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!**





Wet/Dry Vacuum • Household and Workshop Use **SERIES 87M, 87MT, 87L**

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

- TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK OR INJURY:

- Do not leave appliance when plugged in. Unplug from outlet when not in use and 1. before servicing. Connect to a properly grounded outlet only. See Grounding Instructions.
- Do not expose to rain store indoors. 2
- 3. Do not allow to be used as a toy. Close attention is necessary when used by or near children.
- Use only as described in this manual. Use only Manufacturer's recommended attachments. 4.
- 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.
- 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.
- Keep hair, loose clothing, fingers and all parts of body away from openings and moving parts. 10.
- 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 baos 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.

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A 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.

AWARNING – 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 QUALI-FIED 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 adapter 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 cord's 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.

UNPACKING AND SET-UP

- 1. Pull lid latches in an outward motion, remove tank cover and any accessories which may have been shipped in the tank.
- 2. Attach caster system following the instructions and illustrations in this manual.
- 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 for your cleaning operation.
- 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. Insert long machine hose end with locking-nut into inlet of tank and tighten. Do not over-tighten.
- 6. Attach the extension wands to the accessory end of the hose. Twist slightly to tighten the connection (Figure A).
- Attach one of the cleaning accessories (depending on your cleaning requirements) on the extension wands. Twist slightly to tighten the connection (Figure A).
- 8. Plug the cord into the wall outlet. Your cleaner is ready for use. ${\rm I}={\rm ON}, {\rm O}={\rm OFF}$

NOTE: MANY MORE USEFUL TOOLS ARE AVAILABLE AT YOUR LOCAL DEALER OR SHOP-VAC $^{\odot}$ WEBSITE.

CASTER SYSTEM ASSEMBLY

Not all units are equipped with the same caster system. Follow the instructions that apply to your specific unit.

PLASTIC TANK:

With Four Caster Feet

You will find four caster feet, four casters and four screws (Figure 1) with your wet/dry vacuum. Assemble as follows:

- With cord disconnected from receptacle and tank cover removed, turn tank upside down so that bottom is facing up.
- With front of tank facing you, take caster feet marked with the letter A (Figure 2) and place in slots on left front and right rear of tank also marked with the letter A (Figure 3) and secure with screws provided (Figure 4).
- 3. Take caster feet marked with the letter B (Figure 5) and place in slots on right front and left rear of tank also marked with the letter B (Figure 6) and secure with screws provided (Figure 7).
- If flat washers are included in hardware package place flat washer over stem of caster before installing casters into feet. NOTE: Flat washers are not required with all units.
- 5. Insert casters into feet by placing stem of caster into holes provided. Apply pressure and twisting motion until casters snap into place (Figure 8).
- 6. Return tank to upright position.



Volts	Total length of cord in feet			
120V	25	50	100	150
Ampere Rating More Not More Than Than	AWG			
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	18 18 16 14	16 16 16 12	16 14 14 Not reco n	14 12 12 nmended



With Rear Caster Dolly

You will find four casters (b.), two caster feet (c.), rear caster dolly/tool holder (d.), and four screws with your wet/dry vacuum. Assemble as follows:



- With cord disconnected from receptacle and tank cover removed, turn tank upside down so that the bottom is facing up.
- Take rear caster dolly and place into slots (on rear of tank, opposite of drain) and secure with screws provided (Figure 9).
- If flat washers are included in hardware package place flat washer over stem of caster before installing casters into rear caster dolly. NOTE: Flat washers are not required with all units.
- Insert casters into bottom of rear caster dolly by placing stem of caster into holes provided. Apply pressure and twisting motion until casters snap into place (Figure 10).
- With tank drain facing you, take caster foot marked with the letter A (Figure 11) and place in slot on left side of tank also marked with the letter A and secure with screw provided (Figure 12).
- Take caster foot marked with the letter B (Figure 13) and place in slot on right side of tank also marked with the letter B and secure with screw provided (Figure 14).
- Insert casters into feet by placing stem of casters into holes provided. Apply pressure and twisting motion until casters snap into place (Figure 15).
- 8. Return tank to upright position.
- Place tool basket (not standard with all models) with curved surface against tank on rear caster dolly assembly (Figure 16).



With Rear Wheel Dolly

You will find two casters (e.), two large rear wheels (f.), one axle (g.), rear dolly/ basket (h.), two caster feet (i.) and four screws with your wet/dry vacuum. Assemble as follows:



- 1. With cord disconnected from receptacle and tank cover removed, turn tank upside down so that the bottom is facing up.
- 2. Place axle upright on a hard surface and hammer on (1) cap nut. Place (1) wheel on axle and slide down to cap nut **(Figure 17).** Be sure flat side of wheel hub is facing outward.
- 3. Slide axle through holes provided in dolly/basket (Figure 18).
- 4. Slide remaining wheel onto axle and hammer on second cap nut (Figure 19).
- 5. Take rear dolly assembly and place into slots (on rear of tank opposite drain) and secure with screws provided (Figure 20).
- With tank drain facing you, take caster foot marked with the letter A (Figure 21) and place in slot on left side of tank also marked with the letter A and secure with screw provided (Figure 22).
- Take caster foot marked with the letter B (Figure 23) and place in slot on right side of tank also marked with the letter B and secure with screw provided (Figure 24).
- If flat washers are included in hardware package place flat washer over stem of caster before installing casters into feet. NOTE: Flat washers are not required with all units.
- Insert casters into feet by placing stem of caster into holes provided. Apply pressure and twisting motion until casters snap into place (Figure 25).
- 10. Return tank to upright position.



METAL TANK:

Rear Wheel Dolly/Tool Holder and Front Caster Feet Assembly

You will find two casters (j.), two large rear wheels (k.), one axle (l.), rear dolly (m.), two caster feet (n.) and four screws with your wet/dry vacuum. Assemble as follows:



- 1. With cord disconnected from receptacle and tank cover removed, turn tank upside down so that the bottom is facing up.
- Place axle upright on a hard surface and hammer on (1) cap nut. Place (1) wheel on axle and slide down to cap nut (Figure 26). Be sure flat side of wheel hub is facing outward.
 Slide over the baloe avoided in a blue (Figure 27).
- 3. Slide axle through holes provided in dolly (Figure 27).
- 4. Slide remaining wheel onto axle and hammer on second cap nut (Figure 28).
- With a pair of scissors, trim the enclosed template to fit your size tank. Sizes will be 11", 14" or 16" diameters.
- Once template is cut out, place on bottom of tank, align inlet arrow on template with center of inlet on tank (Figure 29).
- 7. Align cutouts in center of rear dolly with bars on template (Figure 30).
- Place groove of rear dolly over rim of tank and push until the dolly is tight against bottom of tank (Figure 31).
- 9. Secure dolly with screw and washer provided (Figure 32).
- 10. If caster feet are attached together, separate by removing webbing.
- 11. Take caster foot marked with the letter A and align arrow on foot (Figure 33) with arrow on template also marked with the letter A (Figure 34).
- 12. Place groove of foot over rim of tank and push until the caster foot is tight against bottom of tank (Figure 35).
- 13. Secure feet with screw and washer provided (Figure 36).
- 14. If flat washers are included in hardware package place flat washer over stem of caster before installing casters into feet. **NOTE:** Flat washers are not required with all units.
- Insert casters into feet by placing stem of caster into holes provided. Apply pressure and twisting motion until casters snap into place (Figure 37).
 Place tech backet (net standard with all standard wi
- 16. Place tool basket (not standard with all models), with curved surface against tank, on rear wheel dolly assembly (Figure 38).



INSTALLING THE CARRIAGE HANDLE

(Not standard with all models)

PLASTIC TANK:

Stand vacuum right side up. Place metal carriage handle outside of tank and under the side carrying handles. Be sure to spread the ends of the carriage handles when assembling to prevent damage to the tank. Align holes of carriage handle to holes in tank and fasten tightly with screws, washers, and nuts provided. The sealing washer and screw have a close fitting tolerance. Rubber side of sealing washer should fit against inside wall of tank. Failure to properly install rubber washer could result in water leakage or loss of performance. Replace the tank cover and clamp the lid latches securely.



METAL TANK:

Attach carriage handle to tank by inserting bolt through the center hole of handle and tank, secure with nut provided. Attach side handles with screws provided. Be sure to spread ends of carriage handle when assembling to prevent damage to tank.



TOOL HOLDER ASSEMBLY

(Not standard with all models) With units 6-12 gallon follow these instruc-

- tions. 1. With rear of unit facing you, take tool holder
- and position it with tabs facing rear of unit (Figure 39).
- Place "J" shaped tabs into the slots on cord wraps (Figure 40).
- 3. Press down until tabs snap into place.
- Press down on center of tool holder until tal latches on bottom lid (Figure 41).

With units 14-20 gallon follow these

 instructions.
 1. With rear of unit facing you, take tool holder and slide over notches on rear of tank (Figure 42).

DRY PICK UP OPERATION 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. Make sure inlet deflector is fully inserted into deflector guide on inside of tank. If it is not, install inlet deflector by sliding it downward into slot on deflector guide (**Figure 43**). **NOTE**: Hose must be removed before inlet deflector can be inserted into or removed from deflector guide. Opening on inlet deflector can face either side of tank. Inlet deflector should always be in place for any type of cleaning. 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 44). 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 45, 46). Center the reusable dry filter on lid cage (Figure 47), slide mounting ring down over filter until ring is positioned against the ribs of the lid cage (Figure 48). 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 49). 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 reinstall. DO NOT MACHINE WASH OR DRY.

IMPORTANT: BEFORE INSTALLING REUSABLE FILTER BE SURE THAT FOAM SLEEVE IS OUTSIDE OF GROOVE AND AROUND LID CAGE. (Figure 44, 45)

NOTE: ENSURE THAT THE MOUNTING RING IS COMPLETELY SECURE AND IN POSITION BY PRESS-ING DOWN FIRMLY AROUND THE RING IN SEVERAL PLACES. BE SURE THE REUSABLE DRY DISC FILTER COMPLETELY COVERS THE FOAM SLEEVE. CHECK TO ENSURE THAT ALL EDGES OF THE REUSABLE DRY FILTER ARE SECURE UNDER THE MOUNTING RING.

CAUTION – KEEP FILTERS CLEAN





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 filter. Foam sleeve must be positioned on the INSIDE of groove located around lid cage for cartridge filter 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 the manual. Use the cartridge filter in position over the lid cage for most general dry pick up. Make sure inlet deflector is fully inserted into deflector guide on inside of tank. If it is not, install inlet deflector by sliding it downward into slot on deflector guide (Figure 50). NOTE: Hose must be removed before inlet deflector can be inserted into or removed from deflector guide. Opening on inlet deflector can face either side of tank. Inlet deflector should always be in place for any type of cleaning. 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 51). 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 (Figure 52 & 53). To remove filter for cleaning, hold the tank cover and turn the filter retainer counterclockwise to loosen and remove, slide the cartridge filter off the lid cage (Figure 54 & 55). To clean filter shake or brush off excess dirt or rinse (from the inside of the filter) with water, dry completely (approximately 24 hours) and reinstall (Figure 56 & 57). NOTE: If the filter has been used for wet pick up, it must be cleaned and dried before using for dry pick up.





INSTALLING THE DISPOSABLE FILTER BAG

(Not standard with all models)

- 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 58).
- Remove inlet deflector from deflector guide (Figure 59). NOTE: Hose must be removed before inlet deflector can be taken out.

- 5. With the opening of the inlet deflector facing the left or right side of the filter bag, slide filter bag collar over deflector matching notches of bag collar to tabs on inlet deflector, bag will only fit properly one way (Figure 60).
- 6. Slide deflector with collection bag attached into deflector guide (Figure 61).
- 7. Reinsert hose into inlet and tighten locking-nut (Figure 62).
- 8. When secured in place, expand bag and position around the inside of tank.
- 9. Replace tank cover.

NOTE: When removing filter bag from tank, remove inlet deflector from filter bag collar and reinstall into deflector guide. Inlet deflector should always be in place for any type of cleaning.





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 installing over filter cage; otherwise a foam sleeve is



not required for wet pick up. Make sure inlet deflector is fully inserted into deflector guide on inside of tank. If it is not, install inlet deflector by sliding it downward into slot on deflector guide (Figure 63). NOTE: Hose must be removed before inlet deflector can be inserted into or removed from deflector guide. Opening on inlet deflector can face either side of tank. Inlet deflector should always be in place for any type of cleaning. 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:

- 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.
- 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.
- 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 64). The blower port cover is equipped with a retaining strap to prevent loss of the port cover while blower is in use. Clear hose of any obstructions before attaching to blower port. Insert hose end with locking-nut into blower port on rear of unit and tighten. Do not over-tighten. Caution should be used when using as a blower due to the powerful force of air when using certain attachments.



NOTE: For maximum performance, when vacuuming, remove blower port cover.

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

EMPTYING LIQUID WASTE FROM THE TANK

Not all units are equipped with tank drains. Follow the instructions, which apply to your specific unit.

Without Tank Drain

Liquid waste may be emptied 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 tank is empty, return the cover to its original position. To continue use, plug the

Liquid waste may be emptied by removing cap drain. To empty, turn unit off and remove plug from wall receptacle. Remove the drain cap and deposit the liquid waste contents in a suitable drain. After the tank is empty, return the drain cap to its original position. To continue use, plug the cord into the wall receptacle and turn the unit on.

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 cleaner the tank should be emptied and cleaned. The power cord can be wrapped around the cord wraps provided on the tank cover on rear of unit (Figure 65). The cleaner should be stored indoors.

