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## Instructions/Spare Parts Manual

# Nilfisk Model VHS255 Drum Top Vacuum

Under no circumstances may this vacuum cleaner be used safely for the collection of hazardous or toxic materials unless equipped with a HEPA filter. Be sure to install the HEPA filter according to Nilfisk's written instructions. It is never to be used in a classified (hazardous) environment, or to collect combustible dust in a non-classified environment.

Do not use this vacuum cleaner for the removal of hazardous substances unless you are licensed and/or certified for this work by the all authorities having jurisdiction.

**CAUTION:** This Nilfisk vacuum cleaner is not to be used in classified (hazardous) environments, as serious injury could result.



**EMPTYING:** If this vacuum cleaner is used to collect hazardous material, do not attempt to open or empty its contents without personal protective clothing and respiratory protection. This procedure must be completed in a contained environment. Contact with the cleaner, filters and all other accessories used when picking-up hazardous materials must be handled according to federal (EPA, OSHA), state and local regulations valid for the vacuumed substance.

**ATTENTION EMPLOYER:** Please ensure these instructions are made available to, and understood by your employees or any other persons who may use this equipment.

This manual does not list all toxic and hazardous materials. It is the employer's responsibility to identify, for employees' and others' information, hazardous or toxic materials which may be collected by this equipment. Such information must be communicated to your employees and other potential users of this equipment.

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# SAFETY INSTRUCTIONS

**THIS VACUUM CLEANER IS DESIGNED FOR COMMERCIAL USE. ACCIDENTS DUE TO MISUSE CAN ONLY BE PREVENTED BY THOSE USING THE MACHINE. READ AND FOLLOW ALL SAFETY INSTRUCTIONS.**



## WARNING!

To reduce the risk of fire, electric shock or injury, please read and follow all safety instructions and caution markings before use. This vacuum cleaner is designed to be safe when used for cleaning functions as specified. Should damage occur to electrical or mechanical parts, the cleaner and/or accessory should be repaired by a competent service technician or the manufacturer directly before continuing use to avoid further damage to the machine or physical injury to the user.

- Do not use outdoors.
- Do not leave the machine unattended when it is plugged in. Unplug from the socket when not in use and before performing maintenance.
- Do not use with a damaged cord or plug. To unplug grasp the plug, not the cord. Do not handle plug or cleaner with wet hands. Turn off all controls before unplugging.
- Do not pull or carry by the power cord, close doors on the cord, or pull the cord around sharp corners. Do not run over the cord. Keep the cord away from heated surfaces.
- Keep hair, loose clothing, fingers and all parts of the body away from openings and moving parts. Do not put any objects into openings or use with openings blocked. Keep openings free of dust, lint, hair and anything else that could reduce the flow of air.
- **CAUTION:** Do not use this device to vacuum dust which may be considered hazardous to health without a properly installed HEPA filter.
- 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 to collect combustible dusts or use in an area classified as combustible dust hazard.
- Do not use to collect hot or burning material such as cigarettes, matches or hot ashes.
- The machine is not intended for use by young children or infirm persons. Young children must be supervised to ensure they do not play with or near the vacuum.
- Do not operate the vacuum without filters.

- Use only as described in this manual and only with the manufacturers recommended attachments.
- If the unit is damaged, dropped in water, or left outdoors exposed to weather, it should be serviced by a qualified repair technician before further operation.
- Use extra care when cleaning on stairs or overhead.

## General Information

Before plugging in the machine, check the rating plate located at the back of the vacuum. The available voltage should be within 10% of the rating of the machine.

Do not oil the motor(s). They are sealed and permanently lubricated at the factory.

## Service Information

To maintain consistent performance over the life of your vacuum, read through these instructions and keep them handy for future reference. If you require service, contact the dealer from whom you purchased the vacuum or an authorized Nilfisk service location. For prompt and complete service information, always refer to the model, type and serial number indicated on the rating plate.

## IMPORTANT!

The machine is equipped with a specially designed cord which if damaged must be replaced with a cord of the same type. Replacement cords are available from Nilfisk dealers and at authorized service locations, and must be installed by qualified personnel.

**Note: The VHS255 has not been certified for sales or use in Canada.**

# GROUNDING / DOUBLE INSULATION

## Grounding Instructions

Applicable to machines with a three-pin plug

This vacuum must be grounded. If it should malfunction or breakdown, grounding provides a path of least resistance for electrical current, and reduces the risk of electrical shock.

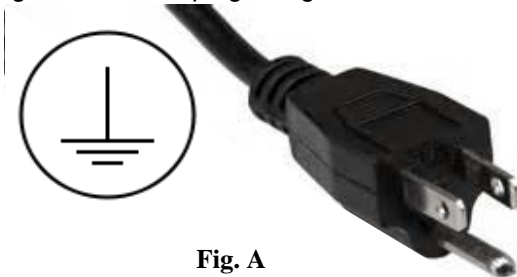
This vacuum is equipped with a cord having an equipment-grounding conductor and grounding plug. The plug must be plugged into an appropriate outlet that is properly installed and grounded in accordance with local codes and ordinances.



### **DANGER!**

Improper connection of an equipment-grounding conductor can result in risk of electric shock. Check with a qualified electrician or service technician if you are unsure whether the outlet is properly grounded. Do not modify the plug provided with the machine. If it will not fit the outlet, have a proper outlet installed by a qualified electrician.

This vacuum is intended for use on a nominal 120V circuit and has a grounding plug similar to the plug in Figure A.



**Fig. A**

A temporary adapter which looks like the adapter in Figure B may be used to connect this plug to a two-pole receptacle if a properly grounded outlet is not available. The temporary adaptor should only be used until a properly grounded outlet designed to accept the plug in Figure A can be installed by a qualified electrician. The green colored tab must be connected to a permanent ground, such as a correctly grounded outlet

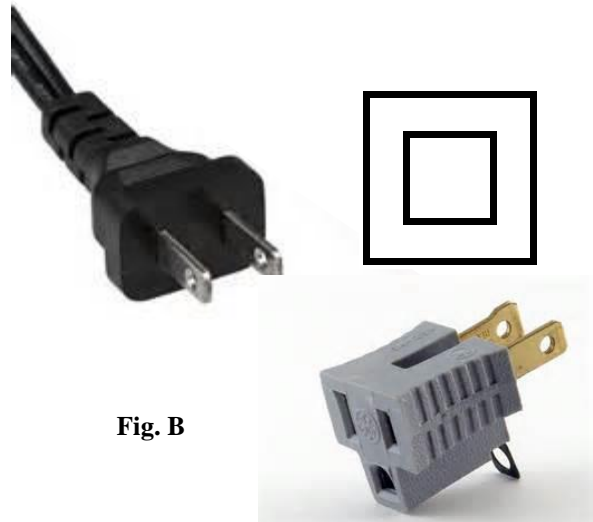
box cover. Whenever the adapter is used, the tab must be held in place by a metal

screw. If the power supply cord or the plug end is damaged, it must be replaced immediately by a qualified repair technician or service location.

Use of a temporary adapter as described here is prohibited in Canada, regardless of whether the machine bears an NRTL mark for Canada.

## Servicing of double-insulated equipment

In a double-insulated appliance, two systems of insulation are provided instead of grounding. No means of grounding is provided on a double-insulated machine, nor should means for grounding be added to it. Servicing double-insulated equipment requires extreme care and knowledge of the



**Fig. B**

system, and should only be performed by qualified service personnel. Replacement parts for a double-insulated machine must be identical to the parts they replace. A double-insulated device is marked "DOUBLE INSULATION" or "DOUBLE INSULATED" and will likely also bear the symbol for double insulation, shown in Figure B.

## IMPORTANT

If the power supply cord or plug is damaged, it must be replaced immediately by a qualified repair technician or service location.

## General Information

**BEFORE CONNECTING THE MACHINE TO A POWER SUPPLY**, check the electrical rating plate located on the back of the motor head to see if the rated voltage agrees within 10% of the voltage available.

**DO NOT OIL** the motor in this vacuum cleaner. It is permanently lubricated and sealed.

**DO NOT OPERATE** the vacuum cleaner without any filters. The Dry Filter, Wet/Dry Cartridge Filter or HEPA filter should be installed to prevent dirt and dust from entering the motors.

This machine is equipped with a thermal breaker to protect the motor and other vital machine parts from overheating. Should this breaker open, you will have to wait at least 5-10 minutes before starting the machine again. You must reset the machine by switching the ON/OFF button. While you are waiting, switch the machine off and unplug it. Check the hose and filters to be sure that nothing is blocking the flow of air through the machine.

## Service Information

**UNPLUG THE MACHINE BEFORE PERFORMING ANY MAINTENANCE.**

To obtain consistent performance over the life of your vacuum, read through these instructions and keep them handy for future reference. If you require service, contact the dealer from whom the vacuum was purchased, or the local authorized Service Station. Always refer to your Service Station for complete service information. For prompt and complete service information, always refer to the model, type and serial number indicated on the rating plate on the back of the motor head.

### **IMPORTANT**

The machine is equipped with a specially designed cord which if damaged, must be replaced by a cord of the same type. This cord is available at authorized service centers and dealers and must be installed by trained personnel.

## Machine Setup

The VHS255 Drum Top Vacuum can be equipped for either dry or wet/dry collection. Follow the instructions below before attempting to use your new machine to insure that you have assembled the unit correctly. **NOTE:** For wet/dry collection, you must purchase the optional float chamber & wet/dry cartridge filter assembly (5) shown below.

**Dry Collection** - Install the sack filter support (2A) on the underside of the motor head (1). See next page for installation instructions. Center the drum ring (4) onto a 30 or 55 gallon drum. Place the sack filter (3) on top of the drum ring. Carefully place the motor head/filter support onto the drum ring and clamp the entire assembly together using the latches.

The sack filter should be used when collecting dry powders or fine dust. This washable filter is easy to clean and will dry much faster than the wet/dry cartridge filter. Small

amounts of water can be collected using the dry filter; however, it is best to allow the filter to dry completely before resuming the collection of dry powder. An optional HEPA (2B) filter can be added in place of the filter support (see *HEPA filter installation*).

**Wet/Dry Collection** - Center the drum ring (4) onto a 30 or 55 gallon drum. [Note: The float chamber and wet/dry cartridge filter assembly (5) must be installed prior to collecting wet material or liquids. Failure to do so can potentially result in damage to the motors and repairs will not be covered under warranty.] Place the float chamber and wet/dry cartridge filter assembly into the drum ring. Carefully place the motor head and sack filter onto the drum ring and clamp the entire assembly together using the latches.

The wet/dry cartridge filter is best used for collecting large amounts of water. The float ball inside the float chamber will restrict the flow of air in the vacuum hose when the drum is approximately 75% full. This will stop the drum from overflowing and will prevent water from entering the motor head. The vacuum's motors are cooled by circulating outside air through the motor head and will continue to run even after the flow of air in the hose has stopped, but both motors should be turned off once the drum capacity has been reached. The wet/dry cartridge filter can also serve as a dry filter; however, it is best to allow the filter to dry completely before switching to dry collection. An optional HEPA filter can be added (see *HEPA Filter installation*).



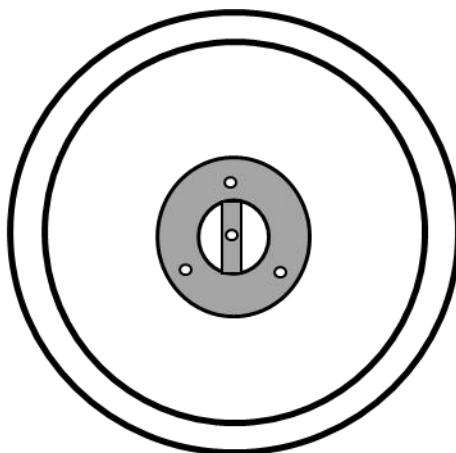


## Dry Filter Support / Optional HEPA Filter

The sack filter support is used to prevent the sack filter from collapsing under vacuum pressure. The sack filter and the optional HEPA filter are mounted in the same location under the motor head. If the optional HEPA filter is used, the sack filter support must be removed. Once installed, the HEPA filter will serve as the support for the dry filter. If the HEPA filter is removed from the machine, be sure to reinstall the dry filter support before continuing to use the dry filter.



Dry Filter Support



Underside of VHS255  
motorhead

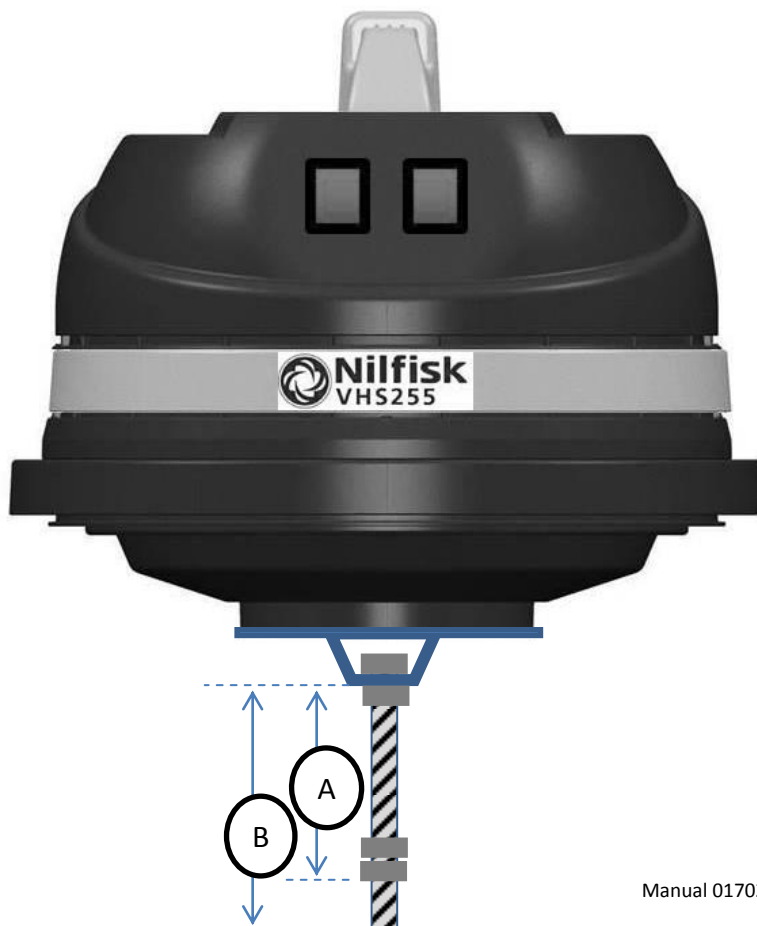


Optional HEPA Filter

When mounting a HEPA cartridge to the VHS255, check the spacing of the nuts on the threaded rod. Dimension "A" is set to prevent over-tightening the cartridge which can lead to damage. Dimension "B" is intended to accommodate the washers, hex nut and knob that secure the filter.

**A** = 4-1/2"

**B** = 5-1/2"



## Installation / Removal of Sack Filter Support

1. The bag filter support cage is attached to the mounting plate with a bolt and nut.
2. To remove the sack filter support, loosen the single nut and bolt that anchors it to the mounting plate. It is not necessary to remove the mounting plate from the motor head.

## Installation / Removal of Optional HEPA Filter

**EMPTYING:** If this vacuum cleaner is used to collect hazardous material, do not attempt to open or empty its contents without personal protective clothing and respiratory protection. This procedure must be completed in a contained environment. Contact with the cleaner, filters and all other accessories used when picking-up hazardous materials must be handled according to federal (EPA, OSHA), state and local regulations valid for the vacuumed substance.

1. Before installing the optional HEPA filter, make sure the sack filter support has been removed from the underside of the motor head. Place the HEPA cartridge so the foam gasket on its open end mates to the mounting plate on the underside of the motor head.
2. HEPA filters cannot be restored to their certified efficiency by washing or brushing them clean and should be replaced when dirty. After removing the HEPA filter, replace it with the same part number shown on the list elsewhere in this manual. If used to filter hazardous debris, the old HEPA should be disposed of in accordance with federal (EPA, OSHA), state and local regulations.

## Installation / Removal of Optional Wet/Dry Cartridge Filter

**EMPTYING:** If this vacuum cleaner is used to collect hazardous material, do not attempt to open or empty its contents without personal protective clothing and respiratory protection. This procedure must be completed in a contained environment. Contact with the cleaner, filters and all other accessories used when picking-up hazardous materials must be handled according to federal (EPA, OSHA), state and local regulations valid for the vacuumed substance.

1. To remove the wet/dry cartridge filter, place the float chamber and filter assembly upside-down on a flat working surface and remove the wing nut and washer that secures the filter to the float chamber assembly. Hold the filter by the end cap and gently twist the filter back and forth to separate the gasket from the float chamber. Lift the filter off of the threaded stud and inspect the float ball cavity underneath to insure that the float ball moves freely. Make sure the filter sealing surface is clean before installing a new filter.
2. To install the wet/dry cartridge filter, carefully place the filter down over the threaded stud and center the filter on the float chamber assembly. Reinstall the washer and wing nut. Tighten the wing nut by hand until the filter bottoms out on the lock nut underneath. The position of the lock nut is set at the factory and is designed to provide the proper amount of gasket compression for the filter. Use Figure C on the next page to check the position of the lock nut and to readjust the nut if necessary.

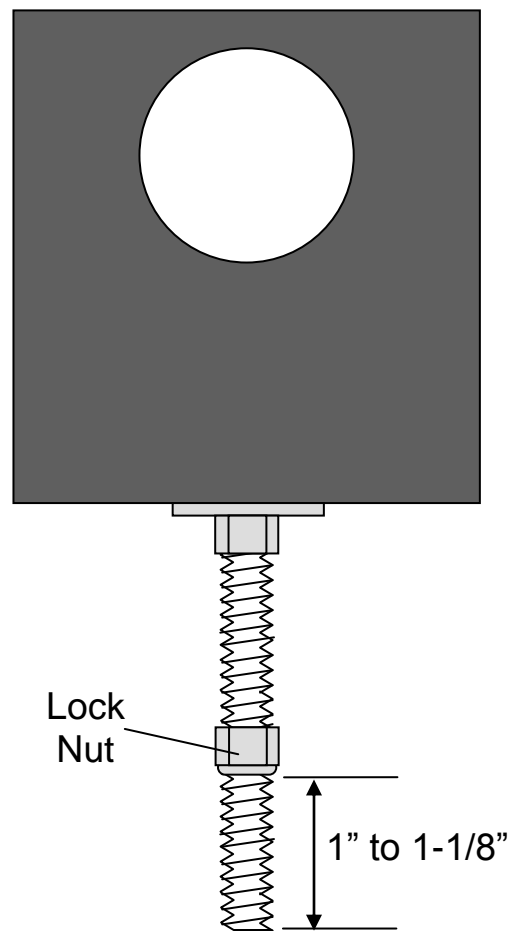


Fig. C

## Cleaning the Sack Filter and Wet/Dry Cartridge Filter

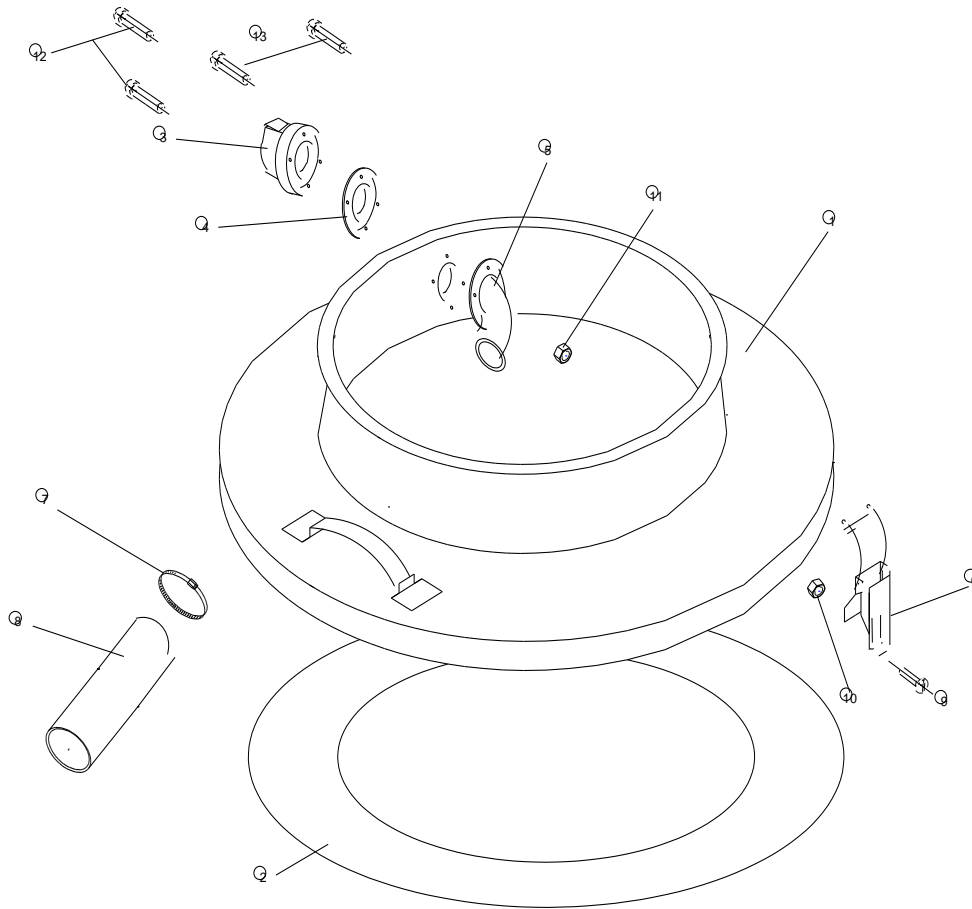
The sack filter is washable. To clean the filter, remove it from the machine and shake off all excess debris, or use another vacuum and a brush attachment to remove the majority of the dirt. Wash the filter gently in water. A mild detergent can be used. Allow the filter to dry thoroughly before reusing.

The wet/dry cartridge filter is also washable. To clean the filter, remove it from the float chamber assembly and tap against the end caps to remove any loose debris, or use another vacuum and brush attachment to remove the majority of the dirt. Hold the filter underneath a faucet at an angle so that the stream of water falls directly against the wire screen surface on the inside of the filter. The force of the water should dislodge the dirt from between the folds of the filter. Rotate the filter underneath the stream of water and continue rinsing until the filter is clean. Be careful not to puncture or damage the filter material. Do not use compressed air to remove dirt or to dry the filter as this could damage the filter material. Allow the filter to dry thoroughly before collecting any dry material.

The HEPA filter is **not** washable and no maintenance should be performed on the HEPA filter. Once the HEPA filter becomes clogged it should be disposed of in accordance with federal (EPA, OSHA), state and local regulations.

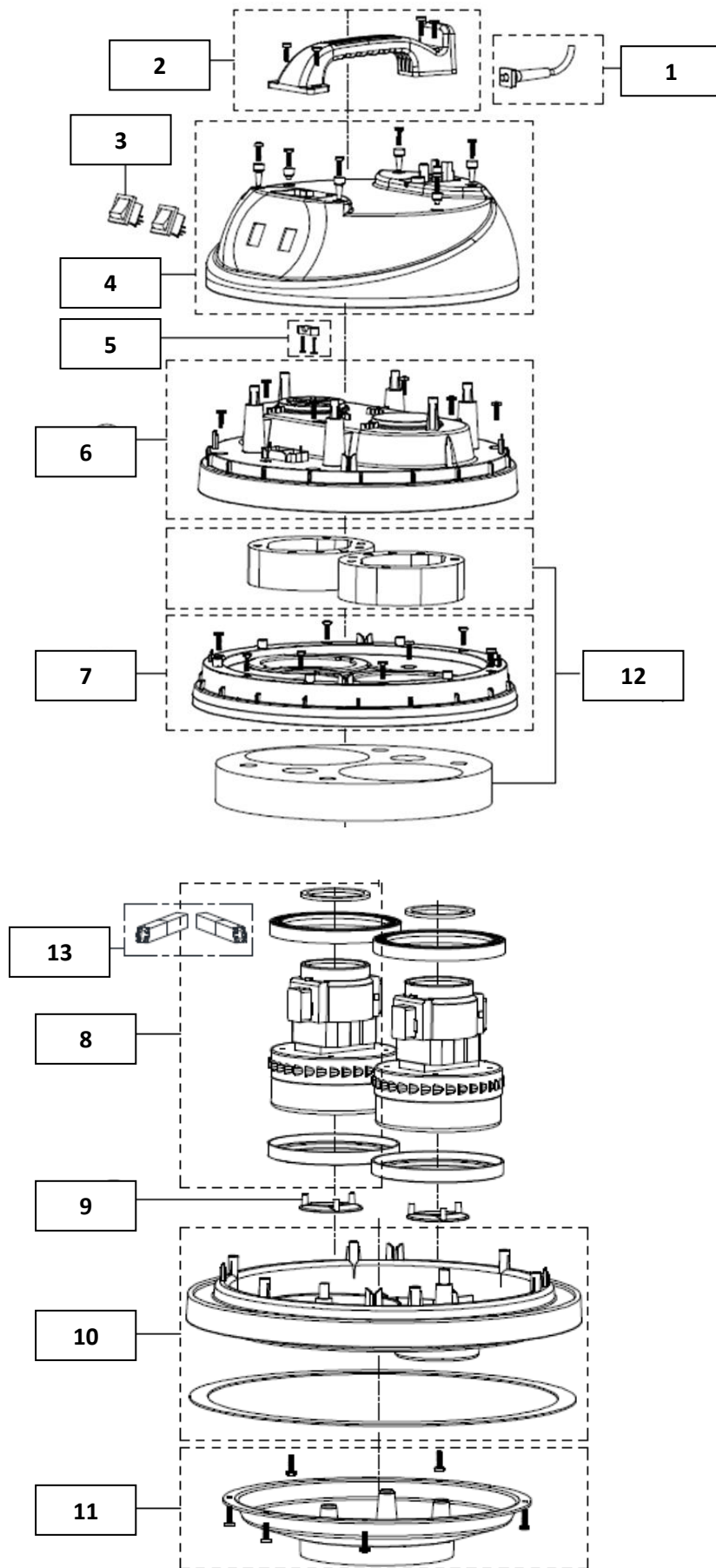


# Drum Ring Assembly



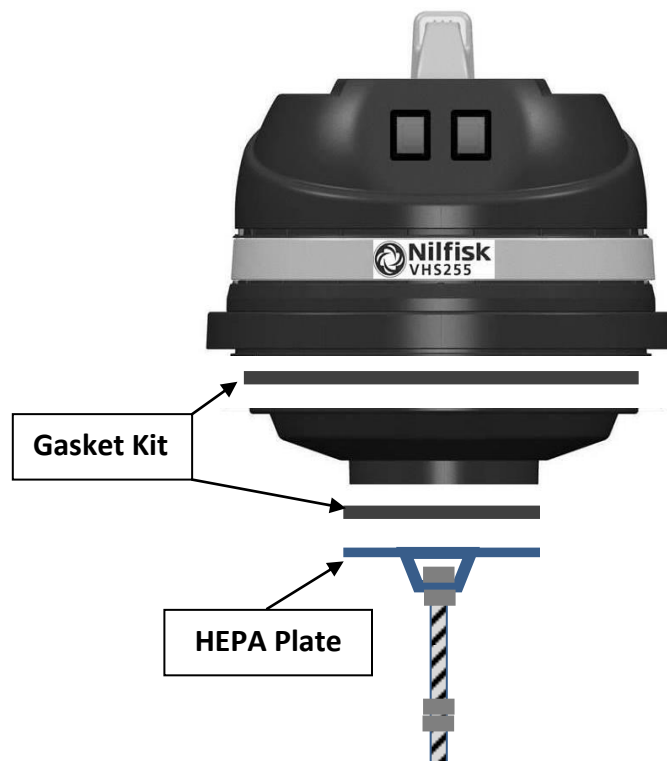
<b>DRUM RING ASSEMBLY</b>			
<b>Item Number</b>	<b>Description</b>	<b>Part Number</b>	<b>Quantity</b>
1	Drum Ring	M90017	1
2	Drum Ring gasket	01786501	1
3	Inlet, 50mm	8-312177	1
4	Gasket, inlet	8-17005	1
5	Deflector, inlet	8-32314	1
6	Latch	1408199000	2
7	Hose Clamp	01703601	1
8	Tube, inlet	01786101	1
9	Screw, 8-32 x 3/8"	01789018	4
10	Nut, 8-32 nylon lock	01763000	4
11	Nut, acorn M5	01763028	4
12	Screw, M5 x 25mm	01763029	2
13	Screw, M5 x 30mm	01763061	2
1 to 13	Drum Ring Complete	M90028	1

# Parts Explosion - Motor head Assembly

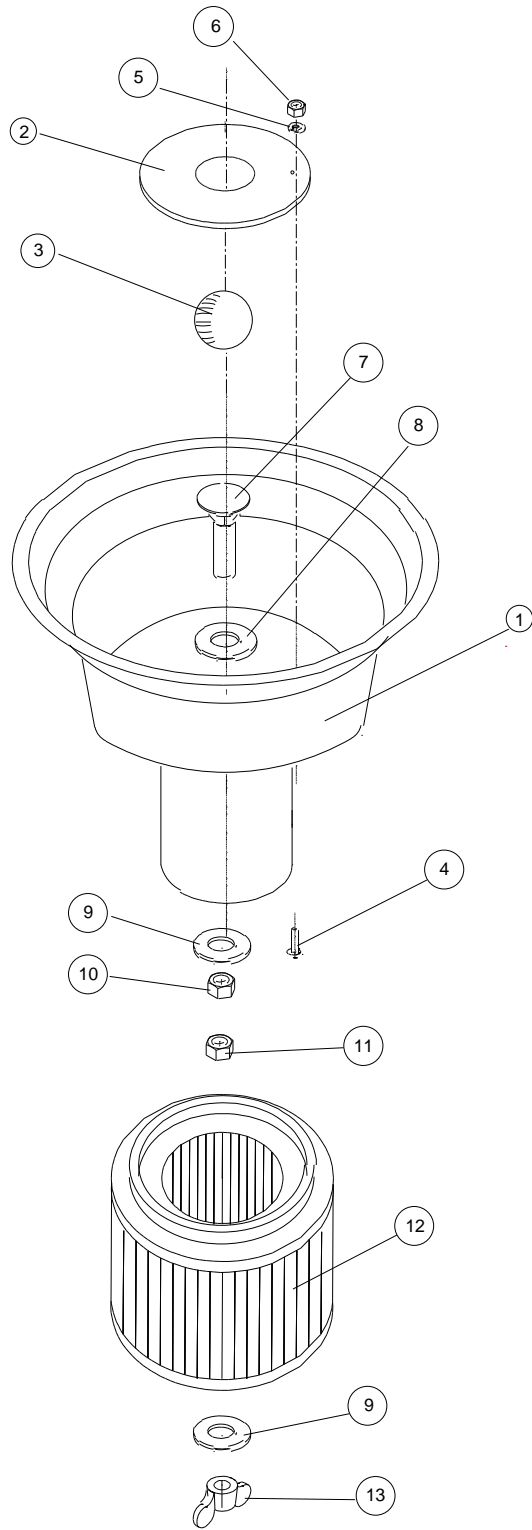


# Parts List - Motor head Assembly

<b>MOTOR HEAD ASSEMBLY</b>			
<b>Item Number</b>	<b>Description</b>	<b>Part Number</b>	<b>Quantity</b>
1	Power Cord, 25'	VA80808	1
2	Handle Assembly	VA86630	1
3	On/Off Switch	VA91346	2
4	Top Housing	VA86621	1
5	Cord Clamp	VA86604	1
6	Motor Cover	VA86622	1
7	Motor Compression Disk	VA86624	1
8	Bypass Motor 110-120V	VA80815	2
9	Motor Seal Plate	GV70008	2
10	Housing Base & Drum Gasket	VA86649	1
11	Plenum Cover	VA86610	1
12	Sound Deadening Kit	VA80724	1
13	Motor Carbon Brushes	ZD89002	2
See below	Plenum & HEPA Plate Gaskets	01786520	1
See Below	HEPA Plate	M90066	1



# Float Chamber Assembly



# Float Chamber Assembly

<b>FLOAT ASSEMBLY</b>			
<b>Item Number</b>	<b>Description</b>	<b>Part Number</b>	<b>Quantity</b>
1	Float Chamber Housing		
2	Plate, Float Ball	01783500	1
3	Float Ball	01783900	1
4	Screw, 8-32 x 5/8"	01788214	6
5	Washer	01789007	6
6	Nut, 8-32 nylon lock	01763000	6
7	Bolt, carriage 5/16" x 2-1/2"	01763910	1
8	Washer	01767202	1
9	Washer	01763126	2
10	Nut, 5/16"	01763075	1
11	Nut, 5/16" nylon lock	01784859	1
12	Cartridge Filter, W/D	M90019	1
13	Wing Nut, 5/16"	01729110	1
<b>Sub-assembly Summary</b>			
1 to 11	Float Chamber Assembly	M90041	1
1 to 13	Float Chamber Assembly W/ Filter	M90034	1

<b>RECOMMENDED SPARE PARTS</b>	
<b>Description</b>	<b>Part Number</b>
Main Sack Filter	VA80119
Wet/Dry Filter Cartridge	M90019
Replacement HEPA Cartridge	8-17262

## Warranty

Nilfisk warrants that Nilfisk vacuum equipment will be free of defects in workmanship or material for a period of two years from the date of delivery. Should any failure to conform to this warranty appear, the Nilfisk companies shall upon notification within such time period, correct such non-conformity, at its option, either by repairing any defective part or parts, or by replacing a part or parts provided that the equipment is returned to an authorized Nilfisk service facility. In all cases freight both ways will be at the expense of the customer. Equipment shall not be returned without advance notice to, and consent of the Nilfisk companies.

EXCEPT AS SPECIFICALLY SET FORTH HEREIN, THE NILFISK COMPANIES MAKE NO WARRANTIES, EITHER EXPRESSED OR IMPLIED AS TO ANY MATTER WHATSOEVER, INCLUDING WITHOUT LIMITATION ANY AND ALL WARRANTIES OF MERCHANTABILITY, FITNESS FOR PURPOSE, OR OTHER WARRANTIES, ALL OF WHICH ARE EXPRESSLY DISCLAIMED AND EXCLUDED. NEITHER PARTY SHALL BE LIABLE TO THE OTHER FOR SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING BUT NOT LIMITED TO LOSS OF PRODUCTION, LOSS OF TIME, LOSS OF PROFITS OR OTHER SIMILAR INDIRECT LOSSES WHICH MIGHT OCCUR AS A RESULT OF DEFECTS, PARTIAL OR TOTAL FAILURE OF THE PRODUCT TO PERFORM AS SPECIFIED.

Correction of non-conformities or defects in the manner and for the period of time provided above, shall constitute fulfillment of all liabilities of the Nilfisk companies to the customer, whether based on contract, negligence or otherwise with respect to, or arising out of such equipment. The remedies set forth herein are exclusive, and the liability of the Nilfisk companies with respect to this sale or anything done in connection therewith, whether in contract, in tort, under any warranty, or otherwise, shall not except as expressly provided herein, exceed the price of the equipment or part on which such liability is based.

The warranty does not cover repairs due to normal wear and tear, accident, neglect, misuse or abuse, incorrect installation or use other than as described in the instruction booklet. Breaks in hoses and cables are not covered. This warranty is rendered void if the motor number plate is removed or defaced or if repairs are made or attempted by persons not authorized by the Nilfisk companies.

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