



Model: DH-1200



**○ INSTRUCTION
MANUAL**

**Heavy
Duty
Hoist**





Heavy Duty Hoist

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

General Safety Precautions

A **COME UP** Hoist 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 place any part of your body or clothing near rotating or moving components
- Don't stand too close to hoist when operating
- Don't lift loads greater than the rated load of the hoist
- Don't touch or hand wire rope or riggings when operating
- Don't put wire rope around an object and hook it back to rope
- Don't use unsuitable rope in construction, strength or having any defects.



1. The hoist is rated for intermittent-periodic duty.
2. The hoist is not to be used to transport personnel.
3. A minimum of five (5) wraps of rope around the drum are necessary to support the rated load.

I. Performance Data

► Specifications

Line Pull (first layer)		545 kg / 1,200 lb	
Line Speed (first layer, no load)		12.5 mpm / 41 fpm	
Amp.	12V	150 A 12 Volt	
Draw	24V	80 A 24 Volt	
Motor	Type	Series wound	
	Output	12V	900 w / 1.2 hp
		24V	600 w / 0.8 hp
Gear Train	Type	3 stage planetary	
	Ratio	216:1	
Brake		Automatic, full load cone brake	
Control		Detachable solenoid pack	
Wire	Length	A7 x 19 Aircraft galvanized	
Rope	Size	15.2 m / 50 ft	

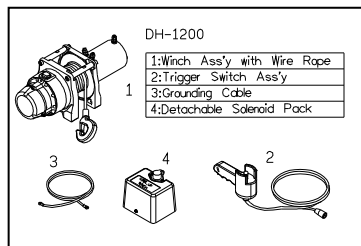
► Performance

1 st layer	Line pull (kg / lb)	545 / 1,200
	Line speed (mpm / fpm)	5.5 / 18.0
2 nd layer	Rope cap (m / ft)	3.2 / 10.5
	Line pull (kg / lb)	480 / 1,060
	Line speed (mpm / fpm)	6.3 / 20.7
3 rd layer	Rope cap (m / ft)	6.9 / 22.6
	Line pull (kg / lb)	430 / 950
	Line speed (mpm / fpm)	7.1 / 23.3
4 th layer	Rope cap (m / ft)	11.0 / 36.1
	Line pull (kg / lb)	390 / 860
	Line speed (mpm / fpm)	7.8 / 25.6
	Rope cap (m / ft)	15.5 / 50.9

► Line speed and Amp. Draw (First layer of rope)

Line Pull		Line Speed		Amp.		Percentage Duty Cycle
kg	lb	mpm	fpm	12 V	24 V	%ED
0	0	12.5	41.0	25	35	25
110	250	9.5	31.2	55	50	23
230	500	8.0	26.2	70	60	20
340	750	7.0	23.0	105	68	18
450	1,000	6.2	20.3	130	75	15
545	1,200	5.5	18.0	150	80	13

► Main Components



T_b

$$\text{Percentage duty cycle (\% ED)} = \frac{T_b}{T_b + T_s} * 100\%$$

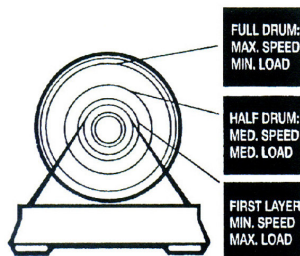
T_b: total sum of overall loading operating hours

T_s: total sum of stopping hours

T_b + T_s = approximately 1 to 10 min.

► How the hoist is rated

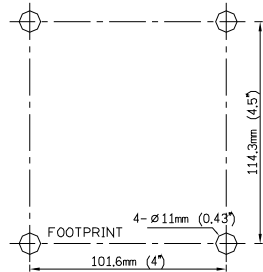
Load and speed vary according to how much wire rope is on the drum. The first layer of rope on the drum delivers the slowest speed and the maximum load. A full drum delivers the maximum speed and the minimum load. For this reason, hoists are rated on their performance first layer of rope on the drum



II. Installation

► Mounting

1. It is very important that the hoist be mounted on a flat and hard surface in order to make sure the motor, drum and gearbox housing are aligned correctly.
2. Four (4) M10 x 1.50 pitch 8.8 Grade High Tensile Steel Bolts must be used for DH-1200 in order to sustain the loads imposed on the winch mounting
3. Torque all mounting bolts to 41 N-M (30 FT – LB)
4. Use the following mounting dimensions.
5. Make sure the mounting surface is flat to within +/- 0.5 mm



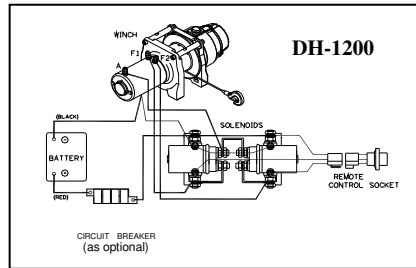
► Battery cables connection

Before using the hoist, make sure all electrical components have no corrosion or damaged; the environment should be clean and dry. The voltage drop from the battery connections to the hoist must not exceed 10% of the nominal voltage under normal operating condition.

Red cable: 4 AWG x 1.83m /72", Positive (+)

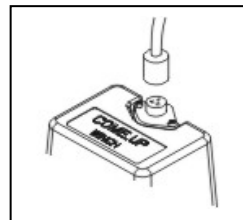
Black cable: 4 AWG x 1.8m /71", Negative (-)

1. Connect the battery cable from control terminals to hoist motor terminals as shown below.
2. Connect positive (+) and negative (-) cables from control terminals to battery.
3. If cables longer than 3 m (10') required, then 2 AWG is recommended.
4. A circuit breaker may be installed in the positive (+) cable near the battery to protect against short circuit..
5. 120 Amp. rating for 12V circuit breaker. 60Amp. rating for 24V circuit breaker.



► Switch Connection

1. A trigger switch with ϕ 1.25 mm X 3C X5 m (16AWG X 3C X 17ft) cord supplied.
2. Open the dust-proof cover of the winch, then insert the switch plug into the socket.



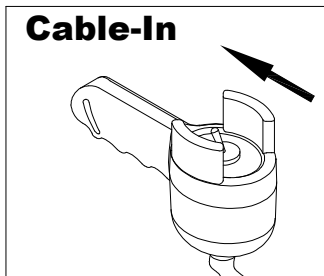
III . Operation

►Precautions

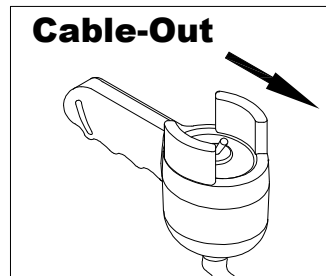
- ⚠ Check all safety and environmental conditions prior and during use.
- ⚠ Before use, ensure that you are familiar with all lifting operations (hoist speeds & direction).
- ⚠ A wire rope should be replaced if it shows signs of excessive wear, broken wires, corrosion or any other defects.
- ⚠ The operator must remain with the winch when it is being operated.
- ⚠ The hoists duty rating is S3 (intermittent – periodic)
- ⚠ If the hoist fails to pull a load under normal conditions, stop the operation within 30 seconds otherwise motor damage may occur.
- ⚠ Ensure that the hoist is connected to the correct voltage. 12VDC or 24VDC only
- ⚠ Make sure the wire rope is wound evenly on the first layer on the drum, rewind it if not evenly wound.
- ⚠ Remove the trigger switch from the hoist when not in use.
- ⚠ Do not wrap the wire rope around the load and back onto it self.
- ⚠ Keep hands and clothes away from the winch, wire rope, and fairlead.
- ⚠ Never unplug the trigger switch when winching a load.
- ⚠ To avoid insufficient power when winching a load, the vehicle should be running and in neutral.
- ⚠ Keep the trigger switch cord clear of the battery cable at all times.
- ⚠ If noise or vibration occurs when running, stop the hoist immediately and return it for repair.

►Cable-in/ Cable-out Operation

- 1). To determine “Cable - Out”, trigger → out (fig.4)
- 2). To determine “Cable - In”, trigger ← in (fig.5)
- 3). To stop hoist, release the trigger



(Fig4)



(Fig5)

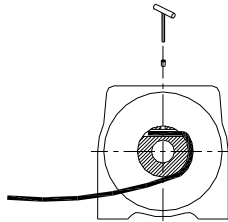
►Lubrication

All moving parts in the hoist 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 a marine type grease.

IV. Maintenance

► Wire Rope Replacement

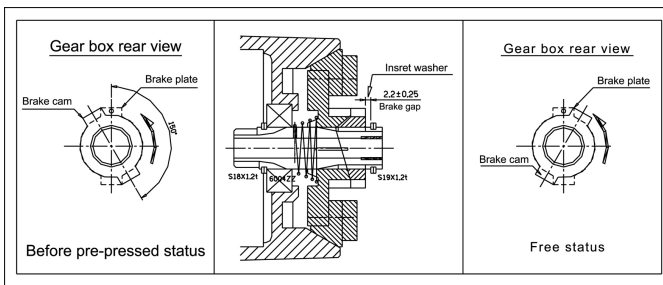
- Never use a rope of a different size or material and only use genuine replacement parts.
 - If the hoist is subjected to a high duty or excess load, the rope may require frequent replacement.
- 1). Spool the entire wire rope, and then remove it from the drum.
 - 2). Put and pass the replacement wire rope below the drum, and insert it into the hole on the drum core.
 - 3). Tighten the screw downwards to secure the wire rope.



► Brake Adjustment

When the brake wears to the point that the load begins to slip. The brake can be adjusted as follows:

- 1). Loosen the bolt on the brake cover and take out c-rings
- 2). Insert few washers to maintain the brake spacer between to be 2.2 ± 0.25 mm
- 3). Make sure to keep the clutch base plate counter-clockwise by $150 - 180$ degree



►Maintenance Schedule

- 1). Ensure that a responsible person carries out all inspections as per schedule.
- 2). Inspections are divided into Daily, Monthly and 3 Monthly.
- 3). Always keep the hoist and accessories free of dirt, oil, grease, water and other substances.

Classification of check			Item	Checking method	Checking reference	
Daily	Periodical					
	One month	Three month				
○			Installation	Mounting bolts & alignment.	Bolt tension & wear.	Existence of abnormalities
○			Trigger switch	Working	Manual	Reasonable actuation
		○		Wearing in contact points	Visual.	Free of wear or damage.
	○		Wire rope	Broken strands	Visual, measuring	Less than 10%
	○			Decrease in rope diameter	Visual, measuring	7% of nominal diameter max
	○			Deforming or corrosion	Visual	Existence of abnormalities
	○			Fastening condition of end	Visual	Existence of abnormalities
	○		Wirings	Fastening condition of terminals	Visual	Free of corrosion and tightening terminals .
		○	Motor	Staining, damage	Visual evidence of wear	Existence of abnormalities
		○	Brake	Wearing of lining	Visual evidence of wear	Free of wear or damage.
○				Performance	Visual	Reasonable actuation
		○	Gear	Damage, wearing	Visual evidence of wear	Free of wear or damage.
		○	Housing	Tie bar	Visual	Mounting surface is flat to within +/- 0,5 mm
		○		Support racks	Visual	Free of bent or crack

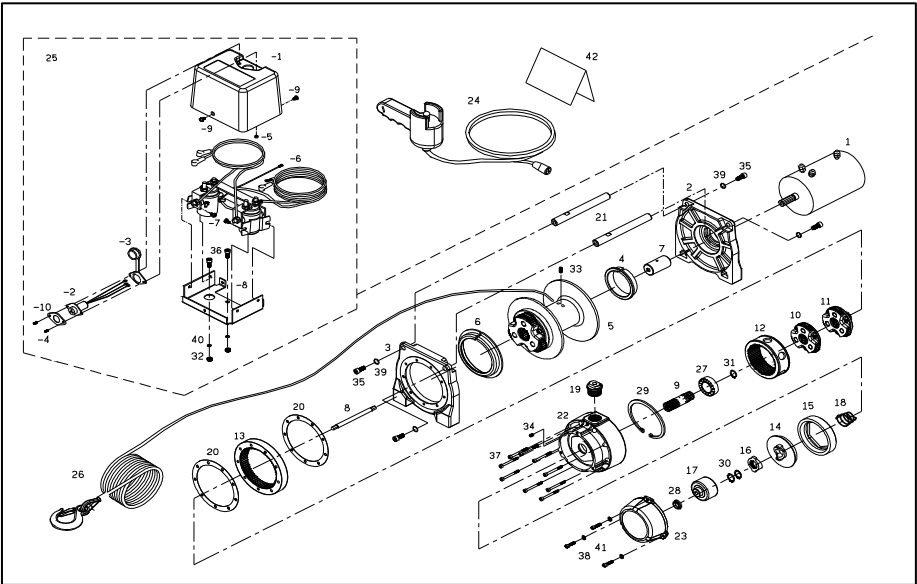
V. Trouble Shooting

When the winch fails to operate after several attempts, or if there is any fault while operating check the following:

Symptom	Possible Cause	Remedy
Hoist will not operate	Cut circuit	Check battery cable.
	Weak battery	Recharge or replace battery (at least 650CCA)
	Damaged circuit breaker	Replace circuit breaker
	Bad connection of wirings	Reconnect tightly
	Damaged solenoid	Replace solenoid
	Cut circuit on switch	Replace switch
	Damaged motor or worn carbon brush.	Replace motor or carbon brush
Motor runs in one direction.	Dropt or lost motor wiring.	Tighten wirings
	Broken wiring or bad connection	Reconnect or replace wiring
	Damaged or stuck solenoid	Replace solenoid
	Switch inoperative	Replace switch
Hoist won't lift rated load.	Dropt or lost wiring.	Replace wiring and tighten, wirings
	Low voltage at hoist	Correct cables size Replace battery as bad condition
		Clean and tighten the wirings
No brake	Damaged brake cam and disc	Replace brake cam and disc
	Damaged gear box	Replace gear box
	Dropt snatch ring	Replace snatch ring
	Oil leakage at brake	Clean oil leakage
	Damaged or inoperative spiral spring	Replace and position spiral spring
Brake distance is too long	Worn or damaged brake	Replace or adjust brake
	Oil leakage at brake.	Clean oil leakage
Damaged gear box	Hit by certain exterior force.	Replace the damaged components
	Damaged gear train.	Replace the damaged components
	Over load operation.	Replace a new winch
Motor runs extremely hot	Long period of operation	Allow to cool
	Damaged motor	Replace or repair motor
	Damaged or inoperative brake	Replace or repair brake
Hoist vibrates badly or is noisy	Damaged brake	Replace or repair brake
	Mounting surface is not flat	Make sure mounting surface is flat
	Tie bar is bent	Replace tie bar
	Crack motor and gear box support racks	Replace racks

VI. Replacement parts List

►DH-1200



IN	Description	Qty	IN	Description	Qty	IN	Description	Qty
1	Motor	1	19	Clutch sleeve	1	26	Wire rope ass'y	1
2	Motor support rack	1	20	Anti-leakage packing 阻油墊片	2	27	Bearing	1
3	Gearbox support rack 機體固定座	1	21	Tie bar	2	28	Bearing	1
4	Drum bushing	1	22	Gear box	1	29	Retaining ring	1
5	Drum	1	23	Brake cover	1	30	Retaining ring	2
6	Drum bushing A	1	24	Trigger switch ass'y	1	31	Retaining ring	1
7	Connecting socket	1	25	Control panel	1	32	Hex bolt	2
8	1 st shaft	1	-1	Upper cover	1	33	Hex bolt	1
9	1 st pinion	1	-2	Switch socket	1	34	Hex bolt	1
10	1 st stage carrier	1	-3	Socket gland	1	35	Hex bolt	4
11	2 nd stage carrier	1	-4	Round bolt	2	36	Hex bolt	2
12	1 st & 2 nd ring gear	1	-5	Nut	2	37	Hex bolt	9
13	3 rd ring gear	1	-6	Solenoid pack	1	38	Hex bolt	3
14	Brake cam B	1	-7	Round bolt	4	39	Spring washer	4
15	Brake disc	1	-8	Down cover	1	40	Spring washer	2
16	Brake camA	1	-9	Hex bolt	3	41	Spring washer	3
17	Brake-clutch base	1	-10	Switch washer	1	42	Foot print	1
18	Spiral spring	1	-11	Battery Cable	1			

Limited Warranty

This Limited Warranty is given by the Comeup Industries Inc. (the “Seller”) to the original purchaser (the “Purchaser”) of a **COME.U.P Hoist** 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, 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 hoist was originally mounted on. Electrical components are warranted for 1 Year from date of purchase under the same conditions. Any **COME.U.P Hoist**, 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 hoist 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 hoist 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.