

Combi winch 2104

Electric

USER MANUAL



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THANK YOU FOR CHOOSING A SAHLINS PRODUCT

We want you to be happy with your equipment. This instruction manual has been written to facilitate its safe handling and maintenance. Please read the manual thoroughly before using the equipment so that you are aware of the safety measures you need to take when using it.

GENERAL INFORMATION

During the design and manufacture of the equipment, great care has been taken to reduce risks from a health and safety perspective. The laying and installation of cables involves a variety of risks, and to reduce these, it is important:

- to study and follow the instructions
- to provide regular staff training in maintenance and safety
- to ensure the availability of appropriate equipment and tools
- that the owner and management are responsible for ensuring that effective safety programs and regulations are produced and followed by all staff.

Our instructions contain important information that all users must be aware of and understand before they use the equipment. To ensure your and others' safety, special attention must be paid to the points/sections with the following headings:

WARNING!

Important information that warns you about the risk of serious personal injuries or danger to life, if the instructions are not followed.

CAUTION

Important information that describes how to prevent damage to machinery and equipment or how to avoid a situation that can cause personal injury.

REMARKS

Guidance regarding the operation, care and maintenance of machinery and equipment.

SAFETY RULES

GENERAL SAFETY MEASURES

- 1) The products to which this user manual applies may only be used in the ways described. All other use is PROHIBITED and is strongly advised against, as this may involve a risk of accident.
- 2) Read and acquaint yourself with all of the warnings, precautionary measures and instructions in the user and care manual, and read and learn the importance of all the signs on and around the equipment. In case of any doubt, ensure that you obtain the answers to all your questions before starting the work.
- 3) Do not work with machinery or equipment while under the influence of alcohol, strong medication, sedatives or other drugs that may reduce your alertness or affect your judgement.
- 4) Take safety measures to ensure that hair or loose clothing cannot get stuck in moving parts or controls.
- 5) If possible, always wear gloves to protect your hands and fingers against cuts and abrasions, burns and solvents.
- 6) Always wear protective goggles if there is a risk of flying particles, splinters, dust or other objects that could damage your eyes, and when required by safety regulations. Protect your eyes at all times!
- 7) Always wear a protective helmet and safety shoes when the work requires.
- 8) Always use hearing protection in work areas with high noise levels.
- 9) Do not perform unnecessary lifting that could harm your back. Use lifting aids where appropriate. Use your legs, not your back, when you are forced to perform lifting on your own.

SAFETY IN THE WORKPLACE

- 10) Keep the work area clean and free of material.
- 11) Do not allow unauthorised staff to be present in or around the work area. Always maintain full control of those present in the work area.
- 12) Surfaces that come into contact with hands or feet must be kept clean, dry and free from oil or grease.
- 13) Store parts and tools in the designated storage location when these are not in use.
- 14) Perform an inspection of warning equipment in the work area, and make sure that each individual unit is working satisfactorily before starting to use the equipment.
- 15) Do not stand beneath or allow anyone else to stand beneath equipment that is lifted or suspended.
- 16) Acquaint yourself with the weight limitations of ropes and lifting devices and the free space required for these.

- 17) Be alert with regard to conditions that could obstruct supervision in and around the work area.

EQUIPMENT SAFETY

- 18) Warning, prohibition and information signs must not be concealed, changed, damaged or removed.
- 19) Never climb onto or allow anyone else to climb onto the equipment during operation, transportation or lifting.
- 20) Check the components in the equipment before each operation to ensure that no parts are damaged or can be suspected of being damaged. Repair or replace damaged parts or parts which can be suspected of being damaged. Repair or replace damaged parts before starting and operating the equipment. Only use original parts.
- 21) Before starting and operating the equipment, ensure that no people, animals, tools, parts or other foreign objects are present in, on, beneath or around the equipment. Check that all protective and safety equipment is correctly installed and is in satisfactory condition
- 22) Before starting the machine, make sure that all staff and visitors in the work area have been informed that the equipment is about to be started. Use suitable warning equipment to warn them.
- 23) Before starting the machine, make sure that all staff and visitors in the work area have been informed that the equipment is about to be started. Use suitable warning equipment to warn them.
- 24) Do not permit untrained staff to start or use any equipment without the supervision of a trained operator.
- 25) Never leave the equipment without control and supervision.
- 26) During start and operation, pay attention to any incorrect measuring instruments, visible defects, strange smells or unfamiliar sounds which could be a warning of a fault. If a fault is suspected, stop the equipment immediately.
- 27) Carry out all inspection, maintenance, lubrication and adjustment with great care and according to the manufacturer's recommendations. The machine must always be stopped during maintenance work.

SAFETY WITH REGARD TO FIRE AND ENVIRONMENTALLY HAZARDOUS SUBSTANCES

- 28) Store flammable, combustible and hazardous substances in a safe location and in containers designed and intended for such purpose. These must be clearly labelled in accordance with applicable rules and regulations.
- 29) Do not allow smoking or open fire/flare in the proximity of fuel and oil tanks or other combustible substances.

- 30) Shut down all motors and engines during refilling with oil or fuel. Follow the regulations and recommendations that apply to the handling of these substances.
- 31) Never start a diesel or petrol engine in an enclosed space if it is not properly ventilated. Hazardous gases can be fatal.
- 32) Do not use flammable and/or combustible substances such as petrol, paraffin or diesel to clean parts. Always use non-flammable solvents that are intended for cleaning.

SAFETY WITH REGARD TO HYDRAULIC SYSTEMS

- 33) Do not perform maintenance on components in hydraulic systems without first ensuring that the system has been depressurised.
- 34) Do not perform internal checks on oil systems without first ensuring that the system has been depressurised.
- 35) Oil under pressure may be hazardous if the pressure is released incorrectly.
- 36) Oil can get very hot during operation. Wait until the system has cooled down before performing the work.
- 37) Do not disassemble a hydraulic cylinder from its connections until the system has been depressurised.
- 38) Do not operate a pressurised system with worn-out or damaged hoses, valves or seals. Replace damaged components before the system is put into operation again.
- 39) Do not attempt to disassemble hydraulic cylinders or other hydraulic equipment if you are not qualified to perform such work.
- 40) Never adjust the pressure settings in hydraulic systems to levels above the recommended values.
- 41) Always follow the manufacturer's recommendations and instructions for inspection and maintenance of pressurised systems, to ensure the existence of safe conditions during operation.

BATTERY SAFETY

- 42) Only use the supplied battery as power source.
- 43) Do not use batteries that cannot be recharged.
- 44) Do not place objects in the air gaps of the battery.
- 45) Keep the battery away from direct sunlight, heat and naked flames. The battery can explode and cause burn injuries and/or chemical burns.
- 46) Keep the battery away from rain and humidity.
- 47) Keep the battery away from microwaves and high pressure.
- 48) Do not attempt to disassemble or crush the battery.
- 49) If the battery leaks, do not allow the liquid to come in contact with the skin or eyes. If you have touched the liquid, clean the area with large amounts of water and consult a doctor.
- 50) Use the battery within the temperature ranges given in the specifications.

- 51) Do not clean the battery with water.
- 52) Do not use a defective or damaged battery.
- 53) Keep batteries away from metal objects, such as nails, coins, and jewellery.

BATTERY CHARGER SAFETY

- 54) Only use the supplied battery charger or charging device to charge the battery.
- 55) Do not place objects in the air gaps of the charger. Do not attempt to take the battery charger apart. Do not connect the charger's contacts to metal objects. Use an approved electrical socket.
- 56) Regularly check that the power cord of the battery charger is undamaged and there are no cracks.
- 57) Disconnect the battery charger from the electrical socket by pulling the plug. Do not pull the power cord.
- 58) Keep power cord and extension cord away from water, oil, and sharp edges. Be careful not to trap the cable in doors, fences or similar. This can otherwise cause the charger to become live.
- 59) Do not clean the battery charger with water.
- 60) Do not use batteries that cannot be recharged in the battery charger.
- 61) Do not use the battery charger near flammable materials or materials that can cause corrosion. Do not cover the battery charger. In case of smoke or fire, unplug the battery charger.
- 62) Never use a defective or damaged battery charger.

INTRODUCTION

COMBI WINCH 2104

Combi winch 2104 is an electrically-operated, combined capstan and a drum winch intended for overhead line installation and underground cable laying. Regardless of which winch is used, there is a function that ensures that the winch cannot inadvertently go backwards.

PROPERTIES & DIFFERENCES DRUM WINCH/CAPSTAN WINCH

The drum winch function enables higher speeds and longer pulls but with lower pulling force. Speed and pulling force are also variable depending on the actual diameter - where the line is wound up on the drum - during pulling.

The capstan winch function enables both increased and constant pulling force, but the maximum possible pulling speed is lower and the maximum pulling length is shorter.



2104 FOR OVERHEAD LINE INSTALLATION

Both the capstan and drum winch functions can be used for overhead line installation. The choice is dependant on the conditions and requirements. For overhead line installation, a compatible steel drum (depending on the winch function) is used together with a synthetic rope. Read more under section "Overhead line installation" page 12.

2104 FOR UNDERGROUND CABLE LAYING

For underground cable laying, the capstan winch function is used together with a compatible steel drum and steel line. When laying in ductwork, the use of a steel line is always advocated due to the risk of fracture caused by line wear. Thanks to the capstan system, maximum pulling force is always available, approx. 1000 kp. Read more under section "Underground cable laying" page 13.

TECHNICAL DATA

WINCH UNIT

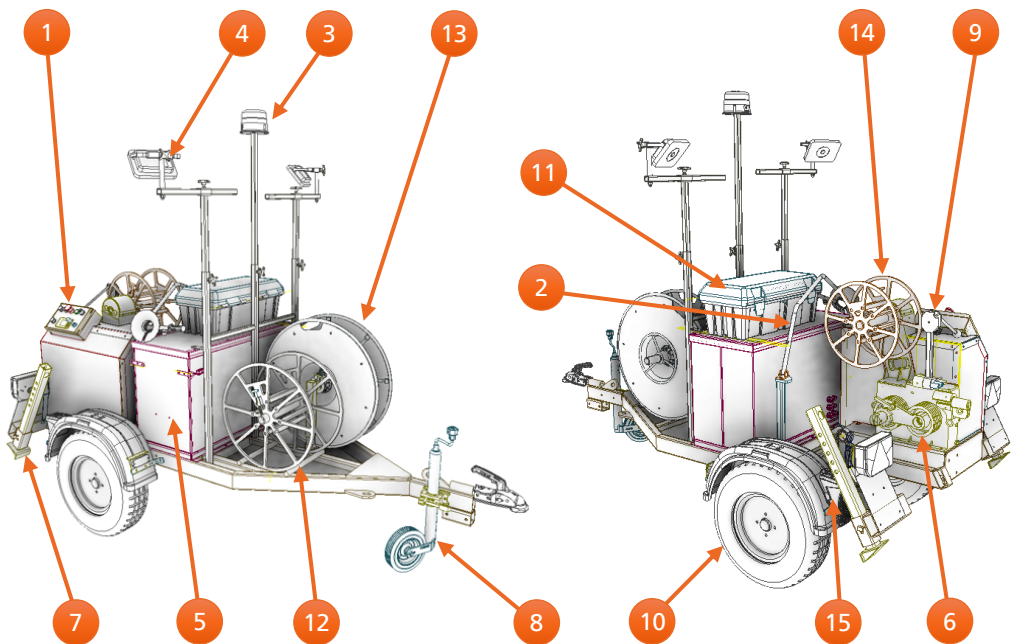
Attribute	Value
Engine	Electric
Power source	Battery
Max. pulling force capstan winch	1000 kp
Max. pulling speed capstan winch	40 m/min
Max. pulling force drum winch	345 kp (at Ø400 mm *)
Max. pulling speed drum winch	116 m/min (at Ø680 mm *)
Recommended pilot rope (synthetic)	Ø6x1100m, Ø8x500m
Recommended steel line	Ø5x500m
Recommended tyre pressure	
Oil - winch housing	Gearbox oil SAE 90, approx. 3 litres
Weight	404 kg
LxWxH	2170 x 1380 x 1305 mm

* Refers to pilot line drum 2040-0121. Read about the drum winch function in the “Introduction” section on page 8.

LITHIUM BATTERY

Attribute	Value
Nominal voltage	48 V
Usable battery capacity (85%)	9 kWh
Recommended operating temperature	-25°C to +60°C
Optimal temperature range for charging	-5°C to +30°C
Cycles	>3000
Charger	230V 50-60 Hz 10A
Approximate charging time	5.1 hours (0-100%)

COMPONENT PARTS



#	Name	#	Name
1	Control panel	9	Line spreader (capstan winch)
2	Line spreader (drum winch)	10	Wheel/axle
3	Warning light *	11	Storage box *
4	Work lighting *	12	Drum (synthetic rope) *
5	Battery box	13	Demolition drum *
6	Capstan winch unit	14	Drum (steel line) *
7	Support stand	15	Stop chocks
8	Support wheels		

* Optional equipment

OPERATION

WORKING WITH COMBI WINCH 2104

SAHLINS Combi winch 2104 is reliable in design to provide safety. It can help you to perform your work easily and facilitate your work. However, it is important that you follow these instructions carefully as improper handling can be hazardous.

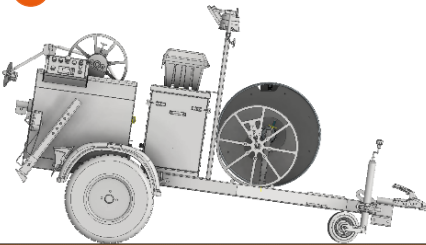
WARNING!

Check that all equipment to be used is free from deformation or other forms of damage.

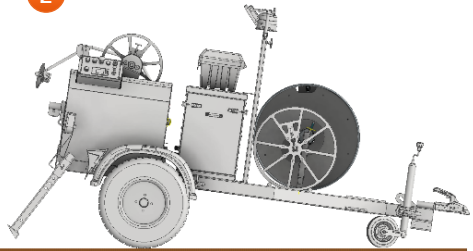
SET-UP

- Detach the winch from the towing ball.
- Lower the support wheel as far as it will go. (1)
- Fold down and lock both support stands at the appropriate height. (2)
- Raise the support wheel so that the winch stands firmly on the support stands. (3)

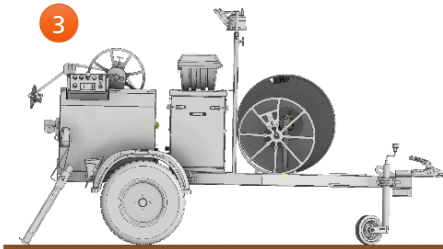
1



2



3



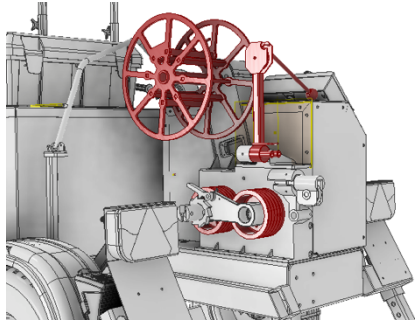
OVERHEAD LINE INSTALLATION

Both the capstan and drum winch functions can be used for overhead line installation.

- As a capstan winch, the speed is slower but pulling force is available at a higher and constant level.
 - As a drum winch, higher speeds are possible but pulling force is lower.
- These values also vary depending on how much line there is on the drum.

CAPSTAN WINCH

- Use a Sahlins original drum with synthetic rope.
- The drum is mounted on the drum axle in the decoupled position. *
- Pull out the desired length of line.
- The line is threaded through the input wheel and further through the grooves in the capstan wheels. **
- From the capstan wheel on through the line spreader.
- Lock the drum in the pulling position. *

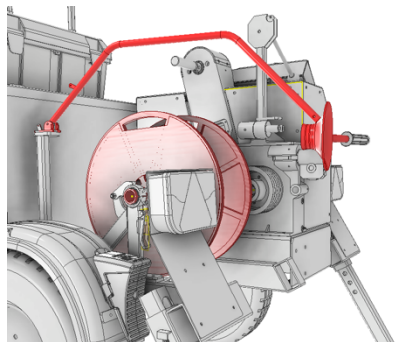


* See section "Mounting the drum" page 14

** See section "Attaching the line to the capstan wheel" page 16

DRUM WINCH

- Use a Sahlins original drum with synthetic rope.
- The drum is mounted on the drum axle in the decoupled position. *
- Pull out the desired length of line.
- Lock the drum in the pulling position. *
- Install the line spreader and prepare for pulling.



* See section "Mounting the drum" on page 14

REMARKS

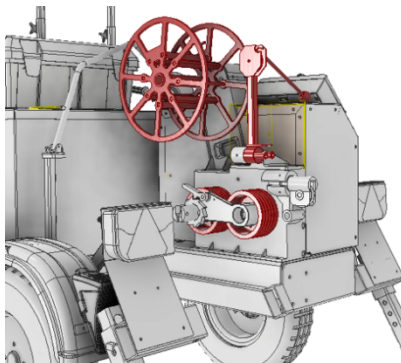
When using the drum winch > The actual diameter of the drum - where the line is wound up - affects both speed and pulling force during pulling. More line on the drum means a larger diameter which leads to higher speed and lower pulling force. Read more under section "Introduction".

UNDERGROUND CABLE LAYING

For underground cable laying, the capstan winch function is used, which enables maximum and constant pulling force throughout the entire pull.

CAPSTAN WINCH

- Use a Sahlins original drum with steel line.
- The drum is mounted on the drum axle in the decoupled position. *
- Pull out the desired length of steel line.
- The line is threaded through the input wheel and further through the grooves in the capstan wheels.
- From the capstan wheel on through the line spreader.
- Lock the drum in the pulling position. *



* See section "Mounting the drum" page 14

**See section "Attaching the line to the capstan wheel" page 16

DEMOLITION

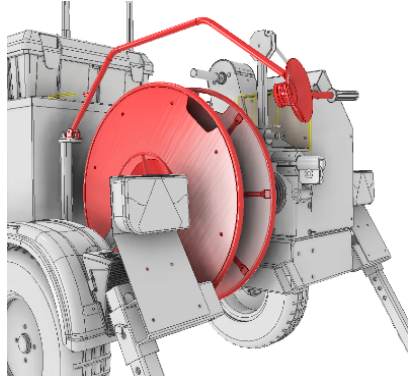
For line replacement and winding in of old line/cable, a split drum together with the drum winch function is used.

- The drum is mounted on the axle* for the drum winch function in the locked position.

* See section "Mounting the drum" on page 14

WARNING!

Do not wind the elastic lines on the drum as this can cause the drum to collapse or blast open.



MOUNTING THE DRUM

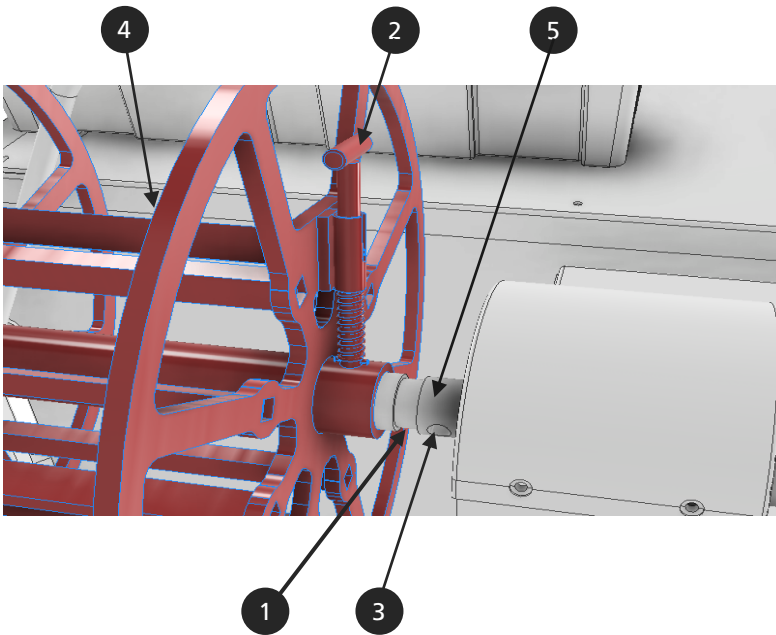
LINE DRUM – CAPSTAN WINCH

Pulling out the rope / Decoupled

- Mount the drum (4) on the drum axle (5).
- Slide in the drum (4) so that the catch (2) enters the groove (1) to uncouple the drum and pull out the line directly from the drum.

Pulling in the line/Pulling position

- Lock the drum (4) by inserting the catch (2) through the lock hole (3) on the drum axle.



LINE DRUM & DEMOLITION DRUM - DRUM WINCH

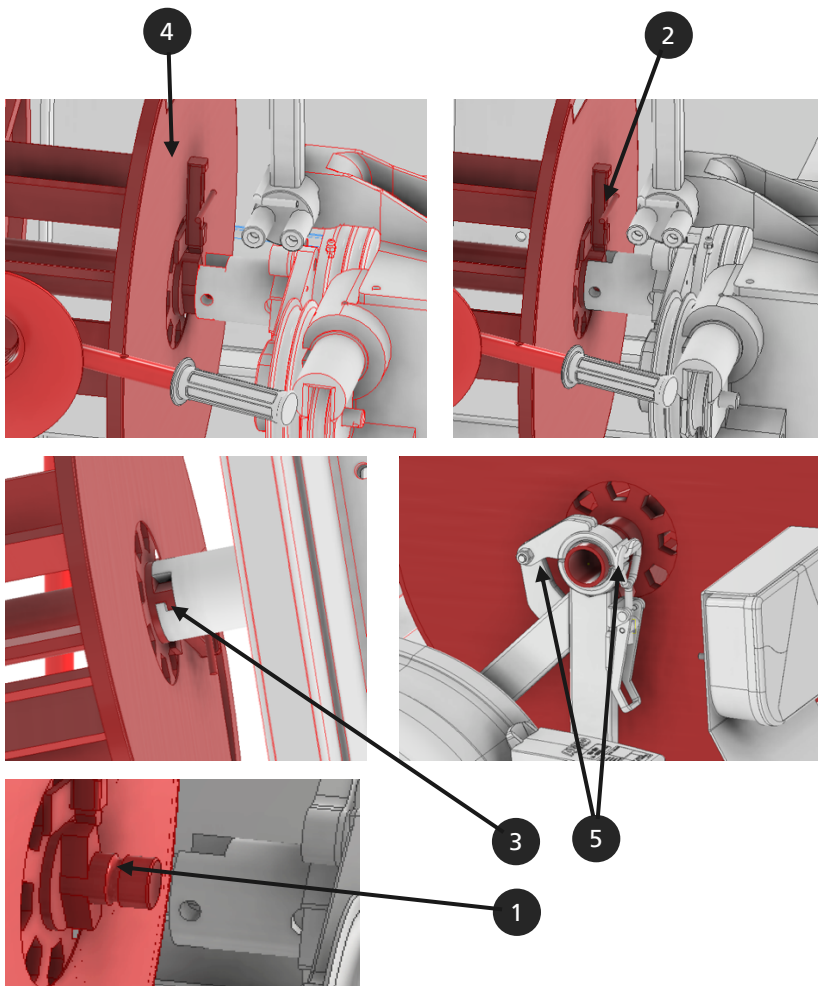
Run the winch so that the wide groove on the axle points obliquely forward upwards.

Pulling out the rope / Decoupled

- Mount the drum (4) in its outermost groove (1), so that the claw coupling (3) runs freely.

Retracting the line/Pulling position

- Pull up the catch (2) and slide the drum coupling into the groove.
- Then turn so that it engages (3).
- Thereafter, lock the bearing cap on the end of the axle with the eccentric lock (5).



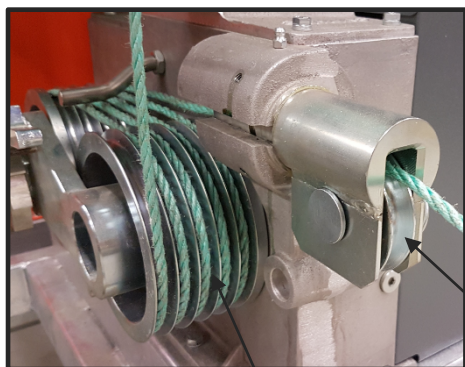
ATTACHING THE LINE TO THE CAPSTAN WHEEL

STEEL LINE/SYNTHETIC ROPE

- Make five loops. (Only for steel line) (1)
- Start by mounting the line in the input roller (2).
- Thread the line around all the capstan wheel's (3) grooves and inside the derailment guards (4)
- Continue up through the line spreader (5) to the drum (6).

⚠ CAUTION

Be very careful when mounting the line and check that the line is correctly positioned in the capstan grooves and on the right-hand side of the derailment guards.



3

6

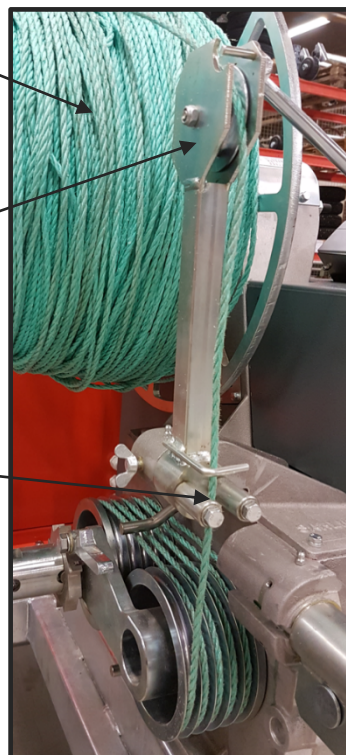
5

2

5

3

4



THE BATTERY

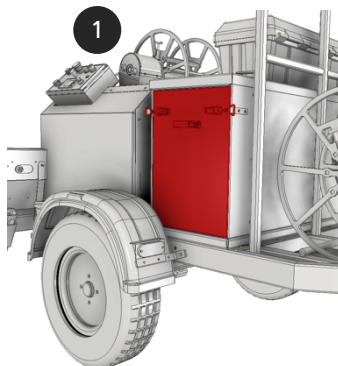
WARNING!

High-voltage! The battery and charger contain a voltage level that could cause personal injury. Never remove the cover or disassemble the battery and do not touch uninsulated battery terminals, connections or other live parts.

STARTING AND SWITCHING OFF THE BATTERY

- Start the battery by pressing button (2) on the control panel*
- Wait a few seconds for the battery to activate. The button flashes when this happens.
- After finishing work, switch off the battery by pressing button (2) firmly twice at 0.5-1.0 second intervals.

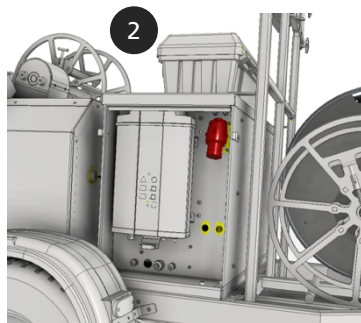
* See section "Control panel" on page 18



CHARGING

The charging time depends on the battery's charge level and temperature. If the battery's temperature falls below -5 C when charging starts, it is heated by a built-in heating system before energy storage takes place. The battery system can be charged during breaks and when the machine is not in use, without reducing the battery life. Multiple short charges during a day's work can replace one longer charge. The battery can also be charged during operation. However, it is recommended that the battery is fully charged for balancing at least once a month (see the "Maintenance " section on page 23).

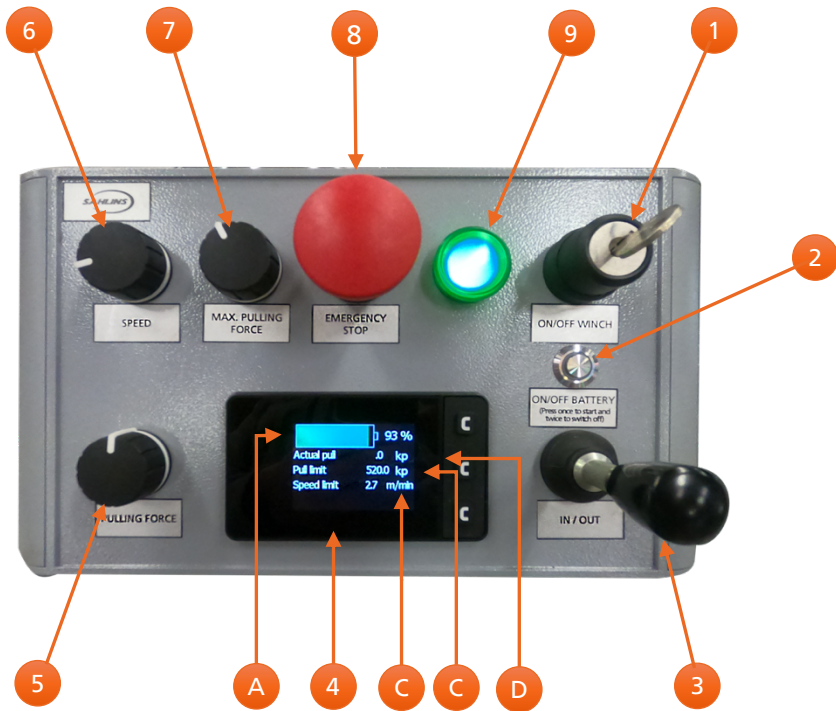
- Start charging the battery when the capacity falls below 20%
- Remove the protective cover from the battery box (1)
- Connect the supplied - or similar - charging cable to the socket on the machine (2)
- See continuous actual battery level during charging on the control panel display, by turning the key (Control panel pos (1)) to the "On" position and activating the winch unit.



WARNING!

Do not insert anything into the ventilation openings on the charger. Do not use the charger in the event of signs of damage. Do not store flammable material near the battery charger.

CONTROL PANEL



#	Name	#	Name
1	On/Off winch	8	Emergency stop
2	On/Off battery	9	Indicator winch On/Off
3	In/Out pulling winch	A	Battery charging level
4	Display	C	Set max. pulling force
5	Pulling force adjustment	C	Set pulling speed
6	Pulling speed adjustment	D	Actual pulling force
7	MAX. pulling force setting		

MANOEUVRING

PULL DIRECTION

All references below refer to the "Control panel" section on page 18

- Forward and reverse control performed via control (3).

PULLING FORCE

All references below refer to the "Control panel" section on page 18

Capstan winch

- Ensure that the control for pulling force (5) is set to "MIN."
- Set "max. Pulling force" with control (7) and see the indicated value (B) on the display (4)
- Turn the key (1) to activate the winch unit
- Pull the lever (3) to pull in
- Increase the pulling force with control (5) until the winch is able to pull the load
- During the pull, the pulling force (5) requires continuous adjustment - as the pulling force requirement increases - to have the necessary power available at all times
- During work, the actual pulling force (A) is shown in the display (4)

Drum winch

- Read the following "CAUTION!" regarding pulling force and speed
- Ensure that the control for pulling force (5) is set to "MIN."
- Set "max. pulling force" with control (7) to "MAX."
- Turn the key (1) to activate the winch unit
- Pull the lever (3) to pull in
- Increase the pulling force with control (5) until the winch is able to pull the load
- During the pull, the pulling force (5) requires continuous adjustment - as the pulling force requirement increases - to have the necessary power available at all times

WARNING!

Setting pulling force (5) with too large a margin - in relation to actual requirement - can mean a risk of both personal injury and machine damage. This is because a sharp increase in pulling force can occur in the event of an unforeseen obstacle.

WARNING!

Never by-pass the dead man's switch function, which ensures that the winch stops if the joystick is released. If this is by-passed there is a risk of personal injury and machine damage.

PULLING SPEED

All references below refer to the "Control panel" section on page 18

Capstan winch

- Set the desired "pulling force" with control (6) and see the indicated value (C) on the display (4)

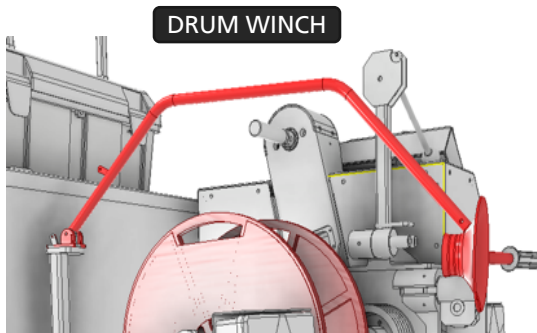
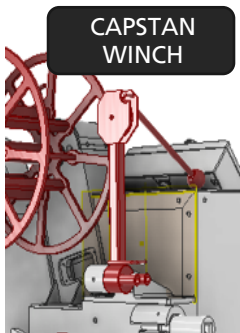
Drum winch

- Read the following "CAUTION!" regarding pulling force and speed
- Set the pulling speed with the control (6)

CAUTION

With drum winch function, the displayed values of the display - for current speed & pulling force - do not reflect the actual values. This is because of varying drum diameters.

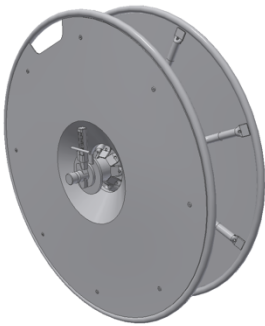
LINE SPREADER



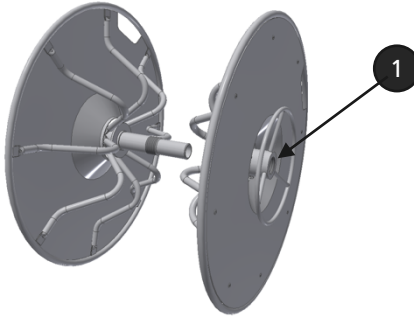
During pulling, ensure the spreading of line on the drum. This is done by continuously using the line spreader.

DEMOLITION

- Always lift off the line spreader if the jointing sleeves pass.
- The old line is wound on and lifted out of the machine.
- Split the drum by loosening the tension grip (1) and lift out the line ring.



ASSEMBLED

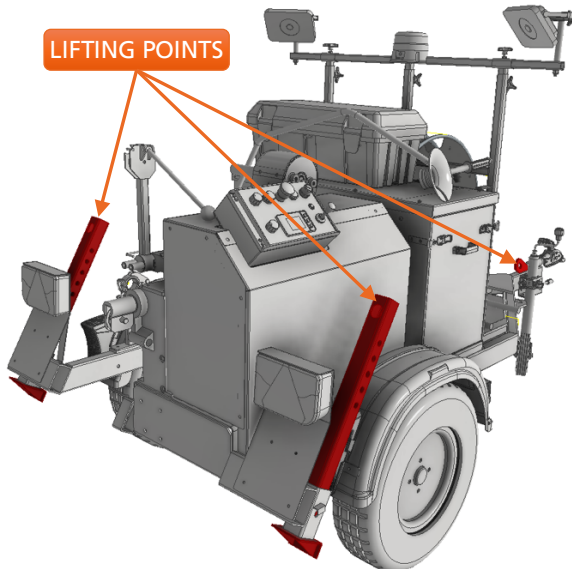


SPLIT

MISCELLANEOUS

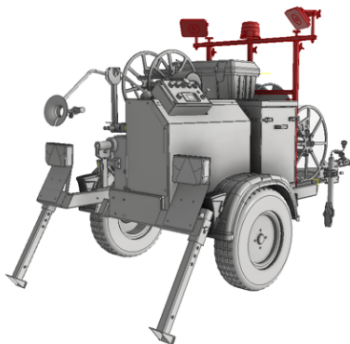
LIFTING THE MACHINE

Lift the winch by the front lifting eye and upper holes on the support stands with approved lifting equipment. See the "Technical data" section on page 9 for weights.

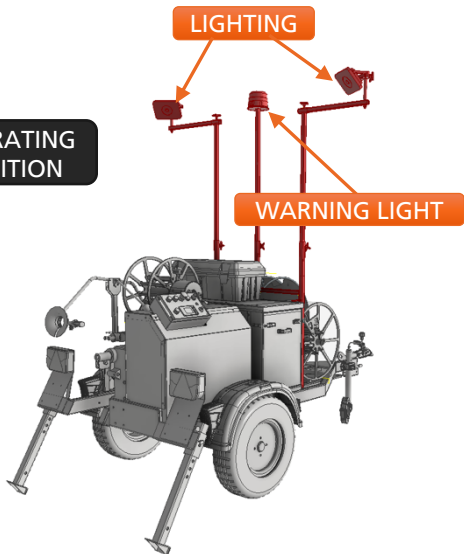


WORK LIGHTING

TRANSPORT POSITION

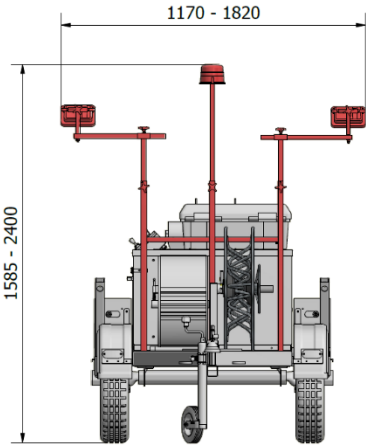


OPERATING POSITION



Combi winch 2104 can be equipped with work lighting as well as a warning light. The lighting is fully rotatable and height and laterally adjustable. All lights can be charged with the supplied charger via the socket behind the battery box cover.

Technical data	Lighting	Warning light
Light source	LED	LED
Light flux	1800 lm	-
Power	20 W	39 W
Voltage	12 V	12 V
Operating time 50%	6 hours	-
Operating time 100%	3 hours	5 hours
Temperature range	-10°C to +40°C	-30°C to +50°C.
Charging time	4 hours	5 hours
Light source service life	30,000 hours	-
Enclosure class	IP65	IP66



MAINTENANCE

SERVICE SCHEDULE

Name	Each time	Once a month or 20 hours	Every third month or 50 hours	Every sixth month or 150 hours	Annually or 300 hours
Winch unit *					
- Oil level winch housing	☐	☒ 1	☐	☐	☐
- Gearbox oil	☐	☐	☐	☒ 1	☒ 5
- Line spreader	☐	☐	☒ 4	☐	☐
- Driving chain	☐	☐	☐	☒ 4	☐
- Driving chain collection drum	☒ 1	☐	☐	☐	☐
- Friction pads	☒ 3	☐	☐	☐	☐
- Input roller	☐	☐	☐	☒ 4	☐
- Line drum axle & Support bearing	☒	☐	☐	☒ 4	☐
Friction clutch **	☒ 1	☐	☐	☐	☐
Battery ***					
- Balancing battery*	☐	☒ 2	☐	☐	☐
- Charge battery < 20%	☒ 2	☐	☐	☐	☐
Chassis ****					
- Tyre pressure	☒ 1	☐	☐	☐	☐
- Support wheel	☒ 1	☐	☐	☒ 4	☐

1 = Inspect

2 = Adjust

3 = Clean

4 = Lubricate

5 = Change

* See more info under the "Winch unit" section on page 24

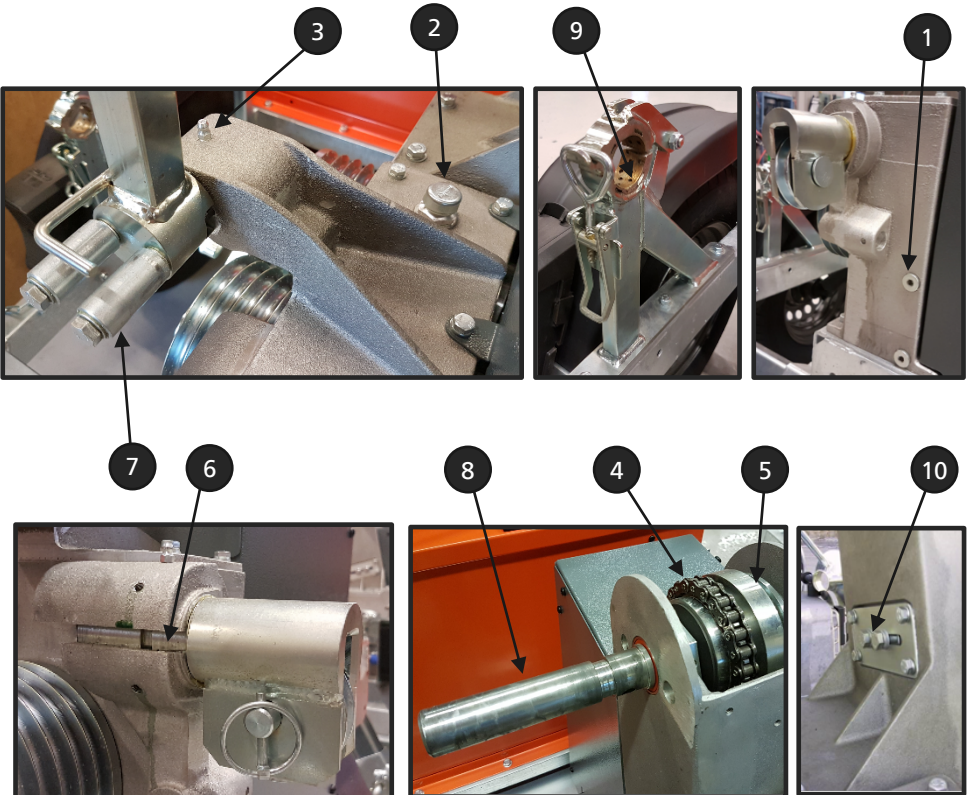
** See more info under the "Friction clutch" section on page 25

*** See more info under the "Battery" section on page 17

**** See more info under the "Chassis" section on page 25

WINCH UNIT

- The oil level in the winch housing is checked via the oil level plug (1) on the front end.
- Top up gearbox oil if necessary. Top up via the venting valve (2) on top of the winch housing.
- Lubricate the line spreader with grease via the grease nipple (3).
- Lubricate the chain (4) if necessary by opening the cover at the top above the slip clutch (5).
- Check that there is no oil on the slip clutch friction pad (5).
- Lubricate bearings on the input wheel (6) and the line spreader wheels/rollers (7).
- Grease the line drum axle (8) and support bearing (9), for wind wheel/ winch drum on the chassis.
- The tension of the drive chain to the collection drum is adjusted with the chain tensioner (10) on the drum holder stand. Loosen the two screws that hold the tensioner, insert a screwdriver or similar and tension the chain adequately.



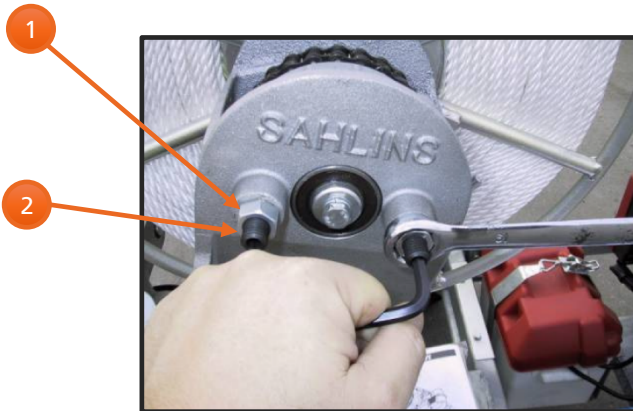
CHASSIS

The chassis is hot-dip galvanized and requires no special inspection. Check the function of the front support wheel regularly and lubricate if necessary. Check tyre pressure, see information in the "Technical data" section on page 9.

FRICTION BRAKE

The friction brake, which prevents the drum from "running away", can be adjusted.

- Adjustment is made with the line drum full.
- Loosen both lock nuts (1) and adjust with the Allen screws (2).
- Screw the same amount on both Allen screws (2) to avoid skewed load on the friction pad.
- Run the line out through the capstan wheel and check that it does not run too slowly and that the drum does not rotate too far when you stop, i.e. so that there is not too much slack on the line that there is a risk of the capstan wheels derailing



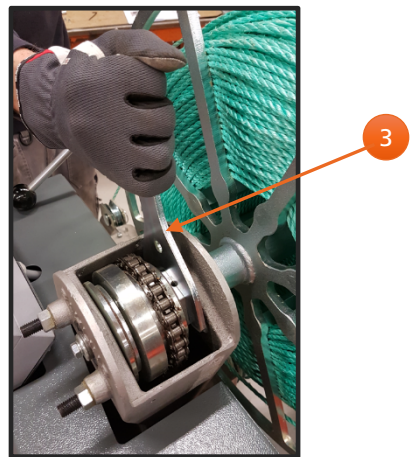
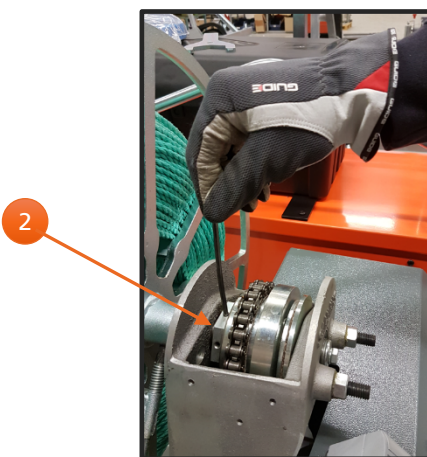
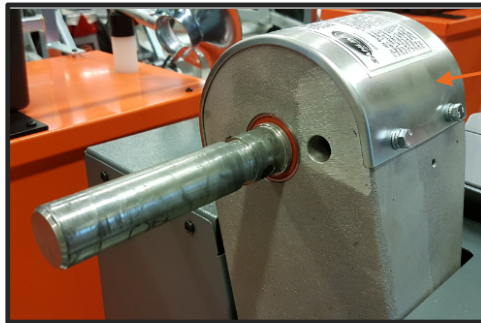
FRICTION CLUTCH

If the capstan wheel rotates without winding in the line, the friction clutch is too loosely tightened and must be adjusted. The friction clutch should then be adjusted.

- Adjustment is made with the line drum full
- The friction brake should first have been adjusted.
- Remove the protective cover (1).
- Loosen the locking screws on the adjuster nut (2).
- Then turn the adjuster nut (2) with the special tool (3) (supplied with the machine).
- Tighten until the winch starts to pull and check that max. pulling force (1000 kp) is achieved.

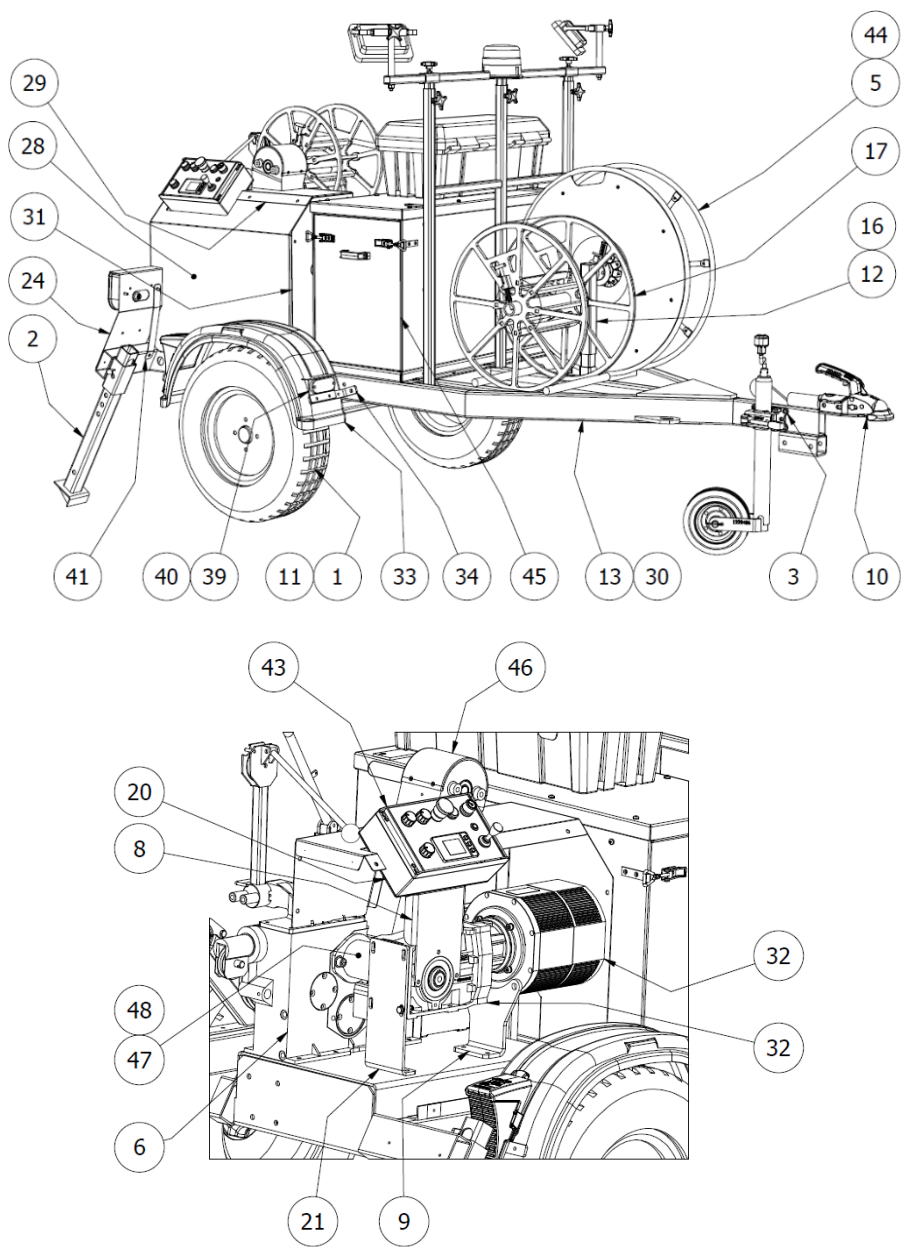
CAUTION

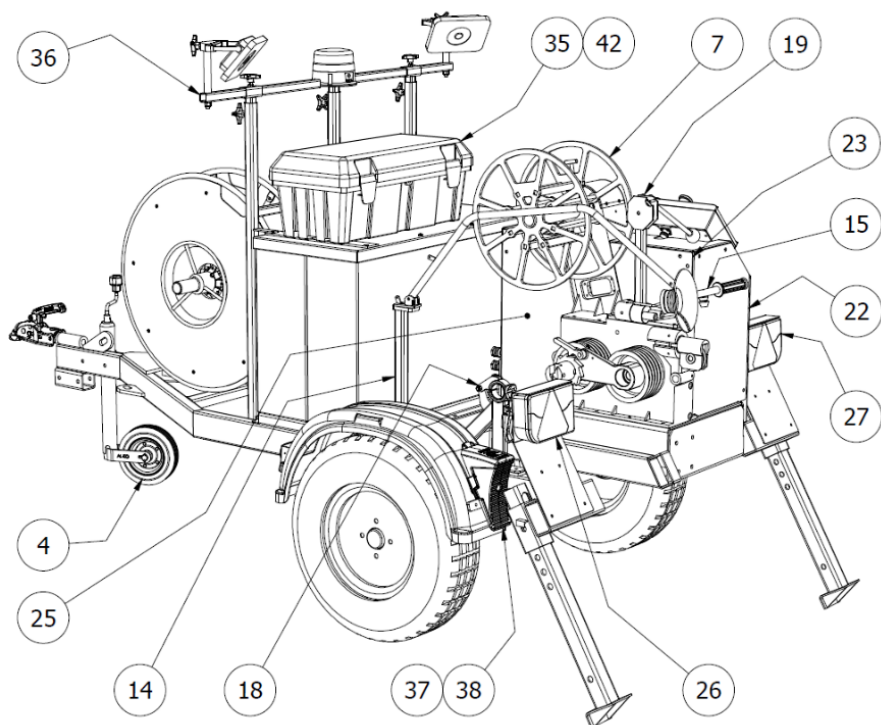
Over-tightening the adjuster nut (2) can damage the winch.



SPARE PARTS

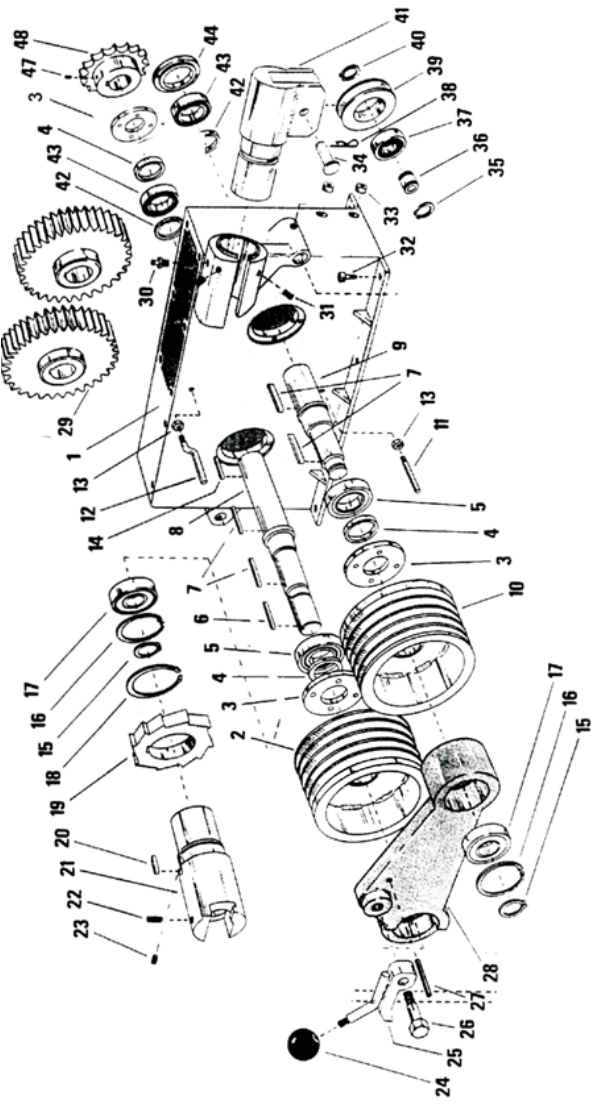
OVERVIEW





Part	Quantity	Part No.	Name
1	2	9581-005	Wheels
2	2	2100-5010	Support stand
3	1	9583-002	Clamping sleeve
4	1	9583-001	Support wheels
5	2	2040-0215	Demolition drum
6	1	-	Winch unit (See page 30)
7	2	3060-0010	Drum Ø395
8	1	2104-5022	Bracket - Control panel
9	1	2104-5012	Support - Electric motor
10	1	9582-007	Ball coupling
11	1	9580-018	Wheel axle
12	1	2100-5008	Drum bracket
13	1	2104-5001	Frame
14	1	2100-5040	Line spreader bracket
15	2	9809-020	Line spreader arm Assembly

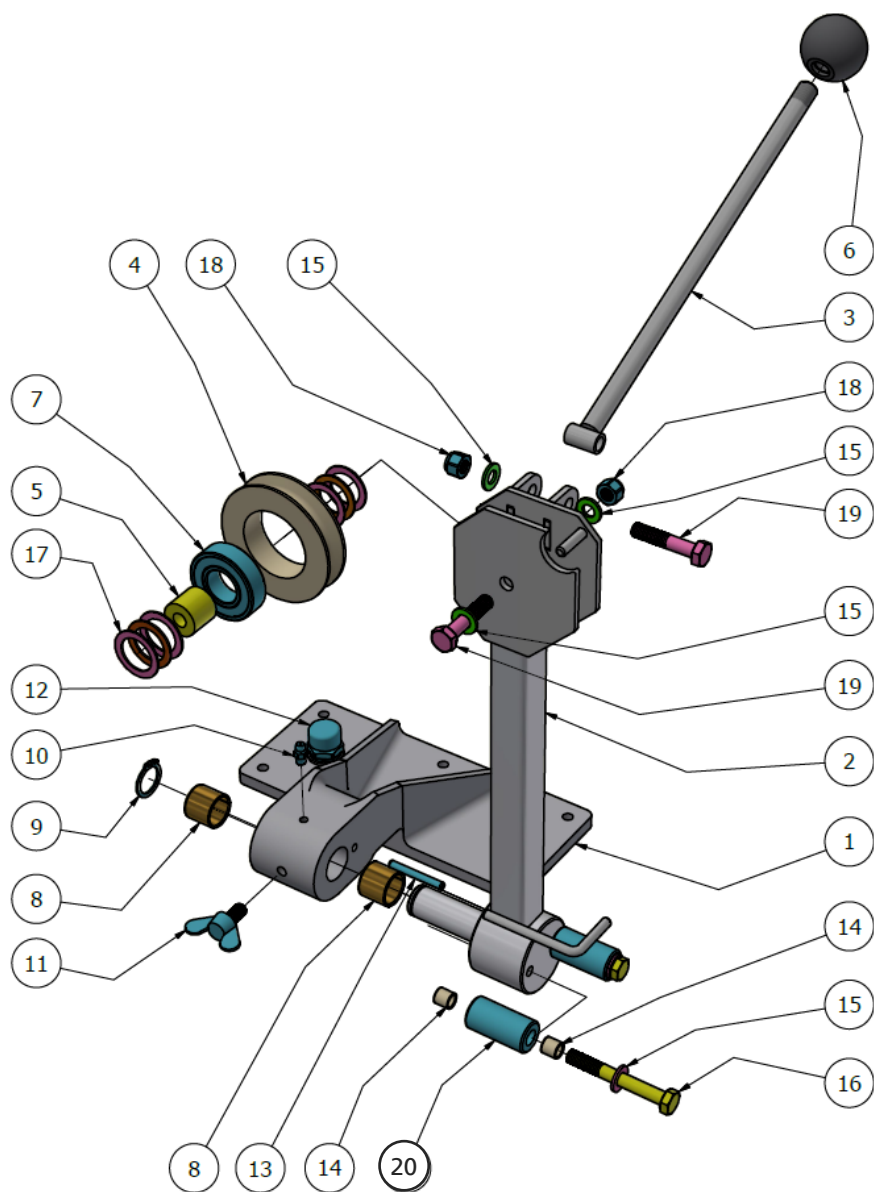
Part	Quantity	Part No.	Name
16	1	2104-5020	Spacer tube - Drum bracket
17	2	3060-0021	Drum Ø530
18	1	2100-0020	Support bearing
19	1	3062-3001	Line spreader assembly (page 32)
20	1	2104-5021	Mounting plate - Control panel
21	1	2104-5013	Support - Gearbox
22	1	2104-5014	Cover - End
23	1	2104-5016	Cover - Rear Small
24	2	2103-5016	Lighting bracket
25	1	214-5017	Cover - Rear Large
26	1	9710-021	Rear light - Left
27	1	9710-020	Rear light - Right
28	1	2104-5018	Cover - Front
29	1	2104-5019	Cover - Top
30	1	2104-5003	Bottom plate
31	1	2104-5015	Cover-End
32	1	-	Electric motor Incl. Gear
33	2	9585-008	Mudguard
34	4	2104-5004	Mudguard bracket
35	1	9877-008	Storage box
36	1	2104-0020	Work lighting
37	2	9589-013	Holder Stop chock
38	2	9589-012	Stop chock
39	2	4701-5021	Position bracket
40	2	9710-024	Position light
41	2	2104-5010	Support - Lighting
42	1	2104-5011	Mounting plate
43	1	-	Control panel
44	1	2040-0111	Pilot rope drum
45	1	-	Battery
46	1	-	Drum holder (page 34)



Ref. No.	Quantity	Part No.	Name
1	1	3060-5001	Winch housing
2	1	3062-5001	Capstan wheel
3	3	3060-5004	Bearing cover
4	3	9462-30477	Seal ring

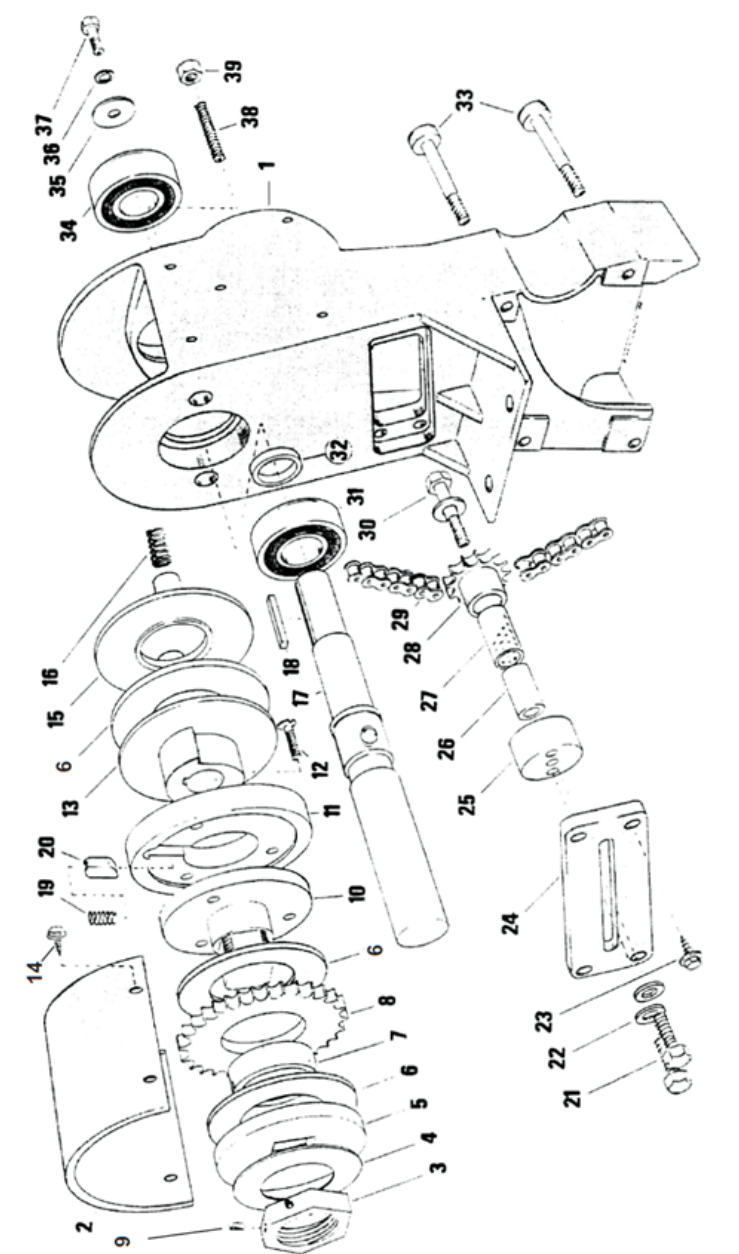
Ref. No.	Quantity	Part No.	Name
5	6	9201-6006-0	Deep groove ball bearings 6006-0
6	1	9322-0840	Parallel key 8x7x40 T
7	5	9321-0840	Parallel key 8x7x40 R
8	1	3060-5005	Shaft capstan wheel
9	1	3060-5006	Shaft capstan wheel
10	1	3062-5002	Capstan wheel
11	1	3062-5003	Line pin lower
12	1	3062-5004	Line pin upper
13	2	9424-12	Nut M12
14	1	9321-0830	Parallel key 8x7x30 R
15	2	9302-025	Circlip SGA25
16	2	9301-047	Circlip SGH47
17	3	9201-6005-20	Deep groove ball bearings 6005-2RS (SKF)
18	1	9302-050	Circlip SGA50
19	1	3062-5005	Ratchet wheel
20	1	9322-1416	Parallel key 14x9x16T
21	1	3062-5006	Shaft coupling Type C
22	1	9389-001	Ball screw M12
23	1	9374-08006	Stop screw M8x6
24	1	9511-2508	Ball M8 Ø25
25	1	3062-5008	Retaining pawl
26	1	3062-5009	Screw M12x37 special
27	1	9344-04036	Spring dowel M4x36
28	1	3062-5010	Shaft spacer
29	2	3062-5011	Gear wheel
30	1	9551-06	Grease nipple
31	2	9373-06016	Stop screw M6x16
32	8	9361-08040	Screw M8x40
33	2	9621-VSTIR1/4ED	Oil plug R1 / 4BSP
34	1	3060-5008	Nosegear wheel axle
35	3	9302-020	Circlip SGA20
36	1	3060-5009	Spacer sleeve
37	1	9201-6004-2	Deep groove ball bearing 6004-2RS
38	1	9343-04532	Linch pin
39	1	3060-5010	Idler pulley
40	2	9302-020	Circlip SGA20
41	1	3060-5011	Nosegear wheel holder
42	2	3060-5012	Spacer
43	4	9201-6006-0	Deep groove ball bearings 6006-0
44	2	3060-5013	Cap
47	1	9374-08010	Stop screw M8x10
48	1	3060-5014	Chain gear wheel

LINE SPREADER



Ref. No.	Quantity	Part No.	Name
1	1	3062-5012	Cover line spreader bracket
2	1	3062-5013	Line spreader arm
3	1	3062-5014	Line spreader arm
4	1	3060-5010	Idler pulley
5	1	3062-5015	Spacer sleeve
6	1	9511-3010	Ball M10 Ø30
7	1	9201-6004-2	Deep groove ball bearing 6004-2RS
8	2	9252-2015	Slide bearing 20x23x20
9	1	9302-020	Circlip SGA20
10	1	9551-06	Grease nipple
11	1	9401-08016	Wing screw M8x16
12	1	9674-001	Breather plug
13	1	9344-05040	Spring dowel FRP 5x40
14	4	9254-0810	Slide bearing PDE 8x10x10
15	5	9441-084	Washer BRB 8.4
16	2	9361-08065	Screw M8x65
17	6	9449-013	Spacer washer
18	2	9422-08	Lock nut M8
19	2	9361-08040	Screw M8x40
20	2	3060-5021	Roller

DRUM HOLDER/FRICTION CLUTCH



Ref. No.	Quantity	Part No.	Name
1	1	3062-5016	Drum holder stand
2	1	3062-5024	Chain guard
3	1	3060-5047	Nut
4	1	9485-001	Belleville spring washer
5	1	3060-5046	Pressure plate
6	3	9591-001	Friction pad
7	1	9229-001	Needle bearing
8	1	3060-5026	Chain gear wheel
9	2	9373-08006	Stop screw M6x8
10	1	3060-5045	Clutch hub
11	1	3060-5027	Freewheel hub outer section
12	3	9372-06025	Screw MF6S M6x25
13	1	3060-5028	Freewheel hub inner section
14	4	9361-06012	Screw M6S M6x12
15	1	3060-5029	Brake hub
16	2	9481-010	Compression spring
17	1	3060-5030	Drum shaft
18	1	9322-0630	Wedge 6x6x30
19	1	9481-011	Compression spring
20	1	3060-5031	Latch
21	2	9361-08025	Screw M6S M8x25
22	2	9441-084	Washer FBB 8.2
23	4	9361-06020	Screw M6S M6x20
24	1	3060-5032	Cap
25	1	3060-5033	Intermediate piece
26	1	3060-5034	Tube
27	1	9251-1525	Slide bearing WB681
28	1	3060-5035	Chain gear wheel
29	1	3060-5025	Chain + lock
30	1	9361-08045	Screw M6S M8x45
31	1	9201-6005-2	Deep groove ball bearing 6005-2RS
32	1	3060-5036	Spacer
33	4	9371-08080	Screw MC6S M8x80
34	1	9201-6204-2	Deep groove ball bearing 6204-2RS
35	1	9449-084	Washer FBB 8, 2x26x5
36	1	9444-082	Washer FRB 8.2
37	1	9361-08020	Screw M6S M8x20
38	2	9374-12045	Stop screw SK6SSM12X45
39	2	9421-12	Nut M12

NOTES

[illegible]



SV	EG Försäkran	EN	EC Declaration of conformity	FR	EC déclaration de conformité
DE	EG-Konformitätserklärung	IT	Dichiarazione CE di conformità	ES	Declaración CE de conformidad
NO	EU-samsvarserklæring	FI	EU-vaatimustenmukaisuusvakuutus	PL	Deklaracja zgodności WE

SV	Vi försäkrar, i egenskap av tillverkare, att nedanstående produkt uppfyller alla tillämpliga bestämmelser i 2006/42/EG.
EN	We declare, as a manufacturer, that the following product meets all applicable provisions of 2006/42 / EC
FR	Nous déclarons, en tant que fabricant, que le produit suivant répond à toutes les dispositions applicables de 2006/42/CE
DE	Wir erklären als Hersteller, dass das folgende Produkt allen anwendbaren Bestimmungen der 2006/42/EG entspricht
IT	Dichiariamo, in qualità di produttore, che il seguente prodotto soddisfa tutte le disposizioni applicabili della 2006/42/CE
ES	Declaramos, como fabricante, que el siguiente producto cumple con todas las disposiciones aplicables de 2006/42/EC
NO	Vi erklærer, som produsent, at følgende produkt oppfyller alle gjeldende bestemmelser i 2006/42 / EC
FR	Nous déclarons, en tant que fabricant, que le produit suivant répond à toutes les dispositions applicables de 2006/42/CE
PL	Declaramos, como fabricante, que o seguinte produto atende a todas as disposições aplicáveis de 2006/42 / CE

SV	Artikelnummer	EN	Article number	FR	Numéro d'article
DE	Produkt Anzahl	IT	Numero dell'articolo	ES	Número de artículo
NO	Artikkelnummer	FI	Artikkelinumer	PL	Numer katalogowy

2104-0000

SV	Benämning Kombivinsch 2104 Elektrisk	EN	Product name Combi Winch 2104 Electric	FR	Désignation Treuil combiné 2104 électrique
DE	Bezeichnung Elektrische Kombi-Seilwinde 2104	IT	Denominazione articolo Combi Winch 2104 Elettrico	ES	Nombre de producto Cabrestante combinado 2104 eléctrico
NO	Produktnavn Kombivinsj 2104 Elektrisk	FI	Tuotteen nimi Yhdistelmävinssi 2104 Sähköinen	PL	Nazwa produktu Wciągarka Combi 2104 z napędem elektrycznym

SV	Tillämpade harmoniserade standarder	EN	Applied harmonised standards	FR	Normes harmonisées appliquées
DE	Angewandte harmonisierte Normen	IT	Norma armonizzate applicate	ES	Normas armonizadas aplicadas
NO	Anvendte harmoniserte standarder	FI	Sovellettavat yhdenmukaistetut standardit	PL	Zastosowane normy zharmonizowane

SV	Andra tillämpade standarder och specifikationer	EN	Other applied standards and specifications	FR	Autres normes et spécifications appliquées
DE	Andere angewandte Normen und Spezifikationen	IT	Altre norme e specifiche applicate	ES	Otras normas y especificaciones aplicadas
NO	Andre anvendte standarder og spesifikasjoner	FI	Muut sovellettavat standardit ja spesifikaatiot	PL	Pozostałe zastosowane normy i specyfikacje

SV	Tillverkare	EN	Manufacturer	FR	Fabricant
DE	Hersteller	IT	Prodotto da	ES	Fabricante
NO	Produsent	FI	Valmistaja	PL	Producent

Sahlins Sweden AB, Företagsvägen 2, 523 35 Holsljunga, Sweden

SV	Signerad av	EN	Signed by	FR	Signé par
DE	Unterschrift	IT	Firmato da	ES	Firmada por
NO	Signert av	FI	Allekirjoitus	PL	Podpis(a)

Mattias Svensson, CEO Sahlins Sweden
Holsljunga, SWE 19.01.2022

Mattias Svensson (19 Jan 2022 09:39 GMT+1)

01/12/2021



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