

### Introduction

#### Feature

Line pull (1 <sup>st</sup> layer):	5,440 kg / 12,000 lb ( SAE J706 rating ) 5,100 kg ( EN 14492-1 rating ) first layer of rope
Line speed (1 <sup>st</sup> layer):	10 mpm / 33 fpm at 60 l / min (15.9 g / min)
Operation pressure:	150 bar / 2,175 psi
Brake:	Drag brake and over-center valve provided for full 100% braking
Clutch (freespooling):	Pull and turn extended T-handle for rapid wire rope payout
Recommended wire rope:	12 mm x 39 m, 1960 N/mm <sup>2</sup> grade, A minimum breaking strength of 100.5 KN required
Hydraulic system:	PTO/power take off unit driven pump

#### Read this manual carefully

You should carefully read and understand this manual before operating it. Careless winch operation may result in personal injury hazards or property damage.

#### Information requesting or parts ordering

Please specify the followings information:

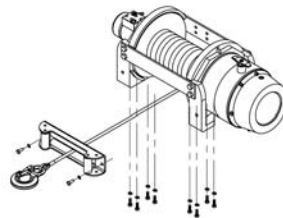
- Winch PN
- Serial number
- Part description
- Part number
- Quantity for each part

### Installation

Before using the winch, make sure all components have no corrosion or damaged; the environment should be clear and dry.

#### Mounting

- Winch shall be mounted on a flat and hard surface.
- Winch should be mounted as closed to center and as perpendicular as possible to the direction of the line pull.
- Wire rope shall be wound in an under-wound



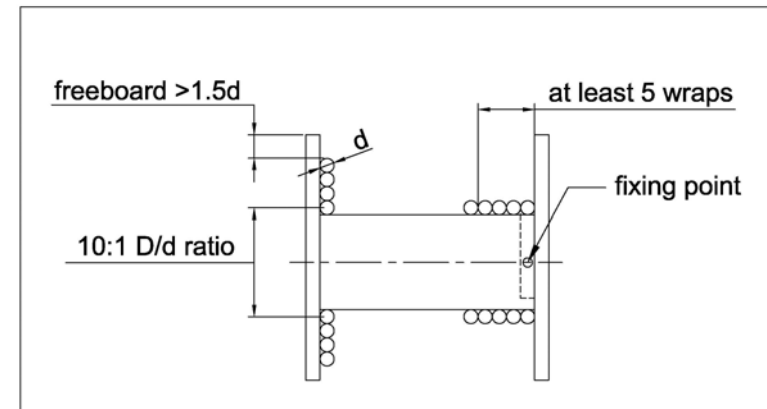
orientation only.

- Eight (8) M12 x 1.75 pitch 12.9 grade high tensile steel bolts must be used in order to sustain the loads imposed on the winch mounting.
- It is always preferred to use both tie bars in the final installed configuration.
- If there is a rope pileup on one end of the drum, reverse the winch to relieve the load and move your anchor point further to the center of the vehicle. Then you can rewind for a neat layer of the rope.

### Compliance with EN 14492-1

The winch HV-12 complies with European Standard of EN-14492:2006 Power-Driven Winches and the latest Machinery Directive: 2006/42/EC provided that the OWNER or END USER complies with all responsibilities described below.

1. Refer to the Instruction Manual to install winch for safe winching operation..
2. Fit a wire rope at 12 mm x 39 m grade 1960 N/mm<sup>2</sup> or EIPS with a minimum breaking strength of 100.5 KN to comply with EN ratings;
  - \* Rope drives with steel wire rope shall be dimensioned
  - \* At least 2:1 wire rope working coefficient for the first rope layer.
  - \* At least 10:1 D/d ratio to the centre of the rope
  - \* At least 1.5 layer of wire rope freeboard.
3. The wire rope must be painted red for 1.6 m on both ends and at least five (5) wraps of wire rope remained around the drum to comply with EN ratings;
  - \* At least two rope windings on the drum.
  - \* Rope attachment to withstand 2.5 x the remaining static force.
4. Fit a pressure relief valve to comply with rated capacity limiter.
5. Fit an emergency stop valve to comply with emergency stop function.
6. Fit a hook with a safety latch to comply with a safety hook.



## Warning

- This winch shall only be used for vehicle recovery or for pulling and lowering boats off trailers.
- The rated line pull and speed are based on the first layer of rope on the drum.
- The rope winding on the drum shall remain 5 wraps from the drum.

## Warranty

Comeup Industries Inc. takes the responsibility for all parts and components to be free from defects in materials and workmanship appearing under normal use for one year from the date of purchase.

## Parts List

				Ver:3
Item No.	Description	Part No.	Qty	
1	Hydraulic motor kit	880278	1	
2	Over center valve	880145	1	
3	Motor support rack	880279	1	
4	Tie bar kit	880130	1	
5	Tie bar kit	880131	1	
6	Drum bushing	880282	2	
7	Drum kit	881214	1	
8	Connecting shaft kit	880168	1	
9	Gearbox support rack	880169	1	
10	2 <sup>nd</sup> ring gear kit	880170	1	
11	2 <sup>nd</sup> stage carrier	880171	1	
12	1 <sup>st</sup> stage carrier	880172	1	
13	1 <sup>st</sup> ring gear	880173	1	
14	1 <sup>st</sup> shaft kit	880174	1	
15	Clutch kit	880156	1	
16	Gear box kit	880176	1	
17	Drag brake kit	880177	1	
18	Brake disc	881175	1	
19	Brake spring	881128	1	
20	Brake cover kit	880178	1	
21	Roller fairlead	880180	1	

## Winch Assembly

