



Instructions for Use Nilfisk VT Mercury Vac

CAUTION: This Nilfisk vacuum cleaner or any other vacuum cleaner is not to be used in explosion-hazardous areas, as serious injury could result.

Your new Nilfisk VT Mercury Vac is a precision engineered instrument designed expressly for the recovery of inorganic mercury spills and the pick up of mercury compound dust. Ordinary vacuum cleaners do not have activated-carbon adsorbent filter cartridges for mercury vapors or HEPA* dust filters. They cannot be used for picking up liquid spills, or finely ground hazardous mercury compound powders and dust. This Nilfisk machine is safe to use as a mercury droplet collector as long as certain precautions are taken. It is safe to use as a hazardous dust collector as long as other precautions are taken. Proper care of this cleaner is essential to the maintenance of its ultra-fine filtering capabilities.



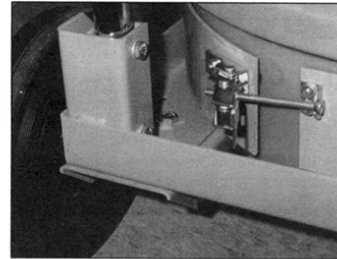
ATTENTION EMPLOYER: Please ensure these Instructions for Use are made available and understood by your employees or any other persons who may use this equipment.

BEFORE USE: DO NOT ATTEMPT TO OPERATE THIS VACUUM CLEANER UNTIL YOU HAVE INSTALLED ITS VARIOUS COMPONENTS ACCORDING TO THE FOLLOWING INSTRUCTIONS.

MACHINE SET-UP

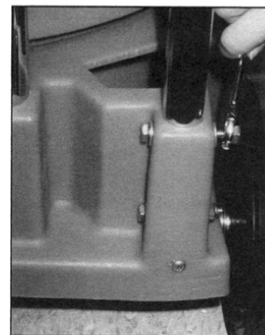
1. **Assembling the Trolley:** If your vacuum cleaner is equipped with a steel trolley, please follow the instructions under section 1(A). If equipped with a gray, polyethylene trolley, please follow instructions 1(B).

(A.) Open the clamp in the back of the trolley. Place the vacuum cleaner container in the trolley with the inlet facing front and center. To tighten or loosen the trolley's grip on the vacuum container, simply adjust the silver clamp located on the back side of the trolley. First, open the clamp. Then loosen the lock nut at the base of the screw. Loosen the screw itself to relax the grip; tighten the screw to strengthen. Once the adjustment is made, tighten the lock nut to hold the clamp in place (photo 1).



Insert the handle tube into the two brackets on the back of the trolley. Make sure the top of the handle is curved away from the trolley. Beginning on either side, take one of the "L"-shaped handle plates and insert it next to the handle tube in the handle bracket so that the tube is completely surrounded, and the nuts on the handle plate, the holes in the handle tube, and the holes in the bracket are all aligned. Install lock washers then insert a bolt through both holes and twist until secure. NOTE: Do not tighten the bolts completely until they are both in place. Repeat with other side.

(B.) Place the vacuum cleaner container in the trolley with the inlet facing front and center. Tighten the three thumb screws located on the trolley. This will secure the container in the trolley.



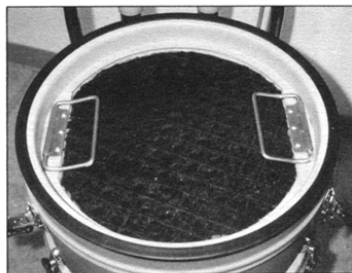
*HEPA: High Efficiency Particulate Air - Retains 99.97% of all particles at 0.3 microns in size.



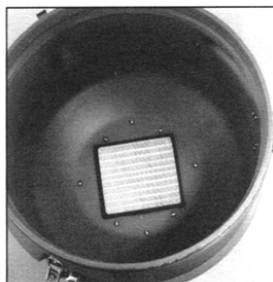
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Remove the hardware from the two holes at the back of the trolley where the handle tubes will be inserted. Insert the handle tubes. Make sure the top of the handle is curved away from the trolley. Beginning on either side, align the holes in the handle tube with the holes in the trolley and re-insert the bolt and washer. Install the other washer and tighten with nut (photo 2). Repeat with other side.

2. Installing the Paper Bag for Collection of Mercury Dust and other Dry Compounds: Open the three container latches located at the middle of the vacuum cleaner container. Lift off the motor lid and carbon chamber assembly and set it gently aside on its blue HEPA filter cover.

It is advisable to expand the bag before installing it in the machine. Gently pull open the pleats that are on each side of the bag, so that the cross section of the bag is almost square. Next, install the fully expanded bag down into the container. Then grasp the green collar on each side of the bag seal with both hands and slide the bag seal over the inlet tube (photo 3). Start from the bottom of the inlet tube and gently pull the bag seal over the inlet tube with a slight rocking or twisting motion. The green collar should be pulled flush against the three outer reinforcing ribs protruding from the inlet tube. After the bag seal is all the way up on the inlet tube, grasp the sides of the bag and pull them up so that the bag remains fully expanded in the container. Replace the motor lid and carbon chamber assembly.

3. Installing the Droplet Separator for Collection of Liquid Mercury: Attach the male camlock fitting of the droplet separator assembly to the container orifice. This secures the droplet separator to the container and provides an airtight seal.

4. Installing the Internal HEPA Filter, Carbon-Adsorbent Filter and Microstatic Diffuser: These components have already been factory installed.

5. Attaching the Accessories: For both liquid and dry mercury spills, install the clear PVC hose (#017273-10). Attach the hose's male camlock fitting to either the container orifice or to the female camlock fitting on the droplet separator assembly. A variety of 1-1/4" accessories are available for any liquid or dust application. Accessories may be attached directly onto the curved steel tube or onto the ends of wands inserted into the curved steel tube. For added security, the container is equipped with positive twist safety latches to prevent unauthorized disassembly.

CAUTION: IT IS IMPORTANT THAT SPILLS BE ATTENDED TO IMMEDIATELY. IT IS EQUALLY IMPORTANT THAT THEY BE CLEANED UP CAREFULLY, THOROUGHLY AND SLOWLY.

DO NOT PICK UP MORE THAN ONE JAR FULL OF LIQUID MERCURY IN ANY FIFTEEN MINUTE PERIOD.

EMPTYING

SINCE THIS VACUUM CLEANER IS USED TO COLLECT HAZARDOUS MERCURY LIQUID AND DUST, DO NOT ATTEMPT TO OPEN OR EMPTY ITS CONTENTS WITHOUT PERSONAL PROTECTIVE CLOTHING AND RESPIRATORY PROTECTION.

The PVC hose which is supplied with the Nilfisk VT Mercury Vac has a smooth lining. This smooth lining notwithstanding, tiny mercury droplets may occasionally remain in the hose after the spill has been picked up. It is therefore of extreme importance that THE HOSE END BE RAISED ABOVE THE OPERATOR'S HEAD AND SHAKEN BEFORE THE MOTOR IS SWITCHED OFF (illustration A). The hose should then be sealed with the wand cap.

1. Removing the Paper Bag: Remove the motor lid and carbon chamber assembly by opening the container latches located at the middle of the vacuum cleaner container. Lift off this upper part, taking care when setting it down again that the blue HEPA filter cover is not damaged.

Remove the paper bag by simply sliding the bag off the inlet tube, taking care not to squeeze or compress it. Once off the inlet tube, seal the bag opening with the attached cap. Dispose of the paper bag in a sealable plastic bag. Then install a new paper bag according to the previous instructions (see Step 2, under Machine Set-Up).

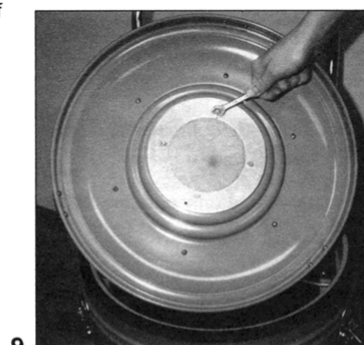
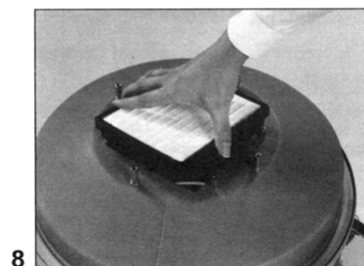
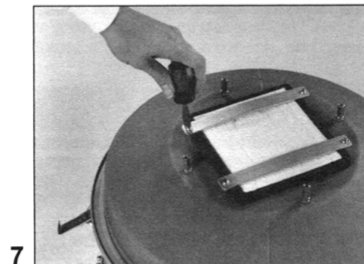
2. Emptying the Droplet Separator: Turn off the motor and tap the side of the polycarbonate droplet separator jar to settle the debris collected inside. Unscrew the clear jar from its black lid, taking care not to spill any of its contents. The liquid mercury can then be poured from the jar into another container for reuse or disposal. Screw the clear jar back onto the black lid and droplet separator assembly. Additional jars with lids are available for purchase.

DISPOSAL: Depending on local regulations and the composition of the materials you have collected, there will be a requirement for special handling and labeling of the filled and sealed plastic bags. Consult your local Occupational Safety and Health Agency (OSHA) and Environmental Protection Agency (EPA) officials for details.

FILTER REPLACEMENT

To ensure that your Nilfisk vacuum cleaner delivers the years of trouble-free operation for which it was designed, it is necessary to check and replace filters regularly.

1. Paper Bag: The disposable paper bag (#819990) should be replaced when it is approximately one third (1/3) full and then disposed of only in a sealed plastic bag. Do not attempt to reuse the disposable paper bag.





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2. Internal HEPA Filter: The glass fiber element in the internal filter (#120155) should perform satisfactorily for a minimum of one year. It cannot be renewed or restored. Exact life of the filter will depend upon the frequency of use and amount and type of material collected. NOTE: Cartridges must be replaced more frequently if the cleaner has had unusually heavy use, or if the vacuum cleaner has been operated without a paper bag installed.

Open the three container latches located at the top of the vacuum cleaner container. Lift off the motor lid assembly and set aside. Remove the carbon filter from the container by picking it up by the two black rings attached to the filter (photo 4). NOTE: This is very heavy. You will now see the HEPA filter inside the tank (photo 5).

Open the remaining three latches and lift off this section of the container. Turn it over and you will see a blue HEPA filter cover. With a flat head screwdriver, unscrew the four screws from the HEPA cover (photo 6). Remove the HEPA cover and set aside. Next, loosen and remove the four screws from the two metal clamps securing the HEPA filter (photo 7). Remove both metal clamps and carefully remove the filter (photo 8). Discard the filter in a sealable bag.

To install the new filter, insert the HEPA cartridge in the square cavity with the gasket side down. Replace the two metal clamps and secure them with the four screws. NOTE: Make sure the screws are well tightened to provide the necessary seal. Replace the blue filter cover and secure with the four screws. Reassemble container.

3. Mercury Vapor Adsorbent Cartridge: There are no visual means of determining when this cartridge needs replacement (#017264). For more information, please refer to the Special Notes section below.

4. Microstatic Diffuser: The microstatic diffuser (#116937) is located directly under the motor housing. The microstatic diffuser is a small, light gray filter that protects the motor from any carbon dust being emitted from the carbon chamber assembly. This filter will require periodic inspection. Dust will discolor the light gray filter. Change the microstatic diffuser as soon as any discoloration is easily noticeable.

Open the three container latches located at the top of the vacuum cleaner container. Lift off the motor. With an open-ended wrench, unscrew the four nuts from the metal filter plate (photo 9). Then, pull the metal filter plate free of the four screws and carefully remove the microstatic diffuser (photo 10). NOTE: Do not remove or discard the black, expanded metal screen. This will need to be reused.

To install the new microstatic diffuser, first trim the edges of the filter by using the old filter as a pattern. Center the new filter over the black metal screen. Press down firmly on the filter, until each of the four screws punctures the filter. Replace the metal filter plate and secure it with the four nuts. Then, replace the motor on the container and close the latches. Discard the old microstatic diffuser in a sealable plastic bag.

CAUTION: Use only genuine Nilfisk replacement filter components. The use of substitute components could pose a grave risk of personal exposure and will cause all equipment warranties to be void.

SPECIAL NOTES: IMPORTANT

The oversize capacity of the Nilfisk mercury-vapor adsorbent cartridge is designed to provide extended filter protection against accidental discharge of mercury vapor during spill cleanup. Although the activated-carbon is designed to have a service life of at least five years, the only sure way to ensure that

your activated-carbon filter still has useful capacity is to perform regular periodic checks of the vacuum cleaner's exhaust with a mercury detection device.

CAUTION: IN-LINE CLOCKS INDICATE ONLY MOTOR RUNNING TIME. THEY DO NOT NECESSARILY INDICATE FILTER EXPOSURE TIME.

Mercury spills are seldom foreseen. As a precaution against large spills, or difficulties in storing recovered mercury, we recommend an extra supply of droplet recovery jars with lids (#017257-02).

WARRANTY

The Nilfisk-Advance Group warrants that Nilfisk 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-Advance Group shall upon notification within such time period, correct such nonconformity, 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-Advance 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-Advance Group.

EXCEPT AS SPECIFICALLY SET FORTH HEREIN, THE NILFISK-ADVANCE GROUP MAKES 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 ANY 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 nonconformities or defects in the manner and for the period of time provided above, shall constitute fulfillment of all liabilities of the Nilfisk-Advance Group 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-Advance Group 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.

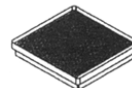
This warranty does not cover repairs due to normal wear and tear, accident, neglect, misuse or abuse, incorrect installation or use other than as described in the instruction booklet. Breaks in hoses and cables are not covered. This warranty is rendered void if the motor number plate is removed or defaced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

Some states do not allow exclusions of implied warranties or limitations on how long an implied warranty lasts so the above exclusions or limitation of implied warranties may not apply. Some states do not allow exclusion or limitation of incidental or consequential damages so the above exclusion or limitation of incidental or consequential damages may not apply. Limited warranties set forth above give specific legal rights. Customer may have other rights which vary from state to state.

ACCESSORIES



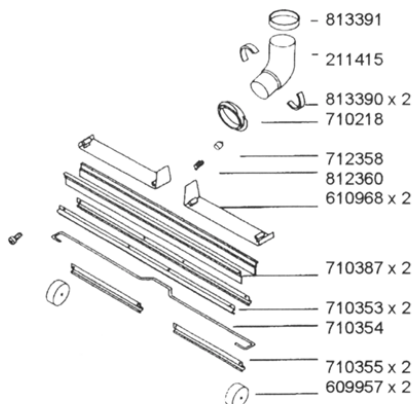
111422 - 12" Wheeled Floor Nozzle



120155 - HEPA Cartridge



819990 - Paper Bags 5/pkg.



111124 - 22" Straight Steel Wand



017273-10 - 10' Mercury Hose Complete, Liquid and Dry Collection

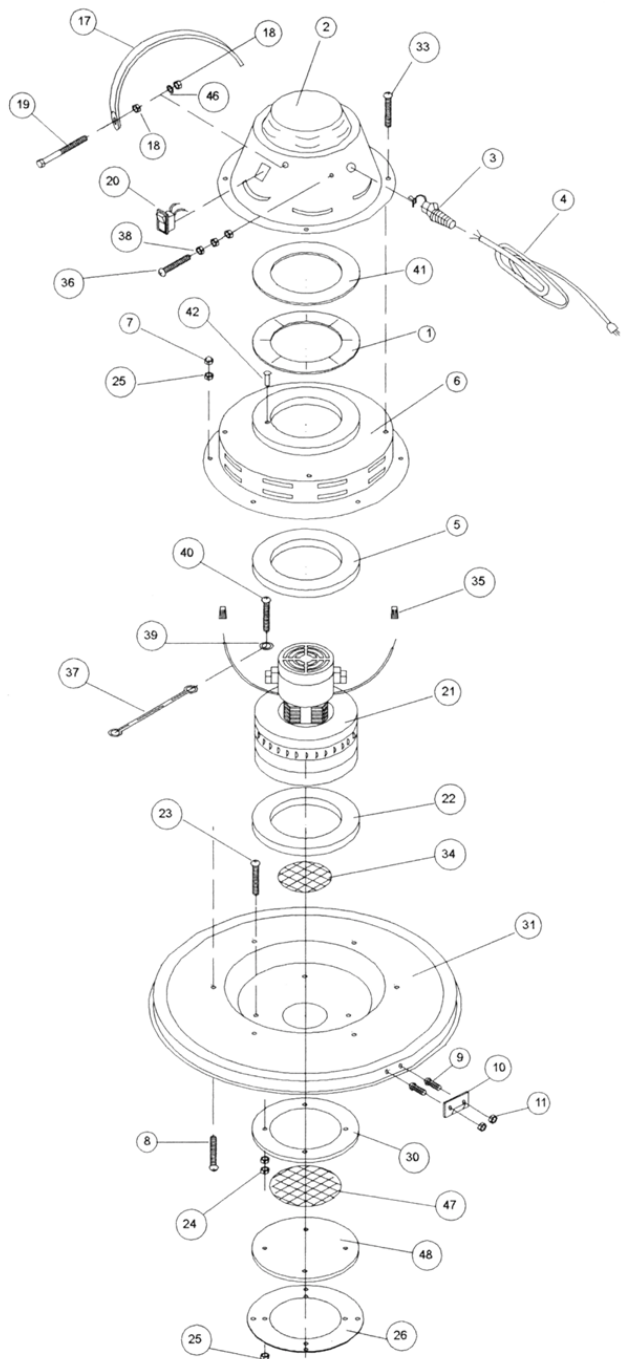


811409 - Plastic Nozzle



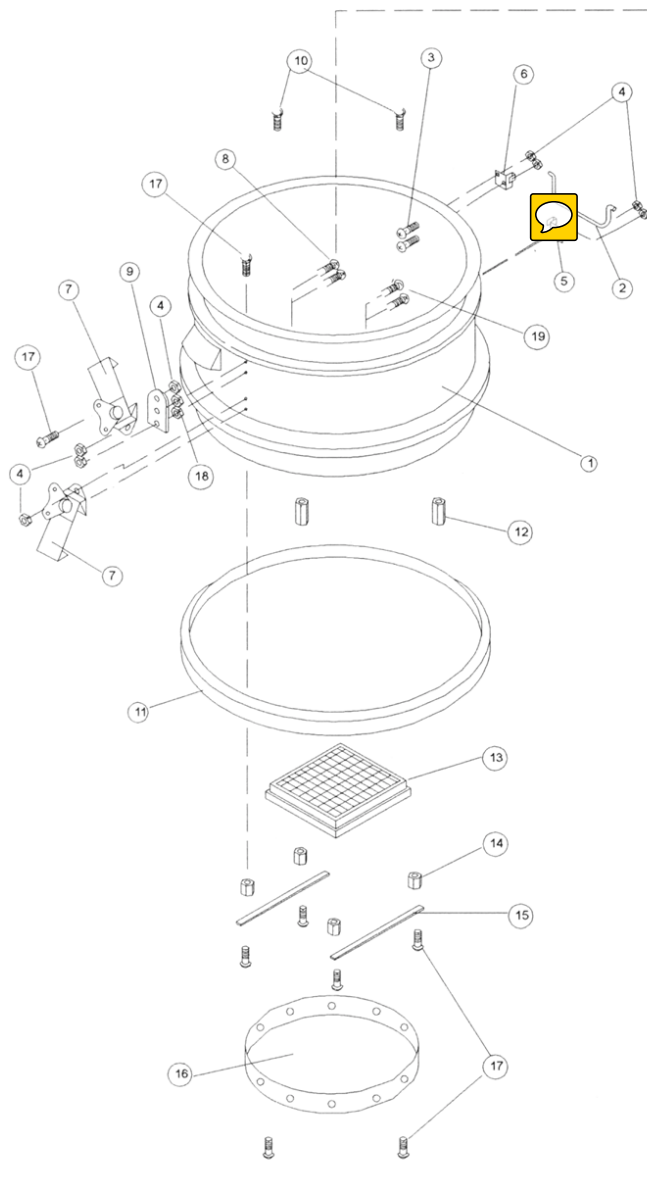
112769 - 3" Round Dust Brush

Motor Cover Assembly

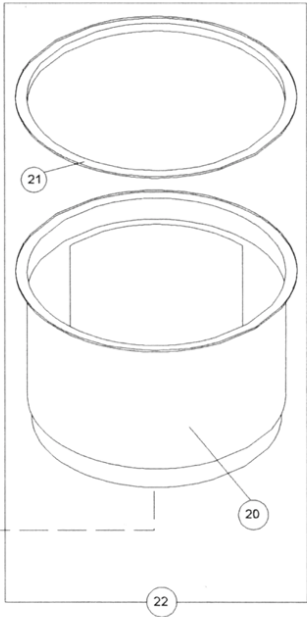


	DESCRIPTION	PT.NO.	
1	MOTOR SEAL	017865-00	1
2	UPPER COVER	017866-00	1
3	STRAIN RELIEF	017867-00	1
4	LINE CORD	017868-00	1
5	GASKET,MOTOR	017869-00	1
6	LOWER COVER	017870-00	1
7	NUT, ACORN	017882-38	6
8	SCREW	017631-00	6
9	SCREW 8-32	017631-00	6
10	KEEPER	017093-05	3
11	NUT 8-32 ESN	017630-00	6
12			
13			
14			
15			
16			
17	HANDLE	811061	1
18	NUT, 5/16"	017644-00	4
19	BOLT-5/16X1 1/4	017877-25	2
20	SWITCH	017873-00	1
21	MOTOR BLOWER	017874-00	1
22	GASKET,MOTOR	017875-00	1
23	SCREW 8-32	017659-00	4
24	NUT	017292-00	8
25	NUT	017292-00	10
26	PLATE	017876-00	1
27			
28			
29			
30	GASKET	017881-00	1
31	COVER, DEEP	017877-02	1
32			
33	SCREW 8-18	017882-37	6
34	SCREEN, PERF.	017878-00	1
35	WIRE NUT	017662-00	3
36	GROUND SCREW	017663-00	1
37	GROUND LEAD	017879-00	1
38	NUT	017664-00	3
39	WASHER #12 I.T.	017665-00	1
40	GROUND SCREW	017666-00	1
41	GASKET, FOAM	017865-05	1
42	SCREW #8 X 3/4	017877-20	2
43	DATA PLATE	017877-21	1
44	SCREW, DRIVE	017877-22	2
45			
46	LOCKWASHER	017877-26	2
47	GRILL		1
48	FILTER	116937-00	1

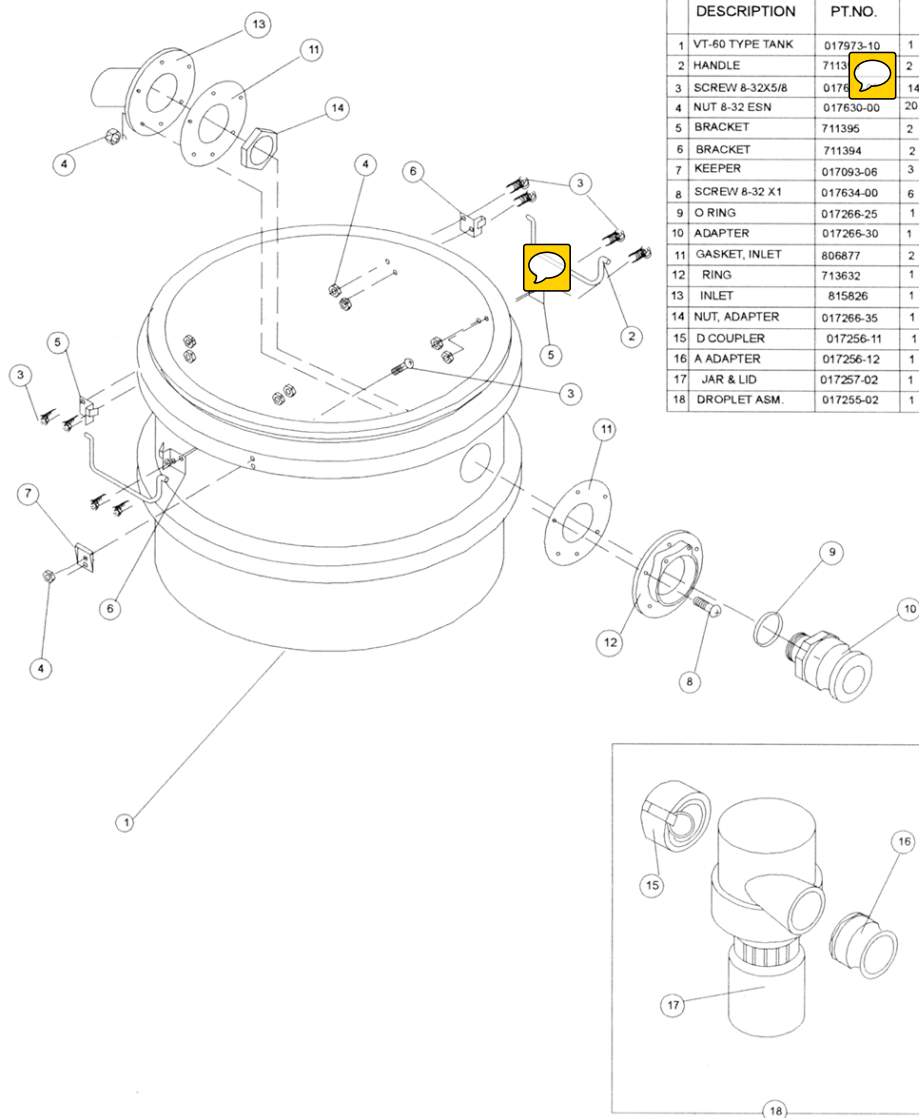
Filter Chamber Assembly



DESCRIPTION	PT.NO.	
1 VT-60 TYPE TANK	017973-05	1
2 HANDLE	711394	2
3 SCREW 8-32X5/8	017630-00	8
4 NUT 8-32 ESN	017630-00	20
5 BRACKET	711395	2
6 BRACKET	711394	2
7 LATCH	017092-11	6
8 SCREW 8-32X3/4	017633-00	6
9 ADAPTER	017094-06	3
10 SCREW 8-32X5/8	017882-14	4
11 SEAL, TANK	017837-00	1
12 STANDOFF 1/2"	017266-00	4
13 HEPA FILTER	120155-00	1
14 STANDOFF 1"	017266-10	4
15 BAR	017266-15	2
16 COVER, HEPA	017266-20	1
17 SCREW 8-32X3/8	017890-18	15
18 NUT 8-32	017292-00	6
19 SCREW 8-32X1/2	017877-27	6
20 CARBON CHAMBER	017264-90	1
21 GASKET, TUBE PLT.	017836-00	1
22 CARBON CHAMB. ASM	017264-00	1



Tank Assembly and Droplet Separator



Nilfisk-Advance America, Inc., 300 Technology Drive, Malvern, PA 19355, 1-800-645-3475

<http://www.pa.nilfisk-advance.com>

Nilfisk-Advance Canada Company, 396 Watline Avenue, Mississauga, Ontario L4Z 1X2, Canada, 1-800-668-8400