

Operating manual (Translation of the original version)



TTV 1100

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1 Introduction

This operating manual contains instructions for using the hand-operated sweeper.

Our products are subject to continuous improvement. Therefore, design changes that were made after this manual went to print could not be incorporated. If you have any questions, please contact our Service department.

The operating manual must be read and applied by all persons who operate the sweeper.

Apart from the operating manual and the regulations for accident prevention applicable in the country of use and the location of use, the common, recognised rules for safe and technically correct working must also be followed.

1.1 Usage conformant with intended purpose

The appliance is intended exclusively for sweeping on solid surfaces (for example.: parking areas, walkways, shop floors). The area to be swept should not be wet.

The sweeper may only be used by reliable and instructed personnel. Prevent children, juveniles and other unauthorised persons from using the machine (e.g. by pulling out the key after use).

Any other use, or any use over and above that, will be considered to be non-conformant with intended purpose. The manufacturer rejects any and all liability for damage resulting from such use. The risk is that of the user alone.

Usage conformant with intended purpose also includes compliance with the operating manual and the inspection and maintenance specifications. Drive the sweeper only along expressly marked routes and spaces.

2 Safety information

1. The machine should only be used in a flawless state, as well as in keeping with its intended purpose, in a safety-conscious and risk-conscious manner and in compliance with these operating instructions.
2. In addition to the operating manual, please heed general legal and other binding regulations for accident prevention and environmental protection.
3. Sweeping and picking up of flammable, toxic or explosive substances, along with flammable gases or diluted acids and solvents, burning or smouldering objects is prohibited!
4. The appliance is not suitable for picking up fluids, cables, cords, wires or the like.
5. The machine should only be used with the dust box fitted to prevent injuries caused by parts being slung out.
6. Transporting loads with the sweeper is not allowed.
7. Faults should be eliminated immediately, particularly those that could impair safety.
8. Do not make any changes, modifications or additions to the sweeper without the approval of the manufacturer.
9. Replacement parts must meet manufacturer specifications. This is always ensured by using original replacement parts.
10. Ensure that operating media, auxiliary media and replacement parts are disposed of in a safe and environmentally-friendly manner, particularly batteries!
11. Suitable non-slip footwear should be worn to avoid accidents.
12. If you have any questions, please contact our Service department.
13. Persons (including children) who are not able to use this machine safely due to their physical, sensory or mental capabilities or their inexperience or lack of knowledge may not use this machine without the supervision or instruction by a responsible person! Children should be supervised to ensure that they do not play with the appliance.
14. Caution: loose clothing can be caught and drawn in on rotating parts.
15. Observe the maximum climbing capability and maximum permissible slant specified in the technical data when driving transversely to an incline. The unit can topple over if the

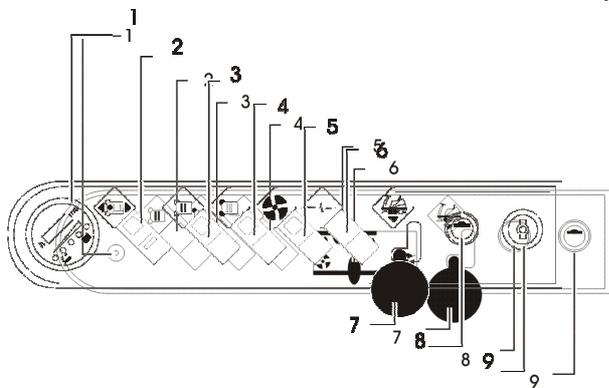
-
- steering is turned too sharply, particularly on inclines. Adjust your driving style and speed to suit conditions.
16. The machine is not approved for use on roads or streets.
 17. Warning: risk of crushing. Maintain a safety clearance of 2 metres to other people during emptying through high dumping.
 18. Maintenance and repair work on the hydraulics and high dumping mechanism should only be entrusted to a specialist firm.
 19. Personal safety equipment, particularly hearing protection, must be worn when operating the machines.
 20. The machine should only be used outdoors or in adequately-ventilated rooms.
 21. Removal of the motor filter while the motor is running can lead to a sudden increase in motor speed. This applies in particular if the filter is dirty or blocked in another manner.
 22. Work using the unit should be interrupted at regular intervals.
 23. Observe general guidelines relating to explosive, inflammable and highly flammable fuels. Particular care should be exercised when filling the machine with fuel to ensure that the motor is deactivated and cold, and that filling is only realised outdoors or in a well-ventilated location.
 24. Warning: parts of the machine become hot during use. There is a risk of burn injuries.

3 Device Description

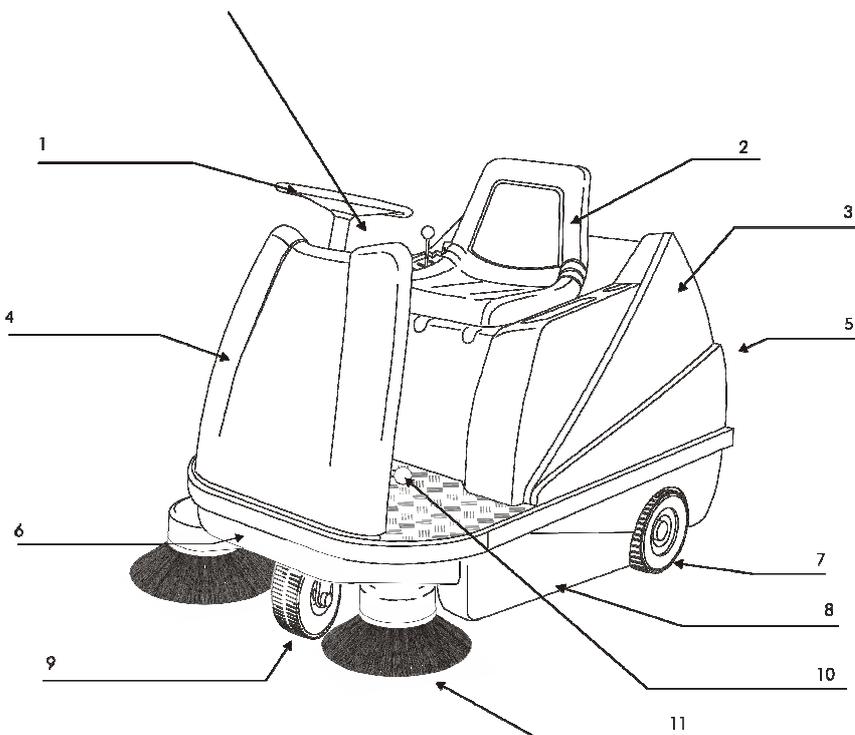
The Sweeping & Suction Machine is driven hydraulically by an internal combustion engine.

Model TT/V 900 operates by using a pivotable side brush to convey the sweepings to the two sweeping rollers arranged parallel to the direction of motion. These project the sweepings overhead into the dust container positioned behind it.

Optionally two side brushes may be installed. Model TT/E 1100 is equipped with two pivotable side brushes. If necessary, the dust stirred up by the sweeping rollers is caught by the dust suction unit in a lamellar filter inside the machine. The lamellar filter is cleaned by an electrically controlled filter cleaning device.



- | | |
|---|-----------------------------------|
| 1 Battery check light | 2 Switch for the sweeping rollers |
| 3 Switch for the side brushes | 4 Switch for filter cleaning |
| 5 Speed control for the motor | 6 Suction control |
| 7 Lowering lever for the sweeping rollers | 8 Cold starting device |
| 9 Key-operated switch | |



- | |
|---------------------------------------|
| 1 steering wheel with steering pillar |
| 2 driver's seat |
| 3 main trim panel |
| 4 steering pillar trim |
| 5 dust container |
| 6 front trim panel |
| 7 driving wheel |
| 8 left side trim panel |
| 9 rear wheel with drum break |
| 10 lowering lever for side brushes |
| 11 pivotable side brushes |

3.1 Initial Startup

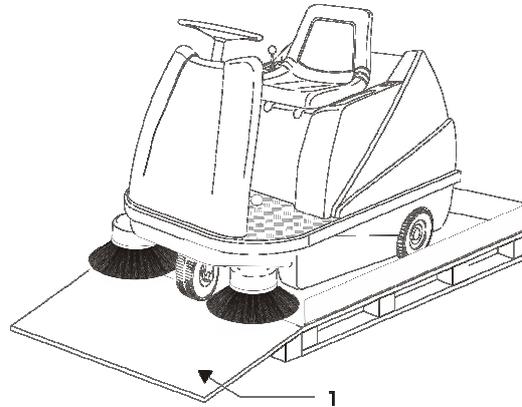
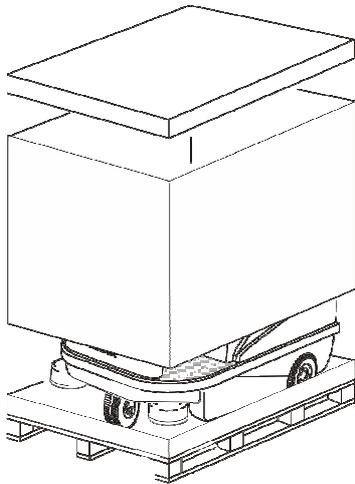
The Sweeping & Suction Machine is supplied with batteries

Standard:

- Open the transport packaging.
- Take off the complete hood. Lift up hood at back and lift the front spigots of the hood out of the retaining.
- Fit in the batteries.
- Replace the hood panel.
- Mount the side brushes.
- The Sweeping & Suction Machine is ready for use.
- Drive the Sweeping & Suction Machine over a ramp out of the transport packaging.

Use a unit ramp. The ramp must be designed in such a way as to allow the rear wheel as well as the drive wheels to travel across it.

If this is not observed, damages to the Sweeping & Suction Machine mechanics will occur.



1 Unit Ramp

- Push the knob of the cold starting device downward.
- Adjust the speed to operating speed. (motor speed control to the very front position).

4.1.4 Driving forward:

- Start up the Suction & Sweeping Machine
- Step on the brake.
- Push the driving direction switch forward.

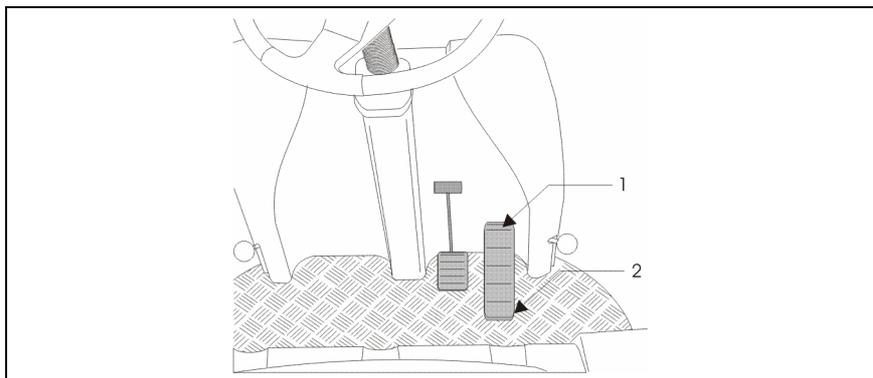


The drive-system only can be operated when speed control for the motor is pushed to working-rpm (flywheelclutch).

- Carefully step on the accelerator (forward).

4.1.5 Driving backwards:

- Carefully step on the accelerator (backwards)



1 Forwards

2 Backwards

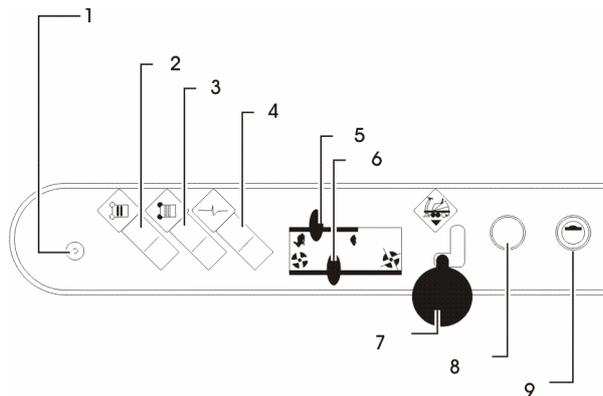
4.2 Sweeping

4.2.1 Operatting the Sweeping Rollers

- Start the Sweeping & Suction Machine.
- Switch the toggle switch for the sweeping rollers to ON Position.
- Unlatch the lowering lever of the sweeping roller.

Stopping Sweeping Rollers Operation.

- Pull lowering lever of the sweeping rollers towards yourself.
- Switch toggle switch for the sweeping rollers to OFF position.
- Let the lever snap in arresting position.



- | | | | |
|---|---|---|---------------------------------|
| 1 | Battery check light | 2 | Switch for the sweeping rollers |
| 3 | Switch for the side brushes | 4 | Switch for filter cleaning |
| 5 | Speed control for the motor | 6 | Suction control |
| 7 | Lowering lever for the sweeping rollers | 8 | Cold starting device |
| 9 | Key-operated switch | | |

4.2.2 Operating the Filter Cleaning Device

The filter cleaning device prevents the lamellar filter from being blocked by debris.

- The suction can be stopped by shutting down the motor or by closing the suction cover.
- Depress the toggle switch for the filter cleaning device for about 5 to 10 seconds.
- The filter cleaning device begins operation.

4.2.3 Operating the Side Brushes

The side brushes are fixed to swingers. Whenever the side brushes hit an obstacle they swing back under the vehicle to avoid damages.

- Start the Sweeping & Suction Machine.
- Unlatch the lowering lever of the side brushes.
- Switch toggle switch for the side brushes to ON position.
- Push the lever down.

Stopping Side Brush Operating.

- Pull up the lowering lever for the side brushes.
- Switch toggle switch for the side brushes to OFF position.
- Let the lever snap in arresting position.

4.2.4 Operating the Suction

The suction prevents dust formation during sweeping operations.

- Start the Sweeping & Suction Machine.
- Push the suction control forward to open the cover of the suction.

CAUTION!



To avoid damage to the filter, use the lever to close the cover before picking up wet sweepings!

- Depress the toggle switch for the filter cleaning device for about 5 to 10 seconds.
- The filter cleaning device begins operation.

4.3 Adjustment of Driver`s Seat

- Loosen the seat arresting device and shift the driver's seat on the seat support to a position that feels comfortable to you.

4.4 Turning Off the Sweeping & Suction Machine

- Depress the brake pedal.
- Lock the brake by pulling the locking lever towards the driver's seat.

When the brake now is relieved the brake pedal must remain in depressed position.

All of the pilot lamps on the switch are off.

- Switch off all actuators.
- Lift up the side brushes and arrest the lowering lever for the side brushes.
- Lift up the sweeping rollers and arrest the lowering lever for the sweeping rollers.
- Turn the key counterclockwise and remove it from the key switch.
- Turn the battery master switch counterclockwise and remove it from the socket.

4.5 Operating the Filter Cleaning Device

The filter cleaning device prevents the lamellar filter from being blocked by debris.

- Close the exhaust flaps.
- Wait until ventilation wheel stands still.
- Apply filter cleaning device at regular intervals.
- Depress the toggle switch for the filter cleaning device for about 5 to 10 seconds.

The filter cleaning device begins operation.

4.6 Emptying the Dust Container

The dust container is the place where the sweepings are collected.

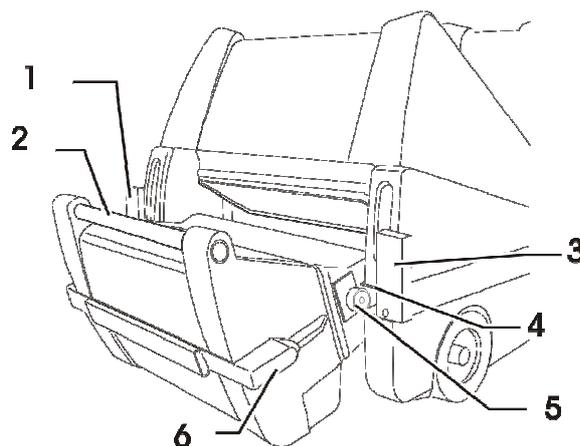
It is positioned at the back of the Sweeping & Suction Machine.

The dust container must be emptied regularly and especially after each use.

4.6.1 Removing the Dust Container

Turn the dust container locking upward.

Pull out the dust container from the Sweeping – & Suction Machine by the gripping handle until the front dust container guide rails are free.



- | | |
|-------------------------|-----------------|
| 1 locking device | 2 recessed grip |
| 3 locking device | 4 guide rail |
| 5 dust container guides | 6 roller |

At the back of the dust container two guiding rollers are installed to make the removal easier.

- Lower the dust container to the ground

A number of rollers and a recessed grip are positioned at the bottom of the dust container.

- Remove the dust container completely from the Sweeping & Suction Machine.
- In order to empty the dust collecting box use the free hand to take hold of the recessed grip.
- The sweepings are discharged through the opening at the bottom of the dust bin.
- Empty sweepings into appropriate containers only.

4.6.2 Reinserting the Dust Container

- Place the dust container before the dust container retaining.
- Bring the dust container's front guides up to the same level as the guide rails.
- Slide the dust container into the Sweeping & Suction Machine.
- Turn the locking device downward.

5 Service and Maintenance

5.1 Safety Information

Only complete the type of maintenance work described in the following chapter. All other maintenance and upkeep work may only be carried out by the manufacturer or by companies and persons authorised by the manufacturer, who are familiar with the relevant safety specifications, because portable devices in industrial use are subject to the safety test according to VDE 0701.

Closely follow the steps listed in the maintenance instructions. The improper completion of maintenance tasks may result in malfunctions when using the sweeper and may possibly render the warranty granted null and void.

Disconnect the spark plug when working on the engine. Observe the machine's safety stickers!

Maintenance work/ troubleshooting at the electric motor must not be done while the electric motor is running.

Use only flawless and appropriate tools to complete maintenance work.

Note the requirements for spare parts (see Spare parts).

If covers and/or safety devices were removed during maintenance work/repairs, they will have to be reattached prior to starting the sweeper.

For carrying out any work on the sweeper, it must be switched off and secured from rolling away by accident.

The open hood always has to be secured by the hood arresting device.

5.2 Cleaning

The suction sweeper may only be cleaned in the off state, when it is dry.

The suction sweeper is a machine with electrical components.

WARNING



Moisture damages the electronics of the device. Moisture can result in leakage currents and short-circuits.!

Do not use any high-pressure cleaners

5.3 Brake

DANGER!



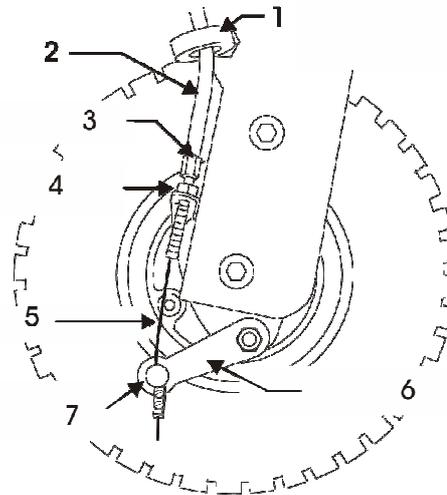
The brake is a component affecting operational safety. All work pertaining to the maintenance and replacement of brake parts must be executed by professionally trained personnel!

The brake (drum brake) acts on the rear wheel and is controlled via Bowden pull wire by the brake pedal.

The brake adjustment is situated on the right side of the rear wheel facing in driving direction.

5.3.1 Adjusting the Brake

- Hold the adjustment nut of the Bowden pull wire in place with a wrench.
- Loosen the back nut of the Bowden pull wire.
- Push the brake lever upward until the brake lever is obstructed.
- Hold the brake lever in this position.
- Tighten the back nut of the Bowden pull wire.



- | | |
|----------------------------|--------------------|
| 1 Bowden pull wire guiding | 2 Bowden pull wire |
| 3 adjustment nut | 4 back nut |
| 5 brake pulley | 6 brake lever |
| 7 brake pulley arresting | |

Now conduct a brake check.

5.4 Brake Check

Free Movement of Rear Wheel

You must be able to move the Sweeping & Suction Machine by pushing when the brake is released.

The rear wheel must not be blocked. Brakes that are set too tightly damage the brake drum.

5.4.1 Correct Operating of Brake

Carefully drive a few meters at moderate speed.

Depress the brake pedal. The Sweeping & Suction Machine must stop.

If the brake check should not render a satisfying result the setting procedure must be repeated.

Further Setting Possibility:

The Bowden pull wire does not allow tightening in the way described above any longer.

- Loosen the brake pulley arresting.
- Lift the brake lever up until it is obstructed.
- Hold the brake lever in this position.
- Pull the brake pulley down and push the brake pulley arresting upward.
- Fasten the brake pulley arresting.
- Carry out the above described brake check.

5.5 Wheels

The Sweeping & Suction Machine is equipped with three wheels.

The standard rear wheel tire is made of solid rubber.

The two drive wheels are standard equipped with pneumatic tires.

Optionally the drive wheels are delivered with solid rubber tires.

Defective tires must be repaired or replaced by expert shops only.

Deliver the complete wheel (rim and tire) to the tire shop.

5.6 Steering

The steering transference to the rear wheel is managed by a chain and two chain sprockets.

Grease the chain sprockets at regular intervals. Cf. Maintenance Chart.

5.7 Removing the main trim panel (hood)

The hood of the Suction & Sweeping Machine can be removed for maintenance and repair work purposes.

5.7.1 Lifting off the hood

- Pull the key out of the key-operated switch.
- Open the hood.
- Lock the hood against unintentional shutting.
- Insert the hood arresting into the hole.
- Disconnect the plug connection for the contact switch of the driver's seat.
- Close the hood.
- Reach underneath the driver's seat and to the rear edge of the hood.
- Lift up the hood.
- Remove the hood

5.7.2 Replacing the hood

- Reach underneath the driver's seat and to the rear edge of the hood.
- Lift up the hood.
- Put the hood in place on the Suction & Sweeping Machine.
- At the front edge of the hood there are two locating pins.
- Insert these pins into the receptacles in the floor panels.
- Open the hood.
- Lock the hood against unintentional shutting.
- Insert the hood arresting into the hole.

If the plug connectors are not connected, the Suction & Sweeping Machine cannot be started.

- Close the hood

5.8 Replenishing operating fluids

Safety information for handling operating fluid

Do not keep easily combustible materials such as fuel, matches, or similar, in the vicinity of a running motor.

Only replenish fuel in an open or well ventilated place.

CAUTION!



Fuel is highly combustible and explosive!

Only replenish fuel at motor stand-still!

There must not be any fuel in the filler cap! Do not overfill the tank!
Make sure the tank cap is closed.

Do not smoke, and keep away open fire while filling the tank and in the fuel storage area.

Remove spilled fuel immediately in the vicinity of the motor!

Wait before starting the motor until the petrol fumes have evaporated!

Observe the specified oil and fuel qualities (see page 29 Technical Data Filling Substances) and store all of these substances in certified containers only.

Be careful when draining hot oil.

Danger of burning.

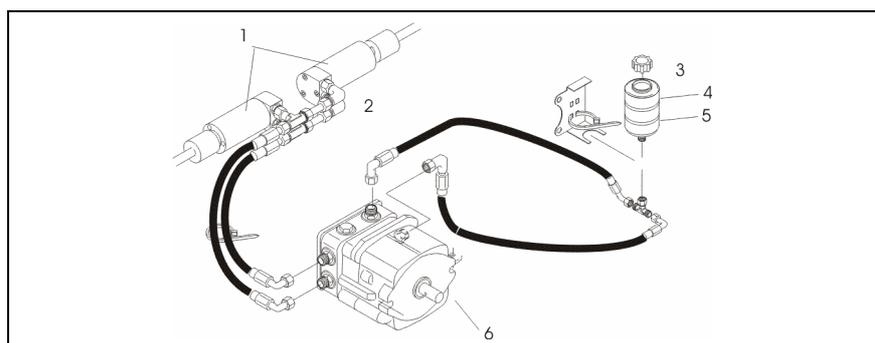
Dispose of used oil according to legal requirements.

5.8.1 Checking the hydraulic oil filling level

- Open the hood.

On the left hand side of the machine, seen in travel direction, the hydraulic pump is positioned. Next to this pump, there is a hydraulic tank containing 1 litre of hydraulic oil. If the level of the hydraulic oil can be seen in the middle of the two markings “min” and “max”, the oil-level is correct.

If the oil-level is below “min”, hydraulic-oil will have to be filled up.



- | | |
|--------------------|--------------------|
| 1 Rear-axle motors | 2 Rear-axle motors |
| 3 Hydraulic-tank | 4 Max |
| 5 Min | 6 Hydraulic Pump |

- Unscrew the cap of the hydraulic tank.
- Place a clean funnel into the tank carefully add hydraulic oil (HLDP 46 oder HLP 46) until the level reaches middle-position between “min” and “max”

- Remove the funnel and close the cap of the hydraulic tank.
- Check oil-level after some minutes of operation of the machine

5.8.2 Replenishing fuel

- Switch off the Suction & Sweeping Machine.
- Allow the motor to cool down.
- Open the hood.
- Unscrew the tank filler cap.
- Place a clean funnel into the tank filler neck.
- Pour in a little fuel and wait until the fuel has drained from the funnel.
- Repeat this process until the tank has been filled.
- Remove the funnel from the tank filler neck.
- Close the tank.
- Should fuel have been spilled, wipe it away.

5.9 Safety information regarding hydraulics

All work on the hydraulic system has to be carried out by skilled personnel or persons charged with this work. Please contact the manufacturer.

The hydraulic system operates under high pressure!

Do not change the adjustment of the overpressure valves!

Hydraulic oil escaping under pressure can permeate through the skin causing severe injuries.

(Consult a doctor at once, in case of injury by pressure oils. Otherwise severe infections may ensue).

Danger of being burnt (!) by hydraulic oil when draining oil at operating temperature !

Hydraulic lines require visual inspection at regular intervals.

Use suitable safety equipment to prevent injuries.

Replace hydraulic hoses immediately in case of

- damage to the exterior layer reaching to the inner lining (e.g. chafe marks, tears, cuts)
- embrittlement of the exterior layer (fissures in the hose material)
- deformations of hydraulic lines, in pressureless state or pressure loaded, that deviate from the natural shape of the hoses.

- deformations at bends such as squeezes, kinks, separation of layers, bubbles.leaks.

Use spare parts complying with the requirements specified by the manufacturer only. This will always be the case, if original spare parts are used.

5.10 Replacement of Filter

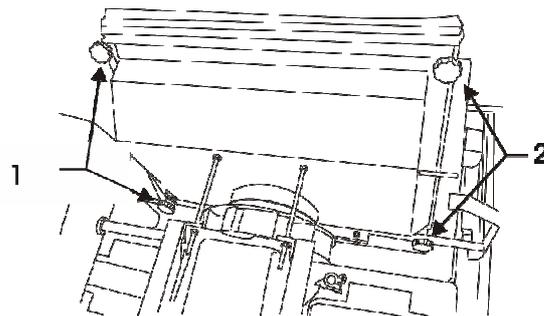
The filter removes fine dust.

The filter is cleaned by an electrical vibrating device.

5.10.1 Removal

- Open the hood.
- Lock hood securely using the hood arrester.

The filter is held in the fixture by 4 star handles.



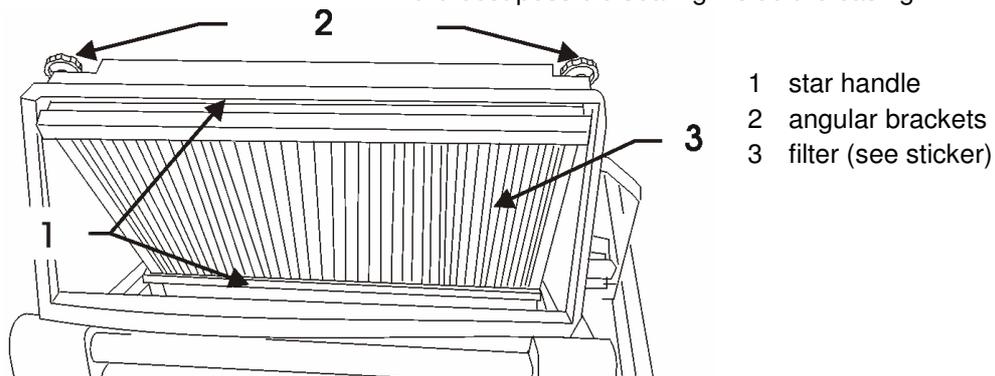
1 star handle

2 star handle

- Loosen the top two star handles.
- Swing up the top angular bracket.
- Loosen the bottom two star handles.
- Pull the filter out of the fixture.

5.10.2 Reinsertion

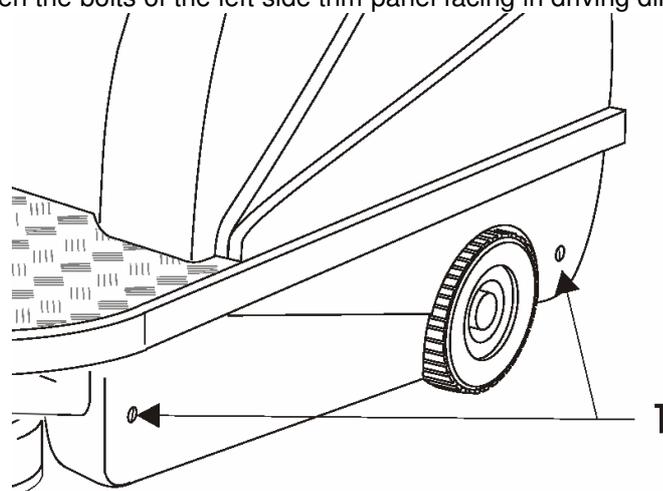
- Place the filter into the lower angular bracket.
- Swing the upper bracket over the filter..
- Tighten the top star handles slightly.
- Tighten star handles evenly crosswise so that the filter snugly fits all around the seal.
- Adjust the bolts and the nuts in a way that, provides the filter with the best possible sealing inside the casing.



5.11 Sweeping Rollers Replacement

5.11.1 Dismounting the Sweeping Rollers

- Turn off the Sweeping & Suction Machine.
- Switch off the EMERGENCY OFF to avoid accidental starting.
- Pull lowering lever of the sweeping rollers.
- Arrest the lowering lever.
- Loosen the bolts of the left side trim panel facing in driving direction.

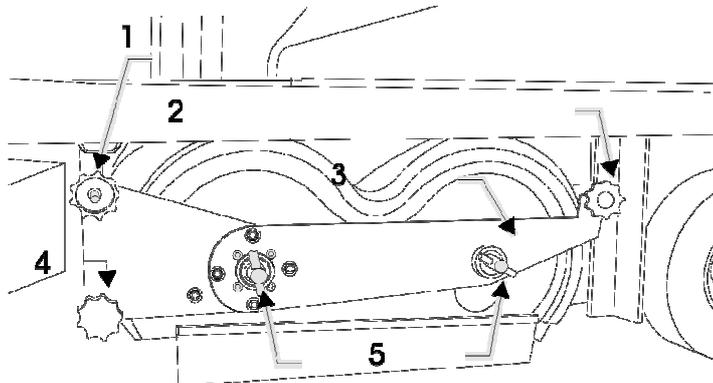


1 fastening bolts of side trim panel

- Remove the side panel.

The roller swing is held in place by three star handles.

- Loosen the star handles.
- Remove the roller swing.



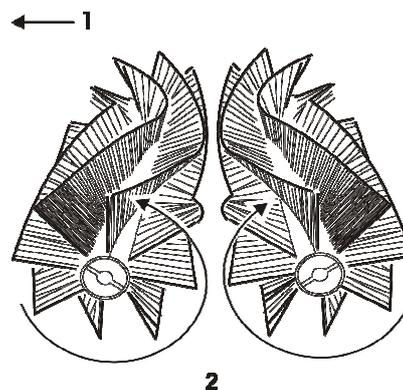
- | | |
|--------------------|----------------------------|
| 1 open star handle | 2 star handle with marking |
| 3 roller swing | 4 star handle |
| 5 turning lever | |

- Pull the sweeping rollers out of the machine and remove any debris, cords, etc., from the roller tunnel and from the pick-up pins.

5.11.2 Installing the Sweeping Rollers

- Push the sweeping rollers under the machine.

Observe the sweeping rollers' sense of rotation while sliding them in.



- | | |
|-----------------|---|
| 1 forward drive | 2 direction of motion of the sweeping rollers |
|-----------------|---|

Each roller end is equipped with a keyway.

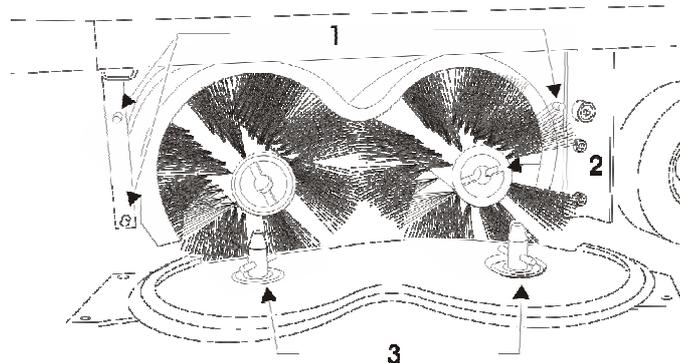
Turn the sweeping roller until the pick-up pin of the rear roller swing fits into the keyway of the sweeping roller.

Slide the sweeping rollers in as far as possible.

Set the front roller swing onto the free sweeping roller ends.

The roller swing is equipped with two turning levers.

Each turning lever end is equipped with one pick-up pin.



- 1 threaded rods
2 sweeping roller keyway
3 pick-up pin

- Turn the turning lever until the pick-up pin fits into the keyway of the sweeping rollers.
- Push the roller swing over the threaded rods.
- Make sure the sweeping rollers are fitted on both sides by the keyway into the pick-up pins and that all star handles are firmly tightened.
- Fasten the side trim panel.

5.12 Setting the Sweeping Rollers

5.12.1 Sweeping Contour Adjustment

For best cleaning results and to ensure the highest possible device efficiency, the sweeping rollers are equipped with a sweeping contour.

The sweeping contour should be set to approx. 50-60 mm at the rear roller.

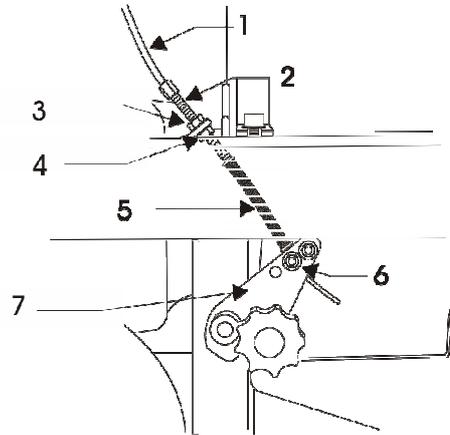
Establishing the Sweeping Contour:

Drive the Sweeping & Suction Machine to an area to be cleaned. Switch on the sweeping rollers without moving the sweeping machine. Allow the sweeping rollers to run for about one or two minutes without moving. Lift the sweeping rollers. Stop sweeping rollers operation and drive forward a few meters. The sweeping track visible on the ground is the sweeping contour.

5.12.2 Adjusting the Sweeping Contour

- Switch off the Sweeping & Suction Machine.
- Pull lowering lever of the sweeping rollers.
- Arrest the lowering lever.
- Open the hood.

- Secure the hood position by the hood arresting device.
- Guide the hood arresting into the holes at the bottom of the hood.
- Remove the right side trim panel facing in the direction of motion.



- | | |
|-----------------------------|-----------------|
| 1 Bowden pull wire | 2 threading rod |
| 3 counter nut A | 4 counter nut B |
| 5 spring | 6 holding screw |
| 7 sweeping roller retaining | |

Increasing the Sweeping Contour by Lowering Sweeping Rollers

- Loosen counter nut A on the threading rod of the Bowden pull wire.
- Turn counter nut A counterclockwise.
- Now lock counter nut A in place by counter nut B

Decreasing Sweeping Contour by Lifting Sweeping Rollers

- Loosen counter nut B
- Turn counter nut B clockwise by a few more threads.
- Lock counter nut B in position by counter nut A.

5.12.3 Further Possible Adjustment:

Take off side trim panel to the right facing in direction of motion.

- Loosen the holding screw.
- Move sweeping roller retaining to desired position.
- Tighten up the holding screw again and mount the side trim panel.

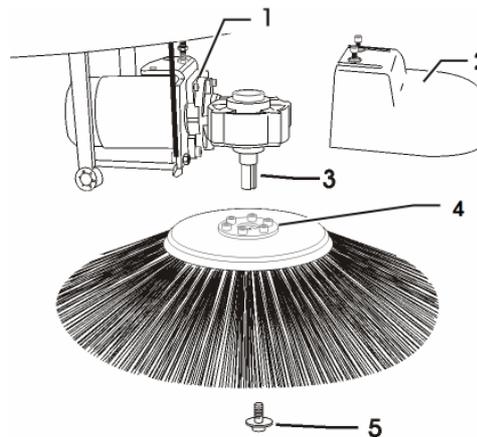
Original roller diameter: 285 mm.

When diameter has decreased to 245 mm, the roller needs to be replaced.

5.13 Replacing the Side Brush

5.13.1 Dismounting the Side Brush

- Turn off the Sweeping & Suction Machine.
- Pull up the lowering lever for the side brushes.
- Arrest the lowering lever.
- Lift up the side brush motor in order to get easy access to the fastening screws at the lower center of the side brush.



- | | |
|---------------------|----------------------------|
| 1 side brush motor | 2 side brush trimming |
| 3 shaft with keyway | 4 flange base with locking |
| 5 fastening screw | |

- Loosen the fastening screw at bottom center of each side brush.
- Pull the side brush down and off.
- Replace the side brush.

5.13.2 Mounting the Side Brush

- Fasten the flange plate to the side brush.

The flange plate is equipped with a locking.

The side brush motor shaft is equipped with a keyway.

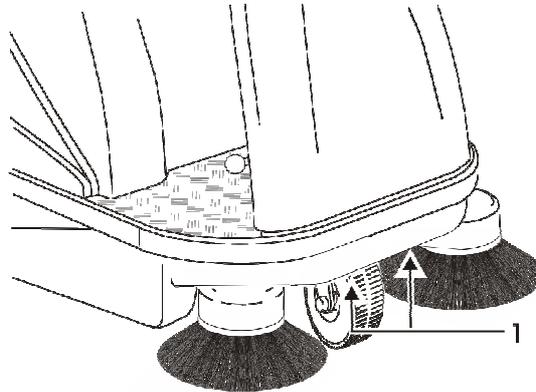
- Turn the side brush until the feather key fits snugly into the keyway.
- Fasten the side brush to the shaft of the side brush motor by us of the fastening screw.

5.14 Adjustment of the Side Brush

Operational wear necessitates additional adjustment of the side brushes.

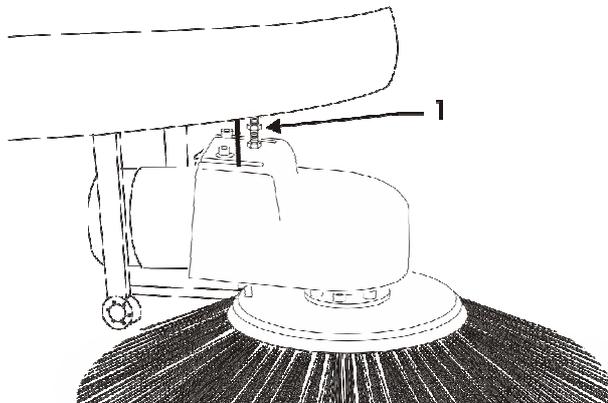
- Turn off the Sweeping & Suction Machine.

- Unlatch the lowering lever of the side brushes.
- Push down the lowering lever.
- Loosen the bolts of the front panel.
- Remove the front panel.



1 bolts for the front panel

- Loosen the bolt of the side brush level adjustment.
- Move the side brush to the desired position. .
- Tighten the bolt of the side brush level adjustment.



1 level adjustment bolt for side brush

- Fasten the front panel.

5.15 Maintenance Chart

5.15.1 Daily maintenance

Check the sweeping roller tunnel to see if objects have been jammed or dirt particles have seized up, diminishing the clear width of the sweeping tunnel or obstructing free movement of the roller brushes

Check acid filling level of the battery and replenish distilled water, if necessary

Check oil filling level of the motor and replenish, if necessary

Check oil filling level of hydraulic system and replenish, if necessary.

Check the machine as to visual damages and correct operation.

Check the state of the dust filter and clean, if necessary Empty the dust container.

Inspect hydraulic lines.

5.15.2 After each 50 operating hours also

Check acid concentration in the battery.

Clean and grease the battery poles.

Check tyre pressure, if air filled tyres are used.

Check if sweeping rollers are worn or obstructed by foreign objects and replace, if necessary.

Check sweeping contour and readjust, if necessary.

Check if side brush adjustment is worn and readjust or replace, if necessary.

5.15.3 After each 100 operating hours also

Check cable insulation and replace cables, if necessary.

Check all cable connections as to tightness.

Check brake pull and readjust, if necessary.

Check the profile of the tyres and replace tyres, if necessary.

Clean the dust filter and replace, if necessary.

Check dust suction as to foreign objects, and clean.

Do a test drive to check if all operational controls work.

Check whether the sweeping roller drive chain has been expanded too much.

Check all bearings as to wear.

Check all seals as to damage and tightness.

5.15.4 After each 200 operating hours also

Subject the hydraulic motor to functional testing.

Renew hydraulic oil.

Check play of steering and tighten the chain, if necessary.

Check all electronic components as to contamination.

In addition

Observe the maintenance instructions provided by the manufacturer of the motor. See annex

5.16 Disturbances, Disturbance Display, Remedy

Disturbance	Possible Cause	Remedy
No function indication at the control panel	Key-operated switch has not been activated Seat contact or hood contact switch has not been activated Flaw in electric connections Battery empty	Turn the key-operated switch check if load is OK Check plug-in connections Recharge the battery
Motor does not start (well):	Battery empty Cold start has not been pulled Fuel tank empty Low hydraulic oil filling level	Recharge battery or reverse starting see section on "Starting the Motor" Replenish fuel. Replenish hydraulic oil and repair flaws / air leaks
Propelling drive out of operation / low efficiency	Low hydraulic oil filling level	Replenish hydraulic oil and repair flaws / air leaks
Brush drive out of operation / low efficiency	circuit-breaker dis-activated	check reason for failure and only afterwards Re-activate circuit-breaker

Disturbance	Possible Cause	Remedy
Sweeping result not satisfactory	Side brush(es) or sweeping roller(s) not lowered	Lower
	Side brush(es) or sweeping roller(s) worn	Adjust / replace
	Trajectory clogged by dirt	Check if anything is jammed inside the roller casing
	Sweeping roller(s) out of operation	Inserted correctly? Is the motor turning?
	Too much dust production	Switch off the side brushes, if they are running
	Filter heavily soiled	Open up the cover
	Filter not correctly fitted	Clean the filter
	Imperfect sealing causing false air to be sucked in around the filter area	Check if it fits tightly
		Check if false air is being sucked in

5.17 Technical Data

Dimension and Weight	
Length:	approx. 1.450 mm
Width:	900 mm
Height:	approx. 1165 mm upper edge of steering wheel
Weight:	230 Kg
Sweeping Width	
without side brush	700 mm
with one side brush	900 mm
with two side brushes	1.100 mm
Dust Container Volume	90 Ltrs.
Turning Radius	1,2 m
Climbing Capacity	20%
Speed	0-6 km/h
Filter Area	4 m ²
Air Volume of the	900 m ³
Dust Suction	
supporting frame	Steel construction, powder coated

Dimension and Weight	
Trim Panel Parts	impact resistant plastic

Drive motor Honda-Motor GX 200K1QXW-4	
Weight:	16 kg
Cubic capacity	196 sqcm
Bore x stroke:	68 x 54 mm
Max. power output:	4,8 KW / 360 U/min
Max. torque:	1,35 kg-m

Hydraulic drive	
Propelling drive	Hydraulic motor OMP 50
Side brushes	12 V permanent-magnet DC-motor 90 W
Sweeping rollers	12 V permanent-magnet DC-motor 400 W

Filling Volumes	
Fuel tank	3,6 l Unleaded fuel
Oil filling	0,5 l
Reducing gear unit Motor oil class SG, SF SAE 10 W. 30	
Hydraulic system:	~ 2 l HLDP 46

Maximum Airborne Sound Level	
90 dB (A)	
Weighted Effective Acceleration Value	
Upper extremities are subjected to $< 2,5 \text{ m/s}^2$	

Tires	
Front: 1 solid rubber tire	
Back: 2 pneumatic tires Optional 2 solid rubber tires	
Tire size: 260 x 85	
Air pressure: 5,5 bar	

Brake
Drum brake
Parking brake
Acting on front wheel

5.18 Product Certification



5.19 Disposal

Dispose of faulty parts, especially electrical components, batteries and plastic parts according to the locally applicable waste disposal specifications.

Used batteries must be disposed of according to Directive 2006/66/EC.

5.20 Accessories and spare parts

Accessories and spare parts must conform to the requirements of the manufacturer. This is ensured by using genuine replacement parts.

5.21 Service

Stolzenberg GmbH & Co. KG
 Hamburger Straße 15-17
 D-49124 Georgsmarienhütte
 Telefon: 0049 / (0)5401 83 53-0
 Fax: 0049 / (0)5401 83 53-11
www.Stolzenberg.de

5.22 Transport

Transport the machine only in the switched-off condition, sufficiently well fastened.

6 EC Declaration of conformity (Translation of the original version)

according to the EC Machine Directive 2006/42/EC, Appendix II, No. 1A

Mr. Kai Stolzenberg – Management of the Stolzenberg GmbH & Co. KG, Hamburger Straße 15-17, D-49124 Georgsmarienhütte - is authorized to arrange technical information.

We hereby declare that the machine described below corresponds, in its conception and construction, as well as the model brought into use by us, to the basic safety and health requirements of the EC Machine Directive 2006/42/EC. In case of a change being made that has not previously been agreed with us, this declaration will lose its validity.

Manufacturer:	Stolzenberg GmbH & Co. KG, Hamburger Straße 15-17, D-49124 Georgsmarienhütte
Designation of the machine:	TTV 1100
Machine type:	Suction sweeper with tandem-roller-system
relevant EC Directives:	Directive 2006/42/EC Directive 2000/14/EC Directive 2004/108/EC

The following standards, in particular, were applied:

EN 292
EN 294

DIN EN 61000-6-2
DIN EN 60335-1
DIN EN 60335-2-69
DIN EN 60335-2-72

Georgsmarienhütte, 01.02.2010


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Kai Stolzenberg
(Dipl. Wirtsch. Ing., Management)