

Husqvarna, 2018-03-12

Safety and Operating Instructions

Dear customer,

thank you for choosing a Husqvarna quality product. We hope that you will genuinely enjoy it.
Please note that the enclosed manual contains Atlas Copco references.

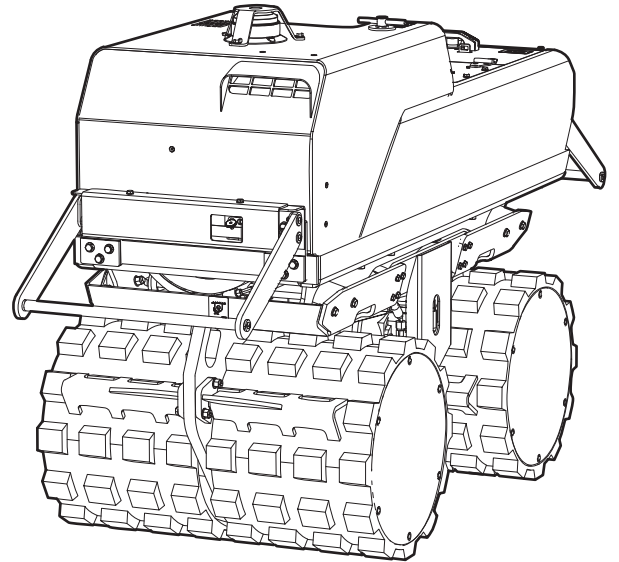
The Husqvarna Group is vouching for the quality of this product.

If you have any questions, please do not hesitate to contact our local sales or service point.

Husqvarna AB
561 82 Husqvarna, Sweden

Safety and operating instructions

Trench compactor



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Introduction

Thank you for choosing a product from Atlas Copco. Since 1873, we have been committed to finding new and better ways of fulfilling our customers' needs. Through the years, we have developed innovative and ergonomic product designs that have helped customers improve and rationalize their daily work.

Atlas Copco has a strong global sales and service network, consisting of customer centers and distributors worldwide. Our experts are highly trained professionals with extensive product knowledge and application experience. In all corners of the world, we can offer product support and expertise to ensure that our customers can work at maximum efficiency at all times.

For more information please visit: www.atlascopco.com

Construction Tools EOOD

7000 Rousse

Bulgaria

About the Safety and operating instructions

The aim of the instructions is to provide you with knowledge of how to use the machine in an efficient, safe way. The instructions also give you advice and tell you how to perform regular maintenance on the machine.

Before using the machine for the first time you must read these instructions carefully and understand all of them.

Safety instructions

To reduce the risk of serious injury or death to yourself or others, read and understand the Safety and operating instruction before installing, operating, repairing, maintaining, or changing accessories on the machine.

Post this Safety and operating instruction at work locations, provide copies to employees, and make sure that everyone reads the Safety and operating instruction before operating or servicing the machine. For professional use only.

In addition, the operator or the operator's employer must assess the specific risks that may be present as a result of each use of the machine.

Additional instructions for the engine can be found in the manufacturer's engine manual.

Safety signal words

The safety signal words Danger, Warning and Caution have the following meanings:

DANGER	Indicates a hazardous situation which, if not avoided, will result in death or serious injury.
WARNING	Indicates a hazardous situation which, if not avoided, could result in death or serious injury.
CAUTION	Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

Personal precautions and qualifications

Only qualified and trained persons may operate or maintain the machine. They must be physically able to handle the bulk, weight, and power of the machine. Always use your common sense and good judgement.

Personal protective equipment

Always use approved protective equipment. Operators and all other persons in the working area must wear protective equipment, including at a minimum:

- Protective helmet
- Hearing protection
- Impact resistant eye protection with side protection
- Respiratory protection when appropriate
- Protective gloves
- Proper protective boots

- Appropriate work overall or similar clothing (not loose-fitting) that covers your arms and legs.

Drugs, alcohol or medication

▲ **WARNING** Drugs, alcohol or medication

Drugs, alcohol or medication may impair your judgment and powers of concentration. Poor reactions and incorrect assessments can lead to severe accidents or death.

- ▶ Never use the machine when you are tired or under the influence of drugs, alcohol or medication.
- ▶ No person who is under the influence of drugs, alcohol or medication may operate the machine.

Operation, precautions

▲ **DANGER** Explosion hazard

If a warm machine or exhaust pipe comes into contact with explosives, an explosion could occur. During operating with certain materials, sparks and ignition can occur. Explosions will lead to severe injuries or death.

- ▶ Never operate the machine in any explosive environment.
- ▶ Never use the machine near flammable materials, fumes or dust.
- ▶ Make sure that there are no undetected sources of gas or explosives.
- ▶ Avoid contact with the warm exhaust pipe or the bottom of the machine.

▲ **DANGER** Fire hazard

If a fire starts in the machine, it can cause injury.

- ▶ If possible use an ABE-class powder extinguisher, otherwise use a BE-type carbon dioxide fire extinguisher.

▲ **DANGER** Fuel hazard

The fuel is flammable and fuel fumes can explode when ignited, causing serious injury or death.

- ▶ Protect your skin from contact with the fuel. If fuel has penetrated the skin, consult a qualified health professional.
- ▶ Never remove the filler cap, or fill the fuel tank when the machine is hot.
- ▶ Fill the fuel tank outdoors or in a clean and well ventilated place, free from sparks and open flames. Fill the fuel tank at least ten meters (30 feet) from the place where the machine is to be used.

- ▶ Release the filler cap slowly to let pressure escape.
- ▶ Never overfill the fuel tank.
- ▶ Make sure the filler cap is screwed on when the machine is used.
- ▶ Avoid spilling fuel on the machine, wipe off any spilled fuel.
- ▶ Check regularly for fuel leaks. Never use the machine if it is leaking fuel.
- ▶ Never use the machine in the proximity of material that can generate sparks. Remove all hot or spark-generating devices before starting the machine.
- ▶ Never smoke when filling the fuel tank or when working with the machine or servicing it.
- ▶ Only store fuel in a container that is specially constructed and approved for the purpose.
- ▶ Consumed fuel and oil containers must be taken care of and returned to the retailer.
- ▶ Never use your fingers to check for fluid leaks.

▲ WARNING Unexpected movements

The machine is exposed to heavy strains during operation. If the machine breaks or gets stuck, there may be sudden and unexpected movement that can cause injuries.

- ▶ Always inspect the machine prior to use. Never use the machine if you suspect that it is damaged.
- ▶ Keep your feet away from the machine.
- ▶ Never sit on the machine.
- ▶ Never strike or abuse the machine.
- ▶ Pay attention and look at what you are doing.

▲ WARNING Engine running hazard

Vibrations from the engine can cause material changes, this can cause the machine to move and cause injuries.

- ▶ Never leave the machine with the engine running.
- ▶ Ensure that only authorized personnel operate the machine.
- ▶ Never give the transmitter to anyone who is not fully familiar with the machine, its operation and safety directives.

▲ WARNING Transmitter hazard

If the operator is not fully familiar with the control system when operating the machine, this may lead to sudden and unexpected movements of the machine which can cause injuries.

- ▶ Always study this safety and operating instructions carefully before operating the machine.
- ▶ Only trained personnel who are fully familiar with the control system may operate the machine.

▲ WARNING System error hazard

Errors in the system can cause injury. If any error occurs in the system:

- ▶ Switch off the start/stop switch on the transmitter.
- ▶ Switch off the battery disconnecter.
- ▶ Unplug the power supply cable to the machine.

▲ WARNING Dust and fume hazard

Dusts and/or fumes generated or dispersed when using the machine may cause serious and permanent respiratory disease, illness, or other bodily injury (for example, silicosis or other irreversible lung disease that can be fatal, cancer, birth defects, and/or skin inflammation).

Some dusts and fumes created by compaction work contain substances known to the State of California and other authorities to cause respiratory disease, cancer, birth defects, or other reproductive harm. Some examples of such substances are:

- Crystalline silica, cement, and other masonry products.
- Arsenic and chromium from chemically-treated rubber.
- Lead from lead-based paints.

Dust and fumes in the air can be invisible to the naked eye, so do not rely on eye sight to determine if there is dust or fumes in the air.

To reduce the risk of exposure to dust and fumes, do all of the following:

- ▶ Perform site-specific risk assessment. The risk assessment must include dust and fumes created by the use of the machine and the potential for disturbing existing dust.
- ▶ Use proper engineering controls to minimize the amount of dust and fumes in the air and to minimize build-up on equipment, surfaces, clothing, and body parts. Examples of controls include: exhaust ventilation and dust collection systems, water sprays, and wet drilling. Control dusts and fumes at the source where possible. Make sure that controls are properly installed, maintained and correctly used.
- ▶ Wear, maintain and correctly use respiratory protection as instructed by your employer and as required by occupational health and safety regulations. The respiratory protection must be effective for the type of substance at issue (and if applicable, approved by relevant governmental authority).
- ▶ Work in a well ventilated area.
- ▶ If the machine has an exhaust, direct the exhaust so as to reduce disturbance of dust in a dust filled environment.
- ▶ Operate and maintain the machine as recommended in the operating and safety instructions
- ▶ Wear washable or disposable protective clothes at the worksite, and shower and change into clean clothes before leaving the worksite to reduce exposure of dust and fumes to yourself, other persons, cars, homes, and other areas.

- ▶ Avoid eating, drinking, and using tobacco products in areas where there is dust or fumes.
- ▶ Wash your hands and face thoroughly as soon as possible upon leaving the exposure area, and always before eating, drinking, using tobacco products, or making contact with other persons.
- ▶ Comply with all applicable laws and regulations, including occupational health and safety regulations.
- ▶ Participate in air monitoring, medical examination programs, and health and safety training programs provided by your employer or trade organizations and in accordance with occupational health and safety regulations and recommendations. Consult with physicians experienced in relevant occupational medicine.
- ▶ Work with your employer and trade organization to reduce dust and fume exposure at the worksite and to reduce the risks. Effective health and safety programs, policies and procedures for protecting workers and others against harmful exposure to dust and fumes must be established and implemented based on advice from health and safety experts. Consult with experts.

▲ DANGER Exhaust gas hazard

The exhaust gas from the machine's combustion engine contains carbon monoxide which is poisonous, and chemicals known to the State of California and other authorities to cause cancer, birth defects, or other reproductive harm. Inhalation of exhaust fumes can cause serious injury, illness, or death.

- ▶ Never inhale exhaust fumes.
- ▶ Ensure good ventilation (extraction of air by fan if necessary).

▲ WARNING Battery hazard

The battery contains poisonous and corrosive sulphuric acid and can explode, this can cause injury.

- ▶ Never expose the battery to naked flames, sparks, strong heat, or anything else where there is a risk of explosion.
- ▶ Avoid getting acid on your skin, clothes or on the machine.
- ▶ Wear protective glasses to avoid getting acid in your eyes, if you get acid in your eyes rinse them with water for at least 15 minutes and seek immediate medical treatment.
- ▶ Never short-circuit the battery poles when fitting or replacing the battery.

▲ WARNING Projectiles

Failure of the work piece, of accessories, or even of the machine itself may generate high velocity projectiles. During operating, splinters or other particles from the compacted material may become projectiles and cause personal injury by striking the operator or other persons. To reduce these risk:

- ▶ Use approved personal protective equipment and safety helmet, including impact resistant eye protection with side protection.
- ▶ Make sure that no unauthorised persons trespass into the working zone.
- ▶ Keep the workplace free from foreign objects.

▲ WARNING Hydraulic system hazard

Hydraulic hoses are made of rubber and can deteriorate with age, with the consequent risk of splitting. This can cause injuries.

- ▶ Maintain the hydraulic system regularly.
- ▶ Whenever there are uncertainties as to durability and wear, replace hoses with new original hoses.

▲ WARNING Slope hazards

During operation, secure the machine so it can not fall if it is placed on a sloping ground. A fall can lead to severe accidents and result in personal injury.

- ▶ Always ensure that all personnel in the working area are higher up the slope than the machine.
- ▶ Always operate the machine straight up and down when placed on slopes.
- ▶ Never exceed the maximum recommended slope angle when operating the machine. Follow the recommendations.

▲ WARNING Motion hazards

When using the machine to perform work-related activities, you may experience discomfort in the hands, arms, shoulders, neck, or other parts of the body.

- ▶ Adopt a comfortable posture while maintaining secure footing and avoiding awkward off-balanced postures.
- ▶ Changing posture during extended tasks may help avoid discomfort and fatigue.
- ▶ In case of persistent or recurring symptoms, consult a qualified health professional.

▲ WARNING Vibration hazards

Normal and proper use of the machine exposes the operator to vibration. Regular and frequent exposure to vibration may cause, contribute to, or aggravate injury or disorders to the operator's fingers, hands, wrists, arms, shoulders and/or nerves and blood supply or other body parts, including debilitating and/or permanent injuries or disorders that may develop gradually over periods of weeks, months, or years. Such injuries or disorders may include damage to the blood circulatory system, damage to the nervous system, damage to joints, and possibly damage to other body structures.

If numbness, persistent recurring discomfort, burning sensation, stiffness, throbbing, tingling, pain, clumsiness, weakened grip, whitening of the skin, or other symptoms occur at any time, when operating the machine or when not operating the machine, stop operating the machine, tell your employer and seek medical attention. Continued use of the machine after the occurrence of any such symptom may increase the risk of symptoms becoming more severe and/or permanent.

Operate and maintain the machine as recommended in these instructions, to prevent an unnecessary increase in vibration.

The following may help to reduce exposure to vibration for the operator:

- ▶ If the machine has vibration absorbing handles, keep them in a central position, avoid pressing the handles into the end stops.
- ▶ When the percussion mechanism is activated, the only body contact with the machine you must have are your hands on the handle or handles. Avoid any other contact, for example supporting any part of the body against the machine or leaning onto the machine trying to increase the feed force.
- ▶ Make sure that the machine is well-maintained and not worn out.
- ▶ Immediately stop working if the machine suddenly starts to vibrate strongly. Before resuming the work, find and remove the cause of the increased vibrations.
- ▶ Participate in health surveillance or monitoring, medical exams and training programs offered by your employer and when required by law.
- ▶ When working in cold conditions wear warm clothing and keep hands warm and dry.

See the "Noise and vibration declaration statement" for the machine, including the declared vibration values. This information can be found at the end of these Safety and operating instructions.

▲ WARNING Trapping hazard

There is a risk of neck ware, hair, gloves, and clothes getting dragged into or caught by rotating machine parts. This may cause choking, scalping, lacerations, or death. To reduce the risk:

- ▶ Never grab or touch a rotating machine part.
- ▶ Avoid wearing clothing, neck ware or gloves that may get caught.
- ▶ Cover long hair with a hair net.

▲ DANGER Electrical hazard

The machine is not electrically insulated. If the machine comes into contact with electricity, serious injuries or death may result.

- ▶ Never operate the machine near any electric wire or other source of electricity.
- ▶ Make sure that there are no concealed wires or other sources of electricity in the working area.

▲ WARNING Concealed object hazard

During operating, concealed wires and pipes constitute a danger that can result in serious injury.

- ▶ Check the composition of the material before operating.
- ▶ Watch out for concealed cables and pipes for example electricity, telephone, water, gas, and sewage lines.
- ▶ If the machine seems to have hit a concealed object, switch off the machine immediately.
- ▶ Make sure that there is no danger before continuing.

▲ WARNING Involuntary start

Involuntary start of the machine may cause injury.

- ▶ Keep your hands away from the start and stop device until you are ready to start the machine.
- ▶ Learn how the machine is switched off in the event of an emergency.

▲ WARNING Noise hazard

High noise levels can cause permanent and disabling hearing loss and other problems such as tinnitus (ringing, buzzing, whistling, or humming in the ears). To reduce risks and prevent an unnecessary increase in noise levels:

- ▶ Risk assessment of these hazards and implementation of appropriate controls is essential.
- ▶ Operate and maintain the machine as recommended in these instructions.
- ▶ If the machine has a silencer, check that it is in place and in good working condition.
- ▶ Always use hearing protection.

Transport, precautions

▲ WARNING Loading and unloading hazard

When the machine is lifted by a crane and similar appliance, this can lead to injury.

- ▶ Use marked lifting points.
- ▶ Make sure that all lifting devices are dimensioned for the weight of the machine.
- ▶ Never remain under or in the immediate vicinity of the machine.

Maintenance, precautions

▲ WARNING Machine modification

Any machine modification may result in bodily injuries to yourself or others.

- ▶ Never modify the machine. Modified machines are not covered by warranty or product liability.
- ▶ Always use original parts and accessories approved by Atlas Copco.
- ▶ Change damaged parts immediately.
- ▶ Replace worn components in good time.

▲ WARNING Hot oil hazard

When changing the oil, oil filter or hydraulic oil on a hot machine, there is a risk of burns.

- ▶ Wait until the machine has cooled down before changing the oil.

▲ CAUTION High temperature

The machine's front cover, exhaust pipe, and hydraulic system become hot during operation. Touching them can lead to burns.

- ▶ Never touch a hot front cover.
- ▶ Never touch the hot exhaust pipe.
- ▶ Never touch the hydraulic system.
- ▶ Wait until the front cover, exhaust pipe, and bottom of the machine has cooled down before carrying out maintenance work.

NOTICE Any use of a quick-charger to charge the battery can shorten the life time of the battery.

Storage, precautions

- ◆ Keep the machine in a safe place, out of the reach of children and locked up.

Overview

To reduce the risk of serious injury or death to yourself or others, read the Safety instructions section found on the previous pages of this manual before operating the machine.

Design and function

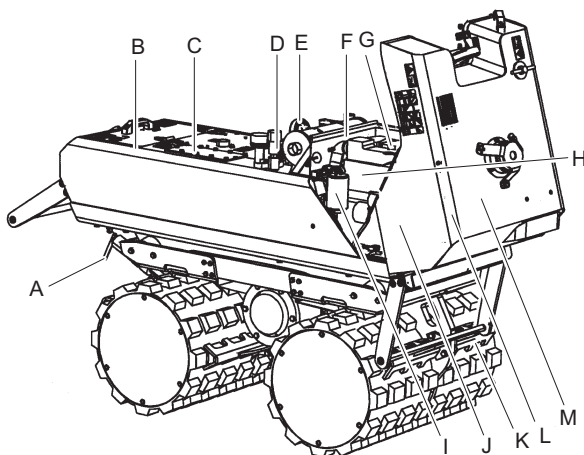
The trench compactor LP 8504 is a radio controlled trench compactor. It has a robust design and is suitable for compaction of medium to deep layers of cohesive and granular soils on limited areas such as trenches, construction back-fills and on roads. No other use is permitted.

The LP trench compactor must only be used in well-ventilated areas, as is the case for all combustion engine machines.

The LP trench compactor must not be towed behind vehicles.

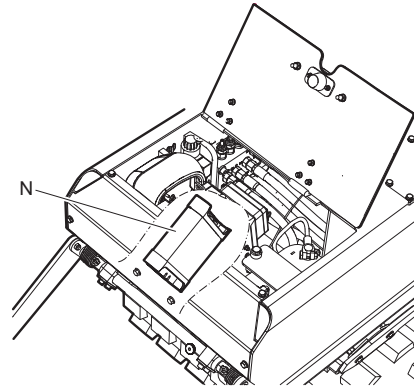
Never operate on steeper slopes than recommended in this manual.

Main parts

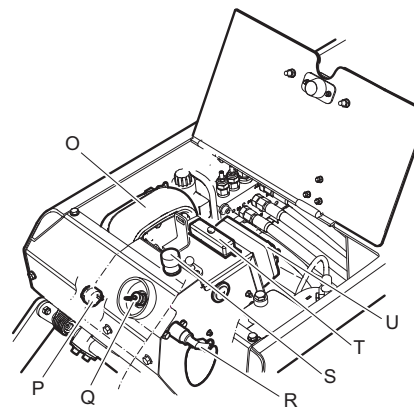


- A. Handbrake
- B. Battery
- C. Hydraulic oil tank
- D. Hydraulic oil filter
- E. Fuel tank
- F. Silencer
- G. Engine oil tank
- H. Engine cooling system
- I. Dewatering filter
- J. Air filter with dust extractor valve

- K. Scraper
- L. Engine oil filter
- M. Fuel filter

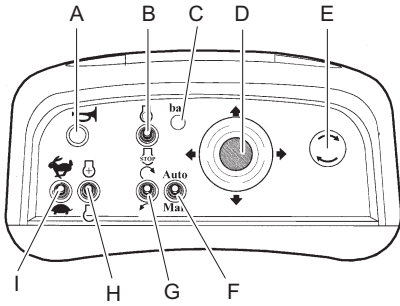


- N. Receiver (placed under the electrical box cover under the rear service hatch)

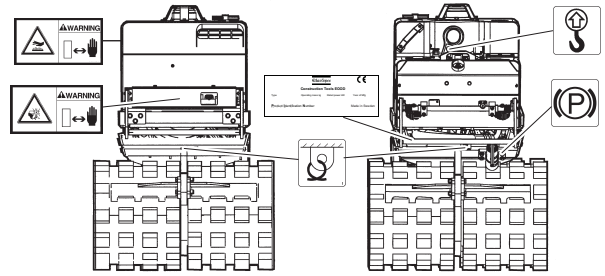
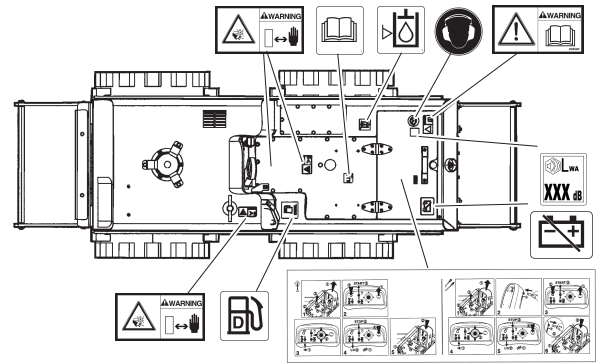


- O. Transmitter
- P. Buzzer
- Q. Cable connect
- R. Battery disconnection
- S. Emergency stop button
- T. Fuse box
- U. Battery charger

Transmitter

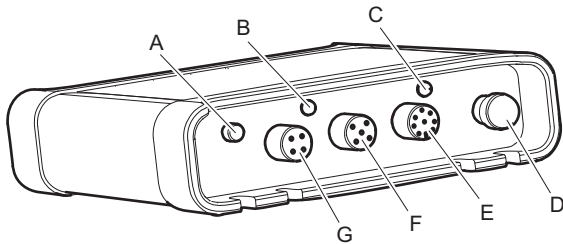


- A. Horn
- B. Start/Stop switch, engine
- C. Indicator for low battery voltage
- D. Joystick
- E. Transmitter on/off
- F. Vibration manual/automatic
- G. Vibration, direction
- H. Engine revs
- I. Operating speed

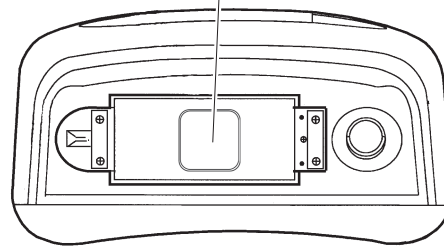
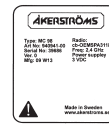


Receiver

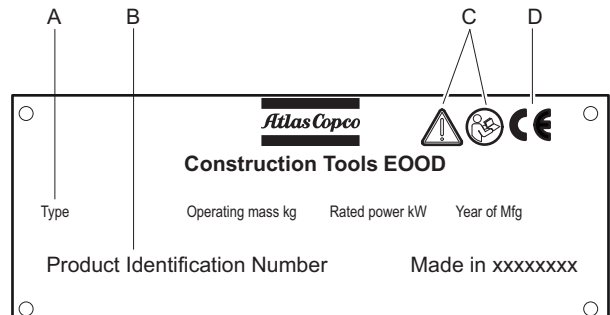
The receiver is placed in the electrical box under the rear service hatch.



- A. Antenna
- B. Status LED
- C. RX
- D. Pairing
- E. Cable control
- F. CAN
- G. Power



Data plate



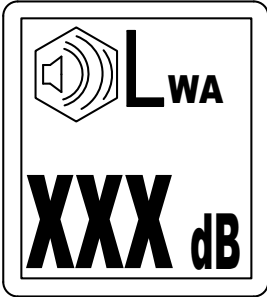
- A. Machine type
- B. Product Identification Number
- C. The warning symbol together with the book symbol means that the user must read the safety and operating instructions before the machine is used for the first time.

Labels

The machine is fitted with labels containing important information about personal safety and machine maintenance. The labels must be in such condition that they are easy to read. New labels can be ordered from the spare parts list.

- D. The CE symbol means that the machine is EC-approved. See the EC Declaration of Conformity which is delivered with the machine for more information.

Noise level label



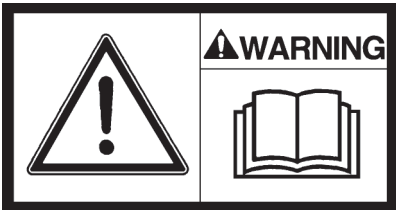
The label indicates the guaranteed noise level corresponding to EC-directive 2000/14/EC. See "Technical data" for accurate noise level.

Safety label



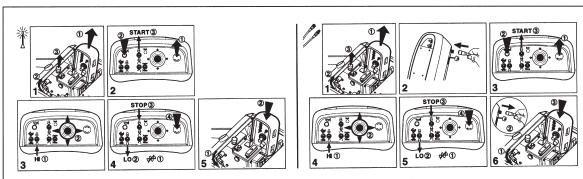
Rotating engine components. Keep your hands at a safe distance from the danger zone.

Safety label



Instruction manual. The operator must read the safety, operation and maintenance instructions before operating the machine.

Starting instructions

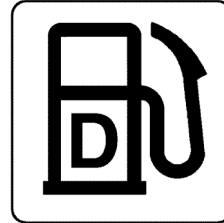


Safety label

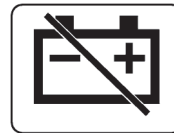


Hot surfaces in the engine compartment. Keep your hands at a safe distance from the danger zone.

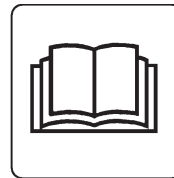
Diesel



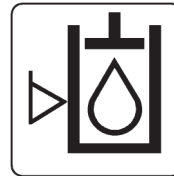
Battery disconnecter label



Read the safety and operating instructions label



Hydraulic oil level label



Lifting point label



Handbrake label



Securing point label

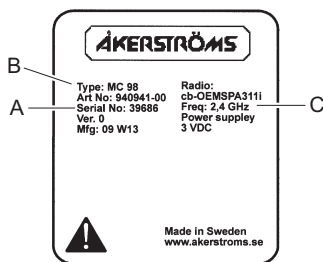


Use ear protectors label



Data signs label

The identity plate is positioned behind the battery on the transmitter.



- A. Serial number
- B. Model designation
- C. Frequency band

Transport

Lifting the machine

▲ WARNING Lifting hazard

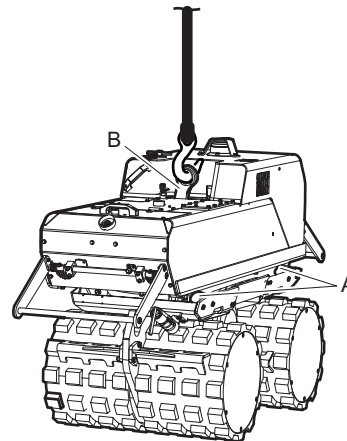
Never lift the machine without checking if it is intact. A damaged machine can fall apart, which can result in serious injury.

- ▶ Check that all equipment is dimensioned in accordance with applicable regulations.
- ▶ Never tow the machine.
- ▶ Only move the machine.

- ▶ Never walk or stand under a lifted machine.
- ▶ Only lift the machine by a hook on the frame.
- ▶ Never lift the machine by the lifting eye at the engine.
- ▶ Check that the shock absorbers, safety straps and protective frame are correctly attached and not damaged.
- ▶ Check the machine's data plate for information of the weight.

Lifting the machine

- ◆ Before lifting the machine check that the shock absorbers (A) and safety frame lifting point (B) are correctly attached and not damaged.
- ◆ Only use the safety frame lifting point (B) for lifting the machine.



Secure transport

▲ WARNING Transport hazard

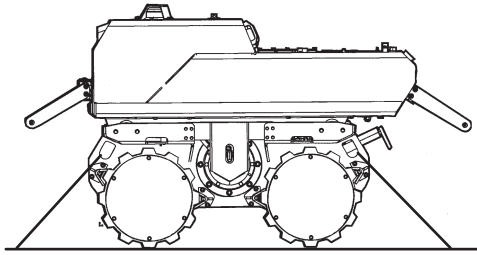
During transportation always strap the machine securely for all transportation, otherwise it can cause injury.

- ▶ Use the front and rear towing attachments points to secure the machine.
- ▶ Use the parking brake.

Secure transport

Secure the machine for all transportation.

- ◆ Use the front and rear towing attachment points to secure the machine.
- ◆ The transmitter must be placed under the rear hood in transportation mode.



- ◆ The maximum clamping force per fixing lug is 40 kN (8992 lbf).

Installation

Fuel

Filling

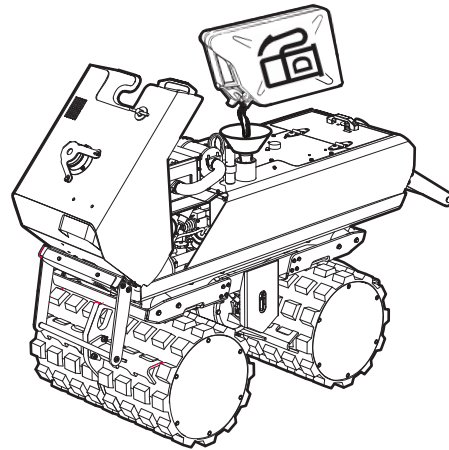
▲ WARNING Fuel hazard

The fuel is extremely flammable and fuel fumes can explode when ignited, causing serious injury or death.

- ▶ Protect your skin from contact with the fuel.
- ▶ Never remove the filler cap or fill the fuel tank when the machine is hot.
- ▶ Never smoke when filling the fuel tank or when working with the machine or servicing it.
- ▶ Avoid spilling fuel and wipe off any fuel spilled on the machine.

Filling procedure

1. Stop the engine and let it cool down before filling the tank.
2. Release the filler cap slowly to let any pressure escape.
3. Fill the fuel tank to the lower edge of the filler pipe.



4. Never overfill the tank. Due to the movement of the fuel within the tank, it is possible to have fuel at a higher level than the tank cap, which can lead to a spillage of fuel if the tank cap is opened. This can be avoided by only opening the tank cap when the machine is on level ground and the tank cap is at the fuel tank's highest point.

Operation

▲ WARNING Engine running hazard

Vibrations from the engine can cause material changes, this can cause the machine to move and cause injuries.

- ▶ Never leave the machine with the engine running.
- ▶ Ensure that only authorized personnel operate the machine.
- ▶ Never give the transmitter to anyone who is not fully familiar with the machine, its operation and safety directives.

▲ WARNING Transmitter hazard

If the operator is not fully familiar with the control system when operating the machine, this may lead to sudden and unexpected movements of the machine which can cause injuries.

- ▶ Always study this safety and operating instructions carefully before operating the machine.
- ▶ Only trained personnel who are fully familiar with the control system may operate the machine.

NOTICE When operating the machine, follow the instructions in the manual; never sit or stand on the machine when it is working.

NOTICE Do not operate the machine at a greater distance than 20 metres (22 yards). Always keep the working area and the machine under good supervision.

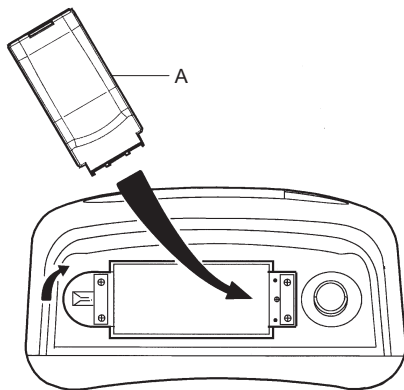
NOTICE Always specify the serial number when making inquiries about control equipment.

Transmitter

The transmitter and receiver must have the same address code and serial number. If another transmitter is used, it must be coded so that the address code corresponds with the receiver. See section "Pairing function" for more information. Coding must be performed by authorized service personnel.

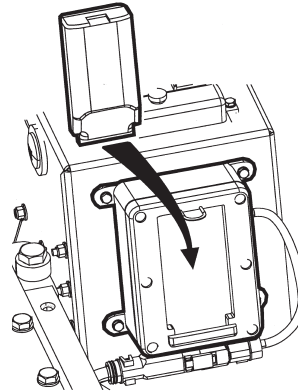
The range is up to 30 metres (33 yards), depending on the surroundings and the occurrence of any radio frequency interference.

- ◆ Two 1500 mAh NiMh batteries are supplied with the machine on delivery. The extra battery can be charged in the battery charger during operation.
- ◆ Insert the battery (A) into the transmitter by sliding it into the slot until it is in locked position. To remove the battery, twist the lock on the transmitter.



- ◆ The operating time for a fully-charged battery is about 15 hours. The transmitter has a yellow LED that lights for 10 seconds when it is time to charge the battery. In this mode, the battery can be used for another 15 minutes. Change the battery and make sure that the slot and contact surfaces are clean.

- ◆ The extra battery can be charged in the receiver on the machine during operation. The battery charger is mounted on the front of the electrical box, under the rear service hatch. Before charging the battery, make sure that the battery charger's and battery's contact surfaces are clean and dry.

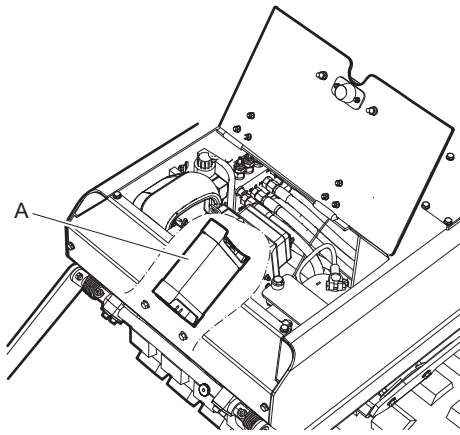


- ◆ Radio communication is interrupted when the battery is removed from the transmitter.
- ◆ The transmitter can be used without the battery if it is connected to the machine with the supplied cable.
- ◆ The battery must be trickle-charged every four weeks, if the transmitter is not used. Remove the battery if the transmitter is not used for a long period.

Indication LED	Status
Constant yellow light for 10 seconds.	Battery discharged.
Flashing yellow light.	Battery low charge.
Green and red light.	Joystick in wrong position when starting the machine.
Fast flashing green light.	No connection.
Slow flashing green light.	Normal operation mode.
Constant red light for 10 seconds.	Internal fault, transmitter.

Receiver

The receiver (A) is mounted in the electrical box under the rear service hatch.



For radio or general indication, a LED labelled RX is used.

Indication on RX	Status
Constant green light.	No connection.
Fast flashing green light.	The receiver is connected. Safety relay (RCSS) is ON.
Slow flashing green light.	The receiver is connected. Safety relay (RCSS) is OFF.
Constant red light.	Internal fault, RX (receiver).
Fast flashing red light.	Internal fault, TX (transmitter).

Pairing function

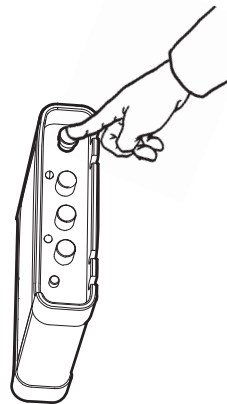
The receiver and transmitter have a pairing function so that a transmitter can be paired with the receiver. The receiver learns the transmitter ID. Since Bluetooth is used for communication, the Bluetooth client in the transmitter is paired with the Bluetooth server in the receiver.

The receiver provides indications, visible from outside, to show that the receiver is in pairing mode and that the transmitter has successfully been paired with the receiver.

The time to complete the pairing may be up to 30 seconds. The searching time is limited to 30 seconds.

How to set the receiver in pairing mode:

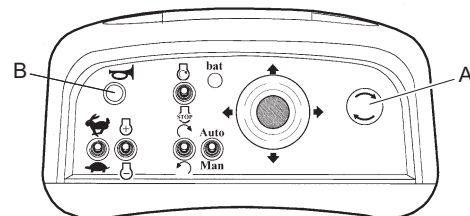
1. Insert and turn the battery disconnecter to locked mode.
2. Activate the pairing mode, by pressing the black button on the receiver.



Event	Receiver indication on RX
In pairing mode	Green and yellow 50/50 ms.
Paired	Steady green.

How to set the transmitter to pairing mode:

3. Move and hold the joystick from centre position.
4. Start the transmitter by releasing the start/stop button (A).
5. Press the horn button (B) for at least 5 seconds. Pairing is indicated on the LED and the display.

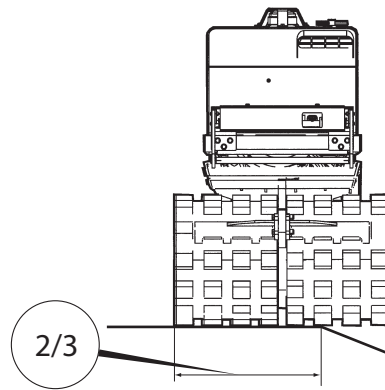


6. Release the joystick.

Event	Transmitter LED indication
In pairing mode	Green and yellow 50/50 ms.
Paired	Steady green.

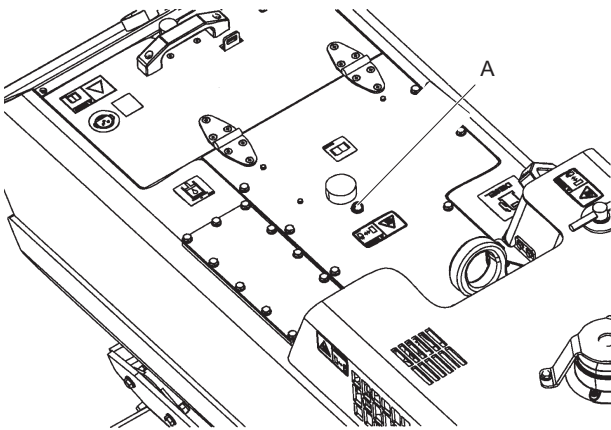
When pairing has been successfully accomplished, restart the transmitter. Restart the receiver by pressing the stop knob.

Event	Transmitter display information
Pairing	
Pairing	Pairing info Pairing RX-TX...
Pairing ready	Pairing info Pairing RX-TX- Link OK Pairing ready! Restart system
BlueTooth	
BlueTooth connected	Pairing info Pairing RX-TX- Link OK
BlueTooth error	Pairing info Pairing RX-TX- Link ERROR Pairing failed! Restart system
Link timeout	
Pairing failed	Pairing info Pairing RX-TX... Pairing failed! Restart system
Pairing failed	Pairing info Pairing RX-TX- Link OK Pairing failed! Restart system



Antenna

The antenna (A) is mounted on the machine behind the rear service hatch.



Operating near edges

▲ WARNING Overturning hazard

When operating along edges, at least 2/3 of the machine must be on a surface with full bearing strength, otherwise the machine can tip over.

- ▶ Switch off the machine and lift it back on surface with full bearing strength.

Operating on slopes

▲ WARNING Slope hazards

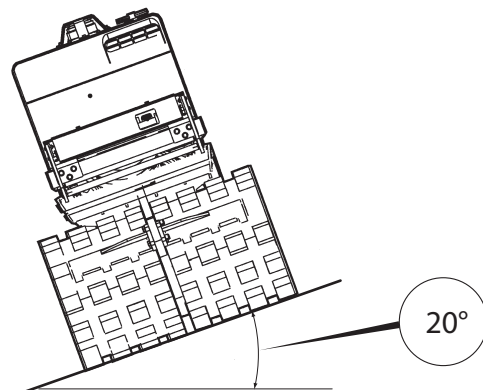
During operation, secure the machine so it can not fall if it is placed on a sloping ground. A fall can lead to severe accidents and result in personal injury.

- ▶ Always ensure that all personnel in the working area are higher up the slope than the machine.
- ▶ Always operate the machine straight up and down when placed on slopes.
- ▶ Never exceed the maximum recommended slope angle when operating the machine. Follow the recommendations.

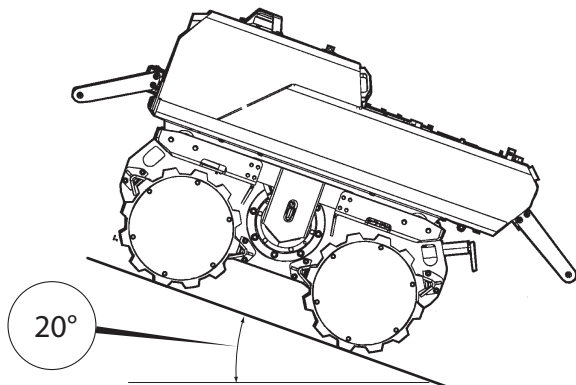
NOTICE Remember that loose ground, vibration switched ON, and driving speed can all cause the machine to tip over even on a lesser slope than specified here.

Operating on slopes

- ◆ Ensure that the work area is secure. Wet and loose earth reduces manoeuvrability especially on sloping ground. Always exercise extreme caution on sloping and uneven terrain.
- ◆ Never work on slopes that exceed the capabilities of the machine. The maximum slope of the machine in operation is 20° (depending on the condition of the ground).



- ◆ The tilting angle is measured on a hard level surface with the machine stationary. Vibration switched OFF and all tanks full.

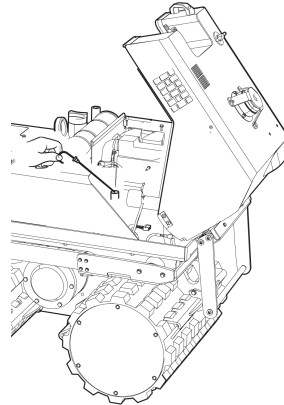


Start and stop

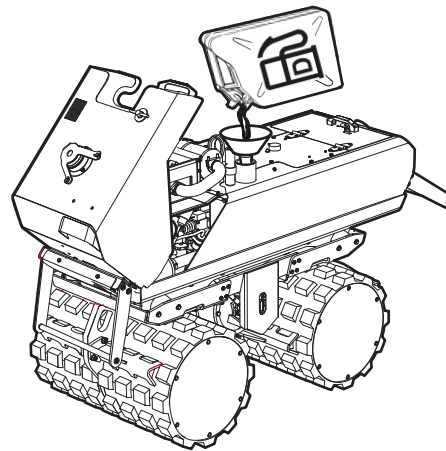
Before starting, Hatz

Follow the general safety precautions supplied with the machine at delivery. We recommend to study the engine manual supplied with the machine. Check that the maintenance routines have been carried out.

1. Check the engine oil level.



2. Fill the fuel tank with fuel.



3. Check that all the controls are working.
4. Make sure that there is no oil leakage, and that all bolted joints are tightened.

▲ **WARNING Sudden machine movement hazard**

During the starting procedure when the hydraulic system is connected, the machine may move in either direction. If the machine moves, it may be sudden and this movement that can cause injuries.

- ▶ Keep your feet away from the machine.
- ▶ Pay attention and look at what you are doing.

NOTICE Always store the transmitter securely to prevent unauthorized starting of the machine.

NOTICE Any use of a start gas can shorten the life of the engine. Never use start gas.

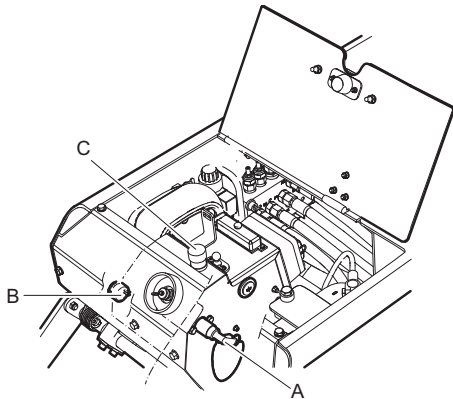
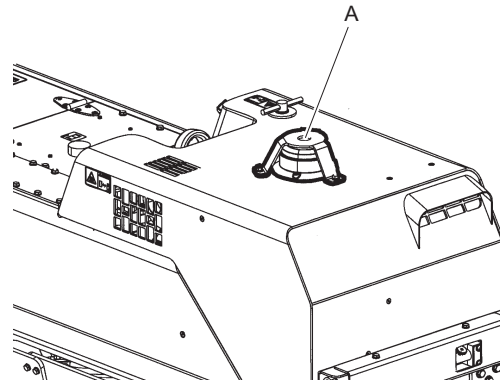
NOTICE During operation oil leaks can occur and bolted joints can come loose, this can cause engine breakdown.

NOTICE If the engine fails to start, wait for 3 seconds before a new attempt to start. If the starter motor is used for more than 20 seconds, a delay is activated for 8 seconds.

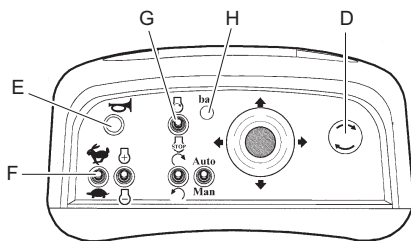
NOTICE If the charging symbol and oil pressure symbol do not extinguish, the machine must be shut off. Fault tracing and repair must be performed by authorized service personnel before the machine is started again.

Starting the engine, Hatz

1. Open the rear service hatch and pick up the transmitter. Insert and turn the battery disconnecter (A) to locked mode. The buzzer (B) sounds when the power is switched on. The buzzer stops when the engine starts.



2. Close the service cover and pull out the emergency knob (C) on the machine.
3. Release the start/stop button (D) on the transmitter. The LED will flash slowly with a green light during normal operation.

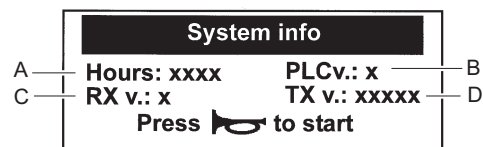


4. Press the horn button (E) until contact is established between the transmitter and receiver.
5. Set the switch for engine speed (F) to low.
6. Start the engine with the toggle switch (G), release when the engine has started.
7. Check the battery status. The low-battery warning light (H) must not light. Always have an extra fully-charged battery available.
8. Check the oil pressure.







The flashing warning light (A) mounted on the hood is activated when the battery disconnecter and emergency stop are activated.

System information

When the transmitter is turned on, the following data will be shown on the display:

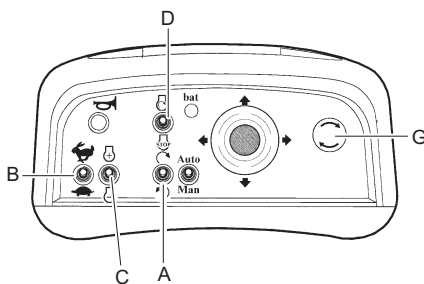


- A. Engine running hours.
- B. Software version for the machine's ECU (Electronic Control Unit).
- C. Software version for the radio receiver.
- D. Software version for the radio transmitter.

Symbol	Description
	Radio contact established between transmitter and receiver.
	Alarm, charging.
	Alarm, low oil pressure.
	Fault codes: 05: Tilt switch activated. The front switch is located behind the engine on the right side of the machine. The rear switch is located on the left side of the machine. 06: Rear contact sensor activated. 07: Front contact sensor activated.
	Radio contact lost between transmitter and receiver.
	Transmitter connected via cable control.

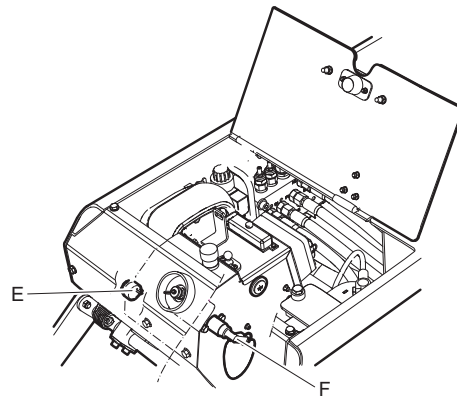
Stopping the engine, Hatz

1. Set the vibration switch (A) to neutral position.



2. Set the speed switch (B) to low (tortoise).
3. Set the engine speed switch (C) to low.
4. Let the engine idle for a few minutes.

5. Push the start/stop switch (D) back. The buzzer (E) sounds when the engine stops.



6. Open the rear service cover and twist the battery disconnecter (F) back to stop the buzzer.
7. Turn off the transmitter with the start/stop button (G), the green LED indicator light turns off.
8. Place the transmitter in its transportation position in the machine or store it in a safe place.

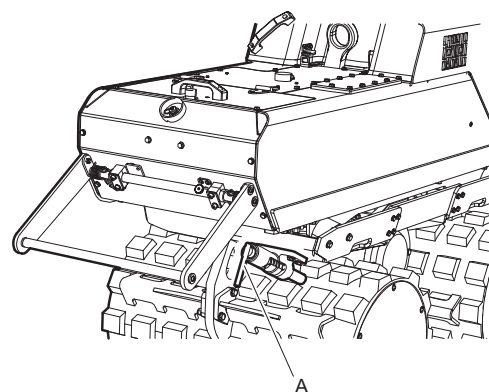
NOTICE The machine will stop immediately when the emergency stop knob is pressed. Make sure that the emergency stop is always in working order.

NOTICE The machine stops immediately when the joystick is released. Make sure that the joystick is working and that it returns to zero mode when it is released.

NOTICE The machine stops immediately when the on/off switch on the transmitter is turned off.

Handbrake

- ◆ Release the handbrake (A) by pulling it out and twist it clockwise into locked position.



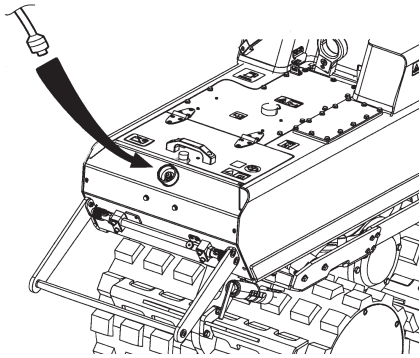
- ◆ Engage the handbrake by twisting it counterclockwise and push it in.

Cable control

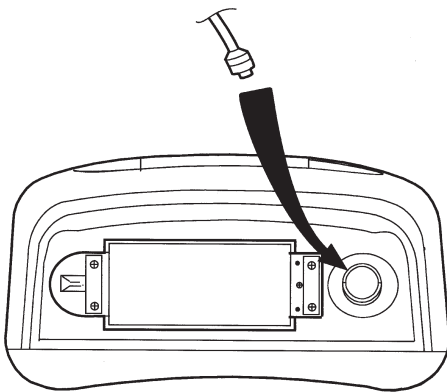
NOTICE The connector must be cleaned before mounting the cable. Damaged connectors must be replaced by authorized personnel.

The machine can be operated by cable control.

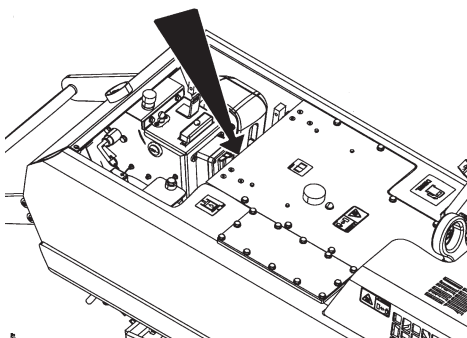
- ◆ Mount the cable on the machine.



- ◆ Mount the cable on the transmitter.

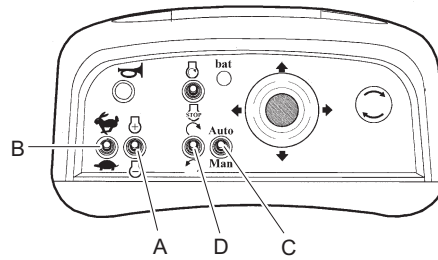


- ◆ The machine is ready to use. Use the same procedure for start/stop and operating as when using radio control.
- ◆ When cable control is used, the transmitter battery is not needed. The transmitter receives power via the cable.
- ◆ Store the cable in the pocket under the centre hatch, when it is not in use.



Operation

The machine must always be operated at the highest engine revs when vibration is used, the engine revs switch (A) is then in position +. Speed switch (B) must be in the position for low speed.





Operating with automatic vibration

Set the vibration toggle switch (C) in position AUTO. Vibration is activated when the joystick is used and the machine is operated at low speed. For the best tractive force, the vibration direction is changed automatically when the machine is operated forwards or backwards.

Operating with manual vibration

Set the vibration toggle switch (C) in position MAN. The starting position for engine speed switch (D) is neutral position.

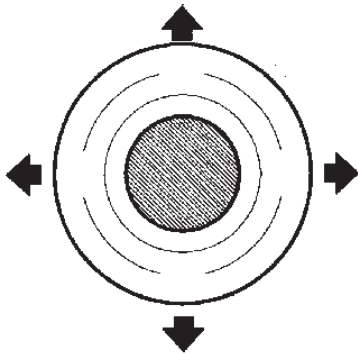
When the engine speed (D) is set to low, the automatic vibration is stopped. Vibration toggle switch (C) must be set to the intermediate position when returning to high speed in order for the automatic vibration to be resumed.

Vibration switch position	
	Vibration is clockwise.
	Vibration is anticlockwise.

Operating

NOTICE The vibration position must not be used when the engine is idling.

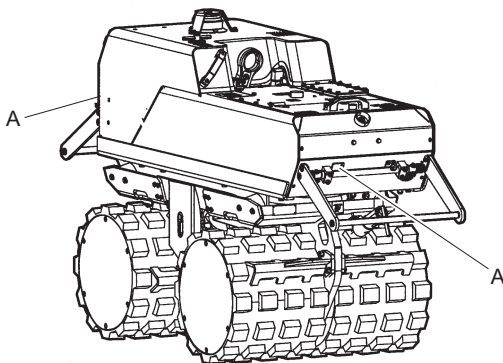
Control



- ◆ **Forward operation:**
Move the joystick forwards.
- ◆ **Reverse operation:**
Move the joystick backwards.
- ◆ **Right operation:**
Move the joystick to the right.
- ◆ **Left operation:**
Move the joystick to the left.
- ◆ **Stop the machine and vibrator:**
Release the joystick to stop the vibrator and the machine will stop.

Contact sensor

There are two contact sensors (A) mounted on the machine. If either of these are activated during operation, operating in that direction is not possible. It is possible to operate the machine in the opposite direction until the contact sensor has been reset.



If the machine gets stuck in a trench

NOTICE The operating mode must only be used if the machine gets stuck in a trench.

To operate the machine when both of the contact sensors are activated, press and hold the horn button for more than 1 second. Hold the button while operating with the joystick.

When taking a break

- ◆ Stop the machine during breaks.
- ◆ During all breaks you must put the transmitter away so that there is no risk for unintentional start.

Parking

Always park the machine on level ground. Before leaving it:

- ◆ Turn off the engine and the transmitter.
- ◆ Activate the parking brake.
- ◆ Store the transmitter securely to prevent unauthorized start of the machine.

Maintenance

▲ WARNING Scalding hazard

During maintenance there is a risk of scalding from hot engine oil.

- ▶ Always ensure that the engine is cold before performing any maintenance.

Regular maintenance is a basic requirement for the continued safe and efficient use of the machine. Follow the maintenance instructions carefully.

- ◆ Before starting maintenance on the machine, clean it in order to avoid exposure to hazardous substances. See "Dust and fume hazard".
- ◆ Use only authorised parts. Any damage or malfunction caused by the use of unauthorised parts is not covered by warranty or product liability.
- ◆ When cleaning mechanical parts with solvent, comply with appropriate health and safety regulations and ensure there is satisfactory ventilation.
- ◆ For major service of the machine, contact the nearest authorised workshop.
- ◆ After each service, check that the machine's vibration level is normal. If not, contact the nearest authorised workshop.

Battery charging

Use a voltage regulated battery charger (constant voltage). A switched two-stage charger with constant voltage is recommended. A two-stage charger automatically reduces the charging voltage (14.4 V)

to trickle charging (13.3 V) when the battery is fully charged.

Battery storage and trickle charging

Never leave a machine with a discharged battery. A discharged battery freezes at a temperature of about -7°C (19F). A fully charged battery will freeze at -67°C (-89F). A battery that is not being used must be fully charged before being put aside.

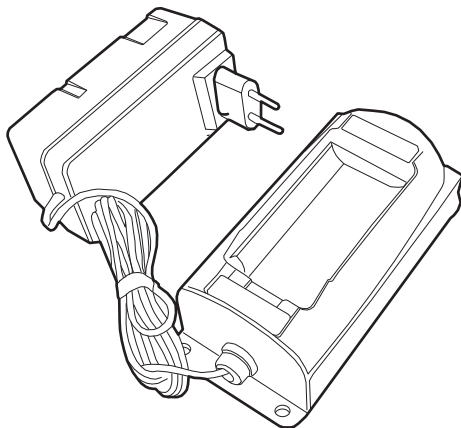
Trickle charging is not normally required during a period of 6 to 8 months. If a battery has not been in use for a long period, it must be fully charged before being used. Trickle charging is recommended a couple of times during the season (especially in winter).

Desktop charger

▲ WARNING Explosion

If the battery is charged in a damp room at a high temperature, it might explode.

- ▶ Use charger only in a dry room within the temperature range -25-70°C (-13-158°F).



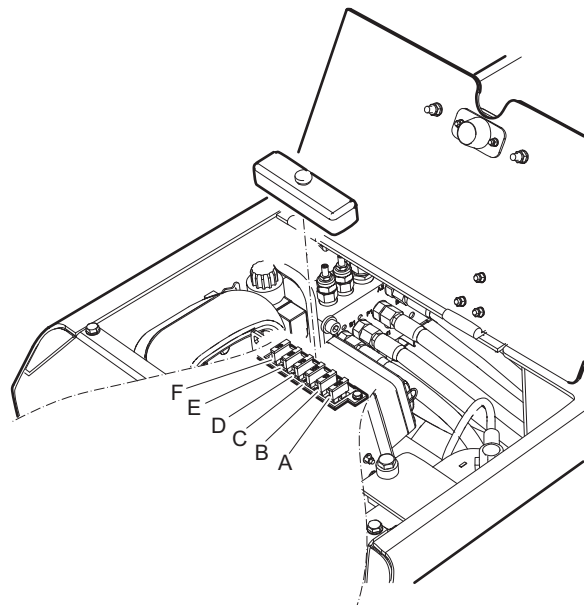
- ◆ The desktop charger works within a voltage range of 100-240 V.
- ◆ The desktop charger comes with an adapter that works in most sockets.

A steady yellow light indicates that the charger is ready for charging. Place the battery in the charger. The charger verifies the battery, which takes 10 seconds. If battery is accepted the charge starts. Full charge time is 2.5 hours at a normal temperature. The battery will not be damaged if it is left in the charger when fully charged.

When the battery is removed from the charger, wait until the LED indicator turns yellow before inserting a new battery for charging.

LED indicator	Battery status
Yellow	Battery verification
Orange	Fast charge
Green with intermittent yellow flash	Top-off charge
Green	Trickle charge
Alternating orange-green	Error

Fuses



- A. Main fuse, 30 A
- B. Radio receiver + Electronic Control Unit, 5 A
- C. Battery charger, 20 A
- D. Strobe, 10 A
- E. Tilt sensors, 10 A
- F. 12 V power socket, 10 A

Every 10 hours of operating (daily)

Before undertaking any maintenance, turn the machine off.

- ◆ Inspect the machine before starting. Inspect the entire machine so that leakages or other faults are detected.
- ◆ Check the ground under the machine. Leakages are more easily detected on the ground than on the machine itself.

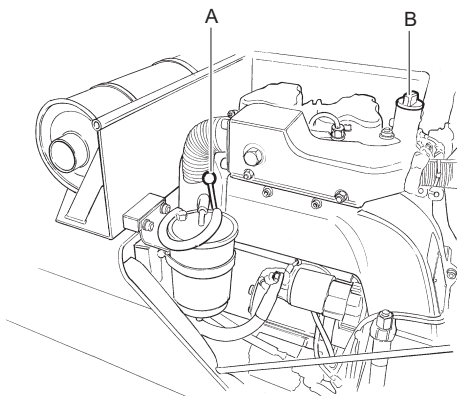
In order to ensure that the machine remains within the stated vibration level values, the following checks must be performed:

Maintenance routines:

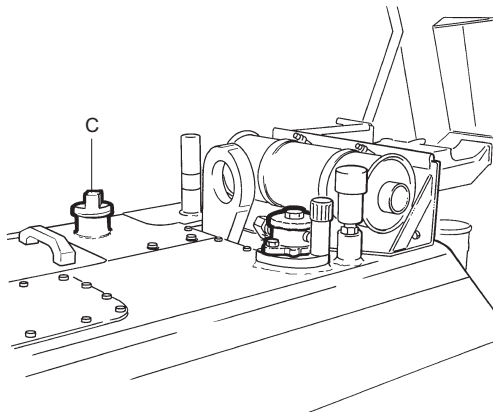
- ◆ Check and replenish engine oil. See engine manual for more information.
- ◆ Check and replenish fuel.
- ◆ Check for oil leaks.
- ◆ Check the dust extractor valve on the air filter.
- ◆ Clean and refit the air filter.
- ◆ Check the hydraulic oil level.
- ◆ Check scraper adjustment.
- ◆ Check the tightness of all nuts and bolts.
- ◆ Check the functions of the transmitter and the receiver.
- ◆ Clean the machine.

Checking the engine, Hatz

- ◆ Stop the engine and wait for a few minutes. The machine must be in a horizontal position.
- ◆ Check the oil level on the dipstick (A). Fill with oil (B) to the upper marking if necessary.



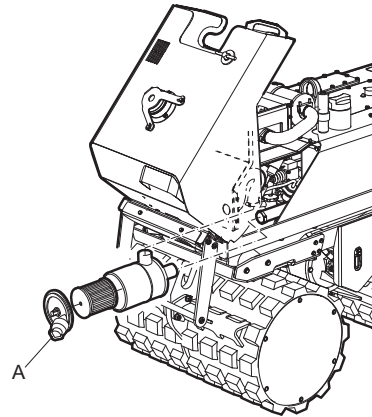
- ◆ Check the fuel level (C).



- ◆ Check the engine for oil leaks.

Cleaning dust extractor valve

- ◆ Check air intake. Clean if necessary
- ◆ Check dust extractor valve (A) for free flow. remove any blockages by pressing together. Check connecting hoses and clamps.



See the engine manual for more information.

Cleaning the air filter

- ◆ Tap the filter against the palm of the hand until all loose dust is dislodged. Do not tap the filter cartridge against any hard objects.

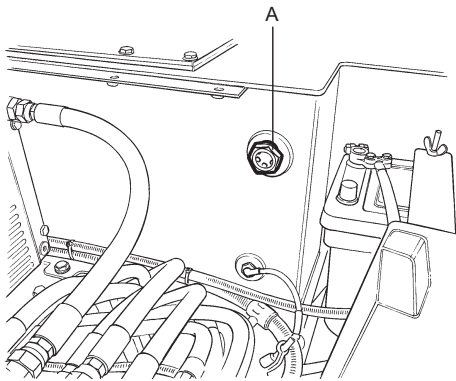


- ◆ The filter must be replaced if it is wet or oily.

See the engine manual for more information.

Checking hydraulic oil level

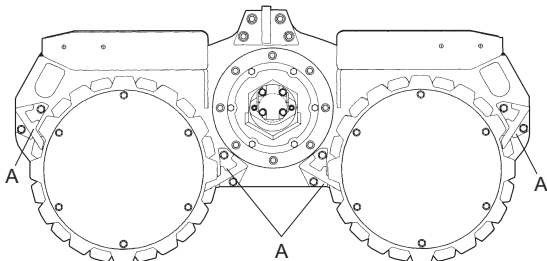
- ◆ Wipe off the oil level gauge (A).



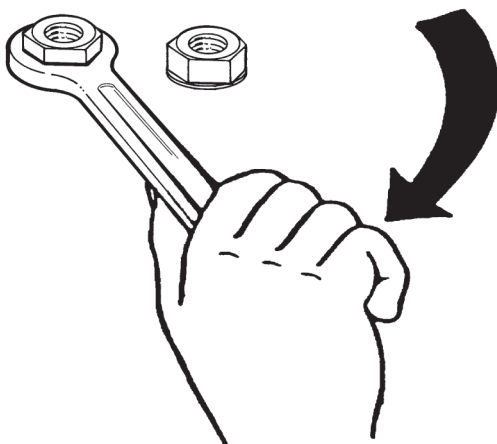
- ◆ Check that the level is in the centre of the gauge. Refill if necessary.
- ◆ Check for leaks if the level falls.

Scrapers, checking and adjusting

- ◆ Make sure that the scraper blades are not touching the pads on the drums. If necessary, adjust the screws (A) to a clearance of 3-5 mm (0.12- 0.2 in.).



Checking bolted joint



Check and if necessary tighten screws and nuts.

NOTICE Never aim a water jet directly at the fuel filler cap. This is particularly important when using a high-pressure cleaner.

Cleaning the machine

- ◆ Do not spray water directly onto electrical components or the instrument panel.
- ◆ Place a plastic bag over the fuel filler cap and secure with a rubber band. (This will prevent water from entering the venting hole in the filler cap. Otherwise this could cause operational disturbances, such as clogged filters.)

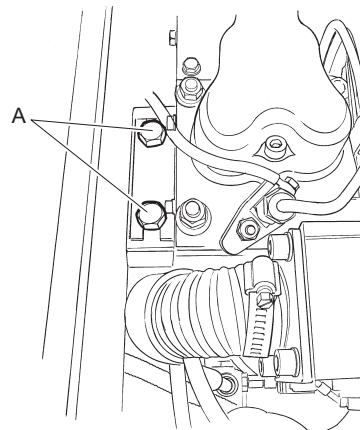
After the first 20 hours of operation

Maintenance routines:

- ◆ Check the engine spacer bolts.
- ◆ Change the engine oil and replace the oil filter. See the engine manual for more information.
- ◆ Check and adjust engine valve clearances. See the engine manual for more information.

Inspection of engine spacer bolts

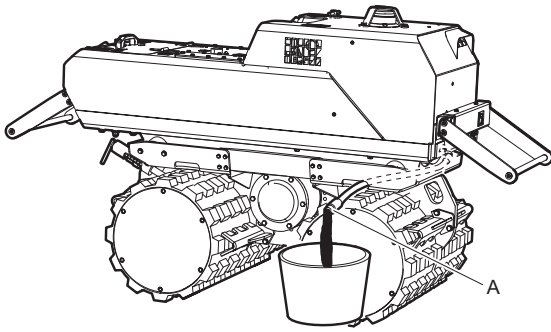
Check that the engine spacer bolts (A) are properly tightened.



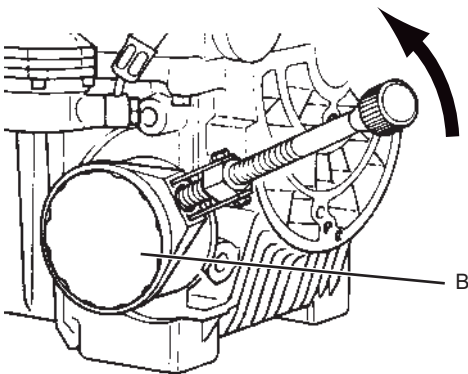
Diesel engine, changing the oil and filter

Only drain the engine oil while engine is warm.

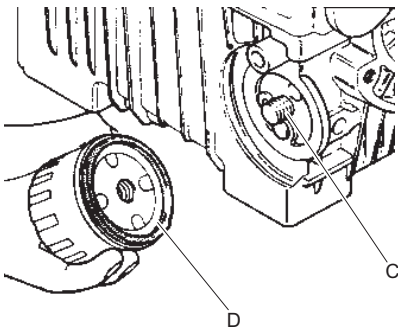
1. Unscrew the drain plug (A) on the draining hose and drain off all the oil. Use a container with at least a 2.5 litre capacity.



2. Replace the drain plug (A) and tighten.
3. Loosen the oil filter (B) by using a band wrench.



4. Clean the surfaces (C) carefully.



5. Replace the oil filter (D) and tighten by hand.
6. Fill with engine oil.
7. Run a for a short time to make sure that the oil filter is oil tight. If necessary tighten.

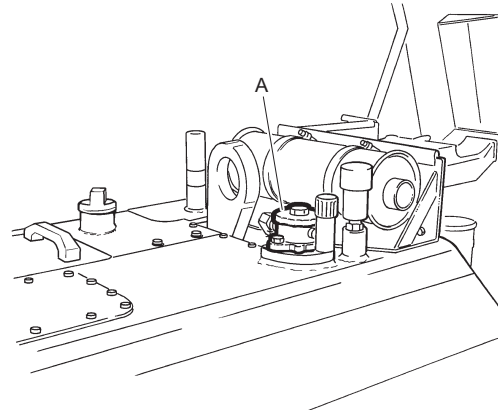
After the first 150 hours of operation

Maintenance routines:

- ◆ Change the hydraulic oil filter.

Hydraulic system, replacing the oil filter

1. Clean the area around the filter cover and then unscrew the cover (A). Replace the filter element. The element is a disposable type and must be disposed of in an environmentally-friendly manner.



2. Insert the new filter in the housing and check the O-ring in the cover.
3. Screw the cover back on and make sure there is no leakage.

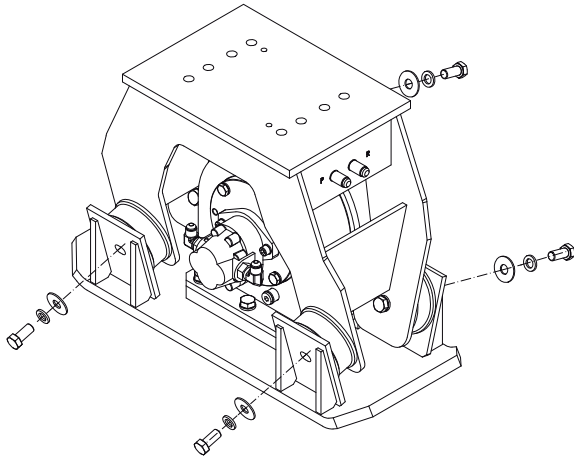
Every 250 hours of operation (every month)

Maintenance routines:

- ◆ Change the hydraulic oil filter.
- ◆ Change the fuel filter.
- ◆ Change the air filter.
- ◆ Check shock absorbers.
- ◆ Drain the fuel filter.
- ◆ Check the battery connections.
- ◆ Check the engine spacer bolts.
- ◆ Check and clean the engine air cooling system. See the engine manual for more information.
- ◆ Change the engine oil and replace the oil filter. See the engine manual for more information.
- ◆ Check and adjust engine valve clearances. See the engine manual for more information.

Diesel engine, replacing the fuel filter

1. The replacement intervals for fuel filters depend on how heavily contaminated the fuel is.
2. Release the hoses on both sides of the fuel filter (A) and replace the filter.

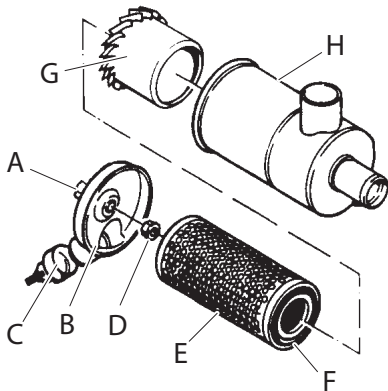


3. When fitting the new filter make sure that the arrow on the filter coincides with the direction of flow of the fuel.

See the engine manual for more information.

Checking air filter

1. Loosen the wing nut (A) and remove the cover (B) with the dust extractor valve (C).



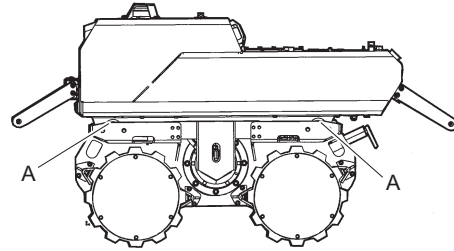
2. Inspect the cover and the dust extractor valve to check that they are not deformed, too old or cracked. Replace if needed.
3. Unscrew collar nut (D).
4. Carefully pull out the filter cartridge (E). Replace the cartridge if the filter or the seal (F) is damaged.
5. Pull the guide (G) from filter housing (H).
6. Clean all parts except the filter cartridge with compressed air. Do not blow into the inlet to the engine.

7. Clean or replace the cartridge.
8. Assemble in reverse order. Check the seal insert of the collar nut (D). Replace the collar nut if the seal insert is missing. Ensure that the dust extractor valve is correctly positioned downwards.

See the engine manual for more information.

Checking the shock absorbers

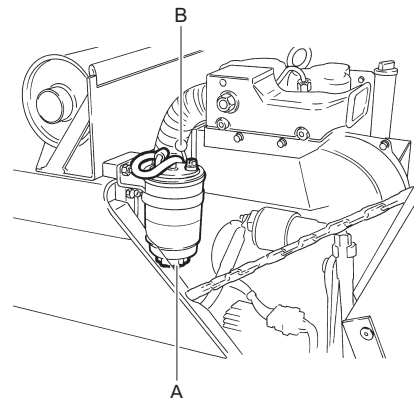
1. Check all the shock absorbers (A) for cracks or if they are exhausted. There are two shock absorbers (A) on each side of the machine.



2. Change the shock absorbers (A) if they are damaged.

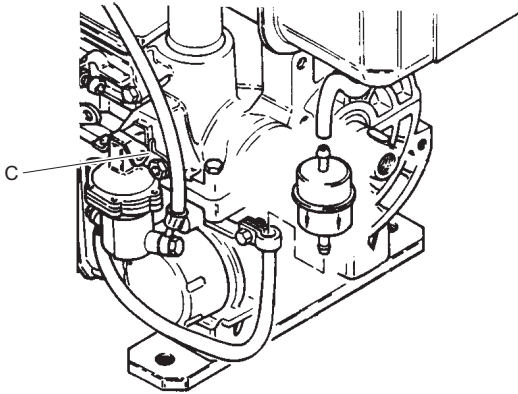
Draining the water separator filter

1. Loosen the drainage plug (A).



2. Drain until the fuel is free from water. Collect the fluid extracted in a fuel can.
3. Tighten the drainage nut (A) and loosen the bleeding screw (B).

- Pump with the hand pump (C) until the fuel is free from air. Tighten the bleeding screw (B).



Checking battery connectors

- ◆ Clean the battery poles and cable shoes and apply a coating of acid-free grease (Vaseline).
- ◆ Tighten the battery connections.
- ◆ Check the attachment of the battery.

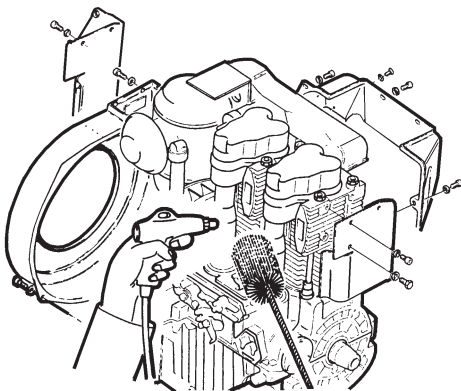
Inspection and cleaning of the engine air cooling system

▲ WARNING Scalding hazard

During maintenance there is a risk of scalding from hot engine oil.

- ▶ Always ensure that the engine is cold before performing any maintenance.

- Remove all air guides.
- Clean all air guides as well as the entire air cooling area including the cylinder head, cylinders and cooling flanges. Blow through with compressed air.
- Check and adjust engine valve clearance.



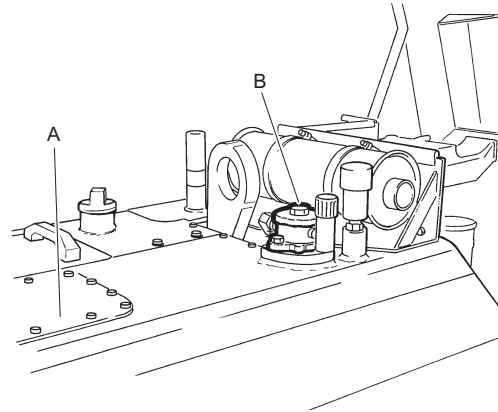
Every 500 hours of operation (yearly)

Maintenance routines:

- ◆ Change the hydraulic oil and the hydraulic oil filter.
- ◆ Clean the fuel tank.

Hydraulic system, changing the oil

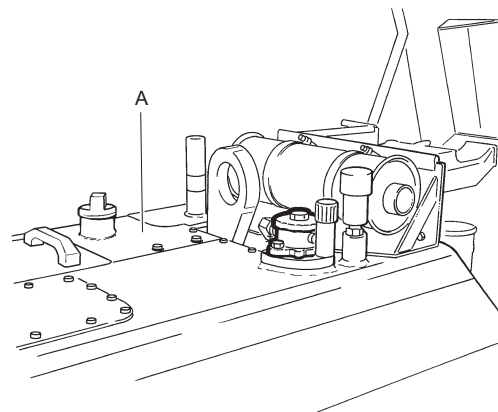
- Remove the hydraulic oil tank cap (A).



- Empty the tank by using a syphon.
- Clean the inside surfaces.
- Change the filter element (B).
- Fill with hydraulic oil.
- Check the level gauge.

Cleaning the fuel tank

- Place a container of at least 17 litres under the fuel tank (A). Clean the surrounding area and remove the drainage plug.



- Drain out the tank and clean.
- Replace the drainage plug with a new seal.
- Refill the tank, check for leaks.

Disposal

A used machine must be treated and disposed of in such a way that the greatest possible portion of the material can be recycled and any negative influence on the environment is kept as low as possible, and in accordance with local restrictions.

Before a fuel driven machine is deposited it must be emptied and cleaned of all oil and fuel. Remaining oil and fuel must be dealt with in a way that does not adversely affect the environment.

Always send used filters, drained oil and fuel remnants to environmentally correct disposal.

Storage

- ◆ Empty the fuel tank before storing the machine.
- ◆ Clean the machine.
- ◆ Clean the air filter.
- ◆ Wipe off any oil and dust that has accumulated on the rubber parts.
- ◆ Cover the machine and store it in a dry, dust-free area.

Technical data

Machine data

LP 8504	Hatz
Engine	
Type	Hatz 2G40, 2-cylinder Diesel
Power kW (hp)	12.5 (17.5)
Rated speed r.p.m.	2,500
Cooling system	Air cooled + hydraulic oil cooler + fan
Air filter	Dry type
Traction system	
Pump	Gear type
Engines	Radial Piston
Pressure Valve, MPa (psi)	26.5 (3,844)
Control system	
Normal control	Radio
Temporary control	Cable
Brake system	
Service brake	Hydrostatic
Parking brake	Mechanical
Performance	
Operating speed, m/min (foot/min)	20.5 (67.3)
Transport speed, m/min (foot/min)	39 (128)
Maximum tilt, ° (%)	20 (36)
Maximum inclination, ° (%)	20 (36)
Compaction data	
Vibration frequency, Hz (r.p.m.)	32 (1,920)
Centrifugal force, kN (lbf)	48 (10,791)
Amplitude, mm (in.)	1.2 (0.04)
Vibration system	
Pump	Gear type
Motor	Gear type
Safety valve, Mpa (psi)	15 (2175)
Fluid volumes	
Fuel tank, litres (qts)	17.0 (18.0)
Crankcase oil capacity, litres (qts)	2.5 (2.6)
Hydraulic oil, litres (qts)	21.0 (22.2)
Eccentric element, litres (qts)	0.5 (0.5)
Fuel consumption, litres/hour (qts/h)	3.2 (3.4)
Lubricants	
Engine oil	Shell Rimula R4 L 15W-40
Eccentric element oil	Shell Rimula R4 L 15W-40
Hydraulic oil	Shell Tellus S3 V68
Fuel	Use diesel oil that complies with EN 590 or DIN 51601.
Electrical system	
Battery Voltage, V	12
Generator Capacity, Ah	50
Fuses, A	1x30, 1x40
Generator, W	330
Starter motor, kW (hp)	1.7 (2.3)

Weights

	630 mm (24.8 in.)	850 mm (33.5 in.)
Net weight, kg (lbs)	1,548 (3,413)	1,650 (3,638)
Operating weight EN500, kg (lbs)	1,573 (3,468)	1,675 (3,693)

Radio equipment

Transmitter	
Operating voltage	Battery NiMh 1500 mAh. The transmitter can be operated without battery via cable control.
Operating time	Up to 15 hours with a new battery.
Data display	Graphical, resolution 128 x 32.
Protection class	IP 66.
Operating temperature, °C (°F)	Between -25 (-13) and +85 (+185).
Storage temperature, °C (°F)	Between -40 (-40) and +85 (+185).
Battery	2 x NiMh batteries supplied with the machine.
Receiver	
Operating voltage, V DC	Between 10 and 32
General consumption	100 mA, without external charging at 12 V DC.
Processor	CPU design 2 robust safety switches (max 2 A). Designed to fulfil EN 13849-1 PL e (EN951-1, Cat 4).
Operating frequency, GHz	BlueTooth, 2.4
Indication, receiver	Triple-colour LED, Red/Green/Yellow.
Indication, CAN status	Twin-colour LED Red/Green.
Protection class	IP 67
Operating temperature, °C (°F)	Between -25 (-13) and +85 (+185).
Storage temperature, °C (°F)	Between -40 (-40) and +85 (+185).

Noise and vibration declaration statement

Guaranteed sound power level **L_w** according to EN ISO 3744 in accordance with directive 2000/14/EC.

Sound pressure level **L_p** according to EN ISO 11201, EN 500-4.

Vibration value determined according to EN 500-4. See table "Noise and vibration data" for the values etc.

These declared values were obtained by laboratory type testing in accordance with the stated directive or standards and are suitable for comparison with the declared values of other machines tested in accordance with the same directive or standards. These declared values are not suitable for use in risk assessments and values measured in individual work places may be higher. The actual exposure values and risk of harm experienced by an individual user are unique and depend upon the way the user works, in what material the machine is used, as well as upon the exposure time and the physical condition of the user, and the condition of the machine.

We, Construction Tools EOOD, cannot be held liable for the consequences of using the declared values, instead of values reflecting the actual exposure, in an individual risk assessment in a work place situation over which we have no control.

This machine may cause hand-arm vibration syndrome if its use is not adequately managed. An EU guide to managing hand-arm vibration can be found at <http://www.humanvibration.com/humanvibration/EU/VIBGUIDE.html>

We recommend a programme of health surveillance to detect early symptoms which may relate to vibration exposure, so that management procedures can be modified to help prevent future impairment.

Noise and vibration data

Type	Noise			Vibration	
	Declared values			Declared values	
	Sound pressure	Sound power		Three axes values	
	EN ISO 11201	2000/14/EC		EN500-4:2011	
	Lp at operator's ear	Lw guaranteed dB(A) rel 1pW	Lw measured dB(A) rel 1pW	m/s ² value	permitted working hours/day
LP 8504	92	106	104	-	-

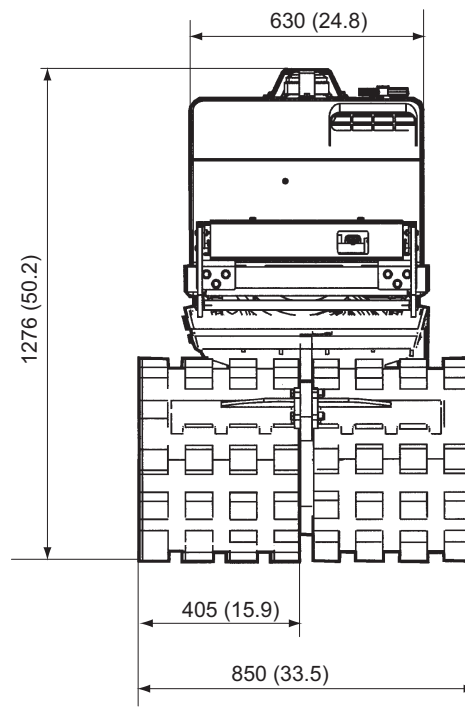
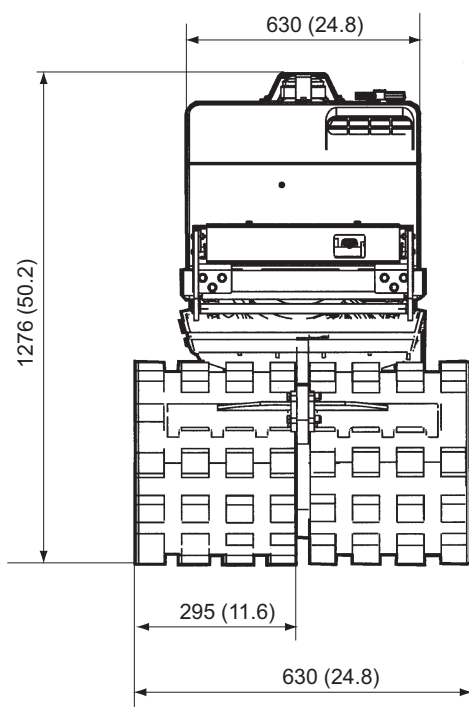
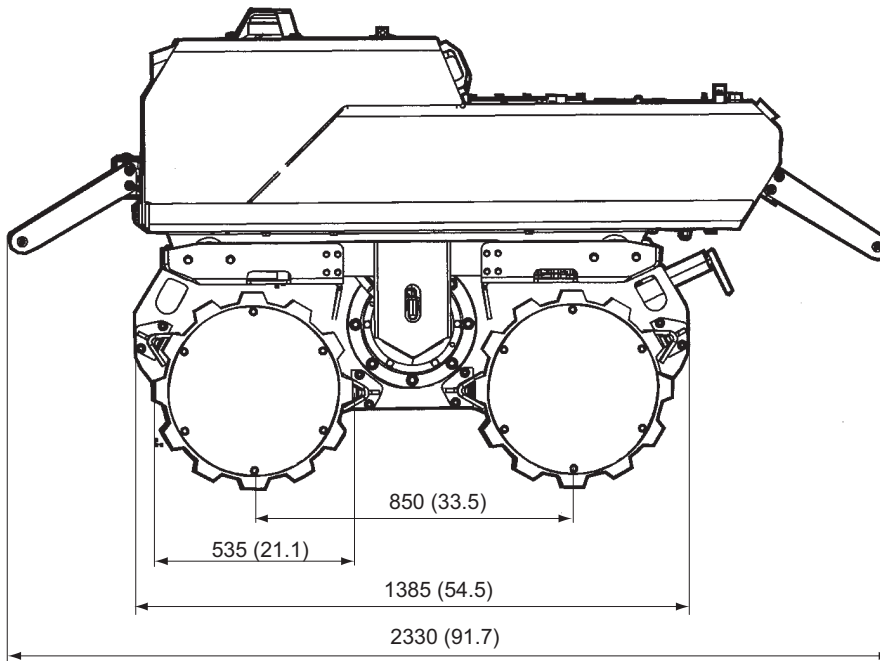
Uncertainties, sound value

Type	Uncertainties, sound value	
	K _{WA} dB(A)	K _{pA} dB(A)
LP 8504	1.5-2.5	2.5-3.0

Uncertainty factor for gravel bed.

Dimensions

mm (in.)



EC Declaration of Conformity

EC Declaration of Conformity (EC Directive 2006/42/EC)

We, Construction Tools EOOD, hereby declare that the machines listed below conform to the provisions of EC Directive 2006/42/EC (Machinery Directive) and 2000/14/EC (Noise Directive), and the harmonised standards mentioned below.

Trench compactor	Guaranteed sound power level [dB(A)]	Measured sound power level [dB(A)]
LP 8504	106	104

Following harmonised standards were applied:

- ◆ EN500-1:2006+A1:2009
- ◆ EN500-4:2011
- ◆ EN13309:2000/prEN13309:2008
- ◆ ETSI EN 301 489-1 v1.8.1 2008-04

Following other standards were applied:

- ◆ 2000/14/EC, appendix VIII
- ◆ 2004/108/EC
- ◆ ISO13766:2006
- ◆ 1999/5/EC

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 Sweden

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Place and date:

Rousse, 2012-12-31

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