



**DC Series Utility Winches
Owners Manual**

Read, Understand, Follow and Save These Instructions

- Read, understand and follow all of these instructions and warnings 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.

Throughout this manual **WARNING, CAUTION, NOTICE** and the **SAFETY ALERT SYMBOL** will be used.



The safety alert symbol alerts you to potential physical injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

WARNING

WARNING indicates a hazardous situation that, if not avoided, could result in death or serious injury.

CAUTION

CAUTION indicates a hazardous situation that, if not avoided could result in minor or moderate injury.

NOTICE


NOTICE indicates a hazardous situation that, if not avoided, could result in property damage

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Important Safety Messages






Before First Operation

- Purchaser/owner must ensure that product is installed according to these instructions. Purchaser/owner must not alter or modify product.
-  Understand your winch and its instructions.
- Never exceed maximum rated capacity. Refer to stamped markings or decals on product to obtain rated capacity. If uncertain, contact Cequent Performance Products at 1-800-632-3290 or www.cequentgroup.com
- The winch is rated at the first layer of wire/synthetic rope on the drum for intermittent-periodic duty.



Are you ready to pull?

-  Your winch can develop tremendous pull forces and if used unsafely or improperly could result in property damage, serious injury or death. Ultimately, safe operation of this device rests with you, the operator.
- NEVER operate this winch when under the influence of drugs, alcohol or medication.
-  ALWAYS remove jewelry and wear eye protection.
-  Use leather gloves or a hand saver cable strap when handling the wire rope.
- NEVER let winch rope slip through your hands.
- Never touch a winch rope or hook when someone else is at the controls.
- 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.
-  Do not use the winch as a lifting device or a hoist for vertical lift.
- 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.
-    Keep clear of winch, rope, hook, and fairlead while operating.
-  The winch is not to be used to lift, support or otherwise transport personnel.
-  ALWAYS be aware of possible hot surfaces at winch motor, drum or rope during or after winch use.
- ALWAYS ensure the operator and bystanders are aware of the stability of the vehicle and/or load.

Is your winch ready to pull?

- 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.
- Periodically check mounting hardware for proper torque and tighten if necessary.
- 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.
- Wire/synthetic rope can break without warning. Always keep a safe distance from the winch and rope while under a load.
- ALWAYS keep wired pendant 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.
-  NEVER wrap winch rope back onto itself. Use a choker chain or strap.
-  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.
- Never use winch rope for towing.
- NEVER use excessive effort to free spool winch rope.
- ALWAYS take time to use appropriate rigging techniques for a winch pull.

During the pull

- NEVER exceed winch or winch rope rated capacity. Double line using a snatch block to reduce winch load.
- Do not shock load the winch.
- Never use a winch to secure a load.
- ALWAYS unspool as much winch rope as possible when rigging. Double line or pick distant anchor point.
- Never engage or disengage the clutch when the winch is under load or the drum is moving.
- Try to pull from an angle of less than 5 degrees laterally and 15 degrees horizontally. Short pulls of up to 45 degrees laterally are acceptable; however without maintaining the proper fleet angle of +/- 5 degrees; the rope will pile onto one side of the rope drum and possibly do damage to the rope or winch. Re-spool your winch as required.
- When winching a heavy load, lay a recovery damper or a heavy blanket over the wire rope near the hook end.
- ALWAYS avoid side pulls which can pile up winch rope at one end of the drum. This can damage winch rope or winch.
- ALWAYS ensure the clutch is fully engaged or disengaged.
- NEVER submerge winch in water.

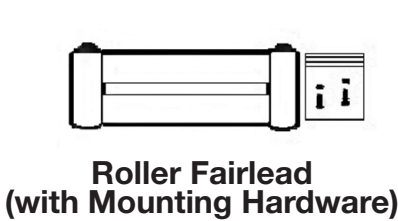
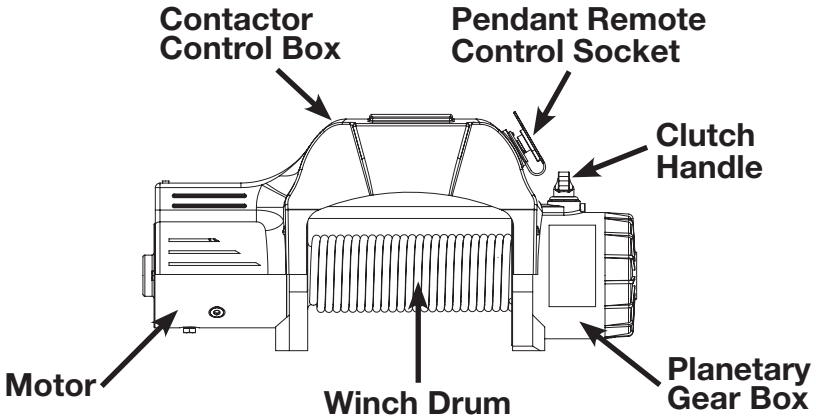
After Use

- Disconnect the hand held pendant from the winch when not in use.
- ALWAYS store the pendant control in a protected, clean, dry area.

Know Your Winch



Figure 1 - Winch Components



Features and Ratings

Table 1 - Winch Specifications

Powered Winches	DC9.0	DC12.0
Rated Line Pull	9000 lbs. / 4082 kgs.	12000 lbs. / 5443 kgs.
Motor: Series Wound	12V : Input: 4.63 kW / 5.8 hp; Output: 2.1 kW / 2.8 hp	12V : Input: 5.4 kW / 7.2.hp; Output: 2.7 kW / 3.6.hp
Gear Reduction Ratio	230:1	230:1
Wire Type - Max. Cable Diameter	21/64" x 95' / Ø8.3 mm x 29 m A7 x 19 Aircraft Cable	13/32" x 83.7' / Ø10.2 mm x 25.5 m A7 x 19 Aircraft Cable
Drum Size - Dia.x L	2.48" x 8.8" / Ø63 mm x 223 mm	2.48" x 8.8" / Ø63 mm x 223 mm
Mounting Bolt Pattern	10" x 4.5" / 254 mm x 114.3 mm; 4-M10	10" x 4.5" / 254 mm x 114.3 mm; 4-M10
Overall Dimensions - LxWxH	21.3" x 6.5" x 9.9" / 540 mm x 166 mm x 251 mm	23.2" x 6.5" x 9.9" / 589 mm x 166 mm x 251 mm
Net Weight	82.1 lbs. / 37.2 kgs.	96.6 lbs. / 43.8 kgs.
Clutch (free-spooling)	Turn handle	
Control	Handheld pendant switch	

Load Rating

Load and speed varies according to how much wire/synthetic rope is on the drum. The first layer of rope on the drum delivers the slowest speed and the maximum load. A full drum delivers the maximum speed and the minimum load. For this reason, all utility duty winches are rated at their first layer capacities.

Table 2 - Winch Capacity

WARNING - Do not exceed rated capacity shown in this table.

DC9.0			DC12.0		
Rope Layer	Capacity	Length of Rope on Drum	Rope Layer	Capacity	Length of Rope on Drum
1st	9,000 lbs. / 4,082 kgs.	20.0 ft. / 6.1 m.	1st	12,000 lbs. / 5,443 kgs.	16.1 ft. / 4.9 m.
2nd	7,350 lbs. / 3,334 kgs.	44.3 ft. / 13.5 m.	2nd	9,563 lbs. / 4,338 kgs.	36.4 ft. / 11.1 m.
3rd	6,200 lbs. / 2,812 kgs.	72.2 ft. / 22.0 m.	3rd	7,948 lbs. / 3,605 kgs.	60.0 ft. / 18.3 m.
4th	5,400 lbs. / 2,449 kgs.	95.1 ft. / 29.0 m.	4th	6,800 lbs. / 3,084 kgs.	83.7 ft. / 25.5 m.

Table 3 - Line Speed And Amp Draw

DC9.0			DC12.0		
Line Pull (lbs./ kgs.)	Line Speed (FPM/MPM)	Current (A)	Line Pull (lbs./ kgs.)	Line Speed (FPM/MPM)	Current (A)
0	19.7 / 6.0	80	0	22.3 / 6.8	100
3000 / 1361	12.5 / 3.8	170	4000 / 1814	13.1 / 4.0	220
6000 / 2722	9.8 / 3.0	260	8000 / 3629	9.8 / 3.0	330
9000 / 4082	6.6 / 2.0	360	12000 / 5443	5.9 / 1.8	450

FPM = Feet Per Minute MPM = Meters Per Minute

Installation Instructions

BEFORE INSTALLING AND USING YOUR POWERED WINCH, READ AND FOLLOW ALL MOUNTING INSTRUCTIONS AND SAFETY MESSAGES.

Mounting

WARNING

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

1. Before Installation

1.1 Inspect Parts

Hand Saver Cable Strap

Clutch Handle

Instruction/Owners Manual

Winch Assembly

Pendant Remote Control

Pendant Remote Control Socket

Roller Fairlead

Battery Lead

Mounting Hardware

Hook

Mounting Hardware Requirements

Four (4) Winch Mounting Bolts and two (2) Fairlead Mounting Bolts, Nuts, and Washers are required. Refer to Table 4 below for bolt quantity, sizes, and required torque. Mounting system will dictate bolt length.

WARNING

ALWAYS torque mounting bolts to the values specified for your winch in Table 4 to prevent vibration during operation.

ALWAYS use class 8.8 metric (grade 5) or better hardware.

NEVER weld mounting bolts.

ALWAYS choose the proper bolt length for your application.

ALWAYS confirm required bolt length to ensure proper thread engagement.

Table 4 - Mounting Torque Requirements

Powered Winches	DC9.0	DC12.0
Winch Mounting Bolt Size	M10 x 1.5 pitch, 8.8 grade, 4 Required	M10 x 1.5 pitch, 8.8 grade, 4 Required
Fairlead Mounting Bolt Size	M10 x 1.5 pitch, 8.8 grade, 2 Required	M10 x 1.5 pitch, 8.8 grade, 2 Required
Winch & Fairlead Mounting Bolt Torque	40 ft./lbs.	40 ft./lbs.

1.2 Select Mount Location

WARNING

ALWAYS choose a mounting location that is sufficiently strong to withstand the maximum pulling capacity of your winch.

1.2.1 Winch and Fairlead Mounting Considerations

WARNING

ALWAYS position fairlead with warning readily visible on top.

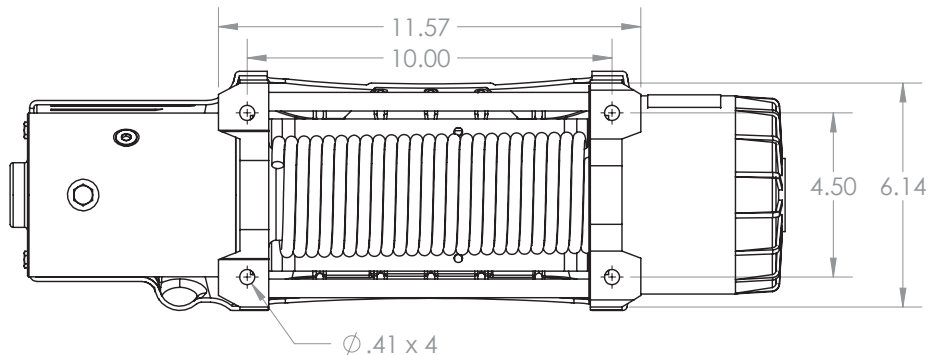
1. Your mounting surface must be equal to or greater than the footprint of the winch frame.
2. Make sure the motor, drum and gearbox housing are aligned correctly.

Installation Instructions

- The fairlead does not mount directly to the winch.
- The wire/synthetic rope shall be under wound. Figure 4.

Figure 2 - Mounting Hole Pattern and minimum surface areas

DC9.0 & DC12.0 - Bottom View
Bolt Pattern & Minimum Mounting Surface - Pattern Is Not To Scale



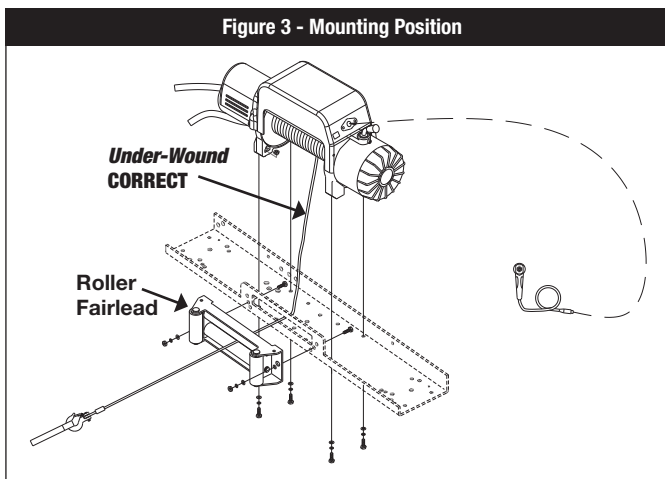
1.3 Determine Mount Position

WARNING

Failure to adequately align, support, or attach the winch to a suitable mounting base could result in a loss of efficiency of performance or damage to the winch, wire/synthetic rope and mounting surface.

The mounting surface must be equal to or greater than the footprint of the winch frame.

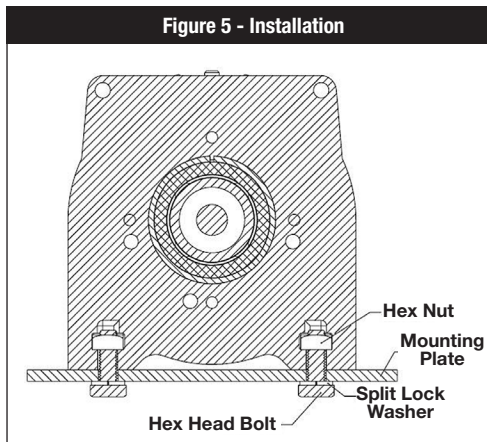
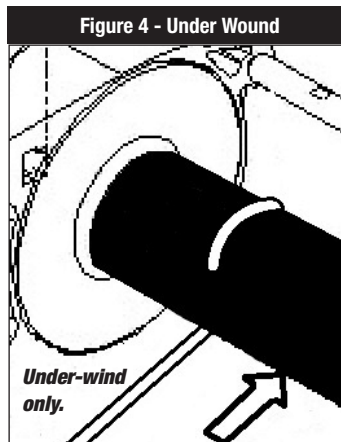
Figure 3 - Mounting Position



Installation Instructions

1.4 Install the Winch

1. Set hex nuts into pockets of winch feet. See Figure 5.
2. Make sure the motor, drum and gearbox housing are aligned correctly
3. Set winch in mounting location. Confirm required bolt length.
4. Install bolts and tighten to torque specified in Table 4, Page 5.
5. Wind the rope around the bottom of the drum.



1.5 Install the Rope

WARNING

ALWAYS complete the winch installation and hook attachment before installing the wiring.
ALWAYS pre-stretch rope and re-spool under load before use. Tightly wound rope reduces chances of “binding”, which can damage the rope.

A minimum of five (5) wraps of steel wire rope and a minimum of ten (10) wraps of synthetic rope around the drum is necessary to support the rated load.

ALWAYS spool the winch rope onto the drum in an under wound orientation.

Roller Fairlead

The use of a 4 way roller fairlead can reduce the contacting friction with the wire rope. The fairlead does not ensure the wire rope will wind onto the drum in an orderly manner. The proper pulling angle must be maintained for the wire rope to wind onto the drum in an orderly manner. If the proper pulling angle is not maintained, it can result in damage to the winch and wire rope. Figure 14 on page 13.

Hawse Fairlead

The use of a Hawse Fairlead can reduce the contacting friction with the synthetic rope. An aluminum hawse fairlead is recommended because it has no sharp edges and resists wear damage more effectively than a roller fairlead. The fairlead does not ensure the synthetic rope will wind onto the drum in an orderly manner. If the proper pulling angle is not maintained, it can result in damage to the winch and synthetic rope. Figure 14 on page 13.

Installation Instructions

Figure 6 - Roller Fairlead

Use a Roller fairlead with **wire rope. rope.**

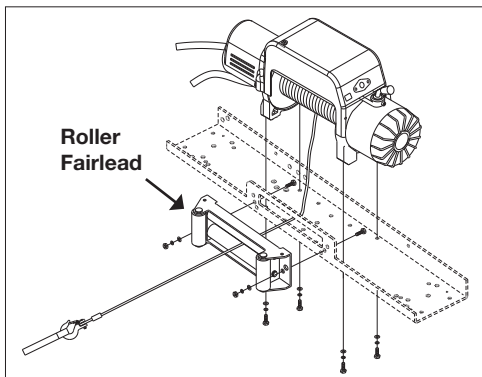
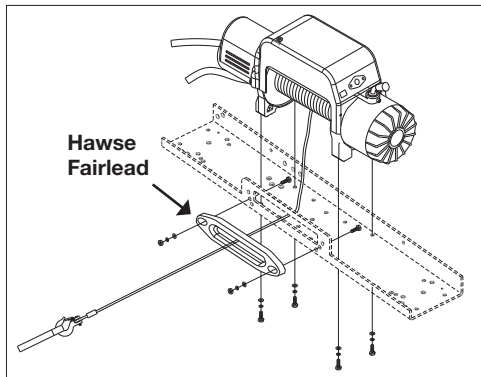


Figure 7 - Hawse Fairlead

Use a Hawse fairlead when using **synthetic rope.**



1.6 Wiring

1.6.1 Install the Wiring

⚠ WARNING

BEFORE installing the winch, make sure all electrical parts are corrosion free.

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.

ALWAYS consult Electrical Connections section for proper wiring details.

Run the charging system during winching operations to keep battery charged.



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.

AVOID pinch and wear/abrasion points when installing all electrical cables.

ALWAYS insulate and protect all exposed wiring and electrical terminals.

1.6.2 Battery Recommendations & Lead Size

A fully charged battery and good connections are essential for the proper operation of your winch.

The minimum requirement for the battery is 650 cold cranking amps. The battery lead shall be 2 gauge with 72" in length at most, otherwise a considerable voltage drop will occur.

1.6.3 Battery Cable Routing

Route battery connection cables in areas that will not cause them to chafe or cut through the insulation causing a potential short circuit. The winch power wire must be routed to the battery. A direct battery connection of the power (red) and ground (black) cables is required.

Installation Instructions

WARNING

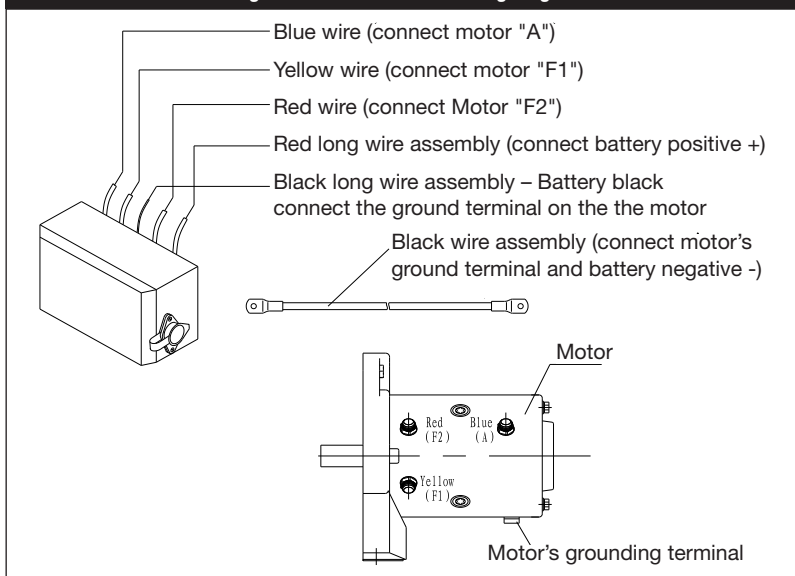
ALWAYS route battery cables along a path that allows the cables to be secured with zip ties. Loose or unsecured power cables can cause serious injury or death.

1. Plan the routing path.
2. Loosely secure power cables along path.
3. Confirm power cables are protected from sharp edges, heat and moving parts. Consider chassis flex and vibration which might damage cable.
4. Carefully inspect electrical cable routing. Zip tie and secure electrical cables. Zip ties should be snug, but not cutting into wire insulation. Use electrical tape, pieces of rubber hose or electrical conduit to protect electrical cables and wire harness where needed to avoid electrical cable insulation wear or abrasion.
5. FIRST attach red (positive) battery cable, then black (negative) battery cable. Install boots as appropriate to protect connections.

1.6.4 System Check

Upon completion of installation, check winch for proper operation. The voltage drop for the winch motor must not exceed 10% of the nominal voltage of 12 DC.

Figure 8 - DC9.0 / DC12.0 Wiring Diagram



Operation Instructions

WARNING

ALWAYS use supplied hand saver cable strap whenever spooling winch rope in or out, during installation or operation to avoid injury to hands and fingers.

2.1 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.

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

Do not shock load the winch when spooling. 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.

NOTICE

DO NOT power the hook into the fairlead. This could cause damage to the fairlead.

2.2 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 will reduce the amperage draw, and reduce heat buildup in the motor. This allows longer continual use.

2.3 Stretching the Wire Rope

WARNING

ALWAYS pre-stretch rope and re-spool under load **BEFORE** use. Tightly wound rope reduces chances of "binding", which can damage the rope.

NEVER operate winch with less than five (5) wraps of wire rope and ten (10) wraps of synthetic rope around the drum. Rope could come loose from the drum, as the rope attachment to the drum is not designed to hold a load.

The goal of stretching your wire rope is to wrap it tightly on the winch drum so that it can support additional layers of wire. It can take up to 1,000 lbs. to properly stretch large diameter cable. This can be accomplished with a vehicle supplied as dead weight to stretch the rope. This is an exercise that will make your wire rope last longer, avoid tangles and ensure a tightly wrapped winch. Use care to evenly wrap each layer to prevent damage to the rope.

2.4 Safe Working Conditions

WARNING

The operator should **ALWAYS** operate the winch from a safe position when pulling a load. The safe areas are: Perpendicular to the winch rope.

The safe position will help prevent the wire rope from striking the operator if the wire rope fails when under load.

Fully extend the pendant control cord to operate winch whenever possible. The operator must try to maintain at least 8 ft. (2.44 m) from the winch while operating.

WARNING

NEVER work around the winch rope while under load.

NEVER step over a winch rope while under load.

ALWAYS use caution when working with electricity and remember to verify that no exposed electrical connections exist before energizing your winch circuit.

Operation Instructions

2.5 For First Time Operation

2.5.1 Connect the Remote Control

Always keep the Industrial grade and waterproof remote control wire clear of the winch, wire/synthetic rope and roller/hawse fairlead. Figure 9.

CAUTION

DO NOT leave the pendant control plugged into the winch when not in use. This may result in a dangerous condition and/or battery drain.

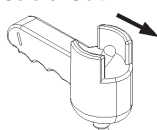
1. Press and hold the Cable In Button for rope winding in operation.
2. Press and hold the Cable Out Button for rope winding out operation.
3. To stop winching, release the Cable In or Cable Out Buttons. Figure 10.

Figure 9 - Connect Remote

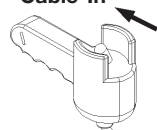


Figure 10 - Remote Control Operation

Cable-Out



Cable-In



2.6 Clutch Operation

WARNING

NEVER engage or disengage clutch if winch is under load, winch rope is in tension or drum is rotating.

To prevent damage, **ALWAYS** fully engage or fully disengage the clutch lever.

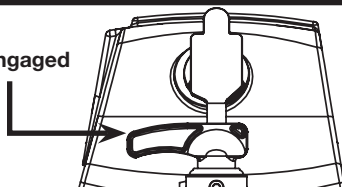
The clutch lever, located on the winch housing opposite the motor, controls the clutch position. When the clutch is engaged, the gear train is coupled to the winch drum and power can be transferred from the winch motor.

2.6.1 Disengage Clutch For Free-Spooling

Turn the handle 180° counter-clockwise rotation to the “Disengaged” position, rope can now free-spool off the drum. Figure 11.

Figure 11 - Disengage Clutch

Disengaged

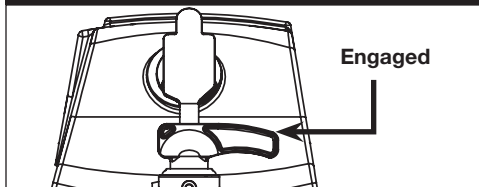


2.6.2 Engage Clutch For Winching

To engage, turn the clutch handle 180° clockwise to the “Engaged” position. Never engage the clutch while the drum is rotating. Figure 12.

Figure 12 - Engage Clutch

Engaged



Operation Instructions

2.7 Winching Principles

2.7.1 Pulling Angle

Locate a suitable anchor such as a strong tree trunk or boulder. Always use a sling as an anchor point.

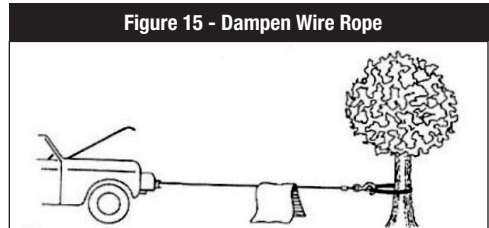
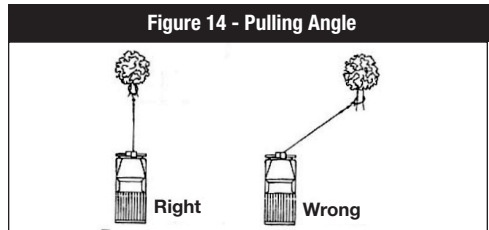
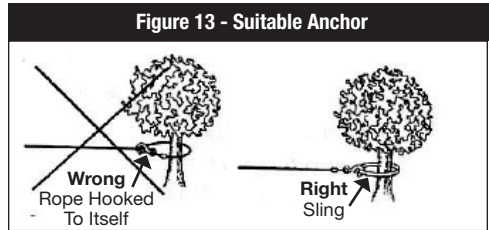
CAUTION

DO NOT attach the clevis hook back onto the cable as this could cause damage to the cable. Figure 13.

CAUTION

DO NOT winch from an acute angle as the wire rope will pile up on one side of the drum causing damage to wire/synthetic rope and the winch. Figure 14.

Short pulls from an angle can be used to straighten the vehicle. Long pulls should be done with the wire rope at a 90° angle to the winch/vehicle.



2.7.2 Recovery Damper

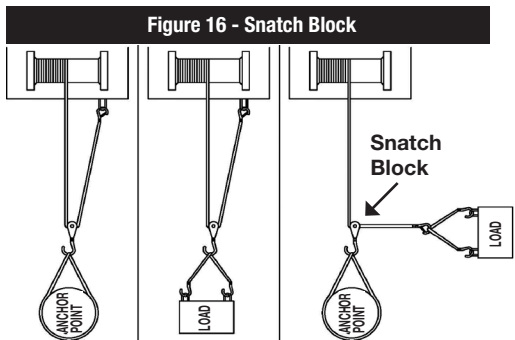
A recovery damper is a safety device designed to help reduce the possibility of injury or property damage in the event of a wire/synthetic rope failure. A blanket or heavy jacket are acceptable substitutes for the damper. Place 5-6 feet from hook. Figure 15.

2.7.3 Snatch Block

For pulls over 70% rated line pull, we recommend the use of the snatch block/pulley block to double line the wire/synthetic rope. Figure 16. An important aid to successful winching is the use of snatch block, which can be used to increase the pulling power of a winch or change the direction of a pull.

A winch double lined with a snatch block creates a mechanical leverage cutting the effort required by nearly half.

The use of one snatch block shows an indirect pull where the vehicle is limited due to unsuitable ground or obstruction. The pull on the load is the actual line pull of the winch. If more than one snatch block is used, they must be located at least 40" (100 cm) apart. Figure 16.



Operation Instructions

2.8 Tips For Prolonging The Life Of Synthetic Rope

- Check the rope for damage or wear before each use.
- Abrasion can damage or weaken your synthetic rope, protect your rope from rubbing against sharp objects.
- An aluminum hawse fairlead is recommended because it has no sharp edges and resists damage more easily than a roller fairlead.
- Keep your synthetic rope clean and dry. To clean it, spool out the rope, rinse it with a hose, and let it dry completely before re-spooling.

WARNING

Do not use the winch as a lifting device or a hoist for vertical lifting.

CAUTION

The “Power-Out” function should be used for relieving tension on the rope, not for extended distances.

The “power out” function drives the winch motor against the brake which is similar to driving your vehicle with the parking brake engaged. Do not use the Power-Out function for lowering a load -- winches are not designed to be used as hoists. Use the free-spool function to pay out wire/synthetic rope. If you power out over 25 feet, let the winch cool for 15 minutes.

Maintenance

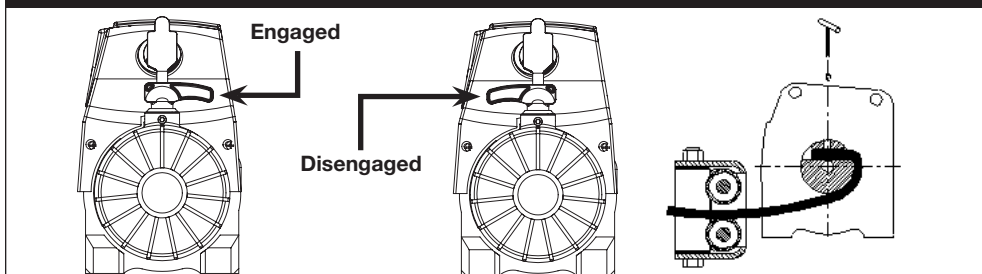
3.1 Wire Rope Replacement

1. Disengage the clutch handle.
2. Un-spool the entire rope, and remove it from the drum.
3. Place the replacement rope through the roller fairlead opening, pass under the drum per Figure 17 and insert it into the hole on the drum core. Tighten the set-screw downwards to secure the wire rope.
4. A minimum of five (5) wraps of wire rope and ten (10) wraps of synthetic rope around the drum is necessary to support the rated load.
5. Respool under load. Stretching the wire rope. See Page 7.

WARNING

ALWAYS pre-stretch rope and re-spool under load before use. Tightly wound rope reduces chances of “binding”, which can damage the rope.

Figure 17 - Wire Rope Replacement

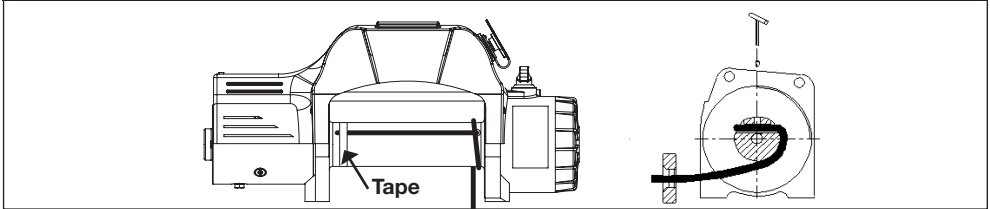


Maintenance

3.2 Synthetic Rope Replacement

1. Disengage the clutch handle, remove the existing rope and replace the hawse fairlead if necessary.
2. Un-spool the rope from the drum. Remove the set-screw from the drum.
3. Cut the end of the new rope at 45° and apply 2-3 wraps of electrical tape to hold the cut strands in place. This will ease assembly.
4. Remove Rope.
5. Thread rope through a hawse fairlead and under the drum per Figure 18, insert the rope through the hole on the drum with 6" – 8" to spare.
6. Place rope across the drum and tape the end down to hold it in place. See Figure 18. Lightly tighten the set-screw to squeeze the rope, do not over tighten.
7. A minimum of ten (10) wraps of rope around the drum is necessary to support the rated load.

Figure 18 - Synthetic Rope Replacement



- **Check the wire/synthetic rope.** Before winching, make sure the rope is wound on the drum evenly. If there is mixed winding, it is essential to rewind it evenly.
- Be careful to keep the rope under tension. Never guide a wire/synthetic rope onto the drum with your hand, use a hand saver cable strap.

Figure 19 - Mixed Winding



3.3 Lubrication

Do not attempt to disassemble the gear box. Repairs should be done by the manufacturer or an authorized repair center. The gearbox has been lubricated using a high temperature lithium grease and is sealed at the factory. No internal lubrication is required. Regularly lubricate clutch handle with light oil. Never lubricate the brake system.

Troubleshooting / Checklist

Table 5 - Troubleshooting

Symptom	Possible Cause	Suggested Action
Motor does not turn on	Switch Assembly not connected properly	Insert Switch Assembly all the way into the connector.
	Loose battery cable connections	Tighten nuts on all cable connections.
	Defective Switch Assembly	Replace Switch Assembly.
	Defective motor	Check for voltage at armature port with Switch pressed. If voltage is present, replace motor.
	Water has entered motor	Allow to drain and dry. Run in short bursts without load until completely dry.
Motor runs but cable drum does not turn	Clutch not engaged	Turn clutch to the "In" position. If problem persists, a qualified technician needs to check and repair.
Motor runs slowly or without normal power	Insufficient current or voltage	Battery weak recharge. Run winch with vehicle motor running. Loose or corroded battery cable connections. Clean, tighten, or replace.
Motor overheating	Winch running time too long	Allow winch to cool down periodically.
Motor runs in one direction only	Defective Switch Assembly	Loose or corroded battery cable or motor cable connections. Clean and tighten. Repair or replace switch assembly.

Table 6 - Checklist

	Before First Operation	After EVERY Use	Every 90 Days
Read, understand and follow the warnings and instructions in this manual.	X		
Check all fasteners and verify they are at the proper torque. Replace fasteners as needed.	X		X
Check that the wiring is correct and the connections are tight.	X		X
Check there are no bare or exposed wires, terminals, or damage to the cables (chafing/cutting). Repair or replace wires as needed.	X		X
If damaged, discontinue use and replace rope immediately.	X	X	X
Keep winch, rope, and switch control free from contaminants. Use a clean rag or towel to remove any dirt and debris.		X	

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