



# Instruction Manual

**Pressure Washer (1403) for Citymaster 2000**

## Introduction

### **Preface**

Dear customer, It is our desire that the good characteristics of the machine should justify the confidence you demonstrated by making this purchase. Prior to the first use, read the chapter "Safety Information" carefully as this will ensure safe operation of the machine. Your own safety, as well as the safety of others, depends to a great extent on how the machine is moved and operated. Therefore, this operation and maintenance manual must be read and understood prior to the machine being used for the first time.

The manual provides valuable information about operation, service and maintenance. The warning symbols as used in this manual identifies items relevant to safety. Please observe the safety provisions (see chapter "Safety Information").

Your authorized Hako dealer will be pleased to answer further questions regarding the machine or the operation and maintenance manual.

Please be advised explicitly that we cannot accept any legal issues out of the contents of this manual. If repair work has to be performed make sure that only genuine spare parts are used; only genuine spare parts may guarantee a dependable machine. We reserve the right for technical improvement..

Valid as of: February 2015

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### **Proper use**

The Pressure Washer is for attachment to the Citymaster 2000 and has been exclusively designed for conventional cleaning of steps, borders, corners, edges, and smaller obstructed surfaces which are not within the machine's reach. Using the equipment beyond this scope of application will be deemed improper use; The manufacturer cannot be held liable for consequential damages; the user alone bears the

risk.

The term of proper use also includes operation, maintenance and repair work to be performed in compliance with the manufacturer's specifications.

The equipment may only be used by persons that are familiar with the machine and aware of possible hazards involved. The applicable Accident Prevention Regulations and further regulations in vigour concerning aspects of safety and working medicine will have to be complied with.

If modifications to the equipment are made in absence of the manufacturer's prior consent, the latter cannot be held liable for damage resulting from such unauthorized modification.

## Introduction

### **Notes on warranty**

The terms of the sales contract apply. Damages are not subject to warranty if they are due to non-compliance with the maintenance and service provisions. The maintenance work has to be performed by an authorized Hako service center and confirmed in the "Maintenance certificate" which is the warranty document.

The following is excluded from warranty: fuses, natural wear, damages caused by overload, inexpert handling and unauthorized modification of the machine. Moreover, any claim for warranty cannot be accepted if damages of the machine are caused by fitting parts or accessories without Hako's prior and explicit consent or by non-compliance with the maintenance instructions.

### **Acceptance of the equipment**

Upon arrival, check the equipment for possible damages in transit. For refund of such damage, have the Deutsche Bahn AG or your freight forwarder confirm such damage. Mail notification and waybill to:




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## Safety information

### 1 Safety information

#### 1.1 Safety and Warning Symbols

All paragraphs in this manual referring to your personal safety, the safety of your machine and the environment protection are attributed one of the following warning symbols:

Symbol	Hazardous for ...	Description
Safety Provisions 	persons and goods	Safety Provisions in dangerous situation caused by misuse inaccurate adherence of instructions or prescribed work routine.
CAUTION 	the machine	important information on handling the machine in order to maintain operability.
Ecological hazard 	the environment	due to use of substances representing an inherent danger to health of environment

## Safety information

### 1.2 General Provisions

- Apart from the provisions contained in this instruction manual, the general safety provisions and the accident prevention regulations as imposed by law have to be complied with.
- Before taking your machine into operation, carefully read the instruction manual as well as other separate instructions for accessories or attached implements and comply with all points mentioned there during work.
- Persons being trained by qualified Hako technicians only are authorised to operate, service and repair the equipment.
- You are advised to thoroughly study the safety instructions since precise knowledge only helps avoiding errors during operation of the machine and thus guarantee faultless usage of the equipment.
- The operating instructions have to be at hand at the place of use of the machine, and therefore have to be kept readily available at the equipment.
- When selling or letting the equipment for rent, hand out these docu-

ments to the new owner/operator and have the transfer certified!

- As far as safety standards are concerned, spare have to equal genuine spare parts!

### 1.3 Provisions for Operation

- Before taking into operation, check the machine for operational safety! Immediately remedy malfunctions!
- It is indispensable for the operator to get acquainted with all attached implements and controls as well as with their function before operation begins. Once you have started to work, no time will be left to do so!
- Wear appropriate safety clothing and personal protective devices before operating the high-pressure cleaning equipment.
- Do not get into the high-pressure cleaner jet and do not direct the jet on other persons even not to clean e.g. clothes or shoes.
- Before using an extension line make sure that plug and coupling are water-proof.
- Only use spray lance from a safe place of stand and do not use it while standing on a ladder or inside a ca-

bin.

- The maximum operating pressure as set by the manufacturer must not be increased.
- De-pressurize all parts under pressure (such as e.g. hoses etc.) before taking them out of operation.
- Only work with the machine at standstill and the parking brake being engaged.

### 1.4 Maintenance instructions

- The daily and weekly maintenance and repair task must be performed by a qualified operator. For any further maintenance and repair work beyond please contact your local Hako service center.
- Observe the maintenance activities and intervals set out in the instruction manual.
- Maintenance and repair work may be carried out only by means of appropriate tools.
- Have the machine checked for safe condition in the sense of the Accident Prevention Regulation by an expert at regular intervals (recommendation: at least once yearly) as well as after modifications or repair.

## Safety information

- Spare parts have to equal the technical requirements as specified by the manufacturer! Genuine spare parts guarantee compliance with these requirements.
- Switch off the engine off and remove the key before inspecting the machine or performing any maintenance work.
- Cleaning the machine by means of high-pressure cleaning equipment or by vapour jet is prohibited.

### 1.5 Specific Hazards

- If improperly used, high-pressure jets can be dangerous. The jet must not be directed on persons, live electrical equipment or the cleaner itself.
- High-pressure hoses, fittings and couplings are essential for system safety. Only use high-pressure hoses, fittings and couplings as recommended by the manufacturer.
- Do not use the equipment while other persons are within reach unless they wear protective clothing.
- Inappropriate extension lines may be a cause of danger.

## Starting Up

### 2 Starting Up

#### 2.1 Instruction

Instructions to operators are required before putting the machine into service. Only the technicians of your local authorized Hako dealer are allowed to give initial instructions on how to use the machine. The manufacturing plant will notify the dealer immediately after delivering the machine and the dealer will contact you to arrange a date.

#### 2.2 Method of operation

The Pressure Washer (Fig. 1/1) is solely intended for attachment to Citymaster 2000 and for the normal cleaning of stairs, ledges, corners, edges and small occupied spaces that the machine cannot otherwise reach.

- 1 Pressure washer
- 2 Pressure regulator
- 3 Switching valve
- 4 Hose connector

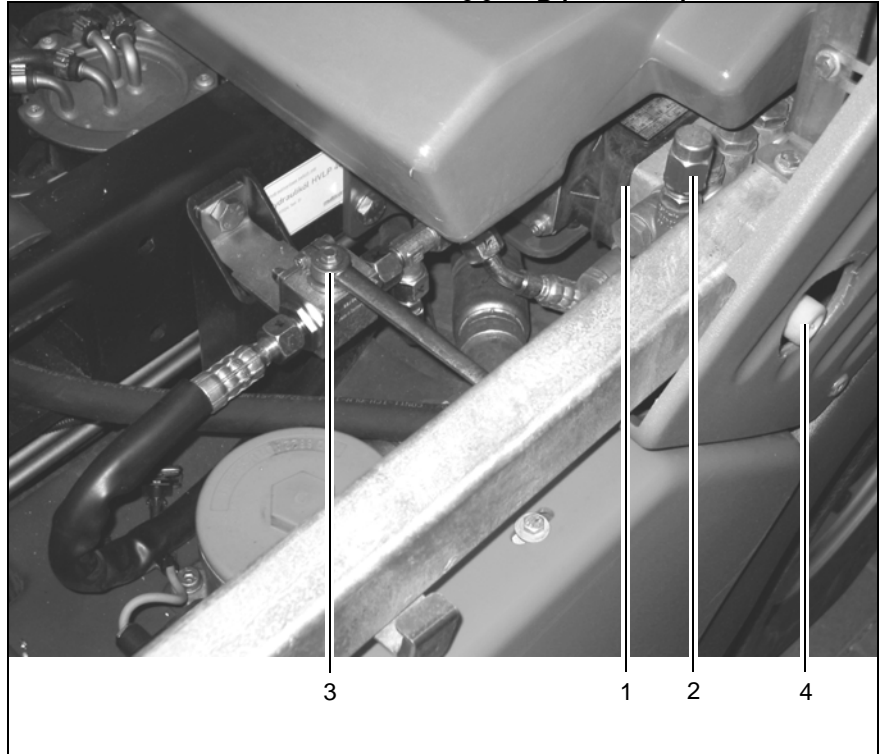


Fig.1

# Starting Up

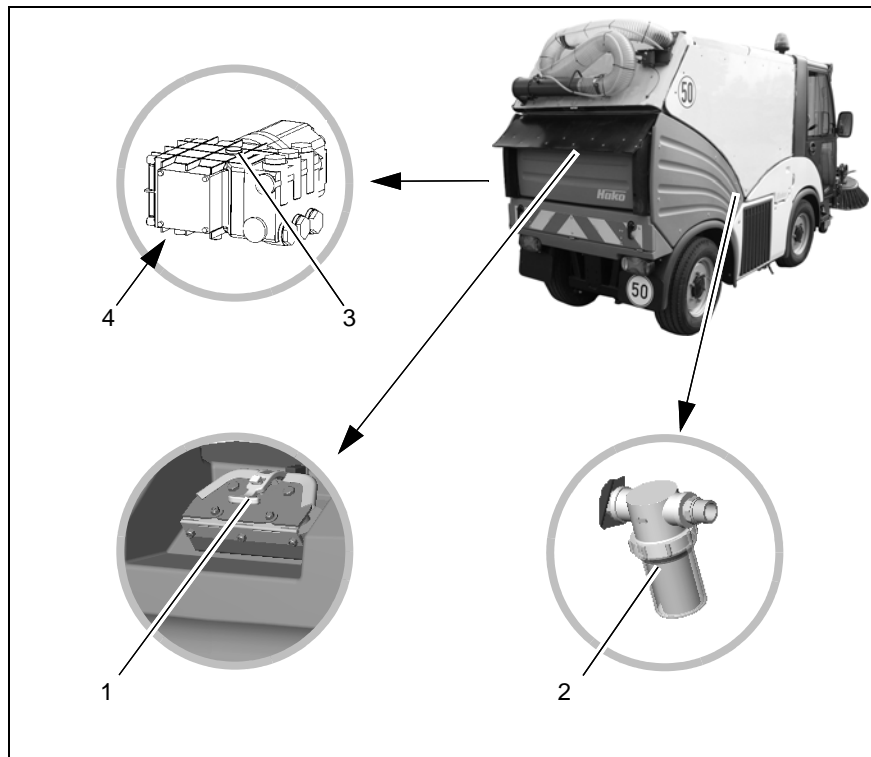
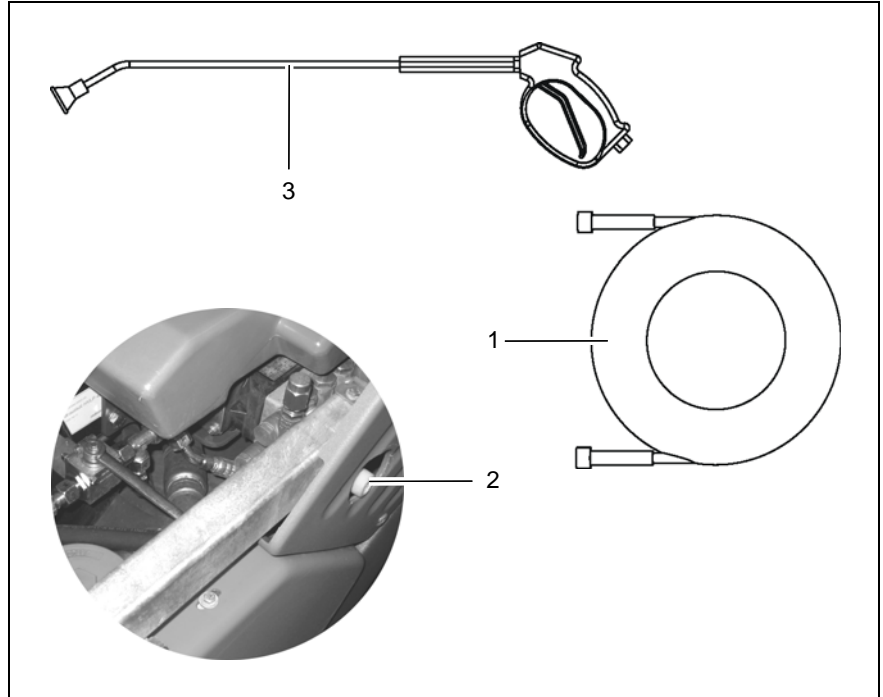


Fig.2



## Starting Up

5. Remove the protective cap and attach the pressure hose (Fig. 3/1) to the pressure washer (Fig. 3/2) (identical cap nuts at both ends of the hose).
6. Connect the spray gun (Fig. 3/3) to the pressure hose.



**Fig.3**

## Starting Up

### 2.4 Turning on the unit

1. Make sure that all control elements are off or zero and that the vehicle's parking brake is applied.
2. Turn the ignition starter switch (Fig. 4/1) to start the engine.



The engine will not start if the switching valve (Fig. 4/3) is still on when you try to start the Citymaster 2000!

3. Lift the sweepings container (Fig. 4/2) and set the switching valve (Fig. 4/3) to turn on the pressure washer. A = ON; B = OFF
4. Adjust the water jet at the tip of the spray ball as appropriate for the cleaning to be done.
5. Set the pressure regulator (Fig. 4/4) to the desired working pressure.



Water jets can be dangerous if not used properly. Do not point the jet to humans, electrical equipment or the machine itself!

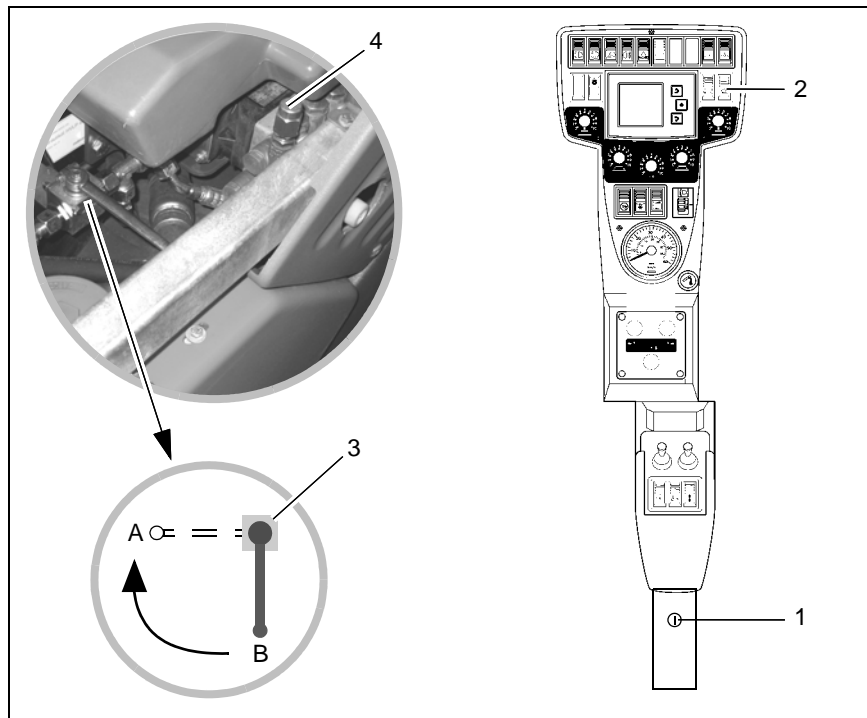


Fig.4

## Starting Up

### 2.5 Maintenance

Pressure washer to be serviced, cleaned and checked at regular intervals (BGV-D15). Technical competence to be verified once a year.

#### Oil level/oil change

Check the oil level in the crankcase before you start operating the pump. Screw out the dipstick (Fig. 5/1); with the machine being horizontal, verify that the oil level reaches the circular mark on the dipstick - fill up oil as necessary. Oil filling: 0.29 kg / SAE 30. Change the oil after the first 50 hours of operation and then every 500 hours of operation. The oil drain is located on the underside of the pump.

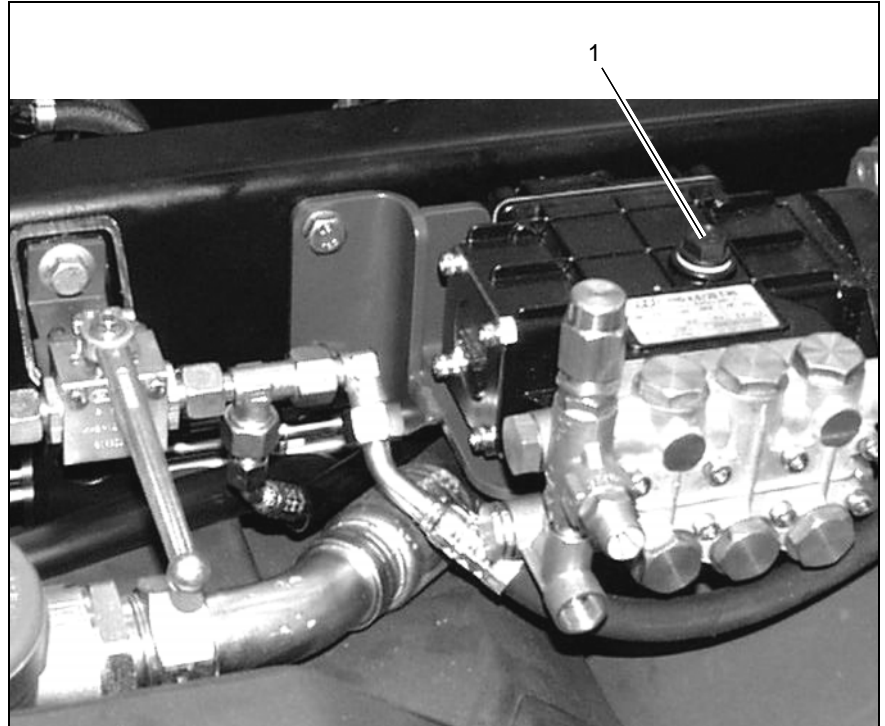


Fig.5



# Advanced Technology for a Cleaner, Better Environment



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