated pulling force : 455 kg (1000 lb)
- Lifting capacity : 250 kg (550 lb)
- Speed : 10.5 m/min (35 ft/min)
- Unit weight: 27 kg (60 lb)
- Duty cycle : 25% (15 min per hour is recommended)
- Rope : Unlimited rope length - double braided polyester (not included)
 - Minimum diameter : 12 mm (1/2")
 - Maximum diameter : 13 mm (1/2")
- Dimensions (overall): 48 cm (19") wide x 36 cm (14") high x 38 cm (15") deep
- Warranty: 1 year

5.5 Periodical tests

Some local regulations require that equipment used for lifting be tested regularly. Check with local authorities and contact your authorized dealer for Portable Winch Co. for testing procedures.

5.6 CE Declaration of conformity



DECLARATION OF CONFORMITY

We
of

PORTABLE WINCH CO.
1170 Thomas-Tremblay St.
Sherbrooke, QC J1G 5G5
CANADA
Tel: +1 819 563-2193
www.portablewinch.com

Declare that the product

Portable Electric Capstan Winch
Model PCT1800-50Hz-P and PCT-60Hz-P
Serial numbers 1001 and higher

For intended purpose

Pulling objects at angles all the way to vertically

In accordance with the following Directives of Machinery 2006/42/CE and the directive below:

2004/108/CE Electromagnetic Compatibility Directive

2006/95/CE Low tension Directive

2000/14/CE Environmental Noise Directive

Mr Gerold Vonblon
Landstrasse 28, A6714 Nuziders
Is authorised to compile the technical files.

I hereby declare that the equipment above has been designed to comply with the relevant sections of the above referenced specifications. The unit complies with all essential requirements of the directives.

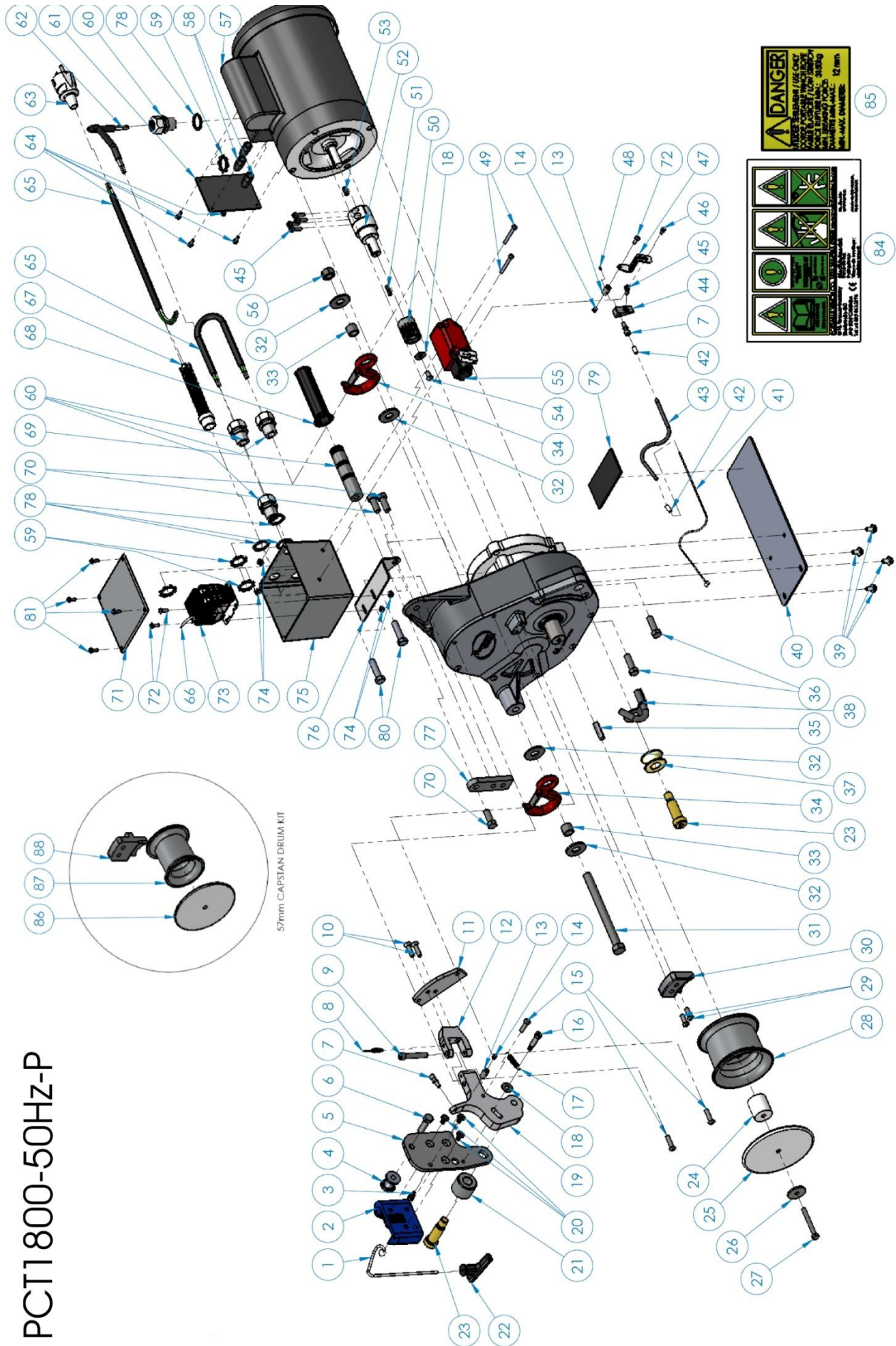
Signed by:

Name: Pierre Roy
Position: Managing Director

Done at Sherbrooke, QC, Canada
On May 11th, 2011.



5.7 Exploded view and parts list

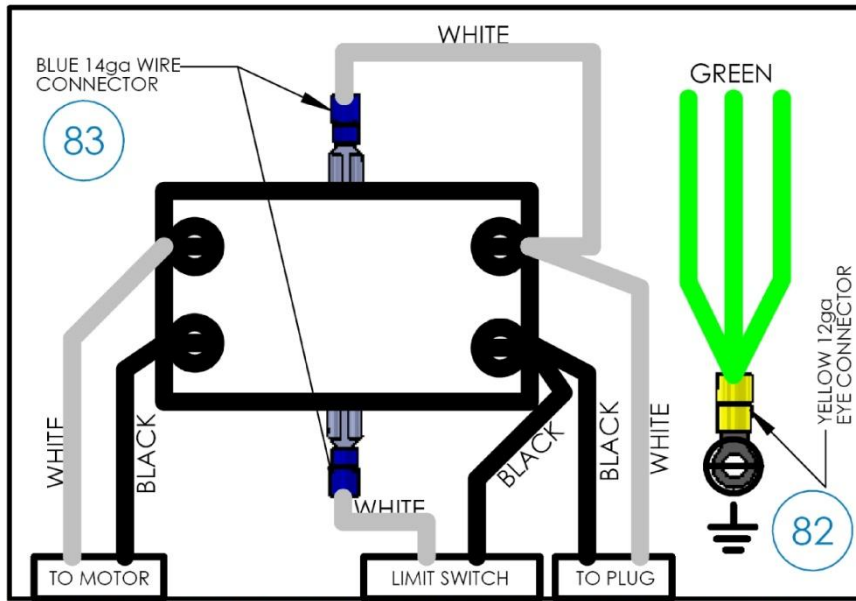


ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	10-0118	NYLON ROPE 1/8 x 24po	1
2	10-0053	MACHINED ASCENDER	1
3	31-0028	SHOULDER BOLT 1/4 x 1/4 - STAINLESS	1
4	10-0055	TOP CABLE GUIDE	1
5	10-0054	PIVOT PLATE	1
6	31-0016	HEX CAP SCREW 3/8-16 x 1-1/4 - STAINLESS	1
7	41-0002	CABLE ADJUSTER	2
8	39-0014	PULL PIN 1/4-20	1
9	31-0033	SOCKET HEAD CAP SCREW 5/16-18 x 1-3/4 - STAINLESS	1
10	31-0006	FLAT HEAD CONTERSUNK CAP SCREW 1/4-20 x 1	2
11	10-0052	ANTI-FALL ATTACHMENT PLATE	1
12	10-0051	INTERMEDIATE PLATE	1
13	10-0057	CABLE PIVOTING ANCHOR	2
14	31-0035	SET SCREW 10-24 x 1/4	2
15	31-0024	BUTTON HEAD CAP SCREW 1/4-20 x 1 - STAINLESS	3
16	31-0030	SHOULDER BOLT 5/16 x 1 STAINLESS	1
17	39-0006	TENSION SPRING 0.045-0375 OD x 1.250 L - STAINLESS	1
18	35-0006	FLAT WASHER 1/4 - Zn	2
19	10-0050	ANTI-FALL MAIN PLATE	1
20	31-0007	FLAT HEAD CAP SCREW 1/4-20 x 3/8	3
21	10-0056	BOTTOM BUSHING	1
22	44-0017	RUBBER HANDLE	1
23	10-0119	SHOULDER BOLT 5/8 x 1-1/2 - Zn	2
24	10-0043	SPACER FOR SAFETY LIP	1
25	10-0044	SAFETY LIP FOR DRUM 85mm	1
26	10-0102	FENDER WASHER 1/4 x 1-1/4 OD - Zn	1
27	31-0011	HEX CAP SCREW 1/4-20 x 2-1/4 - Zn	1
28	10-0001	CAPSTAN DRUM 85mm	1
29	31-0025	BUTTON HEAD CAP SCREW 1/4-20 x 3/4 - STAINLESS	2
30	10-0106	ROPE GUIDE FOR DRUM 85mm	1
31	31-0010	HEX CAP SCREW 1/2-13 x 6 Gr5 - Zn	1
32	35-0004	FLAT WASHER 1/2 - Zn	4
33	10-0098	ALUMINIUM BUSHING	2
34	PCA-1281	SAFETY HOOK 3/4 T	2
35	43-0013	SHAFT KEY 5/16 x 5/16 x 1-1/4	1
36	31-0015	HEX CAP SCREW 3/8-16 c x 1-1/4 Gr5 - Zn	2
37	10-0101	FRONT PULLEY	1
38	10-0103	ROPE KEEPER	1
39	32-0002	FLANGE BOLT SERRATED M6-1 x 12mm - Zn	4
40	10-0069	50Hz ELECTRIC MOTOR GUARD PLATE	1
41	10-0113	CABLE STAINLESS 1.6mm x 33cm	1
42	41-0006	CABLE HOUSING TIP	2
43	10-0112	CABLE HOUSING 5mm x 18cm	1
44	10-0111	CABLE END HOLDER	1
45	32-0003	SOCKET HEAD CAP SCREW M5x0.8 x 16mm	5

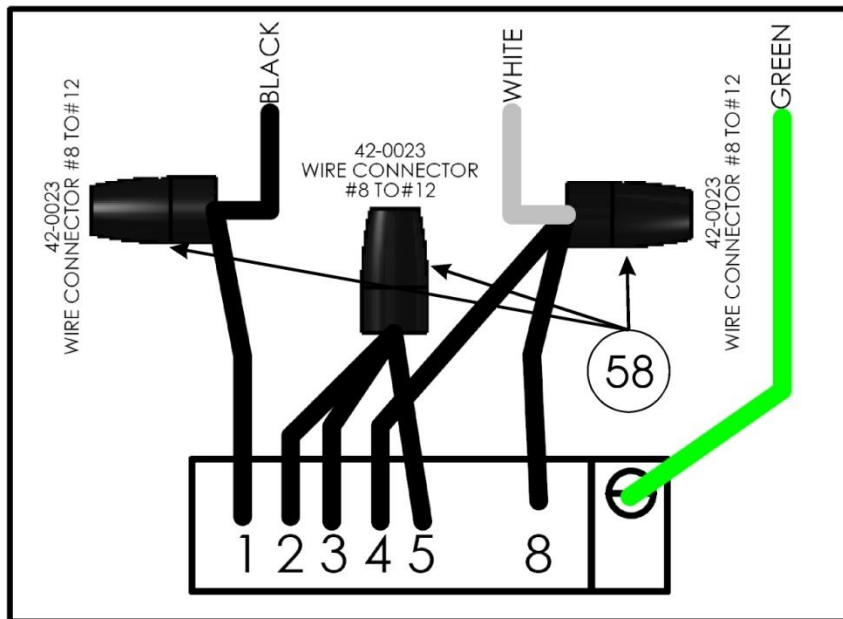
46	INCLUDED WITH 10-0081	SOCKET HEAD CAP SCREW M5x0.8 x 12mm - Zn	1
47	INCLUDED WITH 10-0081	LIMIT SWITCH BENT ARM INCLUDED WITH PCT-ELEC-011	1
48	41-0004	CABLE END CAP	1
49	31-0020	MACHINE SCREW #10-24 x 1-3/4 - Zn	2
50	10-0086	INPUT PINION	1
51	43-0005	SHAFT KEY 3/16 x 1/8 x 3/4	1
52	10-0067	SHAFT ADAPTOR	1
53	INCLUDED WITH 42-0022	SHAFT KEY 3/16 x 3/16 x 0.600	1
54	31-0023	BUTTON HEAD CAP SCREW 1/4-28 x 1/2 Gr5 - Zn	1
55	10-0081	LIMIT SWITCH	1
56	33-0005	NYLON LOCKNUT 1/2-13 - Zn	1
57	42-0022	BALDOR ELECTRIC MOTOR 50Hz 220V 3/4HP	1
58	42-0023	WIRE CONNECTOR #8 TO #12	3
59	42-0009	TIGHTENING RING	3
60	42-0007	1/2in LIQUIDTIGHT STRAIN RELIEF CORD CONNECTOR	4
61	INCLUDED WITH 42-0022	50Hz ELECTRIC MOTOR BOX COVER	1
62	10-0114	ELECTRIC CORD 14/3 AWG x 50cm	1
63	42-0019	ELECTRIC PLUG CEE 7/7 250V 16AMP GROUNDED	1
64	INCLUDED WITH 42-0022	ELECTRIC MOTOR BOX COVER SCREWS	4
65	10-0115	ELECTRIC CORD 14/3 AWG x 46cm	2
66	10-0116	ELECTRIC CORD 14/3 AWG x 13cm	1
67	42-0010	DUSTIGHT STRAIN RELIEF WITH TIGHTENING RING	1
68	44-0019	VINYL GRIP	1
69	10-0094	WINCH HANDLE	1
70	31-0019	HEX CAP SCREW 3/8-24 x 1 Gr5 - Zn	3
71	INCLUDED WITH 10-0080	BOX COVER INCLUDED WITH ELECTRIC BOX	1
72	31-0021	MACHINE SCREW #10-24 x 1/2 - Zn	3
73	42-0020	2 POLES 240 VOLTS 50Hz CONTACTOR	1
74	33-0004	K-LOK LOCKNUT 10-24 - Zn	4
75	10-0080	MACHINED ELECTRIC BOX	1
76	10-0072	ELECTRIC BOX SUPPORT PLATE	1
77	10-0073	HANDLE EXTENSION	1
78	35-0002	NEOPRENE WASHER 13/16 x 1-3/32	4
79	10-0117	RUBBER PAD	1
80	31-0014	HEX CAP SCREW 3/8-16 x 1-1/2 - Zn	2
81	INCLUDED WITH 10-0080	ELECTRIC BOX COVER SCREW	4
82	10-0077	YELLOW 12ga EYE CONNECTOR	1
83	10-0082	BLUE 14ga WIRE CONNECTOR	2
84	44-0018	GENERAL INFORMATION AND WARNING LABEL	1
85	44-0022	ROPE WARNING LABEL	1
86	10-0042	SAFETY LIP FOR DRUM 57mm	1
87	10-0096	CAPSTAN DRUM 57mm	1
88	10-0100	ROPE GUIDE FOR DRUM 57mm	1

5.8 Electrical plans

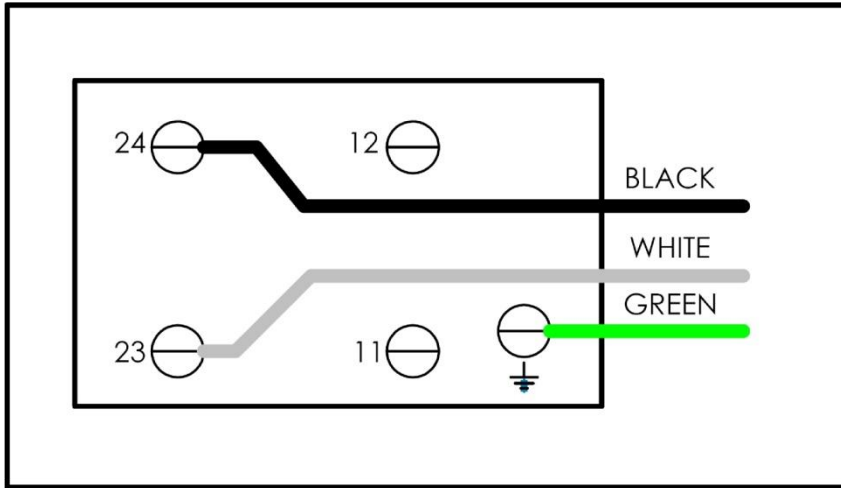
CONTACTOR WIRING DIAGRAM



MOTOR WIRING DIAGRAM 220V-50HZ, 1 PHASE



PULL SWITCH WIRING DIAGRAM



5.9 Manufacturer

The *Portable Electric Capstan Winch PCT1800-50Hz-P* is manufactured by:

Portable Winch Co.

1170, Thomas-Tremblay Street

Sherbrooke, Quebec, CANADA J1G 5G5

Phone: +1 819 563-2193

Toll free (Canada & USA): 1-888-388-PULL (7855)

Fax: +1 514 227-5196

Email: info@portablewinch.com

Web site: www.portablewinch.com

Annexe I. Examining the rope

As specified in section 3.2.2, the rope and its termination should be inspected daily to its full length to detect wear. This page allows you to collect information. It is indicative and may be reproduced and used for daily verification of your rope.

Winching Rope			
DIAMETER :		TERMINATION :	
LENGHT :		MANUFACTURER :	
FIBRES :		COMMISSIONING DATE :	
CONSTRUCTION :			

Daily verification

DATE		INSPECTION OR INCIDENT	NOTES AND TECHNICIANS SIGNATURE
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