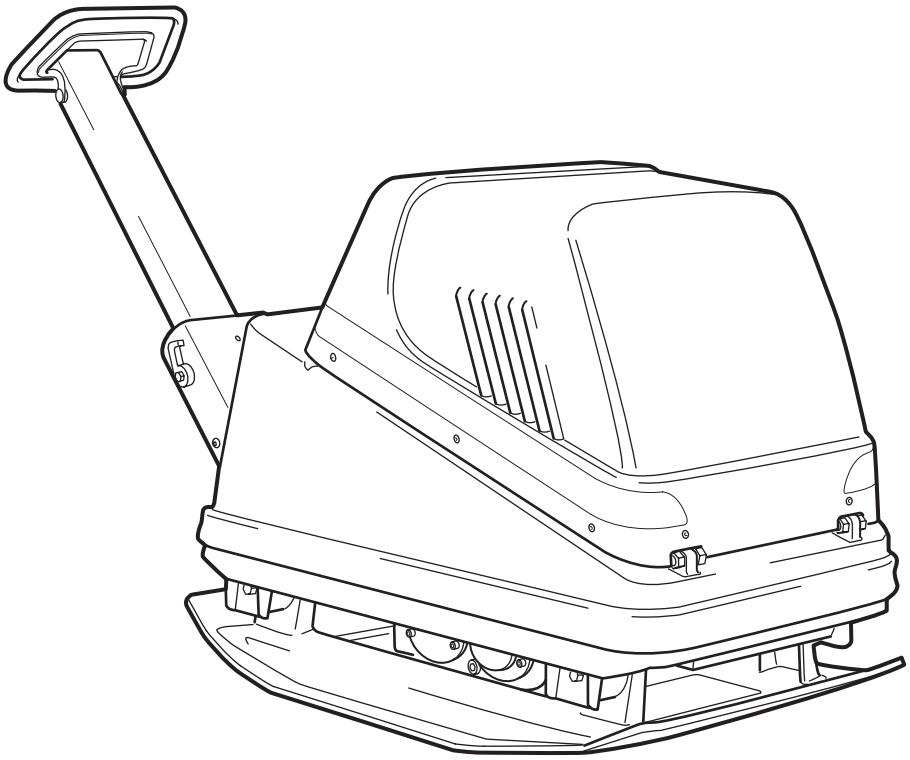
swepac®

INTERNATIONAL AB

FB 465

USER MANUAL



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USE

SWEPAC FB 465
is used to pack ballast under foundations, in connection with road building, in trenches, etc. On account of the forward/reverse function, the machine is very suitable for packing in tight spaces and as a complement to larger packing equipment. The infinitely variable speed control makes it possible to move with great precision and to pack without moving.

CONTENTS

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SAFETY INSTRUCTIONS

- Before using the machine, the operator must be informed of the manufacturer's safety instructions and instructions for use.
- The machine may only be used outdoors.
- The machine may not be used if protection and safety devices are not present or not working.
- The operator may not leave the machine unattended when the engine is on. When the vibrator is connected, the operator must be able to control the movement of the machine using the control handle and the start/stop controls. The machine may be operated only by a trained operator.
- During maintenance work or other interventions in the machine, the engine must always be off.
- Switch the engine off before adding fuel. Avoid fuel spillage and immediately wipe off any spilled fuel. Add fuel only in well ventilated areas.
- Avoid touching hot engine parts, for example the silencer.
- Before lifting the machine, check that the lifting device and its mounting are not damaged and that the rubber dampers on the base plate are undamaged and tightened.
- During transportation and storage, the fuel tank should be empty and the fuel cock switched off.
- When the machine is parked, ensure that it cannot tip over. The machine may not incline more than 20º.
- The operator must use ear protectors when working with the machine.
- The operator must ensure that no unauthorised persons are in the immediate vicinity of the machine.

STANDARDS

Noise

Measurement in accordance with the standard EN 500-4 Rev. 1:1998, Annex C:

In accordance with the conditions in Directive 2000/14/EC, Annex VI, the following values are reported:

	FB 465
Sound pressure level at the operator's ears, LpA	93 dB (A)
Permitted sound power level, L_{WA}	108 dB (A)
Guaranteed sound power level, L_{WA}	108 dB (A)

As the sound pressure level at the operator's ears exceeds 85 dB (A), ear protectors must be used during operation!

Hand/arm vibrations

The vibration acceleration was measured in accordance with the ISO 5349 standard during operation on a surface of macadam. The measurement values were translated into the maximum daily exposure time for regular usage. For additional information about vibrations, please confer the regulation AFS 2005:15 from the Swedish Work Environment Authority, effective July 1st 2005.

	FB 465
Hand/arm vibrations m/s^2	2,6
The maximum daily exposure time	7,4 h

Exhaust Emissions

The FB 465 meets the requirements for exhaust emissions in accordance with US-EPA stage 2.

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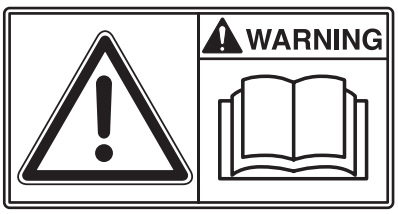
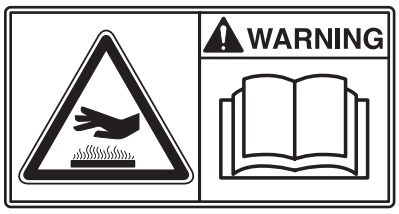
SIGNS

Warning Signs



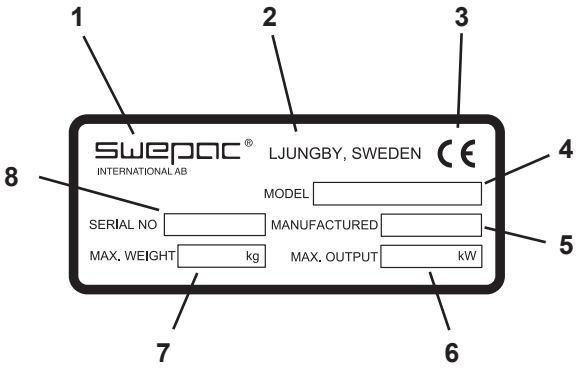
Before use, carefully read the manual and its safety instructions so that you can handle the machine safely. Ensure that the manual is always accessible.



Engine, silencer: to avoid burns or discomfort, do not touch hot engine parts when the engine is on or when the machine has recently been used.

As the sound pressure level at the operator's ears exceeds 85 dB (A), ear protectors must be used when working with the machine to prevent hearing damage.

Machine Signs



1. Manufacturer
2. Place, country of manufacture.
3. CE mark.
4. Model name.
5. Year of manufacture.
6. Max. engine power.
7. Max. weight.
8. Serial number.

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TECHNICAL DATA

FB 465

Net weight	465 kg
Base plate, w x l	700 x 1080 mm
Speed	approximately 25 m/min
Permitted inclination	20°
Centrifugal force	60,000 N
Vibration frequency	70 Hz
Drive engine	Yanmar L 100AE
Engine power	7.35 kW
Engine RPM	3600 RPM
Fuel tank volume	5.5 liter
Fuel type	Diesel
Hydraulic oil volume	38 liter
Battery capacity	40 Ah
Generator power	180 W (15 A)
Oil quantity, crankcase	1,65 liter

FUEL and OIL RECOMMENDATIONS

Fuel	Diesel
Engine oil	SAE10W-30
Hydraulic oil	Viscosity Grade ISO VG 32

METHOD OF OPERATION

The machine consists of a base plate with a vibration element and an upper part cushioned from the base plate. The cushioning between the base plate and the upper part consists of four rubber dampers. The upper part, on which the drive engine is mounted, is also designed as a hydraulic oil tank. The control handle is placed on the upper part and cushioned with rubber dampers. The vibration element is driven and the direction of travel is changed by means of hydraulics. The hydraulic pump, mounted on the diesel engine, supplies a hydraulic motor on the vibration element with an oil flow. The vibration element consist of two shafts on roller bearings with bias weights that are connected to gear wheels that rotate in opposite directions. One gear wheel can rotate on its shaft by means of a hydraulic cylinder. This changes the mutual phase positions of the eccentric weights and the direction of travel of the machine, and the speed is changed infinitely variably. All parts are well protected against damage in connection with use and transportation by a sturdy protective frame with a hood of impact-resistant polythene.

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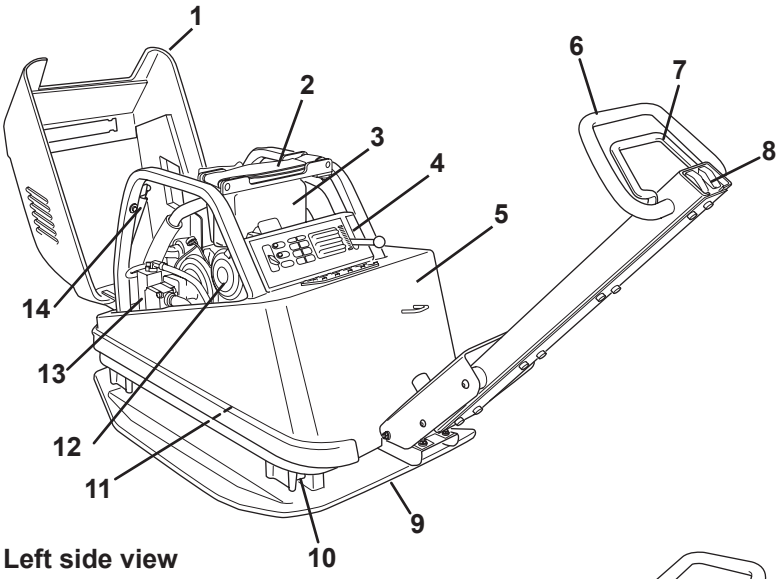
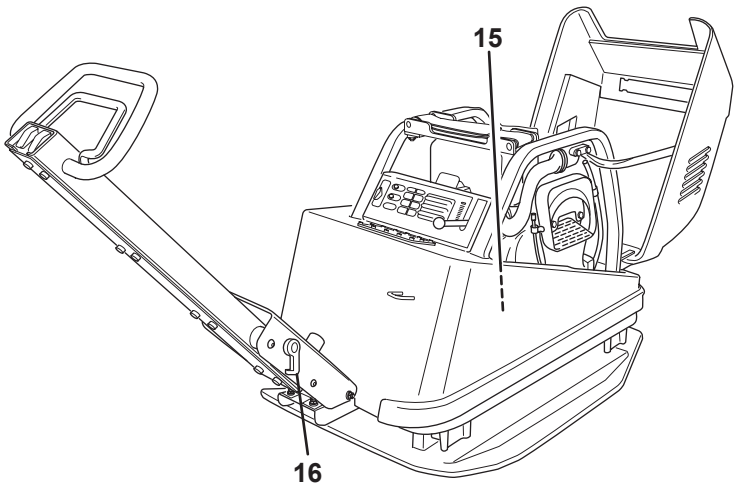
TECHNICAL DESCRIPTION

FB 465



Left side view



Right side view

1. Protective hood
2. Lifting eye
3. Diesel engine
4. Control panel
5. Hydraulic tank
6. Control handle
7. Forward/reverse control
8. Vibrator and handle heating switch
9. Base plate
10. Rubber damper
11. Vibration element
12. Air filter
13. Hydraulic pump
14. Gas shock absorber
15. Hydraulic oil filter
16. Transport locking device

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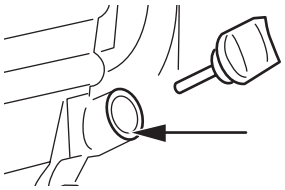
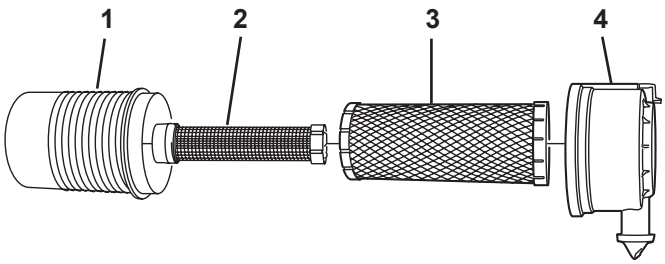
DAILY CHECKS

Fuel Check
Check that there is fuel in the tank. Top up if necessary.

Engine Oil Level Check
Check the oil level in the crankcase every day. The oil must reach the edge of the filling hole when the machine is on a level surface.



Air Filter Check
The air filter must be checked at least once every working week.



1. Filter housing
2. Safety cartridge
3. Filter element
4. Cap

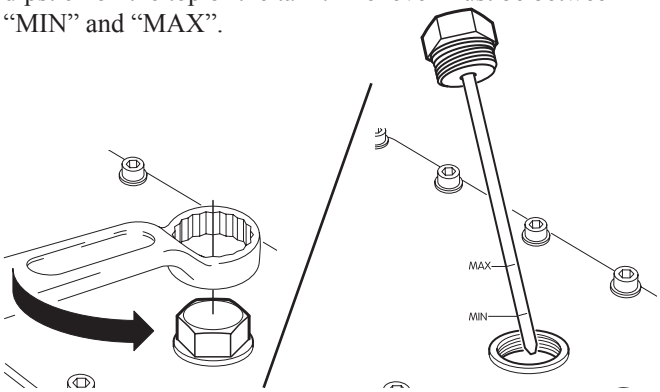
Cleaning
1. Remove the cap and empty out the dust which has collected. Wipe the cap with a damp cloth.
2. Carefully remove the filter element and wipe the inside of the filter housing clean.
3. Blow the filter clean with dry compressed air, max. 5 bar, from the inside until no more dust comes out.

Throw the filter element away:
- if it has been cleaned five times.
- if it is damaged.
- after 1000 operating hours or maximum 12 months.

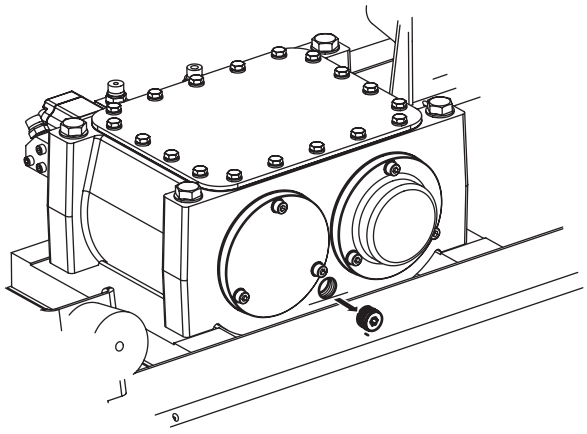
Safety Cartridge
This is normally replaced after around 3000 operating hours or if the main filter is damaged.
To replace it, remove the filter set as described above and fit a new safety cartridge.

Oil/Fuel Leakage
Check every day that the engine is not leaking oil or fuel. If a leak is discovered, the machine may not be operated until the fault has been remedied.

Hydraulic Oil Level Check
Check every day that the hydraulic connections do not leak or wear during operation. Check the oil level with the dipstick on the top of the tank. The level must be between "MIN" and "MAX".



Vibration Element
Check regularly that there is no oil leak. If you suspect a leak, check the level at the level screw on the vibration element. If necessary, add oil up to the lower edge of the level hole when the vibrator is horizontal. Seal any leaks. Note! Machines must never be operated if a leak is suspected.



Rubber Dampers
Check the condition of the rubber dampers regularly. Replace damaged dampers.

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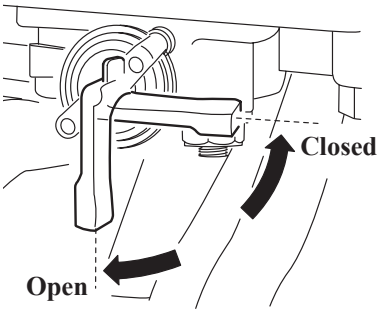
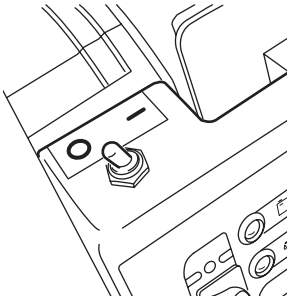
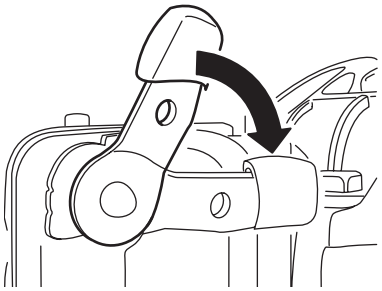


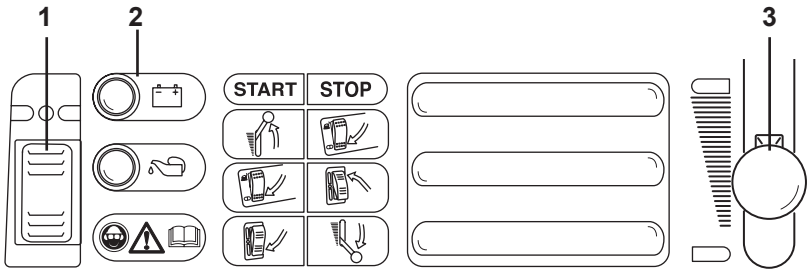
Fuel cock



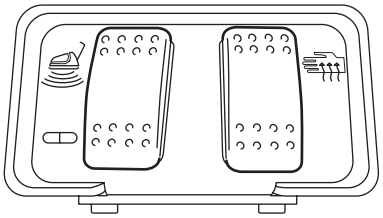
Main power switch



Decompression handle



Instrument panel with;
1. Engine power switch
2. Control lamps for charging and oil pressure
3. Throttle lever



Vibration power switch and handle heating

BEFORE STARTING

See Daily Checks on page 8.

STARTING

Open the hood.

Open the fuel cock.

Switch the main power switch, located on the instrument panel inside the protective cover, to the position “I”.

Close the hood.

Note! The vibration power switch on the handle must be in the position “vibration off” (red/green marking). Otherwise the machine cannot be started.

Switch the throttle lever (3) to the full RPM position (green marking).

Start the engine with the power switch (1). Place the knob in the central position and check that the charging and oil pressure lamps (2) light up. Then press the power switch down (green marking).

Note! Never run the starter motor for longer than 10 seconds at a time. If the engine does not start, wait 15 seconds before trying to start it again.

In very cold weather or if the battery capacity is low for a different reason, starting can be facilitated using the decompression handle in connection with the valve housing. Press the lever down and hold it down until the flywheel has reached its maximum RPM. Run the engine warm for around 5 minutes.

STOPPING

Switch the throttle lever (3) to idle and let the engine run for a few minutes.

Press the engine power switch (1) upwards (red marking).

Stop the engine by moving the throttle lever to the stop position (red marking).

At the End of the Day

Open the hood.

Switch off the main power switch, “O” position.

Close the fuel cock.

Close the hood.

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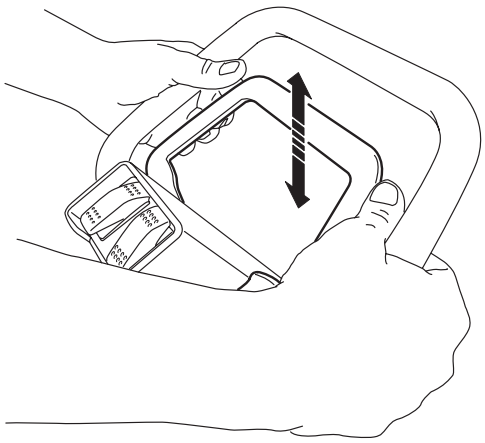
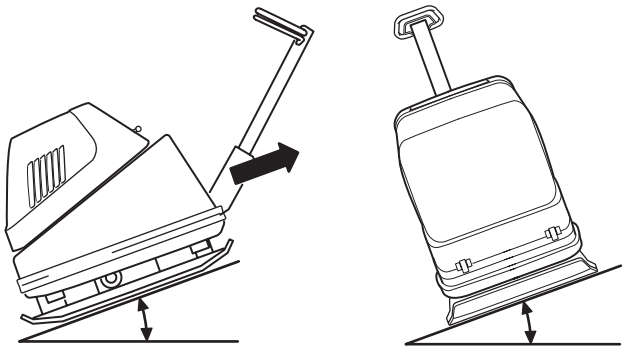
OPERATING INSTRUCTIONS

The vibrator is started and stopped with the power switch on the handle.
When the control hoop on the handle is moved backwards, the machine reverses and when the hoop is moved forwards, the machine moves forwards. The speed is controlled by how long the control hoop is activated.



The machine is only designed to be used outdoors. Work with the machine in daylight or other adequate lighting. Ballast must be wetted or naturally damp. All other use is discouraged.

Note! When moving up a slope, the machine should be reversed.
The machine may not incline more than 20º when in use or parked.

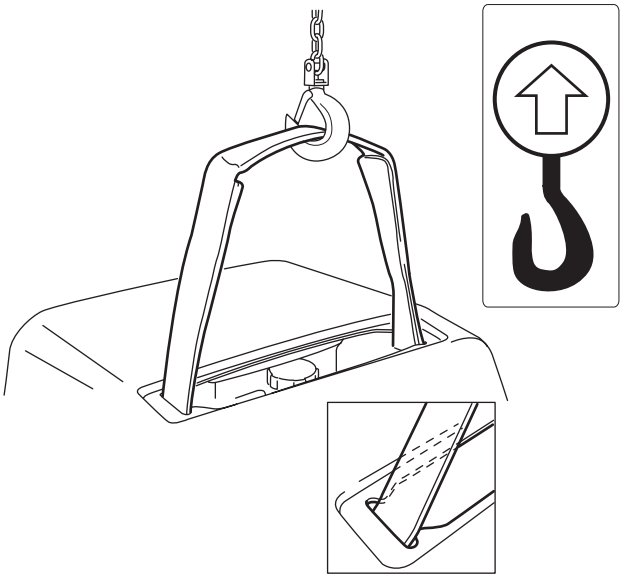


Handle Heating

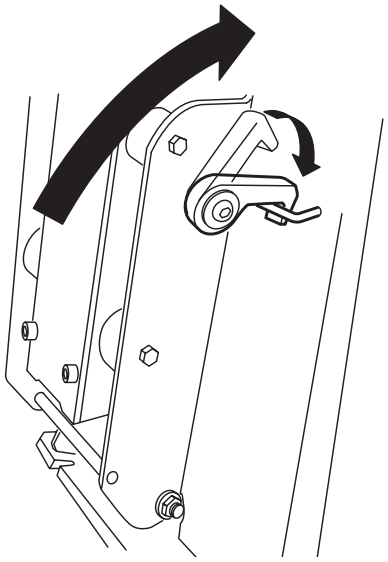
For increased comfort, the machine has an electrically heated handle. The handle heating is activated with the power switch on the handle and can only be used when the vibrator is connected, which prevents the heating coil from discharging the battery when the machine is not being used.

TRANSPORTATION

The machine is fitted with a lifting hawser that can be folded in under the hood when it is not in use.



Check before lifting that the lifting eye and its mounting on the machine are undamaged. Check also that the base plate's rubber dampers are undamaged and firmly attached. For transportation by vehicle, the handle must be folded forwards and locked with the transport locking device. The machine must then be secured with, for example, approved straps. Note! Secure it by the base plate and not the rubber-cushioned upper part.



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