



## Instruction manual Double Vibrating Roller

REN655DY





## Index

1	EC Declaration of Conformity .....	5
2	Preface .....	6
2.1	Introduction.....	6
2.2	Instruction manual storage location .....	6
2.3	Rules for accident prevention .....	8
2.4	contact person.....	8
2.5	Limitation of liability .....	8
2.6	Using the instruction manual .....	8
2.7	Warranty conditions.....	8
3	Use .....	10
3.1	Intended use .....	10
3.2	Inappropriate use .....	10
4	Security.....	11
4.1	Safety symbols and signal words .....	11
4.2	Principle .....	11
4.3	Structural modifications .....	12
4.4	Operator's responsibility .....	12
4.5	Operator's obligations.....	13
4.6	Staff qualification .....	13
4.7	General safety instructions .....	13
4.8	Specific safety instructions for vibratory rollers .....	15
4.9	Safety equipment .....	17
4.10	Maintenance.....	17
5	Machine Description.....	21
5.1	Nameplates and stickers .....	21
5.2	Components.....	26
5.3	Control elements .....	26
5.4	TrackPro (optional) .....	29
6	Transport .....	30
6.1	Safety instructions for transport.....	30
6.2	Requirements and preparations .....	30
6.3	Machine Lifting .....	30
6.4	Tie down the machine .....	31
6.5	Towing the machine .....	32

7	Start-up .....	35
7.1	Pre-startup checks .....	35
7.2	Safety instructions for operation .....	35
7.3	Start .....	37
8	Management.....	41
8.1	Machine drive .....	41
8.2	Water irrigation system.....	41
8.3	Vibration adjustment.....	42
8.4	Selecting the speed and direction of travel .....	42
8.5	Stop mechanism .....	43
8.6	Stopping the march .....	44
9	Maintenance .....	46
9.1	Safety instructions for maintenance.....	46
9.2	Maintenance program .....	48
9.3	Maintenance work .....	49
10	Malfunctions .....	52
10.1	Troubleshooting .....	52
10.2	Start the machine with the auxiliary system for starting up .....	53
11	Detention .....	54
11.1	Temporary decommissioning .....	54
11.2	Permanent decommissioning .....	54
12	Technical data .....	56
12.1	General indications.....	56
12.2	Noise and vibration data.....	56
12.3	Technical characteristics.....	57
12.4	Combustion engine .....	58
12.5	Conversion table .....	59

## 1 EC Declaration of Conformity

### EU Declaration of Conformity

#### Manufacturer

Air Power sro, Jizni Predmesti 2942, 301 00 Pilsen (CZ)

The sole responsibility for issuing this declaration of conformity lies with the manufacturer.

<b>Product</b>	<b>REN655DY</b>
Product type	Roller
Product Function	Soil compaction
Material number	REN655DY, REN655DYB
Net installed power	6.3 kW
Measured sound power level	105 dB(A)
Guaranteed sound power level	108 dB(A)

#### Regulatory framework for conformity assessment

2000/14/EC, Annex VI

#### Notified body

STATNI ZKUSEBNA STROJU as, Tranovskeho 622/11, 163 04 Praha 6 (CZ) (NB 1016)

#### Directives and standards


We hereby declare that this product complies with the relevant provisions and requirements of the following directives and standards:

2006/42/EC • 2000/14/EC • 2014/30/EU • EN 500-1:2006+A1:2009 • EN 500-4:2011  
EN ISO 13766-1:2018

#### Authorized representative for technical documentation

Air Power sro, Jiznf Predmesti 2942, 301 00 Pilsen (CZ)

Pilsen (CZ), 09.01.2024



**AIR POWER**  
AIR POWER s.r.o. Smart Partnership  
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IČ: 263 23 745 DIČ: CZ 263 23 745

Jiri Dvorak  
Manager

Translation of the original Certificate of Conformity

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## 2 Preface

### 2.1 Introduction

This instruction manual contains important information and procedures for safe, proper and cost-effective operation of this machine. Reading the manual carefully, understanding it and following it will help to avoid risks, reduce repair costs and downtime, and thus increase the availability and service life of the machine.

This instruction manual is not intended to be a manual for carrying out extensive maintenance or repair work. Such work must be carried out by a service representative or by qualified personnel. The machine must be operated and maintained in accordance with the instructions in this instruction manual. Improper operation or maintenance that does not comply with the instructions may cause risks.

Defective machine parts must be replaced immediately!

The company representative is available at all times to answer questions about operation or maintenance.

### 2.2 Instruction manual storage location

This instruction manual must be kept in the vicinity of the machine and accessible to personnel at all times.

In case of loss or need for a second copy of this instruction manual, you have the following alternatives:

- Available on the website: <http://www.enar.es>.
- Contact the company representative.

#### 2.2.1 Basics of the instruction manual

This section helps you understand the instruction manual and the characters or character sequences used.



##### Target group

Persons working with this machine must be regularly trained in the dangers associated with its operation.

This instruction manual is intended for:

- Operating personnel:
  - These persons have been instructed in the operation of the machine and have been informed about the possible dangers of incorrect behaviour.
- Expert staff:
  - These individuals have specialized training as well as additional knowledge and experience. They are able to assess the tasks assigned to them and recognize potential hazards.

## Explanation of characters or character sequences

Characters or sequences of characters	Explanation
1., 2., 3...	It symbolizes tasks. The sequence of steps must be respected.
➤	It symbolizes a result or a partial result of an action.
✓	It symbolizes requirements that must be met to perform a task.
•	It symbolizes an enumeration, for example, when several pieces are mentioned in succession.
-	It symbolizes a subnumbering, for example, when certain pieces are composed of other pieces.
①	It symbolizes an item, generally a piece or a control element, in a graphic. The numbering can be done consecutively or with Roman numerals.
1; A	It symbolizes the denomination of parts in explanatory texts. It is identical to the items on the side of the graphics.
 	It symbolizes a direction of movement or different positions in the case of switches.
▶	It symbolizes risk prevention in warning notices.
[ ▶ 52]	Symbolizes a cross-reference in tables. In this case, for example, reference to page 52

### 2.2.1.1 Explanation of symbols

The symbols used in the instruction manual are explained below. The symbols are used exclusively for warnings or instructions or information on the environment. The warnings must be observed at all times to protect the operator and third parties from possible injuries and material damage.

#### Warning symbol



This symbol identifies general warnings. It is used to warn of potential risks, e.g. injuries or accidents.

#### Technical damage indication symbol



This symbol identifies warnings that refer to technical damage. It is used to indicate situations in which damage to the machine or to the property of third parties may occur.

#### Environmental information symbol



This symbol identifies notices related to environmental issues. It is used to warn about potential environmental hazards.

#### Information symbol



This symbol identifies informational notices. The information may, for example, be tips for operating the vehicle. These notices thus contribute to a better understanding and better use of the machine.

## 2.3 Rules for accident prevention

In addition to the information and safety instructions in this operating manual, local accident prevention regulations and national occupational safety regulations apply.

## 2.4 contact person

Depending on the country, the contact person will be the technical service, a subsidiary or a distributor.

- Available on the website: <https://www.enargroup.com>

## 2.5 Limitation of liability

The manufacturer disclaims all liability for personal injury or property damage when any of the following situations occur:

- Procedures contrary to this instruction manual.
- Use not as intended
- Employment of untrained personnel.
- Use of unauthorized spare parts and accessories.
- Improper handling.
- Any type of structural modification.
- Breach of the Terms and Conditions (T&C).

## 2.6 Using the instruction manual

This instruction manual:

- It must be considered as a component of the machine and maintained throughout its useful life.
- must be handed over to any subsequent owner or operator of this machine.
- applies to different machine types within a product range. For this reason, some images may differ from the appearance of the purchased machine. In addition, there may be descriptions of components that differ depending on the variant and are not included in the delivery.

The manufacturer reserves the right to make changes to the information contained in this instruction manual without prior notice.

Any modifications or additions to this instruction manual must be included immediately by the manufacturer.

Group and type	Material number (Mat. No.)
REN655	REN655DY
	REN655DYB



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## 2.7 Warranty conditions

Enarco SAU for its products, grants a one-year warranty from the date of purchase of the product subject to the following conditions:

1. In accordance with the conditions stated here (No. 2-7), we will repair any lack of conformity in the product free of charge, if verify that they are the result of a defective component and/or manufacturing fault, and provided that the fault is reported without delay after its appearance.

2. The warranty does not apply to damage resulting from improper use. Likewise, the warranty does not apply to defects in the product caused by damage in transit for which we are not responsible.

The warranty will be void if repairs or interventions are carried out by persons not authorised by the manufacturer. The same applies to machines on which the periodic maintenance recommended in the instruction manual has not been carried out.

3. The application of the guarantee entails that defective components are repaired or replaced free of charge with fault-free components. Consumables and wear parts are excluded from the guarantee, except in cases of excessive or premature wear not attributable to normal use of the machine.

The replaced components will become our property.

4. In the case of sealed original spare parts, returns will not be accepted once the seal has been removed.

5. To exercise the rights arising from this warranty, you must contact our Technical Assistance Service. The following contact options are therefore available to the customer:

- Telephone: (+34) 976 464 094
- Email: sat@enar.es

*\*For Mexico, Colombia and Poland, please review the last page (Contact Addresses) of the document.*

In the event that the guarantee assessment is positive, Enarco will adopt the most convenient option:

- Carrying out the repair at ENARCO,
- Replacement with a new machine
- Sending the defective part for repair to an authorized workshop.

Enarco will assume the cost of transporting machines or components in any of the above cases. Under no circumstances will Enarco assume downtime costs, rental costs for replacement equipment or other responsibilities for equipment failure during the warranty period.

If the repair is not considered to be under warranty, it will be treated as a normal repair, issuing a quote for approval by the customer. In this case, the shipping costs to and from the customer will be the responsibility of the customer, as well as the cost of the repair or the cost of preparing the quote if the customer does not accept it.

6. Warranty repair of a machine does not extend the initial warranty period.

7. If for any reason any of the conditions for having a guarantee on a product come into effect, conflict with any regulation of any country or locality, said condition will be cancelled and the local regulation will prevail, but the rest of the conditions will remain in force.

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## 3 Use

### 3.1 Intended use

Compliance with all safety instructions and warnings in this instruction manual and compliance with the prescribed care and maintenance instructions are requirements for proper use.

Any use other than or exceeding these limitations is considered not to be in accordance with the intended use. In such cases, the manufacturer's liability and warranty for any resulting damages are waived. The risk shall be borne solely by the operator.

The machine is used for:

- Compact earth and gravel fills.
- Compact mixed and granular soils.
- Compact asphalt.

### 3.2 Inappropriate use

The manufacturer is not liable for personal injury or property damage resulting from improper use. The machine must not be used for, among other things, the following purposes:

- Use as a ladder, support or work surface.
- Transport people or equipment.
- Towing other machines.
- Fill the water irrigation system with other liquids (e.g. diesel).
- Operating the machine with performance data that exceeds the stated or factory specifications.
- Compacting trash.

## 4 Security

### 4.1 Safety symbols and signal words

The following symbol indicates safety instructions. It is used to warn about possible risks to people.



#### **⚠ DANGER**

**DANGER warns of a situation which, if not avoided, will result in serious injury or death.**

Consequences in case of non-compliance.

- ▶ Preventing injury or death.



#### **⚠ WARNING**

**WARNING warns of a situation which, if not avoided, could result in serious injury or death.**

Consequences in case of non-compliance.

- ▶ Preventing injury or death.



#### **⚠ CAUTION**

**CAUTION warns of a situation which, if not avoided, may result in injury.**

Consequences in case of non-compliance.

- ▶ Injury prevention.



#### **NOTE**

**NOTE warns of a situation which, if not avoided, may result in property damage.**

Consequences in case of non-compliance.

- ▶ Prevention of material damage.

### 4.2 Principle

The machine has been built in compliance with the latest state of technology and recognised technical safety regulations.

**Warning!** Risk of injury due to improper use!

Improper use may cause danger to the life and physical integrity of the operator or third parties, or may cause damage to the machine and other material damage.

- Read and observe the instructions and safety instructions contained in this instruction manual. Failure to comply with these instructions may result in electric shock, fire and/or serious injury, as well as damage to the machine and/or other material damage.
- Please observe the safety instructions and directions in the future.

## 4.3 Structural modifications

**Warning!** Risk of injury due to construction modifications.

If unauthorized structural modifications are made, risks to the operator and/or third parties, or damage to the machine and/or other material damage may arise.

- Do not make any construction modifications without written authorization from the manufacturer.

The following actions are considered structural modifications in particular:

- Open the machine and permanently remove components.
- Installing spare parts that do not come from the manufacturer or are not equivalent in model and quality to the original parts.
- Mount accessories of any kind that do not come from the manufacturer.

Furthermore, by making unauthorized structural modifications, the manufacturer's liability and warranty are voided.

Spare parts or accessories from the manufacturer can be assembled and disassembled without any risk.

For more information, please visit the website: <https://www.enargroup.com>

## 4.4 Operator's responsibility

The operator is any person who uses this machine himself for commercial or economic purposes, or hands it over to a third party for use/application and, during operation, has legal responsibility for the product for the protection of personnel or third parties.

- The operator must keep the instruction manual at all times in a place accessible to personnel and ensure that the operator has read and understood this instruction manual.
- The instruction manual must be kept within easy reach on the machine or at the place of use.
- The operator must provide the instruction manual to any subsequent operator or owner of the machine.
- Specific national regulations, standards and directives for accident prevention and environmental protection must also be observed. The operating instructions must be supplemented with further information on compliance with company, official, national or general safety directives.

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## 4.5 Operator's obligations

- Know and put into practice the current occupational safety provisions.
- Determine, in a risk assessment, the hazards that may occur due to working conditions at the workplace.
- Prepare operating instructions for the operation of this machine.
- Regularly check whether the safety instructions correspond to the current state of the standards.
- Regulate and clearly determine the competencies for installation, operation, repair of faults, maintenance and cleaning.
- Train staff at regular intervals and keep them informed about potential risks.
- Refresh your knowledge periodically.
- Maintain records of knowledge received and make them available upon request to the relevant authority.
- Provide staff with necessary protective equipment.

## 4.6 Staff qualification

**Warning!** Risk of injury due to improper use.

Incorrect or improper use or handling by untrained personnel may endanger the health of the operator and/or third parties, and may also cause damage or total loss of the machine and/or other material damage.

The machine may only be put into operation and operated by trained personnel.

**In addition, the following requirements apply to the operator:**

- Be physically and mentally capable.
- Be at least 18 years old.
- Your responsiveness must not be under the influence of drugs, alcohol or medication.
- Please read the safety instructions in this instruction manual.
- Know the intended use of this machine.
- Be instructed on the autonomous operation of the machine.

## 4.7 General safety instructions

The safety instructions in this chapter contain the "general safety instructions" that must be included in the operating manual in accordance with applicable standards. They may include instructions that are not relevant for this machine.

#### 4.7.1 Workplace

- Before starting work, inspect the work environment, e.g. the load-bearing capacity of the ground or obstacles in the area.
- Secure the work area in front of the public road. Secure walls and ceilings, e.g. in trenches, as required.
- Keep unauthorized persons and children away when working with this machine. Distractions can cause loss of control over the machine. Work with attention.
- Always secure the machine so that it cannot tip over, roll, slide or fall. Risk of injury!
- Keep the work area tidy. Cluttered or unlit work areas can lead to accidents.
- Pay attention to the different ground conditions, especially on uneven and soft ground or on slopes. Secure the machine against slipping!
- When working near pits, ditches or platforms, proceed with caution! The load-bearing capacity of the ground must safely support the weight of the machine and the operator.

#### 4.7.2 Safety of people

- Working under the influence of drugs, alcohol or medication can result in serious injuries.
- Appropriate protective equipment must be worn at all times during work. Wearing personal protective equipment significantly reduces the risk of injury.
- Loose or baggy clothing, protective gloves, jewelry and long hair must be kept away from the moving/rotating parts of the machine. Danger of entrapment!
- Always maintain a secure posture and stand with both feet on the ground.
- Do not stand, sit or move over a running machine.
- When working with this machine for a long time, long-term damage caused by vibrations cannot be completely ruled out. Vibration load, see Technical data on page 55.
- Make sure there are no other people in the risk area!

## Personal protective equipment



### ⚠ ADVERTENCIA

**Risk of hearing damage from exceeding the country-specific permitted noise limit.**

Working with the machine without hearing protection can cause permanent hearing damage.

- ▶ Use hearing protection.
- ▶ Work with special caution and prudence with hearing protection.

## 4.7.3 Handling and handling

- Handle the machine with care. Do not operate a faulty machine or one with defective components or controls. Have the defective components or controls replaced immediately. Machines with defective components or controls pose a high risk of injury!
- Do not block, manipulate or modify the machine's control elements in an impermissible manner.
- Secure machines that are not in use against unauthorized operation. The machine may only be used by authorized personnel.
- Handle the machine with care. Replace defective parts immediately before starting the machine. Defective machines pose a high risk of injury.
- Use the machine, accessories, tools, etc., in accordance with these instructions.
- After use, store the machine in a closed, clean, corrosion-protected and dry place that is not accessible to other people and children.

## 4.8 Specific safety instructions for vibratory rollers

### External influences

Do not operate the machine if the following external influences are present.

- In an explosion-prone environment. Risk of explosion!
- In case of heavy rain on sloping surfaces. Risk of slipping!
- In case of methane gas leaking from the ground near oil fields. Risk of explosion!
- In places with dry and easily flammable vegetation. Risk of fire!
- Near open flames. Risk of fire!

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## Operational security

- When operating the machine, take care not to damage the gas, water or electrical lines and hoses.
- Pay particular attention when working near cliffs or slopes. Risk of falling!
- While operating the machine, do not leave the designated operator's area.
- In pits and trenches, pay particular attention to the stability of the side walls and ensure that they do not collapse due to vibration. Risk of spillage!
- Do not allow the machine to operate unattended. Risk of injury!
- Mark off the work area widely and keep unauthorized persons away. Risk of injury!
- Machine operators must ensure that people in the work area remain at a distance of 2 metres from the machine while it is in operation.
- When operating the machine on inclined surfaces, always travel on slopes from below and always stand on slopes at a height above the machine. The machine may slide or tip over.

## Safety distance

Compaction work near buildings can cause damage to the building. For this reason, all possible impacts and vibrations on the surrounding buildings must always be checked first.

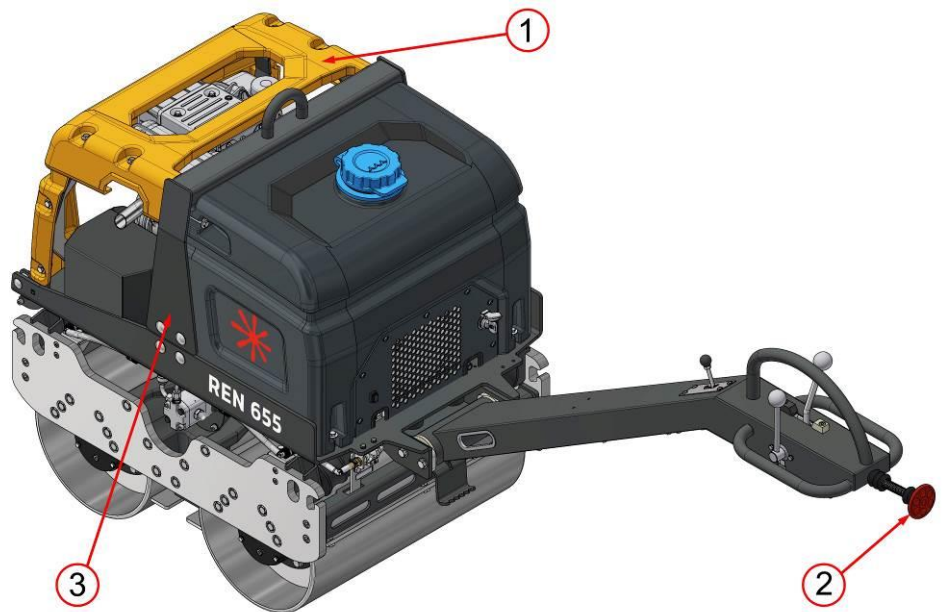
The relevant regulations and standards for measuring, assessing and reducing vibration emissions must be observed, in particular DIN 4150-3.

The manufacturer is not responsible for any possible damage to buildings.



## 4.9 Safety equipment

Safety equipment protects the operator of this machine from the dangers to which he is exposed. These include barriers (separating protective equipment) or other technical measures, which serve to prevent or reduce dangers.



- |   |                             |
|---|-----------------------------|
| 1 | Cover (optional)            |
| 2 | Stop mechanism              |
| 3 | Protective frame (optional) |

### Stop mechanism

Protects the operator from being crushed or trapped between the machine and an object.

### Cover and protective frame (optional)

Protects the operator from contact with hot engine parts.

## 4.10 Maintenance

- Do not perform maintenance, repair, adjustment or cleaning on the machine when it is on.
- Disconnect the starter battery before carrying out maintenance work.
- Observe the maintenance intervals specified in the maintenance schedule. Have a service representative perform any work not listed.
- Replace worn or damaged machine parts immediately. Use only manufacturer's spare parts.
- Carry out maintenance work in a clean and dry environment (e.g. in a workshop).
- Keep the machine clean.
- Replace missing, damaged or illegible warning labels immediately. Warning and information labels contain important information for the protection of the operator.

#### 4.10.1 Servicetechnical

- Repair or maintenance work on the machine must only be carried out by qualified expert personnel.
- Use only original spare parts and accessories. This ensures the operational safety of the machine.

##### 4.10.1.1 Unions threaded

All threaded connections must correspond to the prescribed specifications and must be screwed together firmly.

Observe the tightening torques! Screws and nuts must not be damaged, bent or deformed.

**In particular, the following should be taken into account:**

- Self-locking nuts and micro-encapsulated screws cannot be reused after being loosened. The safety effect is lost.
- After loosening, threaded connections secured with liquid adhesive/glue (e.g. Loctite) must be cleaned and provided with new adhesive.



#### Information

Observe the instructions of the liquid glue manufacturer.

---

#### 4.10.2 Consumables

- Always wear safety glasses and protective gloves when handling consumables. Seek medical attention immediately if, for example, hydraulic oil, fuel, oil or cooling agent gets into your eyes.
- Avoid direct contact of consumables with skin. Wash skin immediately with soap and water.
- Do not eat or drink when working with consumables.
- Contaminated consumables (e.g. by dirt, water) can cause premature wear or machine failure.
- Dispose of any consumables that have been drained or spilled in accordance with current environmental regulations.
- If the machine emits consumables, stop using it and immediately request repair from a service representative.
- Before disconnecting the connectors for hydraulic tools, depressurise the hydraulic system. Place all control elements in neutral position, switch off the engine and the machine and allow them to cool.
- Hydraulic fluid is extremely flammable. If a leak is detected, take the machine out of service immediately.

---

#### 4.10.3 Combustion engine

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#### **⚠ ADVERTENCIA**

##### **Risk of poisoning!**

Inhalation of exhaust gases can cause death within a few minutes. Exhaust gases contain carbon monoxide.

- ▶ Do not use the machine in closed spaces, e.g. in a tunnel.
- ▶ Unless there is adequate ventilation through extractors or hoses.

- 
- Before starting work, check the engine for leaks and cracks in the fuel lines, tank and cap.
  - Do not start a defective engine. Replace damaged parts immediately.
  - It is prohibited to adjust the engine speed beyond the preset number. This may cause engine damage.
  - Make sure that the engine exhaust system is free of flammable parts. Risk of fire!
  - Before refueling, stop the engine and let it cool.
  - Use the correct type of fuel. Observe the intended mixing ratios.
  - Use clean refuelling aids when refuelling. Do not spill fuel, wipe up any spilled fuel immediately.
  - It is forbidden to start the engine near spilled fuel. Risk of explosion!
  - If the machine is operated in partially enclosed spaces, ensure adequate ventilation and ventilation. Do not inhale exhaust gases. Risk of poisoning!
  - Engine and exhaust system surfaces can become very hot in a short period of time. Risk of burns!
  - Do not use any starting aids. These may cause faulty ignition or damage to the engine. Risk of fire!
  - No smoking!

---

#### 4.10.4 Starter battery

- Only use starter batteries from the manufacturer. These are vibration-resistant and therefore suitable for high vibration loads.
- Avoid incorrect connection of the starter battery or bridging the poles with tools. Risk of short circuit!
- Starter batteries contain corrosive acids. Always wear protective glasses and corrosion-resistant gloves when handling starter batteries.
- It is prohibited to cause fire, sparks and smoking when handling starter batteries.
- When disconnecting the starter battery, always disconnect the negative terminal first.
- When connecting the starter battery, always connect the positive pole first. Secure the pole cover.



#### **NOTE**

Never add acids or distilled water. Refer to the battery manufacturer's information for charging.  
Never open the battery!

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## 5 Machine Description

### 5.1 Nameplates and stickers

#### 5.1.1 Nameplate

A fixed identification plate has been mounted on the machine.

##### Other identification plates

In addition, the following machine components also have their own identification plate:

- the combustion engine

##### Symbols on the nameplate

Various symbols and identifications for national and international approvals may appear on or next to the identification plate.

#### 5.1.1.1 Machine Identification

##### Identification plate data

The identification plate contains data that uniquely identifies the machine. This data is required for ordering spare parts and for inquiries regarding technical circumstances.

Record the machine data in the following table:

Denomination	Your data
Group and type	
Material number (Mat. No.)	
Machine Version (Version)	
Machine number (machine no.)	
Year of manufacture	

##### Manufacturer

AIR Power sro Jizni  
Predmesti 2942  
CZ-301 00 PILSEN 3

##### Made for

ENARCO SAU  
C/ Burtina, 16  
PLAZA Logistics Platform  
50197 ZARAGOZA (SPAIN)

## 5.1.2 Safety and information stickers

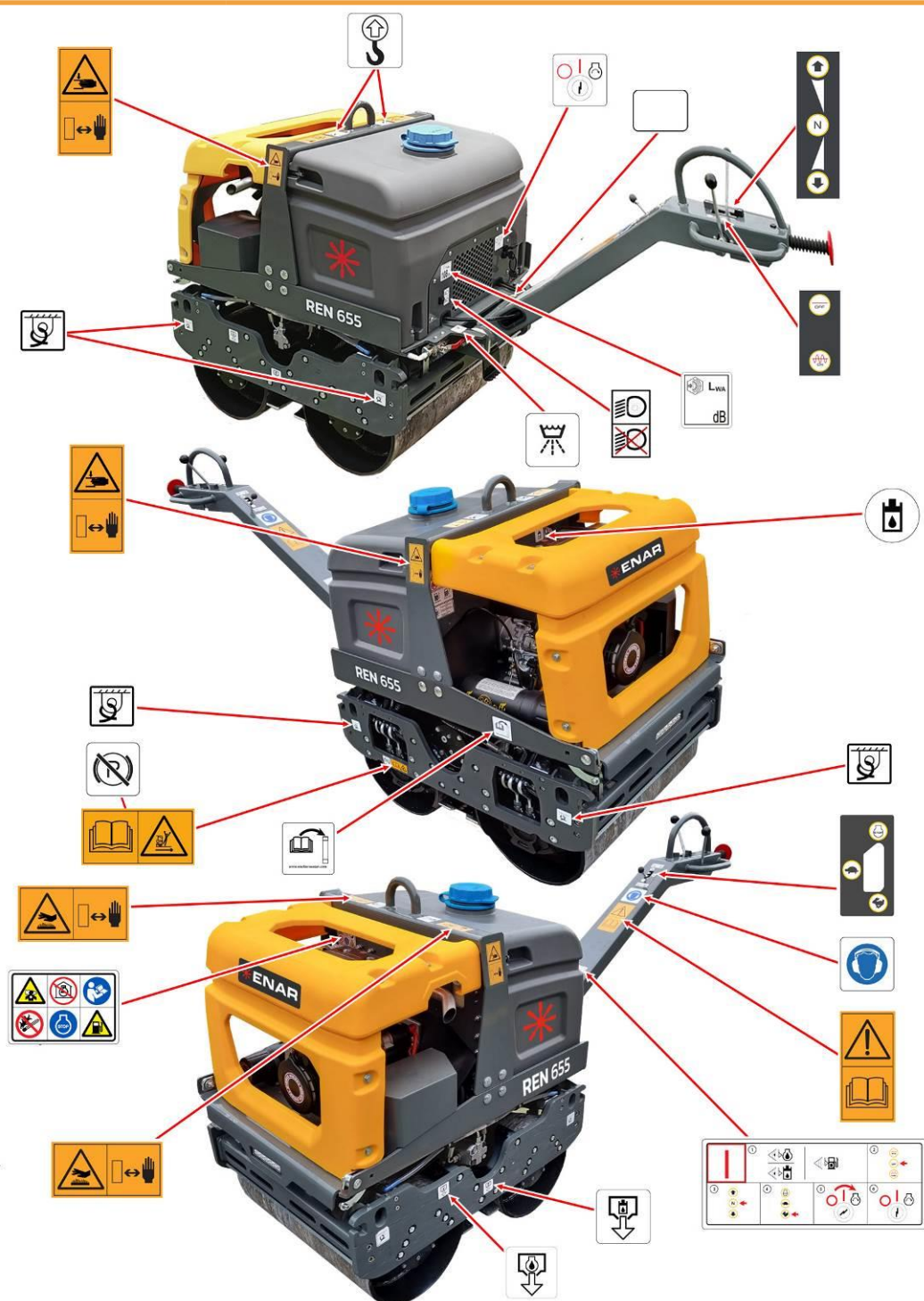


### ⚠ WARNING

**Risk of injury due to lack of stickers and signs or damaged stickers and signs.**

Warning labels contain important information for the protection of the operator.

- Keep all safety, warning and operating instructions in good condition.
- Immediately replace missing, damaged or illegible stickers and signs.





Risk of burns due to hot surface! Keep distance.

Read the instruction manual.

Risk of tipping over!



Caution! Read the instruction manual.



Risk of crushing! Keep your distance.

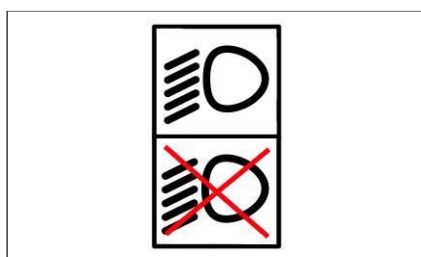


Use hearing protection.

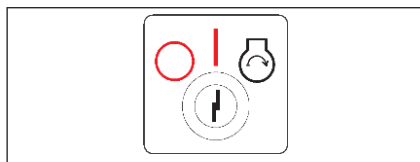


Notes on machine handling:

- Read the instruction manual.
- Do not use the machine in closed spaces.
- Risk of suffocation due to exhaust fumes!
- Stop the machine before refueling.
- No smoking, avoid fire and direct contact with light.

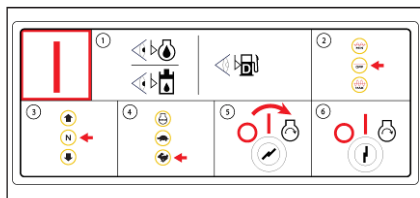


Turn on the light



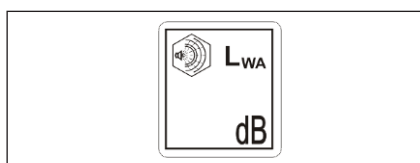
Ignition key positions:

- Off.
- On.
- Start-up.

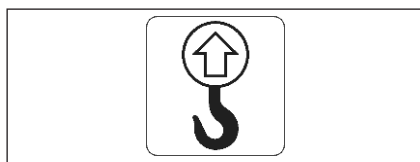


Quick guide for machines with electric start:

- Check the hydraulic oil and engine oil level.
- Check the fuel level.
- Quick Start Guide.



Guaranteed acoustic power level.



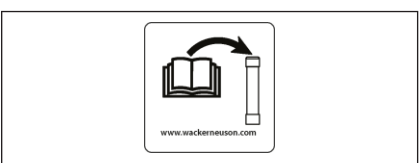
Lift the machine only from the centre support using certified lifting equipment and securing elements (safety load hook).



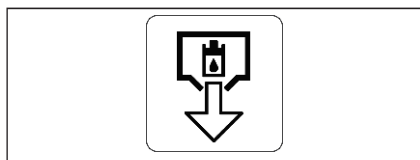
Mooring points.



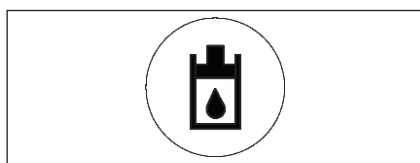
Water irrigation system.



Keep the instruction manual in the document box.

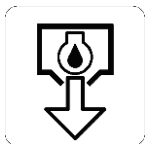


Drain the hydraulic oil.



Fill the hydraulic oil tank.

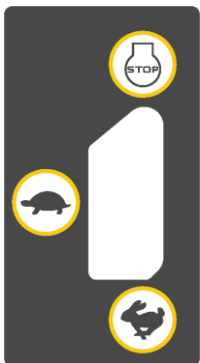




Drain the engine oil.

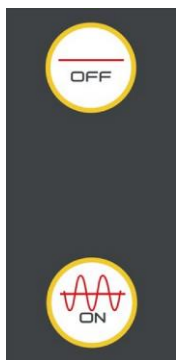


The parking brake can be released manually.



Throttle lever positions:

- Stop.
- Idling.
- Maximum speed.



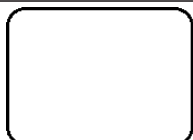
Vibrator lever positions:

- Vibration off.
- Maximum vibration.



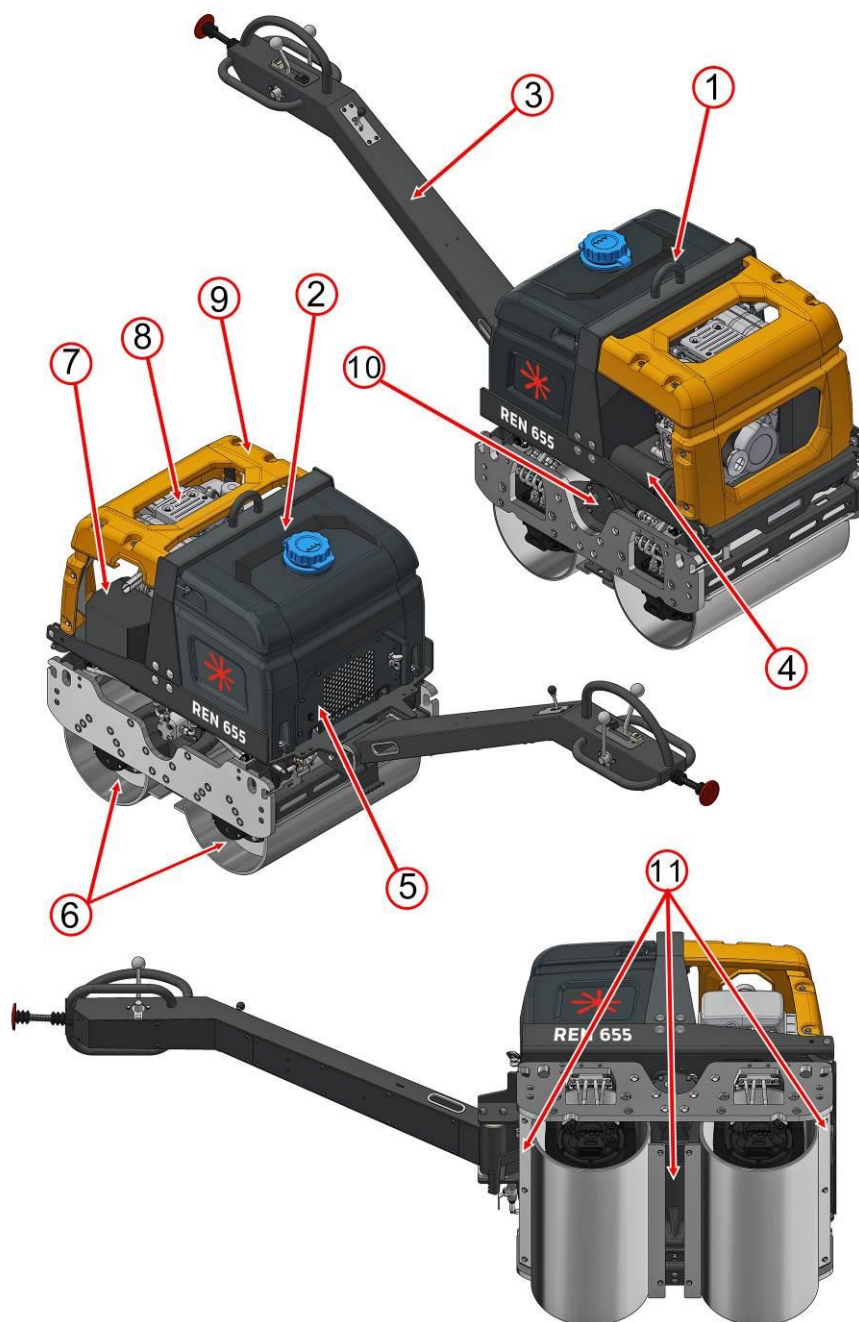
Gear lever positions:

- March forward.
- Neutral position, the machine does not move.
- Go backwards.



Nameplate.

## 5.2 Components



- |    |                                   |
|----|-----------------------------------|
| 1  | Lifting point                     |
| 2  | Water tank                        |
| 3  | Crane mast                        |
| 4  | Document box (optional)           |
| 5  | Operating hour counter (optional) |
| 6  | Drums                             |
| 7  | Starter battery                   |
| 8  | Drive motor                       |
| 9  | Cover (optional)                  |
| 10 | Vibrator                          |
| 11 | Scraper bars                      |

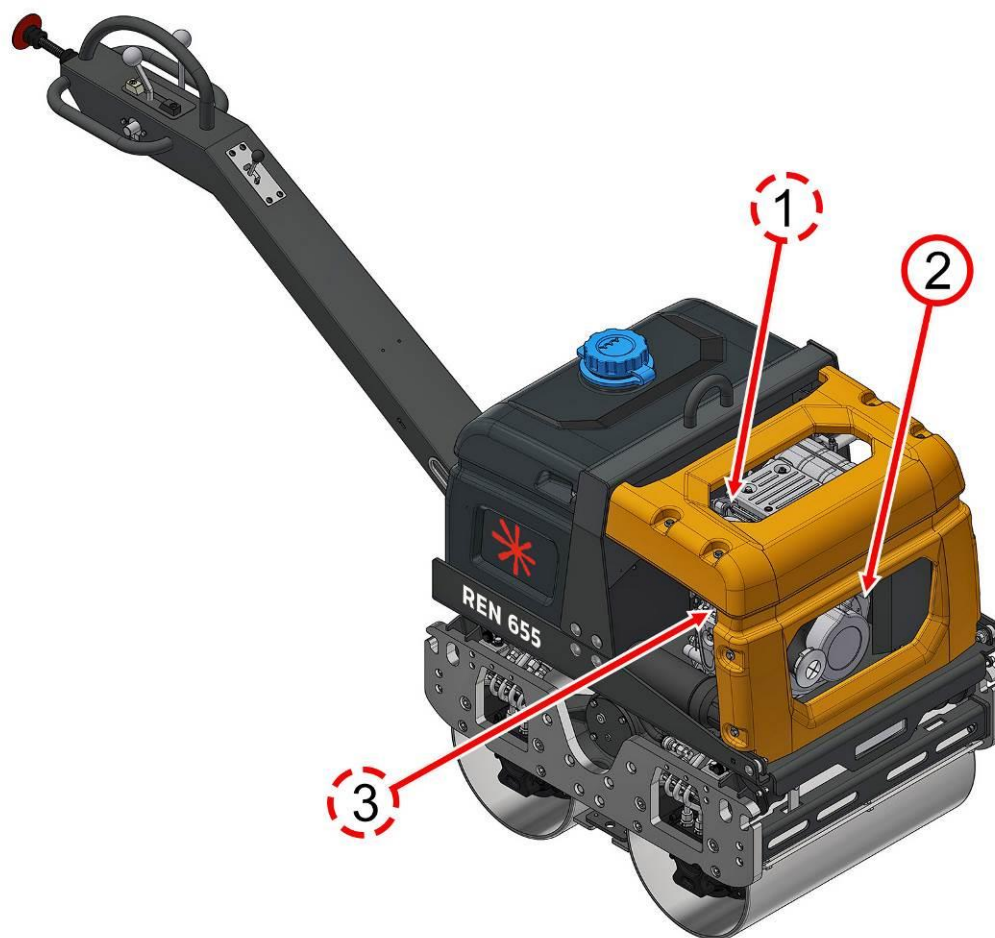
## 5.3 Control elements

Always keep the machine's indicators and control elements dry, clean and free of oil and grease.

Do not block, manipulate or modify the machine's control elements in an impermissible manner.

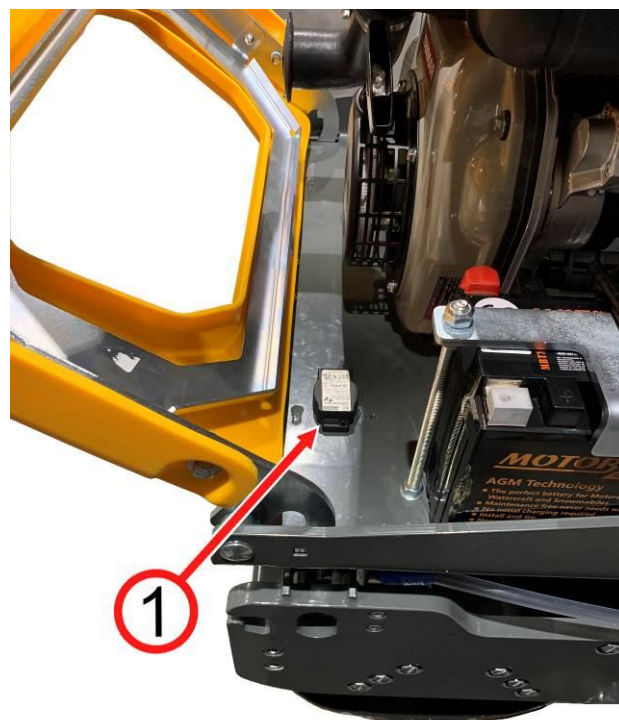


- |   |                               |
|---|-------------------------------|
| 1 | Ignition key (optional)       |
| 2 | Water irrigation system lever |
| 3 | Stop mechanism                |
| 4 | Gear lever                    |
| 5 | Vibrator lever                |
| 6 | Throttle lever                |
| 7 | Mast locking by pedal         |
| 8 | Closing the cover (optional)  |



- |   |                      |
|---|----------------------|
| 1 | Throttle             |
| 2 | Manual start         |
| 3 | Starter decompressor |

## 5.4 TrackPro (optional)



### 1 TrackPro

To facilitate maintenance and upkeep of the machine, the TrackPro device is available, a digital solution for recording the operating data of the roller:

- Record of operating hours (weekly, monthly and total).
- Record of the type of use (idle time, normal speed or overload).
- Upcoming maintenance notice (advance notice of the need for maintenance).
- History and serial number access (detailed record of the usage history of each machine).

Installation of the MyEnar App is required, available for iOS and Android.



## 6 Transport

### 6.1 Safety instructions for transport



#### **⚠ WARNING**

##### **Risk of falling!**

If the machine falls, it can cause serious injuries such as crushing.

- ▶ Only use suitable and tested lifting equipment and securing elements (seat belt) with sufficient load capacity.
- ▶ Only lift the machine by the central suspension.
- ▶ Secure the machine securely to the lifting equipment.
- ▶ Do not lift the machine by the mast.
- ▶ Leave the risk zone during lifting, do not stop under suspended loads.



#### **⚠ WARNING**

##### **Risk of fire due to fuel!**

Leaking fuel can ignite and cause serious injury.

- ▶ Empty the fuel tank before transport.

### 6.2 Requirements and preparations

1. Turn off the machine and allow it to cool.
2. Lock the mast.
3. Clean the drums before loading, see Cleaning the drums 49.
4. Use only suitable lifting devices with sufficient load capacity, see Technical Data on the page 55.
5. Use only suitable lifting equipment with sufficient load capacity.
6. The transport vehicle must have sufficient loading capacity and an appropriate loading surface.

### 6.3 Machine Lifting



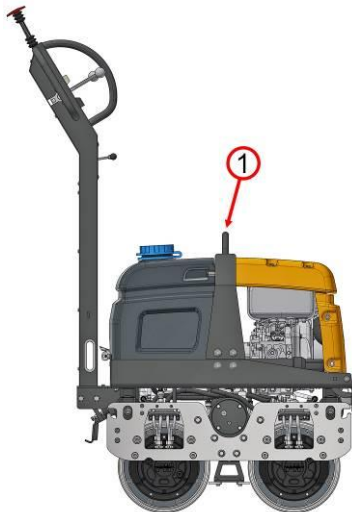
#### **⚠ WARNING**

##### **Risk of crushing!**

In the case of an unstable machine, lifting devices and lifting equipment may fail and fall.

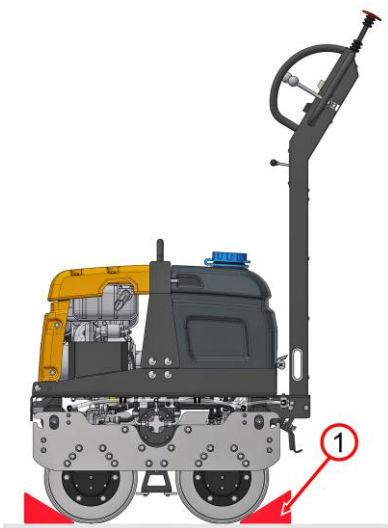
- ▶ Check the stability of the raised machine before continuing work.





1. For a safe lifting process, a competent person must be designated to guide the process.
2. Use only approved loading and securing elements.
3. Attach the appropriate fastening elements to the central suspension **1**.
4. Load the machine into or onto the transport vehicle.

## 6.4 Tie down the machine



1. Place wedges **1** in front of and behind each drum and secure them (e.g. with nails).



2. Only use the provided tie-down points (**2**) to secure the machine.
3. Tie down the machine to the tie down points as shown.
  - Use suitable securing means, e.g. holding straps (1000 daN), chains (6/8 2200 daN).
  - The machine is insured for no roll, slide or overturn.

## 6.5 Towing the machine



### **⚠ WARNING**

#### **Risk of accidents when towing the machine!**

Unforeseen situations may occur when towing the machine. This can lead to accidents resulting in serious injury or even death.

- ▶ Tow the machine only with towing equipment of sufficient size.
- ▶ It is prohibited for people to remain within the range of action of the towing equipment during towing work.
- ▶ Do not tow the machine on a slope.
- ▶ After towing the machine, secure it against unauthorized use and possible accidental movement.



### **⚠ WARNING**

#### **Risk of accidents due to manually releasing the parking brake!**

If the parking brake has been manually released, the machine may move and cause accidents, which may result in serious injury or death.

- ▶ Before releasing the parking brake manually, secure the machine against unintentional rolling, e.g. by placing chocks.
- ▶ Do not manually release the parking brake on slopes.
- ▶ Do not stop the machine if it is not secured.
- ▶ Do not start the machine.



### **⚠ CAUTION**

#### **Risk of burns from hot surfaces!**

The machine, engine and exhaust pipe can become hot very quickly, which can cause serious burns if they come into contact with the skin.

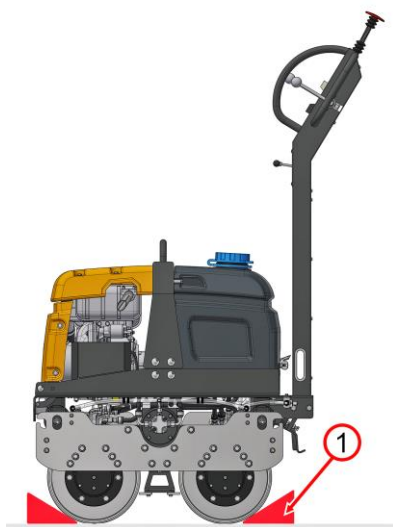
- ▶ Always allow the machine, engine and exhaust pipe to cool after use.
- ▶ If the cooling phase cannot be observed (e.g. in an emergency), use heat-resistant protective gloves.

### **Requirements and preparations**

To tow the machine in the event of a fault or defect, it is necessary to manually deactivate the parking brake.

- ✓ The machine is on a flat surface.
- ✓ The machine and engine are out of service.
- ✓ The mast is locked.





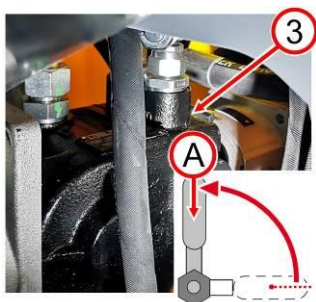
1. Secure the machine against unintentional movement, e.g. by placing wedges 1.



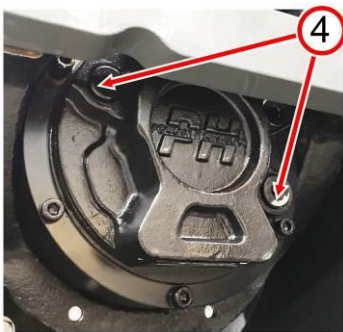
2. Open cover 1.



3. Fold rubber cover 2 to one side.



4. Place lever 3 of the hydraulic pump in position A.



5. Unscrew screws 4.



6. Press the spring-loaded Allen screws 5 and turn half a turn to the right.

7. Tighten screws 4.

- The parking brake is released.
- The machine can be towed.

### Towing on public roads



### ⚠ WARNING

#### Risk of accidents due to ineffective braking on slopes!

The machine can increase speed even on slight slopes. If the parking brake has been released manually, it will not be effective. This can cause accidents resulting in serious injury or even death.

- ▶ Towing the machine on downhill slopes is prohibited.
- ▶ In the case of uphill slopes, it is possible to drive without any problem, since the machine is towed by pulling.



1. Position the vehicle to be towed, using sufficient traction and safe braking equipment.
2. Attach suitable securing elements (e.g. straps or chains) to the towing device 1 of the machine.
3. Please note the dimensions and weight of the machine, see Technical Data on page 56.
4. Tow the machine at a slow speed of 1 km/h maximum for 500 m.
5. After towing, secure the machine against unintentional rolling away, e.g. by placing chocks.
6. Remove the fastening elements.
7. Ask the company representative to repair the machine.
8. Ask the company representative to reactivate the manually deactivated parking brake.

## 7 Start-up

### 7.1 Pre-startup checks



#### Information

For more information and detailed descriptions, see the **Maintenance chapter in page 45.**

#### Perform the following checks:

- Check that the machine and components are not damaged.
  - No start up a damaged machine. Request immediate service the repair of damage and defects.
- Check the fuel fill level.
- Check the tightness of the fuel lines.
- Check the air filter.
- Check the hydraulic oil fill level.
- Check the engine oil fill level.
- Check the water fill level.
- Check that the threaded joints are firm.
- Check the correct operation of the control elements.

### 7.2 Safety instructions for operation



#### **WARNING**

#### **Risk of tipping over due to sliding or tipping machines!**

When close to the edges, at least 2/3 of the machine should be on a load-bearing surface.

- Stop the machine and raise it again onto a load-bearing surface.



#### **WARNING**

Improper handling can cause serious injury or property damage.

- Read and follow all safety instructions contained in this instruction manual.



### ⚠ WARNING

**Risk of hearing damage from exceeding the country-specific permitted noise limit.**

Working with the machine without hearing protection can cause permanent hearing damage.

- ▶ Use hearing protection.
- ▶ Work with special caution and prudence with hearing protection.



### ⚠ CAUTION

**Health risks from vibrations!**

Bodily injury due to vibration.

- ▶ Take regular breaks.

### Operation on inclined surfaces



### NOTE

**Technical damage due to engine lubrication failure!**

- ▶ Do not exceed the maximum permitted inclination, see Technical Data on page 56.



### NOTE

**Avoid engine damage! The engine can be damaged if the machine tilts excessively or tips over.**

If the machine tips over, proceed as follows:

- ▶ Check the stability of the machine.
- ▶ Immediately turn off the engine and machine.
- ▶ Straighten the machine back up as quickly as possible.
- ▶ Do not start the engine after the machine has been straightened.
- ▶ Contact a company representative. The machine must be checked by trained and qualified personnel before it can be restarted.

- On slopes, always move from below.
- Do not use the machine in a position that is transversal to the slope.

### Soil characteristics

The maximum height of the screed depends on several factors of the soil characteristics. It is not possible to determine an exact number for this value.

- Determine maximum layer height by compaction or soil testing.

## **Asphalt compaction**

1. To prevent cracking and adhesion to the asphalt, use the irrigation system.
2. Drain the watering system in case of risk of frost and fill it with a commercial antifreeze agent. This will prevent possible damage to the watering system. Pay attention to the proportion of the mixture with water.

## **7.3 Start**



### **⚠ WARNING**

#### **Risk of burns when using the start-up spray!**

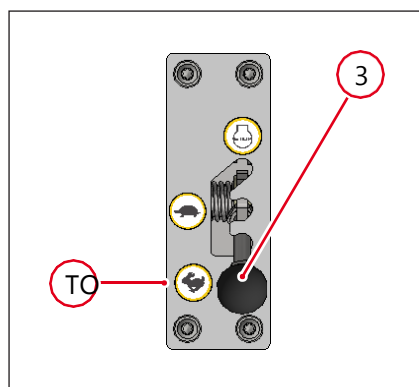
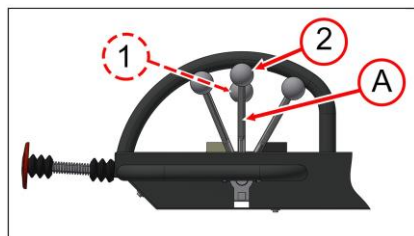
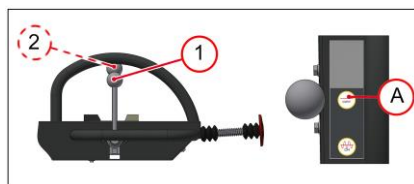
Starter sprays can ignite and cause serious injury.

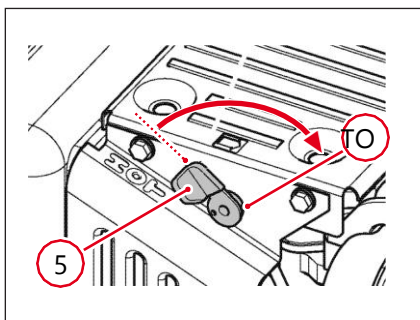
- Do not use aerosols.

### **7.3.1 Starting the machine**

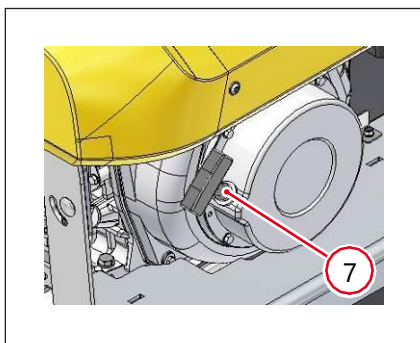
#### **Starting the machine with the reverse starter motor (in case of starter motor failure).**

1. Set the vibrator lever 1 to position A.
2. The gear lever 2 remains in position A.
3. Place the throttle lever 3 in position A.
4. Open the fuel valve.

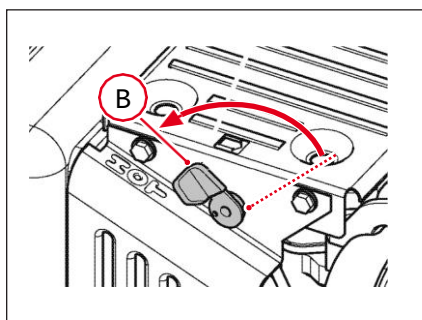




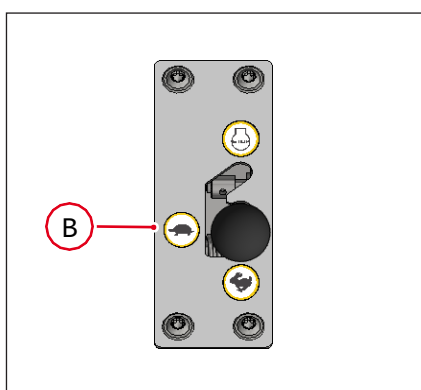
5. With the engine cold, set the choke 5 to position A.



6. Standing next to the machine, slowly extend the recoil starter 7.  
7. Then extend at a higher speed with more power.  
➤ The engine starts.

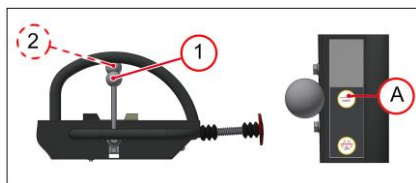


8. If the choke is on, return it to position B after 3 seconds.  
➤ You can hear the ratchet click into place.

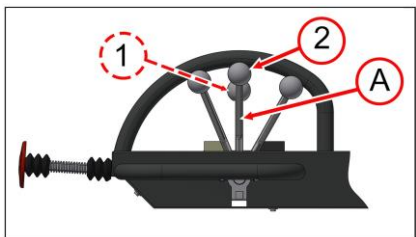


9. Place the throttle lever in position B.  
➤ Allow the machine to warm up.  
➤ The machine is ready for use

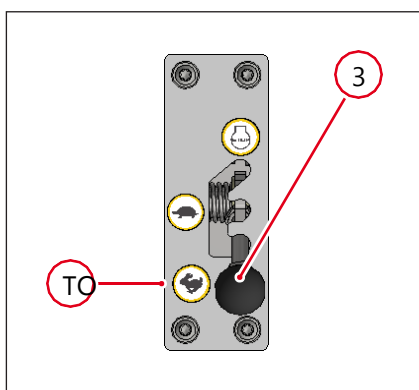
## **Machine with electric start**



1. Set the vibrator lever 1 to position A.



2. The gear lever 2 remains in position A.



3. Place the throttle lever 3 in position A.

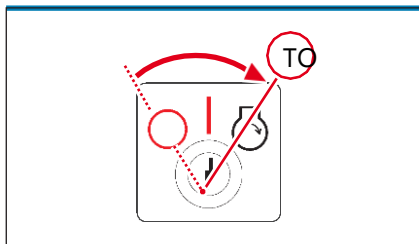
4. Insert the ignition key into the ignition.



## **NOTE**

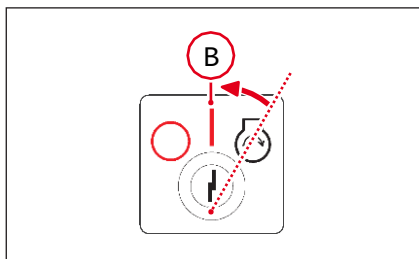
### **Possible engine damage!**

Do not keep the ignition key in position A for more than 15 seconds.

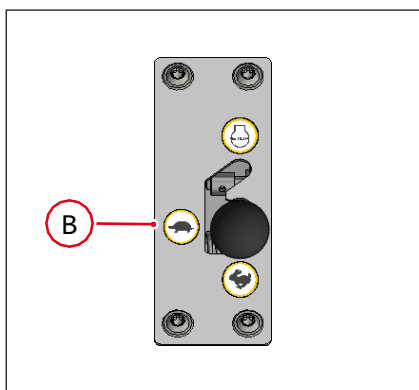


1. Turn the ignition key to position A and hold.

➤ The engine starts.



2. Turn the ignition key to position B.



3. Place the throttle lever in position B.
  - Allow the machine to warm up.
  - The machine is ready for use.



## 8 Management

### 8.1 Machine drive

The correct place for the operator is behind the machine.

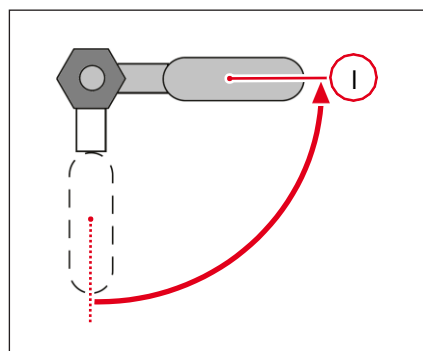
While operating the machine, do not leave the designated operator's area.

Drive and operate the machine with both hands from the steering knuckle.

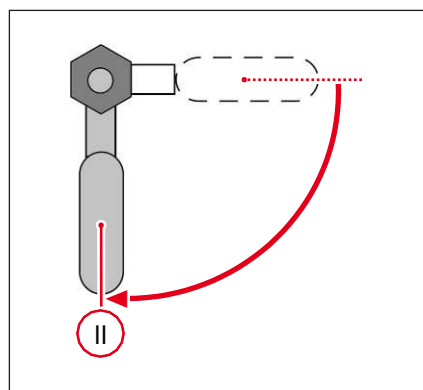
### 8.2 Water irrigation system



The machine is equipped with a water irrigation system **1**.



1. Place the lever in position **I**.
  - Passed of wáter open.



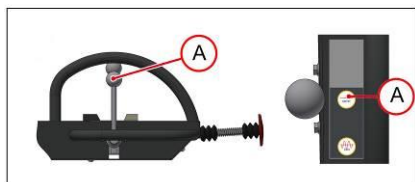
2. Place the lever in position **II**.
  - Passed of wáter closed.

## 8.3 Vibration adjustment

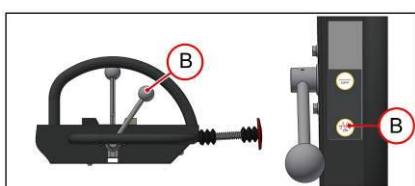


### Information

The vibrator lever locks in the desired position.

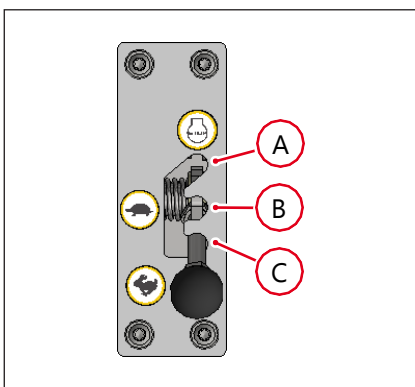


Position **A**: No vibration.



Position **B**: Vibration in motion.

## 8.4 Selecting the speed and direction of travel

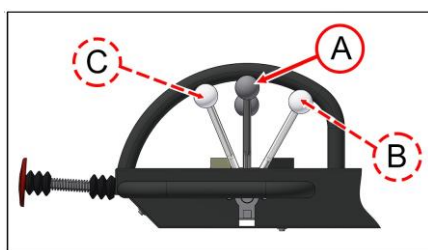


### Throttle lever

Position **A**: Stop, the machine is stopped.

Position **B**: Idle, low travel speed.

Position **C**: maximum acceleration, high driving speed.



### Gear lever

Position **A**: Neutral position. When the gear lever is released, the selected direction of travel is deactivated and the lever automatically returns to position A.

Position **B**: Forward travel. The further the lever is pressed forward, the faster the machine will travel forward.

Position **C**: Reverse. The machine will slowly move backwards.



### Information

The parking brake is automatically released when a travel direction is selected and the machine is moved.

## 8.5 Stop mechanism

### Measures after activating the detention mechanism

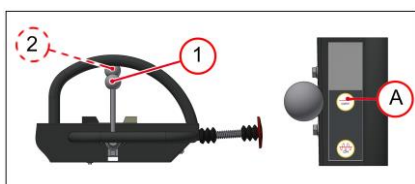


#### CAUTION

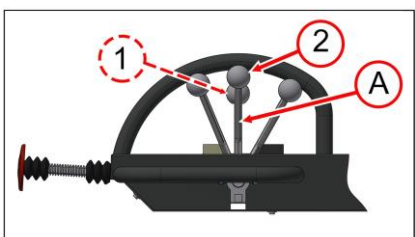
##### **Risk of injury due to carelessness!**

By activating the stop mechanism, the machine continues to operate.

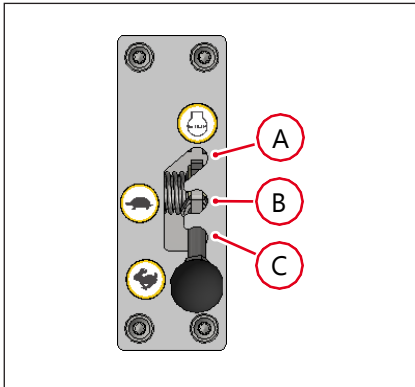
- ▶ The machine automatically enters a vibration state, the drive lever is released.
- ▶ Stop the machine with the following measures.



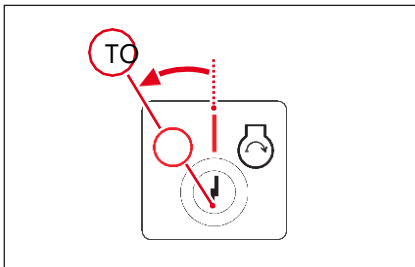
1. Set the vibrator lever **1** to position **A**.



2. Place the gear lever **2** in position **A**.

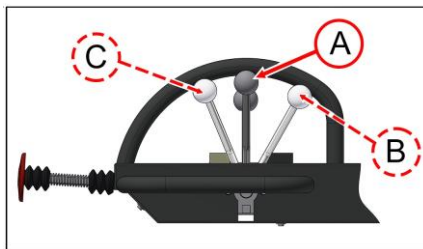


3. Place the throttle lever in position **A**.



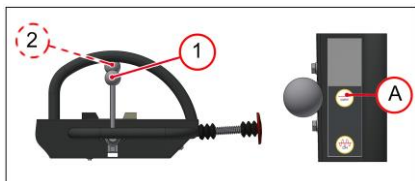
4. Turn the ignition key to position **A**.
5. Remove the ignition key.
6. Allow the machine and motor to cool.
  - The machine is out of service.
  - The parking brake is activated automatically.

## 8.6 Stopping the march

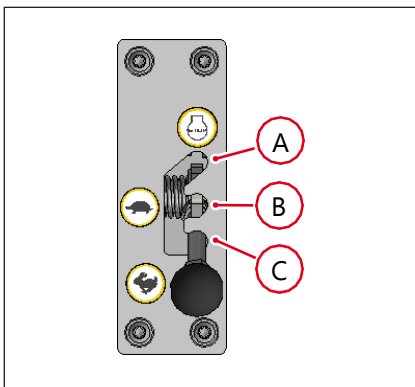


- ✓ The machine is on a flat surface.

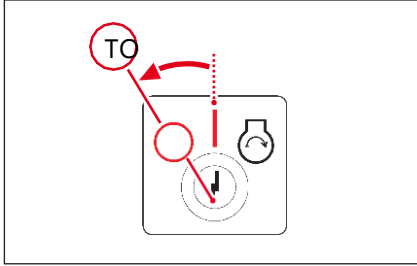
1. Release the gear lever, the lever automatically moves to position **A**.



2. Set the vibrator lever **1** to position **A**.



3. Place the throttle lever in position **A**.



4. Turn the ignition key to position **A**.
5. Remove the ignition key.
6. Allow the machine and motor to cool.
  - The machine is out of service.
  - The parking brake is activated automatically.

## 9 Maintenance

### 9.1 Safety instructions for maintenance



#### **⚠ WARNING**

Improper handling can cause serious injury or property damage.

- ▶ Read and follow all safety instructions contained in this instruction manual.



#### **⚠ WARNING**

##### **Risk of exhaust gas poisoning!**

Exhaust fumes contain toxic carbon monoxide which can cause unconsciousness or even death.

- ▶ Perform maintenance work only with the engine switched off and the machine out of service.



#### **⚠ WARNING**

##### **Risk of injury due to uncontrolled operation of machinery and moving parts!**

- ▶ Perform maintenance work only with the engine switched off and the machine out of service.



#### **⚠ WARNING**

##### **Risk of explosion and fire due to fuel and fuel vapours!**

Fuel and fuel vapors can ignite or catch fire and cause serious injury.

- ▶ No smoking.
- ▶ Do not fill the fuel tank near the fire.
- ▶ Before refueling, stop the engine and let it cool.



#### **⚠ WARNING**

##### **Risk of explosion and fire due to the use of flammable cleaning agents!**

- ▶ Do not clean the machine and components with gasoline or other solvents.



#### **⚠ WARNING**

##### **Risk of burns due to hot engine oil!**

Hot oil splashes can cause skin burns.

- ▶ Turn off the engine and allow it to cool.
- ▶ Use protective gloves.



### **⚠ WARNING**

**Risk of injury due to missing or non-functioning safety equipment!**

- ▶ Operate the machine only when the safety equipment is correctly positioned and functioning.
- ▶ Do not modify or remove safety equipment.



### **⚠ CAUTION**

**Health risks from consumables!**

- ▶ Do not inhale vapours.
- ▶ Avoid contact with skin and eyes.



### **NOTE**

**If the engine runs without an air filter, there is a risk that it will wear out faster!**

- ▶ Do not operate the engine without the air filter or air filter cover.



### **Environment**

**Soil contamination by spilled or overflowing oil.**

- ▶ Cover the work surface with a waterproof sheet.
- ▶ Use a collection container for used oil.
- ▶ Dispose of used oil in an environmentally friendly manner in accordance with legal requirements.



### **Environment**

**Avoid environmental damage!**

- ▶ Clean the machine in a suitable place where contaminated waste water can be collected in an environmentally friendly manner.
- ▶ Collect dirty water and dispose of it in an environmentally friendly way.

## 9.2 Maintenance program



### NOTE

#### Risk of engine damage!

- When starting up a new machine, an oil change must be performed once after 20 hours of operation.

Maintenance work	Daily	Every week	Annually	Every 500 h
Clean the machine. <ul style="list-style-type: none"> <li>• Visual control regarding integrity.</li> <li>• Visual inspection for damage.</li> <li>• Visual inspection for leaks.</li> </ul>	•			
Check the threaded joints.	•			
Check the operation of all control elements and ensure that they can be moved easily. Check the stop mechanism for damage.	•			
Clean and check the scraper bars.	•			
Clean and check the water irrigation system.	•			
Check the oil fill level of the hydraulic oil.	•			
Replace hydraulic oil and filter.*				•
Check the air filter suction area.	•			
Check and clean the air filter.*	•			
Clean the sediment container.*		•		
Check the rubber stop.*		•		
Change the vibrator oil.*				•
Starter battery			•	
* Ask the company representative to carry out this work.				

Engine maintenance work	Every 250 hours	Every 500 h	Every 1500 h
Replace engine oil and oil filter.*	•		
Check valve clearance.*	•		
Change the filter element.*		•	
Change the fuel filter.*		•	
Clean the radiator fins.*		•	



Engine maintenance work	Every 250 hours	Every 500 h	Every 1500 h
Check the injector nozzles.*			•
* Ask the company representative to carry out this work.			

## 9.3 Maintenance work

### Make the preparations:

1. Stop the machine on a flat surface.
2. Put the machine out of service.
3. Allow the machine to cool.

### 9.3.1 Cleaning the machine

#### When cleaning the machine with a high-pressure cleaner, please note the following:

1. Do not direct the high-pressure cleaner directly onto the air intake area and electrical components.
2. Do not hold the high-pressure cleaner too close to the machine to avoid damage to adhesives and sensitive components.
3. Clean the scraper bars, see Clean and Check the Barsscraper on the page 49.
4. Cleaning the drums, see Cleaning the drums in the page 49.

#### Visual inspection after cleaning:

1. Check the tightness and friction points of cables, hoses and ducts.
2. Check the control elements.
3. Check the threaded joints.
4. Check the rubber stop for cracks.
  - Replace the components damaged.

### 9.3.2 Check the fuel level and refill

1. Remove dirt.
2. Open the tank cap.
3. Check the fuel fill level.
  - Fuel fill level to the lower edge of the filler caps.
4. Refuel if necessary, see Technical Data in the page 56.
5. Do not overfill the fuel tank.
6. Close the tank cap firmly.

## 9.3.3 Clean and check the scraper bars

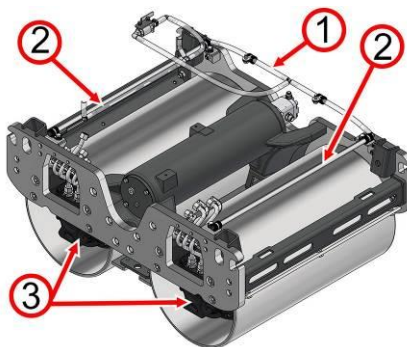


1. Clean the scraper bars 1 daily after finishing work.
2. Remove accumulated and adhered mud, asphalt or clods.
3. Use the high pressure cleaner and a brush.
4. Every four scraper bars, check for wear.
  - The distance between the drums and the scraper bars must be 3mm.
5. In case of severe damage, replace the scraper bars.

## 9.3.4 Cleaning the drums

1. Clean the drums with a high-pressure cleaner.
2. Remove accumulated and adhered mud, asphalt or clods.
3. Scrape with a shovel in case of very dirty drums or those with hard residue.

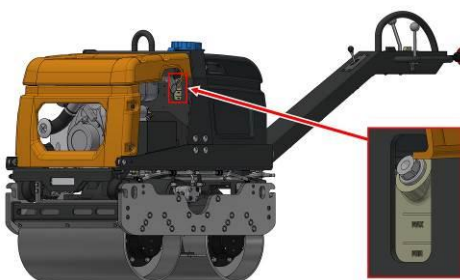
## 9.3.5 Check and clean the water irrigation system



Clogged or dirty hoses 1 and irrigation bars 2 prevent irrigation of drums 3 with water.

1. Remove the caps from the ends of the watering rods.
2. Separate the connectors from the irrigation bars.
3. Rinse the irrigation rods with pure water and clean with a pipe brush.
4. Reassemble the connectors and end caps.
5. Check that the water irrigation flows properly.

## 9.3.6 Check the hydraulic oil fill level



- ✓ The machine is on a flat surface.
- ✓ The machine is out of service.

Check the hydraulic oil fill level on the min/max scale of the hydraulic oil tank.

## 9.3.7 Check the engine oil fill level

- ✓ The machine is on a flat surface.
  - ✓ The machine is out of service.
1. Check the engine oil fill level on the engine oil dipstick.

### 9.3.8 Connect/Disconnect the starter battery



#### **⚠ WARNING**

##### **Risk of explosion due to improper handling of the battery!**

Improper battery handling can cause serious injury or death.

- ▶ Use protective equipment.
- ▶ Smoking and the use of open fire or lights are prohibited.
- ▶ Do not operate the auxiliary system for starting if the batteries are defective or frozen or if the battery fluid level is low.



#### **NOTE**

##### **Short circuit in the electrical system due to incorrect sequence when connecting and disconnecting!**

- ▶ Disconnection: First, the negative pole, then the positive pole.
- ▶ Connection: First the positive pole, then the negative pole.

#### **Connecting the starter battery:**

1. Place the starter battery in the intended position on the machine.
2. Connect the red positive (+) cable to the starter battery.
3. Connect the black negative (-) cable to the starter battery.

#### **Disconnecting the starter battery:**

- ✓ The machine is out of service.
1. Turn all electrical switches to the OFF position.
  2. Disconnect the black negative (-) cable from the starter battery.
  3. Disconnect the red positive (+) cable from the starter battery.

## 10 Malfunctions

### 10.1 Troubleshooting



#### **⚠ WARNING**

##### **Risk of life due to self-repair!**

- ▶ If any faults occur on this machine that are not described in this instruction manual, contact the company representative.
- ▶ Do not repair faults yourself.

Fault	Possible cause	Solution
The machine cannot be started.	Defect in the starting device.	Request machine repair.*
	Throttle lever in stop position.	Place the throttle lever in the idle position.
	Very little fuel.	Refuel. Check fuel filter and fuel lines.
	Incorrect fuel.	Drain the fuel tank. Change the fuel filter.* Refuel.
	Old fuel.	
	The starter battery is empty. The connectors are loose or corroded.	Check the connectors and replace the starter battery if necessary.
	Air filter obstruction.	Clean or replace the air filter if necessary.*
The machine turns off.	Very little fuel.	Refuel.
	Obstruction in the fuel filter.	Clean or replace the fuel filter if necessary.*
	Loose or damaged fuel lines.	Check the connectors and, if necessary, request replacement of the fuel lines.*
No vibrations.	Defect in the vibrator lever.	Check the components and, if necessary, request repair.*
	Low fill level in the hydraulic oil tank.	Fill the hydraulic oil tank.
The machine does not move forward or backward.	Parking brake defect.	Request machine repair.*

\* Ask the company representative to carry out this work.

## Malfunctions

### 10.2 Start the machine with the auxiliary system for starting up



#### ⚠ WARNING

##### Explosion and electric shock!

Burns or electric shock can cause serious injury or death.

- ▶ The auxiliary system cable terminals must not be manipulated for start-up.
- ▶ Check that the nominal voltage of the starter battery and the assist battery are the same.
- ▶ Use the auxiliary system cable for start-up with insulated terminals and a cross section of at least 25 mm<sup>2</sup>.



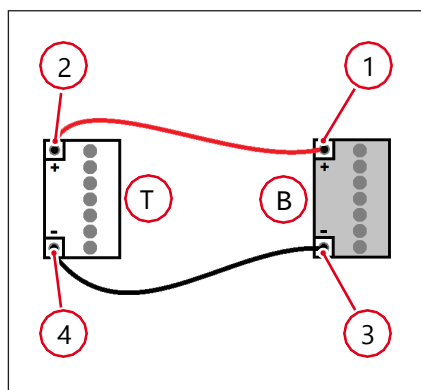
#### Information

The positive pole of a battery is identified with a plus sign (+).

The negative pole of a battery is identified with a minus sign (-).

When the starter battery is too low, the starter device cannot be supplied with sufficient current, so the engine cannot be started. However, it is possible to start the engine using an external power supply.

#### Connect the auxiliary system cable for starting and start the engine



1. Remove the starter battery cover **A** and the assist battery terminal covers **B**.
2. Connect terminal **1** of the first cable to the positive (+) pole of the assistance battery.
3. Connect the other terminal **2** of the first cable to the positive (+) pole of the starter battery.
4. Connect terminal **3** of the second cable to the negative (-) pole of the assistance battery.
5. Connect the other terminal **4** of the second cable to the negative (-) pole of the starter battery.
6. Try to start the engine and the machine.

## 11 Detention

### 11.1 Temporary decommissioning



#### Information

For more information and detailed descriptions, see the chapter **Maintenance** on page 45.

#### Prerequisites for storage

- Store in a dry, dust-free place.
- Do not store outdoors.
- Protect from direct sunlight.
- Observe storage temperature, see Technical Data on page 56.
- Store in a closed place and inaccessible to children.

If the machine is going to remain out of service for more than 1 month, take the following measures:

Complete machine	<ul style="list-style-type: none"> <li>• Clean thoroughly.</li> <li>• If necessary, repair all damage.</li> <li>• Check tightness and, if necessary, repair any damage.</li> </ul>
Fuel tank	Metal deposit: <ul style="list-style-type: none"> <li>• Refuel.</li> </ul>
Water tank	Empty the water.
Engine	<ul style="list-style-type: none"> <li>• Check the engine oil level and top up with engine oil if necessary.</li> <li>• Check and clean the air filter.</li> <li>• Clean the fuel filter.</li> </ul>
Hydraulic system	<ul style="list-style-type: none"> <li>• Change the hydraulic oil.</li> </ul>
Components prone to corrosion	Lubricate and grease.

If the machine is going to remain out of service for more than 6 months, contact the company representative.

### 11.2 Permanent decommissioning

If the machine is not going to be used again and is going to be permanently decommissioned, all consumables must be emptied.

Have the machine disassembled and disposed of properly by an authorized recycling company.

Proper disposal of this machine prevents negative effects on people and the environment, contributes to the selective treatment of pollutants and allows the reuse of valuable raw materials.

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### 11.2.1 Disposal of charging and starting batteries

The machine contains one or more batteries or accumulators (hereinafter referred to as the "battery"). Proper disposal of the battery prevents negative effects on people and the environment, contributes to the targeted treatment of pollutants and enables the reuse of valuable raw materials.

#### **For customers in EU countries**

This battery is subject to the EU Battery Directive (former) and Accumulator Directive (former) as well as the corresponding national laws. The Battery Directive sets the framework for the treatment of batteries throughout the EU.

The battery is marked with a crossed-out waste bin symbol. Identification is provided for the contaminants used: "Pb" is lead, "Cd" is cadmium and "Hg" is mercury.

Rechargeable batteries and accumulators containing lithium can be recognized by the marking "Li" or "Li-Ion" for lithium.

Batteries must not be disposed of with normal household waste! End users must dispose of used batteries exclusively via the manufacturer or dealer or, where applicable, via authorised collection points (legal take-back obligation); delivery is free of charge. The dealer and the manufacturer are obliged to take back these batteries and recycle them appropriately or dispose of them as special waste (legal take-back obligation).

Batteries purchased from the manufacturer can be returned free of charge to the manufacturer after use. If it is not possible to hand over the battery in person to a branch, any indications in the purchase contract or the general terms and conditions of the point of sale must be taken into account.

#### **For customers in other countries**

The manufacturer recommends that the battery should not be disposed of with ordinary household waste, but should be collected separately and in an environmentally friendly manner. National laws and regional regulations also stipulate, under certain circumstances, the separate disposal of batteries. Therefore, battery disposal must be ensured in accordance with national regulations.

## 12 Technical data

### 12.1 General indications



#### Information

For technical reasons of the system, there may be blank columns in the technical data, as well as subscript or superscript figures and incorrectly represented letters, such as:

- ▶ Sound power level LWA, instead of LWA
- ▶ Sound pressure level LpA, instead of LpA
- ▶ Total value of vibrations ahv, instead of ahv
- ▶ Carbon dioxide CO<sub>2</sub>, instead of CO<sub>2</sub>
- ▶ Unit m/s<sup>2</sup>, instead of m/s<sup>2</sup>

### 12.2 Noise and vibration data

The stated noise and vibration data were determined in accordance with the following directives when working under typical machine operating conditions / special test conditions, and using harmonized standards:

- Machinery Directive 2006/42/EC
- Noise Emissions Directive 2000/14/EC

During use, different values may occur depending on the prevailing operating conditions.

#### Sound pressure level at the operator's location

- The LpA value was determined in accordance with EN ISO 11201 and EN 500-4.

#### Guaranteed sound power level

- The LWA value was determined in accordance with EN ISO 3744 and EN 500-4.

#### Total value of vibrations calculated hand-arm vibrations

The ahv value was determined in accordance with EN ISO 20643 and EN 500-4



## 12.3 Technical characteristics

Guy	REN655
Machine material number	REN655DY
Engine material number	
Centrifugal force [kN]	12.5
Vibration frequency [kN]	56
Working speed [km/h]	3.6
Traffic speed [km/h]	3.6
Travel speed (reverse) [km/h]	2.5
Max. climbing capacity (without vibration) [%]	33
Max. transverse tilt [°]	25
Max longitudinal inclination [°]	18
Length (mast in working position) [mm]	2452
Length (locked mast) [mm]	1327
Width [mm]	712
Drum width [mm]	650
Height (mast in working position) [mm]	1170
Height (mast locked) [mm]	1960
Distance between axles [mm]	500
Left projection [mm]	203
Right projection [mm]	203
Left side overhang [mm]	25
Right side overhang [mm]	30
Drum diameter [mm]	355
Drum blade thickness [mm]	10
Operating weight [kg]	635
Empty weight [kg]	615
Water tank content [l]	40
Brake	hydraulic
Nominal power [kW]	4.3
Nominal number of revolutions [1/min]	3000
Hydraulic oil quantity [l]	5
Type of hydraulic oil	ISO VG 46
Operating temperature range [°C]	-15 - +45
Storage temperature range [°C]	-15 - +45
Sound pressure level at the operator's location LpA [dB(A)]	88
Measured sound power level LWA [dB(A)]	103
Guaranteed sound power level LWA [dB(A)]	108
Total value of vibrations ahv [m/s <sup>2</sup> ]	1170

## 12.4 Combustion engine

Engine manufacturer	Yanmar
Engine material number	
Engine type	L70V5
Type of combustion	four-stroke cycle
Refrigeration system	Air
Cylinder	1
Displacement [cm <sup>3</sup> ]	320
Max tilt [°]	30
Fuel type	Diesel
Fuel consumption [l/h]	0.9
Tank content [l]	3.3
Oil specification	SAE 10W-40
Max. oil filling [l]	1.6
Max power [kW]	4.4
Number of revolutions [1/min]	3300
Rule	ISO 3046-1
Escape level	EU Phase V
CO <sub>2</sub> emissions* [g/kWh]	964
Battery [V]	12
* Value obtained from CO <sub>2</sub> emissions at the time of engine certification without considering the application in the machine.	

## 12.5 Conversion table

The following conversion tables make it possible to convert the metric values in this manual, in particular the technical data, to the imperial system of units.

Conversion tables	
<b>Volume units</b>	
1 cm <sup>3</sup>	0.061 in <sup>3</sup>
1 m <sup>3</sup>	35.31 ft <sup>3</sup>
1 ml	0.034 US fl.oz.
1 l	0.26 gal
1 l/min	0.26 gal/min
<b>Units of length</b>	
1 mm	0.039 in
1 m	3.28 ft
<b>Weight</b>	
1 kg	2.2 lbs
1 g	0.035 oz
<b>Pressure</b>	
1 bar	14.5 psi
1 kg/cm <sup>2</sup>	14.22 lbs/in <sup>2</sup>
<b>Strength/power</b>	
1 kN	224.81 lbf
1 kW	1.34 hp
1 PS	0.986 hp
<b>Torque</b>	
1 Nm	0.74 ft.lbs
<b>Speed</b>	
1 km/h	0.62 mph
<b>Acceleration</b>	
1 m/s <sup>2</sup>	3.28 ft/s <sup>2</sup>







FOR ANY REQUIREMENTS REGARDING THE PARTS LIST OF OUR MACHINES, PLEASE REFER TO OUR WEBSITE.



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