

Power-Flite[®]

Quasar 26 Sweeper



Operating Instructions

PW050-W26-U

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INTRODUCTION



Warranty

Please visit <https://www.powr-flite.com/warranty-registration> to learn more about your warranty and our warranty policy.



Warning Labels

Prior to operating the unit, read and understand completely this owner's manual paying special attention to warning labels. These labels indicate a potentially hazardous situation that could result in death or serious injury if not avoided. Use only as described in this manual.



Important

There are no owner serviceable parts inside this machine. Removal of screws and accessing internal components will void all warranty claims.

Your new Powr-Flite unit is a high quality, precision-made product. All parts used in the manufacturing of this unit have passed rigid quality control standards prior to assembly. Please safeguard the original receipt/invoice given at the time of purchase. If you experience any problems with your unit during the warranty period, the original receipt/invoice will act as proof of purchase.

Upon receipt, inspect outer box for exterior damage. Unpack all internal parts, ensure all items are present according to the owner's manual, and review components for damage.

Each unit is tested and thoroughly inspected prior to shipping. If damage is discovered, immediately notify the transportation company that delivered your machine and request an inspection. As a manufacturer, we are unable to act upon any claim for concealed damage and you must originate the claim. Be sure to keep the carton, packing inserts, and carrier's receipt until the inspector has verified your claim.

GROUNDING INSTRUCTIONS

DANGER: Improper use of the grounding plug can result in a risk of electric shock.

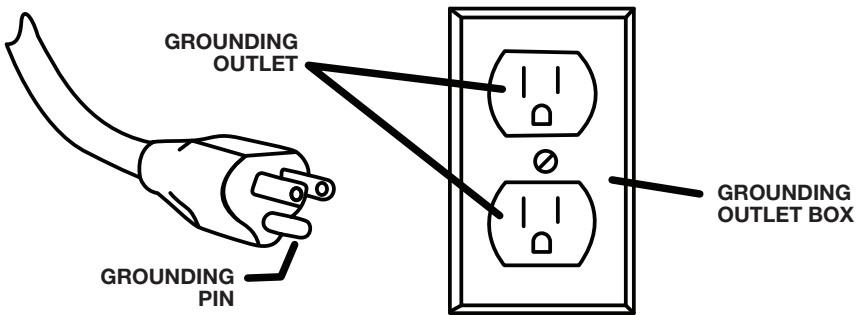
WARNING!

Improper connection of the equipment-grounding conductor can result in a risk of electric shock. Check with a qualified electrician or service person if you are in doubt as to whether the outlet is properly grounded. DO NOT modify the plug provided with the appliance. If it will not fit the outlet, have a proper outlet installed by a qualified electrician.

Grounding Methods

This battery charger for this appliance must be grounded. If it should malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk electric shock. This machine is equipped with a cord having an equipment-grounding conductor and grounding plug. The plug must be inserted into an appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances.

This appliance is for use on a nominal 115-volt circuit, and has a grounding plug that looks like the plug illustrated in sketch A.



A

IMPORTANT SAFETY INSTRUCTIONS

READ AND UNDERSTAND ALL INSTRUCTIONS BEFORE USING THIS UNIT

Read and understand this owner's manual and all labels on the unit before operating. Safety is a combination of common sense, staying alert, and knowing how your unit works. Use this unit only as described in this manual. Use only manufacturer's recommended attachments. To reduce the risk of personal injury or damage to your unit use only recommended accessories.

WARNING: To avoid fire, DO NOT use with a flammable or combustible liquid or floor cleaner.

WARNING: To avoid electric shock, DO NOT expose to rain. Store Indoors.

When using this unit, basic precautions should always be followed, including the following:

- DO NOT leave unit when plugged in. Unplug from outlet when not in use and before servicing.
- DO NOT allow unit to be used as a toy. Close attention is necessary when used around or near children.
- Use only as described in this manual. Use only manufacturer's recommended attachments.
- DO NOT use with damaged cord or plug. If unit is not working properly because it has been dropped, dropped into water, left outdoors, or damaged in any way, contact a service center
- DO NOT handle plug or appliance with wet hands.
- DO NOT put any objects into openings.
- DO NOT use with any opening blocked: keep free of dust, lint, hair, or anything that may reduce air flow.
- Keep hair, loose clothing, fingers, and all parts of body away from openings and moving parts.
- DO NOT pick up anything that is smoking or burning such as cigarettes, matches, or hot ashes.
- DO NOT use to pick up hazardous chemicals.
- Turn off all controls before unplugging.
- DO NOT use to pick up flammable or combustible liquids such as gasoline or use in areas where they may be present.
- DO NOT use where oxygen or anesthetics are used.
- Replace damaged or worn parts immediately with genuine original equipment parts to maintain safety.
- This battery charger must be connected to a properly grounded outlet only. See grounding instructions.
- DO NOT use equipment out of doors or in the rain.
- DO NOT use equipment near or around flammable or explosive materials, fuels, or solvents.
- DO NOT allow the unit to freeze.
- Anyone designated to operate this equipment must, without fail, read and thoroughly understand all instructions and precautions prior to use.
- Do not operate equipment under any unsafe condition.

IMPORTANT SAFETY INSTRUCTIONS



State of California Proposition 65 Warnings

WARNING: This product contains one or more chemicals known to the state of California to cause cancer.

WARNING: This product contains one or more chemicals known to the state of California to cause birth defects or other reproductive harm.



Intended Use

Do NOT modify this unit in any way or adapt it for any other use. Modification of this unit in any way will void all warranties and could create safety hazards.

PARTICULAR RISKS

Electronics

- In the case of defects in the electrical installation, switch the machine off immediately and clear the fault.
- Work on the electrical equipment may only be carried out by electricians who have received the necessary training
- The machine's electrical equipment must be inspected/checked at regular intervals. Defects, such as loose connections and cable damage, must be rectified immediately.

Batteries

- It is possible that sparking will occur when connecting the batteries.
- Batteries may only be handled and changed by properly skilled maintenance personnel.
- The machine has been set up for operation using maintenance-free batteries. If other battery types are used, the machine must be set up for use with them by an authorized Tornado service center.
- Never lay any metallic objects or tools on batteries - risk of short circuit!



TECHNICAL SPECIFICATIONS

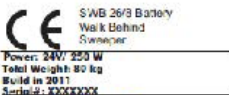
Machine length	cm/in	80/32
Machine height (handle folded)	cm/in	60/24
Machine width	cm/in	70/28
Working width	cm/in	66/26
Rotary brush width	cm/in	40/16
Rotary brush diameter	cm/in	19/7
Area Coverage, theoretical	m ² /sqft/h	2400/26000
Debris Container Volume	Liter/Gal	40/9
Filter Surface	m ² /sqft	1.1/12
Nominal Voltage	V	24
Power Consumption, rotary brush drive	W/A	210/8.75
Power Consumption, side brush drive	W/A	48/2
Power Consumption, suction turbine	W/A	60/2.5
Weight without batteries	kg/lbs.	42/93
Weight with batteries	kg/lbs.	56/124
Noise emission value*	dB (A)	70
Measurement inaccuracy (KpA):	dB (A)	2

*The sound pressure level (LpA) (at the ear of the operator) measured according to DIN IEC 60335-2-72 under normal working conditions:

Labels on the machine

The following safety and warning labels are attached to the machine where easily legible. Missing or illegible labels must be replaced immediately.

Rating plate



Filter shaker



Wear compensator for side brush



Maximum permissible gradient



Wear compensator for rotary brush

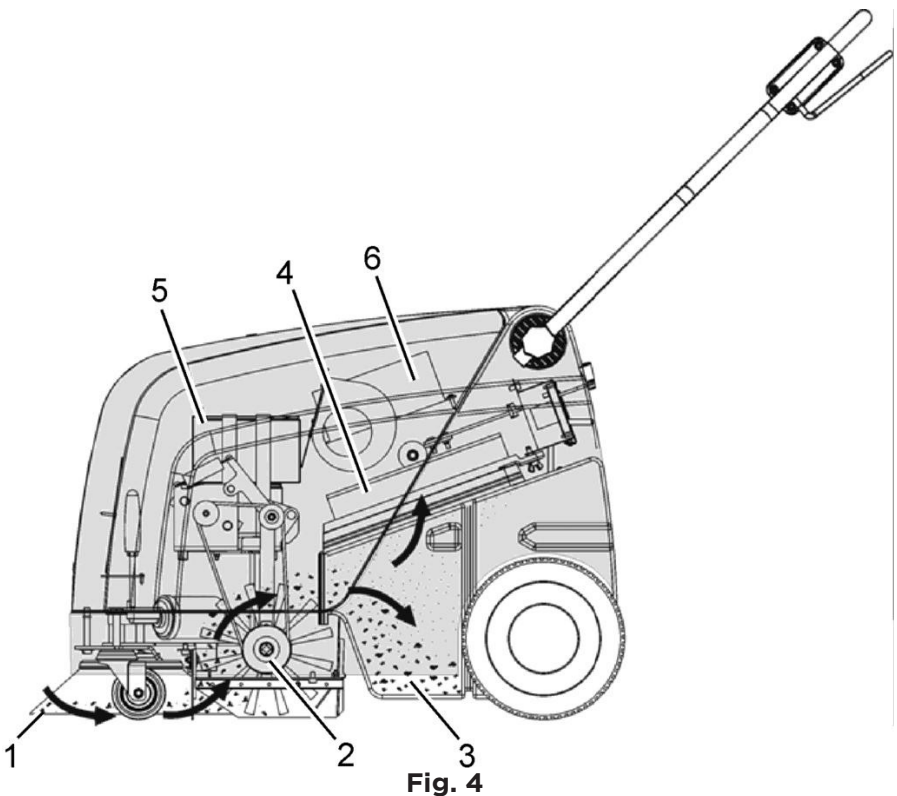


Read and observe the operating manual



Method of operation

The Powr-Flite PW050-W26-U is a machine designed to sweep and clean waste from hard floors and carpets. The side brush (Fig. 4/1) sweeps the dirt from corners to a position in front of the rotary brush (Fig. 4/2). The rotary brush sweeps the larger particle dirt overhead into the debris container (Fig. 4/3). The finer dust picked up is drawn up by the suction turbine, fed into the filter system (Fig. 4/4) and filtered out. Only dust-free air is fed back into the ambient air. The machine is equipped with maintenance-free batteries (Fig. 4/5), a specially adapted, fully automatic battery charger (Fig. 4/6) and a total discharge signal transducer to protect it against total discharge.



PARTS IDENTIFICATION

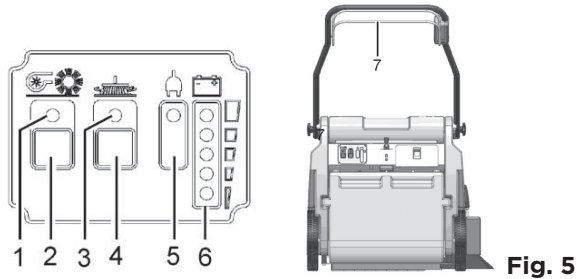


Fig. 5

Operating and indicator elements

1. Control lamp for rotary brush drive, side brush drive and suction turbine
2. ON/OFF button for rotary brush drive, side brush drive and suction turbine
3. Control lamp for side brush drive
4. ON/OFF button for side brush drive
5. Control lamp for battery charger operation
6. Charge control indicator
7. Drive bar

ON/OFF button for rotary brush, side brush and suction turbine (Fig. 5/1).

The button activates the rotary brush drive, side brush drive and suction turbine so they are ready to operate. The side brush drive can be switched off separately. The suction turbine cannot be switched off separately which prevents the dust vacuum being activated by accident.



To prevent unauthorized use of the machine, be sure to switch the machine off using the button (Fig. 5/1).

Control lamp for rotary brush drive, side brush drive and suction turbine (Fig. 5/2).

The green control lamp indicates that the rotary brush drive and suction turbine are ready to operate. If the rotary brush or suction turbine is overloaded, a safety shutdown is triggered and the control lamp flashes.

ON/OFF button for side brush drive (Fig. 5/3).

The button can be used to switch off the side brush drive independently of the rotary brush drive and to activate it for use again.

Control lamp for side brush drive (Fig. 5/4).

The green control lamp indicates that the side brush drive is ready to operate. If the side brush is overloaded, a safety shutdown is triggered and the control lamp flashes.

Control lamp for battery charger operation (Fig. 5/5).

This control lamp indicates that the batteries are being charged

Charge control indicator (Fig. 5/6).

During the charging process, the machine's electronics system controls the machine is not switched on inadvertently and indicates the charge status. The battery charge status is indicated by 4 green and 1 red LED.

The battery voltage is depicted in 5 levels:

- > 25.1 V = all green LEDs on
- > 24.5 V = bottom 3 green LEDs on
- > 23.9 V = bottom 2 green LEDs on
- > 22.7 V = bottom green LED on
- < 22.7 V = red battery LED flashes

Drive bar (Fig. 5/7).

The drive bar switches all the drives which are ready to operate on or off. The drive bar serves to prevent damage. If the drive bar is released during operation, all the drives are switched off

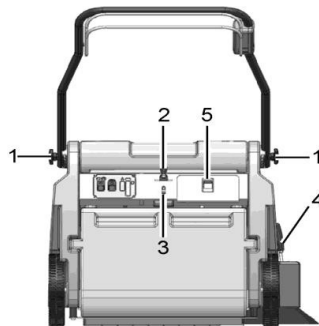


Fig. 6

3.2.2 Operating elements on the machine

Knurled screws for handle (Fig. 6/1).

The two knurled screws enable the handle to be adjusted to a comfortable height for the user.

Shaking device lever (Fig. 6/2).

In order to clean the filter in the dust vacuum, switch the shaking device lever several times quickly to the left and right.

Debris container locks (Fig. 6/3).

Pull the lock lever up in order to remove the debris container.

Side brush lever (Fig. 6/4).

Use the lever to lower or raise the side brush.

Charger cable flap (Fig. 6/5).

The battery charger cable is located behind the flap to the right beside the operating panel. Pull the lock downwards to open the flap.

OPERATION

Starting Up

Unpacking and assembling Fig 1

Open the box, two people are required.

To remove the machine from the protective wrap and place it on the floor.

1. To fix the side brush (Fig 1/1) align the drive pins on the side brush drive plate and secure with the wing bolt and washer supplied.
2. Loosen the two knurled screws (Fig. 1/2) holding the handle a few revolutions until the handle can be raised and positioned. Set the handle to a height comfortable for the user and then tighten the knurled screws.
3. Remove the locking bolt (Fig 1/3) holding the hood and pivot the hood open.
4. Fix the disassembled cable lug (Fig. 2) to the corresponding battery contact. It is possible that sparking will occur when connecting the batteries!
5. Close the hood and lock in place with the bolt.
6. The unit is now ready to operate.

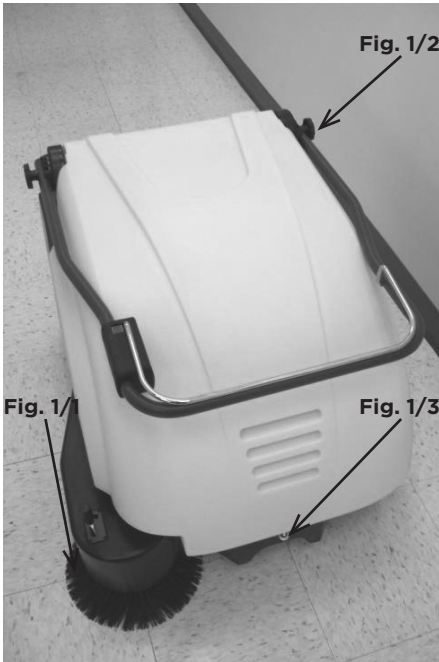


Fig. 1

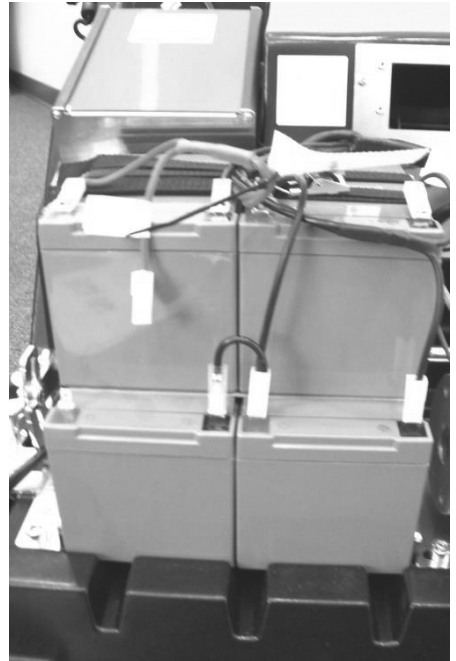


FIG. 2

Instruction

Instructions to operators are required before putting the machine into service. Only technicians from your local, authorized Tornado dealer are allowed to provide initial instruction on how to use the machine.

Initial battery charge



Before starting the machine up for the first time, the batteries to be used must be fully charged, properly, by implementing the initial battery charge routine.

Prior to starting up

Carry out the following checks before starting the machine:

1. Check the charge status of the batteries.
2. Check the levels of wear on the rotary brush and side brush.
3. Check the fill level of the debris container.

Operation

Please read the Safety Information in Chapter 1. Before switching the machine on, ensure that the drive bar (Fig. 3/3) on the handle has not been actuated.

1. Switch the machine on using the (Fig. 3/1) button: rotary brush drive, dust vacuum and side brush drive are ready to operate.
2. Lower the side brush to its working position using the lever (Fig. 3/4). When working without the side brush: do not lower the side brush and press the button (Fig. 3/2) for the side brush once. The green control lamp goes out.
3. Actuate the drive bar (Fig. 3/3) on the handle: the machine starts to work. Start work immediately after actuating the drive bar, otherwise imprints could be produced on the floor. Release the drive bar when driving over thresholds.



Start work immediately after actuating the drive bar, otherwise imprints could be produced on the floor. Release the drive bar when driving over thresholds.

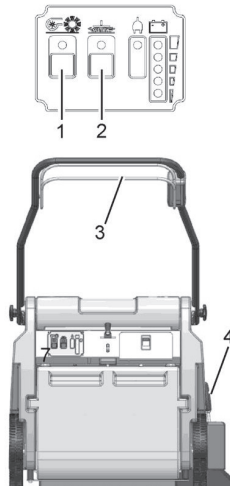


Fig. 3

OPERATION

Stopping the machine

When the drive bar is released, the rotary brush drive, dust vacuum and side brush drive switch off automatically.

After completing work

1. Drive to an appropriate maintenance area.
2. Stop the machine. Raise the side brush to its idle position and switch the machine off.
3. Actuate the filter shaker.
4. Empty the debris container.
5. Check the brush space for accumulations of dirt.
6. Check the charge status of the batteries.



It is not permitted to clean the machine with a pressure washer or steam blaster.

Battery system

1. Battery indicator for charger
2. Charge control indicator
3. Charger
4. Flap for charger mains power cable
5. Connection cable
6. Lashing straps
7. Batteries
8. Hood
9. Connection plan



Batteries may only be handled and changed by properly skilled maintenance personnel.

The charge control indicator (Fig. 7/2) indicates the charge status of the batteries during operation. When the batteries are discharged, the red LED flashes. The machine functions are restricted. Charge the batteries immediately!

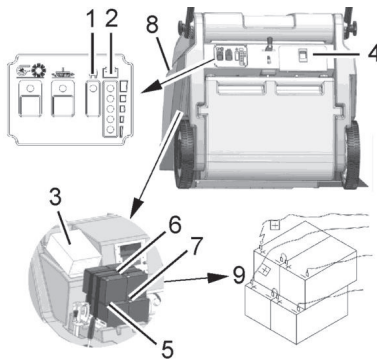


Fig. 7

Charging the batteries

The charge control indicator (Fig. 7/2) indicates the charge status of the batteries during operation. The batteries must be charged immediately when the red LED lights up. The batteries (Fig. 7/7) are charged using the integrated battery charger (Fig. 7/3). The charger is connected by means of the power cable (Fig. 7/4).

While the battery is being charged, the battery indicator on the charger (Fig. 7/1) lights up.

Before starting the machine up for the first time, the batteries to be used must be fully charged, properly, by implementing the initial battery charge routine. Tornado assumes no liability for damage to the battery caused by a fault when the battery is charged for the first time.

Total discharge signal transducer (TSG)

The machine is equipped with a total discharge signal transducer to protect the batteries against total discharge. The total discharge signal transducer is integrated in the electronics.

Servicing the driving batteries Never leave discharged batteries lying around; recharge them immediately!

Removing the batteries

1. Park the machine on a level area of floor.
2. Switch off the machine.
3. Loosen the locking bolt holding the hood (refer to Figure 1/3) and pivot the hood open.
4. Slacken the lashing straps (Fig. 7/6).
5. Disconnect the connection cable (Fig. 7/5) from the batteries and remove the batteries.

Inserting the batteries



Only the special batteries approved by Tornado may be installed at the prescribed position.

1. Install the two lower batteries in the battery holder in accordance with Figure 7.
2. Lay the rubber mat on the batteries.
3. Place the other two batteries on the rubber mat.
4. Tighten the lashing straps (Fig. 7/6).
5. Connect the battery poles to the connection cables in accordance with the connection plan (Fig. 7/9). It is possible that sparking will occur when connecting the batteries! Check to ensure a firm fit!
6. Close the hood (Fig. 7/8) and lock in place with the locking bolt on the frame.

Disposing of batteries

Used batteries with the recycling symbol contain reusable commodities. In accordance with symbol with the crossed out bin, these batteries must not be disposed of in domestic waste.

MAINTENANCE

Side brush

1. Side brush
2. Wing bolt
3. Carrier
4. Hood
5. Adjusting bolt
6. Counternut
7. Locking bolt

Changing the side brush

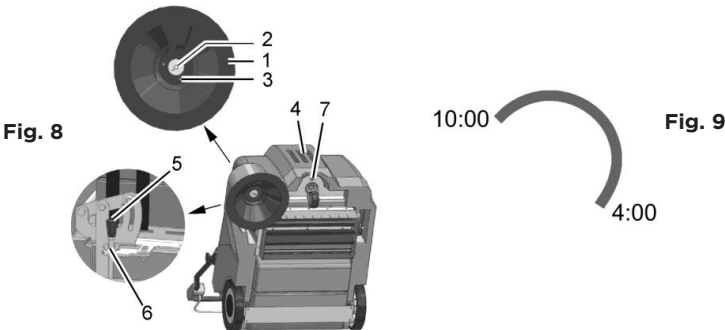
Check the side brush (Fig. 8/1) weekly and change in the case of wear.

1. Switch the machine off and lay it on its side.
2. Remove the wing bolt (Fig. 8/2) with the washer from underneath the side brush (Fig. 8/1).
3. Pull the side brush off.
4. To fix the side brush align the drive pins on the side brush drive plate and secure with the wing bolt and washer supplied.

Setting the sweeping pattern

In the case of brush wear and after changing the side brush (Fig. 8/1), readjust the sweeping pattern.

1. Switch the machine off; unscrew the locking bolt (Fig. 8/7) and open the hood (Fig. 8/4).
2. Loosen the counternut (Fig. 8/6) and adjust the sweeping pattern by turning the adjusting bolt (Fig. 8/5) clockwise and counter clockwise so that it touches the floor.
3. Tighten the counternut again and close the hood.
4. Switch the machine on and allow the side brush to run while standing still for a short time.
5. Switch the machine off, raise the front a little and pull it back.
6. Check the sweeping pattern, comparing it with a clock viewed driving forward. When set correctly, the sweeping pattern must make an impression on the floor between approx. 10:00 and 4:00 o' clock (Fig. 9).
7. Repeat the process, if necessary, until the sweeping pattern is set correctly.
8. Close the hood (Fig. 8/4) and screw the locking bolt (Fig. 8/7) back in.



Rotary brush

1. Rotary brush
2. Fillister head self-tapping screws
3. Rotary brush segment
4. Sealing strips
5. Sweeping pattern adjusting lever
6. Timing belt
7. Hood
8. Locking bolt

Cleaning the brush space

The brush space with rotary brush (Fig. 10/1) and gaskets (Fig. 10/4) must be checked daily for signs of dirt and cleaned, if necessary.

Changing the rotary brush

The rotary brush (Fig. 10/1) must be checked weekly and changed in the case of wear.

1. Switch the machine off and lay it on its side.
2. Loosen the six screws (Fig. 10/2) in the rotary brush and remove the two roller segments.
3. Install the two new roller segments and fix in place with the fillister head screws.
4. After changing the rotary brush, readjust the sweeping pattern as necessary.

Setting the sweeping pattern

In the case of brush wear, and after changing the rotary brush (Fig. 10/1), readjust the sweeping pattern.

1. Switch the machine off, unscrew the locking bolt (Fig. 10/8) and open the hood (Fig. 10/7).
2. Loosen the wing nut on the adjusting lever (Fig. 10/5) and adjust the sweeping pattern using the adjusting lever by pivoting it up and down until it touches the floor.
3. Tighten the wing nut again and close the hood.
4. Switch the machine on and allow the rotary brush to run while standing still for a short time.
5. Switch the machine off, raise the front a little and pull it back.
6. When adjusted correctly, there must be an approx. 50 mm wide sweeping pattern on the floor which has parallel sides.
7. Repeat the process, if necessary, until the sweeping pattern is set correctly.
8. Close the hood (Fig. 10/7) and screw the locking bolt (Fig. 10/8) back in

Changing the sealing strips

The four sealing strips (Fig. 10/4) must be checked weekly and changed in the case of wear.

1. Switch the machine off and lay it on its side.
2. Remove all four sealing strips (Fig.10/2) with holders.
3. Loosen the screws in the holders and remove the damaged sealing strips.
4. Fix the new sealing strips on the holders and reinstall them.
5. Adjust the sealing strips so that they touch the floor lightly.

MAINTENANCE

Changing the timing belt

The timing belt (Fig. 10/6) must be checked every 500 operating hours and changed in the event of wear.

1. Switch the machine off, unscrew the locking bolt (Fig. 10/8) and open the hood (Fig. 10/7).
2. Slacken the timing belt (Fig. 10/6) using the tension pulley and remove the belt.
3. Slacken the tension pulley and install the new timing belt. The timing belt is automatically tensioned by means of a tension spring.
4. Close the hood (Fig. 10/7) and screw the locking bolts (Fig. 10/8) back in.

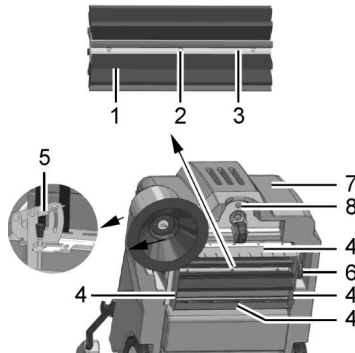


Fig. 10

Debris container

1. Debris container
2. Locking mechanism
3. Seal
4. Handle

Emptying the debris container

Check the fill level of the debris container (Fig. 11/1) at regular intervals (max. load capacity 25 kg) and empty as necessary.

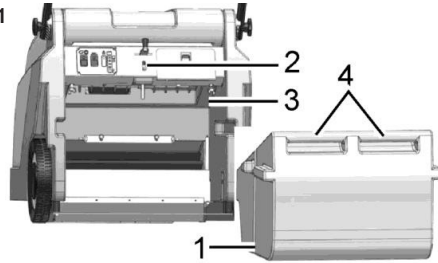
1. Switch the machine off and pull the locking mechanism (Fig. 11/2) on the debris container (Fig. 11/1) upwards.
2. Pull the debris container to the rear out of the machine using the handle (Fig. 11/4) and dispose of the waste according to the applicable environmental laws.
3. Reinstall the debris container and press it against the locking mechanism until it audibly latches into place.

Changing the seal

Check the seal (Fig. 11/3) weekly for signs of wear and change it as necessary.

1. Switch off the machine and pull the locking mechanism (Fig. 11/2) on the debris container (Fig. 11/1) upwards.
2. Pull the debris container (Fig. 11/3) out of the machine using the handle (Fig. 11/4).
3. Pull the seal for the debris container from the filter support frame. Install a new seal.
4. Reinstall the debris container.

Fig. 11



Dust vacuum

1. Filter
2. Sealing strip
3. Filter support frame
4. Shaking device
5. Wing bolts
6. Holders

Cleaning the filter

Clean the filter (Fig. 12/1) in the dust vacuum as necessary using the shaking device (Fig. 12/4). In the case of extreme accumulation of dirt, clean the filter as follows:

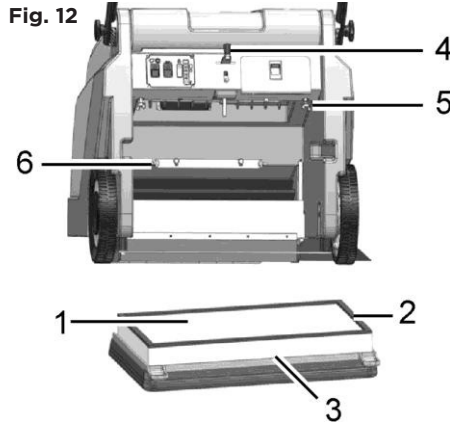
1. Switch the machine off and remove the debris container.
2. Loosen the wing bolts (Fig. 12/5). Pivot the filter support frame (Fig. 12/ 3) down and remove it.
3. Remove the filter from the filter support frame. Beat the filter clean or use a vacuum cleaner. Be careful not to damage the filter ribs!
4. Insert the correct side of filter in the filter support frame. The sealing strip (Fig. 12/2) must point towards the suction turbine!
5. Hook the filter support frame in the holder (Fig. 12/6) and fix in place with the wing bolts.
6. Reinstall the debris container

Changing the filter

Check the filter (Fig. 12/1) every 250 operating hours for signs of wear and change it as necessary.

1. Switch the machine off and remove the debris container.
2. Unscrew the wing bolts (Fig. 12/5). Pivot the filter support frame (Fig. 12/3) downward and remove it.
3. Remove the filter from the filter support frame.
4. Insert the correct side of the new filter in the filter support frame. The sealing strip (Fig. 12/2) must point towards the suction turbine!
5. Hook the filter support frame in the holder (Fig. 12/6), if necessary, and fix in place with the wing bolts.
6. Reinstall the debris container

MAINTENANCE



Install the Lint filter

If the machine is mainly used on carpet, you have to install the lint filter (Fig.13/7).

1. Switch the machine off and remove the debris container.
2. Unscrew the wing bolts (Fig.12/5). Pivot the filter support frame (Fig.13/3) down and remove it.
3. Mount the lint filter (Fig.13/7) between filter and the filter support frame
4. Hook the filter support frame in the holder (Fig.12/6), if necessary, and fix in place with the wing bolts.
5. Reinstall the debris container.

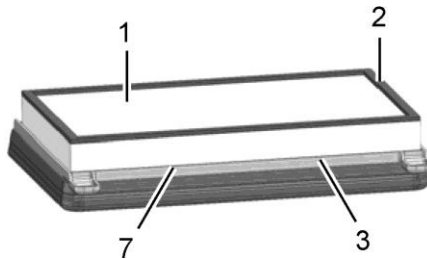


Fig. 13

Powr-Flite[®]

Powr-Flite
3101 Wichita Court
Ft. Worth, TX 76140-1755
Phone: 817-551-0700
WWW.POWR-FLITE.COM



Record of Purchase

Serial Number: _____

Purchase Date: _____

Dealer: _____

Phone Number: _____