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CE

INDUSTRIAL XL WINCH

INSTALLATION AND OPERATOR'S GUIDE
GUIDE D'INSTALLATION ET OPERATEUR

75282D1

ORIGINAL INSTRUCTIONS

Winch Installation Guide

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SYMBOL INDEX

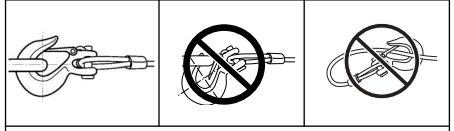
SYMBOL	EXPLANATION
	Read All Product Literature **Some literature available only online at www.warn.com.**
	Always Wear Hearing and Eye Protection
	Never Use Winch as a Hoist
	Properly Seat Load in Throat of Hook
	Wind Rope on Bottom of Drum
	Finger/Fairlead Crushing Hazard
	Hand Piercing/Cutting Hazard
	Explosion/Bursting Hazard
	Never Route Electrical Cables Across Sharp Edges
	Avoid Installing Electrical Cables around Pinch and Wear/Abrasion Points
	Use hook larger than 1/2" (13mm)

SYMBOL	EXPLANATION
	Always Wear Leather Gloves
	Do Not Move People
	Always Use Supplied Hook Strap
	Never Apply Load to Hook Tip or Latch
	Never Wind Rope Over Top of Drum
	Fairlead Pinch Point
	Hot Surface Hazard
	Fire and Burn Hazard
	Never Route Electrical Cables through or Near Moving Parts
	Exposed Wiring Hazard, Insulate Exposed Wiring and Terminals
	Never Hook Back on Rope

Warnings and Cautions

As you read these instructions, you will see WARNINGS, CAUTIONS, NOTICES and NOTES. Each message has a specific purpose. WARNINGS are safety messages that indicate a potentially hazardous situation, which, if not avoided could result in serious injury or death. CAUTIONS are safety messages that indicate a potentially hazardous situation which, if not avoided, could result in minor or moderate injury. A CAUTION may also be used to alert against unsafe practice. CAUTIONS and WARNINGS identify the hazard, indicate how to avoid the hazard, and advise of the probable consequence of not avoiding the hazard. NOTICES are messages to avoid property damage. NOTES are additional information to help you complete a procedure. **PLEASE WORK SAFELY!**

WARNING

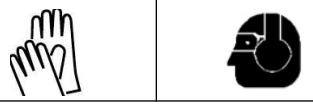


MOVING PARTS ENTANGLEMENT HAZARD

Failure to observe these instructions could lead to serious injury or death.

- **Always** ensure hook latch is closed and not supporting load.
- **Never** apply load to hook tip or latch. Apply load only to the center of hook.
- **Never** use a hook whose throat opening has increased, or whose tip is bent or twisted.
- **Always** use a hook with a latch.
- **Always** ensure the operator and bystanders are aware of the stability of the vehicle and/or load.
- **Always** keep wired remote control lead and power cord clear of the drum, rope, and rigging. Inspect for cracks, pinches, frayed wires or loose connections. Damaged components must be replaced before operation.
- **Always** pass remote lead thru window when used in vehicle.
- **Never** hook back on rope.

WARNING



MOVING PARTS ENTANGLEMENT HAZARD

Failure to observe these instructions could lead to serious injury or death.

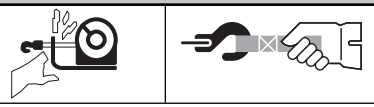
General Safety:

- **Always** Know Your Winch. Take time to fully read the Instructions and/or Operations Guide, and/or Basic Guide to Winching Techniques, in order to understand your winch and its operations, **found online at www.warn.com.**
- **Never** exceed winch or winch rope rated capacity. Double line using a snatch block to reduce winch load.
- **Always** wear heavy leather gloves when handling winch rope.
- **Never** use winch or winch rope for towing. Shock loads can damage, overload and break rope.
- **Never** use a winch to secure a load.
- **Never** operate this winch when under the influence of drugs, alcohol or medication.
- **Never** operate this winch if you are under 16 years of age.

Installation Safety:

- **Always** choose a mounting location that is sufficiently strong to withstand the maximum pulling capacity of your winch.
- **Always** use class 8.8 metric (grade 5) or better hardware.
- **Never** weld mounting bolts.
- **Always** use factory approved mounting hardware, components, and accessories.
- **Never** use bolts that are too long.
- **Always** confirm required bolt length to ensure proper thread engagement.
- **Always** complete the winch installation and hook attachment before installing the wiring.
- **Always** keep hands clear of winch rope, hook loop, hook and fairlead opening during installation, operation, and when spooling in or out.
- **Always** position fairlead with warning readily visible on top.
- **Always** prestretch rope and respool under load before use. Tightly wound rope reduces chances of "binding", which can damage the rope.

WARNING



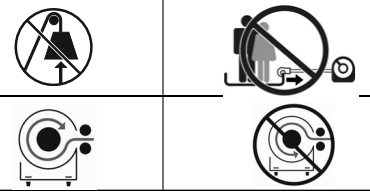
MOVING PARTS ENTANGLEMENT HAZARD

Failure to observe these instructions could lead to serious injury or death.

Winching Safety:

- **Always** inspect winch rope, hook, and slings before operating winch. Frayed, kinked or damaged winch rope must be replaced immediately. Damaged components must be replaced before operation. Protect parts from damage.
- **Always** remove any element or obstacle that may interfere with safe operation of the winch.
- **Always** be certain the anchor you select will withstand the load and the strap or chain will not slip.
- **Always** use supplied hook strap whenever spooling winch rope in or out, during installation and during operation.
- **Always** require operators and bystanders to be aware of vehicle and or load.
- **Always** be aware of stability of vehicle and load during winching, keep others away. Alert all bystanders of an unstable condition.
- **Always** unspool as much winch rope as possible when rigging. Double line or pick distant anchor point.
- **Always** take time to use appropriate rigging techniques for a winch pull.
- **Never** touch winch rope or hook while someone else is at the control switch or during winching operation.
- **Never** engage or disengage clutch if winch is under load, winch rope is in tension or drum is moving.
- **Never** touch winch rope or hook while under tension or under load.
- **Always** stand clear of winch rope and load and keep others away while winching.
- **Never** use vehicle to pull load on winch rope. Combined load or shock load can damage, overload and break rope.
- **Never** wrap winch rope back onto itself. Use a choker chain or tree trunk protector on the anchor.

WARNING

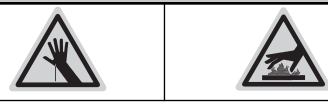


FALLING OR CRUSHING HAZARD

Failure to observe these instructions could lead to serious injury or death.

- **Always** stand clear, keep hands clear, keep others away.
- **Never** operate winch with less than 5 wraps of wire rope or/10 wraps of synthetic rope around the drum. Rope could come loose from the drum. Rope could come loose from the drum, as the rope attachment to the drum is not designed to hold a load.
- **Never** use winch as a hoist or to suspend a load.
- **Always** be certain anchor will withstand load, use appropriate rigging and take time to rig correctly.
- **Never** use winch to lift or move persons.
- **Never** use excessive effort to freespool winch rope.
- **Always** use proper posture/lifting technique or get lifting assistance while handling and installing product.
- **Always** wind the winch rope on bottom (mountside) of drum.
- **Never** wind rope over top of drum.
- **Always** spool the winch rope onto the drum in the direction specified by the drum rotation labels on the winch and/or in the documentation. This is required for the automatic brake (if so equipped) to function properly.

WARNING



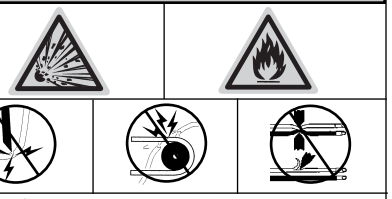
CUT AND BURN HAZARD

Failure to observe these instructions could lead to serious injury or death.

To avoid injury to hands and fingers:

- **Always** wear heavy leather gloves when handling winch rope.
- **Always** be aware of possible hot surfaces at winch motor, drum or rope during or after winch use.

WARNING



CHEMICAL AND FIRE HAZARD

Failure to observe these instructions could lead to serious injury or death.

- **Always** remove jewelry and wear eye protection.
- **Never** route electrical cables across sharp edges.
- **Never** route electrical cables near parts that get hot.
- **Never** route electrical cables through or near moving parts.
- **Always** place the supplied terminal boots on wires and terminals as directed by the installation instructions.
- **Never** lean over battery while making connections.
- **Never** route electrical cables over battery terminals.
- **Never** short battery terminals with metal objects.
- **Always** verify area is clear of fuel lines, fuel tank, brake lines, electrical wires, etc., when drilling.
- **Always** consult operator's manual for proper wiring details.
- **Always** insulate and protect all exposed wiring and electrical terminals.

WARNING

Failure to observe these instructions could lead to property damage, severe injury, or death

- **Never** exceed the maximum recommended hydraulic pressure or flow for any of the components used.
- **Always** use a tandem-center type control valve (A & B work ports blocked) to insure proper brake operation.
- **Always** make sure all hydraulic system components are functioning correctly.
- **Never** use a standard motor valve.
- **Never** use a relief valve that exceeds the hydraulic motor pressure rating. Use of this valve can overload the winch.

CAUTION

CUT AND BURN HAZARD

Failure to observe these instructions could lead to minor or moderate injury.

- **Never** let winch rope slip through your hands.

CAUTION

MOVING PARTS ENTANGLEMENT HAZARD

Failure to observe these instructions could lead to minor or moderate injury.

To avoid injury to hands or fingers:

- **Never** leave remote control where it can be activated during free spooling, rigging, or when the winch is not being used.
- **Never** leave the winch remote control plugged in when installing, freespooling, rigging, servicing or when the winch is not being used.

NOTICE

AVOID WINCH AND EQUIPMENT DAMAGE

- **Always** avoid side pulls which can pile up winch rope at one end of the drum. This can damage winch rope or winch.
- **Always** use care to not damage the vehicle frame when anchoring to a vehicle during a winching operation.
- **Never** submerge winch in water.
- **Always** store the remote control in a protected, clean, dry area.
- **Always** raise tensioner when installing rope.

What is a Winch?

WARN Industries produces a large family of winches and hoists. But what makes a winch different than a hoist?

Winches and hoists look alike. Both consist of a motor, a rotating drum with rope, reduction gears, a base, and usually an electrical control system. However, winches and hoists are used for different purposes.

Winches are used to pull a load horizontally across the ground, while hoists are used to lift a load into the air. Unlike hoists, the operator of a winch may unwind cable by "free spooling" or disengaging the motor from the gear train using the built-in clutch. Then the operator reverses the position of the clutch to connect the motor to the gears and pull the load.

Pre-Install Checklist

1 Check to see that you have received the following:

- The winch
- The winch mounting hardware

2 Upon removing winch from packaging, check for damage including bent or cracked tie rods, tie bars, or housings. Correct any damage before installing winch.

3 Make sure the environment surrounding winch and controller is free of :

- Combustible vapors
- Chemical fumes
- Oil vapors
- Corrosive material

4 Make sure that the air temperature surrounding the winch and controller stays within 120° F (49° C) and -20° F (-29° C).

5 Make sure that the mounting structure can withstand the full rated pull of the winch.

Mounting the Winch

Mounting Bolts:

Use the supplied fasteners whenever possible or SAE Grade 8 bolts of the same thread size. The tie plates, tensioner bracket, and spacers supplied with the winch should NOT be removed. Mounting brackets (if required) should be added to the tie plates and spacers supplied with the winch. Mounting brackets thicker than ½ inch (12mm) in thickness may require longer mounting bolts to be used. The bolt threads must extend a minimum of ¾ inch (19mm) into the drum supports. Bolts that are too long or too short will fail to anchor the winch securely and may cause a failure of the winch mounting.

Mounting Brackets:

When foot mounting the winch, the mounting plate should be a minimum of ½ inch thick steel. A thinner mounting plate will not support the winch properly and may cause a failure of the winch mounting. Foot mounting plates thicker than 1/2 inch (12mm) will require longer mounting bolts.

When side mounting the winch, brackets must be a minimum of 4 inch (100mm) by 4 inch (100mm) by ½ inch (12mm) thick angle iron or larger. Mounting brackets with inadequate thickness may cause a failure of the winch mounting. Side mounting brackets thicker than 1/2 inch (12mm) will require longer mounting bolts.

1 Make sure that the mounting surface is flat within +/-0.020 in. (0.50 mm). If the surface is not flat, use shim stock as needed to avoid straining the winch.

2 Torque all mounting bolts to the recommended values on the product data sheet.

3 Use the mounting hole locations provided on the product data sheet.

Mount the Winch

⚠ CAUTION To prevent accidental activation of the winch and serious injury, complete the winch installation and attach the hook before installing the wiring.

⚠ WARNING Always choose a mounting location that is sufficiently strong enough to withstand the maximum pulling capacity of your winch.

⚠ WARNING Never use bolts that are too long.

This section illustrates the recommended mounting configurations for the Series XL winch. This section does not include every possible mounting configuration, but illustrates the correct methods for mounting the winch.

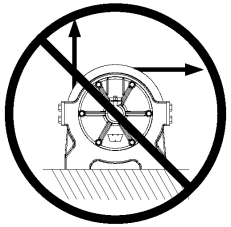
⚠ WARNING Always spool the winch rope onto the drum in the direction specified by the drum rotation labels on the winch and/or in the documentation. This is required for the automatic brake (if so equipped) to function properly.

⚠ WARNING Always confirm required bolt length to ensure proper thread engagement.

Mounting Configurations

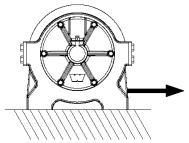
Foot Down Mounting Position:

DO NOT wind the rope from the top of the drum. DO NOT position the load direction away from the mounting surface.



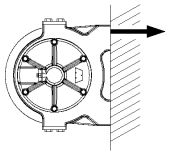
Foot Down Mounting Position:

DO wind the rope from the bottom of the drum.



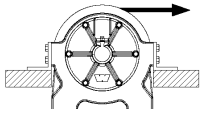
Foot Forward Mounting Position:

DO wind the rope from the top or bottom of the drum towards the direction of the mounting surface.

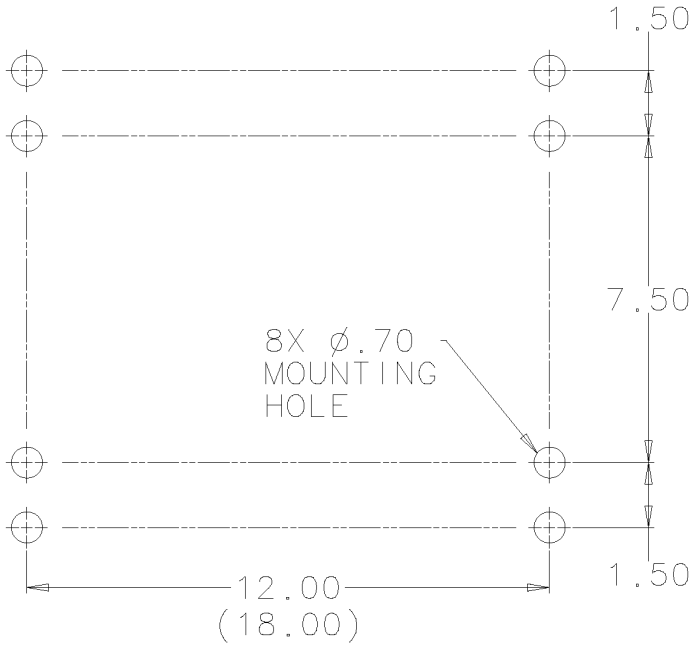


Side Mount:

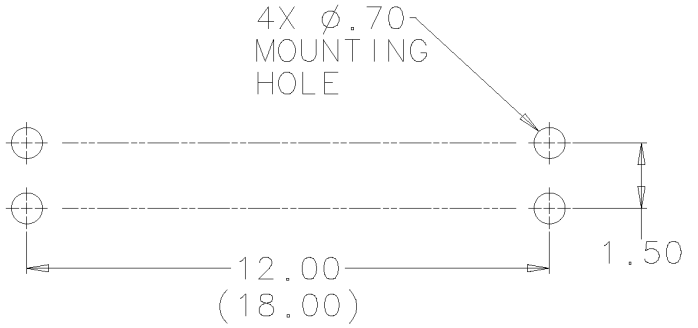
DO wind the rope from the top of the drum.



Mounting Bolt Patterns



BOLT PATTERN- SERIES XL FOOT MOUNTING
STANDARD DRUM (LONG DRUM)



BOLT PATTERN- SERIES XL SIDE MOUNTING
STANDARD DRUM (LONG DRUM)

Hydraulic Winches: General Information

⚠WARNING Never exceed the maximum recommended hydraulic pressure or flow for any of the components used.

⚠WARNING Always use a tandem-center type control valve (A & B work ports blocked) to insure proper brake operation.

⚠WARNING Always make sure all hydraulic system components are functioning correctly.

⚠WARNING Never use a standard motor valve.

⚠WARNING Always connect the winch to the hydraulic system as shown in the hydraulic schematic.

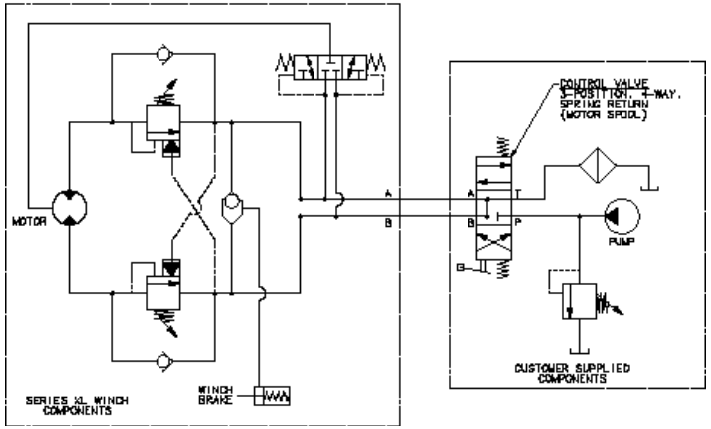
NOTE: The hydraulic system diagram and component descriptions are provided for general reference. Consult a knowledgeable hydraulics representative for specific recommendations on component selection, interconnection, layout, and best practice.

The pressure rating of the winch motor is determined by (a) the maximum allowable pressure at the motor inlet port and (b) the maximum allowable pressure drop across the motor. Pressure drop is defined as the difference between the inlet port pressure and the outlet port pressure at the winch motor. Exceeding the maximum inlet pressure may damage the winch motor. Exceeding the maximum pressure drop may cause failure of winch components.

The recommended operating temperature range of the hydraulic motor is 100°F to 150°F (38°C to 66°C). The maximum operating temperature range is -6°F to 180°F (-21°C to 82°C). Do NOT exceed the flow rating of the hydraulic motor. See the product data sheet for specific hydraulic specifications.

HYDRAULIC FLUID: The hydraulic fluid used with the winch must be an extreme pressure, anti-wear hydraulic oil with oxidation and corrosion inhibitors. It must contain a foam suppressant, and have a viscosity rating of 100-300 SUS at 60°F to 115°F (15°C to 46°C). The recommended nominal filtration level is 10 microns or finer.

HYDRAULIC SYSTEM SCHEMATIC
SERIES XL WINCHES



Brake System

WARN Series XL winches are equipped with a 2-part hydraulic braking system.

1. Dual counterbalance valves mounted to the winch motor provide dynamic braking to control the load when it is moving (i.e. power out function).
2. A spring applied hydraulically released (SAHR) disc brake prevents movement of the winch drum and load when the winch is stopped (i.e. control valve OFF position).

Both braking components are designed to operate in either direction, which allows flexibility in the rope winding direction.

Never attempt to adjust or remove the Counterbalance Valves installed in the winch hydraulic manifold.

In order for the brake system to function properly, the winch must be connected to the proper system Control Valve. The Control Valve must be a 3-position, 4-way, spring return valve as shown in the Hydraulic Schematic. The Control Valve and hydraulic plumbing must allow both motor ports (Port A and Port B) to drain freely to the hydraulic system reservoir in the center (OFF) position. Hydraulic system back pressure (return line pressure) must not exceed 100 psi. Use of the incorrect control valve or plumbing may cause failure of the brake system.

Freespool Clutch Operation

⚠WARNING Always ensure the clutch is fully engaged before operating the winch.

⚠WARNING Never engage or disengage clutch if winch is under load, winch rope is in tension or drum is moving.

⚠WARNING Never operate the winch motor for a prolonged period while the clutch is in freespool mode.

⚠WARNING Never exceed 120 psi air pressure.

⚠WARNING Never use oil or other liquids to operate the air clutch.

WARN Series XL winches are equipped with either a manual or air operated freespool clutch depending on the model. The freespool clutch allows the operator to rapidly spool out the winch rope. The freespool clutch disconnects the winch drum from the winch brake.

MANUAL CLUTCH OPERATION

The manual freespool clutch is operated by depressing the detent latch and turning the clutch lever as indicated on the winch label.

AIR CLUTCH OPERATION

The air freespool clutch is operated by application of air pressure to the fitting supplied on the winch gearbox housing. The fitting is designed to accept ¼" rigid plastic tubing.

1. To release the clutch (freespool operation): Apply 50-120 psi air pressure to the air fitting.

2. To engage the clutch (winch operation): Remove air pressure (0 psi) from the air fitting.

Installing the Winch rope

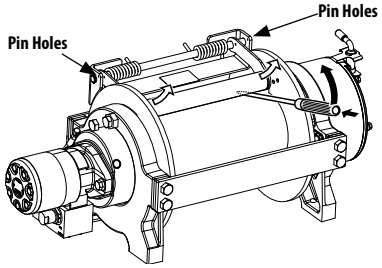
⚠WARNING Always spool the winch rope onto the drum in the direction specified by the drum rotation labels on the winch and/or in the documentation. This is required for the automatic brake (if so equipped) to function properly.

⚠WARNING Never exceed winch or winch rope capacity listed on product data sheet. Double line using a snatch block to reduce winch load.

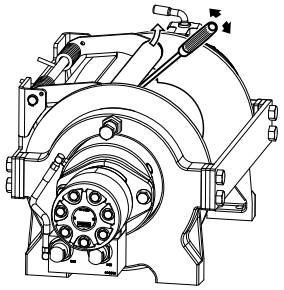
NOTICE Always raise tensioner when installing rope.

The winch rope may be spooled on the winch drum in either direction. Always follow the guidelines for pull direction listed under Mounting the Winch.

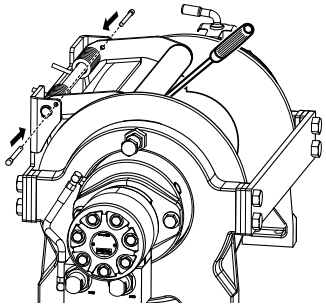
1 Insert pry bar between roller tensioner and drum.



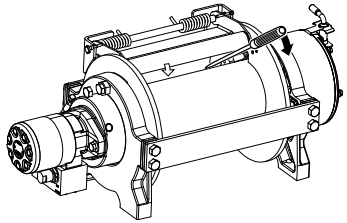
2. Lift roller tensioner until pin holes are aligned.



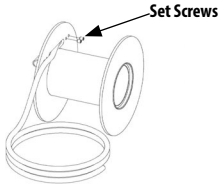
3. Insert a 1/4" pin into the pinholes.



4. Release roller tensioner.



5 Insert the end of the winch rope into the anchor hole in the drum flange. ***NOTE: A small piece of tape around the end of the winch rope will make installation much easier. The winch rope must extend to the other end of the hole.***

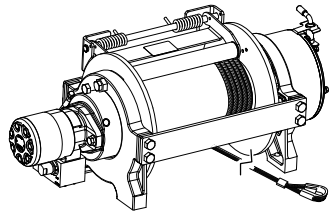


6 Torque the set screws to 12-15 lb-ft (16-20 N-m). Do not overtighten as this may cause the screw threads to be damaged. Ensure both (2) set screws secure the winch rope. Ensure both (2) set screws do not protrude from the drum flange.

7. With end of rope securely installed, carefully wind the rope evenly onto the drum. Keep the rope under tension at all times.

⚠WARNING Never operate winch with less than 5 wraps of wire rope or/10 wraps of synthetic rope around the drum. Rope could come loose from the drum.

8. Once five wraps has been spooled onto the drum, use a pry bar to lift roller tensioner and remove the 1/4" pin. Carefully lower the tensioner.



9. Always maintain a minimum of five (5) wraps of rope on the drum. Fewer wraps may cause the end of the rope to pull free of the drum and release the load.

System Check

Once you have performed a system check, you are ready to confirm winch function.

- Recheck mounting hardware for loose bolts, etc.
- Be sure all hydraulic system components and connections are correct
- Be sure all connections are tight and secure
- Check motor rotation: The drum should rotate counterclockwise when viewed from the motor end when hydraulic fluid is supplied to Port A of the motor.
- To ensure maximum hydraulic motor life, the winch should be operated for one hour at no more than 30% of rated load before application of full load.

First Time Operating Instructions

In this section, we'll show you the first time operating instructions for effective basic winching. For complete winch operation and techniques read the Basic Guide to Winching Techniques found online at http://www.warn.com/corporate/literaturerequest.shtml.

Remote Control

The winch is controlled by the hand held remote control. The remote control provides control of the power-out (forward) or power-in (reverse) rotation of the spooling drum.

Do not leave the remote plugged into the winch when not in use. Leaving the remote plugged in, may result in a dangerous condition and/or battery drain.

Clutch Operation:

⚠WARNING Never engage or disengage clutch if winch is under load, winch rope is in tension or drum is moving.

When the clutch is engaged, the gear train is coupled to the winch drum and power can be transferred from the winch motor. When the clutch is disengaged the drum is in the freespool position and the gear train and winch rope drum are uncoupled allowing the drum to rotate freely.

The clutch lever, located on the winch housing opposite the motor, controls the clutch position. To prevent damage, always fully engage or fully disengage the clutch lever.

Spooling Out

⚠WARNING Never operate winch with less than 5 wraps of wire rope or/10 wraps of synthetic rope around the drum. Rope could come loose from the drum.

⚠WARNING Always keep hands clear of winch rope, hook loop, hook and fairlead opening during installation, operation, and when spooling in or out.

⚠WARNING Always wear heavy leather gloves when handling winch rope.

Freespooling is generally the quickest and easiest way to spool out winch rope. Before freespooling winch rope out from the winch, power out enough rope to remove any tension the winch rope might be under. Disengage the clutch. Then freespool by manually spooling out enough winch rope for the winching operation. See The Basic Guide to Winching Techniques for more information.

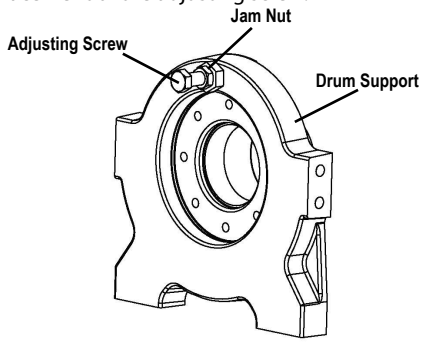
NOTICE Do NOT power out more than 30ft without allowing the winch to cool for 20 minutes before powering rope back in. Instead, place the clutch in freespool and pull the rope out by hand.

⚠WARNING Always use supplied hook strap whenever spooling winch rope in or out, during installation and during operation.

Some models may be equipped with a drum retarder to prevent unintended drum rotation during freespool operation. The drum retarder contains a user-adjustable drag setting which improves the spooling of the winch rope and helps maintain the rope's integrity and life span.

Drum Retarder Operation:

Set the adjusting screw to provide adequate resistance to the drum rotation during free spooling. Once the desired resistance is reached, cinch down the Jam nut to lock the placement of the adjusting screw.



Spooling In Under Load

⚠WARNING Never exceed winch's rated line pull.

Power-in the winch rope evenly and tightly on the drum. This prevents the outer winch wraps from sinking into the inner wraps, binding, and damaging the winch rope.

Avoid shock loads when spooling, by pulsing the control switch to take up winch rope slack. Shock loads can momentarily far exceed the winch and rope ratings.

Spooling In Under No Load

⚠WARNING Never touch winch rope or hook while someone else is at the control switch or during winching operation.

Spooling with an Assistant: Have the assistant hold the hook strap putting as much constant tension on the winch rope as possible. While keeping tension, the assistant should walk toward the winch while you operate the control switch spooling in the winch rope. Release the switch when the hook is a minimum of 6 ft. (2m) from the fairlead opening.

Spool in the remainder for storage as directed below.

Spooling Alone: Arrange the winch rope to be spooled so it will not kink or tangle when spooled. Be sure any winch rope on the drum is tightly and evenly layered. Spool enough winch rope to complete the next full layer on the drum. Tighten and straighten the layer. Repeat process until the hook is a minimum of 6 ft. (2 m) from the fairlead opening.

Spool in the remainder for storage as directed below.

Spooling Remainder for Storage

When the hook is within 8 ft. (2.4 m.) of the fairlead, disconnect the hook from the anchor or load. Hold onto the supplied hook strap and hold tension on the winch rope. Slowly power-in the winch by "pulsing" the power-in switch on the remote control until the hook is within 3 ft. (1 m) of the fairlead.

Stop winching in and attach the hook to a suitable anchor point on the vehicle.

***NOTICE* Do not power the hook into the fairlead. This could cause damage to the fairlead.**

Once the hook is suitably attached to the vehicle, power-in the remaining slack in the winch rope by "pulsing" the power-in switch on the remote control until there is minimal slack in the winch rope.

Overloading/Overheating

This winch is rated for intermittent duty. When the motor approaches stall speed, very rapid heat buildup occurs which may cause motor damage.

Double-line rigging (see The Basic Guide to Winching Techniques) will reduce the amperage draw, and reduce heat buildup in the motor. This allows longer continual use.

Rigging

For complete rigging fundamentals, Read the Basic Guide to Winching Techniques, found online at **http://www.warn.com.**

Periodic Preventive Maintenance

- Keep winch free of dirt, oil, grease, water and other substances. Remove any overflow grease from bearings.
- Check all mounting bolts and make sure they are tightened to proper torque. Replace any damaged fasteners.
- Periodically check all hydraulic connections to be sure they are tight and free of corrosion.
- Check rope for visible damage every time winch is operated. Examples of damage are: cuts, knots, mashed or frayed portions, and broken strands. Replace rope immediately if damaged. Failure to replace a damaged rope could result in breakage.
- If winch drum continues to turn after controls are released, brake may need to be replaced.

Maintenance activity	After first operation	Before each use	Semi-annually or after each 25 hours of operation
Check fasteners	X		X
Check hydraulic connections	X		X
Spool out and check rope		X	
Check motor brushes			X
Visual check of winch and control valve	X	X	X

Take time to fully understand your winch and the winching operation by reviewing the Basic Guide to Winching Techniques found online at:

www.warn.com

For further information or any questions contact:

WARN INDUSTRIES, INC.
12900 S.E. Capps Road, Clackamas
OR USA 97015-8903, 1-503-722-1200,
Customer Service: 1-800-543-9276
Dealer Locator Service: 1-800-910-1122
or visit www.warn.com.

Trouble Shooting:

Note: These trouble shooting tips apply to Series XL hydraulic winches only. Repair activities should only be performed by qualified persons.

Problem	Possible cause	Corrective action
Winch does not hold load when stopped	Load exceeds winch rating	Refer to the product data sheet for the correct line pull rating for your winch.
	Brake is badly worn or broken	Replace brake. NOTE: Entire brake assembly must be replaced.
	Incorrect hydraulic control valve installed	Verify that the hydraulic control valve is an “open-center” type spring return valve and that all hydraulic pressure to the winch is released in the OFF position.
Difficulty unspooling rope	Bent flange on drum	Rotate drum and inspect for bent flanges. Bent drum must be removed and repaired.
	Worn drum bushings	Remove drum. Inspect bushings and replace if necessary.
	Freespool clutch is not fully disengaged	Verify that clutch lever rotates freely. Verify that clutch lever is turned to the release position. Verify that air pressure to the clutch is 50-120 psi (air clutch only).
	Clutch is damaged	Disassemble winch and verify that driveshaft moves freely and that the driveshaft spring is not damaged. Verify that piston O-ring is not damaged (air clutch only).
	Rope is bound up on drum	Connect the winch to a load and alternately power-in and power-out. The rope will usually work itself free. Inspect the rope for damage and replace if necessary. USE EXTREME CAUTION.
	Drum binds, because improper mounting causes winch to twist	Remount the winch following specifications and procedures in this manual. Be sure mounting surface is flat to within .020 inch. Use shims if necessary. Be sure mounting bolts are tight.
	Ambient temperature too low	Run the winch for several minutes to warm the gearbox to operating temperature.

Problem	Possible cause	Corrective action
Winch lacks power, pulls slowly, stalls or will not run at all.	Hydraulic fluid pressure too low or flow rate too low	Check fluid level, filter, valves, and other components. Consult a hydraulic specialist.
	Drum binds, because improper mounting causes winch to twist	Remount the winch following specifications and procedures in this manual. Be sure mounting surface is flat to within .020 inch. Use shims if necessary. Be sure mounting bolts are tight.
	Freespool clutch is not engaged	Verify that clutch lever rotates freely. Verify that clutch lever is turned to the correct position. Verify that air pressure to the clutch is 0 psi (air clutch only).
	Worn drum bushings	Remove drum. Inspect bushings and replace if necessary.
	Gearbox wear, binding, or internal damage	Disassemble winch gearbox. Inspect for damaged components, free rotation of planet gears, binding, or contamination. Replace damaged components and lubricate with EP grease.
	Hydraulic motor is damaged	Replace hydraulic motor.
	Disc brake is not released	Verify that hydraulic pressure is applied to disc brake during winch operation. Replace brake if necessary. NOTE: Entire brake assembly must be replaced.
	Damage or contamination of hydraulic manifold	Replace hydraulic manifold. NOTE: Entire manifold assembly must be replaced. DO NOT attempt to adjust or remove the counterbalance valves.
	Ambient temperature too low	Temperature must be above -6º F for the hydraulic system to function properly.