

***Hako***

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# Mounting and Operating Instructions

Sweeper (6113.07)  
for Hako-Profi-Variette (3632/3632.02)

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Please be advised explicitly that we cannot accept any legal claims 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 parts may guarantee a dependable machine and will make sure that your rights under current warranty are not affected.

Valid from October 1998

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It is our express intention that the good characteristics of the Hako-Profi-Variette should justify the confidence you demonstrated us by making this purchase. We have tried to supply you with an efficient, reliable machine of contemporary design.



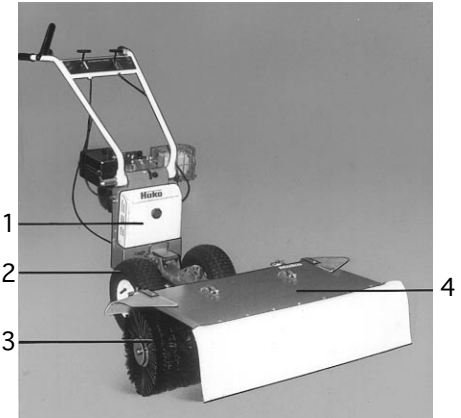
In this instruction book, all those items concerning your safety have been marked by the symbol . Please transmit those safety instructions also to any other machine operators. Before taking the machine into operation, please carefully read and comply with these instructions for use. For "General provisions for safety and prevention of accidents", please refer to page 15.

## Provisions for use

The Hako-Profi-Variette may be used only in its intended fields of application and work such as ground treatment, mowing meadows, as a snow plough and for other winter road service and for sweeping. Any other kind of use shall be deemed to be excluded from the intended fields of application and as such under the operator's risk. The use according to the intended fields of application includes also that the operating and maintenance conditions prescribed by the manufacturer are adhered to.

The Hako-Profi-Variette may be used, serviced and repaired only by persons who are familiar with the unit and who have been informed of possible dangers. Do never perform any modifications without the manufacturer's consent. Otherwise we cannot be held responsible for damage resulting therefrom.

The provisions for the prevention of accidents concerned as well as the other generally acknowledged regulations referring to safety, working medicine and road traffic must be adhered to.



- 1 Hako-Profi-Variette (3632.02)
- 2 Drive wheels
- 3 Sweeping roller (5899)
- 4 Sprinkling device (5840.07)

## Assembly and starting-up

Drive wheels (3074 or 3078) are required for operation of the Hako-Profi-Variette and Hako-Variette S as a sweeping machine.

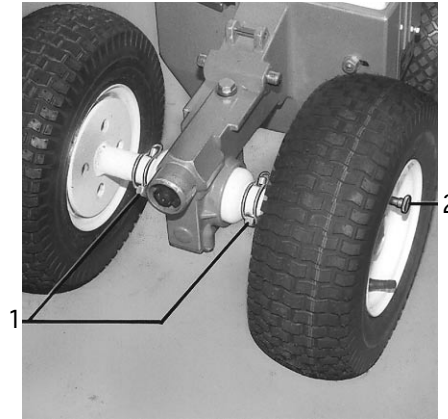
The sweeper comprises:

6113.07 sweeping machine

5899 sweeping roller

Recommended for sweeping of dirt:

5821 sprinkling device.



### Installation of the drive wheels (3074.07 and 3078.07)

The drive wheels must be mounted as described in Fig. II.

The folding plugs (II/1) are used to fasten the wheels to the drive shaft. Make sure that the retaining yokes of the folding plugs are tilted contrary to the sense of rotation. When using the Hako-Variette for sweeping, make sure that the wheels are safely connected to the operating shaft by means of the stop bolts (II/2).

The stop bolts must be locked, as required, either at one wheel (differential effect) or at both wheels (differential locked).

To move the Hako-Variette without the engine drive assembly being engaged, pull out the two stop bolts and lock them by a rotation through 90°.

Locking-in will be effected by inverse sequence of operations. The tire pressure in the drive wheels must be 1.0 bar.

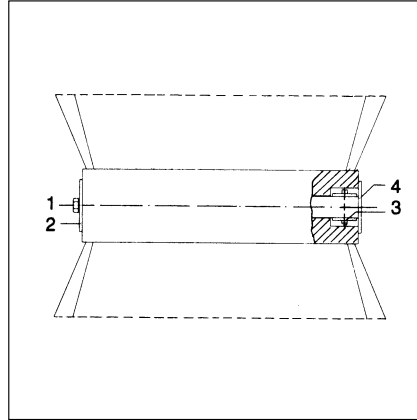
**Note:** The cranked broom rings must be arranged towards the out-side and towards the center.

The other half broom section will be installed in the same way.

- Fasten the protective cover to the sweeper at the two hinged lids.

## Installation of the sweeping roller (5899) to the sweeper

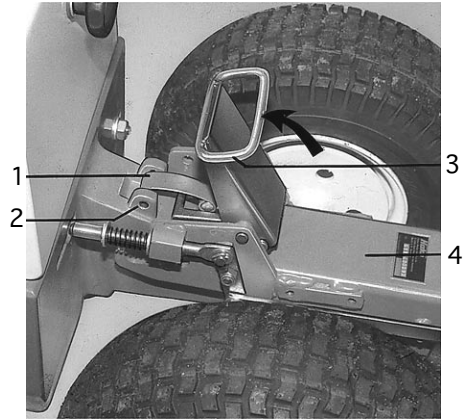
- Unscrew the tightening screw (1) and remove the thrust plate (2).
- Remove the broom centerpiece.
- Slip the broom axle (4) onto the gearbox shaft and fasten it using the tightening pins (3).
- Reposition the broom centerpiece; then fasten it using the thrust plate (2) and the tightening screw (1). The other half broom section will be installed in the same way.



## Attachment of the sweeper

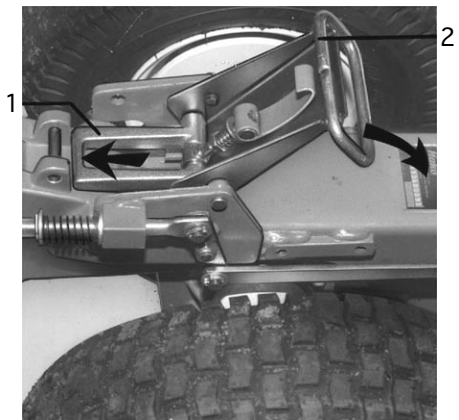
The sweeper has been equipped with an attachment beam (III/3). For attachment, proceed as described below:

- Disconnect the PTO shaft drive.
- Put the sweeper on the support which was tilted down previously (the support will tilt upwards automatically when the machine moves forward).



- Push the Hako-Variette into the rest at the sweeper (the pins must be placed in the rest).
- Attach the spring pull shackle (III/1) into the clamping piece (III/2) and tilt the fast coupling (III/4) down to the machine.

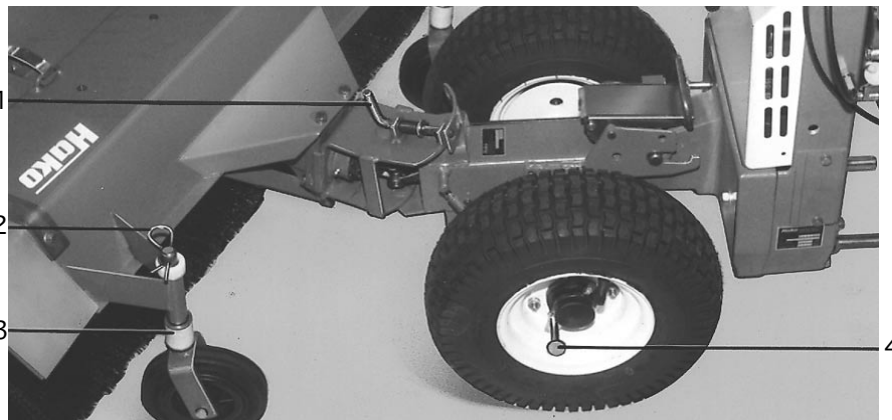
Now the implement is safely coupled to the basic machine and a frictional connection is established.



IV

## Removal of the sweeper

- Tilt down the support.
- Tilt up the fast-coupling (1) and press it down forward, in order to make sure that the Hako-Variette and the sweeper are pressed apart by the bracket (2).
- Lift the Hako-Variette slightly at the girder and pull it out of the rest at the sweeper.



V

## Operation

### Working and operating instructions

Before starting to work, perform the following adjustments:

- Adjust the girder to the stature of the operator.
- Set the machine to slow speed.
- Set the broom contact pressure according to the ground conditions at the spring buckles (III/4).
- Start the engine and let it warm up for some time.

- Engage the control lever for the PTO shaft.

- Slowly engage the unit.

When engaging the Hako-Variette the wheel drive assembly and the sweeper are put into operation simultaneously. If frequent turning manoeuvres are required, it is recommended to drive the left-hand wheel only. When sweeping corners or restricted areas, make sure that the wheel drive assembly is completely disconnected (refer to section "Installation of the drive wheels 3074.07 and 3078.07" on page 12).

The sweeper can be adjusted so that the broom sweeps in a straight line, or that the dirt is transported either to the right or to the left, depending on the pitch of the broom. The inclination is adjusted by means of the lock assembly (V/1). The max. working width is 35.4 in. (90 cm).

## Adjustment of the broom contact pressure

The broom contact pressure should be adjusted according to the ground conditions, as an excessive pressure will cause a great power consumption and an increased wear of the broom. The adjustment should be effected on a level surface while the two supporting wheels are trailing.

To increase the broom contact pressure, remove the spring pin (V/2) and change the position of the plastic rings on the supporting wheel shaft to the left and right, from the top to the bottom.



## General provisions for safety

Besides the instructions specified in this manual, the general provisions for safety and prevention of accidents as stated by legislation have to be adhered to. Do not put aside this manual without having read it, even if you already did some job using a motor-powered hoe or a single-axled tractor. Have the time now – saving it later! The operator is responsible to any people within the working area. Children have to be kept at distance from the Hako-Profi-Variette while in operation. It is not allowed to stay within the zone of danger. Warning and instruction plates fitted to the Hako-Profi-Variette show important notes for operation without danger. Before use, the Hako-Profi-Variette and its tools (mounted implements) must be checked for good condition and safety at work. Be careful when handling fuel – increased danger of fire. Do never re-fill fuel in the neighbourhood of open fire or sparks which might cause ignition. Do not smoke when refilling. Stop the engine at all times before re-

filling fuel. Fuel must not be re-filled in closed rooms. Remove residues of dirt and grease at all times, in order to prevent fire. Spilled fuel should be wiped off immediately.

It is essential to get familiar with all controls and components and with their functions, before starting operation. During operation, it will be too late to do so.

## Operation

Start the engine at idling speed only, and from the girder end (do not step in front of the machine or of the tools). The safety clearance resulting from the design of the guide girder must be kept existing at any time during operation. If hoeing and mowing work on slopes and hills involves any risk that the machine might get sliding, it has to be held by some person using a bar or a rope. That person must keep at the uphill side of the machine and at sufficient clearance from the tools. Work is allowed only while the guards are in use as specified. That guard has to be adjusted to the depth of work in such a way that just that part of tool remains uncovered which penetrates the ground. Stout footwear is required for work with the machine.

When leaving or transporting the machine, stop the engine.  
Do never leave the machine unattended as long as the engine is running.

### **Mounted implements/tools**

Special carefulness is required when implements are being coupled or mounted. Secure mounted implements only by means of the devices provided for that purpose. Put the machine into operation only if all guards are fitted and in their correct positions. Mount only those implements which were approved or recommended by Hako-Werke.

### **Operation with PTO shaft**

Implements driven by PTO may be coupled only when the engine does not run. During PTO operation, nobody is allowed to stay within the range of the rotating PTO or universal shaft. When the PTO shaft is disconnected, the implement driven by it will continue working for a short period of time, due to its inertial force. Do not step too close to the machine during that time. Work on it is allowed upon complete standstill only. When PTO-driven implements are dismantled, the PTO shaft must be covered by a protective cap.



## **Maintenance/repairs**

Whenever work is done at the tools, the engine has to be stopped, the spark plug socket has to be disconnected, and steps have to be taken to preclude involuntary putting into operation or unintentional movements. Cleaning work, whenever possible, should not be done by hand, but by means of suitable tools. For any kind of maintenance, repair work, adjustments etc., suitable tools should be used, too. Oil and fuel must be collected and removed in accordance to the legal provisions.

At all times, before taking the Hako-Profi-Variete into operation, check it for safe operating conditions. For safety reasons, original Hako spare parts only should be used.

## **Oilchange at the broom gearbox**

The broom gearbox is filled with oil which is to be changed at least once per year.

Filling capacity: Approx. 0.07 US gal. (0.25 l) of trans-mission oil, Mobilube GX 90, make Mobiloil or an equivalent oil of another manufacturer.

The oil level must reach the edge of the filler orifice when the machine is placed in horizontal position. The filler plug is installed on the front end of the gearbox.



## Greasing of the sweeper

The following lubricating points must be lubricated at regular intervals:

- Propeller shaft
- Self-aligning bearing in the bearing bracket

The following points are to be greased:

- Support wheel shanks
- Sliding surfaces of the dog clutch

Lubricant: Mobilgrease MP, make Mobiloil or an equivalent grease of another manufacturer.

## Parking the sweeper

The sweeper, when it is not used for an extended period of time, must be parked so as to prevent the bristle tips from being kinked. The lifetime of the sweeper will be increased by frequent and thorough cleaning – with a jet of water –, in particular after sweeping saliferous matter.

In case the sweeper is to be put out of operation for an extended time, it is recommended to coat it with an oil spray.

<b>Noise Level</b> Hako-Profi-Variette with pre-sweeper 6113.07	dB (A)	81
<b>Vibrations</b> The frequency weighted acceleration measured according to EN 1033 which have an effect upon the upper limbs (hand-arm-system) amounts under normal working conditions by the Hako-Profi-Variette (3632.02) Hako-Profi-Variette (3632.02) with mounted sweeping machine (6113.07)	m/s <sup>2</sup> m/s <sup>2</sup>	3,8 3,1

# EC Declaration of Conformity

according to  
Directive 89/392/EEC

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**Hako-Werke GmbH**  
**Hamburger Straße 209-239**  
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declare under our sole responsibility,  
that the product

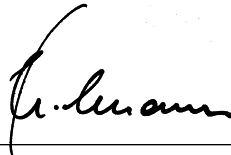
**Kehrmaschine**  
**Typ: 6113**

to which this declaration relates corresponds to the relevant basic safety and health requirements of the Directive 89/392/EEC.

For the relevant implementation of the safety and health requirements mentioned in the Directives, the following standard(s) and/or technical specification(s) has (have) been respected:

**EN 292**  
**EN 294**

Bad Oldesloe, 16.08.1994



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Bernd Heilmann, Managing Director



# **Hako**

## **Spitzentechnik für eine saubere und schönere Umwelt**

Superior technology for a cleaner and better environment



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