

FITTING AND OPERATING  
OWNERS GUIDE



WINCHMAX HYDRAULIC RANGE

10,000lb

15,000lb

20,000lb

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

WINCHMAX LTD  
[WWW.WINCHMAX.CO.UK](http://WWW.WINCHMAX.CO.UK)

Thank you for buying a WINCHMAX hydraulic winch suitable for mid duty commercial vehicle recovery operations. By correctly installing and using this product within its limitations, as per the instructions provided and general good practice, 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. ONLY SUITABLY TRAINED AND QUALIFIED OPERATORS SHOULD USE THE WINCH.**

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. Please ensure that this guide is kept with the winch for easy reference and do not hesitate to contact WINCHMAX if you require any clarification of its contents.

### **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.
- Never stand between the winch and the load.
- Never use a damaged winch. Check your winch thoroughly, including all electrical connections before use. Any damaged parts should be replaced, using only genuine WINCHMAX parts.
- Check the direction of rotation is correct, the wire must load on and off the bottom of the drum.
- If a wire rope breaks or pulls loose under load it can lash back with significant force. We recommend using a heavy winch blanket/damper draped over the rope towards the hook end to reduce whiplash in the event of rope failure.
- Protect the winch from shock/snatch loads - do not allow the winch rope to be yanked by a rolling load or moving vehicle as this could momentarily more than double the load on the rope potentially causing catastrophic failure.
- Never drive your vehicle to assist the winch in any way.
- Do not use the winch rope to tow vehicles.
- Do not submerge winch.
- Do not use winch if the rope is frayed or damaged.
- Always use hand saver tab and protective gloves when handling the hook, or applying hand tension when loading the rope back into the drum.

- Never hook the winch rope back on itself as this will cause strand damage.
- 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 that the winch rope re-spools onto the drum tightly evenly, do not allow cable bunching.
- Never attempt to use a non-sheathed 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.
- Never leave the wander lead connected when not in use, protect the wander lead cable from damage or entrapment in the cable drum.
- Always shut down the hydraulic pump before undertaking any maintenance on the winch.

## Physical Installation

**WARNING:** Correct installation of your winch is vital for correct and safe operation. It is the responsibility of the installer to ensure that the winch is installed in accordance with this guide and all relevant regulations.

When unpacking, make sure that the item is intact and undamaged. If any part is missing or damaged, please contact your supplier immediately.

- Only install your winch with a genuine WINCHMAX mounting plate or bumper. For these instructions, we are describing installation using a pre-drilled WINCHMAX mounting plate suitable for flatbed installations.
- The winch must be mounted with the direction of pull perpendicular to the mounting bolt fixings and the mounting point on the vehicle must be capable of withstanding the maximum rated pull of the winch.
- Mount the fairlead (rollers if the winch is fitted with steel wire rope, or aluminium hawse if the winch is fitted with un-sheathed synthetic rope) to the upstand of the mounting plate using supplied bolts, nuts and washers.
- It must be understood that the fairlead acts as a guide only, it is not designed to withstand winch loads. It must not be used to change the direction of the rope any more than a few degrees in the vertical or horizontal plane.
- If you need to change the direction of pull to a greater degree, then a suitable snatch block or pulley must be used.
- Mount the winch to the mounting plate using supplied bolts, square nuts and washers, tighten the mounting bolts to a torque of 60Nm (45ft/lb). All mounting points should be utilised.
- The supplied bolts are the correct length for installation on a 5-7mm 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 fully engage the square nut but must not protrude to the extent that the bolt contacts the top of the nut housing in the winch frame.

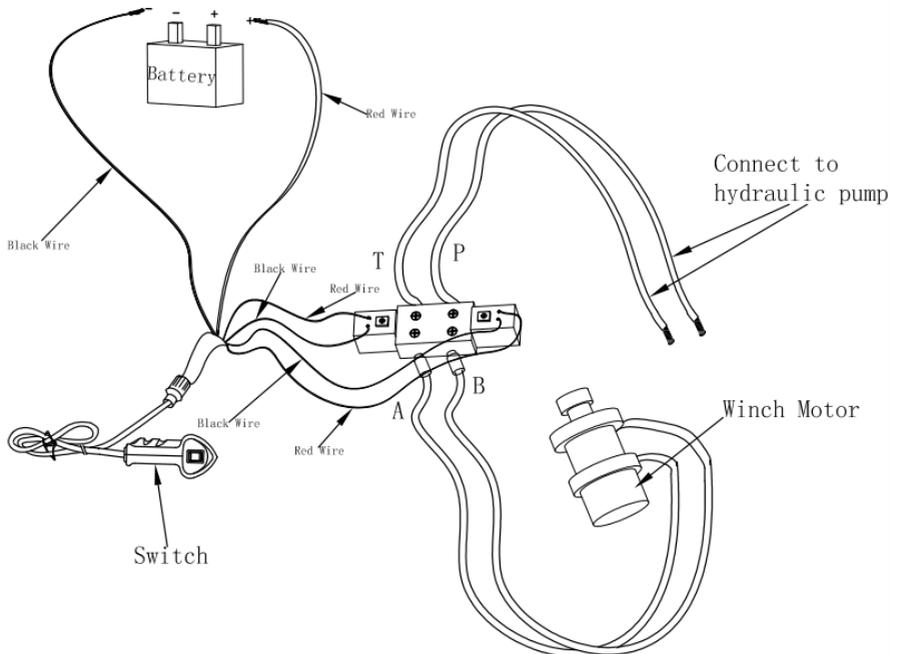
- Feed the hook end of the wire rope from the drum through rollers to the front and attach the clevis hook. Where the thimble eye is too big or if a fixed hook is used, you may need to remove the top fairlead roller to allow the hook end to pass through.
- With a synthetic rope with a spliced-on hook you may need to pull the rope off and feed the rope back through the hawse fairlead from the drum end.

### Connecting the Hydraulic Supply:

**WARNING: the hydraulic supply must be fitted with a suitable regulator. Do not exceed the rated pressure or flow for the winch.**

- The connection and set up of the hydraulic supply should only be undertaken by a hydraulic engineer or suitably competent person.
- The specification of the hydraulic supply is critical - it must not exceed the limitations of pressure or flow as to do so could cause catastrophic failure of the winch.
- Where the hydraulic pump can exceed the maximum working pressure of the winch a suitable pressure regulator must be installed and calibrated to protect the winch from over-pressure.

**Fig 1. Basic Configuration Schematic**



## **Remote Control (optional) - wireless and plug in types.**

The primary remote control for your winch is the plug-in wander lead. This should be connected as per the schematic (Fig.1).

- Please ensure that the electrical supply from the battery(s) matches the coil voltage (12v / 24v) of the solenoid direction valve. Where the vehicle has a 24v system consisting of two 12v batteries wired in series, a 12v supply can be derived from a single battery if required.
- For the initial set-up of the winch, the wander lead should be used.
- Take care when inserting the wireless remote plug into the control box socket, you must line up the socket end with the groove in the socket.
- The wander lead will allow smaller adjustments than the optional wireless remote, so should always be used when the load is close the winch or for fine adjustment.

## **SPOOLING THE ROPE**

- Your winch may be supplied with the rope already loaded onto the drum or separately to facilitate easier installation.
- 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 handle in the 'disengaged' position, rotate the drum to a convenient position so that the rope holes in the drum are at the front.
- Feed the drum end of the rope through the fairlead UNDER the drum and back through the rope hole so that the end of the rope is flush with the surface of the drum.
- Secure the rope end using the Allen head screw.
- Attach the hook end to a suitable anchor point and position the vehicle so there is at least 2m of slack on the rope. Apply the vehicle hand brake.
- Holding the rope with gloved hands, 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 powering it in until you take up the slack on the rope. Ensure that each wrap lays tightly next to the other until the rope tensions against the anchor point until there least 4 wraps around the drum.
- The rope must be wound onto the drum from the bottom.
- Power the winch in to pull the vehicle towards the anchor point applying the brakes as required to maintain tension on the rope.
- During the operation, regularly stop the winch, apply the handbrake to maintain tension and check the rope is spooling on evenly and neatly as this will minimise the possibility of damage to the rope under heavy loading.
- 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 there is approx. 3m of rope left to be spooled in, using the hand saver 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.
- 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 could result in the failure of the drum fixing.

## **WINCH OPERATION**

(This describes using the winch on a vehicle for self-recovery. Modify the procedure as required where you are using the winch to recover a second vehicle)

- Ensure vehicle is secure by applying parking brake or chocking wheels.
- The gearbox handle has two positions 'engaged' and 'disengaged'. For free spool the gearbox should be disengaged. For power operation, the gearbox must be fully 'engaged'.
- Power out (for a short distance) or free-spool the cable out and connect the hook to a suitable anchor point.
- Re-check all cable rigging before commencing.
- Plug in the winch hand controller. Feed the hand controller around the front of the vehicle and through the driver's window.
- Operate the winch whilst guiding the path of the winch with the vehicle steering as necessary.
- You must ensure that the cable winds evenly onto the drum. Acute angle winching can result in rope bunching on the drum and excessive lateral loading resulting in damage to the drum flanges and cross-bars.
- When the operation has been completed inspect the rope, if it has not spooled tightly and evenly it should be pulled out and re-spoiled correctly under tension for next 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.
- A minimum of 4 tight wraps on the drum must be maintained to prevent failure of drum fixing. Do not pull wire rope out past the red marking.
- The clutch must be fully engaged for any powered winching operation. Do not attempt to disengage the clutch under load.
- Do not attempt to re-engage clutch while the winch is running.
- Never use vehicle traction to assist the winch in any way.

## **MAINTAINING YOUR WINCH**

- The winch should be operated at least once a month: power out approx. 10m of cable, free spool 5m, then power back in under minimum 100kg load.
- Regularly check all fixing bolts and the crossbar fixings are secure.
- 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.
- 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.
- Replace any damaged components before next use.

## **CARE OF THE ROPE - Wire Rope**

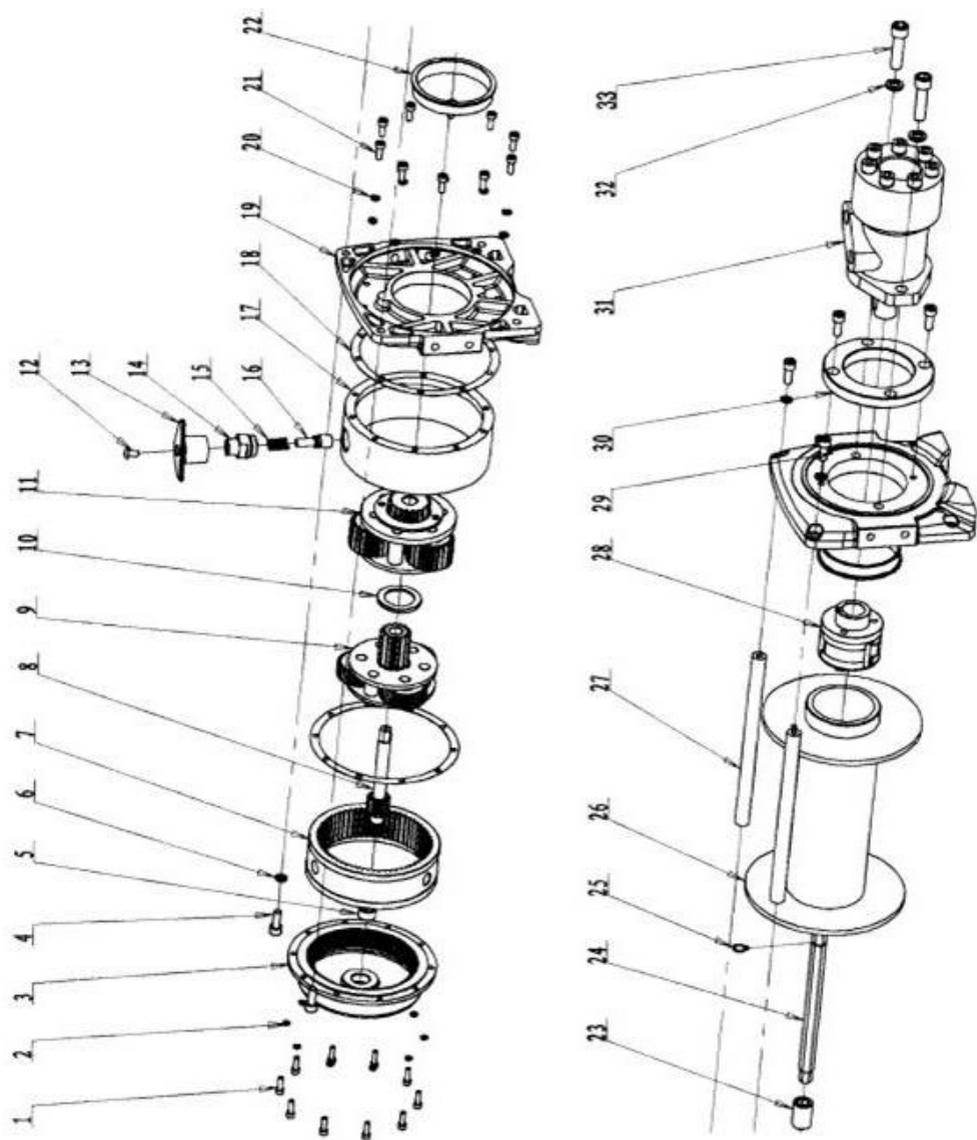
Wire Ropes Directive ISO 4309:2004/2010 details the guideline for the care and maintenance of wire rope and provides the criteria by which rope should be replaced. A summary of these follows below

- 10 strands or more broken within a 25mm length of the rope
- Visible signs of stretching (reduced diameter along part of length) or is 10% less than its original diameter at any point along its length.
- Excessive corrosion.
- Deformed twisted, kinked or bent.
- Faulty or broken hook or hook safety catch.
- Never use the hook to link back to the rope
- Always ensure that the rope spools tightly and neatly back onto the drum.
- Dress the rope and hook with light oil to inhibit corrosion.
- Keep the winch covered when not in use.

## **CARE OF THE ROPE - Synthetic Rope**

- Do not allow the rope to contact sharp or abrasive objects.
- Avoid immersion 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.
- The first 2-3m from the hook end is the most exposed and so vulnerable to damage. The use of a protective rope protector is recommended.
- Keep winch covered when not in use.
- Replace rope if there is any significant fibre damage

# Parts diagram



## Winch Parts List

Item No.	Description	QTY
1	Hexagon bolt M5 X 16	10
2	Spring washer	10
3	Gearbox end cover	1
4	Hexagon bolt M8 X 20	6
5	Bearing	1
6	Spring washer	4
7	Clutch gear	1
8	Transmission shaft	1
9	Planetary gear assembly 1	1
10	Plastic washer	1
11	Planetary gear assembly 2	1
12	Hexagon bolt M6 X 15	1
13	Clutch handle	1
14	Clutch handle localizer housing	1
15	Spring	1
16	Clutch handle localizer	1
17	Gearbox	1
18	Paper washer	2
19	Gearbox base	1
20	Spring washer	10
21	Screw M6X16	10
22	Sliding bearing	2
23	Hexagon connector	1
24	Driveshaft	1
25	Hoop 14.8mm X 11.9mm X 1mm	1
26	Drum	2
27	Tie bar	2
28	Brake	1
29	Motor base	1
30	Motor ring base	1
31	Hydraulic motor	1
32	Spring washer	2
33	Hexagon bolt M12 X 45	2

### Technical Specifications 10,000lb Hydraulic Winch

Single Line Rated Pull	10,000lb (6,804kg)
Cable	25m of 9.1mm Galvanized Wire Rope
Hook	¾" Clevis Hook. Zinc Plated. Safety Catch.
Fairlead	4-way Roller (wire rope) Hawse (synthetic rope)
Weight (GW)	56kg (123lb)

Layer Rated	Line pull (lb)	Pull per layer (kg)	Line speed m/min
1	10000	4550	4.94
2	9150	4159	5.4
3	8440	3840	5.86
4	7280	3550	6.32

### Technical Specifications 15,000lb Hydraulic Winch

Single Line Rated Pull	15,000lb (6,804kg)
Cable	25m of 12mm Galvanized Wire Rope
Hook	½" Clevis Hook. Zinc Plated. Safety Catch.
Fairlead	4-way Roller (wire rope) Hawse (synthetic rope)
Weight (GW)	62kg (136lb)

Layer Rated	Line pull (lb)	Pull per layer (kg)	Line speed m/min
1	15000	6780	4.81
2	12100	5470	5.96
3	10100	4570	7.12
4	8800	3980	8.27

### Technical Specifications 20,000lb Hydraulic Winch

Single Line Rated Pull	20,000lb (6,804kg)
Cable	25m of 14mm of Galvanized Wire Rope
Hook	½" Clevis Hook. Zinc Plated. Safety Catch.
Fairlead	4-way Roller (wire rope) Hawse (synthetic rope)
Weight (GW)	55kg (121lb)

Layer Rated	Line pull (lb)	Pull per layer (kg)	Line speed m/min
1	20000	9072	4.24
2	17860	8118	4.75
3	16130	7332	5.26
4	14710	6686	5.77

## Technical Specifications Common to 10,000lb, 15,000lb and 20,000lb Hydraulic Winches

Motor	Hydraulic
Control	Not Supplied
Gear Reduction Ratio	32:1
Gear Train	3 Stage Planetary
Clutch	Sliding Ring Gear
Braking Action	Automatic
Drum Size	Diameter 88mm Length 222mm
Drum Finish	Black, painted.
Flow (Max)	60 l/min
Pressure Hose Connections	18mm/1.5mm
Pressure (Max)	10.8Mpa (108 Bar)
Weight (GW)	56kg (123lb)
Overall Dimensions (LxWxH)	548 x 196 x 249mm
Mounting Bolt pattern	10.00"±0.015" x 4.50"±0.010" (254 x 114.3mm)
No Load Line Speed	6.5m/min (21.3 ft/min)
Winch Finish	Original Orange Powder Coated

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### Warranty

- WINCHMAX LTD provides a limited lifetime warranty for all its products
- It is the owner's responsibility to remove and return any defective item to WINCHMAX for replacement or repair.
- In the case of failure, consequential damage or loss is not covered.
- Failure to install and operate the winch in accordance with these instructions and general good practice will invalidate the warranty.
- The warranty does not cover accidental damage, misuse or where the product has been tampered with in any way.
- The warranty does not cover wearing parts such as the rope or brake.
- Please refer to the WINCHMAX website for full terms and conditions.

**WINCHMAX LTD**

info@winchmax.co.uk [www.winchmax.co.uk](http://www.winchmax.co.uk)

The Powerhouse, Earsham Hall, Bungay, Suffolk, NR3452AN. Tel +44(0)1986899266

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