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NEUSON**

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## Operator's Manual Vibratory plate

**BPS**



**Machine Type**

**BPS1030A, BPS1135A, BPS1340A, BP-  
S1550A, BPS2050A**

**Material Number**

**5100060589**

**Version**

**5**

**Date**

**01/2023**

**Language**

**[en-US]**



5100060589

## **Imprint**

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## **Original operator's manual**

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# California Proposition 65 Warning



## ⚠ WARNING

The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.



## ⚠ WARNING

Diesel engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects, and other reproductive harm.



## ⚠ WARNING

Cancer and Reproductive Harm  
[www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)



## ⚠ WARNING

Batteries, battery posts, terminals and related accessories contain lead and lead compounds, and other chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. WASH HANDS AFTER HANDLING.



# Contents

## 1 EC Declaration of Conformity

## 2 Foreword

|                                                    |    |
|----------------------------------------------------|----|
| 2.1 Introduction .....                             | 12 |
| 2.2 Storage Location of the Operator's Manual..... | 12 |
| 2.3 Accident Prevention Regulations .....          | 13 |
| 2.4 Contact person .....                           | 13 |
| 2.5 Limitation of liability .....                  | 14 |
| 2.6 Use of the operator's manual .....             | 14 |

## 3 Usage

|                          |    |
|--------------------------|----|
| 3.1 Designated use ..... | 15 |
| 3.2 Unintended use ..... | 15 |

## 4 Safety

|                                                        |    |
|--------------------------------------------------------|----|
| 4.1 Safety symbols and signal words .....              | 16 |
| 4.2 Principle .....                                    | 16 |
| 4.3 Structural changes .....                           | 17 |
| 4.4 Responsibility of the operator.....                | 17 |
| 4.5 Obligations of the operator .....                  | 18 |
| 4.6 Qualification of staff.....                        | 18 |
| 4.7 General safety instructions.....                   | 18 |
| 4.8 Specific vibration plate safety instructions ..... | 21 |
| 4.9 Safety features .....                              | 23 |
| 4.10 Service .....                                     | 24 |
| 4.11 Vehicle fluids .....                              | 25 |
| 4.12 Combustion engine .....                           | 26 |

## 5 Description of the Machine

|                                  |    |
|----------------------------------|----|
| 5.1 Type plates and labels ..... | 27 |
| 5.2 Components .....             | 29 |
| 5.3 Control elements .....       | 29 |

## 6 Transportation

|                                             |    |
|---------------------------------------------|----|
| 6.1 Safety instructions for transport ..... | 31 |
| 6.2 Prerequisites and preparations .....    | 31 |
| 6.3 Lifting the machine .....               | 31 |
| 6.4 Lashing the machine .....               | 33 |

## 7 Commissioning

|                                                    |    |
|----------------------------------------------------|----|
| 7.1 Safety instructions for operation.....         | 34 |
| 7.2 Tests before commissioning .....               | 35 |
| 7.3 Putting into operation with Honda engine ..... | 35 |

## 8 Operation



|           |                                               |    |
|-----------|-----------------------------------------------|----|
| 8.1       | Operating the machine .....                   | 38 |
| 8.2       | Take out of operation with Honda engine ..... | 38 |
| <b>9</b>  | <b>Maintenance</b>                            |    |
| 9.1       | Safety instructions for maintenance .....     | 39 |
| 9.2       | Maintenance plan .....                        | 41 |
| 9.3       | Maintenance work .....                        | 41 |
| <b>10</b> | <b>Troubleshooting</b>                        |    |
| 10.1      | Troubleshooting machine .....                 | 48 |
| <b>11</b> | <b>Shutdown</b>                               |    |
| 11.1      | Temporary decommissioning .....               | 49 |
| 11.2      | Final shutdown .....                          | 49 |
| <b>12</b> | <b>Accessories</b>                            |    |
| 12.1      | Accessories .....                             | 50 |
| <b>13</b> | <b>Technical Data</b>                         |    |
| 13.1      | General instructions .....                    | 52 |
| 13.2      | Noise and vibration data .....                | 52 |
| 13.3      | BPS Honda .....                               | 52 |
| 13.4      | Combustion engine .....                       | 57 |
| 13.5      | Conversion table .....                        | 58 |



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## EU Declaration of Conformity

### Manufacturer

Wacker Neuson Produktion GmbH & Co. KG, Wackerstraße 6, 85084 Reichertshofen (DE)

This declaration of conformity is issued under the sole responsibility of the manufacturer.

|                              |                                                                                                                  |
|------------------------------|------------------------------------------------------------------------------------------------------------------|
| <b>Product</b>               | <b>BPS1030, BPS1135, BPS1340</b>                                                                                 |
| Product type                 | Vibratory plate                                                                                                  |
| Function of product          | Soil compaction                                                                                                  |
| Material number              | 5100054202, 5100058916, 5100059657, 5100059658,<br>5100059659, 5100059662, 5100059906, 5100060129,<br>5100067726 |
| Net installed power          | 2,6 kW                                                                                                           |
| Measured sound power level   | 104 dB(A)                                                                                                        |
| Guaranteed sound power level | 105 dB(A)                                                                                                        |

### Conformity assessment procedure

2000/14/EC, Annex VIII

### Notified body

TÜV Rheinland LGA Products GmbH, Tillystr. 2, 90431 Nürnberg (DE) (NB 0197)

### 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

### Person responsible for technical documents

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Reichertshofen (DE), 21.12.2022

Helmut Bauer

Managing Director

Original Declaration of Conformity

BPS1030, BPS1135, BPS1340\_CE\_en



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|                              |                                                                                                            |
|------------------------------|------------------------------------------------------------------------------------------------------------|
| <b>Product</b>               | <b>BPS1135, BPS1340</b>                                                                                    |
| Product type                 | Vibratory plate                                                                                            |
| Function of product          | Soil compaction                                                                                            |
| Material number              | 5100054202, 5100058916, 5100059657, 5100059658, 5100059659, 5100059662, 5100059906, 5100060129, 5100067726 |
| Net installed power          | 2,6 kW                                                                                                     |
| Measured sound power level   | 104 dB(A)                                                                                                  |
| Guaranteed sound power level | 105 dB(A)                                                                                                  |

### Conformity assessment procedure

SI 2001 No. 1701, Schedule 11

### Approved Body

Until 11/2023: TÜV Rheinland LGA Products GmbH, Tillystr. 2, 90431 Nürnberg (DE) (NB 0197)

Starting 12/2023: TUV Rheinland UK Ltd., Friars Gate, 1011 Stratford Road, Shirley, Solihull, B90 4BN (GB) (No. 2571)

### Directives and standards

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SI 2008 No. 1597 • SI 2001 No. 1701 • SI 2016 No. 1091 • EN 500-1:2006 + A1:2009

EN 500-4:2011 • EN ISO 13766-1:2018

### Person responsible for technical documents

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Reichertshofen (DE), 21.12.2022

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BPS1135, BPS1340\_UKCA\_enuk



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|                              |                                                |
|------------------------------|------------------------------------------------|
| <b>Product</b>               | <b>BPS1550</b>                                 |
| Product type                 | Vibratory plate                                |
| Function of product          | Soil compaction                                |
| Material number              | 5100054202, 5100061215, 5100061216, 5100067727 |
| Net installed power          | 3,6 kW                                         |
| Measured sound power level   | 103 dB(A)                                      |
| Guaranteed sound power level | 108 dB(A)                                      |

### Conformity assessment procedure

2000/14/EC, Annex VIII

### Notified body

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Reichertshofen (DE), 21.12.2022

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Helmut Bauer  
Managing Director



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|                              |                                                |
|------------------------------|------------------------------------------------|
| <b>Product</b>               | <b>BPS1550</b>                                 |
| Product type                 | Vibratory plate                                |
| Function of product          | Soil compaction                                |
| Material number              | 5100054202, 5100061215, 5100061216, 5100067727 |
| Net installed power          | 3,6 kW                                         |
| Measured sound power level   | 103 dB(A)                                      |
| Guaranteed sound power level | 108 dB(A)                                      |

### Conformity assessment procedure

SI 2001 No. 1701, Schedule 11

### Approved Body

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|                              |                                    |
|------------------------------|------------------------------------|
| <b>Product</b>               | <b>BPS2050</b>                     |
| Product type                 | Vibratory plate                    |
| Function of product          | Soil compaction                    |
| Material number              | 5100054202, 5100061217, 5100061218 |
| Net installed power          | 3,6 kW                             |
| Measured sound power level   | 104 dB(A)                          |
| Guaranteed sound power level | 108 dB(A)                          |

### Conformity assessment procedure

2000/14/EC, Annex VIII

### Notified body

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

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Reichertshofen (DE), 21.12.2022

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|                              |                                    |
|------------------------------|------------------------------------|
| <b>Product</b>               | <b>BPS2050</b>                     |
| Product type                 | Vibratory plate                    |
| Function of product          | Soil compaction                    |
| Material number              | 5100054202, 5100061217, 5100061218 |
| Net installed power          | 3,6 kW                             |
| Measured sound power level   | 104 dB(A)                          |
| Guaranteed sound power level | 108 dB(A)                          |

### Conformity assessment procedure

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Reichertshofen (DE), 21.12.2022

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Helmut Bauer  
Managing Director

**UK  
CA**

## 2 Foreword

### 2.1 Introduction

This operator's manual contains important information and procedures for the safe, proper and economical operation of this machine. Careful reading, understanding and observing it helps to avoid hazards, reduce repair costs and downtimes and thus increase the availability and service life of the machine.

This operator's manual is not a manual for extensive maintenance or repair work. Such work must be carried out by the service partner or by technically trained personnel. The machine must be operated and maintained in accordance with the instructions in this operator's manual. Improper operation or maintenance can cause hazards.

Defective machine parts must be replaced immediately!

The manufacturer is always available to answer questions on operation or maintenance.

### 2.2 Storage Location of the Operator's Manual

This operator's manual must be kept in the immediate vicinity of the machine and accessible to personnel at all times.

If a second copy of this operator's manual is lost or required, the following options are available for obtaining a replacement:

- On the Internet at <http://www.wackerneuson.com>.
- Contact the service partner

#### 2.2.1 Understanding These Instructions

This section helps to understand the operator's manual and the illustrations used therein.

##### Target group

People working with this machine must be regularly trained with regard to the dangers and risks occurring when using this machine.

This operator's manual is aimed at:

- Operating personnel:
  - These people have been instructed in working with the machine and about possible dangers and risks arising due to improper behavior.
- Technically trained personnel:
  - These people have a professional training as well as additional knowledge and experience. They are capable of assessing the tasks assigned to them and recognizing any possible risks and dangers.

##### Explanation of symbols

| Symbol       | Explanation                                                        |
|--------------|--------------------------------------------------------------------|
| 1., 2., 3... | Indicates an activity. The sequence of the steps must be observed. |
| ⇒            | Indicates a result or an intermediate result of an action.         |



| Symbol                                                                            | Explanation                                                                                                                        |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| ✓                                                                                 | Indicates prerequisites that must be established for the activity.                                                                 |
| •                                                                                 | Indicates a list, e.g. if several components are named one after the other.                                                        |
| -                                                                                 | Indicates a sub-list, e.g. if components consist of further components                                                             |
| ①                                                                                 | Identifies a position, usually a component or control element, in a graphic. The numbering may be sequential or in Roman numerals. |
| 1; A                                                                              | Indicates the naming of components in explanatory texts. It is identical with the adjacent positions in the illustrations.         |
|  | Indicates a direction of movement or different positions for switches.                                                             |
| ▶                                                                                 | Indicates the avoidance of hazards in warning notices.                                                                             |
| [▶52]                                                                             | Indicates a cross-reference in tables. Here e.g. reference to page 52                                                              |

### 2.2.1.1 Explanation of symbols

The symbols used in the operator's manual are explained below. The symbols are used exclusively in warning or environmental instructions or information. Warnings must always be observed to protect the operator and third parties from personal injury and damage to property.



#### **Symbol for warning notices**

This symbol marks general warnings. It is used to alert you of possible hazards, e.g. risks of injury or accidents.



#### **Symbol for indications of technical damage**

This symbol is a warning symbol that indicates a danger of technical damage. It is used to indicate situations where damage to the machine or third-party property may occur.



#### **Symbol for environmental information**

This symbol indicates environmental information. It is used to warn of possible environmental hazards.



#### **Symbol for information**

This symbol indicates information. This information can include tips on operation, for example. It helps to better understand and use the machine.

## 2.3 Accident Prevention Regulations

In addition to the notes and safety instructions in this operator's manual, the local accident prevention regulations and the national industrial safety regulations apply.

## 2.4 Contact person

Depending on the country, the contact person is a service partner, a subsidiary or a dealer.

- On the Internet at <http://www.wackerneuson.com>.

## 2.5 Limitation of liability

In the event of the following infringements, the manufacturer disclaims any liability for personal injury and damage to property:

- Actions contrary to this operator's manual.
- Non-designated use
- Deployment of untrained personnel.
- Use non-approved spare parts and accessories.
- Improper handling.
- Structural changes of any kind.
- Non-observance of the General Terms and Conditions (GTC).

## 2.6 Use of the operator's manual

This operator's manual:

- must be regarded as an integral part of the machine and must be kept in a safe place throughout its service life.
- must be passed on to each subsequent owner or operator of this machine.
- applies to various machine types from one product range. For this reason, some illustrations may differ from the appearance of the purchased machine. Variant-dependent components that are not included in the scope of delivery can also be described.

The manufacturer reserves the right to change the information in this operator's manual without notice.

It must be ensured that any changes or additions made by the manufacturer are immediately incorporated into this operator's manual.

| Group - Type                                                                                            | Material number (Mat. no.) |
|---------------------------------------------------------------------------------------------------------|----------------------------|
| Configurable machine*                                                                                   | 5100054202                 |
| BPS1030A                                                                                                | 5100059658                 |
| BPS1030Aw                                                                                               | 5100058916                 |
| BPS1135A                                                                                                | 5100059662                 |
| BPS1135Aw                                                                                               | 5100059657                 |
| BPS1340A                                                                                                | 5100059906                 |
| BPS1340Aw                                                                                               | 5100059659                 |
| BPS1340Aws (Loxam)                                                                                      | 5100060129                 |
| BPS1340Aws                                                                                              | 5100067726                 |
| BPS1550A                                                                                                | 5100061215                 |
| BPS1550Aw                                                                                               | 5100061216                 |
| BPS1550Aws                                                                                              | 5100067727                 |
| BPS2050A                                                                                                | 5100061217                 |
| BPS2050Aw                                                                                               | 5100061218                 |
| * In the case of configurable machines, technical data is assigned via the machine's sales designation. |                            |

## **3 Usage**

### **3.1 Designated use**

Designated use also includes observing all notes and safety instructions in this operator's manual and observing the prescribed care and maintenance instructions.

The machine is used for:

- Compaction in earth and gravel construction.
- Compaction of mixed and granular soils.
- Compaction of asphalt.
- Shaking in cobblestones.

Any other use or use that goes beyond this is considered improper use. The manufacturer shall not be liable or liable for any damage resulting therefrom. The risk is borne solely by the operator.

### **3.2 Unintended use**

The manufacturer is not liable for personal injury or damage to property resulting from unintended use. The following activities, among others, are not intended:

- Compaction of strongly cohesive soils.
- Compaction of frozen soils.
- Compaction of hard, non-compactable soils.
- Compaction of non-load-bearing soils.

## 4 Safety

### 4.1 Safety symbols and signal words

The following symbol identifies safety instructions. It is used for warning against potential personal risk or danger.



#### **⚠ DANGER**

**DANGER** identifies a situation causing death or serious injury if it is not avoided.

Consequences in case of non-observance.

- Avoidance of injury or death.



#### **⚠ WARNING**

**WARNING** identifies a situation that can cause death or serious injury if it is not avoided.

Consequences in case of non-observance.

- Avoidance of injury or death.



#### **⚠ CAUTION**

**CAUTION** identifies a situation that can cause injury if it is not avoided.

Consequences in case of non-observance.

- Avoidance of injury.



#### **NOTICE**

**INFORMATION** identifies a situation that causes damage if it is not observed.

Consequences in case of non-observance.

- Avoidance of damage to property.

### 4.2 Principle

The machine has been designed and built in accordance with latest state-of-the-art standards and the recognized safety regulations.

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

Improper use can result in danger to life and limb for the operator and third parties or machine and other property damage.

- Read and observe the notes and safety instructions in this operator's manual. Failure to follow these instructions may result in electric shock, fire and/or serious injury, as well as damage to the machine and/or other objects.
- Keep safety instructions and information for the future.

## 4.3 Structural changes

**Warning!** Risk of injury due to structural changes.

Unauthorized structural changes to this machine can pose a risk to operators and/or third parties, as well as damage to the machine and/or other property.

- Do not make any structural changes without the manufacturer's written consent.

In particular, a structural change shall be deemed to have occurred:

- When opening of the machine and permanent removal of components.
- Installation of spare parts that do not come from the manufacturer or are not equivalent in design and quality to the original parts.
- Attachment of accessories of any kind that do not originate from the manufacturer.

The manufacturer's liability and warranty are also void in the event of unauthorized structural alterations.

Spare parts or accessories from the manufacturer can be installed or removed safely.

Further information is available on the Internet at - <http://www.wackerneuson.com>.

## 4.4 Responsibility of the operator

The operator is the person who operates this machine himself for commercial or economic purposes or who leaves it to a third party for use/application and bears the legal product responsibility for the protection of personnel or third parties during operation.

- The operator must make the operator's manual accessible to the personnel at all times and ensure that the operator has read and understood the operator's manual.
- The operator's manual must be kept ready to hand at the machine or at the place of use.
- The operator must hand over the operator's manual to any other operator or subsequent owner of the machine.
- The country-specific regulations, standards and directives on accident prevention and environmental protection must also be observed. The operator's manual must be supplemented by further instructions for compliance with operational, official, national or generally applicable safety guidelines.

## 4.5 Obligations of the operator

- Know and implement applicable health and safety regulations.
- In a risk assessment, identify hazards arising from working conditions at the place of use.
- Create operating instructions for the operation of this machine.
- Regularly check whether the operating instructions correspond to the current status of the regulations.
- Clearly regulate and define responsibilities for installation, operation, troubleshooting, maintenance and cleaning.
- Train personnel at regular intervals and inform them about possible dangers.
- Refresh instruction at regular intervals.
- Keep records of the training received and make them available to the competent authority on request.
- Provide personnel with the necessary protective equipment.

## 4.6 Qualification of staff

**Warning!** Risk of injury due to misuse.

In the event of misuse, abuse or operation by untrained personnel, there is a risk to the health of the operator and/or third parties, as well as damage or total failure of the machine and/or other property damage.

- The machine may only be commissioned and operated by trained personnel.

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

- Physical and mental suitability.
- Minimum age 18 years.
- No influence on reactivity by drugs, alcohol or medication.
- Familiarity with the safety instructions in this operator's manual.
- Familiarity with the intended use of this machine.
- Instructed in the independent operation of the machine.

## 4.7 General safety instructions

The safety instructions in this chapter contain the "General safety instructions", which must be listed in the operator's manual in accordance with the applicable standards. It may contain instructions which are not relevant for this machine.

### 4.7.1 Workplace

**Warning!** Hazard of poisoning from exhaust gases.

Exhaust gases contain carbon monoxide. Inhaling exhaust gases can lead to death in a few minutes.

- Do not inhale exhaust gas.
- Do not operate machine in an enclosed/partially enclosed or poorly ventilated or vented area.
- Particular caution is required when operating in ditches, because a high concentration of carbon monoxide can form in ditches after a short time.
- Ensure adequate ventilation/exhaustion.

**Warning!** Risk of explosion from fuel vapors.

Fuel vapors are highly flammable and can cause an explosion. This can seriously injure people and cause damage to property.

- Do not start the engine near spilled fuel.
- Open fire and smoking prohibited.

**Warning!** Risk of injury due to unsafe work environment.

Unsafe working environment can cause the machine to tip, roll, slide and fall. People can be injured as a result.

- Before starting work, familiarize yourself with the working environment, e.g. load-bearing capacity of the floor or obstacles in the environment.
- Always secure the machine against tipping, rolling, slipping and falling.
- Observe the changing ground conditions, especially on uneven and soft ground or on slopes. Secure the machine against slipping!
- When working near pits, ditches or plateaus, exercise caution! The load-bearing capacity of the ground must safely carry the weight of the machine and the operator.

**Warning!** Risk of injury if distracted by third parties.

Distraction by others can result in loss of machine control. This can seriously injure people and cause damage to property.

- Secure work area to public transport area.
- Keep unauthorized persons and children away when working with this machine.

**Warning!** Risk of injury due to adverse working conditions.

Cluttered and poorly lit work areas can lead to accidents. People can trip, fall and be seriously injured as a result.

- Keep work area tidy.
- Provide adequate lighting.

## 4.7.2 Personal safety

**Warning!** Risk of injury due to physical impairment.

Physical impairment can reduce the ability to react. This can lead to loss of machine control. People can be injured as a result.

- Do not work under the influence of drugs, alcohol or medication.

**Warning!** Danger of being drawn in by unsuitable clothing and long hair.

Wide or loose clothing, protective gloves, jewellery and long hair can be caught and pulled in by moving/rotating machine parts. This can result in severe injuries.

- Keep loose or loose clothing and protective gloves away from moving/rotating machine parts.
- Remove jewelry before starting work.
- Tie up long hair or use a hair net.

**Warning!** Danger of falling due to unsafe position.

Working in an unstable position can lead to falls. Falls can cause serious injuries.

- Always ensure a safe footing.
- Always have both feet on the ground.

**Warning!** Risk of injury to third parties

Bystanders can be seriously injured by incidents in the work area.

- Make sure there are no other people in the danger area.

**Caution!** Damage to health from exposure to vibration.

Prolonged use of this machine may result in long-term vibration-related damage or impaired circulation in the fingers, hands or wrists. Signs of this can be body parts falling asleep, tingling, hurting, stinging and discoloring.

In the case of personal predisposition to poor blood circulation, working time can be reduced despite safety gloves and regular breaks from work.

- Take regular breaks from work.
- If these symptoms are detected, consult a doctor immediately.
- Observe national occupational safety requirements.

Vibration exposure, [see Technical Data on page 52](#)

### Personal protective equipment

Suitable protective equipment must be used for all work. Personal protective equipment considerably reduces the risk of injury.

**Warning!** Risk of hearing damage from exceeding permissible noise limits.

Working with the machine without hearing protection can lead to hearing damage in the long-term.

- Always use hearing protection when working with the machine.
- When working with hearing protection, work particularly attentively and carefully, because noises, e.g. screams or beeps, are only perceived to a limited extent.

### 4.7.3 Handling and use

**Warning!** Risk of injury from falling loads.



In the event of improper transport or transport with unsuitable lifting gear, loads can fall. People can be hit and seriously injured or killed.

- Do not stay under lifted loads.
- Only use suitable and tested lifting gear and slings with sufficient load-bearing capacity.
- Secure the machine safely to the lifting gear.
- Use appropriate transport method.

**Warning!** Risk of crushing from swinging loads.

Improper transport can cause loads to swing. People can be hit or crushed by this and be seriously injured or killed.

- Keep a sufficient distance from the lifted loads.
- Secure raised loads against swinging.

**Warning!** Danger to life due to unauthorized troubleshooting

Unauthorized troubleshooting can lead to unforeseen machine states. People can be injured as a result.

- If faults occur on this machine which are not described in this operator's manual, contact the manufacturer.
- Do not rectify faults on your own.

**Warning!** Risk of injury from defective machines or components.

Defective machines or components can lead to unforeseen machine states. People can be injured as a result.

- Handle machines with care.
- Do not start a defective engine.
- Have defective parts replaced before operating the machine.

**Warning!** Risk of injury due to functionally restricted controls.

Controls that are not fully functional can lead to unforeseen machine states. People can be injured as a result.

- Check the machine's controls for functionality before operation.
- Do not lock, manipulate or alter the machine controls in an inadmissible manner.

**Warning!** Risk of injury due to unauthorized start-up.

Unauthorized start-up can lead to dangerous situations. Persons involved can be seriously injured as a result.

- Only allow the machine to be operated by authorized personnel.
- Secure unused machines against unauthorized putting into operation.
- After operation, store the machine in a locked, clean, frost-free and dry place that is inaccessible to other people and children.
- Use the machine, accessories, tools etc. in accordance with these instructions.

## 4.8 Specific vibration plate safety instructions

### 4.8.1 External influences

**Warning!** Fire and explosion hazard.

Operating machines in potentially explosive atmospheres or near open flames can result in an explosion or fire. This can seriously injure people and cause property damage.

- Do not operate the machine in a potentially explosive environment.
- Do not operate machine in oilfield environments - methane gas leaking from ground.
- Do not operate the machine in the vicinity of open flames.
- Do not operate the machine in dry, highly flammable vegetation.

**Caution!** Risk of injury from slipping machine.

In heavy rain, the machine may slip on sloping surfaces. This can injure people and damage the machine.

- Do not operate the machine on inclined surfaces in heavy rain.

## 4.8.2 Operational safety

**Warning!** Risk of injury from uncontrolled guided machine.

Loss of machine control can result in serious injury to the operator or others.

- Always hold the machine with both hands.
- Take a firm stand.

**Warning!** Risk of injury from tipping or slipping machine.

The machine can tip over or slide off in the vicinity of escarpments. People can be hit and seriously injured.

Make sure at least 2/3 of the machine is on a stable surface.

Otherwise, take the machine out of operation and move it to a stable surface.

**Caution!** Risk of injury from the machine slipping.

When operating the machine on inclined surfaces, the machine can slip and tip over. This can injure people and damage the machine.

- Only approach gradients from below.
- Stay above the machine during compaction work across the slope.
- Do not leave the designated operating position when the machine is in operation.
- Exercise the utmost degree of caution near abysses or slopes.
- Ensure stability.

**Caution!** Danger of being buried in ditches and pits.

When operating the machine in ditches and pits, side walls can collapse due to vibration. People can be buried and injured.

- Check side walls for stability before starting work.
- Pay close attention to sidewalls in ditches and pits.

**Caution!** Risk of injury to third parties when the machine is running.

When operating the machine, people in the work area can be injured.

- Never let the machine run unattended.
- Block off a large work area and keep unauthorized persons away.
- Make sure people in the work area keep a minimum distance of 2 meters from the running machine.

**Caution!** Risk of injury when starting with the recoil starter.

Improper handling when starting can cause injury to the operator or third parties.

- Only pull the starter handle on the recoil starter when there is sufficient space and no one is in the immediate vicinity.

#### 4.8.2.1 Safety distances

**Note!** Material damage due to careless work.

Careless work can damage lines laid in the floor.

- When operating the machine, make sure that no gas, water or electrical lines or pipes are damaged.

**Note!** Material damage caused by vibrations.

Compaction work in the vicinity of buildings can lead to building damage.

- Check all possible effects and vibrations on surrounding buildings beforehand.
- Observe the relevant regulations and rules for measuring, assessing and reducing vibrations, in particular DIN 4150-3.

**Information!** The manufacturer shall not be liable for any damage to buildings.

## 4.9 Safety features

Safety features protect the operator of this machine from being exposed to the existing hazards. These are barriers (separating protective devices) or other technical measures that serve to avert or reduce hazards.

**Warning!** Risk of injury due to modified or removed safety devices.

Modified or removed safety devices lose their protective function. People can be injured as a result.

- Operate the machine only when the safety devices are correctly installed and functional.
- Do not change or remove safety devices.
- Reattach safety and protective devices removed for maintenance/service (e.g. V-belt protection).



The V-belt guard **1** protects the operator against crushing and entrapment.

## 4.10 Service

**Warning!** Risk of injury from defective machine.

Machines that are not or improperly maintained/repared may have defects that go unnoticed. This can cause personal injury and property damage.

- Observe maintenance intervals according to maintenance plan.
- Only have the machine repaired or serviced by technically trained personnel.
- Have work not listed in the maintenance plan carried out by the service partner.
- Replace worn or damaged machine parts immediately.
- Only use original spare parts and accessories. The operational safety of the machine is thus maintained.
- Carry out maintenance work in a clean and dry environment (e.g. workshop).
- Replace any missing, damaged or illegible safety labels immediately. Safety and information labels contain important information for the protection of the operator.
- Keep the machine clean.

**Warning!** Risk of injury due to modified or removed safety devices.

Modified or removed safety devices lose their protective function. People can be injured as a result.

- Operate the machine only when the safety devices are correctly installed and functional.
- Do not change or remove safety devices.
- Reattach safety and protective devices removed for maintenance/service (e.g. V-belt protection).

**Caution!** Risk of crushing/risk of burns when the machine is running.

Moving/rotating machine parts can cause crushing. Hot machine parts can cause burns if touched.

- Do not service, repair, adjust or clean the machine when it is switched on.
- Switch off the machine and let it cool down.

#### 4.10.1 Threaded fittings

**Caution!** Risk of injury due to missing or loose screw connections.

Missing or loose screw connections can lead to loose machine parts. People can be injured as a result.

- All threaded fittings must comply with the specified specifications and be firmly bolted together.
- Observe the correct tightening torques.
- Screws and nuts must not be damaged, bent or deformed.
- Particular attention should be paid to the following:
  - Self-locking nuts and micro-encapsulated screws must not be reused after loosening. The fastening effect is lost.
  - Screw connections with adhesive securing/liquid adhesives (e.g. Loctite) must be cleaned after loosening and provided with new adhesive before reuse.

**Information!** Observe the instructions of the liquid adhesive manufacturer.

### 4.11 Vehicle fluids

**Warning!** Danger of scalding from hot operating materials.

Operating materials can become very hot after a short operation period. Contact with hot operating materials can lead to severe scalding.

- Switch off the machine and let it cool down.
- Use protective gloves.

**Warning!** Risk of fire and explosion from flammable cleaning agents.

Flammable detergents can cause fires and explosions. People can be injured as a result.

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

**Caution!** Risk of damage to health.

Operating materials can contain toxins that can severely damage the eyes, mucous membranes and skin on contact.

- Do not inhale vapors.
- Avoid eye and skin contact.
- Always wear protective goggles and gloves when handling operating materials.
- Consult a doctor immediately if operating materials get into your eyes.
- In case of skin contact, wash skin immediately with soap and water.
- Do not eat or drink while working with vehicle fluids.

**Note!** Danger of machine damage.

Contaminated operating materials (e.g. dirt, water) can lead to premature wear or machine failure.

- Do not contaminate operating materials.
- Replace contaminated operating materials.
- If vehicle fluids leak from the machine, stop operating the machine and have it repaired immediately by a service partner.

**Environment** Risk of environmental damage.

Operating materials that get into the ground, water bodies or sewage system can cause environmental damage.

- Line work surface with impermeable foil.
- Use collection containers for old operating materials.
- Dispose of discharged or spilled vehicle fuel in accordance with applicable environmental regulations.
- Clean the machine in a suitable place where the dirty waste water can be collected in an environmentally friendly manner.
- Collect contaminated water and dispose of it in an environmentally friendly manner.

## 4.12 Combustion engine

**Warning!** Risk of fire from hot engine parts and fuel.

Hot engine parts can ignite fuel and combustible material. This can cause severe burns to people and damage to property.

- Ensure that the exhaust system of the engine is free of flammable materials.
- Before refueling, switch off the engine and let it cool down.
- Do not spill fuel, wipe up spilled fuel immediately.
- Do not use jump start sprays. These can cause fire, misfires and engine damage.

**Caution!** Risk of burns from hot engine parts.

The engine surface and exhaust system can become very hot after only a short time. Persons can suffer burns on contact.

- Switch off the engine and let it cool down.

**Note!** Machine damage from incorrect, contaminated and leaking fuel.

- Use the correct type of fuel.
- Observe the prescribed mixing ratios for two-stroke engines.
- Use clean filling aids for refueling.
- Before start of work, check the engine for leaks and cracks in the fuel line, tank and filler cap.
- Do not start the defective engine. Replace damaged parts immediately.

**Note!** Machine damage due to incorrectly set engine speed.

- The preset engine speed must not be adjusted. This could lead to engine damage.

## 5 Description of the Machine

### 5.1 Type plates and labels

#### 5.1.1 Type label

A type label is permanently attached to the machine.

##### Other type labels

Furthermore, the following components of the machine are provided with their own type label:

- the combustion engine

##### Symbols on the type label

Various symbols and markings for national and international approvals can be shown on or next to the nameplate.

##### 5.1.1.1 Labeling on the machine

##### Type label data

The type label contains information that uniquely identifies this machine. This information is required for ordering spare parts and for technical queries.

Enter the data on the machine in the following table:

| Designation                  | Your details |
|------------------------------|--------------|
| Group - Type                 |              |
| Material number (Mat. no.)   |              |
| Machine version ( version)   |              |
| Machine number (machine no.) |              |
| Year of construction         |              |

#### 5.1.2 Safety and information labels

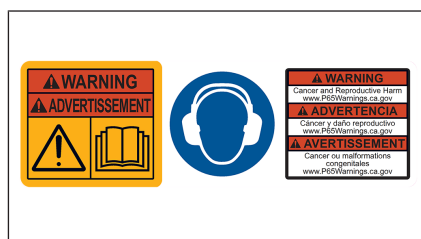
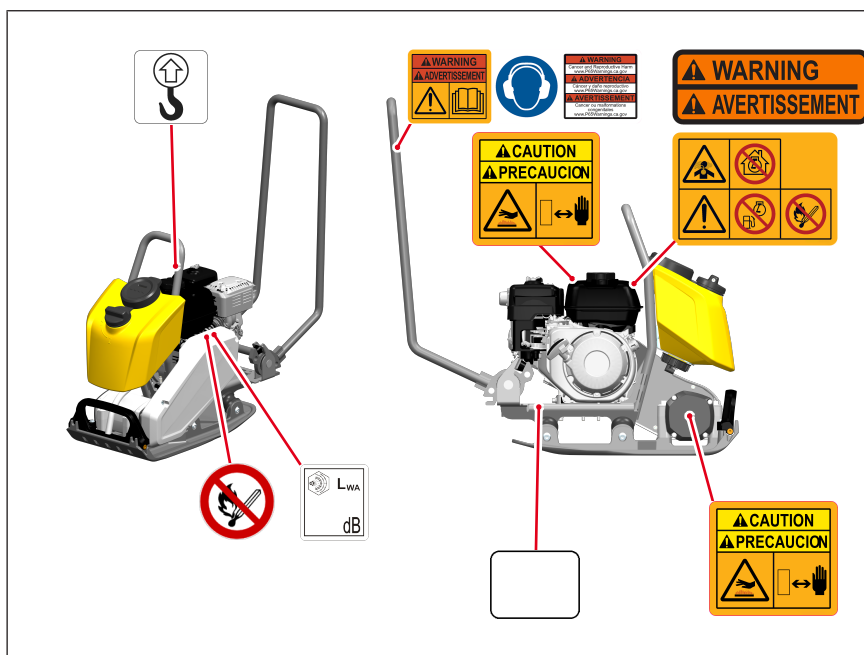


##### **⚠ WARNING**

##### **Injury hazard due to missing or damaged labels and signs!**

Safety labels contain important information to protect the operator.

- ▶ Keep all safety, warning and operating instructions on the machine in a clearly legible condition.
- ▶ Replace missing or damaged labels and signs immediately.



- Read the operator's manual.
- Use hearing protection.

## Warning of health risks

**WARNING! CALIFORNIA: Proposition 65 (Toxic Substances and Safe Drinking Water Act of 1986)**

For more information: [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)



Caution: Risk of injury

- Risk of burns due to hot surface!
- Keep back.

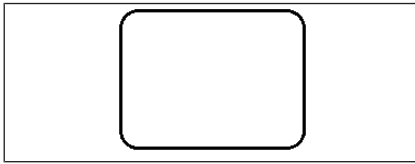


Warning of health risks.

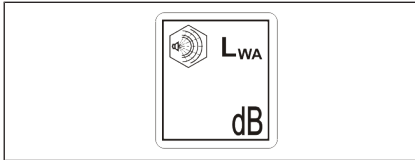


- Risk of suffocation due to exhaust gases!
- Do not operate the machine in closed rooms.
- Take the machine out of operation before refelling.
- Fire, open flame and smoking are prohibited.





Type label.

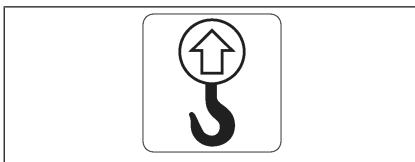


Guaranteed sound power level.



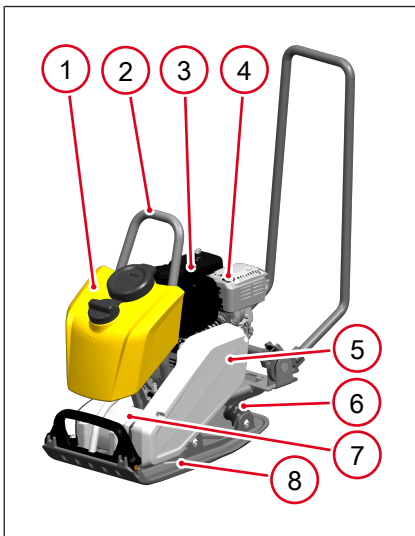
**Fire hazard!**

Smoking and open fire prohibited.



Only lift the machine at the central suspension with tested lifting gear and slinging gear (safety load hook).

## 5.2 Components

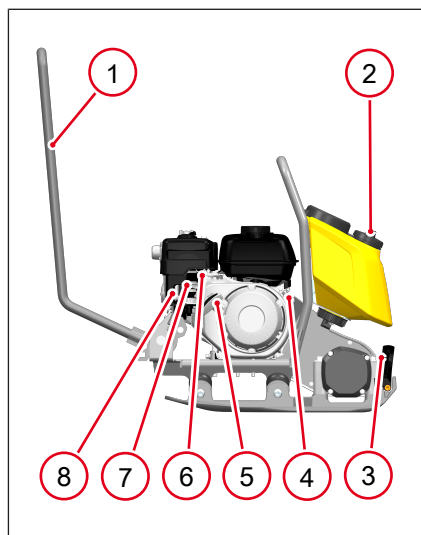


- |   |                          |
|---|--------------------------|
| 1 | Water tank               |
| 2 | Central suspension       |
| 3 | Fuel tank                |
| 4 | Drive engine             |
| 5 | V-belt with V-belt guard |
| 6 | Rubber-metal buffer      |
| 7 | Exciter                  |
| 8 | Base plate               |

## 5.3 Control elements

Always keep the displays and controls of the machine dry, clean and free of oil and grease.

Do not lock, manipulate or alter the machine operating elements in an inadmissible manner.



- |   |                             |
|---|-----------------------------|
| 1 | Guide bracket               |
| 2 | Water sprinkling regulation |
| 3 | Handle                      |
| 4 | Engine switch               |
| 5 | Handle reversing starter    |
| 6 | Throttle lever              |
| 7 | Choke lever                 |
| 8 | Fuel cock                   |

## 6 Transportation

### 6.1 Safety instructions for transport



#### **⚠ WARNING**

##### **Hazard of falling!**

The falling machine can cause serious injuries, e.g. by crushing.

- ▶ Only use suitable and tested lifting gear and slings (safety hooks) with sufficient lifting capacity.
- ▶ Only lift the machine by the central suspension.
- ▶ Secure the machine safely to the lifting gear.
- ▶ Do not lift the machine by the guide bracket.
- ▶ Leave the danger zone when lifting, do not stand under suspended loads.



#### **⚠ WARNING**

##### **Fire hazard due to fuel!**

Leaking fuel can catch fire and cause severe burns.

- ▶ Empty the fuel tank before transport.

6

### 6.2 Prerequisites and preparations

- Switch off the machine and let it cool down.
- Use only suitable hoists with sufficient lifting capacity.
- Only use suitable lifting equipment with sufficient lifting capacity, [see Technical Data on page 52](#).
- The transport vehicle must have a sufficient bearing load and a suitable loading surface.

### 6.3 Lifting the machine

#### **Lifting with lifting device and lifting gear**



#### **⚠ WARNING**

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

If the machine is unstable, the lifting gear and the hoist may fail and fall down.

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

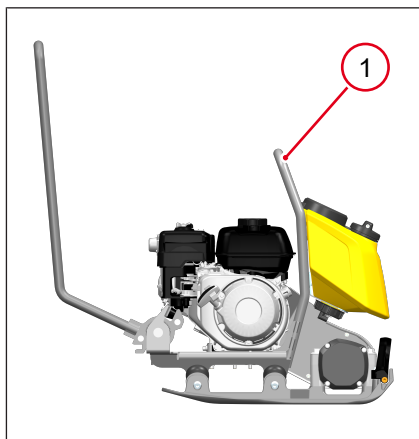


#### ⚠ CAUTION

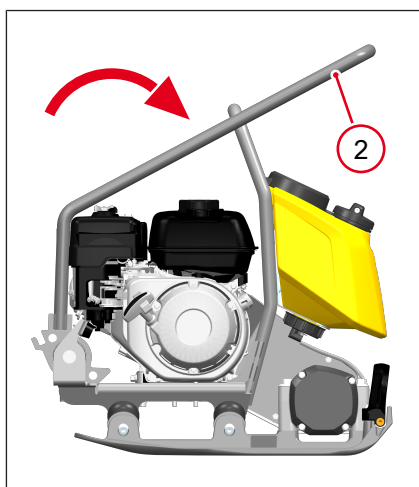
##### **Danger of burns due to hot surfaces!**

The machine, engine and exhaust can heat up quickly after a short time; that can lead to severe burns in case of contact with skin.

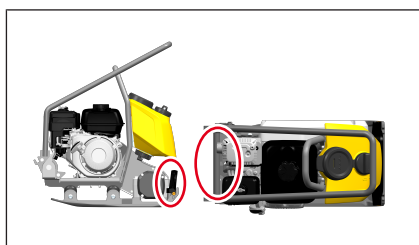
- ▶ Always allow the machine, engine and exhaust to cool down after use.
- ▶ Use heat-resistant protective gloves if the cooling phase cannot be maintained (e.g. due to an emergency).



1. To ensure safe lifting, appoint a competent instructor.
2. Only use certified lifting and fastening gear.
3. Attach suitable sling to central suspension 1.
4. Load the machine into or onto the transport vehicle.



5. Fold down the guide bracket 2 during transport.



##### **Lifting by the handles**

1. Designate at least one second person for a safe lifting operation.
2. Two persons should hold and lift the machine at the provided handles with both hands.
3. Load the machine into or onto the transport vehicle.



## 6.4 Lashing the machine



### NOTICE

Use anti-slip mats to secure the load.



Only use the lashing points provided for this purpose to secure the machine.

- Tie down the machine as shown.
- ⇒ The machine is secured against unrolling, slipping and tipping over.

## 7 Commissioning

### 7.1 Safety instructions for operation



#### **⚠ WARNING**

##### **Tipping hazard due to slipping or overturning machine!**

At least 2/3 of the machine must be on a stable surface near edges.

- ▶ Take the machine out of operation and lift it back onto a stable surface.



#### **⚠ WARNING**

Improper handling may result in injury or serious material damage.

- ▶ Please read and follow all safety instructions in this operator's manual.



#### **⚠ WARNING**

##### **Risk of hearing damage if the country-specific noise limit is exceeded!**

Working with the machine without hearing protection can lead to hearing damage in the long-term.

- ▶ Wear ear protectors.
- ▶ Work attentively and cautiously when using hearing protection.



#### **⚠ CAUTION**

##### **Health hazard due to vibrations!**

Physical impairments due to vibration.

- ▶ Take regular breaks.



#### **⚠ CAUTION**

##### **Risk of collapse and spillage!**

There is a risk of injury from falling or spilling when working on fracture, pit, dump and embankment edges, on trench edges and heels.

- ▶ Pay attention to side walls and their stability.
- ▶ Ensure stability.

#### **Operation on inclined surfaces**



#### **NOTICE**

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

- ▶ Do not exceed the maximum permissible inclination, see [see Technical Data on page 52](#).

- Only approach gradients from below.

### Ground conditions

The maximum dumping height depends on several factors of the ground conditions. An exact specification of this value is not possible.

- Determine the maximum fill height by compaction tests or soil samples.

### Shaking in cobblestones

- To avoid damage to the machine or compaction material, use a sliding device, [see Accessories on page 50](#).

### Compaction of asphalt

- To avoid cracking and sticking to the asphalt, use water tank with sprinkler system, [see Accessories on page 50](#).

## 7.2 Tests before commissioning



### Information

Further information and detailed descriptions, [see Maintenance on page 39](#).

#### Perform the following checks:

- Check machine and components for damage.
  - Do not put the damaged machine into operation. Damages and defects must be repaired immediately.
- Check the fuel level.
- Check fuel lines for leaks.
- Check air filter.
- Check engine oil fill level.
- Check reversing starter.
- Check to ensure the screw connections are firmly seated.
- Check control elements for functionality.

## 7.3 Putting into operation with Honda engine

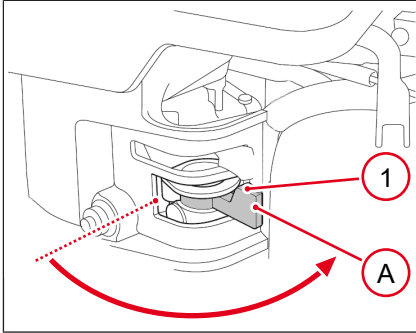


### ⚠ WARNING

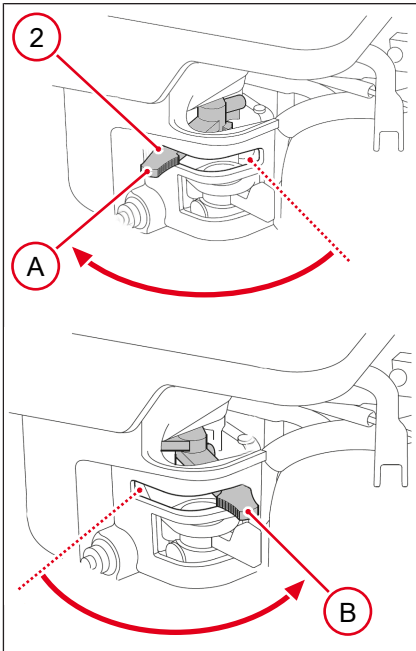
#### Danger of burns due to starting aid sprays!

Starting aid sprays can ignite and cause severe burns.

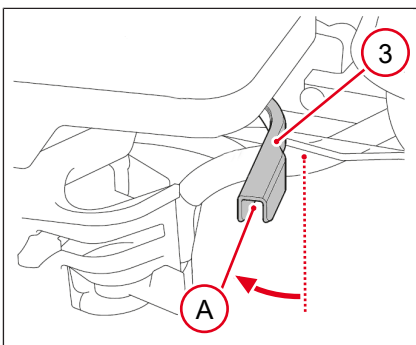
- ▶ Do not use any starting aid sprays.



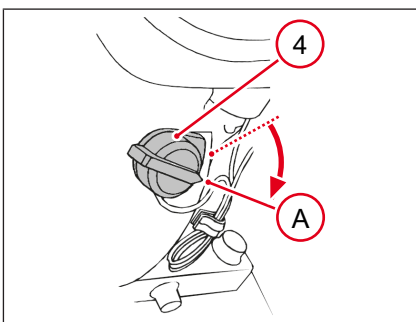
1. Move the fuel cock **1** into position **A**.



2. Move choke lever **2** to position **A** when the engine is cold.
3. Move the choke lever to position **B** when the engine is warm.

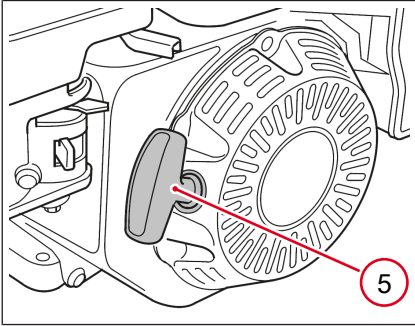


4. Move the throttle lever **3** into position **A**.

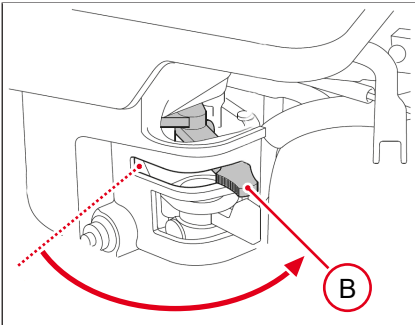


5. Move the engine switch **4** into position **A**.





6. Pull the starting handle **5**.
- ⇒ Pull the starting handle slightly until resistance is felt, then pull it strongly. Slowly return the starting handle.



7. Move choke lever to position **A** for starting, move choke lever back to position **B** while the engine is warm.
- ⇒ Engine runs.

## 8 Operation

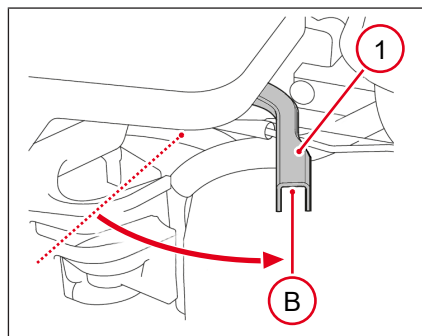
### 8.1 Operating the machine

The operator's designated location is behind the machine.

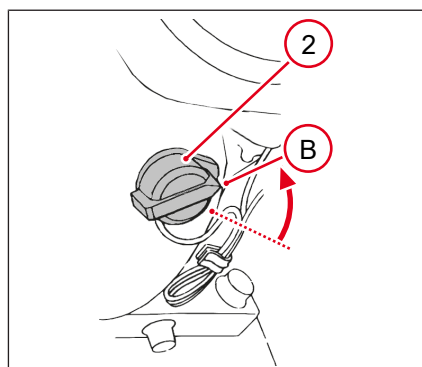
Guide and steer the machine using the guide bracket.

### 8.2 Take out of operation with Honda engine

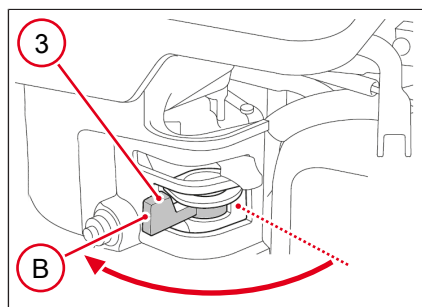
✓ The machine is on a level surface.



1. Move the throttle lever **1** to position **B**.



2. Move the engine switch **2** into position **B**.



3. Move the fuel cock **3** into position **B**.

⇒ Let the machine and engine to cool down.

## 9 Maintenance

### 9.1 Safety instructions for maintenance



#### **⚠ WARNING**

Improper handling may result in injury or serious material damage.

- ▶ Please read and follow all safety instructions in this operator's manual.



#### **⚠ WARNING**

##### **Hazard of poisoning from exhaust fumes!**

Exhaust fumes contain poisonous carbon monoxide, which can lead to unconsciousness or to death.

- ▶ Only perform maintenance work with the engine switched off and the machine decommissioned.



#### **⚠ WARNING**

##### **Risk of injury from uncontrolled machine starting and moving parts!**

- ▶ Only perform maintenance work with the engine switched off and the machine decommissioned.



#### **⚠ WARNING**

##### **Fire and explosion hazard due to fuel and fuel vapors!**

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

- ▶ Do not smoke.
- ▶ Do not refuel near open fire.
- ▶ Switch off the engine and allow it to cool before refueling.



#### **⚠ WARNING**

##### **Risk of fire and explosion when using flammable cleaning agents!**

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



#### **⚠ WARNING**

##### **Burn hazard due to hot engine oil!**

Splashes of hot oil can cause burns to the skin.

- ▶ Switch off the engine and let it cool down.
- ▶ Use protective gloves.



### **⚠ WARNING**

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

- ▶ Only operate the machine if the safety devices are correctly installed and functioning.
- ▶ Do not change or remove safety devices.



### **⚠ CAUTION**

#### **Danger of burns due to hot surfaces!**

The machine, engine and exhaust can heat up quickly after a short time; that can lead to severe burns in case of contact with skin.

- ▶ Always allow the machine, engine and exhaust to cool down after use.
- ▶ Use heat-resistant protective gloves if the cooling phase cannot be maintained (e.g. due to an emergency).



### **⚠ CAUTION**

#### **Health risk from fuel, lubricants and coolants!**

- ▶ Do not inhale vapors.
- ▶ Avoid skin and eye contact.



### **NOTICE**

#### **Engine damage from operating the engine without an air filter!**

If the engine is operated without an air filter, there is a risk of rapid engine wear.

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



### **Environment**

#### **Soil contamination due to oil leaking or overflowing.**

- ▶ Line work surface with impermeable foil.
- ▶ Use collecting container for used oil.
- ▶ Dispose of used oil in an environmentally friendly manner in accordance with statutory regulations.



### **Environment**

#### **Avoid damage to the environment!**

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

## 9.2 Maintenance plan



### NOTICE

#### Danger of engine damage!

- When commissioning new machines, an oil change must be carried out once after 20 operating hours.

| Maintenance work                                                                                                                          | daily | monthly | 100 h | 125 h | 300 h | 500 h |
|-------------------------------------------------------------------------------------------------------------------------------------------|-------|---------|-------|-------|-------|-------|
| Clean the machine. <ul style="list-style-type: none"> <li>• Visual check for completeness.</li> <li>• Visual check for damage.</li> </ul> | •     |         |       |       |       |       |
| Check engine oil fill level.                                                                                                              | •     |         |       |       |       |       |
| Check air filter intake area.                                                                                                             | •     |         |       |       |       |       |
| Check screw connections.                                                                                                                  | •     |         |       |       |       |       |
| Check the fuel level                                                                                                                      | •     |         |       |       |       |       |
| Clean and check air filter.                                                                                                               |       | •       |       |       |       |       |
| Check V-belt tension.                                                                                                                     |       | •       |       |       |       |       |
| Cleaning the deposit cup.                                                                                                                 |       |         | •     |       |       |       |
| Change engine oil.                                                                                                                        |       |         | •     |       |       |       |
| Check spark plugs.                                                                                                                        |       |         | •     |       |       |       |
| Clean fuel filter.*                                                                                                                       |       |         | •     |       |       |       |
| Check rubber buffer.*                                                                                                                     |       |         |       | •     |       |       |
| Check valve clearance.*                                                                                                                   |       |         |       |       | •     |       |
| Replace fuel filter.*                                                                                                                     |       |         |       |       |       | •     |
| * Have this work carried out by a service partner.                                                                                        |       |         |       |       |       |       |

## 9.3 Maintenance work

### Carrying out preparations:

1. Place the machine on a level surface.
2. Decommissioning the machine.
3. Let the machine cool down.

### 9.3.1 Cleaning the machine

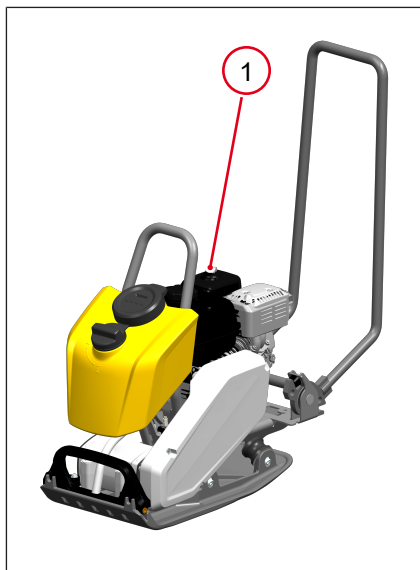
#### Observe the following when cleaning the machine with a high-pressure cleaner:

1. Do not aim high-pressure cleaner directly at air intake area and electrical components.
2. Do not hold the high-pressure cleaner too close to the machine in order to avoid damage to labels and sensitive components.

#### Visual check after cleaning:

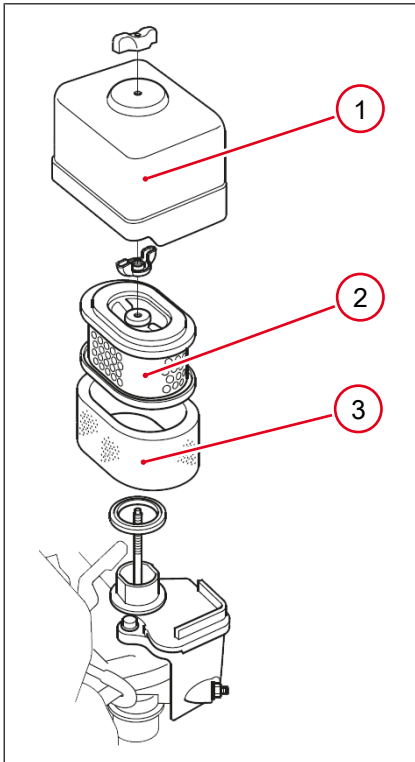
1. Check cables, hoses and lines for leaks and chafe marks.
2. Check screw connections.  
⇒ Replace damaged components.
3. Check all safety, warning and operating instructions for completeness.  
⇒ Replace missing or damaged labels and signs immediately.

#### 9.3.2 Checking and topping up the fuel level



1. Remove dirt.
2. Open filler cap 1.
3. Check the fuel level.  
⇒ Max. fuel level to lower edge of filler neck.
4. Refuel if necessary, [see Technical Data on page 52](#).
5. Close filler cap tightly.

### 9.3.3 Cleaning and checking the air filter



#### Engine type GX 120 and GX 160

1. Remove air filter lid **1**.
2. Remove and separate the air filter inserts.  
⇒ Paper filter insert **2** and foam filter insert **3**
3. Check both air filter inserts for cracks and holes, replace if damaged.

#### Cleaning the paper filter insert

1. Knock out filter insert on hard surface.
2. Blow with compressed air from the inside through the filter insert.  
⇒ Do not brush out, this will force dirt into the fibers.
- ⇒ Replace if heavily soiled.

#### Cleaning the foam filter insert

1. Wash the filter insert in soapy water.
2. Rinse thoroughly with water.
3. Leave to dry.
4. Immerse in new engine oil, [see Technical Data on page 52](#).
5. Press out the filter insert.  
⇒ Excess engine oil will smoke when the engine is started.

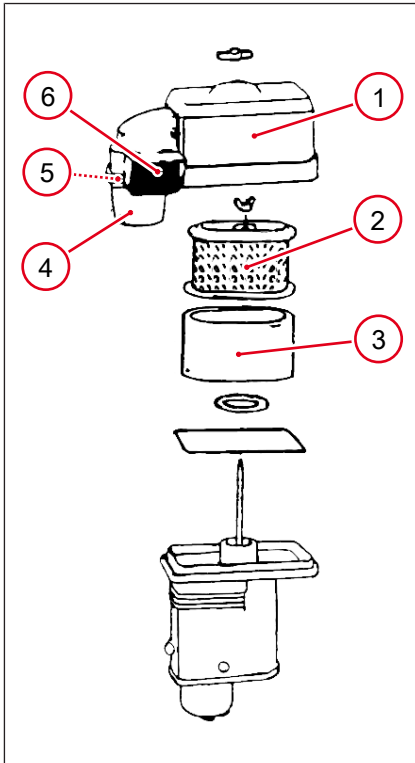
#### Engine type GX 160 (Cyclone-Type)



#### NOTICE

##### Hazard of engine damage!

- ▶ When reinstalling the cyclone, ensure that the air inlet tab fits snugly in the groove of the pre-cleaner cover.
- ▶ Install the air duct in the correct direction.



1. Remove air filter lid 1.
2. Remove and separate the air filter inserts.
3. Paper filter insert 2 and foam filter insert 3.
4. Check both air filter inserts for cracks and holes, replace if damaged.

#### Clean the paper filter insert

1. Knock out filter insert on hard surface.
2. Blow with compressed air from the inside through the filter insert.
3. Do not brush out, this will force dirt into the fibers.
4. Replace if heavily soiled.

#### Cleaning the foam filter insert

1. Wash the filter insert in soapy water.
2. Rinse thoroughly with water.
3. Leave to dry.
4. Immerse in new engine oil, [see Technical Data on page 52](#).
5. Press out the filter insert.
6. Excess engine oil will smoke when the engine is started.

#### Cleaning cyclone body

1. Unscrew the screws on the housing.
2. Wipe components or wash with water.
3. Cyclone 4, air duct 5 and air inlet tabs 6.
4. Dry components thoroughly and assemble.

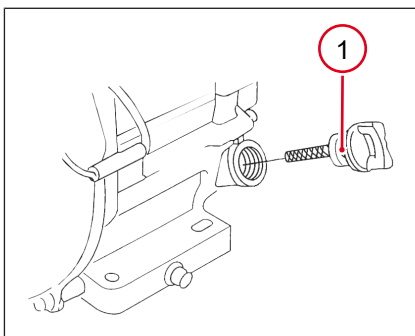
### 9.3.4 Checking and topping up engine oil level



#### NOTICE

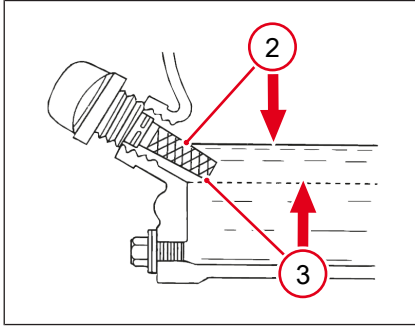
##### Danger of engine damage!

- Only change the oil when the engine is at operating temperature.
- Only use engine oil with the correct specification, [see Technical Data on page 52](#).



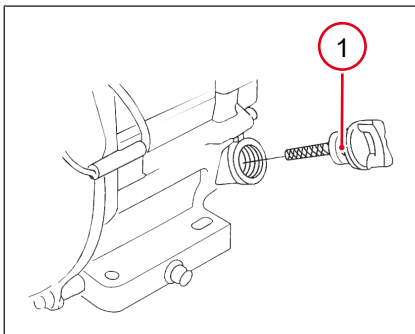
1. Remove dirt.
2. The machine must be horizontal.
3. Unscrew engine oil dipstick 1.
4. Wipe the engine oil dipstick with clean and fiber-free rags.



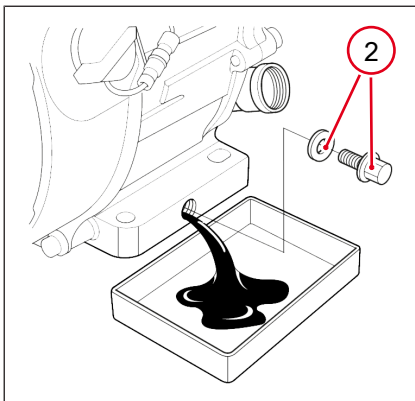


5. Insert the engine oil dipstick again.
6. Pull out the engine oil dipstick again.
7. Check engine oil fill level.
  - ⇒ If the engine oil level is at the lower fill level limit 3, top up engine oil if necessary, [see Technical Data on page 52](#).
- ⇒ Fill engine oil to the upper fill level limit 2, do not overfill.
  - Tighten the engine oil dipstick again.

### 9.3.5 Replacing engine oil

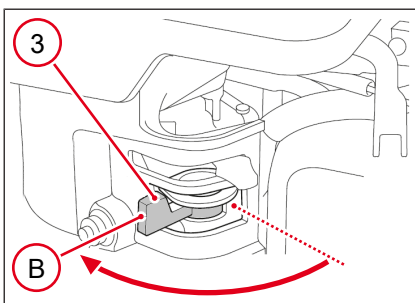


1. Remove dirt.
2. Provide a suitable container for draining the used oil.
3. Unscrew engine oil dipstick 1.

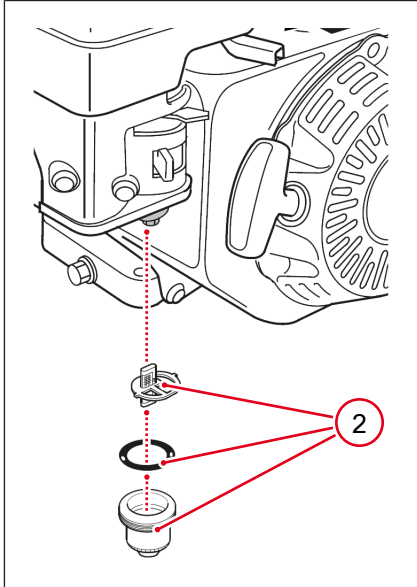


4. Unscrew the engine oil drain plug with sealing ring 2.
5. Allow the used oil to drain completely.
6. Tighten the engine oil drain plug with new sealing ring, tightening torque 18 Nm.
7. Place the machine in a horizontal position.
8. Fill in new engine oil, [see Checking and topping up engine oil level on page 44](#).
9. Tighten the engine oil dipstick again.

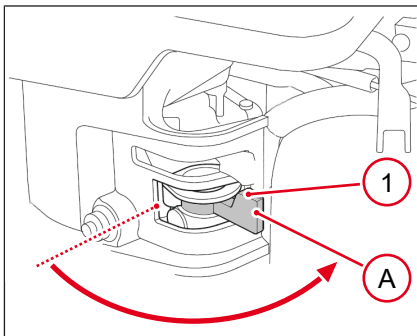
### 9.3.6 Cleaning the deposit cup



1. Move the fuel cock 3 into position B.



2. Remove deposit cup, filter and O-ring 2.
3. Clean and dry deposit cup and filter.
4. Replace the O-ring, filter and sedimentation cup.



5. Move the fuel cock 1 into position A.
6. Check fuel system for leaks.

### 9.3.7 Checking spark plug

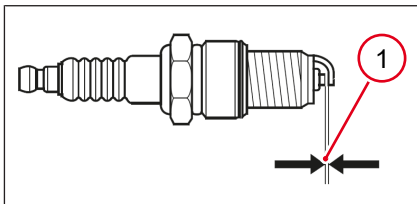


#### NOTICE

##### **Danger of engine damage!**

An incorrect spark plug can cause engine damage, see [Technical Data on page 52](#).

- ▶ Correct electrode spacing.
- ▶ Free of deposits.



1. Pull out spark plug connector.
2. Remove dirt from the spark plug area.
3. Unscrew spark plug and check.
4. Replace if damaged or heavily soiled.
5. Measure electrode spacing 1, see [Technical Data on page 52](#).  
⇒ Correct the electrode spacing by carefully bending it.
6. Tighten the spark plug again, tightening torque 18 Nm.
7. Plug the spark plug connector onto the spark plug.

### 9.3.8 Retightening and changing the V-belt

#### Carrying out preparations:

1. Place the machine on a level surface.
2. Decommissioning the machine.
3. Let the machine cool down.

#### Tighten the V-belt

1. Remove the V-belt guard.
2. Unscrew the screws of the exciter V-belt pulley.
3. Remove outer V-belt pulley half.
4. Remove the intermediate pulley.
5. Align and secure the removed intermediate pulleys and the outer V-belt pulley half.



#### Information

When tightening, turn the V-belt pulley to prevent the V-belt from jamming.

- 
1. Tighten the screws.
  2. Fit the V-belt guard, tightening torque 10 Nm.

## 10 Troubleshooting

### 10.1 Troubleshooting machine



#### **⚠ WARNING**

##### **Danger to life due to unauthorized troubleshooting!**

- ▶ If faults occur on this machine which are not described in these operating instructions, contact the manufacturer.
- ▶ Do not rectify faults on your own.

| Fault                                              | Possible cause                           | Remedy                                                 |
|----------------------------------------------------|------------------------------------------|--------------------------------------------------------|
| The engine cannot be started.                      | Engine switch off.                       | Engine switch on.                                      |
|                                                    | Throttle lever in stop or idle position. | Throttle lever on.                                     |
|                                                    | Fuel cock is closed.                     | Open the fuel cock.                                    |
|                                                    | Not enough fuel.                         | Refill with fuel. Check fuel filter and fuel lines.    |
|                                                    | Incorrect valve clearance.               | Check valve clearance, have it adjusted if necessary.* |
|                                                    | Valves worn.                             | Have the machine repaired.*                            |
|                                                    | Cylinder and/or piston ring worn.        |                                                        |
|                                                    | Spark plugs worn.                        |                                                        |
|                                                    | Engine oil level too low.                | Add engine oil.                                        |
| No vibration when the engine is running.           | V-belt worn.                             | Change V-belt.                                         |
|                                                    | Clutch linings worn out.                 | Have the clutch linings replaced.*                     |
| * Have this work carried out by a service partner. |                                          |                                                        |

## 11 Shutdown

### 11.1 Temporary decommissioning



#### Information

Further information and detailed descriptions, [see Maintenance on page 39](#).

#### Storage requirements

- Store dust-free and dry.
- Do not store outdoors.
- Protect from direct sunlight.
- Observe storage temperature, [see Technical Data on page 52](#).
- Store in a locked place that is not accessible to children.

If the machine is stationary for more than 1 month, perform the following measures:

|                                     |                                                                                                                                                                                   |
|-------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Entire machine                      | <ul style="list-style-type: none"> <li>• Clean thoroughly.</li> <li>• If necessary, rectify all defects.</li> <li>• Check for leaks, rectify any defects if necessary.</li> </ul> |
| Fuel tank                           | Plastic tank: <ul style="list-style-type: none"> <li>• Drain fuel completely.</li> </ul> Metal tank: <ul style="list-style-type: none"> <li>• Refill with fuel.</li> </ul>        |
| Engine                              | <ul style="list-style-type: none"> <li>• Check engine oil level, fill engine oil if necessary.</li> <li>• Check and clean air filter.</li> <li>• Clean fuel filter.</li> </ul>    |
| Components susceptible to corrosion | Oil and grease.                                                                                                                                                                   |

If the machine is shut down for more than 6 months, contact a service partner.

### 11.2 Final shutdown

If the machine is no longer in use and is shut down for good, all operating fluids must be drained.

Have the machine professionally dismantled and disposed of by a state-approved recycling company.

Professional disposal of this machine avoids negative effects on human health and the environment, helps with the targeted treatment of pollutants and makes it possible to recycle valuable raw materials.

## 12 Accessories

### 12.1 Accessories



#### ⚠ CAUTION

##### **Risk of injury and possible machine damage!**

Use of non-original spare parts or accessories can lead to injuries or machine damage.

- ▶ Only use original spare parts and accessories.
- ▶ In case of disregard, no liability will be accepted.

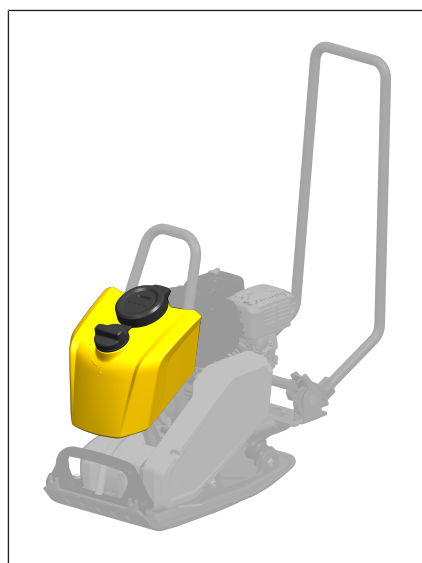


#### ⚠ CAUTION

##### **Stability of the machine with wheel set!**

Tipping over or rolling away of the machine can lead to injuries or material damage.

- ▶ Park the machine safely.
- ▶ Secure the wheel set against rolling away or fold it up.



#### **Water tank**

Water tank with continuously adjustable sprinkler system, [see Safety instructions for operation on page 35](#).



### **Wheel set**

Wheel set for easier transport on the construction site.



### **Slide mechanism**

Surface protection, [see Safety instructions for operation on page 35](#)

## 13 Technical Data

### 13.1 General instructions



#### Information

For system technical reasons, empty columns can be displayed in the technical data, and numbers and letters that written in superscript or subscript may be displayed incorrectly, e.g:

- ▶ Sound power level LWA instead of  $L_{WA}$
- ▶ Sound pressure level LpA instead of  $L_{pA}$
- ▶ Vibration total value ahv instead of  $a_{hv}$
- ▶ Carbon dioxide CO2 instead of  $CO_2$
- ▶ Unit m/s2 instead of  $m/s^2$

### 13.2 Noise and vibration data

The noise and vibration data listed have been determined in accordance with the following guidelines for the typical machine operating conditions / special test conditions and using harmonized standards:

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

During operational use, values may differ depending on the prevailing operating conditions.

#### Sound pressure level at operator station

- $L_{pA}$  was determined according to EN ISO 11201 and EN 500-4.

#### Guaranteed sound power level

- $L_{WA}$  was determined according to EN ISO 3744 and EN 500-4.

#### Weighted vibration total value hand-arm vibration

- $a_{hv}$  was determined according to EN ISO 20643 and EN 500-4.

### 13.3 BPS Honda

| Type                                      | BPS1030Aw         | BPS1030A          |
|-------------------------------------------|-------------------|-------------------|
| <b>Material number machine</b>            | <b>5100058916</b> | <b>5100059658</b> |
| Material number engine                    | 5100045994        | 5100045994        |
| Centrifugal force [kN]                    | 10                | 10                |
| Vibrations [Hz]                           | 98                | 98                |
| Vibrations [1/min]                        | 5880              | 5880              |
| Area output* [m2/h]                       | 500               | 500               |
| Flow [m/min]                              | 26                | 26                |
| Gradeability [%]                          | 36,4              | 36,4              |
| Length (drawbar in working position) [mm] | 930               | 930               |
| Width [mm]                                | 320               | 320               |



| Type                                                                         | BPS1030Aw  | BPS1030A   |
|------------------------------------------------------------------------------|------------|------------|
| Material number machine                                                      | 5100058916 | 5100059658 |
| Height [mm]                                                                  | 663        | 663        |
| Underclearance [mm]                                                          | 663        | 663        |
| Operating weight [kg]                                                        | 56         | 53         |
| Nominal power** [kW]                                                         | 2,6        | 2,6        |
| Rated speed [1/min]                                                          | 3600       | 3600       |
| Operating temperature range [°C]                                             | -15 - +45  | -15 - +45  |
| Storage temperature range [°C]                                               | -15 - +40  | -15 - +40  |
| Sound pressure level at operator station LpA [dB(A)]                         | 92         | 92         |
| Sound power level LWA, measured [dB(A*)                                      | 104        | 104        |
| Sound power level LWA guaranteed [dB(A)]                                     | 105        | 105        |
| Vibration total value ahv [m/s <sup>2</sup> ]                                | 4.6        | 4.6        |
| Measurement uncertainty of the total vibration value ahv [m/s <sup>2</sup> ] | 0.5        | 0.5        |

\*Depends on the soil conditions.

\*\* Corresponds to the installed net power according to Directive 2000/14/EC.

| Type                                                                         | BPS1135Aw  | BPS1135A   |
|------------------------------------------------------------------------------|------------|------------|
| Material number machine                                                      | 5100059657 | 5100059662 |
| Material number engine                                                       | 5100045994 | 5100045994 |
| Centrifugal force [kN]                                                       | 11         | 11         |
| Vibrations [Hz]                                                              | 98         | 98         |
| Vibrations [1/min]                                                           | 5880       | 5880       |
| Area output* [m <sup>2</sup> /h]                                             | 546        | 546        |
| Flow [m/min]                                                                 | 26         | 26         |
| Gradeability [%]                                                             | 36,4       | 36,4       |
| Length (drawbar in working position) [mm]                                    | 930        | 930        |
| Width [mm]                                                                   | 350        | 350        |
| Height [mm]                                                                  | 663        | 663        |
| Underclearance [mm]                                                          | 663        | 663        |
| Operating weight [kg]                                                        | 63         | 61         |
| Nominal power** [kW]                                                         | 2,6        | 2,6        |
| Rated speed [1/min]                                                          | 3600       | 3600       |
| Operating temperature range [°C]                                             | -15 - +45  | -15 - +45  |
| Storage temperature range [°C]                                               | -15 - +40  | -15 - +40  |
| Sound pressure level at operator station LpA [dB(A)]                         | 93         | 93         |
| Sound power level LWA, measured [dB(A*)                                      | 104        | 104        |
| Sound power level LWA guaranteed [dB(A)]                                     | 105        | 105        |
| Vibration total value ahv [m/s <sup>2</sup> ]                                | 4.5        | 4.5        |
| Measurement uncertainty of the total vibration value ahv [m/s <sup>2</sup> ] | 0.5        | 0.5        |

\*Depends on the soil conditions.

\*\* Corresponds to the installed net power according to Directive 2000/14/EC.

| Type                                                                         | BPS1340Aw  | BPS1340A   |
|------------------------------------------------------------------------------|------------|------------|
| Material number machine                                                      | 5100059659 | 5100059906 |
| Material number engine                                                       | 5100045994 | 5100045994 |
| Centrifugal force [kN]                                                       | 13         | 13         |
| Vibrations [Hz]                                                              | 98         | 98         |
| Vibrations [1/min]                                                           | 5880       | 5880       |
| Area output* [m <sup>2</sup> /h]                                             | 624        | 624        |
| Flow [m/min]                                                                 | 26         | 26         |
| Gradeability [%]                                                             | 36,4       | 36,4       |
| Length (drawbar in working position) [mm]                                    | 930        | 930        |
| Width [mm]                                                                   | 400        | 400        |
| Height [mm]                                                                  | 663        | 663        |
| Underclearance [mm]                                                          | 663        | 663        |
| Operating weight [kg]                                                        | 75         | 71         |
| Nominal power** [kW]                                                         | 2,6        | 2,6        |
| Rated speed [1/min]                                                          | 3600       | 3600       |
| Operating temperature range [°C]                                             | -15 - +45  | -15 - +45  |
| Storage temperature range [°C]                                               | -15 - +40  | -15 - +40  |
| Sound pressure level at operator station LpA [dB(A)]                         | 93         | 93         |
| Sound power level LWA, measured [dB(A*)]                                     | 104        | 104        |
| Sound power level LWA guaranteed [dB(A)]                                     | 105        | 105        |
| Vibration total value ahv [m/s <sup>2</sup> ]                                | 4,6        | 4.6        |
| Measurement uncertainty of the total vibration value ahv [m/s <sup>2</sup> ] | 0,5        | 0.5        |
| *Depends on the soil conditions.                                             |            |            |
| ** Corresponds to the installed net power according to Directive 2000/14/EC. |            |            |

| Type                                      | BPS1340Aws (Loxam) | BPS1340Aws |
|-------------------------------------------|--------------------|------------|
| Material number machine                   | 5100060129         | 5100067726 |
| Material number engine                    | 5100045994         | 5100045994 |
| Centrifugal force [kN]                    | 13                 | 13         |
| Vibrations [Hz]                           | 98                 | 98         |
| Vibrations [1/min]                        | 5880               | 5880       |
| Area output* [m <sup>2</sup> /h]          | 624                | 624        |
| Flow [m/min]                              | 26                 | 26         |
| Gradeability [%]                          | 36,4               | 36,4       |
| Length (drawbar in working position) [mm] | 930                | 930        |
| Width [mm]                                | 400                | 400        |
| Height [mm]                               | 663                | 663        |
| Underclearance [mm]                       | 663                | 663        |
| Operating weight [kg]                     | 71                 | 77.7       |
| Nominal power** [kW]                      | 2,6                | 2,6        |
| Rated speed [1/min]                       | 3600               | 3600       |
| Operating temperature range [°C]          | -15 - +45          | -15 - +45  |
| Storage temperature range [°C]            | -15 - +40          | -15 - +40  |

| Type                                                                         | BPS1340Aws (Loxam) | BPS1340Aws |
|------------------------------------------------------------------------------|--------------------|------------|
| Material number machine                                                      | 5100060129         | 5100067726 |
| Sound pressure level at operator station LpA [dB(A)]                         | 93                 | 93         |
| Sound power level LWA, measured [dB(A*)                                      | 104                | 104        |
| Sound power level LWA guaranteed [dB(A)]                                     | 105                | 105        |
| Vibration total value ahv [m/s <sup>2</sup> ]                                | 4.6                | 4.6        |
| Measurement uncertainty of the total vibration value ahv [m/s <sup>2</sup> ] | 0.5                | 0.5        |
| *Depends on the soil conditions.                                             |                    |            |
| ** Corresponds to the installed net power according to Directive 2000/14/EC. |                    |            |

| Type                                                                         | BPS1550Aw                | BPS1550A                 |
|------------------------------------------------------------------------------|--------------------------|--------------------------|
| Material number machine                                                      | 5100061216               | 5100061215               |
| Material number engine                                                       | 5100045995<br>5100046324 | 5100045995<br>5100046324 |
| Centrifugal force [kN]                                                       | 15                       | 15                       |
| Vibrations [Hz]                                                              | 98                       | 98                       |
| Vibrations [1/min]                                                           | 5880                     | 5880                     |
| Area output* [m <sup>2</sup> /h]                                             | 750                      | 750                      |
| Flow [m/min]                                                                 | 25                       | 25                       |
| Gradeability [%]                                                             | 36,4                     | 36,4                     |
| Length (drawbar in working position) [mm]                                    | 970                      | 970                      |
| Width [mm]                                                                   | 500                      | 500                      |
| Height [mm]                                                                  | 663                      | 663                      |
| Underclearance [mm]                                                          | 663                      | 663                      |
| Operating weight [kg]                                                        | 89,1                     | 83,7                     |
| Nominal power** [kW]                                                         | 3,6                      | 3,6                      |
| Rated speed [1/min]                                                          | 3600                     | 3600                     |
| Operating temperature range [°C]                                             | -15 - +45                | -15 - +45                |
| Storage temperature range [°C]                                               | -15 - +40                | -15 - +40                |
| Sound pressure level at operator station LpA [dB(A)]                         | 95                       | 95                       |
| Sound power level LWA, measured [dB(A*)                                      | 107                      | 107                      |
| Sound power level LWA guaranteed [dB(A)]                                     | 108                      | 108                      |
| Vibration total value ahv [m/s <sup>2</sup> ]                                | 4,1                      | 4,1                      |
| Measurement uncertainty of the total vibration value ahv [m/s <sup>2</sup> ] | 0,5                      | 0,5                      |
| *Depends on the soil conditions.                                             |                          |                          |
| ** Corresponds to the installed net power according to Directive 2000/14/EC. |                          |                          |

| Type                    | BPS1550Aws               |
|-------------------------|--------------------------|
| Material number machine | 5100067727               |
| Material number engine  | 5100045995<br>5100046324 |
| Centrifugal force [kN]  | 15                       |
| Vibrations [Hz]         | 98                       |

| Type                                                                         | BPS1550Aws |
|------------------------------------------------------------------------------|------------|
| Material number machine                                                      | 5100067727 |
| Vibrations [1/min]                                                           | 5880       |
| Area output* [m <sup>2</sup> /h]                                             | 750        |
| Flow [m/min]                                                                 | 25         |
| Gradeability [%]                                                             | 36,4       |
| Length (drawbar in working position) [mm]                                    | 970        |
| Width [mm]                                                                   | 500        |
| Height [mm]                                                                  | 663        |
| Underclearance [mm]                                                          | 663        |
| Operating weight [kg]                                                        | 89,1       |
| Nominal power** [kW]                                                         | 3,6        |
| Rated speed [1/min]                                                          | 3600       |
| Operating temperature range [°C]                                             | -15 - +45  |
| Storage temperature range [°C]                                               | -15 - +40  |
| Sound pressure level at operator station LpA [dB(A)]                         | 95         |
| Sound power level LWA, measured [dB(A)*]                                     | 107        |
| Sound power level LWA guaranteed [dB(A)]                                     | 108        |
| Vibration total value ahv [m/s <sup>2</sup> ]                                | 4,1        |
| Measurement uncertainty of the total vibration value ahv [m/s <sup>2</sup> ] | 0,5        |
| *Depends on the soil conditions.                                             |            |
| ** Corresponds to the installed net power according to Directive 2000/14/EC. |            |

| Type                                                 | BPS2050Aw                | BPS2050A                 |
|------------------------------------------------------|--------------------------|--------------------------|
| Material number machine                              | 5100061218               | 5100061217               |
| Material number engine                               | 5100045995<br>5100046324 | 5100045995<br>5100046324 |
| Centrifugal force [kN]                               | 20                       | 20                       |
| Vibrations [Hz]                                      | 98                       | 98                       |
| Vibrations [1/min]                                   | 5880                     | 5880                     |
| Area output* [m <sup>2</sup> /h]                     | 750                      | 750                      |
| Flow [m/min]                                         | 25                       | 25                       |
| Gradeability [%]                                     | 36,4                     | 36,4                     |
| Length (drawbar in working position) [mm]            | 970                      | 970                      |
| Width [mm]                                           | 500                      | 500                      |
| Height [mm]                                          | 663                      | 663                      |
| Underclearance [mm]                                  | 663                      | 663                      |
| Operating weight [kg]                                | 99,1                     | 93,7                     |
| Nominal power** [kW]                                 | 3,6                      | 3,6                      |
| Rated speed [1/min]                                  | 3600                     | 3600                     |
| Operating temperature range [°C]                     | -15 - +45                | -15 - +45                |
| Storage temperature range [°C]                       | -15 - +40                | -15 - +40                |
| Sound pressure level at operator station LpA [dB(A)] | 95                       | 95                       |
| Sound power level LWA, measured [dB(A)*]             | 107                      | 107                      |

| Type                                                                         | BPS2050Aw  | BPS2050A   |
|------------------------------------------------------------------------------|------------|------------|
| Material number machine                                                      | 5100061218 | 5100061217 |
| Sound power level LWA guaranteed [dB(A)]                                     | 108        | 108        |
| Vibration total value ahv [m/s <sup>2</sup> ]                                | 4,1        | 4,1        |
| Measurement uncertainty of the total vibration value ahv [m/s <sup>2</sup> ] | 0,5        | 0,5        |
| *Depends on the soil conditions.                                             |            |            |
| ** Corresponds to the installed net power according to Directive 2000/14/EC. |            |            |

## 13.4 Combustion engine

| Engine manufacturer                                                                                                                      | Honda                  |
|------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| Material number engine                                                                                                                   | 5100045994             |
| Engine type                                                                                                                              | GX 120                 |
| Combustion processes                                                                                                                     | four-stroke            |
| Cooling                                                                                                                                  | Air                    |
| Cylinder                                                                                                                                 | 1                      |
| Cubic capacity [cm <sup>3</sup> ]                                                                                                        | 118                    |
| Inclined position max. [°]                                                                                                               | 20                     |
| Fuel type                                                                                                                                | Gasoline               |
| Fuel consumption [l/h]                                                                                                                   | 1                      |
| Tank volume [l]                                                                                                                          | 2,5                    |
| Oil specification                                                                                                                        | SAE 10W-30             |
| Oil filling max. [l]                                                                                                                     | 0,6                    |
| Output max. [kW]                                                                                                                         | 2,6                    |
| RPM [1/min]                                                                                                                              | 3600                   |
| Standard                                                                                                                                 | SAE J1349              |
| Exhaust-emission level                                                                                                                   | EU Stage V, US Phase 2 |
| CO <sub>2</sub> emission* [g/kWh]                                                                                                        | 976                    |
| Spark plug type                                                                                                                          | NGK BP-6 ES            |
| Electrode gap [mm]                                                                                                                       | 0,7 - 0,8              |
| * Determined value of the CO <sub>2</sub> emission during engine certification without consideration of the applications on the machine. |                        |

| Engine manufacturer               | Honda       |
|-----------------------------------|-------------|
| Material number engine            | 5100045995  |
| Engine type                       | GX 160      |
| Combustion processes              | four-stroke |
| Cooling                           | Air         |
| Cylinder                          | 1           |
| Cubic capacity [cm <sup>3</sup> ] | 163         |
| Inclined position max. [°]        | 20          |
| Fuel type                         | Gasoline    |
| Fuel consumption [l/h]            | 0,8         |
| Tank volume [l]                   | 3,6         |
| Oil specification                 | SAE 10W-30  |

| Engine manufacturer                                                                                                          | Honda                  |
|------------------------------------------------------------------------------------------------------------------------------|------------------------|
| Material number engine                                                                                                       | 5100045995             |
| Oil filling max. [l]                                                                                                         | 0,6                    |
| Output max. [kW]                                                                                                             | 3,6                    |
| RPM [1/min]                                                                                                                  | 3600                   |
| Standard                                                                                                                     | SAE J1349              |
| Exhaust-emission level                                                                                                       | EU Stage V, US Phase 2 |
| CO2 emission* [g/kWh]                                                                                                        | 757                    |
| Spark plug type                                                                                                              | NGK BP-6 ES            |
| Electrode gap [mm]                                                                                                           | 0,7 - 0,8              |
| * Determined value of the CO2 emission during engine certification without consideration of the applications on the machine. |                        |

| Engine manufacturer                                                                                                          | Honda                  |
|------------------------------------------------------------------------------------------------------------------------------|------------------------|
| Material number engine                                                                                                       | 5100046324             |
| Engine type                                                                                                                  | GX 160                 |
| Combustion processes                                                                                                         | four-stroke            |
| Cooling                                                                                                                      | Air                    |
| Cylinder                                                                                                                     | 1                      |
| Cubic capacity [cm <sup>3</sup> ]                                                                                            | 163                    |
| Inclined position max. [°]                                                                                                   | 20                     |
| Fuel type                                                                                                                    | Gasoline               |
| Fuel consumption [l/h]                                                                                                       | 0,8                    |
| Tank volume [l]                                                                                                              | 3,6                    |
| Oil specification                                                                                                            | SAE 10W-30             |
| Oil filling max. [l]                                                                                                         | 0,6                    |
| Output max. [kW]                                                                                                             | 3,6                    |
| RPM [1/min]                                                                                                                  | 3600                   |
| Standard                                                                                                                     | SAE J1349              |
| Exhaust-emission level                                                                                                       | EU Stage V, US Phase 2 |
| CO2 emission* [g/kWh]                                                                                                        | 757                    |
| Spark plug type                                                                                                              | NGK BP-6 ES            |
| Electrode gap [mm]                                                                                                           | 0,7 - 0,8              |
| * Determined value of the CO2 emission during engine certification without consideration of the applications on the machine. |                        |

## 13.5 Conversion table

The following conversion tables enable the conversion of the metric values from the instructions, in particular the technical data, into the imperial.

| Conversion table  |                       |
|-------------------|-----------------------|
| Volume units      |                       |
| 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.       |

| Conversion table     |                           |
|----------------------|---------------------------|
| 1 l                  | 0.26 gal.                 |
| 1 l/min              | 0.26 gal./min             |
| <b>Length units</b>  |                           |
| 1 mm                 | 0.039 in                  |
| 1 m                  | 3.28 ft                   |
| <b>Weights</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>Force/output</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>   |









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