FITTING AND OPERATING GUIDE

12V / 24V DC ELECTRIC RECOVERY WINCHES.

13,500lb (6,124kg)

17,000lb (7,938kg)

VERY IMPORTANT - YOU MUST READ AND UNDERSTAND THIS GUIDE BEFORE INSTALLING AND OPERATING YOUR WINCH

Thank you for buying a WINCHMAX brand winch. By using this product within its limitations and following the instructions provided you can expect many years of trouble-free service.

IMPORTANT

PLEASE READ AND UNDERSTAND THIS ENTIRE MANUAL BEFORE INSTALLING OR OPERATING THIS PRODUCT – FAILURE TO DO SO COULD RESULT IN DAMAGE TO PROPERTY, SERIOUS INJURY OR DEATH. UNDERTAKE A FULL SAFETY CHECK AND RISK ASSESSMENT BEFORE EACH USE.

Whilst we have attempted to provide comprehensive guidance for the safe operation of this winch it remains the operator's responsibility to evaluate and minimise the potential risk before and during every operation. Keep these instructions for reference.

1. WARNINGS AND GENERAL SAFETY INFORMATION

- No loose clothing or jewellery should be worn to prevent entanglement in moving parts.
- Good quality overalls, non-slip protective footwear, thick leather gloves and eye protection should be worn.
- It is the operator's responsibility to ensure he/she and all spectators remain at a safe distance. For spectators, this should be at least 1.5 times the rope length being used.
- Check your winch thoroughly, including all electrical connections before use. Any damaged parts should be replaced, using only genuine parts.
- Protect the winch from shock loads - do not allow the winch rope to be yanked by a rolling load or moving vehicle. Never drive your vehicle to assist the winch in any way.
- If a wire rope breaks or pulls loose under load it can lash back with significant force
- With wire rope, it is a good idea to use a heavy winch blanket/damper draped over the rope towards the hook end to reduce whiplash in the event of rope failure. The vehicle bonnet can be raised to provide additional protection when operating from inside the vehicle.
- Do not use winch if the rope is frayed or damaged.
- Never handle hook directly, always use hand saver tab and protective gloves.
- Never hook the winch rope back on itself.

- Always electrically isolate the winch when not in use.
- Do not use the winch as a hoist or for overhead lifting.
- Do not use the winch to lift, support or move personnel.
- Always ensure winch rope re-spools in tight and even wraps on the drum, do not allow cable bunching.
- Never attempt to use a synthetic rope with a roller fairlead designed for wire rope.
- Never approach the winch, hook or cable if someone else is at the controls.
- Always be certain the anchor point can withstand the load and will not slip.
- Protect the wireless remote from any possibility of accidental operation.

2. PHYSICAL INSTALLATION

WARNING: correct installation of your winch is vital for correct and safe operation.

2.1 Installing Control Box (recommended before fitting winch to vehicle)

When mounting on a 4x4 with a possibility of deep water wading it is good practice to remote mount the control box up under the bonnet to protect the electrics from water.

If changing the orientation of the control box mounting, always ensure there is a suitable drain hole at the lowest point.

2.2 Mounting the Winch Please refer to Fig.A

- Install a suitable mounting bumper or mounting plate in the required position. The winch must be mounted with the direction of pull perpendicular to the mounting bolt fixings. The plate should be fabricated from minimum 6mm steel.
- Attach fairlead (roller type for wire rope or aluminium hawse for synthetic rope) to the mounting plate using two nuts (9) & bolts (1) with flat (7) and spring (8) washers.
- Insert the four square nuts (2) into the pockets at the base of the winch frame.
- Thread the four high tensile bolts (5) with flat (3) and spring (4) washers up through the mounting plate and into the square nuts in the winch. Tighten the mounting bolts to a torque setting of 60Nm
- The supplied bolts are the correct length for installation on a 6-7mm plate. Other thickness's may require bolts of a different length. The required criteria are that the bolts are at least 8.8 grade high tensile, the thread length should be sufficiently long to fill the thread of the square nut without contacting the top of the mounting nut pocket in the winch base.
- If the rope is pre-spooled, feed the thimble eye on the hook end through the roller

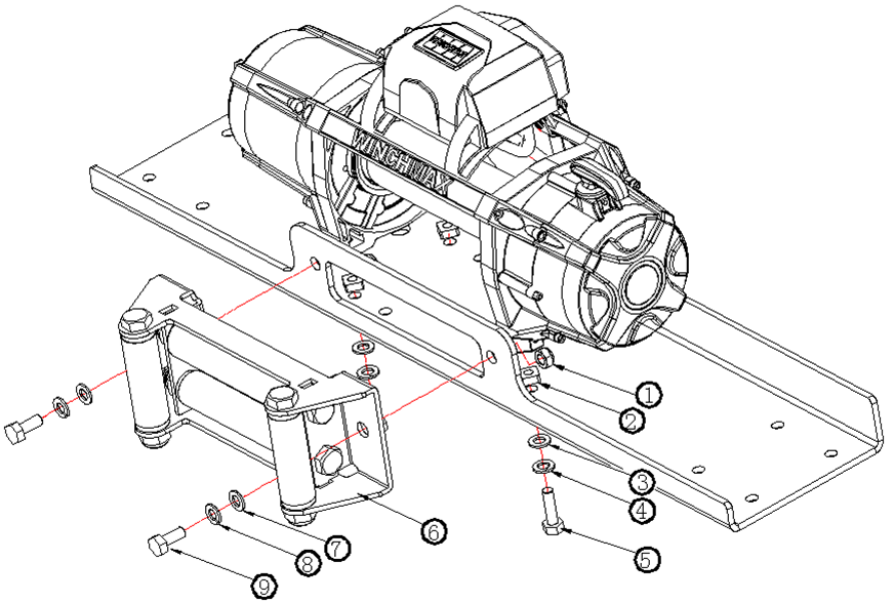


Fig A

fairlead (6) from the winch side and attach the clevis hook. If you are installing a synthetic rope with a hawse fairlead or if the rope is fitted with a fixed competition hook, you will need to pull off the rope and then feed it back through from the front side of the fairlead.

- If the winch has a 'through the drum' type fixing, undo the Allen head grub screw and feed the end of the rope through the hole until it is visible on the other side. Secure the grub screw. If the winch has a flange type fixing then secure the ring terminal at the end of the rope using the Allen head cap screw, but only finger tight to allow the fixing to swivel on the screw. Spool the rope as per Section.4.

3. ELECTRICAL INSTALLATION

- Ensure your battery is in good condition and can provide a minimum of 650 CCA
- Route the supplied battery leads (long red lead from control box = Positive/separate long black lead = Negative) directly to the battery location, ensure that the cable is protected throughout its run from heat and abrasion against sharp components.
- Connect the negative battery lead to the winch motor earth terminal (**never use a chassis earth**)
- Connect the remaining cables from the control box to the motor observing the colour coded boots on the cable and corresponding colour coded collars on the motor terminals.

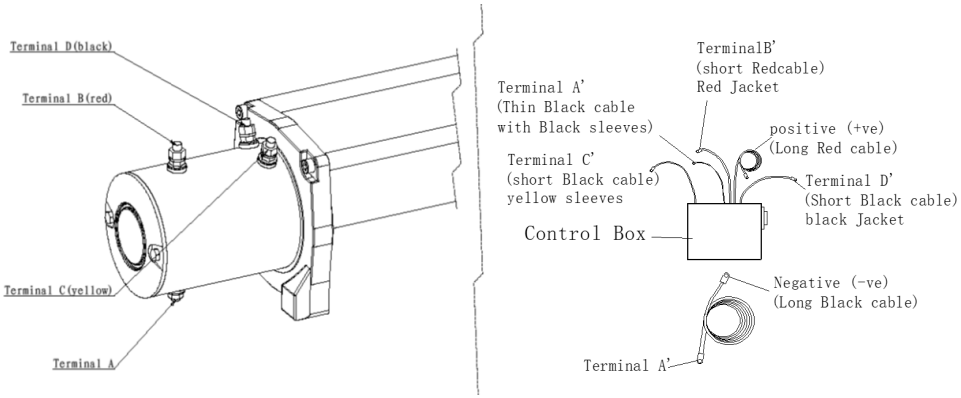


Fig B

- Ensure that the small earth wire from the control box (this is the earth supply to the contactor) is connected to the main battery fed earth terminal on the underside of the motor (**do not attempt to use a chassis earth**).
- When you are satisfied that all other connections are correctly installed connect the battery leads to the battery (via an isolator switch and the overload cut out if being used)
- Please refer to Fig B in conjunction with the above.

Notes

- If you need to extend the cables, use minimum 40mm2 flexible welding cables.
- Always fit a battery isolator switch to the positive supply line to allow for emergency stop and to prevent unintentional starting and to protect the winch if the vehicle is jump-started.
- All earth connections must be fed from the battery, never attempt to use a chassis earth
- Check all connections are secure and protect from corrosion with petroleum jelly, copper grease or similar.
- If there is an overload circuit breaker supplied please mount this in line with the positive supply (fix one end to the battery terminal, and connect the positive supply lead to the winch on the other)
- Do not use a roller fairlead with synthetic rope as this can trap and damage the fibres

Remote Control

- The winch is supplied with two types of remote control (a) plug-in wander lead (b) twin handset wireless remote control. The plug-in wander lead is considered to be the primary control system and allows very precise control. It should always be kept available for use.
- The plug-in wander lead will either have a direct push-fit three-pin plug (17,000lb) or a push and twist 'bayonet fitting' (13,500lb). With the bayonet fitting, the plug should be lined up with the keyway (approximately 11 o'clock) on the socket and fully inserted, then rotated clockwise until the silver clip is directly at the top (12 o'clock).
- The wireless remote control receiver is pre-installed into the control box.
- To power on the transmitter hold down both buttons for approximately 3 seconds until the power light illuminates.
- To power off the transmitter repeat the process.
- If the transmitters are left on and unused for approximately 5 minutes they will auto power-off to preserve the battery.
- Always keep the wireless transmitters safe and dry and protect from unauthorized/ accidental operation.

4. SPOOLING THE ROPE

- We recommend the use of an assistant when spooling the rope.
- Spooling should be undertaken on a large open and level area.
- First, lay out the rope in front of the vehicle ensuring there are no twists or kinks.
- With the winch clutch disengaged, feed the drum end of the rope through the front of the roller/hawse fairlead and connect to the drum.
- If the winch has a 'through the drum' type fixing, undo the Allen head grub screw and feed the end of the rope through the hole until it is visible on the other side, Secure the grub screw.

- If the winch has a flange type fixing then secure the ring terminal at the end of the rope using the Allen head cap screw, but only tighten finger tight to allow the fixing to swivel on the screw.
- Attach the hook end to a suitable anchor point and position the vehicle so there is at least 3m of slack on the rope. Apply the vehicle hand brake.
- Holding the rope with gloved hands and at least 5m back from the winch apply as much pressure as you can by leaning your body weight against the rope and walking towards the winch whilst using the wired remote to wind in. Ensure that each wrap lays tightly next to the other until the rope tensions against the anchor point. There should be at least 6 wraps around the drum.
- The rope must be wound onto the drum from the bottom of the drum.
- Using the wired remote and whilst gently applying the vehicle foot brake to maintain tension, use the winch to pull the vehicle towards the anchor point.
- During the operation, regularly stop the winch, apply the handbrake to maintain tension and check the rope is spooling on evenly to the winch.
- If you have an assistant, they should remain in the vehicle to operate the brake, whilst you maintain control of the winch from outside the vehicle and using the wired remote.
- When the rope is all but approx. 3m spooled in, using the hand save to hold the hook, reverse the winch slightly to allow the hook to be released.
- Maintaining tension on the rope, pulse the remote to take in the remaining rope and then anchor the hook onto a suitable mounting point on the vehicle.

NOTES

- It is important to understand that it is the first 6-8 tight wraps around the drum and NOT the drum terminal fixing point that allows the wire or synthetic rope to grip onto the drum.
- The drum fixing is not load-bearing, it is only designed to allow the cable to be wound on under sufficient load for it to wrap tightly onto the drum.
- When wire rope is new it is greasy and springy and can easily unwind on the drum if tension is ever released.
- If the outer wraps of a wire rope do ‘unwind’ then you must pull the whole rope out and re-spool under tension. Failure to observe this will result in failure of the drum fixing.

5. WINCH OPERATION

- Ensure vehicle is secure by applying parking brake or chocking wheels.
- Power out (for a short distance) or free-spool the cable out and connect to a suitable anchor point
- Re-check all cable rigging before commencing.
- Plug in the winch hand controller and switch on the battery isolator if fitted. Feed the hand controller around the front of the vehicle and through the driver's window.
- To commence winching, start the vehicle engine and with the transmission in neutral operate the winch whilst guiding the path of the winch with the vehicle steering until free.
- You must ensure that the cable winds evenly onto the drum. Acute angle winching can result in rope bunching on the drum which could break out the winch cross bars.
- When the operation has been completed, the rope should be pulled out and re-spooled neatly under tension for the next use.

Notes

- Your winch is not designed to be used continuously but instead to provide the high load short duration pulls required to recover an off-road vehicle from difficulty.
- Never allow the winch motor to stall.
- Whenever you work your winch it will generate heat in the motor, high loading and/or long or repeated operation can cause the motor to overheat. Always monitor motor temperature; if the motor becomes too hot to comfortably hold your bare hand on stop operation immediately and allow to cool before further use.
- Do not exceed the maximum rated load of your winch.
- We recommend the use of a snatch block and double line technique for any loads exceeding 50% of winch rating. Always anchor hook back to suitable chassis fixing not the winch mounting plate
- Keep the vehicle engine running while winching to maintain battery charge.
- A minimum of 6 tight wraps on the drum must be maintained to prevent failure of drum fixing. Do not pull wire rope out past the red marking.
- Do not disengage the clutch will under load.
- Do not re-engage clutch while the winch is running.
- Never drive your vehicle to assist the winch in any way

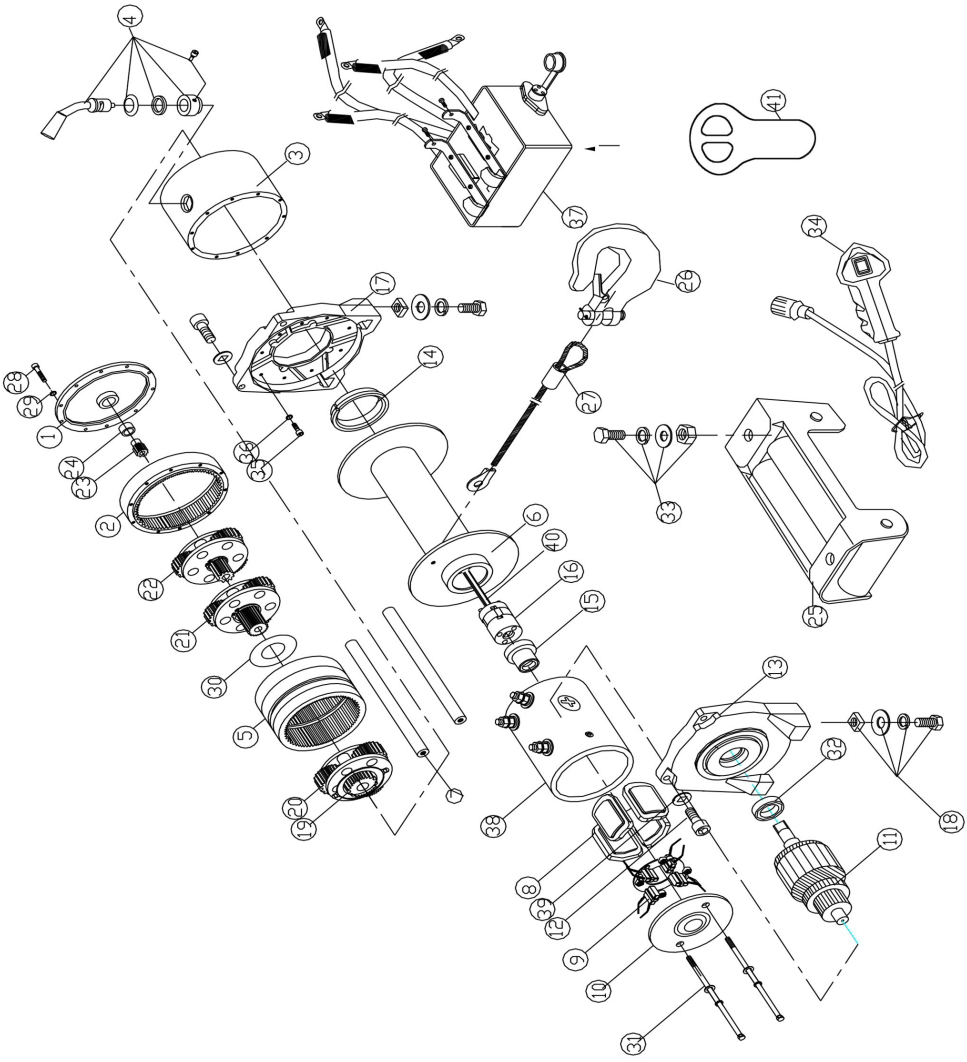
6. MAINTAINING YOUR WINCH

- The winch should be exercised at least once a month: Power out approx. 10m of cable, free spool 5m, then power back in under minimum 100kg load.
- Replace remote control batteries every 12 months or when exhausted.
- Keep protective winch cover fitted when the winch is not in use.
- All moving parts are permanently lubricated with grease and with normal use do not need greasing for the life of the winch.
- Clean your winch after use, use only low-pressure water and a brush to rinse off any dirt. Run the winch for a minute or two after cleaning to warm up motor and assist drying.
- Once dry you should use a light spray oil to coat the winch and wire rope before installing the winch cover.
- The winch should not be immersed in dirty water.

7. SYNTHETIC ROPE

- Do not allow the rope to contact sharp or abrasive objects
- The winch should not be immersed in dirty water.
- Do not expose to strong detergents, fuels, oils or anti-freeze solutions.
- After use; pull out the rope, wash, dry and carefully re-spool onto the drum.

Specifications 13,500Lb Winch



Technical data 13,500Lb Winch

Single line rated pull	13,500lb (5,909kg)
Motor	6.0hp/4.5kw, series wound
Control	Remote switch
Extra wireless remote switch	Optional
Gear train	3 stage planetary
Gear reduction ratio	265:01:00
Braking	Automatic load-holding brake
Drum size (diameter x length)	2.5” (63.5mm) x 9.6” (224mm)
Cable	3/8” (9.5mm) x 85’ (26m)
Remote control switch	Included
Battery	Recommended: 650 CCA
Net weight	41kg
Overall dimension (length x width x height)	20.8” x 6.3” x 8.6” (530 x 160 x 218mm)
Mounting bolt pattern	10” x 4.5” (254 x 114.3mm)

Line pull lb (kg)	Line speed ft/min (m/min)	Current A
0	21.3 (6.5)	65
2,000 (909)	11.5 (3.5)	126
4,000 (1818)	9.4 (2.85)	175
6,000 (2727)	7.9 (2.4)	230
8,000 (3636)	6.5 (2..0)	280
10,000 (4545)	5.8 (1.75)	355
13,500 (6102)	4.1 (1.25)	415

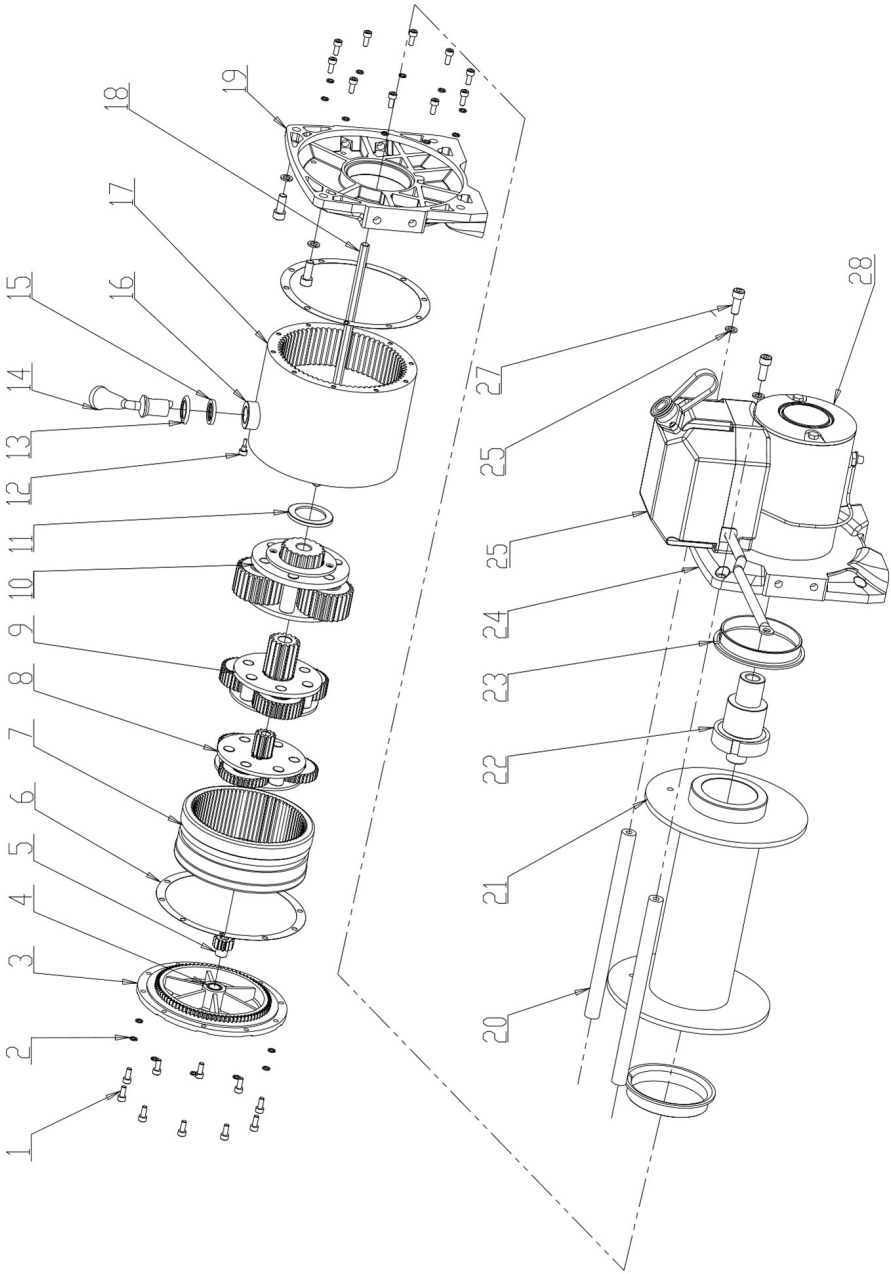
Layer	Rated line pull lb (kg)	Total rope on drum ft (m)
1	13500 (6102)	17 (4.8)
2	10010 (4550)	41 (12.0)
3	8840 (4018)	71 (21.0)
4	7410 (3368)	85 (26.0)

Parts List 13,500lb Winch

No.	Description	Qty
1	Gear-Box End Cover	1
2	Inner Gear	1
3	Gear Box-Tube	1
4	Clutch Handle Assy	1
5	Clutch Gear	1
6	Drum Assy	1
7	Tie Bar	2
8	Stator (12v & 24v)	1
9	Carbon Brush Assy	1
10	Motor End Cover	1
11	Rotor (12v & 24v)	1
12	Link Screw M8 x 25	4
13	Motor Base	1
14	Nylon Bearing	2
15	Coupling Joint	1
16	Brake	1
17	Gear Box-Base	1
18	Mounting Bolt Assy	4
19	Outer Spline	1
20	Gear Carrier Assy-output	1
21	Gear Carrier Assy-intermediate	1

No.	Description	Qty
22	Gear Carrier Assy-input	1
23	Sun Gear-input	1
24	Bearing	1
25	Roller Fairlead	1
26	Hook	1
27	Wire Rope	1
28	Link Screw M4 X 35	10
29	Lock Washer 4	10
30	Washer	1
31	Mounting Bolt M6 x 150	2
32	Bearing 6203zR	1
33	Mounting Bolt Assy of Roller Fairlead	1
34	Switch Assy	1
35	Link Screw M4 x 15	10
36	Lock washer 4	10
37	Solenoid Box Assy	1
38	Motor-Box -Tube	1
39	Lock Washer 8	4
40	Transmission Shaft	1
41	Wireless remote switch	1

Specifications SL17,500Lb Winch



Technical data 17,000Lb Winch

Single line rated pull	17,000lb (7,727kg)
Motor	6.0hp/4.5kw, series wound
Control	Remote switch
Extra wireless remote switch	Optional
Gear train	3 stage planetary
Gear reduction ratio	358.4 :1
Braking	Automatic load-holding brake
Drum size (diameter x length)	3.5” (88mm) X 8.7” (221.6 mm)
Cable	Φ12mm, 26m
Remote control switch	Included
Battery	Recommended: 650 CCA
Net weight	53.5kg
Overall dimension (length x width x height)	555 × 196 × 249mm
Mounting bolt pattern	10” x 4.5” (254 x 114.3mm)

Line pull lb (kg)	Line speed ft/min (m/min)	Current A
0	23.9/7.28	68
2000 (909)	12.2/3.7	100
4000 (1818)	9.3/2.8	155
6000 (2727)	7.4/2.25	185
8000 (3636)	6.0/1.83	235
10000 (4545)	5.1/1.55	275
12000 (5454)	4.4/1.34	330
15000 (6818)	3.3/1.0	435
16000 (7272)	3.12/0.95	455
17000 (7727)	2.95/0.9	520

Layer	Rated line pull lb (kg)	Total rope on drum ft (m)
1	17000 (7727)	20.4 (6.22)
2	15482 (7037)	42.44 (12.94)
3	12584 (5720)	66.74 (20.35)
4	10550 (4795)	85.28 (26.0)

Parts List 17,000lb Winch

No	Description	Qty
1	Hexagonal screw M5 X 12	20
2	Washer	20
3	Gearbox end cover	1
4	Bearing	1
5	Sun gear	1
6	Washer	2
7	Clutch gear	1
8	Gear carrier 1	1
9	Gear carrier 2	1
10	Gear carrier 3	1
11	Washer	1
12	Screw	1
13	Clutch knob washer cover	1
14	Clutch knob	1

No	Description	Qty
15	Clutch knob washer	1
16	Clutch knob base	1
17	Gearbox tube	1
18	Transmission shaft	1
19	Gearbox base	1
20	Tie bar	2
21	Drum	1
22	Cone-shaped brake Assy	1
23	Coupling joint	1
24	Motor base	1
25	Solenoid box Assy	1
26	Washer	2
27	Screw	2
28	Motor Assy	1

Troubleshooting

Symptom	Possible cause	Remedy
Winch will not operate	Loose, damaged or corroded wiring	Check all wiring and connections to ensure good condition
	Either wireless or wired controls defective.	Test using other control system
	Winch supply battery inadequate	Check voltage of supply battery matches winch
	Motor has burnt out	Test motor by direct connection and replace if required
Runs in only one direction	Loose, damaged or corroded wiring	Check all wiring and connections to ensure good condition
	Motor connection stud(s) have been overtightened and snapped internal weld	Replace motor
	Wander lead not correctly connected	Check wander lead is correctly inserted into control box socket (& rotated to lock position if bayonet type)
Will not free spool	Free spool not dis-engaged	Disengaged free spool
Load does not hold	Free spool not engaged	Engage free spool
	Brake unit has failed	Replace brake unit
	Winch rope has come off drum fixing	Re-fix rope to drum
Winch runs in opposite direction	Yellow and black terminal connections reversed	Swap connections to Yellow and black terminals
	Wireless receiver output wires connected in reverse	Swap wireless receiver output wire connections
Motor runs extremely hot	Long period of operation	Stop operation to let the unit cool down
	Weight overload	Reduce load

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