



Model: HV-8000SP  
HV-10000SP  
HV-12000P  
HV-15000P

○ INSTRUCTION  
MANUAL



**Note:**  
Roller fairlead does not  
mount to winch.

**Hydraulic  
Recovery  
Winch**





## Hydraulic Recovery Winch

Thanks for purchasing a **COME UP** WINCH. This manual covers operation and maintenance of the winch. All information in this publication is based on the latest production information available at the time of printing.

### General Safety Precautions

A **COME UP** Winch is designed to give safe and dependable service if operated according to the instructions. Read and understand this manual before installation and operation of winch.

Follow these general safety precautions:

- Don't use unsuitable snatch block or accessories.
- Don't use unsuitable wire rope in construction, strength or having any defects.
- Check the winch for smooth operation without load before winching operation.
- Make sure the wire rope is wound evenly on the first layer on the drum, rewind it if not evenly wound.

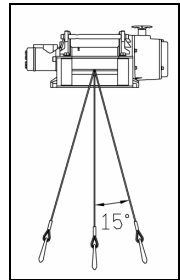
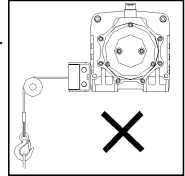


1. The winch is rated for intermittent-periodic duty.
2. The winch is not to be used to lift, support or otherwise transport personnel.
3. A minimum of five (5) wraps of rope around the drum are necessary to support the rated load.
4. When choosing the right winch, you need to consider the vehicle size and weight. As a general guide, you need a winch with a maximum load rating of at least one to one and a half times greater than the gross vehicle weight.
5. The rated line pull of the winch must be powerful enough to overcome the added resistance caused by what ever the vehicle is stuck in.

## I. Safety Precaution

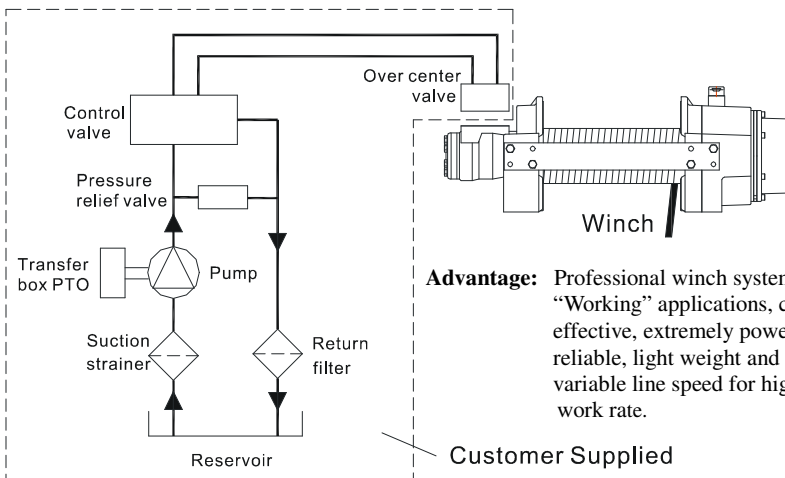
Please read and understand this Instruction Manual before installing your winch.

- ⚠ Don't use unsuitable wire rope in construction, strength or having any defects.
- ⚠ Don't use unsuitable hook and snatch block for wire rope.
- ⚠ The operator of winch in some cases may be required to have qualification according to applicable laws and ordinances.
- ⚠ Do not use winch as a lifting device or a hoist for vertical lifting
- ⚠ Do not use winch to move people.
- ⚠ Do not exceed maximum line pull ratings shown in tables.  
Shock load must not exceed these ratings.
- ⚠ Keep hands clear of wire rope and fairlead opening.
- ⚠ Pull from an angle below 15 degree to straighten up the vehicle or load. (Fig2)
- ⚠ Use leather gloves or a heavy rag when handling the wire rope.
- ⚠ When winching a heavy load lay a heavy blanket or jacket over the wire rope near the hook end.



## Hydraulic System Installation

(Powered by PTO / power take off unit driven pump)



**Advantage:** Professional winch system for “Working” applications, cost effective, extremely powerful, reliable, light weight and variable line speed for high work rate.

### **As a general rule:**

- ▶ The hydraulic system shown above must contain over center valve, control valve and pressure relief valve for having the winch operated correctly. Failure to use the correct valves may result in damage to the winch, property, or personal injury.
- ▶ The relief valve must be set at the winch operating pressure and does not exceed the rated pressure. Failure to use the correct pressure and flow may result in damage to the winch, property or personal injury.
- ▶ The hydraulic pressure or flow lower than those rated for the winch may result in a lower line pull or lower line speed.
- ▶ The bigger nominal bore hose, the better winch performance.
- ▶ Keeping cleanliness and accuracy on the hydraulic system installation are essential to have hydraulic system functioned properly
- ▶ All hose lengths are kept to a minimum because pressure and flow loss is increased as hose length increases
- ▶ Pressure and return lines in excess of 3.5 meter ( 11.5'' ) should be compensated with an increase in nominal bore size

### **Hydraulic System Specification:**

- ▶ System type: Open system with filtered return line
- ▶ Over center valve: Give smoothly controlled winch out when under load and to provide full dynamic braking. It must be installed to hold full load
  - Port A means the inlet port of oil from reservoir
  - Port B means the return port of oil to reservoir.
- ▶ Relief valve: Set at the winch operating pressure
- ▶ Pump: With a max. oil supply of 15.9 g / min ( 60 l / min ) at top motor rpm.
  - The pump must be capable of delivering a pressure of 170 bar ( 2,466 psi )
- ▶ Reservoir: Must be fitted with an oil filler device comprising strainer and filter and a dip stick. The capacity of the tank should be at least 60 liters.
- ▶ Hoses: Inlet line ... 1 1/4'' – 1 1/2'' nominal bore (N.B.) from reservoir to pump
  - Return line .....1'' (N.B.) from control to reservoir
  - Pressure hoses ..... 1/2'' (N.B.) from control valve to over center valve
  - Motor drain line pipe: 1/4'' BSP N.B.
- ▶ Control valve: 4 way, 3-position with spring centered, open centre
- ▶ Pressure relief valve: Must be set at the winch operating pressure
  - ( It should be mounted as closed to the winch as possible)
- ▶ Hydraulic motor: Heavy, industrial and long periods used Danfoss OMP80 for HV-8000SP, OMP100 for HV-10000SP, OMP125 for HV-12000P and OMP160 for HV-15000P
  - It is recommended to have the motor drain line connected back to the reservoir

## II. Performance Date

### ► Specification

Model		HV-8000SP	HV-10000SP	HV-12000P	HV-15000P
Line Pull kg / lb		3,629 / 8,000	4,535 / 10,000	5,443 / 12,000	6,803 / 15,000
Line Speed mpm / fpm		15 / 49	12 / 39.45	11 / 35.4	9 / 28.8
Operation pressure		140 bar / 2,030 psi			
Max. oil flow		15.9 g / min ( 60l / min)			
Motor	Displacement	77.8 cm <sup>3</sup> / rev 4.7 in <sup>3</sup> / rev	97.3 cm <sup>3</sup> / rev 5.9 in <sup>3</sup> / rev	125 cm <sup>3</sup> / rev 7.6 in <sup>3</sup> / rev	156 cm <sup>3</sup> / rev 9.5 in <sup>3</sup> / rev
	Rotation	Anti-clockwise			
Gear train	Type	2 stage planetary gear			
	Ratio	16:1			19.4:1
Free-spool		One way rotating ring gear free-spool			
Brake		Spring applied drag brake			

### ► Line Pull and Speed

Model		HV-8000SP	HV-10000SP	HV-12000P	HV-15000P
1st layer	Line pull kg / lb	3,629 / 8,000	4,535 / 10,000	5,443 / 12,000	6,803 / 15,000
	Line speed mpm / fpm	15 / 49	12 / 39.45	11 / 35.4	9 / 28.8
	Rope cap m / ft	5.6 / 18	7.5 / 25	8.8 / 28.8	7.6 / 25
2nd layer	Line pull kg / lb	3,019 / 6,655	3,770 / 8,320	4,641 / 10,232	5,677 / 12,516
	Line speed mpm / fpm	18 / 59	14.6 / 47.9	12.6 / 41.3	10.5 / 34.4
	Rope cap m / ft	12.3 / 40	16.4 / 54	19.2 / 63	16.8 / 55.1
3rd layer	Line pull kg / lb	2,585 / 5,698	3,330 / 7,120	4,045 / 8,919	4,869 / 10,736
	Line speed mpm / fpm	21 / 69	17.1 / 56.1	14.5 / 47.6	12.3 / 40.4
	Rope cap m / ft	20.2 / 66	26.9 / 88	31.3 / 102	27 / 89
4th layer	Line pull kg / lb	2,259 / 4,981	2,820 / 6,225	3,585 / 7,905	
	Line speed mpm / fpm	24.1 / 79	19.7 / 64.6	16.4 / 53.8	
	Rope cap m / ft	29.2 / 96	38.9 / 128	40 / 131	
5th layer	Line pull kg / lb	2,007 / 4,425	2,505 / 5,530		
	Line speed mpm / fpm	27.1 / 90	22.2 / 72.8		
	Rope cap m / ft	30 / 100	40 / 131		

The performance listed is applicable only when using the recommended wire rope.

HV-8000SP ... 9.5 mm X 30 m ( 3/8" X 100' ) galvanized aircraft

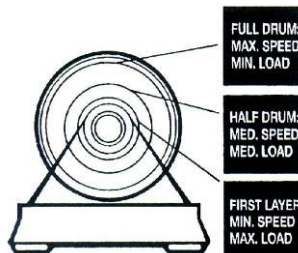
HV-10000SP .. 9.5 mm X 40 m ( 3/8" X 131' ) galvanized aircraft

HV-12000P . 12 mm X 40 m ( 1/2" X 131' ) 6 X W(19) + IWRC

HV-15000P . 14 mm X 27 m ( 9/16" X 89' ) 6 X W(19) + IWRC

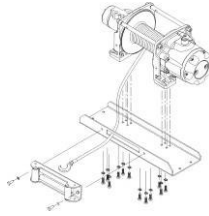
### ► How Winch Are Rated

Load and speed vary according to how much wire 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, winches are rated on their performance on the first layer of wire rope on the drum.

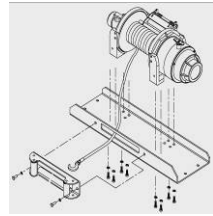


### III. Installation

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



HV-8000SP/10000SP



HV-12000P/15000P

#### ► **Mounting**

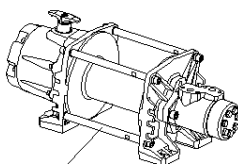
1. It is very important to have the winch and roller fairlead mounted on a flat and hard surface within 0.5 mm in order to make sure the motor, drum and gearbox housing are aligned correctly. Failure to align it could damage winch performance of winch, wire rope or mounting channel.
2. A minimum of 6.4 mm thick steel mounting channel is absolutely required to prevent the possibility of damage to the winch or vehicle.
3. The winch should be mounted as closed to center and as perpendicular as possible to the direction of the line pull. **This will keep the wire rope fleet angle centered on the drum as small as possible**
4. The tie bars supplied with the winch must remain attached when winch is foot mounted. Unless a roller fairlead is used, one of tie bar can be removed.
5. The Roller fairlead does not mount to winch directly.
6. All the twelve (12) M10 X 35, 12.9 grade high tensile steel bolts must be used for HV-8000SP and HV-10000SP in order to sustain the loads imposed on the winch mounting
7. All the eight (8) M12 X 35, 12.9 grade high tensile steel bolts must be used for HV-12000P and HV-15000P in order to sustain the loads imposed on the winch mounting

#### ► **Free-spool Function**

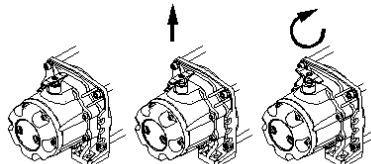
The free-spool allows rapid unwinding of the wire rope for hooking onto a load or anchor points and is operated by a T-handle.

The T-handle must be in the “Engaged” position before winching.

- 1). To disengage, lift the T-handle up and turn it at 90° clockwise rotation to the “Disengaged” position, wire rope can now be free spooled from the drum.
- 2). To engage, lift the T-handle up and turns it at 90° counter-clockwise rotation to the “Engaged” position.
- 3). If a T-handle can't be properly locked in the “Engaged” position, rotate the drum to make the free-spool couple to the gear train.
- 4). Wear leather gloves and use a hand-saver strap when guiding the wire rope out of the drum.



Tie bar



## IV. Maintenance

### ► Lubrication

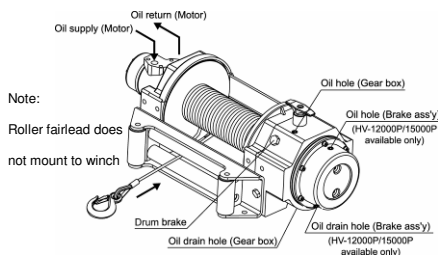
#### ► For Gear Box

All moving parts in the winch are permanently lubricated at the time of assembly. Under normal conditions factory lubrication will suffice. If re-lubrication is necessary after repair or disassembly use Castrol Alpha Spheroil L-EP 2 grease, 150 Viscosity (cSt) at 40 degree C. 0.3 liter for HV-8000SP/10000SP and 0.6 liter for HV-12000P/15000P

#### ► For Brake Assembly

Gear lubrication is an important component in insuring the long life of your winch. The type of lubricant will have a great influence. The gear oil your winch was shipped with is Castrol Alpha Series, SP-460, a viscosity ( cSt ) is 457.81/29.83 at 40°C/100°C. Consult your local lubricant distributor on the selection that best fits your climate and application.

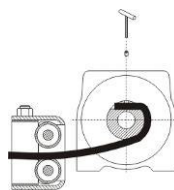
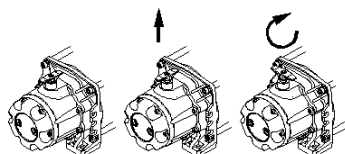
The initial lubricant should be changed after the first 10 hours of operation. Subsequent changes of 0.3 liter should be scheduled every 250 hours of operation or annually.



#### ► Wire Rope Replacement

Before installing a new wire rope, wrap the end of the wire rope with tape to prevent fraying. Wind the wire rope on the drum by pull a force to keep the tension constant. Never use a wire rope of a different size or material and only use genuine wire ropes.

- 1). Disengage the free-spool.
- 2). Spool the old wire rope, and then remove it from the drum.
- 3). Take horizontal roller and bolts of roller fairlead apart, then place the replacement wire rope through the roller fairlead opening, pass below the drum, and insert it into the hole on the drum core.
- 4). Use a hex wrench to tighten the screw downwards to secure the wire rope.
- 5). Tighten the horizontal roller and bolt of roller fairlead
- 6). Wear leather gloves and use a strap when guiding the wire rope off the drum.



► **Maintenance Schedule**

- Ensure that a responsible person carries out all inspections as per schedule.
- Inspections are divided into Daily, Monthly and 3 Monthly.

Classification of check			Checking item	Checking method	Checking reference	
Daily	Periodical					
	One month	Three month				
○			Installation	Loosening and center run-out of foundation	Checking of installing bolts	Existence of abnormalities
○			Wire rope	Breaking of base wire	Visual	Less than 10%
○	○			Decreasing of diameter	Visual, measuring(one month)	7%of nominal diameter max
○				Deforming or corrosion	Visual	To be not remarkable
○				Fastening condition of end	Visual	To be sufficient for hanging up of load
		○	Free-spool	Wearing of handle	Operating	To be free from remarkable wearing and damage
		○	Motor	Staining, damage	decomposition checking	Existence of abnormalities
		○	Brake	Wearing of lining	Decomposition checking	To be free from remarkable wearing and damage
○				Performance	Visual	Reasonable actuation
		○	Gear	Damage, wearing	Decomposition checking	To be free from remarkable wearing and damage
	○		Oil	Incorrect oil, flow oil	Visual	Add, replace or clean oil
○	○			Low oil level	Visual	Replenish oil



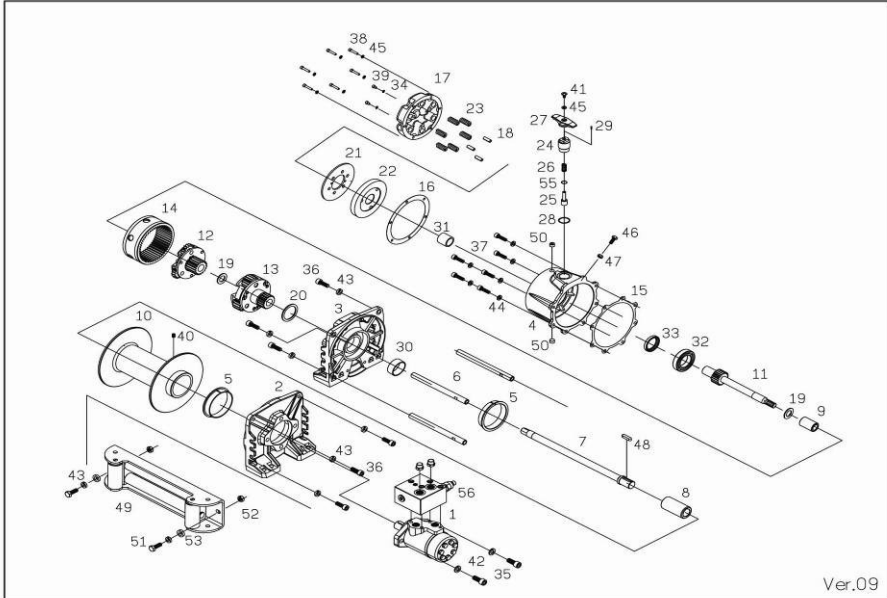
## V. Trouble Shooting

When winch fails to respond after several attempts, or if there are any defective operation check followings:

Symptom	Possible Cause	Remedy
Winch will not pull load	Overload	Reduce load
	The hydraulic system pressure is not adequate to power the load, or the back pressure is too high	Check the pressure on each side of the hydraulic motor
	Winch is mechanically binding up	Loosen, but not remove, the bolts that are attaching the tie bar and support racks. Rotate the drum, making sure that it turns freely without sticking. Tighten the bolts.
	The brake is not releasing	This requires disassembly of the brake assembly. Remove and replace of the brake assembly
Winch will not pay out	The brake is not releasing	This requires disassembly of the brake assembly. Remove and replace of the brake assembly
	The gear train is mechanically bundling up	This requires disassembly of the brake assembly. Remove and replace of the brake assembly
	Winch is mechanically binding up	Same as above.
	Damaged T-handle linkage	Replace or remove the free-spool assembly
Oil leakage	Damaged drum seals	Replace drum seal
	Damaged drum flanges	Replace drum
	Front seal in the hydraulic motor shaft has failed	Replace or repair the motor
Excessive noise	Low oil level	Refill oil
	Oil flow too high	Check oil flow rate
Fail in immediate stop after power off	Fail in installing or damaged over-center valve	Check over-center valve
	Wrong oil flow direction of port A & B on the over-center valve	Check over-center valve
	Damaged brake assembly	Replace or repair brake assembly
Drum noise	Insecure mounting	Check mounting
	Low oil flow	Check flow rate
	Low relief	Check relief valve setting

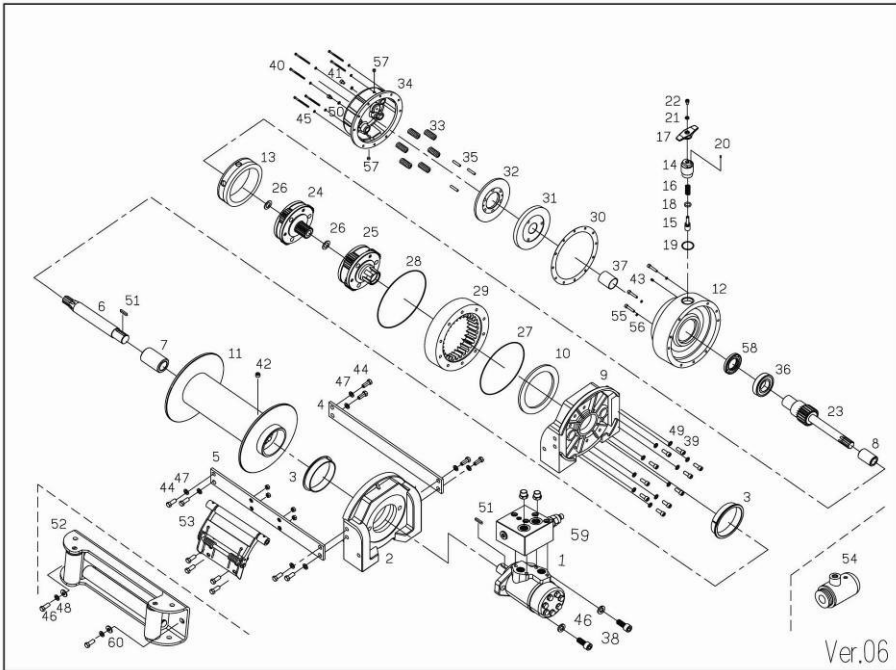
## VI. Replacement Parts List

### ►HV-8000SP/10000SP



No.	Description	Qty	No.	Description	Qty	No.	Description	Qty
1	Hydraulic motor	1	18	Plain washer	1	35	Oil Seal	
2	Motor support rack	1	19	Brake free-spool base	1	36	Hex bolt	2
3	Drum Support rack	1	20	Spiral spring	1	37	Hex bolt	6
4	Gear Box	1	21	Cam A	1	38	Hex bolt	6
5	Socket	1	22	Brake ass'y	1	39	Hex bolt	3
6	Drum Bushing	2	23	Free-spool barrel	1	40	Hex bolt	
7	Tie bar	3	24	Free-spool lever	1	41	Hex bolt	1
8	Connecting shaft	1	25	Pressed spring	1	42	Spring washer	2
9	Connecting socket	1	26	T-handle	1	43	Spring washer	6
10	Drum	1	27	Plain washer	1	44	Spring washer	6
11	1 <sup>st</sup> gear train	1	28	Spring pin	1	45	Spring washer	4
12	1 <sup>st</sup> planetary gear	1	29	Snatch ring	2	46	Nylon screw	1
13	2 <sup>nd</sup> planetary gear	1	30	O ring	1	47	Nut	1
14	Ring	1	31	Bushing	1	48	Double round key	2
15	Brake cover	1	32	Bushing	1	49	Roller fairlead	1
16	Anti-leakage packing	1	33	Bearing	1	50	Cap screw	2
17	Plain washer	2	34	Bearing	1			

►HV-12000P/15000P



Nu	Description	Qty	Nu	Description	Qty	Nu	Description	Qty
1	Hydraulic motor	1	20	Spring pin	1	39	Hex bolt	10
2	Motor support rack	1	21	Spring washer	1	40	Hex bolt	6
3	Drum bushing	2	22	Hex bolt	1	41	Hex bolt	2
4	Tie bar	1	23	1 <sup>st</sup> shaft	1	42	Hex bolt	1
5	Tie bar	1	24	1 <sup>st</sup> stage carrier	1	43	Hex bolt	1
6	Connecting shaft	1	25	2 <sup>nd</sup> stage carrier	1	44	Hex bolt	8
7	Connecting socket	1	26	Plain washer	2	45	Spring washer	6
8	Socket	1	27	O ring	1	46	Hex bolt	2
9	Gear support rack	1	28	O ring	1	47	Spring washer	10
10	Plain washer	1	29	2 <sup>nd</sup> ring gear	1	48	Spring washer	2
11	Drum	1	30	Anti-leak packing	1	49	Spring washer	10
12	Gear box	1	31	Brake assembly	1	50	O ring	2
13	First ring gear	1	32	Brake disc	1	51	Double round key	2
14	Free-spool barrel	1	33	Brake spring	6	52	Roller fairlead	1
15	Free-spool lever	1	34	Brake rear cover	1	53	Cable tensioner	1
16	Pressed spring	1	35	Spring pin	3	54	Air free-spool	1
17	T-handle	1	36	Bearing	1	55	Hex bolt	3
18	O ring	1	37	Needle bearing	1	56	Spring washer	3
19	Plain washer	1	38	Hex bolt	2	57	Cap Screw	2

## Limited Warranty

This Limited Warranty is given by the Comeup Industries Inc. (the "Seller") to the original purchaser (the "Purchaser") of a **COMEUP** Winch specified in this manual. This Limited Warranty is not transferable to any other party.

The Seller takes the responsibility for all parts and components, with the exception of the wire rope, motor and electric parts to be free from defects in materials and workmanship appearing under normal use for as long as the said Purchaser owns the vehicle that the winch was originally mounted on. Electrical components are warranted for 1 Year from date of purchase under the same conditions. Any **COMEUP** Winch, which is defective, will be repaired or replaced without charge to the Purchaser.

Upon discovering any defect, the Purchaser under this Limited Warranty is requested to return the complete winch and inform the seller or their authorised distributors of any claims. The Purchaser must provide a copy of the proof of purchase bearing the winch serial number, date of purchase, owners name and address, vehicle details and registration number.

The Limited Warranty does not cover any failure that results from improper installation, operation or the Purchaser's modification in design. The winch is designed for vehicle self-recovery use only and should not be used in industrial applications or for moving people. The Seller does not warrant them to be suitable for such use.