

## **Read, Understand, Follow and Save These Instructions**

Read, understand and follow all of these instructions and warnings (Instructions) before installing and using this product. Install and use this product only as specified in these instructions. Improper installation or use of this product may result in property damage, serious injury, and/or death. Never allow installation or use of this product by anyone without providing them with these instructions. You must read, understand and follow all instructions and warnings for any product(s) to which this product is used in conjunction with or installed. Save these instructions with the product for use as a reference for any future installation and use of the product.

### **WARNING**

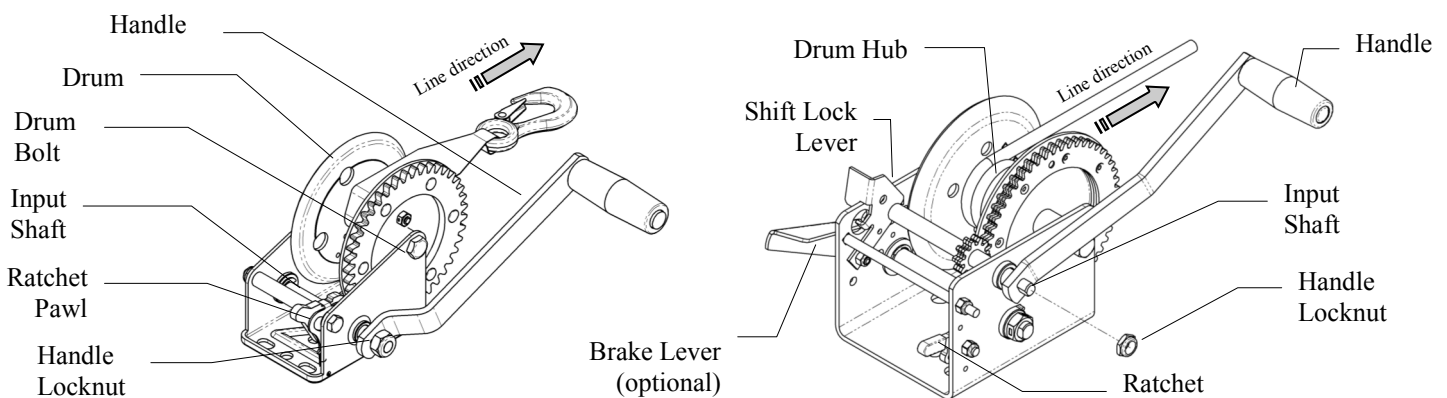
**Failure to follow these warnings and instructions may result in property damage, serious bodily injury, and/or death.**

- Purchaser/owner must ensure that product is installed according to these instructions. Purchaser/owner must not alter or modify product.
- Operator and bystanders should never position any part of body under any portion of this product or the load being supported.
- Do not allow children to play on or around this product or the load being supported.
- Do not use winch to move humans.
- Never exceed maximum rated capacity. Refer to stamped markings or decals on product to obtain rated capacity.
- Always inspect the cable or strap and its attachment before each use to make sure they are not damaged. Never use them if they are worn, kinked, or frayed. If the cable or attachment breaks, the cable will whip violently, causing property damage, serious bodily injury, and/or death.
- Never stand along side the winch cable, strap, or rope or guide the cable, strap, or rope with your hands.
- Never operate with slippery, wet, or oily hands and always maintain a firm grip on the winch handle. Do not attempt to stop a winch by grabbing the handle while in motion.
- Always maintain a minimum of three (3) complete wraps of cable or rope on the drum, or three layers of strap on the drum.
- Only winches that have a hub diameter of 1 3/4" can accommodate steel cable.
- Assure there is adequate safety factor, of at least 3 times the maximum load for all components used.
- A loud clicking sound from the ratchet must be heard when lifting the load. If a loud clicking sound is not heard, do not use and replace ratchet components immediately.
- Never release the crank handle unless the ratchet pawl is fully engaged and the load is supported.
- Never leave a weight supported from the winch while the winch is unattended, as another person may attempt to operate the winch, thereby creating an unsafe condition.
- This winch is designed for manual operation only and the load rating is based on an intermittent duty cycle.
- Excessive force in turning winch handle may indicate overload. Winches require maximum of 45 lbs of handle force to pull their rated load.
- If you cannot crank the winch with one hand you are potentially overloading the winch.
- On two speed winches, make sure that the ratchet pawl is properly engaged and holding the load before attempting to change gears.
- Winches are not designed to secure boats to trailers while towing. Boat tie downs should be used for this purpose.
- Periodically check mounting hardware for proper torque and tighten if necessary.
- Always replace bent, broken, or worn parts before using this product.
- This product is rated according to SAE J1853

### **Installation Instructions**

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(Mounting hardware not supplied.) The winch stand must be capable of supporting at least five times the rated capacity of the winch. The mounting surface must be equal to or greater than the footprint of the winch frame. When attaching the winch, use three 3/8" dia. grade-5 hardware and torque to 28-30 ft-lbs. Mounting bolts will vary in length for each application. Check final installation and make sure winch is secure to mounting structure.



#### **Attaching a Handle:**

Assemble the handle onto the flatted input shaft end. Tighten the 1/2" - 13 locknut against handle and torque to 22-25 ft-lbs. Do not over torque.

#### **Attaching Winch Line (Rope, Strap or Cable):**

Always maintain a minimum of three complete wraps of rope, strap or cable on the drum.

#### **Attaching a Rope:**

Attaching a rope to the winch drum requires no bolts, nuts, or clamp. The rope must weave through the drum outer wall and be secured beneath itself as shown in the illustration.

#### **Attaching a Strap:**

Winches designed for a strap have holes in the drums to accommodate a strap cross bolt. A grade 5 bolt of the largest possible diameter is required for strap mounting (see chart on following page).

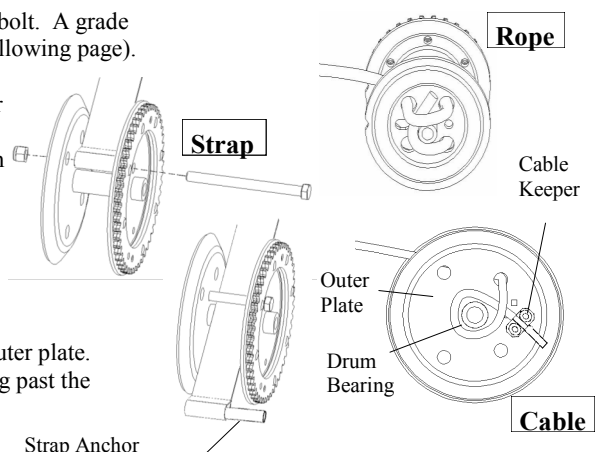
Tighten the locknut just to where end play in bolt is taken up. Over-tightening can deform drum. For winches having a strap anchor included, pass the strap loop under the cross bolt, insert strap anchor in the strap loop, then pull tight.

If attaching strap without a strap anchor to a plastic covered winch, remove the drum bolt and gently separate the plastic cover to allow the winch drum to be removed.

Install the strap according to the instructions below and re-install the winch drum as it was before. On single-speed winches, torque the drum locknut to 9-10 ft-lbs. On two-speed winches, torque the drum locknut to 24 ft-lbs. Be sure not to over tighten as this may crush the spacer between the frame, and keep the drum from turning.

#### **Attaching a Steel Cable to a Drum:**

Pass the cable from the inside of the drum through one of the dimpled holes in the outer plate. Loop the cable around the drum bearing, under itself, and leave 1" of cable extending past the clamp location. Tighten the clamp nuts to approximately 2 ft-lbs.



### **Prior to Use**

- 1) Inspect rope, strap or cable and replace if damaged.
- 2) Check mounting hardware for proper tightness and tighten if necessary.
- 3) Apply a drop or two of #30 weight engine oil to each bushing I.D. and to the ratchet pawl pivot points. Maintain a thin layer of chassis grease on the gear teeth.

## Operation

### Let Line/Load Out:

Before turning the handle, firmly grip the winch handle and disengage the ratchet pawl or engage it in the reverse direction. You may have to take in a small amount of line to allow the ratchet pawl to unload. With a firm grip on the winch handle, slowly let out line. If you must stop before the load is fully out, be sure the ratchet pawl is engaged in the forward or loading position and gradually release the winch handle to be sure the ratchet pawl is holding the load.

### Take Line/Load In:

Be sure the ratchet pawl is engaged in the forward or loading position. As you turn the handle, make sure the cable, strap, or rope is winding onto the drum properly. If you must stop before the load is fully in, be sure the ratchet pawl is engaged and gradually release the winch handle to be sure the ratchet pawl is holding the load.

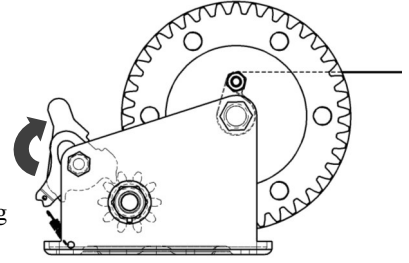
### Braking (Winches Equipped with Optional Hand Brake):

Apply the brake to help control the load by pressing down on the hand brake lever. Do not let go of the winch handle while letting line out, and do not attempt to stop a spinning winch handle.

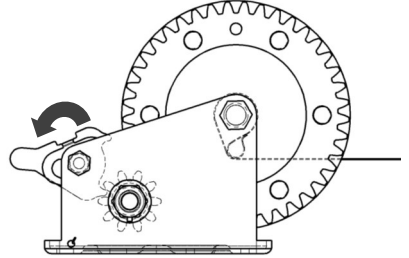
### Shifting (2-Speed Winches Only):

Make sure that the ratchet pawl is properly engaged and holding the load before attempting to change gears. 3700 lb. winches change gears by relocating the winch handle onto a different input shaft. Other 2-speed winches shift by disengaging the shift lock lever, sliding the input shaft, and reengaging the shift lock lever. The shift lock lever must be firmly in place in an inner or outer groove on the input shaft during winch operation. Inner and outer grooves, drive gear is engaged, center groove is neutral.

**Ratchet Pawls Engaged**  
Line over Drum Hub



Line under Drum Hub



## Winch Information Chart

Capacity (1)	Gear Ratio	Handle Length	Drum Hub Diameter	Drum Storage			Strap Bolt Size	
				Rope	Steel Cable (2)	Strap	Metric (GR 8.8)	Standard (GR 5)
<b>SINGLE SPEED WINCHES</b>								
<b>900 lbs.</b>	3.25:1	7"	0.64	36' x 1/4"	N/A	15' x 2"	M6 x 65mm	1/4" x 2-3/4"
<b>1100 lbs.</b>	4.1:1	7"	0.87	30' x 5/16"	N/A	20' x 2"	M8 x 66mm	5/16" x 2-3/4"
<b>1300 lbs.</b>	4.1:1	8"	0.87	30' x 5/16"	N/A	20' x 2"	M8 x 66mm	5/16" x 2-3/4"
<b>1500 lbs.</b>	4.1:1	8"	0.87	20' x 5/16"	N/A	20' x 2"	M8 x 66mm	5/16" x 2-3/4"
<b>1800 lbs.</b>	4.0:1	8"	0.96	20' x 7/16"	N/A	20' x 2"	M8 x 66mm	5/16" x 2-3/4"
<b>TWO SPEED WINCHES</b>								
<b>2000 lbs.</b>	4.1:1 & 9.8:1	10"	1.00	20' x 7/16"	N/A	N/A	N/A	3/8" x 2-3/4"
<b>2600 lbs.</b>	5.1:1 & 12.2:1	10"	1.00	24' x 7/16"	N/A	20' x 2"	N/A	3/8" x 2-3/4"
	5.1:1 & 12.2:1	10"	1.75	N/A	100' x 7/32"	N/A	N/A	Cable only (2)
<b>3200 lbs.</b>	5.1:1 & 12.2:1	10"	1.00	24' x 7/16"	N/A	20' x 2"	N/A	3/8" x 2-3/4"
	5.1:1 & 12.2:1	10"	1.75	N/A	100' x 7/32"	N/A	N/A	Cable only (2)
<b>3700 lbs.</b>	5.1:1 & 12.2:1	10"	1.75	N/A	185' x 7/32"	N/A	N/A	Cable only (2)

(1) Capacity is based on direct line pull on first layer of the line on the drum. Capacity is reduced as line builds up on the drum as defined on the frame.

(2) Only winches that are shown to accommodate **steel cable** can use steel cable. Winches designed for steel cable have a larger drum hub to reduce the bending fatigue of the cable and extend the cable life. Neatly wrapping the cable is necessary to reduce the chance of kinking or fraying.