



1000KG POWER HOIST

MODEL NO's: **PH1000**

Thank you for purchasing a Sealey product. Manufactured to a high standard, this product will, if used according to these instructions, and properly maintained, give you years of trouble free performance.

IMPORTANT: PLEASE READ THESE INSTRUCTIONS CAREFULLY. NOTE THE SAFE OPERATIONAL REQUIREMENTS, WARNINGS & CAUTIONS. USE THE PRODUCT CORRECTLY AND WITH CARE FOR THE PURPOSE FOR WHICH IT IS INTENDED. FAILURE TO DO SO MAY CAUSE DAMAGE AND/OR PERSONAL INJURY AND WILL INVALIDATE THE WARRANTY. KEEP THESE INSTRUCTIONS SAFE FOR FUTURE USE.



Refer to
instructions



Wear eye
protection



Wear safety
footwear



Wear head
protection

1. SAFETY

1.1. ELECTRICAL SAFETY

- ☐ **WARNING!** It is the user's responsibility to check the following:
- ✓ Check all electrical equipment and appliances to ensure that they are safe before using.
- ✓ Inspect power supply leads, plugs and all electrical connections for wear and damage.
- ✓ Ensure that the insulation on all cables and on the appliance is safe before connecting it to the power supply.
- ✗ **DO NOT** use worn or damaged cables, plugs or connectors.
- ✓ Ensure that any faulty item is repaired or replaced immediately by a Sealey qualified technician.
- ✓ If the cable or plug is damaged during use, switch off the electricity supply and remove from use.
- ✓ Sealey recommend that an RCD (Residual Current Device) is used with all electrical products.
- IMPORTANT:** Ensure that the voltage rating on the appliance suits the power supply to be used and that the plug is fitted with the correct fuse.
- ✗ **DO NOT** pull or carry the appliance by the power cable.
- ✗ **DO NOT** pull the plug from the socket by the cable. Protect the power cable from heat, oil and sharp edges.

1.2. GENERAL SAFETY

- CAUTION** Read all safety regulations and instructions. Any errors made in following the safety regulations and instructions may result in an electric shock, fire and/or serious injury.
- ✓ Keep all safety regulations and instructions in a safe place for future use.
 - ☐ **WARNING!** Ensure Health & Safety, local authority, and general workshop practice regulations are adhered to when using this product.
 - ✓ Locate product in a suitable working area.
 - ☐ **WARNING!** The end switch (Automatic stop mechanism lever) is not allowed to be used as an off-switch or be dismantled, which is a safety device to prevent that the weight is lifted over the boundary.
 - ✓ Keep the work area clean, uncluttered and ensure there is adequate lighting.
 - ✓ Keep the product clean and tidy in accordance with good workshop practice.
 - ✓ Keep children and unauthorised persons away from the working area.
 - ✗ **DO NOT** use the product for any purpose other than that for which it is designed.
 - ✗ **DO NOT** exceed maximum capacity of product.
 - ✗ **DO NOT** use the product out of doors.
 - ✗ **DO NOT** get the product wet or use in damp or wet locations or areas where there is condensation.
 - ✗ **DO NOT** clean the product with any solvents which may damage the paint surface or the protective coating.
 - ✓ The user shall ensure that the operating personnel are given the necessary training.
 - ✓ The operator shall always work in compliance with the operating instructions.
 - ✓ Use the machine only for the purpose for which it is designed.
 - ✓ The operator shall lift the load from the ground with the minimum speed available at the hoist.
 - ✓ The rope shall be tightened and shall not be in the slack-condition when the load is being lifted from the ground.
 - ✓ The hoist is not designed to lift loads above the rated capacity of the hoist.
 - ✓ Be sure to hoist the loads with lowest speed from the ground. The cable should be tense but not unwound when start loading from the ground.
 - ✓ Check the cable hoist at regular intervals for signs of damage. The control switch must be in good condition.
 - ✓ Store the power hoist in a proper manner when it is not in use. Store the machine at a dry, high or lockable place, out of the reach of children including plastic bags, boxes, Styrofoam etc. Dispose of packaging after 1 year.
 - ✓ Ensure that the hook moves in the same direction as shown on the control switch.
 - ✓ Depending on the frequency of use, after 20 hours of continuous operation, the machine must be taken in for a thorough maintenance (at least once a year).
 - ✓ Have repair and service work carried out only by authorized workshops by a trained electrician. Repair work must only be carried out by a trained electrician, otherwise the machine may cause accidents.
 - ✓ Always concentrate fully when operating the cable hoist.
 - ✓ If the brakes stop functioning and the load lowers quickly, one should press the off-switch immediately and then the On-switch. After unloading, please send the machine to a qualified professional for repairs.
 - ☐ **WARNING!** Push the E-stop button on time in case of danger or emergency. To release the button turn it in arrow direction.
 - ✗ **DO NOT** try to lift fixed or obstructed loads. It is prohibited, to lift a weight crookedly, or to pull it along the floor.
 - ✗ **DO NOT** pull loads sideways or from one side. **DO NOT** allow the load to swing.

- ✗ **DO NOT** allow children to play with or near this item.
- ✗ **DO NOT** allow the load to swing during operation and **DO NOT** subject the equipment, chains or straps to shock loads.
- ✗ **DO NOT** leave the load hanging in the air long-term, to prevent the deformation of the pieces. While the machine is in operation **DO NOT** carry out any repairs or inspections.
- ✗ **DO NOT** lift people or lift loads over people. Falling loads can injure or kill people.
- ✗ **DO NOT** attempt to lift loads that exceed the rated load (see the data plate).
- ✗ **DO NOT** use 2 or more machines to load same object.
- ✗ **DO NOT** remove or cover warning labels and/or tags. These carry important safety information. If unreadable or missing, contact Sealey Service Centre for a replacement.
- ❑ **WARNING!** Excessive inching (e.g. giving short pulses to the motor) shall be avoided.
- ❑ **WARNING!** The hoist is not designed for lifting of persons.
- ❑ **WARNING! DO NOT** stand under the raised load.
- ❑ **WARNING!** Failure to heed safety and warning instructions may result in damage and/or personal injury and will invalidate the warranty.
- ❑ **WARNING!** If the red indicator mark is visible when unwinding the cable, please stop the cable winch immediately and do not continue to unwind the cable.
- ❑ **WARNING!** Always wear safety equipment (such as rubber gloves, non-slip footwear, hearing and hair protection and etc.) when working.
- ❑ **WARNING!** Never wear loose clothing or jewellery; this could be caught by movable parts of the machine.
- ❑ **WARNING!** It is prohibited, to transport hot molten masses.
- ✓ Only use appliances which are in perfect working order.
- ✓ Service and clean the appliance regularly.
- ✓ Adapt your working style to suit the appliance.
- ✗ **DO NOT** overload the appliance.
- ✗ **DO NOT** use the Emergency Stop button as a routine stopping device. It should only be used to stop the machine in an emergency.
- ✓ Have the appliance serviced whenever necessary.
- ✓ Switch the appliance off when it is not in use.
- ✓ Wear protective gloves.

2. INTRODUCTION

A large powerful motor capable of a number of lifting tasks, in a garage, workshop, construction and industrial environments. Simple installation using the brackets provided, to suitable square section beams. Thermostatic overload cut-out switch, protecting the motor. Remote control with emergency stop for easy control from a safe distance. Power paint coated steel casing, for added corrosion resistance.

3. SPECIFICATION

Model No:	PH1000
Capacity (Double Cable):	1000kg
Capacity (Single Cable):	500kg
Current:	7.5A
Dimensions:	490 x 185 x 280mm
Group of Mechanisms:	M1
Insulating Grade:	B
IP Rating:	IP54
Lift Height (Double Cable):	6m

Lift Height (Single Cable):	12m
Lift Speed (Maximum):	(Double) 4m/min (Single) 8m/min
Minimum Rope Tensile Strength:	1870N/mm ²
Motor Power:	1600W
Nett Weight:	32.0kg
Plug Type:	3-Pin
Power Supply Cable Length:	1.3m
Rope Diameter:	Ø6mm
Voltage:	230V~50Hz
Work Rate:	S3
A-rated noise emissions	Less than 70dB

3.1. THE NOISE PRESSURE VALUE

- 3.1.1. The Sound pressure value only indicates the maximum noise emitted by the machine. Whether the operator requires hearing protection is not certain here. It depends on how much noise reaches the operator's ears, and it also depends on the surrounding environment (such as other sound sources nearby). Even if there is no clear requirement, for the safety of the operator, always wear hearing protection when working.

3.2. INTERMITTENT RATING

This machine is designed for operating type S3 20% - 10 min (periodic intermittent operation). The relative duty cycle is 20%, which means that the device can be operated at rated load for 2.0 minutes during each operating cycle and must then be switched off for 8.0 minutes to cool off. The device can therefore be continuously used for a duration of 20% of the total operating cycle of 10 minutes at rated load.

3.3. TECHNICAL DATA

Type	100/200	125/250	150/300	200/400	250/500	300/600	400/800	500/999
Rated voltage	230v~	230v~	230v~	230v~	230v~	230v~	230v~	230v~
Rated frequency	50 Hz	50 Hz	50 Hz	50 Hz	50 Hz	50 Hz	50 Hz	50 Hz
Power consumption	450W	450W	500W	800W	800W	1050W	1300W	1600W
Rated current	1.8A	1.8A	2.4A	3.1A	3.1A	4.6A	5.6A	7.5A
Rated load								
-for single cable	100kg	125kg	150kg	200kg	250kg	300kg	400kg	500kg
-for double cable	200kg	250kg	300kg	400kg	500kg	600kg	800kg	999kg

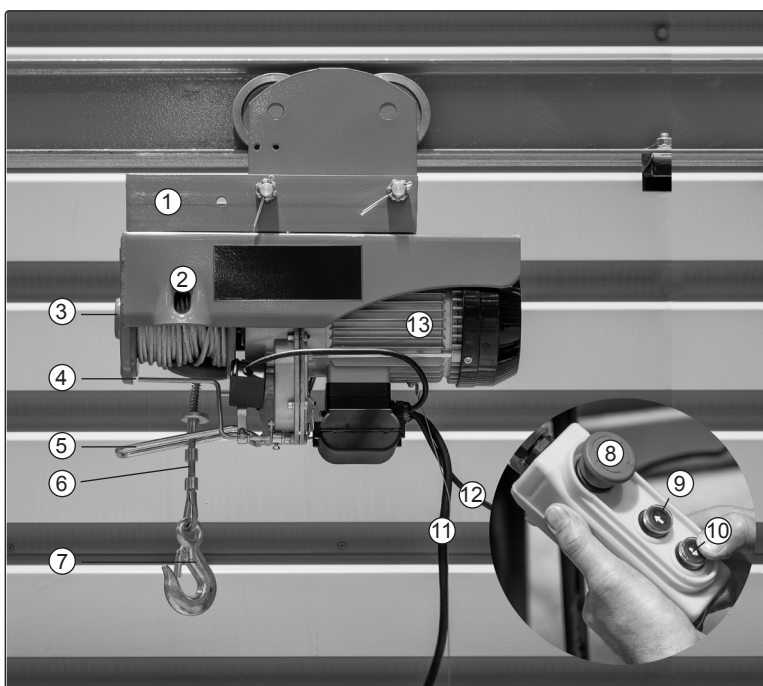
Rated speed -for single cable -For double cable	8m/min 4m/min	8m/min 4m/min	8m/min 4m/min	8m/min 4m/min	8m/min 4m/min	8m/min 4m/min	9m/min 4.5m/min	8m/min 4m/min
Hoisting height -for single cable -For double cable	12m 6m	12m 6m	12m 6m	12m 6m	12m 6m	12m 6m	12m 6m	12m 6m
Cable diameter	3.0 mm	3.0 mm	3.0 mm	4.0 mm	4.0 mm	4.5 mm	5.0 mm	6.0 mm
Protection class	IP54	IP54	IP54	IP54	IP54	IP54	IP54	IP54s
Motor category	A1 (8000 Cycles)	A1 (8000 Cycles)	A1 (8000 Cycles)	A1 (8000 Cycles)	A1 (8000 Cycles)	A1 (8000 Cycles)	A1 (8000 Cycles)	A1 (8000 Cycles)
Operation mode ※	ED 20% 150s/h	ED 20% 150s/h	ED 20% 150s/h	ED 20% 150s/h	ED 20% 150s/h	ED 20% 150s/h	ED 20% 150s/h	ED 20% 150s/h
Tensile strength of The steel cable	1870 N/ mm2	1870 N/ mm2	1870 N/ mm2	1870 N/ mm2	1870 N/ mm2	1870 N/mm2	1960 N/mm2	1870 N/mm2
Insulation class	B	B	B	B	B	B	B	B
Protection rating	I	I	I	I	I	I	I	I
Sound pressure Level (LWA) ※	71 DB(A)	71 DB(A)	71 DB(A)	71 DB(A)	71 DB(A)	71 DB(A)	71 DB(A)	71 DB(A)
Weight	11 kg	11.5 kg	12.5 kg	16 kg	16.5 kg	17.5 kg	20.5 kg	33.5 kg

4. CONTENTS

4.1. Refer to attached parts list and contents image.

5. FEATURES

1	Fastening clamp
2	Fastening hole for hook
3	Drum
4	Lever for maximum cable length
5	Automatic stop mechanism lever
6	Steel cable
7	Load Hook
8	Emergency Stop switch
9	Push button to raise
10	Push button to lower
11	Power cable
12	Control cable
13	Motor



6. PRE-INSTALLATION CHECKS

- Ensure the installation site can support the full load capacity.
- Check electrical supply compatibility.
- Verify that the suspension point is structurally sound.

6.1. UNPACKING

- 6.1.1. After opening the packaging, inspect the frame, the steel cable, the hook and the electric control mechanism for signs of possible transit damage.
- 6.1.2. Remove the adhesive tape from the drum before using the hoist for the first time.

6.2. ASSEMBLY AND INSTALLATION (fig.1,2,3)

6.2.1. Procedure for correct mounting

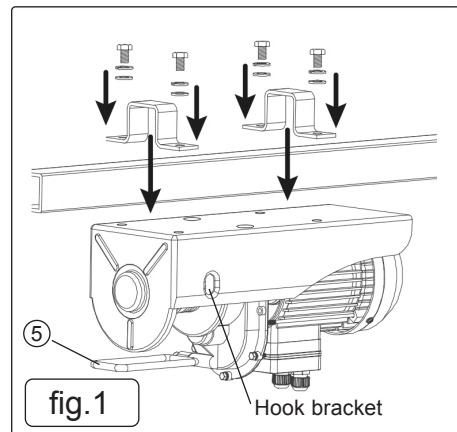
The cable hoist is fitted with two fastening clamps (1) with which it has to be fastened to a rectangular tube. The dimensions of the arm must conform with the size of the fastening clamps and must be capable of supporting twice the rated load. We recommend that you seek advice from a qualified technician.

All screws must be tightened correctly. A qualified technician should check the anchoring of the arm before the machine is started.

A) Install the machine on a steel beam. Use only the enclosed installation brackets which can be attached to the top of the mounting casing using the screws, washers, and spring lock washers. The steel beam must be able to withstand at least double the rated lifting capacity of the cable hoist.

B) The steel beam must have a diameter of 46x46mm, a wall thickness of at least 2.3 mm and a length of at least 450mm.

C) The steel beam must be securely anchored in a wall. The anchor must be installed correspondingly sturdy in order to be able to withstand the load.



D) Please be sure that the cable hoist is installed level and not slanted.

E) The remote control must be easily accessible at all times and must therefore be installed at a distance to the floor of between 0.8 m and 1.5m.

F) Insert the load hook into the hook bracket of the mounting casing when using the additional load hook with deviating shaft.

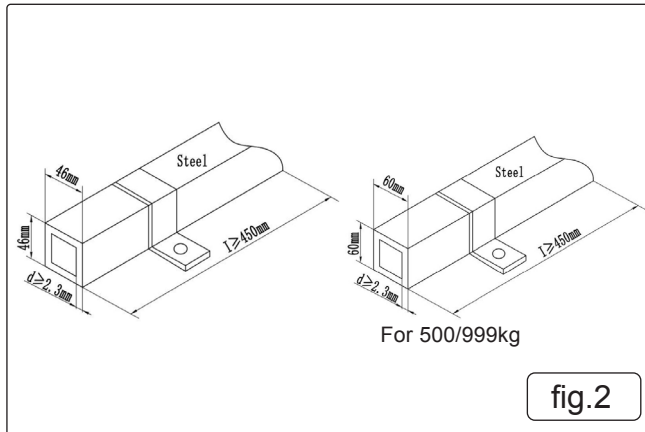


fig.2

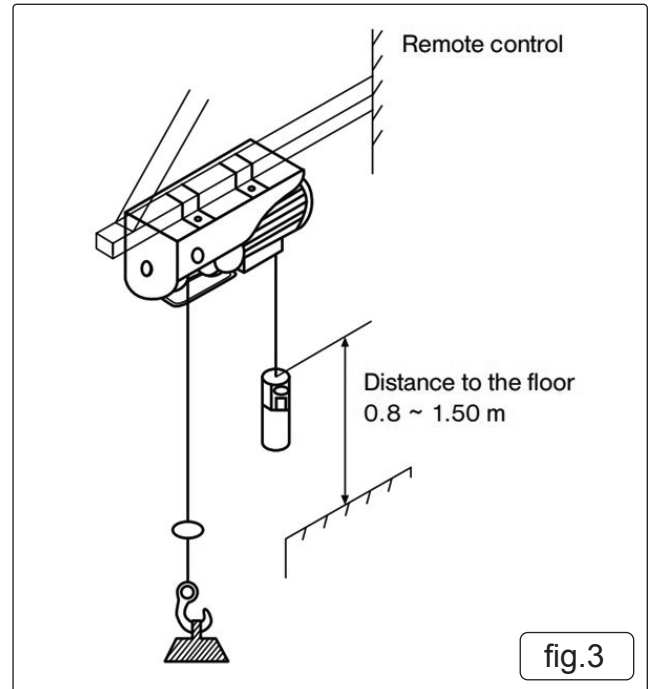


fig.3

6.3. BLOCK AND TACKLE FUNCTION (FIG.5-6)

The cable hoist is fitted with a return roller (15) and an additional hook (16). If these parts are used correctly, the cable hoist can lift twice its rated load.

Fit the return roller (15) and additional hook (16) as shown in Figure 4 – 5. The permanent hook (8) must be attached to the fastening hole (2) (Fig. 6). The load is now raised by two steel cables, which means that the cable hoist can lift twice its rated load. (Fig.7).

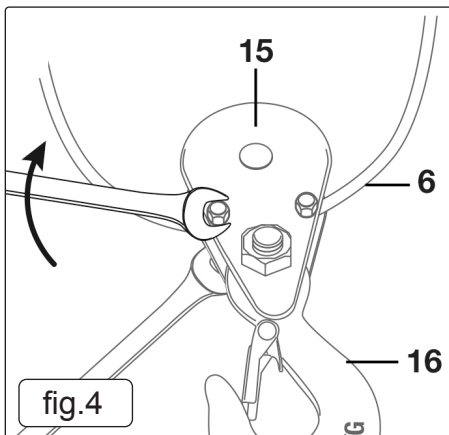


fig.4

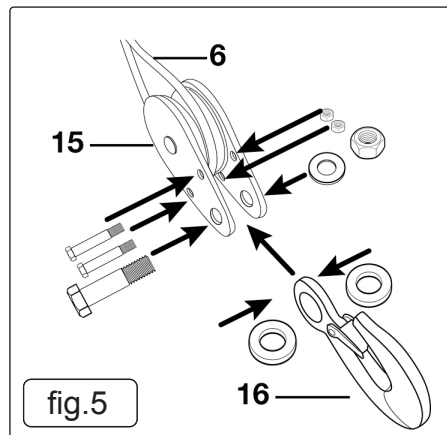


fig.5

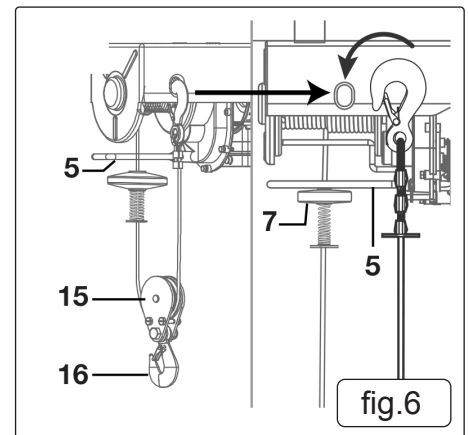


fig.6

6.4. INSTALLATION AND COMMISSIONING OF THE PRODUCT

6.4.1. Secure the hoist to an overhead beam or gantry using a certified trolley or suspension hook.

6.4.2. Connect the mains supply.

6.4.3. Ensure the control pendant is operational and positioned safely.

6.4.4. Conduct a test run without load to verify functionality.

6.5. CONNECTING THE MACHINE TO POWER SUPPLY

6.5.1. Proper grounding must be established before operation.

6.5.2. Electrical connections should be performed by a certified electrician.

6.6. PERMISSIBLE CONDITIONS OF USE

6.7. 1. LOAD CONDITIONS

- The rated load capacity must not exceed 1000kg under normal operation.
- Dynamic and static loading should be within design limits.
- Shock loading (sudden lifting of a load) should be minimized to avoid excessive stress.

6.8. 2. DUTY CYCLE & OPERATING TIME

- Ensure your hoist's duty cycle matches your operational needs to avoid overheating and premature wear.

6.9. 3. ENVIRONMENTAL CONDITIONS

- **Standard:** -5°C to +40°C

- Extreme conditions require special hoists.

Humidity:

- Hoists should be protected in environments above 85% relative humidity to prevent electrical and mechanical failures.

6.10. The temperature for transport and storage may be between -25°C and 55°C. The maximum temperature must not exceed 70°C.

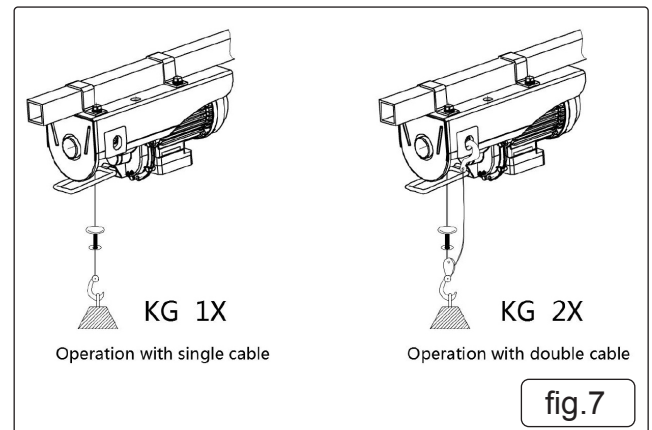


fig.7

Dust & Corrosive Environments:

- Hoists in dusty, humid, or corrosive areas must have IP-rated enclosures (e.g., IP54 or higher).

Outdoor Use:

- This Hoist is not permitted for outdoor use.

6.11. 4. ELECTRICAL CONDITIONS

- Voltage Tolerance: $\pm 10\%$ of 230V, 50Hz.

- Voltage drop must be $\leq 5\%$ during operation and $\leq 10\%$ during startup.

- Proper grounding & overcurrent protection are mandatory as per BS EN 60204-32.

6.12. BEFORE STARTING THE EQUIPMENT

Before you connect the equipment to the mains supply make sure that the data on the rating plate are identical to the mains data.

- Always pull out the power plug before making adjustments to the equipment.

- Please make no-loading test before start-up operation at first, and please check:

A) The flexibility of up/down operating switch to insure the controlling of the hoisting and lowering of load hook.

B) The flexibility of up limit bracket to make sure the cut-off of circuit.

C) The flexibility of down limit bracket to make sure the cut-off circuit when the steel cable is nearly used up.

D) Any abnormal sounds when start-up operation.

E) The steel rope may be damaged (split or bent) or has reached 20 hours of use. Replace the rope immediately.

- The cable hoist is not suitable for transporting hot and/or molten masses and in addition it is not suitable for use at low temperatures or in aggressive atmospheres.

- It is in mechanical group M1.

- Read and absorb the operating instructions before you use the cable hoist.

- Ensure that the operator knows how the machine works and how it should be operated.

- The user should always operate as set out in the operating instructions.

- The cable hoist is not designed for continuous operation. Its mode of operation is: Intermittent mode without influencing the starting process.

- The rated capacity of the machine does not vary due to the position of the load.

- Please inspect the hook before operation is possible damaged or distortion replace it in time.

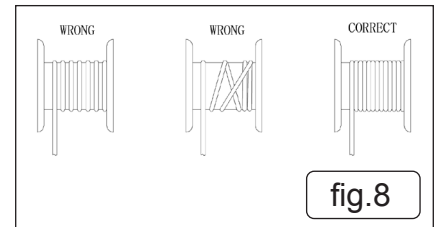
- The service life of the cable hoist is approximately 8000 cycles (excluding wearing parts). When the hoist has completed 8000 cycles, all its mechanical parts must be checked and overhauled.

- Operating with a residual current protective device (Red Emergency Stop button) provides additional protection in hazardous and emergency situations. To resume operation after resolving the issue, reset it by turning the switch head in the direction of the arrow.

- Ensure that there is enough lubricant on all parts. Apply lubricant to the load hook, cable drum shaft, gearbox, and bearings every six months.

6.12.1. Before you start, ensure that the steel cable is correctly wound around the drum and that the spacing between the winds is smaller than the steel cable (Fig. 8).

NOTE: When replace the wire rope, be sure to pull rope into the square hole of rope drum, and then pull it out from the round hole. With that wind the rope two circles and then pull it to the baffle which is side of rope drum and fix it.



7. OPERATION

7.1. MANUAL CONTROLS

7.1.1. **EMERGENCY STOP BUTTON** - Use button in case of an emergency only. Fig.9. Check whether the Emergency Stop button is pressed. Turn the red stop button clockwise to release it. (**SEE MODES AND MEANS FOR STOPPING 7.3.2).**

7.1.2. **Automatic stop mechanism lever (5) fig.6:** When the maximum lifting height has been reached, the cut-out weight presses the lever (5) fig.6 upwards. This trips a limit switch after which the load cannot be raised any further.

7.1.3. - **Lever for maximum cable length:** When the load has reached its lowest possible position, a limit switch is tripped which makes it impossible to lower the load any further. This limit switch also prevents the cable hoist operating in the wrong direction (hook moving in the opposite direction to the arrow shown on the control switch).

7.1.4. - The cable hoist will stop if the Emergency Stop switch is pressed.

7.1.5. - In an emergency, immediately press the Emergency Stop button to stop the cable hoist. The cable hoist cannot be operated if the Emergency Stop switch has been pressed.

7.1.6. **UP ARROW** - Press Up Arrow to raise. The user should lift the load off the ground at the slowest possible speed. The cable should be taut when the load is raised. Fig.10. **NOTE:** The motor (13) in contents graphic for the cable hoist is fitted with a thermostat switch. Whilst the cable hoist is operating, the motor (13) in contents graphic may therefore stop. It will restart automatically when it has cooled down.

❑ **WARNING!** The electric cable hoist is not fitted with a rated power limiter. You should therefore not repeat attempts to lift a load if the overload trip is limiting the hoist's operation. In this case the load exceeds the rated capacity of the cable hoist.

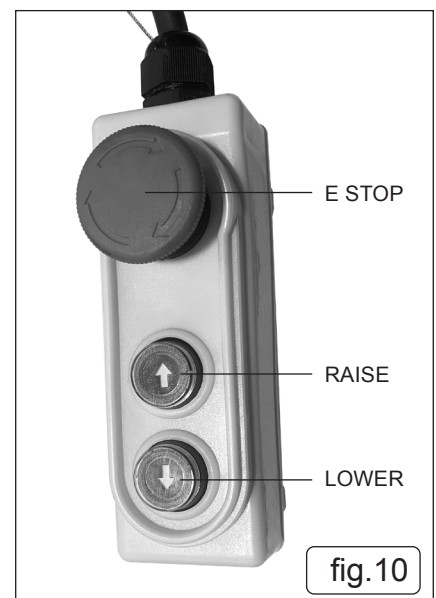
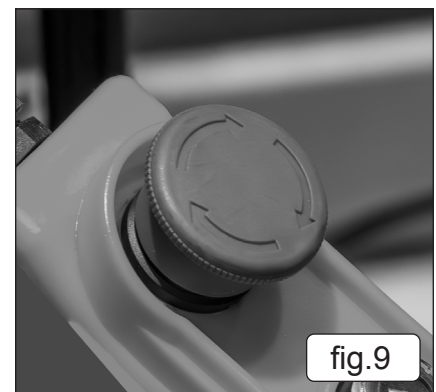
* **DO NOT** leave any suspended loads unsupervised without first taking the appropriate safety precautions.

7.1.7. **DOWN ARROW** - Press Down Arrow to lower. Fig.10.

NOTE: Ensure that the load is correctly secured to the hook or, if you are using the block and tackle, the additional hook, always maintain a safe distance from the load and the steel cable.

7.2. SETTINGS AND ADJUSTMENTS

To ensure safe and efficient operation of your 1000kg power hoist, the following settings and adjustments should be made according to industry standards.



7.3. ELECTRICAL SETTINGS AND ADJUSTMENTS

7.3.1. A) Voltage and Frequency Settings.

- Ensure the supply voltage is 230V \pm 10% (50Hz).
- Check voltage drop (\leq 5% during operation, \leq 10% during startup).
- Ensure proper earthing/grounding.

B) Motor Overload Protection.

- Set the thermal overload relay according to the motor full load current (FLC ~ 10A).
- If using a soft starter, configure the starting ramp-up time (typically 1-3 sec for smooth starts).

C) Braking System Adjustment.

- The electromagnetic brake should engage when power is cut.
- Check and adjust the braking torque (typically 150% of rated torque).

D) Limit Switch Settings.

- **Upper limit switch:** Prevents hoist from over-lifting. Set slightly above the highest required lifting point.
- **Lower limit switch:** Prevents chain/cable slack. Set just above ground level.

7.3.2. MODES AND MEANS FOR STOPPING

The stopping modes of a power hoist are critical for safe operation, load control, and system longevity. Stopping this hoist can be achieved through different methods, depending on the application and safety requirements.

A) Category 0 – Direct (Emergency) Stop (Uncontrolled Stop).

- **Means:** Power is immediately cut off to the motor, and the load stops due to the brake engagement.
- **Application:** Emergency stop functions, power failure situations.
- **Effect:** Can cause mechanical shock to the hoist system if frequently used.
- **Standard Requirement:** Must be manually reset before restarting.

B) Category 1 – Controlled Stop with Power Available.

- **Means:** The hoist slows down under control before power is cut and the brake is applied.
- **Application:** Used when smoother stopping is needed to reduce mechanical stress.
- **Effect:** Prevents load swinging, reduces wear on brakes and mechanical components.
- **Implementation:** Soft starters, variable frequency drives (VFDs).

C) Category 2 – Controlled Stop with Power Maintained.

- **Means:** The hoist is actively braked using motor control (e.g., dynamic braking) before stopping. Power is not cut immediately.
- **Application:** Precise positioning and high-accuracy lifting (e.g., CNC-controlled cranes).
- **Effect:** Allows better control over stopping, avoids sudden braking forces.

7.4. SPECIFIC SAFEGUARDS

A) Load Holding Brake (Fail-Safe Electromagnetic Brake).

- Holds the load securely when power is off.
- Prevents unintended movement during stoppage.

B) Overload Protection Device.

- Prevents the hoist from lifting beyond its rated 1000kg capacity.
- Electronic load monitoring system (prevents lifting over 100% load).
- Slip clutch (disengages motor if overloaded).

C) Upper & Lower Limit Switches.

- **Upper limit switch:** Stops hoist before hitting the top.
- **Lower limit switch:** Prevents slack chain or cable formation.

D) Emergency E Stop

- Use Emergency Stop to stop the hoist in case of emergencies. Immediately cuts power to the hoist.
- Stops movement within milliseconds.
- **Manual reset required** before restarting.

7.5. INTERMITTENT RATING

This machine is designed for operating type S3 20% - 10 min (periodic intermittent operation). The relative duty cycle is 20%, which means that the device can be operated at rated load for 2.0 minutes during each operating cycle and must then be switched off for 8.0 minutes to cool off. The device can therefore be continuously used for a duration of 20% of the total operating cycle of 10 minutes at rated load.

7.6. FAULT IDENTIFICATION AND LOCATION FOR REPAIR

Fault	Possible Causes	Location to Check	Repair Action
Hoist not powering on	<ul style="list-style-type: none">- Power supply failure.- Blown fuse/circuit breaker.- Faulty control switch.	<ul style="list-style-type: none">- Power supply wiring.- Control panel.	<ul style="list-style-type: none">- Check main voltage (230V).- Replace fuse or reset breaker.- Test and replace control switch if faulty.
Motor running, but hoist not lifting	<ul style="list-style-type: none">- Overload detected.- Brake failure.- Gearbox damage.	<ul style="list-style-type: none">- Load sensor.- Brake system.- Gearbox.	<ul style="list-style-type: none">- Reduce load (ensure \leq1000kg).- Inspect and replace electromagnetic brake.- Check gearbox for worn gears or oil leaks.
Motor hums but does not rotate	<ul style="list-style-type: none">- Capacitor failure (single-phase motors).- Stuck brake.- Mechanical jam.	<ul style="list-style-type: none">- Motor capacitor.- Brake assembly.- Load chain/rope.	<ul style="list-style-type: none">- Replace start capacitor.- Clean and adjust brake assembly.- Inspect for chain tangles.

Fault	Possible Causes	Location to Check	Repair Action
Hoist moves erratically or intermittently	<ul style="list-style-type: none"> - Loose wiring. - Faulty pendant control. - Motor winding damage. 	<ul style="list-style-type: none"> - Electrical connections. - Pendant switch. - Motor. 	<ul style="list-style-type: none"> - Tighten connections. - Replace or repair control pendant. - Test and repair motor windings.
Load drifts down when stopped	<ul style="list-style-type: none"> - Brake slipping. - Worn brake pads. 	<ul style="list-style-type: none"> - Brake system. 	<ul style="list-style-type: none"> - Adjust brake gap. - Replace worn brake linings.
Slow lifting speed	<ul style="list-style-type: none"> - Low voltage supply. - Worn motor. - Overloaded hoist. 	<ul style="list-style-type: none"> - Power supply. - Motor. - Load weight. 	<ul style="list-style-type: none"> - Check voltage drop (should be $\leq 5\%$). - Replace motor brushes if worn. - Ensure load is within rated capacity.
Excessive noise from hoist	<ul style="list-style-type: none"> - Loose motor mounting. - Worn bearings. - Dry gearbox. 	<ul style="list-style-type: none"> - Motor mount. - Bearings. - Gearbox oil level. 	<ul style="list-style-type: none"> - Tighten bolts. - Lubricate or replace bearings. - Check gearbox oil level and refill.
Hoist does not stop at limit	<ul style="list-style-type: none"> - Faulty limit switch. - Wiring fault. - Control relay stuck. 	<ul style="list-style-type: none"> - Upper/lower limit switch. - Electrical panel. 	<ul style="list-style-type: none"> - Adjust or replace limit switch. - Inspect and repair wiring.
Emergency Stop not working	<ul style="list-style-type: none"> - E-stop wiring fault. - Stuck contactor. 	<ul style="list-style-type: none"> - E-stop button. - Control relay. 	<ul style="list-style-type: none"> - Test and replace E-stop button. - Inspect contactor for welding.

7.7. RESTARTING THE MACHINE AFTER AN INTERVENTION

7.7.1. After an intervention (repair, maintenance, or emergency stop), the hoist must be restarted safely to prevent hazards such as uncontrolled movement, electrical faults, or mechanical failure.

1. Pre-Restart Safety Checks

A) Verify the Cause of Intervention

- Confirm the original fault has been identified and fully resolved.
- Ensure all repair or maintenance work is complete.
- If intervention was due to an emergency stop, investigate the root cause before restarting.

B) Check Electrical Safety

- Disconnect Lockout/Tagout (LOTO) if applied.
- Measure voltage at control panel terminals using a multimeter (should read 230V AC).
- Ensure all wiring is secured and no loose connections exist.
- Reset overload relays or breakers if they were tripped.

C) Inspect Mechanical Components

- Verify that brakes are functional and properly engaged.
- Check for correct chain/rope alignment and tension.
- Ensure no obstructions in the hoist's path.
- Confirm gearbox is properly lubricated.

D) Confirm Limit Switch & Emergency Stop Functionality

- Manually test the upper and lower limit switches.
- Press the Emergency Stop (E-Stop) button, then reset it.

7.8. RISKS THAT REMAIN AND HOW TO MITIGATE

Risk	Potential Hazard	Mitigation Measures	Standard Compliance
Unintended Load Drop (Brake Failure)	<ul style="list-style-type: none"> - Load may fall if brake fails or wears out. 	<ul style="list-style-type: none"> - Use fail-safe electromagnetic brakes. - Regularly inspect & replace worn brake pads. - Install secondary mechanical brake. 	BS EN 14492-2
Electrical Shock or Fire	<ul style="list-style-type: none"> - Exposed wiring, short circuits, or overload. 	<ul style="list-style-type: none"> - Ensure proper grounding & insulation. - Use thermal overload relays to prevent overheating. 	BS EN 60204-32
Overloading & Structural Failure	<ul style="list-style-type: none"> - Lifting beyond 1000kg damages the motor & structure. 	<ul style="list-style-type: none"> - Use overload limiters to prevent excess load lifting. - Conduct regular load tests (110% of rated load). 	BS EN 14492-2
Uncontrolled Movement (Hoist Running When Not Intended)	<ul style="list-style-type: none"> - Faulty control switches or remote signal interference. 	<ul style="list-style-type: none"> - Use wired emergency stop system. - Check pendant/remote signal reliability. 	BS EN 60204-32

Risk	Potential Hazard	Mitigation Measures	Standard Compliance
Swinging or Unstable Loads	- Causes collisions or injury.	- Use anti-sway control systems. - Train operators in load stabilization techniques.	EN 12100
Falling Load Due to Chain/Wire Rope Failure	- Wear, fatigue, or improper lubrication leads to breakage.	- Conduct weekly inspections. - Replace chain if >10% wear detected.	BS EN 14492-2
Crushing Hazard (Operator in Danger Zone)	- Operator gets caught under a moving load.	- Enforce no-standing-under-load policy. - Use barriers & warning signs.	EN 12100
Lack of Emergency Response Training	- Delayed response during incidents.	- Conduct regular emergency drills. - Ensure operators know E-Stop function.	EN 12100

7.9. SEQUENCE OF OPERATION

The operation sequence of a hoist follows a structured process to ensure safe lifting, movement, and lowering of loads. Below is a step-by-step breakdown of the hoist's typical operation cycle.

- ✓ **Verify Power Supply**
 - Ensure the main power switch is ON and voltage is stable (230V, 50Hz).
- ✓ **Inspect Load Handling Equipment**
 - Ensure hook, chain/wire rope, and brake system are in good condition.
 - Check that limit switches are functioning correctly.
 - Ensure the path is clear of obstructions.
- ✓ **Confirm Load is Within Capacity**
 - Ensure the weight does not exceed 1000kg (check load markings).
 - Verify load balance and secure attachment to prevent swinging.

7.10. USE OF THE HOIST MECHANISM

The hoist mechanism is responsible for lifting, lowering, and positioning loads safely. Below is a detailed breakdown of its components, functions, and correct usage to ensure safe and efficient operation.

Component	Function
Electric Motor (1600W, 230V, 50Hz)	Provides power for lifting and lowering loads.
Gearbox & Transmission System	Reduces speed and increases torque for controlled movement.
Hoist Drum / Chain Wheel	Wound with wire rope or chain to lift and lower the load.
Load Chain or Wire Rope	Transfers lifting force from the hoist to the load.
Braking System (Electromagnetic or Mechanical)	Holds the load when lifting stops, preventing drift or free-fall.
Limit Switches (Upper & Lower)	Automatically stop movement at predefined positions.
Control Pendant / Remote Control	Used by the operator to control the hoist functions.

7.11. MISUSE OF THE HOIST

Misusing a hoist can lead to serious accidents, equipment damage, and regulatory non-compliance.

7.12. HOW TO PREVENT HOIST MISUSE

- Ensure Operators Are Trained & Certified.
- Operators must understand weight limits, load positioning, and safety protocols.
- Training should include hands-on hoist operation and emergency procedures.
- ✓ **Enforce Pre-Use Safety Inspections**
 - Inspect chains, hooks, brakes, and controls before each use.
 - Report and tag faulty equipment immediately.
- ✓ **Display Clear Operational Guidelines**
 - Post warning signs near the hoist.
 - Use load charts to show maximum capacity.
- ✓ **Use the Right Equipment for the Task**
 - Use a trolley system for lateral movement.
 - Use a certified man-lift, not a hoist, for personnel lifting.

7.13. LIMITS OF THE HOIST

A 1000kg power hoist has defined operational, mechanical, and safety limits to ensure safe and efficient use. Exceeding these limits can lead to equipment failure, accidents, or regulatory violations.

7.14. KEY OPERATIONAL LIMITS

See table on the next page.

Limit Type	Description	Risk If Exceeded	Preventive Measures
Load Capacity	Max lifting capacity: 1000kg.	- Overloading can cause motor burnout, chain/wire rope failure, or structural damage.	- Always check load weight before lifting. - Use overload protection systems.
Lifting Height	Maximum lift height (varies by model).	- Lifting beyond limit can cause cable tangling, loss of control, or rope slippage.	- Ensure adequate rope/chain length. - Use limit switches to prevent overtravel.
Duty Cycle (Operating Time vs. Rest Time)	Hoist motor cannot run continuously; must follow rated work cycle (e.g., 40% ED at 10 min cycles).	- Overuse can lead to motor overheating and failure.	- Follow manufacturer's rated duty cycle. - Allow cooling periods between operations.
Speed Limits	Fixed or variable lifting/lowering speeds.	- Excess speed may cause load instability or excessive swing.	- Use smooth and controlled speed adjustments.
Side Loading Limit	Hoist is designed for vertical lifting only.	- Side forces can cause hook bending, rope/chain fraying, or trolley derailment.	- Do not pull or drag loads horizontally. - Use a trolley system for lateral movement.
Operational Temperature Range	Typically -10°C to 40°C.	- Extreme temperatures can affect motor performance and lubrication.	- Use in a controlled environment. - Check oil/lubrication viscosity in cold/hot conditions.

8. MAINTENANCE

8.1. STEEL CABLE

- 8.1.1. A check must be made every 30 cycles, as shown in Fig.11 or showing, to find whether the entire steel cable Fig.12 is in good condition. If it is damaged, it must be replaced by a steel cable of the type specified in the technical data.

NATURE OF INSPECTIONS FOR SAFETY FUNCTIONS

IMPORTANT. Always ensure that the machine is not connected to the mains supply before you start any servicing work.

- **In the following:** One cycle means one raising and lowering movement of a load. Periodic inspection means an inspection after 100 cycles.
 - Test periodically that the limit switches on the cable hoist are in correct working order.
- Conduct this test as follows:** When the cable has reached the maximum height, the lever on the automatic stopping mechanism will be actuated. The motor must then stop. (Test without a load).

When the steel cable has been unwound as far as possible, the lever for the maximum cable length will be actuated. The motor must then stop.

- Inspect the mains cable and the control cable periodically.

8.2. LIST OF NECESSARY SAFETY CHECKS

- The steel cable and return roller must be greased every 200 cycles.
- Check every 1000 cycles whether the screws for the fastening clamps and return roller are properly tightened.
- Check every 1000 cycles whether the hooks and return roller are in good condition.
- Check before using the cable hoist whether the Emergency Stop button and pushbuttons are in perfect working order.
- Check the braking system every 1000 cycles. If the motor makes any unusual noises or cannot raise the rated load, it is possible that the braking system requires an overhaul:
- Replace damaged or worn parts and keep the service documentation relating to this in a safe place.
- Please contact Sealey Service Centre for any unscheduled maintenance work.

8.3. FREQUENCY OF INSPECTIONS FOR SAFETY FUNCTIONS

Component / Safety Function	Inspection Type	Frequency	Inspection Focus
Load Chain / Wire Rope.	Visual & Functional.	Daily (Before Use).	- Check for wear, corrosion, deformation, or broken strands. - Ensure proper lubrication. - Confirm smooth movement without snags.
Hooks & Load Attachment Points.	Visual.	Daily (Before Use).	- Look for cracks, deformation, excessive wear. - Ensure the safety latch is functional.
Braking System.	Functional Test.	Weekly.	- Test if brake holds load properly. - Listen for unusual noises (signs of wear).

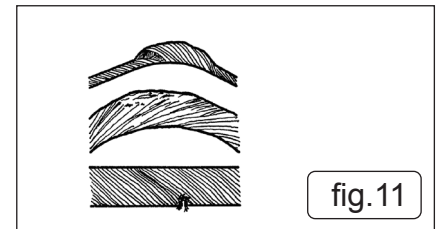


fig.11

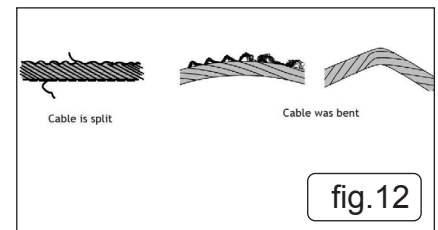


fig.12

Component / Safety Function	Inspection Type	Frequency	Inspection Focus
Limit Switches (Upper & Lower).	Functional Test.	Weekly.	- Verify switches stop movement at limits. - Ensure no bypassing or tampering.
Emergency Stop (E-Stop) Button.	Functional Test.	Weekly.	- Press E-Stop to ensure immediate halt of all hoist functions. - Reset and verify normal operation resumes correctly.
Electrical Controls & Wiring.	Visual & Functional.	Monthly.	
Load-Limiting & Overload Protection Devices.	Load Test.	Every 6 Months.	- Confirm overload limiters prevent operation beyond max capacity. - Verify sensors are not bypassed or malfunctioning.
General Structural Integrity.	Comprehensive Inspection.	Every 6 Months.	- Check frame, mounting bolts, and overall hoist structure. - Look for signs of metal fatigue, cracks, or corrosion.
Full Load Test (With Max Rated Capacity).	Certified Inspection.	Annually.	- Conduct a test lift with 1000kg under controlled conditions. - Verify motor, brakes, and hoist mechanism performance.

8.4. MAINTENANCE OPERATIONS, INCLUDING DRAWINGS AND DIAGRAMS, THAT DO NOT REQUIRE A PERSON WITH TECHNICAL KNOWLEDGE OR SKILL

8.4.1. These maintenance tasks can be performed by an operator without specialized technical knowledge. They focus on preventing wear and ensuring safe operation without requiring disassembly or advanced repairs.

1. Basic Maintenance Operations

A) Daily Pre-Use Checks

- ✓ Inspect Load Chain / Wire Rope.
 - Look for twists, kinks, wear, or broken strands.
 - Ensure proper lubrication (if dry, apply a light coat of chain oil).
- ✓ Check Hooks & Safety Latches.
 - Ensure the hook is not bent or cracked.
 - Verify the safety latch closes fully.
- ✓ Test Emergency Stop (E-Stop) Function.
 - Press the E-Stop button and confirm the hoist stops immediately.
 - Reset the E-Stop and verify normal operation resumes.
- ✓ Check Pendant / Remote Control.
 - Look for damaged cables or worn-out buttons.
 - Ensure controls respond correctly (Up, Down, Stop).

8.5. TEST AND INSPECTION INTERVALS

1. Pre-Use Checks (Daily or Before Each Shift)

- ✓ **Who?** Trained operator.
- ✓ **What to check?**
 - Visual inspection for damage (wire ropes, chains, hooks, and slings).
 - Control functions (start/stop, emergency stop, limit switches).
 - Brakes & holding mechanisms (no unusual sounds or slipping).
 - Load test (light load) to confirm smooth operation.

8.6. FREQUENCY AND METHOD OF FUNCTIONAL TESTING

Functional testing ensures that the hoist operates safely and efficiently under normal working conditions. Below are the recommended testing intervals and methods.

Test Type	Frequency	Who Performs it?	Purpose
Pre-Use Check (Operational Test)	Daily or before each shift.	Trained operator.	Ensure safe operation before use.
Routine Functional Test	Weekly.	Competent maintenance staff.	Detect early signs of failure.
Thorough Examination	Every 6 or 12 months (LOLER, EU standards).	Qualified inspector.	Verify full functionality & compliance.
Load Testing	Annually or after major repairs.	Certified inspection engineer.	Ensure mechanical integrity under load.
Major Inspection	Every 10 years.	Specialist or manufacturer.	Full dismantling & life cycle assessment.

8.7. GUIDANCE ON THE ADJUSTMENT, MAINTENANCE AND REPAIR

Regular maintenance and proper repairs are essential to ensure the longevity and safe operation of your 1000kg lifting hoist. Contact Sealey Service Centre.

8.8. PROCEDURES FOR SECURING A HOIST MACHINE FOR SAFE MAINTENANCE

Securing a hoist machine for maintenance is essential to ensure the safety of personnel working on or around the equipment.

1. Preparation for Maintenance

A. Notify and Isolate the Hoist

- Notify relevant personnel (operators, supervisors, etc.) that maintenance will take place to prevent accidental use.
- Isolate the hoist from the power supply:
- Switch off the power at the main disconnect or circuit breaker.
- Lock and tag out the power switch using a Lockout/Tagout (LOTO) procedure, ensuring that only authorized personnel can restore power.
- Verify no live power is present by checking the electrical system with a voltage tester.

B. Ensure Clear Access to the Hoist

- Remove any obstacles around the hoist to ensure a clear, safe working space.
- Use appropriate warning signage (e.g., "Maintenance in Progress" signs) to alert others to the potential hazards.

8.9. SPECIFICATION OF ANY NECESSARY PPE

When performing maintenance on a 1000kg lifting hoist, it's critical to ensure that all personnel are equipped with the proper Personal Protective Equipment (PPE) to minimise risk and comply with safety standards. Below is a detailed specification of the necessary PPE to be used during various stages of hoist maintenance.

1. General PPE Requirements for Hoist Maintenance

PPE Category: The PPE needed for lifting hoist maintenance should fall under Category II or Category III, based on the level of risk involved in the specific maintenance task.

2. Types of PPE for Hoist Maintenance

A. Head Protection (Hard Hat)

Purpose: Protects against falling objects, head impact, or electric shock.

B. Eye and Face Protection

Purpose: Protects the eyes and face from flying debris, sparks, welding, or exposure to hazardous substances.

C. Hearing Protection

Purpose: Protects against excessive noise levels which could lead to hearing damage.

D. Hand Protection (Gloves)

Purpose: Protects the hands from cuts, abrasions, burns, or chemical exposure.

E. Foot Protection (Safety Boots)

Purpose: Protects feet from falling objects, heavy loads, and punctures.

F. Body Protection (Work Suit or Overalls)

Purpose: Protects against debris, dirt, chemical splashes, or hot surfaces.

8.10. LUBRICATION OF ROPES, CHAINS, GEARBOXES, BEARINGS, HOOKS

Proper lubrication is crucial to ensuring the smooth and safe operation of hoists, particularly for ropes, chains, gearboxes, bearings, and hooks, as these components endure significant wear and stress. Below is a detailed guide for the correct lubrication of these components.

1. LUBRICATION OF ROPES (WIRE ROPES)

Purpose:

- To reduce wear, prevent corrosion, and maintain the flexibility of the wire rope.

Lubricants:

- **Lubricant Type:** Use wire rope lubricants that provide protection against corrosion and wear while offering proper penetration into the rope strands.
- **Penetrating Lubricants:** Designed for deep penetration into the strands of the rope.
- **Grease-Based Lubricants:** Grease with high adhesive properties for long-lasting protection.

Lubrication Procedure:

1. **Clean the Rope:** Remove dirt, debris, and old lubricant using a wire brush or a suitable cleaning agent. This ensures that the new lubricant penetrates effectively.
2. **Apply Lubricant:** Apply lubricant evenly along the length of the rope. Use a brush, spray, or dip method (depending on rope size and type).
3. **Work in the Lubricant:** After applying, work the lubricant into the strands by gently manipulating the rope or running it through sheaves.
4. **Check Coverage:** Ensure that all strands of the rope, including those near the core, are well-coated.

Lubrication Frequency:

- **General Rule:** Lubricate wire ropes every 3 months, or more frequently if the rope is exposed to harsh environmental conditions (e.g., high humidity, saltwater, extreme temperatures).
- If the hoist operates continuously or in harsh conditions, lubrication may be required as often as once a month.

Signs that Ropes Need Lubrication:

- Visible signs of rust or corrosion.
- Rope feels stiff or exhibits increased friction during operation.
- Excessive wear on the rope strands or kinks.

2. LUBRICATION OF CHAINS (If Applicable)

Purpose:

- Lubrication helps prevent corrosion, wear, and jamming in hoist chains.

Lubricants:

- Use high-performance chain lubricants designed for heavy-duty applications.
- **Oily Lubricants:** These are ideal for lubrication of the chain links in the hoist.
- **Penetrating Oil:** For the initial lubrication or to remove rust.

Lubrication Procedure:

1. **Clean the Chain:** Remove any dirt, rust, or old lubricant using a degreaser or an appropriate cleaning solvent.

2. Apply Lubricant: Coat the entire length of the chain thoroughly with lubricant. This can be done using a spray, brush, or oil bath method.

3. Work in the Lubricant: Rotate the chain manually to ensure that lubricant penetrates into the rollers, pins, and links.

4. Remove Excess Lubricant: Wipe off any excess lubricant to prevent it from attracting dust and dirt.

Lubrication Frequency:

- Lubricate every 3-6 months, or more frequently under heavy use or extreme conditions.
- For high-frequency applications or harsh environments (e.g., dusty, wet conditions), lubricate the chain once a month.

Signs that Chains Need Lubrication:

- Noise from the chain (e.g., squeaking or grinding).
- Rust or corrosion on the chain links.
- Binding or stiff movement during operation.

3. LUBRICATION OF GEARBOXES (If Applicable)

Purpose:

- Gearboxes are subject to high stress and friction, and proper lubrication prevents overheating, excessive wear, and corrosion.

Lubricants:

- Use industrial gear oil or gear grease designed for hoist applications.
- API GL-4 or GL-5 rated oils are suitable for heavy-duty gearboxes.
- Synthetic gear oils provide extended service life and better temperature performance.

Lubrication Procedure:

1. Check Gearbox Oil Levels: Always verify the oil level before applying new lubricant. Ensure that the gearbox is not overfilled or underfilled.

2. Drain Old Lubricant: If changing the oil, first drain the old lubricant from the gearbox.

3. Refill with Fresh Lubricant: Refill the gearbox with the recommended type and quantity of lubricant. Ensure it covers the gears completely.

4. Seal the Gearbox: Once filled, ensure all seals are tightly secured to avoid leakage.

Lubrication Frequency:

- Every 6-12 months, or per manufacturer's recommendation based on usage and environment.
- High-load operations or extreme environments may require more frequent oil changes (e.g., every 6 months).

Signs that Gearboxes Need Lubrication:

- Unusual noises (grinding or whirring sounds).
- Overheating of the gearbox.
- Excessive vibration or erratic motion.

4. LUBRICATION OF BEARINGS

Purpose:

- Bearings carry the weight of the hoist's moving parts. Proper lubrication ensures smooth rotation, reduces wear, and extends bearing life.

Lubricants:

- Grease-based lubricants are commonly used for bearing lubrication.
- Lithium or Calcium-based greases are commonly used in hoist systems.
- High-temperature greases are used for bearings exposed to heat.

Lubrication Procedure:

1. Clean the Bearing Area: Before applying new lubricant, remove old grease and dirt from the bearing area.

2. Apply Grease: Apply a sufficient amount of grease to the bearing. This can be done with a grease gun, brush, or by packing the bearing with grease (for smaller bearings).

3. Distribute Grease: Rotate the bearing by hand to ensure the grease is evenly distributed and fully penetrates the bearing components.

Lubrication Frequency:

- Every 6 months or as needed based on usage (may require more frequent attention in dusty or harsh environments).

Signs that Bearings Need Lubrication:

- Excessive noise (grinding or squealing sounds).
- Bearings overheating or operating roughly.
- Visible wear on the bearing surface.

5. LUBRICATION OF HOOKS

Purpose:

- Hooks are subjected to high tensile forces and need lubrication to ensure smooth operation, prevent rust, and extend their service life.

Lubricants:

- Penetrating oils or light lubricants are typically used on hoist hooks.
- Lubricants such as light machine oils or anti-seize compounds are effective for hook lubrication.

Lubrication Procedure:

1. Clean the Hook: Remove debris, dirt, and rust from the hook using a brush or cloth.

2. Apply Lubricant: Apply the lubricant directly to the hook's joints and pivot points (where the hook rotates).

3. Work the Lubricant In: Move the hook to work the lubricant into the pivot points and any moving parts.

Lubrication Frequency:

- Lubricate every 3 months, or whenever the hook shows signs of wear or rust.
- If the hoist is used in harsh environments (e.g., saltwater or high humidity), lubricate more frequently (e.g., every month).

8.11. INSPECTION OF PARTS THAT WILL WEAR DOWN

Regular inspection of parts that wear down over time is crucial to ensure the hoist continues to operate safely and efficiently. Components that are subject to wear need to be monitored closely to avoid failures that could lead to safety risks or operational disruptions.

1. WIRE ROPES (HOIST CABLES)

Wear Mechanisms:

- **Abrasion:** Rubbing against sheaves, drums, and other surfaces can wear down the rope.
- **Corrosion:** Exposure to moisture, salt, or chemicals can rust the rope.

- **Fatigue:** Repeated bending and stretching can cause internal wear and breakage.

- **Kinking:** Improper handling or tension can cause the rope to kink or fray.

Inspection Criteria:

- **Visual Inspection:** Look for fraying, broken strands, or corrosion. A rope that appears to have flattened sections or visible damage may need to be replaced.

- **Measurement of Diameter:** Measure the rope diameter at various points. Significant reduction in diameter indicates wear.

- **Check for Surface Cracks:** Look for visible cracks or wear patterns in the rope's surface, especially in areas that come into contact with sharp edges or drums.

- **Rope Tension:** Ensure the rope is not slack. Excessive slackness can lead to uneven wear.

- **Check for Lubrication:** Ensure the rope is adequately lubricated, as dry ropes wear out faster.

Frequency of Inspection:

- **Frequent Inspection:** Every 1–3 months, or after every 500 operational hours, depending on the intensity of usage and environmental conditions (e.g., humidity or saltwater exposure).

- **Critical Inspections:** After heavy lifting operations, unusual noise, or when the hoist rope shows signs of significant wear.

2. CHAINS (If Applicable)

Wear Mechanisms:

- **Wear of Links and Rollers:** The load-bearing surfaces of the chain links and rollers wear down over time.

- **Stretching:** Chains can elongate, losing tension and affecting hoist performance.

- **Corrosion:** Exposure to moisture or chemicals can cause rust and weakens the chain.

Inspection Criteria:

- **Visual Inspection:** Look for signs of wear such as cracks, stretching, or deformation on the links and rollers.

- **Check for Elongation:** Use a calliper or measuring tool to measure the length of the chain and compare it to the manufacturer's specifications. If the chain has stretched beyond allowable limits, it should be replaced.

- **Check for Corrosion:** Inspect for rust or signs of oxidation. Corroded chains should be replaced.

- **Check for Binding or Stiffness:** Move the chain manually. If the chain is difficult to move or binds in certain sections, the rollers may be worn out.

Frequency of Inspection:

- **General Inspection:** Every 3–6 months or after heavy usage.

- **Critical Inspection:** If the hoist is used continuously or in harsh environments (e.g., wet, dusty conditions), inspect the chain monthly.

3. BEARINGS (SUPPORTING COMPONENTS)

Wear Mechanisms:

- **Wear from Friction:** Bearings wear down over time due to constant movement and load.

- **Corrosion:** Bearings exposed to moisture or chemicals may corrode and seize.

- **Overheating:** Poor lubrication or excessive load can cause bearings to overheat, affecting their function.

Inspection Criteria:

- **Listen for Noise:** During operation, listen for any grinding, squealing, or rough sounds that indicate worn bearings.

- **Check for Heat:** Touch the bearings (with care) or use a temperature gun to check if they are excessively hot, indicating potential overheating.

- **Check for Excessive Play:** Manually move the bearing and check for any play or wobbling. Bearings should rotate smoothly without any noticeable movement in the shaft or housing.

- **Lubrication Check:** Ensure that the bearings are properly lubricated. Lack of lubrication can cause excessive wear and failure.

Frequency of Inspection:

- Every 6 months or as needed based on operation levels.

- **Critical Inspection:** More frequent checks if the hoist operates at high speeds, under heavy loads, or in dusty/wet environments.

4. GEARBOX COMPONENTS (GEARS, SHAFTS, AND HOUSING) (If Applicable)

Wear Mechanisms:

- **Gear Wear:** Teeth can wear down from constant engagement, especially under heavy loads.

- **Shaft Misalignment:** Over time, shafts may become misaligned, leading to uneven gear wear.

- **Lubrication Failure:** Insufficient lubrication can lead to increased friction, overheating, and damage to gears.

Inspection Criteria:

- **Visual Inspection:** Check for cracks, pitting, or excessive wear on gear teeth. Inspect the shaft for misalignment or any bending.

- **Check for Gear Play:** Gears should mesh smoothly without excessive play. Loose gears indicate wear.

- **Lubricant Condition:** Drain and inspect the gearbox oil. If it appears contaminated with metal shavings or has turned a dark colour, the gears may be wearing excessively.

- **Temperature Check:** Monitor gearbox temperature. If it runs too hot, it indicates lubrication problems or worn-out components.

Frequency of Inspection:

- Every 6–12 months for general use. More frequent checks should be done under high-stress operations or extreme environments.

- **Critical Inspection:** If unusual noises, overheating, or visible damage is noticed.

5. HOOKS

Wear Mechanisms:

- **Deformation:** Hooks can bend or stretch from excessive loads.

- **Corrosion:** Exposure to moisture can lead to corrosion, weakening the hook.

- **Cracks:** High-stress areas of the hook can develop cracks, particularly at the throat or hook tip.

Inspection Criteria:

- **Visual Inspection:** Look for cracks, bends, or any visible damage to the hook.

- **Check for Deformation:** Ensure the hook is not deformed (i.e., the tip should not be spread or flattened).

- **Measure the Throat Opening:** Measure the throat width to ensure it hasn't widened due to wear. Hooks that have opened beyond the manufacturer's specifications should be replaced.

- **Check for Corrosion:** Inspect the hook for rust or corrosion. Any heavily corroded hooks should be replaced.

Frequency of Inspection:

- Every 3 months or after every heavy lift.

- **Critical Inspection:** After any unusual load or after the hoist has been used under extreme conditions.

6. SHEAVES AND DRUMS

Wear Mechanisms:

- **Groove Wear:** Over time, ropes and chains can wear grooves into sheaves and drums, causing uneven wear on the rope or chain.
- **Bearing Wear:** The bearings within sheaves or drums can wear, causing the sheaves to rotate unevenly or seize.
- **Corrosion and Damage:** Exposure to environmental factors can cause rust or other forms of damage to the components.

Inspection Criteria:

- **Visual Inspection:** Check for groove wear or cracks in sheaves and drums. Ensure the grooves are smooth and free of any abrasions.
- **Check Rotation:** Manually rotate the sheaves to ensure smooth movement. Feel for any roughness or unusual resistance.
- **Measure Groove Depth:** If the grooves have worn significantly, they should be re-machined or replaced.

Frequency of Inspection:

Every 3–6 months, depending on usage. More frequent checks are necessary in environments with heavy use or where dust and debris are prevalent.

8.12. CORRECTLY CHECKING ANY GROOVES (If Applicable)

1. Visual Inspection of Grooves

Purpose:

To identify any visible signs of wear, deformation, or damage in the groove area that might affect the hoist operation.

Steps:

1. **Turn Off the Hoist:** Before inspecting, ensure the hoist is de-energized and securely locked out to prevent accidental operation.
2. **Inspect for Cracks or Deformation:** Examine the grooves closely for any cracks, chips, or fractures. Use a flashlight to check deeper sections of the grooves.
3. **Check for Excessive Wear:** Look for flattened or worn areas where the rope or chain has been in constant contact. Grooves should be smooth and symmetrical. Wear can result in a wide, shallow groove.
4. **Look for Foreign Objects or Debris:** Ensure the grooves are free of dirt, rust, or foreign objects that could affect the rope's movement.

8.13. SAFETY DEVICES AND PROCEDURE WHEN THEY ARE TRIGGERED

Lifting hoists are equipped with safety devices designed to protect the system, operator, and the surrounding environment in case of abnormal conditions or failure. These devices help prevent accidents, damage, and ensure safe operation. If any of these safety devices are triggered, specific procedures must be followed to ensure the hoist is safely stopped, repaired, and tested before resuming operation.

1. OVERLOAD PROTECTION DEVICE

Purpose:

To prevent the hoist from lifting loads that exceed its rated capacity (1000kg in this case), thereby reducing the risk of system failure, rope or chain breakage, or excessive wear.

Activation:

The overload protection device will trigger when the hoist exceeds its rated load capacity, typically 10–20% above the maximum rated load.

Procedure When Triggered:

1. **Stop Operation Immediately:** If the overload protection device triggers, the hoist will either stop lifting or limit further lifting. The operator must cease operation immediately.
2. **Remove Excess Load:** Check the load and verify whether it exceeds the rated capacity. Remove excess weight or redistribute the load if necessary.
3. **Check for Load Imbalance:** Ensure the load is properly positioned and evenly distributed on the hoist. An imbalanced load can trigger the overload protection device.
4. **Reset the Device:** Once the load is corrected, you may need to reset the overload protection device. Follow the manufacturer's instructions for resetting the hoist.
5. **Test the Hoist:** After resetting, run a test lift with a load within the hoist's rated capacity to confirm the system is functioning properly.

2. LIMIT SWITCHES (UPPER AND LOWER LIMIT STOPS)

Purpose:

Limit switches prevent the hoist from operating beyond its designated lifting range, such as going beyond the upper limit (top) or lower limit (bottom), which could lead to damage or unsafe conditions.

Activation:

Limit switches activate when the hoist approaches its maximum height (upper limit) or reaches the lowest point (lower limit) of travel.

Procedure When Triggered:

1. **Stop Hoisting Immediately:** If the limit switch is triggered, the hoist will automatically stop moving either at the top or bottom of the travel range.
2. **Check for Obstructions:** Ensure there are no obstructions blocking the hoist from moving or causing it to exceed the upper or lower limit.
3. **Ensure Proper Load Positioning:** Check if the load is properly positioned within the travel range to avoid the risk of triggering the limit switch.
4. **Reset the Limit Switch:** After removing any obstructions, reset the hoist control system if necessary. Follow the manufacturer's reset procedure.
5. **Test Operation:** Perform a test lift or lowering operation to ensure the limit switches function correctly and the hoist does not exceed the limits again.

3. EMERGENCY STOP (E-STOP)

Purpose:

The emergency stop button is designed to stop the hoist immediately in an emergency situation, preventing further movement to reduce the risk of injury, equipment damage, or safety hazards.

Activation:

The emergency stop is triggered manually by the operator in case of an immediate danger or abnormal condition (e.g., rope failure, unusual noises, unsafe movement).

Procedure When Triggered:

- 1. Assess the Situation:** When the emergency stop is activated, immediately check the reason behind the emergency stop (e.g., obstruction, system malfunction).
- 2. Visually Inspect the Hoist:** Perform a visual inspection of the hoist, rope, and load. Look for visible damage or obstructions that may have triggered the emergency stop.
- 3. Clear the Obstruction:** If the emergency stop was triggered by an obstruction or any unsafe condition, clear the obstruction or rectify the issue.
- 4. Reset the Emergency Stop:** The emergency stop button must be manually reset before the hoist can resume operation. Reset the button and return the hoist to a ready condition.
- 5. Test Functionality:** After resetting, conduct a test operation, lifting a load within the rated capacity to verify that the hoist is functioning correctly.

4. THERMAL OVERLOAD PROTECTION (MOTOR OVERLOAD)**Purpose:**

Thermal overload protection prevents the hoist motor from overheating by shutting down the motor if it runs too hot. This is especially important for continuous or heavy operations that could strain the motor.

Activation:

Thermal overload protection is triggered when the motor temperature exceeds a safe limit, typically due to continuous operation without rest or heavy load conditions.

Procedure When Triggered:

- 1. Allow the Motor to Cool Down:** If the thermal overload is triggered, turn off the hoist and allow the motor to cool down. Cooling time can vary, but it is typically around 30–60 minutes.
- 2. Check for Proper Ventilation:** Ensure the hoist's motor and surrounding components have proper ventilation and are not obstructed by dust or debris.
- 3. Check for Overloading:** If the motor is consistently overheating, verify that the load is within the hoist's rated capacity and that it is not being overworked.
- 4. Inspect the Motor and Wiring:** Inspect the motor and electrical components for any signs of damage or short circuits.
- 5. Reset the Overload:** After the motor has cooled, reset the thermal overload protection (if applicable) and power the hoist back on.
- 6. Test the Hoist:** Conduct a short test operation to ensure that the motor is functioning properly and does not overheat during normal operation.

5. HOIST ROPE SLACK DETECTION (If Applicable)**Purpose:**

This device detects whether the rope becomes too slack or loose during operation, which could indicate a malfunction or improper load.

Activation:

If the rope slack detection system senses a slack rope (i.e., the rope is not under sufficient tension), it will trigger an alarm or stop the hoist to prevent potential accidents or damage.

Procedure When Triggered:

- 1. Stop the Hoist:** If slack is detected, immediately stop the hoist to avoid potential damage to the rope or hoist system.
- 2. Check the Load:** Ensure that the load is correctly positioned and properly secured. An improperly balanced or poorly secured load can cause slack in the rope.
- 3. Check Rope Tension:** Inspect the rope for adequate tension and ensure it is not tangled or slackened. Verify that the rope is properly wound on the drum.
- 4. Inspect the Hoist Mechanism:** Check the hoist mechanism for any failure or malfunction that might have caused the slack condition.
- 5. Resume Operation:** Once the issue is resolved and the rope is adequately tensioned, you can reset the system and resume hoisting operations.

6. SAFETY BRAKE SYSTEM**Purpose:**

The safety brake system ensures that the hoist does not accidentally lower a load in case of failure, mechanical malfunction, or power loss.

Activation:

The safety brake is engaged when there is an uncontrolled lowering of the load or if the power fails unexpectedly.

Procedure When Triggered:

- 1. Check the Brake:** Inspect the brake system and ensure that it is properly engaged. A failure in the braking system may require immediate repair.
- 2. Ensure Proper Load Positioning:** Verify that the load is properly positioned and securely attached to prevent any unwanted lowering.
- 3. Test the Brake:** Perform a manual brake test to confirm the brake is functioning correctly. The brake should prevent any lowering of the load when engaged.
- 4. Check for Malfunctions:** If the brake does not function properly, the hoist should be removed from service and the brake mechanism inspected by a qualified technician.
- 5. Service and Repair:** If the brake system has failed, service or replace the faulty components before resuming operation.

8.14. AVOIDING DAMAGE OF THE HOIST WHEN USED INCORRECTLY

To maximize the lifespan of a 1000kg lifting hoist and ensure safe operation, it's essential to follow proper usage practices. Incorrect use can lead to mechanical failures, excessive wear, and safety hazards.

8.15. PERFORMING MAINTENANCE ON THE MACHINE AND IT'S FITTINGS (SERVICE AND EMERGENCY REPAIR)

Proper servicing helps prevent breakdowns, reduce wear, and ensure safety. (See next page for maintenance frequency).

Component	Daily	Weekly	Monthly	Annually
Load Chain / Wire Rope	Inspect for wear, lubrication.		Deep clean.	Replace if needed.
Hook & Safety Latch	Check for damage.			Replace if worn.
Brakes	Function test.			Replace pads if worn.
Limit Switches	Test stopping points.		Adjust settings.	Replace if faulty.
Electrical Wiring & Controls	Visual inspection.			Full electrical test.
Gearbox & Bearings	Check for leaks, noise.		Top-up lubrication.	Full service.
Bolts & Fasteners	Tighten if needed.			Replace if loose/worn.

8.16. ADJUSTMENTS AND MAINTENANCE OPERATIONS TO THE PRODUCT

Proper adjustments and maintenance are essential for safe operation, optimal performance, and longevity of a 1000kg lifting hoist. Below is a detailed guide covering routine maintenance, key adjustments, and troubleshooting procedures.

Component	Daily	Weekly	Monthly	Annually
Load Chain / Wire Rope	Inspect for wear, lubrication.		Deep clean.	Replace if needed.
Hook & Safety Latch	Check for damage.			Replace if worn.
Brakes	Function test.			Replace pads if worn.
Limit Switches	Test stopping points.		Adjust settings.	Replace if faulty.
Electrical Wiring & Controls	Visual inspection.			Full electrical test.
Gearbox & Bearings	Check for leaks, noise.		Top-up lubrication.	Full service.
Bolts & Fasteners	Tighten if needed.			Replace if loose/worn.

2. ADJUSTMENTS AND MAINTENANCE OPERATIONS

A. Load Chain or Wire Rope Maintenance & Adjustment

Steps:

1. Inspect for corrosion, wear, kinks, or twists.
2. Clean with a dry cloth to remove dirt and debris.
3. Lubricate using manufacturer-recommended oil.
4. Check tension and alignment on the drum/sheave.

✂ Adjustment:

- If the chain is too loose, adjust it according to the manufacturer's recommended slack.
- For wire rope hoist's, ensure the rope is properly seated in the drum grooves.

Avoid: Using a damaged or improperly tensioned chain/rope.

B. Hook & Safety Latch Maintenance & Adjustment

Steps:

1. Inspect for bends, cracks, and deformation (if throat opening is too wide, replace).
2. Ensure safety latch is properly closing—replace if loose or broken.

✂ Adjustment:

If the hook is misaligned, adjust the hook nut or replace the locking mechanism.

Avoid: Using hooks without a working safety latch.

C. Brake System Inspection & Adjustment

Steps:

1. Test with a light load to ensure proper braking.
2. Listen for grinding or slipping noises.
3. Inspect brake pads and discs for wear.
4. Adjust the brake tension if the hoist drifts when holding a load.

✂ Adjustment:

- If brakes fail to hold a load, tighten the brake spring tension.
- If the hoist slips, adjust the friction disc pressure.

Avoid: Using the hoist if brakes don't engage fully.

D. Limit Switch Testing & Adjustment

Steps:

1. Raise the hook to its upper limit—it should stop automatically.
2. Lower the hook to its lower limit—it should stop without over-lowering.
3. Adjust or replace limit switches if the hoist doesn't stop correctly.

✂ Adjustment:

- Adjust the upper/lower limit stops if the hoist is not stopping correctly.

Avoid: Operating with malfunctioning limit switches.

E. Gearbox & Bearings Maintenance (If Applicable)

Steps:

1. Check for oil leaks around the gearbox housing.
2. Refill with recommended gear oil if low.
3. Lubricate bearings to reduce friction.

✂ Adjustment:

- If the gearbox is noisy, adjust or replace worn gears.
 - Tighten gearbox bolts if there is excessive vibration.
- Avoid:** Running the hoist with low or contaminated oil.

F. Electrical System Checks & Adjustment

Steps:

1. Inspect wiring for frayed cables or loose connections.
2. Test the control pendant or remote for responsiveness.
3. Verify grounding and insulation resistance.

Adjustment:

- If controls are unresponsive, check and tighten electrical connections.
- If the hoist stops intermittently, adjust the contact points.

Avoid: Operating with damaged or exposed wiring.

8.17. PREVENTATIVE MAINTENANCE MEASURES TO BE OBSERVED

Preventative maintenance is crucial to ensure the safe operation, efficiency, and longevity of your lifting hoist. By following a structured maintenance plan, you can minimize breakdowns, prevent accidents, and reduce costly repairs.

1. Key Preventative Maintenance Measures

A. Daily Pre-Use Inspection ☒

Before each use, conduct a visual and functional check:

- Load Chain / Wire Rope – Check for wear, twists, kinks, or corrosion.
- Hook & Safety Latch – Ensure the hook is not deformed and the safety latch closes fully.
- Brakes – Perform a test lift to confirm the brakes hold the load properly.
- Limit Switches – Check if the upper and lower stops engage correctly.
- Control System – Ensure all buttons function and there are no delays in response.

Avoid: Using the hoist if any component shows signs of damage or failure.

8.18. REPAIR OF THE MACHINE

Proper repair procedures are essential to restore the safe and reliable operation of a 1000kg lifting hoist.

Contact Sealey Service Centre.

8.19. IDENTIFICATION OF END OF SERVICE

Knowing when to retire a lifting hoist is essential to prevent accidents and ensure safe and efficient operation. Below are the key indicators that a hoist has reached the end of its service life and should be replaced.

1. Criteria for Determining End of Service

- Severe Structural Wear or Deformation.
- Excessive chain or wire rope elongation beyond manufacturer limits.
- Permanent deformation of the hook, drum, or load-bearing components.
- Cracks, corrosion, or deep gouges in load-bearing parts.
- Excessive wear on gear teeth leading to slipping or grinding noises.

A hoist with any of these structural issues should be retired immediately.

8.20. PROCEDURE OF END OF SERVICE

When a lifting hoist reaches the end of its service life, it must be safely decommissioned and disposed of to prevent accidents, ensure compliance with safety regulations, and avoid unauthorized use.

1. Decision to Retire the Hoist

A hoist should be taken out of service if it:

- ✓ Fails safety inspections or load tests.
- ✓ Has excessive wear, cracks, or deformation in key load-bearing components.
- ✓ Has repeated failures despite regular repairs and maintenance.
- ✓ Exceeds its manufacturer-defined service life.
- ✓ Has obsolete or unavailable replacement parts.

Once a hoist is deemed unfit for use, it must not be operated again.

2. End-of-Service Procedure

Step 1: Isolate & Tag the Hoist

1. Turn off the power supply to the hoist.
2. Apply Lockout/Tagout (LOTO) to prevent accidental operation.
3. Attach a clear "OUT OF SERVICE – DO NOT USE" tag to the hoist.

Step 2: Remove from Active Use

1. Lower the hoist hook to its resting position.
 2. Disconnect the electrical connections from the control panel or power source.
 3. Drain hydraulic fluids or lubricants (if applicable) and dispose of them safely.
 4. Remove the hoist from its mounting structure (beam, trolley, or frame).
- Ensure the hoist is not left in a location where it could be mistakenly used.

Step 3: Dismantle & Secure Critical Components

1. Remove key load-bearing parts such as chains, wire ropes, hooks, and limit switches.
2. Cut or permanently damage worn-out parts to prevent reuse.
3. Store salvageable components (if any) separately for future recycling or spare parts.

✗ **DO NOT** allow worn-out components to be reused on another hoist.

Step 4: Disposal & Recycling

1. Sort materials (metal, electrical parts, oil, etc.) for appropriate disposal.
 2. Follow local environmental and waste regulations for industrial equipment disposal.
 3. Send scrap metal to a certified recycling facility.
 4. Dispose of oils, lubricants, and electrical components through an authorized waste management company.
- Never discard industrial hoist parts in regular waste bins.

Step 5: Update Records & Report Decommissioning

1. Log the decommissioning date and reason in the hoist's maintenance records.
2. Report the end-of-service to relevant authorities (if required by workplace regulations).

- 3. Notify personnel that the hoist is no longer in use.
- ✗ **DO NOT** remove documentation—this ensures compliance with safety standards.
- 8.21. INFORMATION FOR EMERGENCY SITUATIONS**
- Operation method in the event of an accident or breakdown**
- If a 1000kg lifting hoist experiences an accident or breakdown, immediate and proper action is necessary to ensure safety, prevent further damage, and comply with regulatory requirements.
- 1. Immediate Actions in Case of an Accident or Breakdown**
- A. If a Load is Suspended in the Air**
- ✗ **DO NOT** Attempt to Lower the Load Manually.
- ✓ Activate the Emergency Stop Button (E-Stop) on the hoist.
- ✓ Secure the surrounding area to prevent personnel from standing beneath the suspended load.
- ✓ Assess the cause of failure (electrical issue, mechanical failure, brake problem, etc.).
- ✓ Notify a qualified hoist technician immediately.
- ✓ Never attempt to free a jammed hoist without professional assistance.
- 8.22. LOAD LIFTING ATTACHMENTS AND SLINGS**
- The used load lifting attachments shall have a rated capacity of at least 2 times (fixing point) the total load (load, load lifting attachment) actually suspended.
- The used slings shall have a rated capacity of at least 2 times the total load (load) actually suspended.
- Loads shall be attached only with positive-locking means.
- 8.23. TRANSPORT, HANDLING, AND STORAGE OF THE MACHINE**
- 8.23.1. Position centre of gravity**
- Why Centre of Gravity (CoG) Matters in Hoisting? The CoG is typically near the center of the hoist body, slightly toward the motor side, as the motor is usually the heaviest component.
- The Centre of Gravity (CoG) of a load is the point where its weight is evenly distributed in all directions. Proper positioning of the CoG during lifting operations is critical to:
- ✓ Prevent load tilting or swinging.
- ✓ Ensure stability and control.
- ✓ Reduce stress on the hoist and rigging components.
- ✓ Prevent accidents and load drops.
- 8.24. STORAGE CONDITIONS OF THE MACHINE**
- Proper storage of a lifting hoist is essential to prevent corrosion, mechanical damage, and degradation of electrical and moving components. Below are the recommended storage conditions to ensure the hoist remains in optimal condition when not in use.
- 1. General Storage Requirements.**
- ✓ Dry & Ventilated Environment.
- Store in a clean, dry, and well-ventilated area to prevent rust and moisture buildup.
- Avoid areas with high humidity or exposure to direct sunlight.
- ✓ Temperature Control
- Ideal storage temperature: -10°C to 40°C.
- Avoid extreme temperatures that can damage electrical components and lubrication.
- ✓ Protection from Contaminants
- Keep away from dust, chemicals, and corrosive substances.
- Cover with a protective dust cover when stored for long periods.
- 8.25. CORRECT HANDLING AND TRANSPORTATION**
- Proper handling and transportation of a lifting hoist are essential to prevent damage, ensure safety, and maintain operational efficiency.
- 1. Handling the Hoist Safely**
- ✓ **Before Moving the Hoist:**
- Inspect the hoist for any loose or protruding parts.
- Ensure chains, ropes, or slings are properly secured to prevent tangling.
- Check for any leaks (hydraulic or lubrication) and clean if necessary.
- Disconnect power supply and secure control cables before transport.
- ✓ **Lifting the Hoist Properly:**
- Always use designated lifting points (as specified in the manual).
- Use a forklift, crane, or hoist for lifting heavier units.
- Ensure balanced lifting to prevent tilting or swinging.
- ✗ **DO NOT** lift the hoist by its chains, wire ropes, or electrical cables.
- Avoid dragging the hoist across the floor, as this may damage its housing or electrical components.
- 2. Transportation Guidelines**
- A. Manual Handling (Small Portable Hoists)**
- For hoists that can be manually carried:
- ✓ Use correct lifting posture (bend knees, keep back straight).
- ✓ Use two-person handling if necessary.
- ✓ Secure loose parts to prevent damage during movement.
- B. Transporting by Vehicle (Forklift, Pallet, or Crate)**
- For larger, heavier hoists:**
- ✓ Use a wooden pallet or transport crate for stability.
- ✓ Strap or chain the hoist securely to prevent shifting during transit.
- ✓ Protect sensitive components (control pendant, electrical connectors) from impact.
- ✓ Store upright if required (check the manufacturer's guidelines).
- ✗ **DO NOT** stack heavy loads on top of the hoist to prevent structural damage.
- 3. Unloading & Installation**
- ✓ Unload with care—use a hoist, crane, or forklift for lifting.
- ✓ Inspect the hoist before installation to ensure no transport damage.
- ✓ Check for oil leaks, electrical integrity, and loose components before first use.

- ✓ If stored, follow proper storage conditions (dry, dust-free, and covered).
Never operate a hoist that has visible damage from transportation.

8.26. CLEANING

- Keep all safety devices, air vents and the motor housing free of dirt and dust as far as possible.
- Wipe the equipment with a clean cloth or blow it with compressed air at low pressure.
- We recommend that you clean the device immediately each time you have finished using it.
- Clean the equipment regularly with a moist cloth and some soft soap.

- ✗ **DO NOT** use cleaning agents or solvents; these could attack the plastic parts of the equipment. Ensure that no water can seep into the device.

9. TROUBLESHOOTING

Common Malfunction	Cause	Solution
The Off-On-Switch is used but the motor does not turn.	<ol style="list-style-type: none"> 1. It is not plugged into the power supply. 2. The wires are broken or ripped. 3. Switch Malfunction. 4. The capacitor is burned through. 5. End-switch has not been reset Or a limit switch error. 6. The thermal switch has suffered a wire break. 	<ol style="list-style-type: none"> 1. Connect the item to the power supply. 2. Check the wires and plug it in again to the outlet. 3. Repair switch or change it. 4. Change your capacitor. 5. Check the end-switch and replace the limit switch. 6. Wait until the item cools down, or replace the thermal switch.
The dual-direction switch has been activated. The motor is very loud, can however not pick-up the load.	<ol style="list-style-type: none"> 1. The voltage offered is too Small. 2. The capacitor has become Damaged. 3. The brake is not completely open. 	<ol style="list-style-type: none"> 1. Adjust the work, depending on the power supply. 2. Change power supply. 3. Allow the machine to be repaired from a qualified repair service.
After a power loss the brakes do not hold or the machine slips down.	<ul style="list-style-type: none"> • The gap between the brakes is too large. • The brake spring is ripped. • The brake disk is locked. • The brake disk is at the start Already dirty. 	<ul style="list-style-type: none"> • Allow the machine to be repaired from a qualified repair service.
The noise of the machine becomes louder.	<ol style="list-style-type: none"> 1. Badly oiled. 2. After a long use, the cogwheel and bearings are damaged. 3. Badly installed or dent. 	<ol style="list-style-type: none"> 1. Oil/Grease machine officially. 2. Change the cogwheel or bearings. 3. Check installed parts.
The rope winch has too much voltage.	<ol style="list-style-type: none"> 1. Earthed error or no earthed. 2. The internal connectors are touching the housing. 	<ol style="list-style-type: none"> 1. Checked earthed wires and properly connect them. 2. Check all internal connections.
End-switch is not functioning.	<ol style="list-style-type: none"> 1. The end-switch is defect. 2. End-switch is blocked. 	<ol style="list-style-type: none"> 1. Switch off or change. 2. Check, repair, and change End switch.



ENVIRONMENT PROTECTION

Recycle unwanted materials instead of disposing of them as waste. All tools, accessories and packaging should be sorted, taken to a recycling centre and disposed of in a manner which is compatible with the environment. When the product becomes completely unserviceable and requires disposal, drain any fluids (if applicable) into approved containers and dispose of the product and fluids according to local regulations.



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NOTE: It is our policy to continually improve products and as such we reserve the right to alter data, specifications and component parts without prior notice.

IMPORTANT: No Liability is accepted for incorrect use of this product.

WARRANTY: Guarantee is 12 months from purchase date, proof of which is required for any claim.

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