




# **2000-LB. CAPACITY PORTABLE WINCH OWNER'S MANUAL**



 **WARNING:** Read carefully and understand all **INSTRUCTIONS** before operating. Failure to follow the safety rules and other basic safety precautions may result in serious personal injury.

**Item# 141220**

Thank you very much for choosing a Northern Industrial. Product! For future reference, please complete the owner's record below:

Model: \_\_\_\_\_ Purchase Date: \_\_\_\_\_

Save the receipt, warranty and these instructions. It is important that you read the entire manual to become familiar with this product before you begin using it.

This winch is designed for certain applications only. The distributor cannot be responsible for issues arising from modification. We strongly recommend this winch is not modified and/or used for any application other than that for which it was designed. If you have any questions relative to a particular application, DO NOT use the winch until you have first contacted the distributor to determine if it can or should be performed on the product.

For technical questions please call **1-800-222-5381**.

## INTENDED USE

1. Convenient, portable power for pulling boats, stuck vehicles and other heavy items.
2. Powerful 2000-lb. pulling power.
3. 12 Volt powered for convenient use without extension cords or small gas engines.
4. Portable, with built-in carrying handle and quick-attach mounting plate.

## TECHNICAL SPECIFICATIONS

Item	Description
Capacity:	6000 Lbs. Rolling.
	5000 Lbs. Marine
	2000 Lbs. Pulling Capacity
Max. Boat Size:	18 Feet (5.5m)
Max. Boat Weight:	5000 Lbs. (2268 kg)
Line Speed:	6 Feet/Minute with Load
Cable Length:	30 Feet (9m)
Hook Size:	3/4in. Opening x 3-3/4in.L
Power Supply:	12 Volts
Power Cord:	6 Foot (2m) Negative Lead
	14 Foot 9 Inches (4.25m, 230mm) Positive Lead
Remote Switch:	9 Feet 9 Inches (2.75m, 230mm)
Mounting Plate:	8-3/4in. x 4-15/16in. x 3/16in.
Overall Dimensions:	9-1/2in. x 7-1/2in. x 10in.

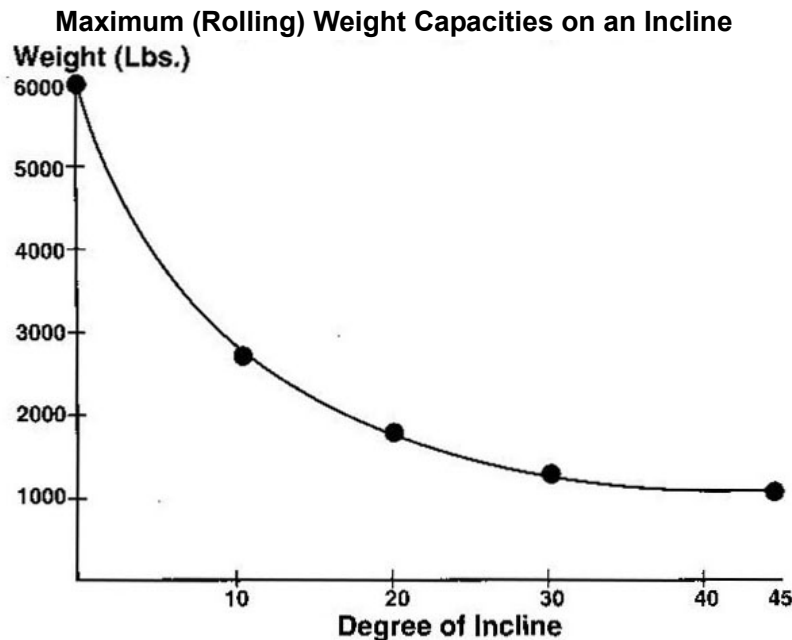
## INCLUDED ACCESSORIES:

1. Power lead, fitted with water resistant plug and circuit breaker.
2. Remote switch with water resistant plug, for safe operation.
3. 30-ft. aircraft cable with attached hook.
4. Mounting bracket for trailer hitch.
5. Emergency crank handle and adjustable clutch.

## PULLING CAPACITY

1. This winch has a pulling capacity of 2000 lbs. Applying this capacity to practical applications, you can use this winch to move the following:
  - a. Move a load from a dead stop of up to 2000 lbs. on level ground.

- b. Move a watercraft of up to 4800 lbs.
  - c. Maintain movement of a wheeled vehicle of up to 6000 lbs.
2. Pulling Capacity is reduced as incline increases. For example, rolling capacity is reduced from 6000 lbs. on flat ground to 1100 lbs. on a 45° incline. Refer to the following chart for estimated pulling capacity (rolling weight) on various inclines.



## GENERAL SAFETY RULES



**WARNING:** Read and understand all instructions. Failure to follow all instructions listed below may result in serious injury. **Do not exceed indicated weight capacity.**



**WARNING:** The warnings, cautions, and instructions discussed in this instruction manual cannot cover all possible conditions or situations that could occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.

## SAVE THESE INSTRUCTIONS

You will need this manual for the safety warnings and cautions, assembly instructions, operating procedures, maintenance procedures, trouble shooting, parts list, and diagram. Keep your invoice with this manual. Write the invoice number on the inside of the front cover. Keep both this manual and your invoice in a safe, dry place for future reference.



**WARNING:** When using powered equipment, basic safety precautions should always followed to reduce the risk of personal injury and hazards.

## WORK AREA

**Keep work area clean**, free of clutter and well lit. Cluttered and dark work areas can cause accidents.

**Do not use your winch where there is a risk of causing a fire or an explosion**; e.g. in the presence of flammable liquids, gasses, or dust. Electrically powered tools can create sparks, which may ignite the dust or fumes.

**Keep children and bystanders** away while operating a winch. Distractions can cause you to lose control, so visitors should remain at a safe distance from the work area.

**Be aware of all power lines, electrical circuits**, water pipes and other mechanical hazards in your work area, particularly those hazards below the work surface hidden from the operator's view that may be unintentionally contacted and may cause personal harm or property damage.

**Be alert of your surroundings**. Using winches in confined work areas may put you dangerously close to cutting tools and rotating parts.

## PERSONAL SAFETY

**Stay alert**, watch what you are doing and use common sense when operating a winch. Do not use a winch while you are tired or under the influence of drugs, alcohol or medication. A moment of inattention while operating a winch 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 often cover moving parts and should be avoided.

**Use safety apparel and equipment**. Use safety goggles or safety glasses with side shields which comply with current national standards, or when needed, a face shield. Wear heavy leather gloves when handling a wire rope. Use a dust mask in dusty work conditions. This applies to all persons in the work area. Also use non-skid safety shoes, hardhat, gloves, dust collection systems, and hearing protection when appropriate.

**Avoid accidental starting**. Ensure the switch is in the off position before connecting winch into power supply. In the event of a power failure, while a winch is being used, turn the switch off to prevent surprise starting when power is restored.

**Always** stand clear of wire rope and load during operation, and keep bystanders away as well. Do not try to guide the cable

**Always** be certain the anchor you select will withstand the load, and the strap or chain will not slip.

**Never** use as an overhead hoist, or to suspend a load.

**Never** use to lift or move persons.

**Never** exceed the winch or wire rope rated capacity.

**Never** apply load to hook tip or latch. Apply load to only the center of the hook.

**Never** use a hook whose throat opening has increased, or whose tip is bent or twisted.

**Never** touch wire rope or hook while in tension or under load.

**Never** hook wire rope back onto itself.

**Do not apply a load to the winch** when the cable is fully extended. The cable fastener is not capable of holding the rated capacity.

**Do not overreach**. Keep proper footing and balance at all times.

**Remove adjusting keys or wrenches** before connecting to the power supply or turning on the winch. A wrench or key that is left attached to a rotating part of the winch may result in personal injury.

## MAINTENANCE

**Maintain your winch.** It is recommended that the general condition of your winch be examined before it is used. Keep your winch in good repair by adopting a program of conscientious repair and maintenance in accordance with the recommended procedures found in this manual. If any abnormal vibrations or noise occurs, stop using the winch immediately and have the problem corrected before further use. Check for damage to the cable, including bending, fraying or kinking. Have necessary repairs made by qualified service personnel.

**Cleaning.** Use only soap and a damp cloth to clean your winch. Many household cleaners are harmful to plastics and other insulation. Never let liquid get inside a winch.

**Replacement parts and accessories.** When servicing, use only identical replacement parts. Use of any other parts will void the warranty. Only use accessories intended for use with this winch.

- **Maintain winch with care** Follow instructions for lubricating and changing accessories. Inspect power cord periodically and, if damaged, have it repaired by an authorized technician. Inspect all moving parts and mounting bolts prior to use. Control handle and power switch must be kept clean, dry and free from oil and grease at all times.
- Lubricate the cable occasionally with light oil.
- Grease the gears every 6 months. To do this, remove the clutch knob and separate the left and right housing. Use any good quality waterproof grease.

## Assembly

### Wiring your Electric Winch

**Your Winch may be used with temporary or permanent wiring**

**NOTE:** Mount the winch prior to completing the wiring.

#### Temporary Wiring

1. Lift the rubber seal and plug the POWER CABLE (#39) into the PLUG (#36) on the right side of the winch body. This plug is labeled "power." Route the Power Cable from the winch to your battery, being careful to avoid tangling it in moving equipment, or causing a tripping hazard.
2. Connect the Black Clamp Handle of the POWER CABLE (#39) to the frame of your vehicle, establishing a ground connection. Connect the Red Clamp Handle to the Positive (+/Red) terminal of your battery. **Note:** Be sure you are using a 12V automotive battery or equivalent, in good condition.
3. Lift the rubber seal on the left side of winch body. Taking the Remote Control Unit, insert the Socket at the end of the cord into the Plug on the left side of the winch body labeled "Remote Control."
4. Set the remote control aside in a safe place until ready for use.

#### Permanent wiring

1. Attach the OVER-CURRENT PROTECTOR (#31) to the Positive (+/Red) terminal of your battery, using the battery terminal clamp bolt.
2. Plan a route for the wiring from the point of the vehicle where the winch will be mounted or used to the battery. This route must be secure, out of the way of moving parts, road debris, or any possibility of being damaged by operation or maintenance of the vehicle. For example, you may wish to route the wires under the vehicle, attaching it to the frame using suitable fasteners. Do

not attach the wires to the exhaust system, drive shaft, emergency brake cable, fuel line, or any other components which may create damage to the wiring through heat or motion, or create a fire hazard.

3. If you drill through the bumper or any part of the body to route the wires, be sure to install a rubber grommet in the hole to prevent fraying of the wires at that point.
4. Route the POWER CABLE (#39) from the point the winch will be used to the battery. Following the precautions discussed above.
5. Remove the Red Clamp handle, and attach the red wire to the OVER-CURRENT PROTECTOR (#31) which is mounted onto the Positive (+/ Red ) terminal of your battery.
6. Remove the Black Clamp handle, and attach the black wire to the frame of your vehicle, creating a secure electrical ground.



#### **WARNING:**

Always connect Red to Red (Positive to Positive) and Black to the vehicle's frame, making a ground connection, when using battery power from your vehicle.

Never continue use of your winch or other accessory until the battery is completely run down. This can permanently damage your battery!

You may wish to keep your engine running while using this winch, to continually recharge the battery. However, exercise extreme caution when working around a running vehicle. (See USING YOUR WINCH on page 7 of this manual.)

Do not use a dirty, corroded or leaking battery. You may suffer injury from acid burns.

Always wear ANSI-approved safety glasses when working around or with a battery.

## **OPERATION**

### **MOUNTING YOUR WINCH**

**Your winch is designed to be mounted temporarily, using the Trailer Hitch Mounting Bracket. However, you may also mount your winch permanently.**

#### **Permanent Mounting**

1. Select a mounting site on the bumper of your vehicle, truck bed, boat trailer, or other suitable location. **NOTE:** This winch can generate 2000 lbs. pulling force. Be sure the location you select can withstand this much force. You may need to use steel reinforcement plates, or weld on additional bracing, depending on the desired mounting location.
2. Align the winch with the desired location, and mark for drilling the locations of the 4 holes on the base of the winch.
3. Drill these locations on your vehicle.
4. Using hardened steel bolts at least 3/8in. in diameter, install your winch to the location.

#### **Temporary Mounting**

1. Attach the three Plate Stud Bolts to the Adapter Plate, as shown, (see Diagram on page 9) using the supplied Nuts. Tighten securely.
2. Index the heads of the Plate Studs into the keyhole slots on the back of the winch.

3. Attach the Winch/Adapter Plate assembly to your trailer hitch, by inserting the trailer hitch ball through the shaped hole in the Adapter Plate.



### **WARNING!**

Keep hands, clothing, hair, and jewelry clear of the drum area and cable when winching.

Never use the winch if the cable is frayed, kinked or damaged.

Never allow anyone to stand near the cable or in line with the cable behind the winch while it is under power. If the cable should slip or break, it can suddenly whip back toward the winch, causing a hazard for anyone in the area. Always stand well to the side while winching.

## **USING YOUR WINCH**



**CAUTION:** Never touch wire rope or hook while operating the winch, or while the rope is under a load.

1. Put your vehicle in Neutral. (Never winch with your vehicle in Gear or in Park, since this could damage your vehicle's transmission.) PUT YOUR EMERGENCY BRAKE ON. BLOCK THE WHEELS FROM ROLLING, USING SUITABLE CHOCKS. FAILURE TO FOLLOW THESE INSTRUCTIONS CAN CAUSE YOUR VEHICLE TO ROLL WHILE WINCHING, CREATING AN EXTREMELY DANGEROUS SITUATION!!
2. To pull out the cable, turn the CLUTCH KNOB (#19) counterclockwise to loosen it, and then pull out the cable you need. ALWAYS LEAVE AT LEAST THREE TURNS OF CABLE ON THE SPOOL TO PREVENT PULLING THE CABLE OUT OF THE WINCH!
3. Hook onto the object using a pulling point, tow strap or chain. Never wrap the cable around the object and hook onto the cable itself. This can cause damage to the object being pulled, and kink or fray the cable.
4. Re-tighten the clutch knob.
5. Stand clear, and when it is safe to do so, use the power switch in the remote control to retract the cable, and winch the item as desired.
6. After moving the item, secure it. Do not rely on the winch to hold an item for an extended period of time.



### **SPECIAL WARNINGS WHEN USING THIS ELECTRIC WINCH**

*Using this powerful tool may create special hazards.*

*Take particular care to safeguard yourself and those around you.*

#### **The Cable.**

Be sure the cable is in good condition, and is attached properly.

Do not use the winch if the cable is frayed.

Do not replace the cable with a cable of lesser strength.

#### **The Battery.**

Be sure the battery is in good condition. Avoid contact with battery acid or other contaminants.

Always wear ANSI-approved eye protection when working around a battery.  
Have the engine running when using the winch, to avoid running the battery down.

**Stand Back.**

Stay out of the direct line that the cable is pulling. If the cable slips or breaks, it will “whiplash” along this line.

Do not stand between the winch and the load when operating.

Keep hands, clothing, hair and jewelry clear of the winch while in use.

Use a spotter to assist you in assuring that it is safe to operate the winch. Make sure this person is out of the way of the vehicle and the cable before activating the winch.

**Power Limits.**

Do not attempt to exceed the pulling limits of this winch.

Never use the hand crank to “assist” the winch. This will damage the winch and may cause personal injury.

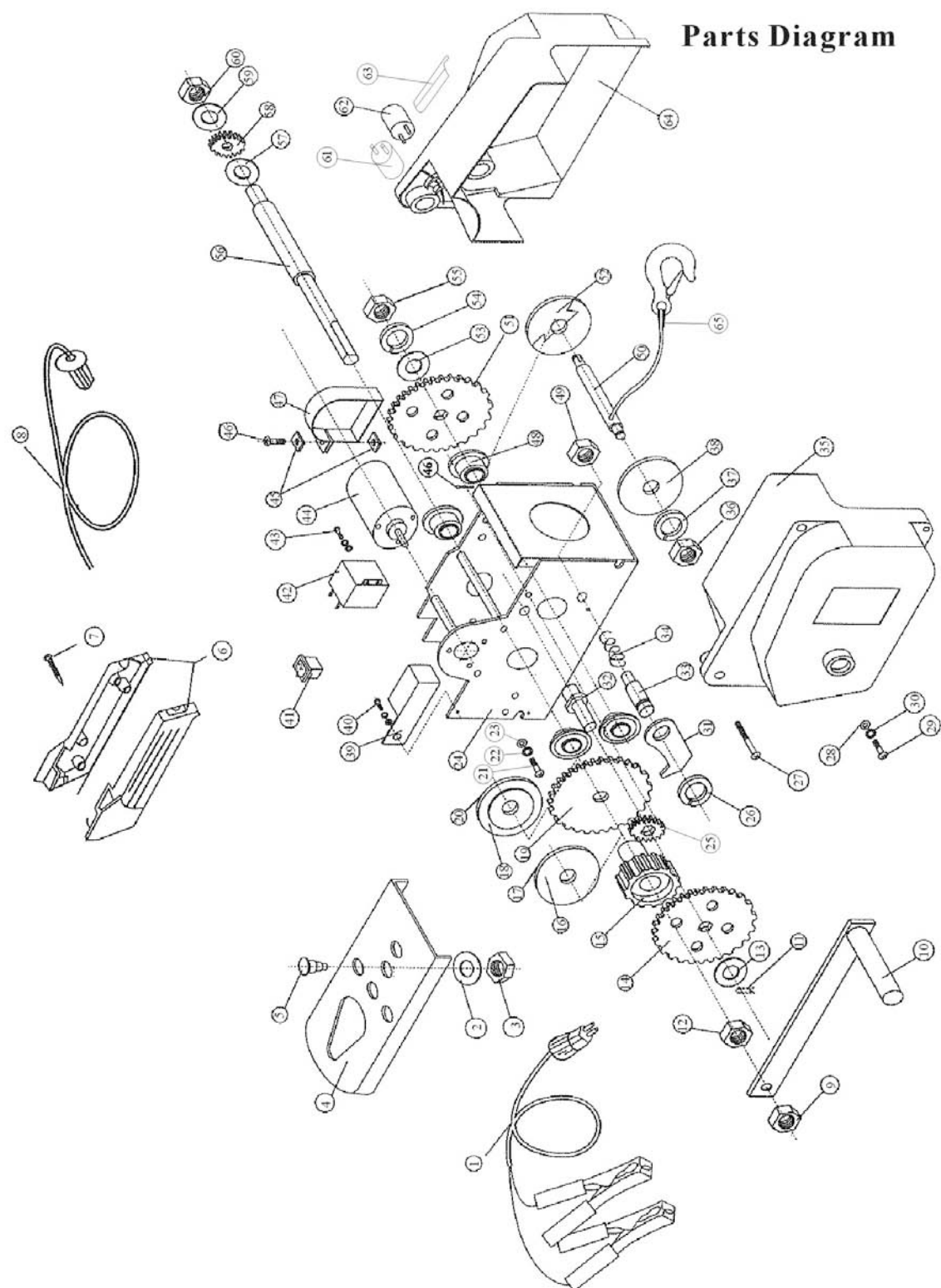
**USING THE EMERGENCY HAND CRANK**

**Warning:** Do not use the crank to assist an operating winch. This will damage the winch and may cause personal injury.

1. Turn the clutch knob clockwise until hand tight. Do not force it or over tighten.
2. Place the end of the hand crank over the flattened end of threaded shaft on the left side of the winch.
3. Rotate the hand crank clockwise to tighten the cable. Continue to turn until the cable has been completely retracted.



## DIAGRAM & PARTS LIST



<b>Part#</b>	<b>Description</b>	<b>Part #</b>	<b>Description</b>
1	Electrical wire	34	Spring
2	Lock washer	35	Left shell
3	Nut	36	Nut
4	Adapter plate	37	Lock spring
5	Screw	38	Plate
6	Remote control housing	39	Cord protector
7	Self-tapping screw	40	Screw
8	Control wire	41	Switch
9	Nut	42	Relay
10	Hand crank	43	Screw
11	Spring lock	44	Motor
12	Nut	45	Fast plate
13	Lock washer	46	Screw
14	Gear	47	Fast plate
15	Clutch knob	48	Bearing
16	Friction plate	49	Nut
17	Steel plate	50	Shaft
18	Steel plate	51	Gear
19	Gear assembly	52	Plate
20	Friction plate	53	Lock washer
21	Screw	54	Lock spring
22	Lock washer	55	Nut
23	Lock washer	56	Shaft
24	Frame	57	Lock washer
25	Gear	58	Gear
26	Lock spring	59	Lock washer
27	Screw	60	Nut
28	Lock washer	61	Split-pin
29	Screw	62	Jack
30	Lock washer	63	Cover
31	Claw lock	64	Right shell
32	Shaft lock	65	Steel cable and hook
33	Shaft lock		

For replacement parts and technical questions, please call **1-800-222-5381**.

## **WARRANTY**

One-Year Limited Warranty



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