



ATTENTION!

Read all safety rules carefully before attempting to operate. Retain for future reference.



DANGER!

Never operate this unit when flammable materials or vapors are present because electrical devices produce arcs or sparks that can cause a fire or explosion.

NEVER OPERATE UNATTENDED!

User manual. Please review before operating vac.

shop·vac[®]
BRAND

Wet/Dry Vacuums

SERIES CH87

Commercial/Industrial Use

Description

The Shop-Vac[®] Wet/Dry vacuum cleaners are for vacuuming wet and dry non-volatile materials. Equipped with powerful, permanently lubricated, Single or Two-Stage By-Pass motors. Standard filtration systems to handle dry or wet pick up. Double filtration is available for most Shop-Vac[®] Vacs and is standard on Shop-Vac[®] Commercial Vacuums. Automatic float shut off prevents overflow during wet pick up. Includes versatile 1-1/2" (3.81cm) diameter accessories. UL listed.

IMPORTANT SAFETY INSTRUCTIONS

When using an electrical appliance, basic precautions should always be followed, including the following: **READ ALL INSTRUCTIONS BEFORE USING THIS APPLIANCE.**

⚠ WARNING – TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK OR INJURY:

1. Do not leave appliance when plugged in. Unplug from outlet when not in use and before servicing. Connect to a properly grounded outlet only. See Grounding Instructions.
2. Do not expose to rain – store indoors.
3. Do not allow to be used as a toy. Close attention is necessary when used by or near children.
4. Use only as described in this manual. Use only Manufacturer's recommended attachments.
5. Do not use with damaged cord or plug. If appliance is not working as it should, has been dropped, damaged, left outdoors or dropped into water, contact Shop-Vac Corporation for assistance.
6. Do Not: pull or carry by cord, use cord as a handle, close a door on cord or pull cord around sharp edges or corners. Do not run appliance over cord. Keep cord away from heated surfaces.
7. Do not unplug by pulling on cord. To unplug, grasp the plug; not the cord.
8. Do not handle plug or appliance with wet hands.
9. Do not put any object into openings. Do not use with any openings blocked; keep free of dust, lint, hair and anything that may reduce air flow.
10. Keep hair, loose clothing, fingers and all parts of body away from openings and moving parts.
11. Do not pick up anything that is burning or smoking, such as cigarettes, matches or hot ashes.
12. Do not use without dust bag and/or filters in place.

13. Turn off all controls before unplugging.
14. Use extra care when cleaning on stairs.
15. Do not use to pick up flammable or combustible liquids such as gasoline or use in areas where they may be present.
16. Do not use your cleaner as a sprayer of flammable liquids such as oil base paints, lacquers, household cleaners, etc.
17. Do not vacuum toxic, carcinogenic, combustible or other hazardous materials such as asbestos, arsenic, barium, beryllium, lead, pesticides or other health endangering materials. Specially designed units are available for these purposes.
18. Do not pick up soot, cement, plaster or drywall dust without cartridge filter and collection filter bag in place. These are very fine particles that may pass through the foam and affect the performance of the motor or be exhausted back into the air. Additional collection filter bags are available.
19. Do not leave the cord lying on the floor once you have finished the cleaning job. It can become a tripping hazard.
20. Use special care when emptying heavily loaded tanks.
21. To avoid spontaneous combustion, empty tank after each use.
22. The operation of a utility vac can result in foreign objects being blown into eyes, which can result in eye damage. Always wear safety goggles when operating vacuum.
23. **STAY ALERT!** Watch what you are doing and use common sense. Do not use vacuum cleaner when you are tired, distracted or under the influence of drugs, alcohol or medication causing diminished control.
24. **WARNING!** Do **NOT** use this vacuum cleaner to vacuum lead paint debris because this may disperse fine lead particles into the air. This vacuum cleaner is not intended for use under EPA Regulation 40 CFR Part 745 for lead paint material cleanup.

SAVE THESE INSTRUCTIONS

⚠ WARNING – DO NOT LEAVE VACUUM UNATTENDED WHEN IT IS PLUGGED IN AND/OR OPERATING. UNPLUG UNIT WHEN NOT IN USE.

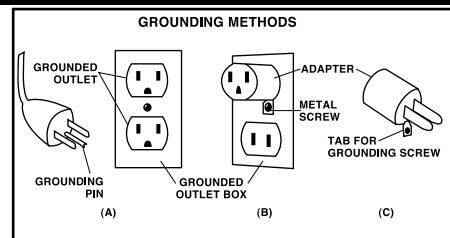
GROUNDING INSTRUCTIONS

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 of electric shock. This appliance 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.

⚠ 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.

This appliance is for use on a nominal 120-volt circuit, and has a grounded plug that looks like

the plug illustrated in **sketch A**. A temporary adaptor that looks like the adaptor illustrated in **sketches B and C** may be used to connect this plug to a 2-pole receptacle as shown in **sketch B** if a properly grounded outlet is not available. The temporary adaptor should be used only until a properly grounded outlet (**sketch A**) can be installed by a qualified electrician. The green colored rigid ear, lug or the like extending from the adaptor must be connected to a permanent ground such as a properly grounded outlet box cover. Whenever the adaptor is used, it must be held in place by a metal screw.



IN CANADA, THE USE OF A TEMPORARY ADAPTOR IS NOT PERMITTED BY THE CANADIAN ELECTRICAL CODE. Make sure that the appliance is connected to an outlet having the same configuration as the plug. No adaptor should be used with this appliance.

EXTENSION CORDS

When using the appliance at a distance where an extension cord becomes necessary, a 3-conductor grounding cord of adequate size must be used for safety, and to prevent loss of power and overheating. Use the table below to determine A.W.G. wire size required. To determine ampere rating of your vacuum, refer to nameplate located on rear of motor cover.

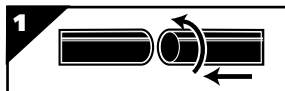
Before using appliance, inspect power cord for loose or exposed wires and damaged insulation. Make any needed repairs or replacements before using your appliance. Use only three-wire outdoor extension cords which have three-prong grounding-type plugs and three-pole receptacles which accept the extension cord's plug. When vacuuming liquids, be sure the extension cord connection does not come in contact with the liquid.

NOTE: STATIC SHOCKS ARE COMMON IN DRY AREAS OR WHEN THE RELATIVE HUMIDITY OF THE AIR IS LOW. THIS IS ONLY TEMPORARY AND DOES NOT AFFECT THE USE OF THE APPLIANCE. TO REDUCE THE FREQUENCY OF STATIC SHOCKS IN YOUR HOME, THE BEST REMEDY IS TO ADD MOISTURE TO THE AIR WITH A CONSOLE OR INSTALLED HUMIDIFIER.

Volts		Total length of cord in feet			
120V		25	50	100	150
Ampere Rating More Than	Not More Than	AWG			
		0	6	18	16
6	10	18	16	14	12
10	12	16	16	14	12
12	16	14	12	Not recommended	

UNPACKING AND SET-UP

1. Pull lid latches in an outward motion and remove tank cover and any accessories which may have been shipped in the tank.
2. Before replacing tank cover, refer to Dry Pick up or Wet Pick up Operation in this manual to ensure you have the proper filters installed and inlet deflector is positioned correctly for your cleaning operation.
3. Your vacuum comes with the filters already installed for dry pick up. For filters recommended for wet pick up refer to wet pick up operation.
4. Replace tank cover and apply pressure with thumbs to each latch until it snaps tightly in place. Make sure both lid latches are clamped securely.
5. Attach dolly following the instructions and illustrations in this manual.
6. Insert long machine hose end with locking-nut into inlet of tank and tighten. Do not over-tighten.
7. Attach the extension wands to the accessory end of the hose. Twist slightly to tighten the connection (**Figure 1**).
8. Attach one of the cleaning accessories (depending on your cleaning requirements) on the extension wands.



Twist slightly to tighten the connection (**Figure 1**).

9. Plug the cord into the wall outlet. Your cleaner is ready for use.

I = ON, 0 = OFF

NOTE: MANY MORE USEFUL TOOLS ARE AVAILABLE AT YOUR LOCAL DEALER OR SHOP-VAC® WEBSITE.

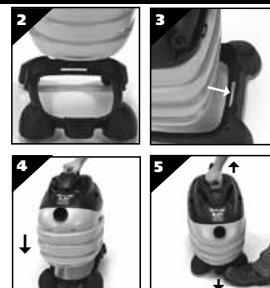
DOLLY OPERATION

Attaching Dolly

To attach dolly to bottom of tank, lift vacuum using the top handle. Position vacuum above dolly with the front of the vacuum facing the front of the dolly (side with the release lever) (**Figure 2**). Place tab on back bottom of tank into slot in back of dolly (**Figure 3**). Push downward on front of vacuum until front of tank clips into lever on dolly (**Figure 4**).

Removing Dolly

To remove dolly, gently push downward on the release lever with your foot. While holding the release lever down, lift upwards on vacuum using the top carry handle (**Figure 5**).



TOOL HOLDER ASSEMBLY

(Not standard with all models)

1. Replace tank cover and apply pressure with thumbs to each latch until it snaps tightly in place. Make sure both lid latches are clamped securely.
2. With rear of unit facing you, take tool holder and position it with the tabs facing rear tank cover (Figure 6).
3. Press tabs of tool holder into the slots on mounting lugs on rear of tank cover (Figure 7).
4. Press down until tabs snap into place.



⚠ WARNING – ALWAYS DISCONNECT THE PLUG FROM THE WALL OUTLET BEFORE REMOVING THE TANK COVER.

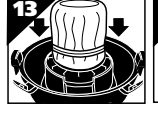
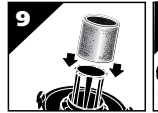
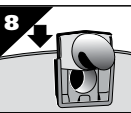
DRY PICK UP

INSTALLING FOAM SLEEVE AND REUSABLE DRY FILTER

(Not standard with all models)

⚠ WARNING – ALWAYS DISCONNECT THE PLUG FROM THE WALL OUTLET BEFORE REMOVING THE TANK COVER.

When using the reusable dry filter to pick up dust and dry material, you must install foam sleeve and reusable dry filter to ensure proper filtration. Remove inlet deflector from the deflector guide, located on inside of tank, sliding in an upward motion. **NOTE:** Hose must be removed before inlet deflector can be taken out. Reinstall being sure the opening of the inlet deflector is facing the tank bottom (Figure 8). If the vacuum has been used to pick up liquids, the foam sleeve must be cleaned and dried before installing for dry pick up. With tank cover in an upside down position, slide foam sleeve down over lid cage pulling until foam sleeve completely covers lid cage (Figure 9). **NOTE:** Bottom of foam sleeve must be positioned on the OUTSIDE of groove around lid cage for the reusable dry filter to fit properly (Figure 10, 11). Center the reusable dry filter on lid cage (Figure 12), slide mounting ring down over filter until ring is positioned against the ribs of the lid cage (Figure 13). The reusable dry filter should always be in position over the foam sleeve for dry pick up. To remove the filter for cleaning, remove mounting ring and filter from lid cage (Figure 14). To clean the reusable dry filter, shake off excess dirt and dust or (depending on the condition of the filter) rinse with water. Allow the filter to dry completely and re-install. **DO NOT MACHINE WASH OR DRY.**

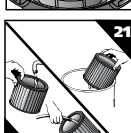
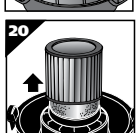
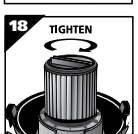
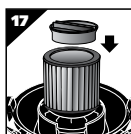
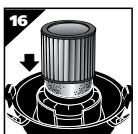
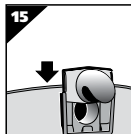


INSTALLING THE CARTRIDGE FILTER

(Not standard with all models)

NOTE: If foam sleeve is in position over lid cage, it does not need to be removed before installing cartridge. Foam must be positioned on the INSIDE of groove around lid cage for cartridge to fit properly.

The cartridge filter can be used for wet or dry pick up; installation is the same for both. When picking up large quantities of liquid please refer to the Wet Pick up Operation section in this manual. Use the cartridge filter in position over the lid cage for most general dry material pick up. Remove inlet deflector from the deflector guide, located on inside of tank, sliding in an upward motion. **NOTE:** Hose must be removed before inlet deflector can be taken out. Reinstall being sure the opening of the inlet deflector is in the proper position for your cleaning operation. For dry pick up be sure the opening of the inlet deflector is facing the tank bottom (Figure 15). For wet pick up be sure the opening of the inlet deflector is facing the top of the tank. With the tank cover in an upside down position, slide the cartridge filter down over the lid cage, pushing until the filter seals against the cover (Figure 16). Place filter retainer into the top of the cartridge filter, hold the tank cover with one hand, turn the handle on the filter retainer clockwise to tighten, locking the filter into place (Figures 17 & 18). To remove the filter for cleaning, again hold the tank cover and turn the filter retainer counter-clockwise to loosen and remove, slide the cartridge filter off the lid cage (Figures 19 & 20). To clean the cartridge filter shake or brush off excess dirt or rinse (from the inside of the filter) with water, dry completely (approximately 24 hours) and re-install (Figures 21 & 22). **NOTE:** If the filter has been used for wet pick up, it must be cleaned and dried before using for dry pick up.



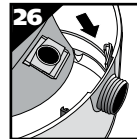
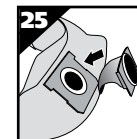
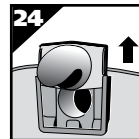
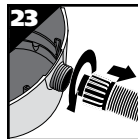
⚠ CAUTION – KEEP FILTERS CLEAN.

EFFICIENCY OF THE VACUUM IS LARGELY DEPENDENT ON THE FILTER. A CLOGGED FILTER CAN CAUSE OVERHEATING AND POSSIBLY DAMAGE THE CLEANER. CHECK THE FILTER PERIODICALLY AND REPLACE AS REQUIRED.

INSTALLING THE DISPOSABLE FILTER BAG

(Not standard with all models)

1. Use for dry pick up only. Use in conjunction with cartridge filter for picking up soot, cement, plaster or drywall dust.
2. With cord disconnected from receptacle, pull latches in an outward motion and remove tank cover.
3. Unscrew hose locking-nut and remove hose from inlet (Figure 23).
4. Remove inlet deflector from deflector guide (Figure 24). **NOTE:** Hose must be removed before inlet deflector can be taken out.
5. With the opening of the inlet deflector facing the bottom of the filter bag, slide collection bag collar over deflector matching notches of bag collar to tabs on inlet deflector, bag will only fit properly one way (Figure 25).
6. Slide deflector with collection bag attached into deflector guide (Figure 26).
7. Reinsert hose into inlet and tighten locking-nut (Figure 27).
8. Fold bottom of collection bag to fit shape of tank.



WARNING FOR FINE DUST & POWDERS

FILTER SELECTION GUIDE

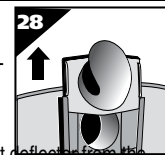
SIZE	Fine dust Drywall	Standard Household
5-8 U.S. Gal (18.9-30.3L)	90671	90661/90532
10-14 U.S. Gal (37.8-53L)	90672	90662/90534
15-22 U.S. Gal (56.8-83.2L)	90673	90663/90533

90107 REUSABLE DRY FILTER AND MOUNTING RING fits most Wet/Dry Vacuums.

90585 FOAM FILTER SLEEVE fits most Wet/Dry Vacuums and should remain in place at all times.

WET PICK UP OPERATION

Remove ALL dirt and debris found in the tank. The vacuum requires only a minimum of conversion when going from dry to wet pick up. Remove all dry use filters from the vacuum. A clean cartridge filter may be used for vacuuming small amounts of liquids. For best results when vacuuming large quantities of liquid, remove the cartridge filter. When vacuuming liquids containing debris, it is recommended purchasing a foam sleeve and install over filter cage; otherwise a foam sleeve is not required for wet pick up. Remove inlet deflector from the deflector guide sliding in an upward motion. **NOTE:** Hose must be removed before inlet deflector can be taken out. Reinstall being sure the opening of the inlet deflector is facing the top of the tank (Figure 28), misting may occur if inlet deflector is not inserted properly. Misting in exhaust air may occur if the filter becomes saturated during wet pick up. If misting occurs, remove filter and allow to dry or, replace with another dry filter to eliminate the misting and possible dripping of liquid around the lid. Turn the unit off immediately upon completing a wet pick up job or when tank is full and ready to be emptied. Raise the hose to drain any excess liquid into the tank. The interior of the tank should be periodically cleaned.



The foam sleeve should be cleaned periodically as described in the following steps:

1. Always disconnect the plug from the wall receptacle before removing the tank cover. Place tank cover in an upside down position. Remove foam sleeve by sliding it up and off the lid cage.
2. Shake excess dust off foam sleeve with a rapid up and down movement.
3. Hold foam sleeve under running water for a minute or two, rinsing from the inside. A water wash is not always required, depending on the condition of the foam sleeve.
4. Gently wring out excess water, blot foam sleeve with a clean towel, and allow to dry. The foam sleeve is now ready to be reinstalled on the lid cage.

NOTE: WET PICK UP ACCESSORIES SHOULD BE WASHED PERIODICALLY, ESPECIALLY AFTER PICKING UP WET, STICKY KITCHEN ACCIDENTS. THIS CAN BE ACCOMPLISHED WITH A WARM SOLUTION OF SOAP AND WATER.

BLOWER FEATURE

This vacuum can be used as a powerful blower. To use your unit as a blower unscrew blower port cover located on the backside of the motor housing (Figure 29). The blower port cover is equipped with a retaining strap to prevent loss of the port cover while blower is in use. Insert hose end with locking-nut into blower port on rear of unit and tighten. Caution should be used when using as a blower due to the powerful force of air when using certain attachments.



⚠ WARNING – ALWAYS WEAR EYE PROTECTION TO PREVENT ROCKS OR DEBRIS FROM BEING BLOWN OR RICOCHETING INTO THE EYES OR FACE WHICH CAN RESULT IN SERIOUS INJURY.

EMPTYING LIQUID WASTES FROM THE TANK

Your Shop-Vac® Wet/Dry Vac may be emptied of liquid waste by removing the tank cover. To empty, stop the motor and remove the plug from the wall receptacle. Remove the tank cover and

deposit the liquid waste contents in a suitable drain. After the tank is empty, return the cover to its original position. To continue use, plug the cord into the wall receptacle and start the motor.

AUTOMATIC SUCTION SHUT-OFF

The vacuum is equipped with an automatic suction shut-off that operates when picking up liquids. As the level of the liquid rises in the tank, an internal float rises until it seats itself against a seal at the intake of the motor, shutting off suction. When this happens, the motor will develop a higher than normal pitch noise and the suction is drastically reduced. If this occurs, turn unit off immediately. Failure to turn unit off after float rises and shuts off suction will result in extensive damage to the motor. To continue use, empty the liquid waste from the tank as outlined in the previous paragraph.

NOTE: IF ACCIDENTALLY TIPPED OVER, THE VACUUM COULD LOSE SUCTION. IF THIS OCCURS, TURN UNIT OFF AND PLACE VAC IN UPRIGHT POSITION. THIS WILL ALLOW THE FLOAT TO RETURN TO ITS NORMAL POSITION, AND YOU WILL BE ABLE TO CONTINUE OPERATION.

LUBRICATION

No lubrication is necessary as the motor is equipped with lifetime lubricated bearings.

STORAGE

Before storing your vacuum the tank should be emptied and cleaned. The power cord can be wrapped around the cord wraps provided on the top of the tank cover located in front and behind the handle (**Figure 30**). To remove the cord from the cord wraps grasp the sides of the rear cord wrap located behind the handle, turn counter clockwise 180° until the tip of the cord wrap is above the handle (**Figure 31**). Grasp the entire cord behind the handle and pull above the rear cord wrap, pull cord towards the front of the vac until the cord becomes disconnected from the front cord wrap (**Figure 32**). Grasp the sides of the rear cord wrap and turn clockwise 180° to return it to its original position (**Figure 33**). **The cleaner should be stored indoors.**



TROUBLESHOOTING

Trouble	Possible Cause	Remedy
Suction weakens or cleaner runs hot	Clogged filter	Brush dirt from filter. If condition continues, change filter.
	Air leak	Check all fittings for tight fit (nozzles, hose, etc.) Check that tank cover is sealed properly.
	Obstruction in hose or nozzle.	Check nozzle, hose, etc. for obstructions, and remove if present.
Misting in the exhaust air	Saturated filter	Replace saturated filter with a dry filter.

! WARNING – IF ANY OF THE MOTOR HOUSING PARTS SHOULD BECOME DETACHED OR BROKEN, EXPOSING THE MOTOR OR ANY OTHER ELECTRICAL COMPONENTS, OPERATION SHOULD BE DISCONTINUED IMMEDIATELY TO AVOID PERSONAL INJURY OR FURTHER DAMAGE TO THE VACUUM. REPAIRS SHOULD BE MADE BEFORE REUSING THE VACUUM.