



No. 9972-2060010

# LINE MACHINE

2060

## USER MANUAL



 **MADE IN HOLSLJUNGA**



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# THANK YOU FOR CHOOSING A SAHLINS PRODUCT!

We want you to be happy with your Line Machine 2060. 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, we have taken great care to reduce risks from a health and safety perspective.

Laying cables or installing ropes involves a variety of risks, and to reduce these, it is important:

- to read and follow the instructions
- to ensure periodic 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 prepared and followed by the entire staff.

Our instructions contain important information that all users should be aware of and understand before they use the equipment. To ensure your and others' safety, special attention should 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.

### **NOTE**

Advisory information regarding the operation, care and maintenance of machinery and equipment.

# SAFETY RULES

## General safety rules

1. 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 have answers to all your questions before starting the work.
2. Do not work with machinery or equipment if you're under the influence of alcohol, strong medications, sedatives or other drugs that can make you less alert or affect your judgement.
3. Take safety measures such as not wearing loose clothing which can get stuck in moving parts or controls.
4. If possible, always wear gloves to protect your hands and fingers against cuts and abrasions, burns and solvents.
5. Always use protective goggles if there is a risk of flying particles, flakes of material, dust or other objects that can damage your eyes, and when required by safety regulations. Protect your eyes!
6. A safety helmet and protective footwear must be worn at all times during such work.
7. Always use hearing protection in work areas with high noise levels.
8. Do not carry out heavy lifts which could hurt your back, use equipment instead. If you have to carry out manual lifts, use your legs rather than your back muscles.

## Safety in the workplace

9. Keep the work area clean and free of material.
10. Do not permit unauthorised staff to be present within or around the work area. Always keep complete control of who is present.
11. Areas that come in contact with hands or feet must be kept clean, dry and free of oil or grease.
12. Store spare parts and tools in the designated places when these are not in use.
13. Perform a control of warning equipment in the work area and make sure that each individual unit works satisfactorily before starting the equipment.
14. Do not stand beneath or permit anyone else to stand beneath equipment that is lifted or suspended.
15. Acquaint yourself with the weight limitations of ropes and lifting equipment and the free space required for these.
16. Be aware of conditions that may impede the monitoring of the work area and its surroundings.

## Equipment safety precautions

17. Warning, prohibition and information signs may not be concealed, changed, damaged or removed.
18. Never climb up onto equipment during operation, transport or suspension and do not let anyone else climb on top either.
19. Check the components in the equipment before each operation to ensure that no parts are damaged or are suspected to be damaged. Repair or replace damaged parts or parts which are suspected to be damaged. Repair or replace damaged parts before starting and operating the equipment. Only use genuine spare parts.

20. Before starting and operating equipment, ensure that no people, animals, tools, spare parts or other foreign objects are present in, on, under or around it. Check that all protective and safety equipment is correctly installed and in satisfactory condition.
21. Before starting the machine, make sure that all the staff and visitors in the work area have been informed that the equipment will be started. Use suitable warning equipment to warn them.
22. Do not permit untrained personnel to use any equipment without supervision by a trained operator.
23. Never leave the equipment without control and supervision.
24. Be aware of potentially incorrect measuring instruments, visible defects, odours or unknown sounds that could indicate an error during start-up and operation. If you suspect something is wrong, turn off the equipment immediately.
25. Carry out all inspection, maintenance, lubrication and adjustment with great care and according to the manufacturer's recommendations. The machine should always be stopped during maintenance work.

### Safety with respect to fire and environmentally hazardous substances

26. Store flammable, combustible and dangerous substances in a safe place and dedicated containers. These should be kept clearly marked in accordance with relevant guidelines.
27. Do not allow smoking or open fires/flames in the proximity of fuel and oil tanks or other combustible substances.
28. Turn off all engines during refueling or refilling oil. Follow the guidelines and recommendations that are applicable for handling these substances.
29. Never start a diesel or petrol engine in a closed space if it is not properly ventilated. Hazardous gases can kill.
30. Do not use flammable and/or combustible substances such as petrol, paraffin or diesel to clean parts. Do not use non-flammable solvents that are intended for cleaning.

### Safety for hydraulic systems

31. Reduce system pressure first before performing any maintenance work on the hydraulic system.
32. Do not perform any internal inspections until the pressure has been reduced.  
Hydraulic oil can be dangerous if it is incorrectly released. Oil can be very hot under operation. Wait till the system has cooled down before the work can be performed.
33. Do not remove a hydraulic cylinder from the connections reducing system pressure.
34. Do not operate the pressure system with worn-out or damaged hoses, valves and seals. Replace damaged components before the system is taken in operation again.
35. Do not disassemble hydraulic cylinders or other hydraulic equipment unless you are qualified to perform such work.
36. Never set pressure settings in the hydraulic system above the recommended values.
37. Follow the manufacturer's recommended inspection and maintenance instructions for pressure systems to ensure appropriate conditions during operation.

# INTRODUCTION

Line machine 2060 is a portable overhead cable winch for running overhead cable and bare wire on a front rope drum or demolition and replacement using a split drum. The winch is constructed in three manageable base units: engine with gearbox, pole and drum holding frame and a drum. The winch is powered by a four-stroke petrol engine. The engine is combined with a self-braking worm gear that holds the load when stopped. It also has a forward and reverse gear.

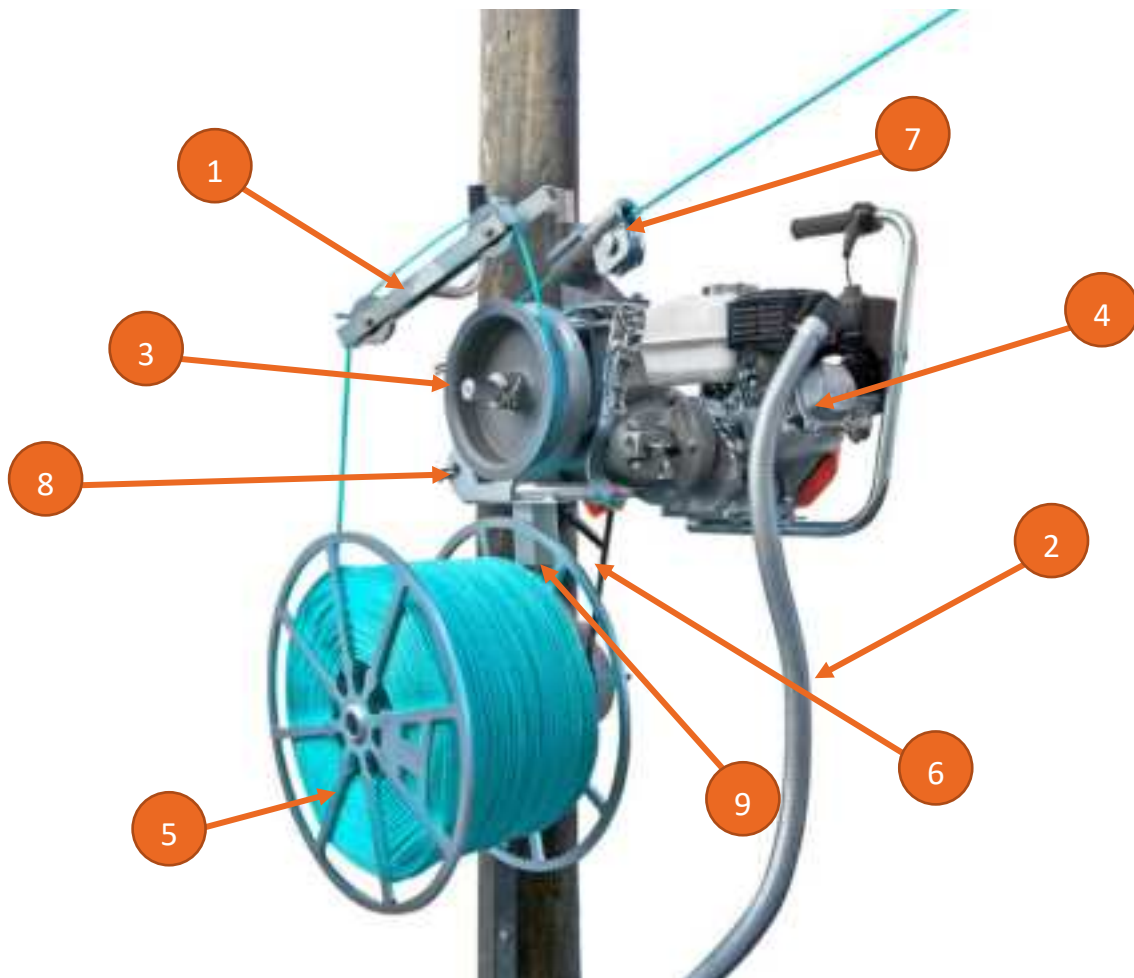


# TECHNICAL DATA

LINE MACHINE	
Model	2060
Dimensions L x W x H	550 x 220 x 340 mm
Pulling speed	Approx. 0-29 m/min (controlled with the engine throttle.)
Pulling force	400 kp
Winch line	6 mm synthetic winch line
Compatible drums	Front rope drum and demolition drum
Weights	
- Engine with gear	37 kg
- Pole bracket	13 kg
- Drum arm	6.5 kg
- Line spreader	2.2 kg
Engine	Honda GX 160, four-stroke, air-cooled, petrol 5.5hp
Gear box	Worm gear forward and reverse. Self-braking (automatic brake)
Noise level	Approx. 96 dB

# COMPONENTS

#	Name
1	Line spreader
2	Exhaust hose
3	Capstan wheel
4	Petrol engine
5	Front rope drum
6	Drive belt
7	Rotatable input wheel
8	Pole bracket
9	Drum arm



# MOUNTING

Work with line machine: SAHLINS line machine 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!

Before assembling the bracket, engine and accessories, make sure you are wearing protective gloves.

## Bracket

- Mount the frame at a suitable working height on the pole. May only be used on a wooden pole with a circular cross section.
- Align the frame so that it is in the correct direction of pull.
- Pull out the belt tensioner fully and attach the hook into the hole (make sure it is properly aligned with the groove on the opposite side of the tensioner)
- Pull the belt through until it is fully stretched and then tighten with the clamping handle until the bracket is firmly secured.



## Engine and capstan wheel

- Install the engine with gearbox between the tubular arms on the frame. Make sure that the pipes lie correctly with the milled opening in the gearbox.
- Fold up the locking arm and secure it with the eccentric locking device.
- Fit the capstan wheel onto the output shaft from the gear. Secure with the locking pin.



## Drum holding frame

- Install the drum holding frame on the engine bracket, slide it up to its highest level to simplify installation of the drive belt.
- Put the drive belt over the drive pulley on the gear, and the pulley on the drum holding frame.
- Check that the belt is correctly aligned in the grooves. The belt is tensioned by pressing the drum holder down. Check belt tension by pressing the belt with your thumb. Recommended clearance is 5-8 mm.



- Lock the drum holder with the lock screw on the inside of the bracket.

### Line spreader and exhaust hose

- Install the line spreader on the attachment for the input roller. Always use the line spreader for line pulling.
- Fasten the exhaust hose with the spring clamp and place the outlet at a suitable distance from the operator.

#### **WARNING!**

Never start the engine until the machine has been fully assembled.

#### **CAUTION!**

Always mount the exhaust hose and line spreader.



### Mounting the rope drum

- Mount the drum so that the latch on the drum is securely attached to the hole on the drum shaft.
- When pulling out the rope, mount the drum so that the latch is fully inserted into the milled opening to allow the drum shaft to be released and pull the rope straight from the drum.
- When pulling in the line, lock the drum by inserting the locking pin in the hole in the drum shaft.

#### **NOTE**

When pulling out the rope, it is not necessary to start the engine.



### Attaching the rope to the capstan wheel

- Remove the input wheel and thread the rope through the ridge, re-attach the wheel.
- Wind the rope 2 or 3 times around the capstan wheel and then through the line spreader to the drum.



**WARNING!**

Before tightening the rope, make sure that the latch on the drum is locked properly.



# MANOEUVRING

## WARNING

Before operating the machine, read the operating instructions for the Honda GX 160 engine unit and make sure that you understand how the controls work.

Speed is controlled using the engine throttle.

Dead man's switch - The throttle is equipped with a "dead man's switch", which means that if you release the throttle, the engine begins to idle and the drive shaft stops, but the load is maintained (self-braking worm gear).

- For an "emergency stop", release the throttle and turn the engine switch to the "OFF" position.

## NOTE

The machine can only be driven forward or in reverse. There is no neutral gear. You should only shift gears during idling, otherwise the gearbox may be damaged.

## Reverse gear

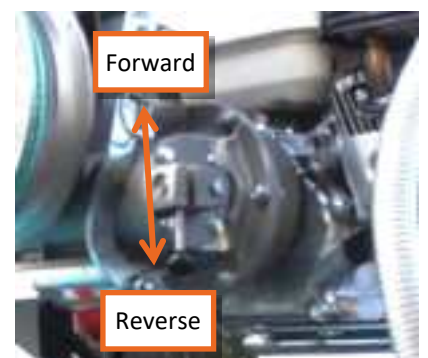
The reverse gear is only used for releasing, e.g. taut rope. In the event of unusually high loads, e.g., when a splice sleeve gets caught on a cable trolley etc., release the throttle, wait until the engine has begun to "idle", put the gear in reverse and reverse a few rounds until the problem has been solved. If you find it difficult to shift gears, move the gear lever back and forth repeatedly until the gear engages. Never use force when changing gear. When the problem has been solved, continue pulling in/out. Never use more throttle than necessary to achieve the desired effect, never rev the engine while stationary.

## Drive shaft

The drive shaft is intended for mounting and driving the capstan wheel or demolition drum when operating the Line Machine 2060 and some cable drum trolleys.

## V-belt wheel

On the "inside" there is a V-belt wheel which drives the front rope drum on the Line Machine 2060.



## Using the demolition drum

- Remove the capstan wheel from the output shaft and mount it on the wind wheel.
- Secure the latch making sure that the claw coupling engages the shaft.
- Make sure that the tension grip on the drum end is tightened before winding in the rope.



### **WARNING**

Before pulling, make sure that the rope is in good condition and will not break, thereby causing damage to person or property.

### **CAUTION**

Do not wind the synthetic fibre rope on the old rope drum as the elasticity of the rope can cause the drum to collapse or blast.

### **WARNING**

Always use a line spreader during winding to prevent accidents.

Always lift off the line spreader as the jointing sleeves pass. (Do not wind more rope than you can manage into the reel lifting shoe). The old rope that has been wound on the drum is “bundled” before splitting the drum. Carefully loosen the tension grip and split the drum to allow the cable ring to be lifted out.

### **WARNING**

Be aware that the cable ring can fall out of the drum if handled carelessly when loosening the tension grip and splitting the drum.

After having lifted out the cable ring, reassemble the drum end to make the drum ready for use again.

## Using the front rope drum

### **WARNING!**

Before pulling in the rope, check that it has not been damaged or incorrectly spliced.

### **WARNING**

When pulling, make sure that the pulling force does not compromise the integrity of the rope. See “Technical specifications”.



### **WARNING**

Always use a line spreader during winding to prevent accidents.

The rope drum is used for rope and aerial cable pulling. The drum should only be used with a genuine 3-stroke Polynite with a min. breaking load of 800 kp. (6 mm L 550 m or. 1,100 m) For any other ropes, contact Sahlins Sweden AB for approval before use. Use swivels between the traction rope and the single-ended cable grip. The jointing should be done through approved splicing.

**WARNING**

Do not tie ropes together as this reduces their breaking strength

## Using the line spreader

**WARNING**

It is very important that the line spreader is always used when winding in rope to prevent accidents.

The line spreader is standard equipment and should be used on the demolition drum for winding in rope and the winch drum for synthetic rope.

## Starting and stopping the engine

See the operating instructions for the Honda GX 160.

# MAINTENANCE

## Engine maintenance

See the operating instructions for the Honda GX 160.

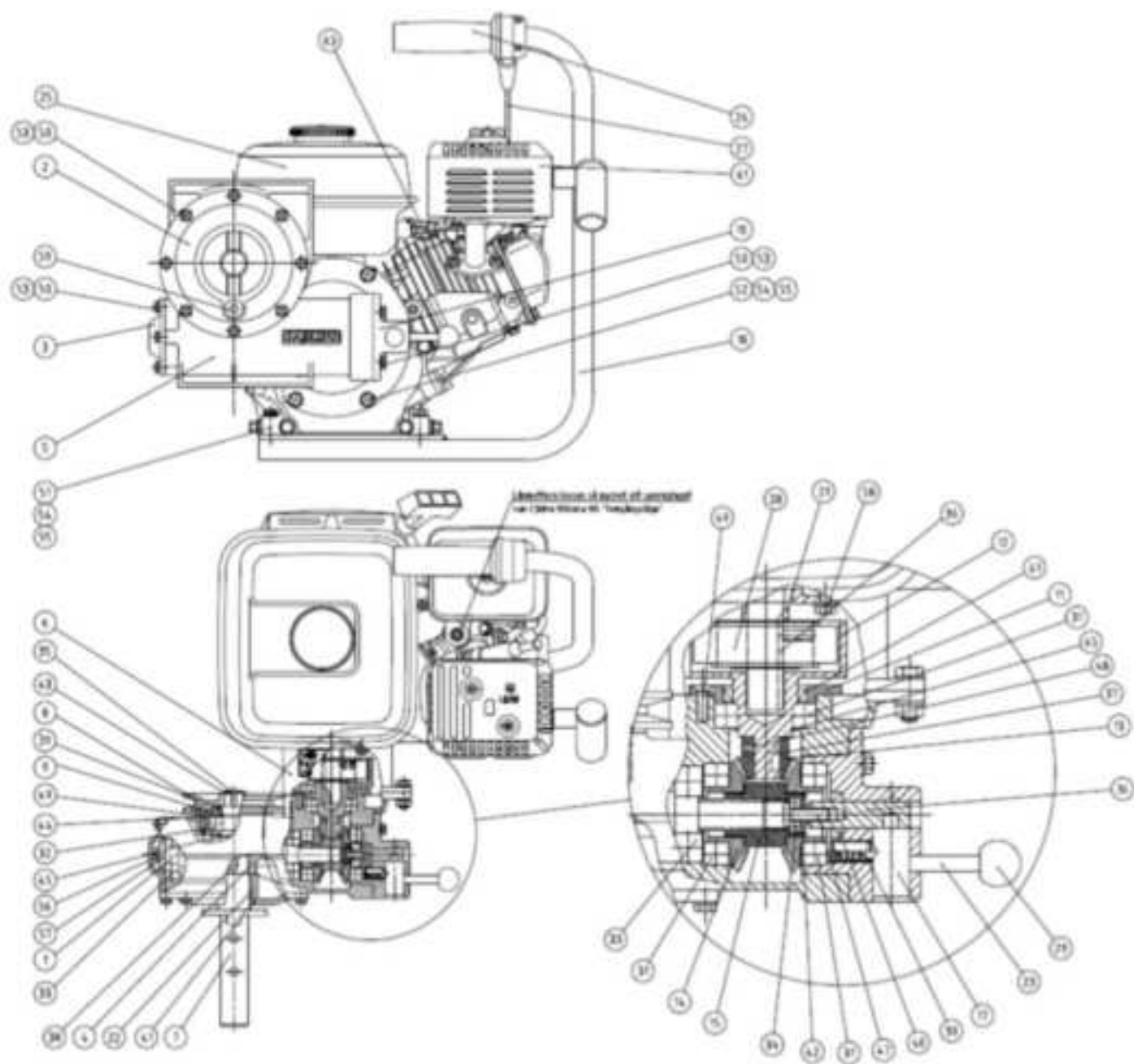
## General maintenance

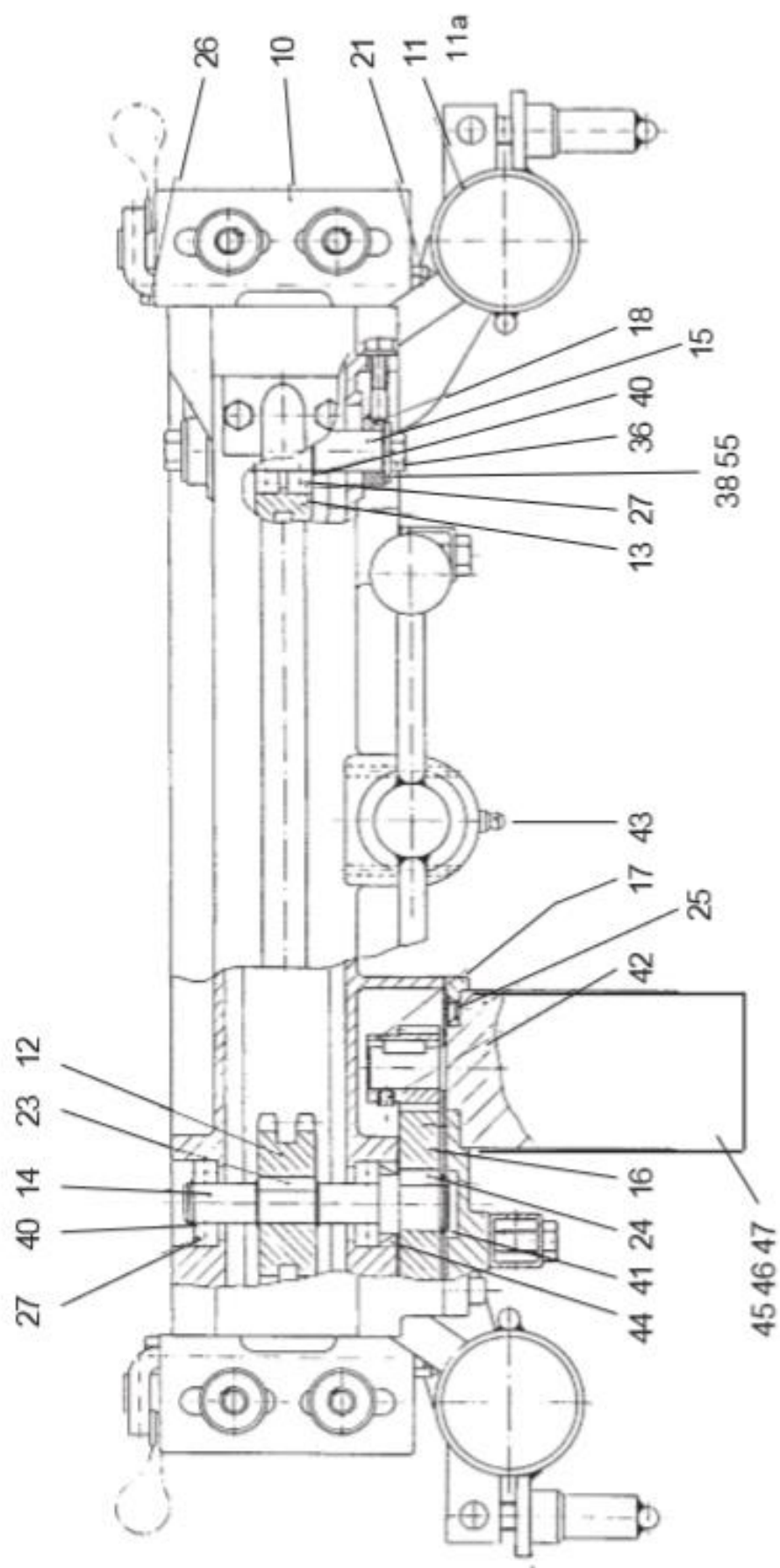
If necessary, lubricate the tension grip on the belt tensioner and the tension screw on the eccentric lock. Check and lubricate the shaft coupling and drum locks on the drums. Check the tow line regularly for signs of damage.

## Transportation and storage of the line machine

Transport and store the machine in its original storage container.

# SPARE PARTS






# LIST OF SPARE PARTS

Ref.	Name	Amount
1	Tension spring	1
2	Heat protection	1
3	Plug VSTI 16 x 1.5 ED	1
4	Screw	4
5	Washer 8.4x26x5	1
6	Left-hand threaded screw	1
7	Nut	6
8	Spring washer FBB 8.2	13
9	Spring washer FBB 6.1	20
10	Screw M6S M8X25	5
11	Screw M6S M8X40	2
12	Screw M6S M6X20	16
13	Insex screw MF6S M6X20	7
14	Stop screw S6SS M4X6	1
15	Screw M7 SPEC	1
16	Track ring SGA 30	1
17	Track ring SGA 25	1
18	Track ring SGA 20	1
19	Track ring SGA 19	1
20	Sealing ring 35x45x7	2
21	Sealing ring 14x24x7	1
22	Sealing ring 25x35x7	1
23	Parallel key	1
24	Parallel key	1
25	Wedge	1
26	Parallel key	1
27	Deep groove ball bearings	1
28	Deep groove ball bearings	2
29	Deep groove ball bearings	1
30	Deep groove ball bearings	3
31	Spring-loaded pressure screw	1
32	Lever knob DIAM 25mm	1
33	Centrifugal coupling	1
34	Wire throttle w. sleeve	1
35	Throttle lever	1
36	Motor Honda 5.5hp	1
37	Gear stick (lever)	1
38	Brass bearing 35x39x26	1
39	Distancer	1
40	Carrying handle	1
41	Eccentric	1
42	Sleeve for eccentric	1
43	Spline sleeve	1
44	Conical gear Z = 30	2
45	Conical gear Z = 15	1
46	Drive shaft	1
47	Sealing ring holder	1
48	Back end	1
49	Cap	1
50	V-belt pulley - gear	1
51	Capstan wheel shaft	1
52	Engine flange	1
53	Worm gear housing	1
54	Worm gear	1
55	Cap	1
56	Back end	1
57	Worm screw	1



(SV) EG-FÖRSÄKRAN OM ÖVERENSSTÄMMELSE  
 (EN) EC DECLARATION OF CONFORMITY  
 (FR) EC DÉCLARATION DE CONFORMITÉ  
 (DE) EG-KONFORMITÄTSERKLÄRUNG  
 (IT) DICHIARAZIONE CE DI CONFORMITÀ

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(EN) Product name / (SV) Benämning / (FR) Désignation / (DE) Bezeichnung / (IT) Denominazione articolo	
Linjemaskin 2060 / Line machine 2060 / (FR) Leitungswinde 2060 / Macchina in linea 2060	
(EN) Applied harmonised standards / (SV) Tillämpade harmoniserande standarder (FR) Normes harmonisées appliquées / (DE) Angewandte harmonisierte Normen (IT) Norme armonizzate applicate	
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