WM5 SERIES
DISHWASHER



INSTRUCTIONS

MODEL
WM5 SERIES
DISHWASHERS

ML-107350	*WM5*
ML-107351	*WM5C*
ML-107352	*WM5H*

HOBART
CORPORATION

EXECUTIVE OFFICES
TROY, OHIO 45374

FORM 18185 (5-91)

Installation, Operation and Care of MODEL WM5 SERIES DISHWASHERS

SAVE THESE INSTRUCTIONS

GENERAL

The WM5 Series Dishwashers are fully automatic, front-loading machines which are equipped with a 1/2 horsepower, electric motor.

Standard equipment includes two standard 20" x 20" racks, dial thermometers for both rinse and wash cycles, synchronous timer, pilot light, overtemperature light (WM5H only) and lower front trim panel. Side and top panel kits are available, should a free-standing mode be desired.

Three models are available: the WM5 is the standard model; the WM5H features a built-in booster heater; and the WM5C is a low temperature, chemical sanitizing model, for use with 5.25% or 8.40% sodium hypochlorite solution (bleach) as the sanitizing agent.

INSTALLATION

UNPACKING

Immediately after unpacking the dishwasher, check it for possible shipping damage. If this machine is found to be damaged after unpacking, save the packing material and contact the carrier within 15 days of delivery.

Prior to installation, test the electrical service to ensure that it agrees with the specifications on the machine data plate.

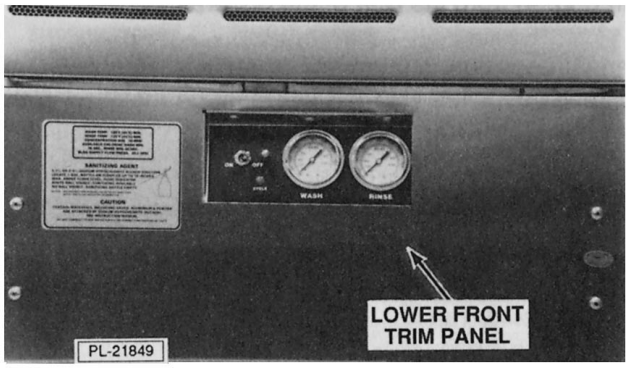
Panel Assembly

If optional panel kits are not to be installed, you may skip to page 4, **LOCATION**.

The optional panel kit(s) must be installed prior to positioning the dishwasher.

The lower front trim panel (Fig. 1) must be removed.

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Model WM5 shown
Fig. 1

Remove the five screws which secure the lower front trim panel and pull it outward.

Replace this panel at the completion of installation.

Remove the top two screws from the trim strip and loosen the next two screws (Fig. 2).



Fig. 2

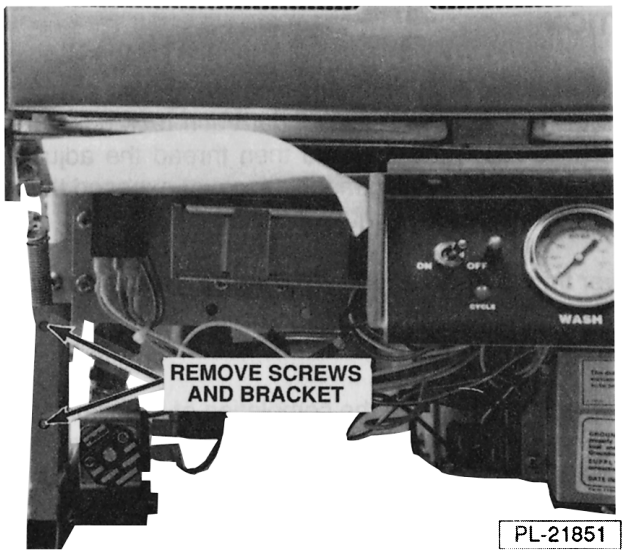


Fig. 3

Remove two screws and lower front trim panel mounting bracket (Fig. 3).

Loosen the two screws shown in (Fig. 4) from the rear of the dishwasher.

Place the trim strip and side panel in position, tighten and/or replace all screws, and reinstall the lower front trim panel mounting bracket. Two screws (supplied with the kit) must be installed in the two extra holes on the back of the side panel.

Repeat this procedure to attach the remaining side panel.

To install the top panel, place it in position with the two locating screws in the slotted holes on top of the dishwasher, slide it as far back as it will go, and fasten it with two screws through the two holes in the top lip of the tank.

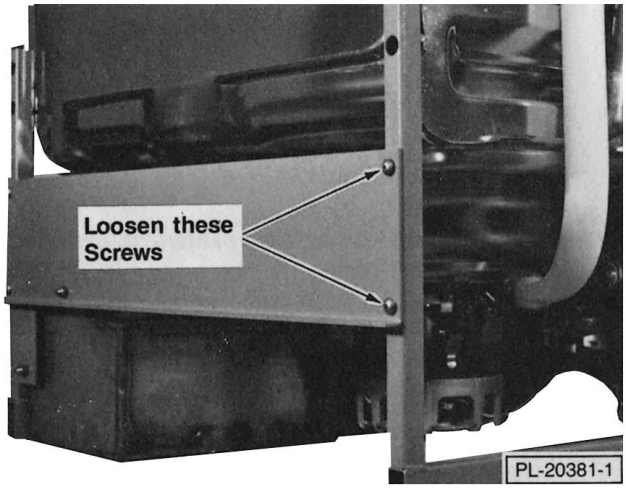


Fig. 4

LOCATION

Place the machine in its operating location. Before any connections are made, the machine must be leveled. There is a reference line (tank seam) under each rack guide inside the tank. To level the machine, pour enough water in the tank to reach the line and then thread the adjustable feet in or out until the water level is even with the reference line. After leveling machine, cover exposed threads of adjustable feet with black rubber tubing (supplied). (See instructions supplied with machine.)

The lower front trim panel (Fig. 1) must be removed to accommodate plumbing and electrical connections.

Remove the five screws which secure the lower front trim panel and pull it outward.

Replace this panel at the completion of installation.

Machines without panels should be anchored to the counter under which they are installed by assembling two screws (not supplied) through the holes in the top lip of the tank.

This machine must be cleaned after installation and prior to being put into service. Refer to the OPERATION section for detailed instructions.

PLUMBING

WARNING: PLUMBING CONNECTIONS MUST COMPLY WITH APPLICABLE SANITARY, SAFETY, AND PLUMBING CODES.

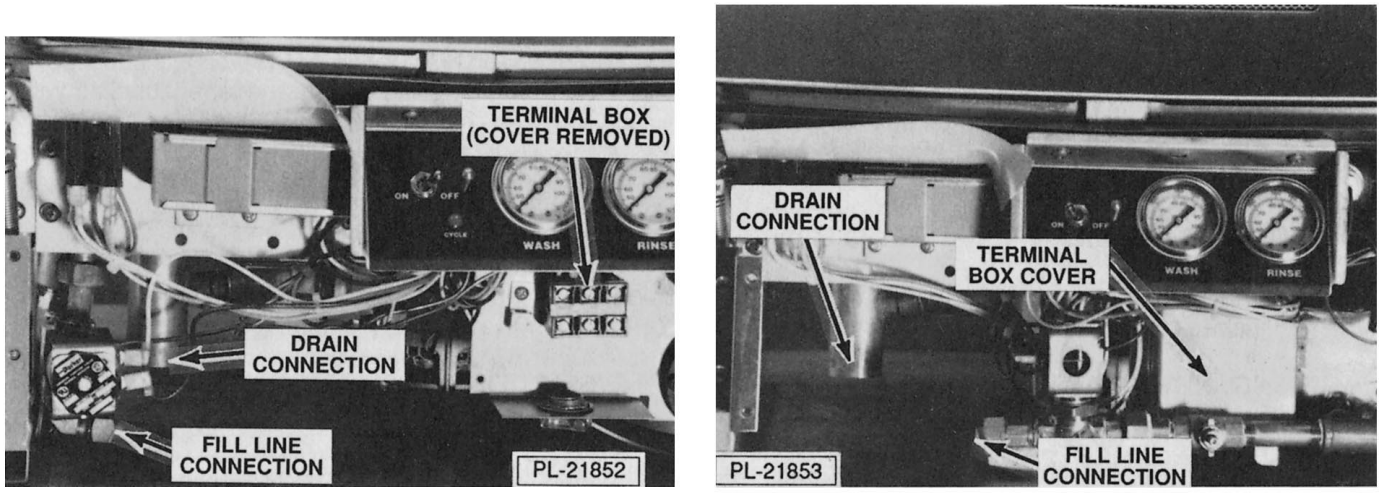
Fill

Required water supply characteristics are as follows:

MODEL	TEMPERATURE	FLOWING PRESSURE
WM5	180°F (82°C) Minimum	20 ± 5 p.s.i.
WM5H	140°F (60°C) Minimum	20 ± 5 p.s.i.
WM5C	120°F (49°C) Minimum	20 ± 5 p.s.i.

If flowing pressure exceeds 25 p.s.i., a pressure reducing valve (not supplied) must be installed in the supply line.

A line strainer (supplied) should be installed in the supply line between a manual shut-off valve (not supplied) and the connection point on the machine (Fig. 5). Installing a manual shut-off valve would accommodate servicing of the machine.



Models WM5 & WM5C **Model WM5H**

Fig. 5

Remove the fill connection sweat fitting (Fig. 5) from the fill valve at the union, connect the sweat fitting to the water supply line, and then reconnect the union.

Drain

Drain height must be no more than $5\frac{1}{16}$" above the floor.

A $1\frac{1}{2}$" connection (Fig. 5) is provided for the drain, which should be connected through a "P" trap (not supplied). Drain must have a minimum flow capacity of 10 gallons per minute.

Drain the water that was used to level the machine by manually actuating the drain valve, and check for leaks.

ELECTRICAL

WARNING: ELECTRICAL AND GROUNDING CONNECTIONS MUST COMPLY WITH THE APPLICABLE PORTIONS OF THE NATIONAL ELECTRICAL CODE AND/OR OTHER LOCAL ELECTRICAL CODES.

WARNING: DISCONNECT ELECTRICAL POWER SUPPLY AND PLACE A TAG AT THE DISCONNECT SWITCH INDICATING THAT YOU ARE WORKING ON THE CIRCUIT.

BRANCH CIRCUIT SIZE AND PROTECTION

Model	Volts	Phase	Minimum Circuit Ampacity	Maximum Protective Device	75°C **Copper** Wire Size
WM5	120	1	15	15	14
WM5C	120	1	15	15	14
WM5H	120/240 (3W)	1	50	50	*

* This is a 3-wire system that requires three #8 AWG wires (75° C) including a current carrying neutral. In addition, a fourth wire must be provided for machine ground. Do not connect this machine to a 120 VAC circuit.

NOTE: The above information compiled in accordance with the National Electrical Code, 1987 edition.

IMPORTANT: Use copper wire only.

Remove the terminal box cover (see Fig. 5). A hole, for 1/2" trade size conduit (3/4" for Model WM5H), is supplied in the bottom of the terminal box. Make electrical connections per the wiring diagram and torque label supplied with the machine and replace the terminal box cover.

CHEMICAL SANITIZER (Model WM5C Only)

Place a one gallon bottle of 5.25% or 8.40% sodium hypochlorite solution (bleach) in a desired location no higher than 10 inches off of the floor. Do not premix the sanitizing solution with water or any other liquid.

WARNING: NEVER PREMIX A WETTING AGENT WITH THE SANITIZING SOLUTION. MIXING MAY CAUSE HAZARDOUS GAS TO FORM.

Remove the sanitizer bottle cap and place the standpipe assembly into the bottle. Check to assure there are no obstructions or kinks in the delivery tube.

The dishwasher must be operated through four complete cycles (without dishes) to initially charge the sanitizer delivery system.

INITIAL FILLING (WM5H Only)

After electrical and plumbing connections have been made, close and latch the door and turn the ON/OFF switch (Fig. 6) to the ON position. Cycle the machine through three wash cycles to fill the booster.

OPERATION

CAUTION: Items such as pewter, aluminum, and silver will be attacked by sodium hypochlorite (bleach). Therefore, the Model WM5C Chemical Sanitizing unit should not be used to wash such items.

PREPARATION

Check to ensure that the strainer is in place and free of debris. Check both wash arms to ensure that they spin freely and are not clogged.

CONTROLS

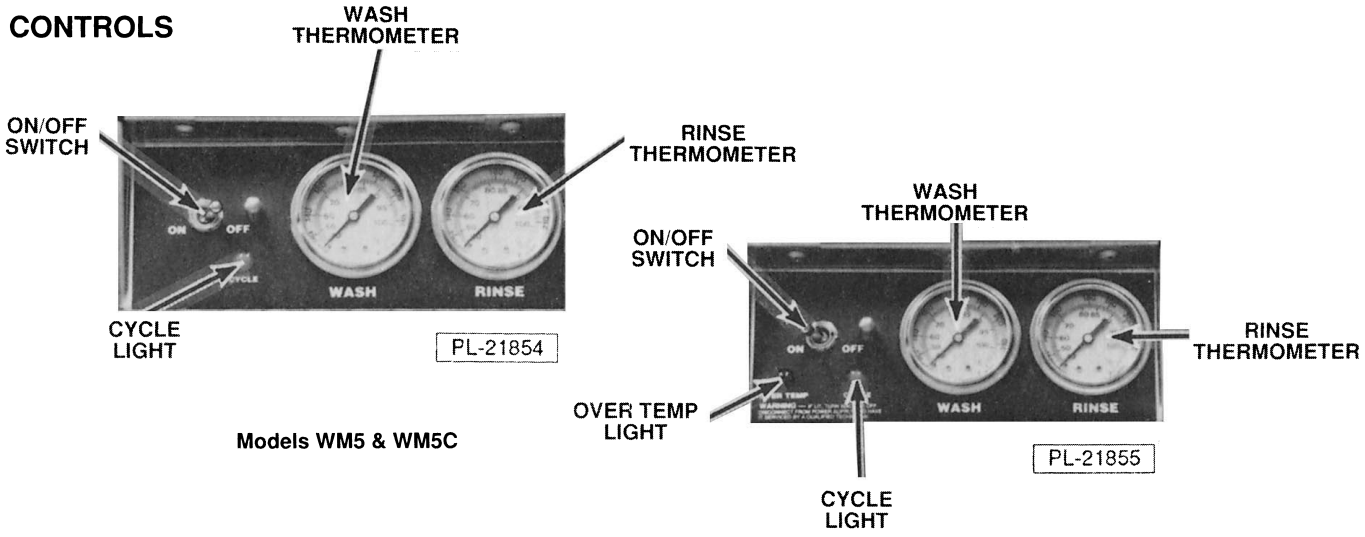


Fig. 6

DISHWASHING

Dishes must be scraped and/or rinsed to remove food particles and other debris. Place the dishes in a rack. Do not stack dishes on top of each other as water must have free access to all sides of every dish. Stand plates edgewise in a peg-type rack (Fig. 7). Cups, glasses, and bowls should lay upside down in an open or compartment-type rack (Fig. 7). Silverware and other small pieces should lay loosely on the bottom of a flat-bottom rack.

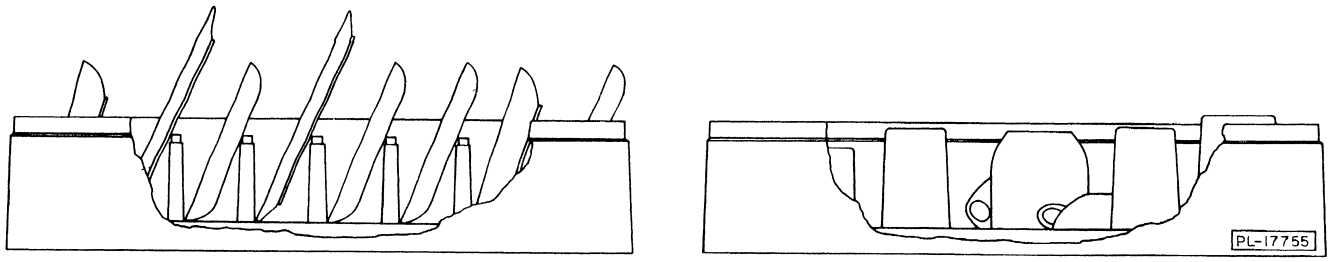


Fig. 7

Open the door and slide the rack of dishes into the dishwasher. Deposit the proper amount of detergent on the inside door panel. Consult a local detergent supplier for the type and quantity of detergent best suited for your locality.

When the door is opened, the cycle light will come on during a brief reset period. When the light goes off (approximately 8 seconds), close and latch the door, at which time the wash cycle will begin (indicated by the cycle light).

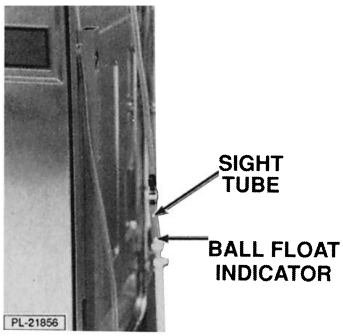
When the cycle light goes off, the cycle is completed. Unlatch and open the door, remove the rack of clean dishes, and, after the reset period, the dishwasher is ready for a repeat operation.

Thermometers (Fig. 6) are provided for convenience in checking the wash and incoming rinse water temperatures and should be monitored occasionally (during a cycle) to ensure that the dishwasher is operating with the proper minimum temperatures.

Sanitizer System (Model WM5C Only)

A sight tube with a ball float indicator (Fig 8.) is used to detect the flow of the sanitizer solution. If the ball is not floating in the sight tube, the chemical container is empty. The sanitizer MUST be replenished immediately.

After replacing the sanitizer, the dishwasher must be operated through four complete cycles (without dishes) to recharge the delivery system.



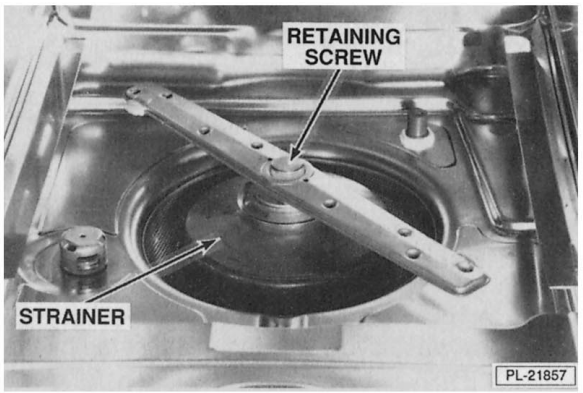
Booster Heater (Model WM5H Only)

There is an overtemperature light on the Model WM5H (see Fig. 6) that, when lit, indicates the booster heater protector has tripped. If this occurs, turn the machine off, disconnect from power supply and have it serviced by a qualified technician.

CLEANING

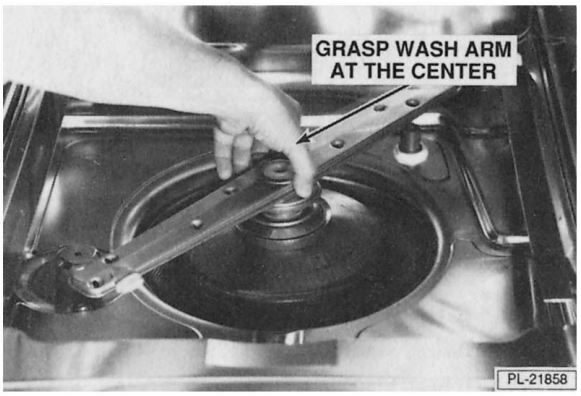
This machine must be cleaned at least once each working day.

Open the door and remove the wash arms and the strainer assembly (Fig. 9). To remove the lower wash arm, loosen the retaining screw (Fig. 9), grasp the wash arm **at the center** (Fig. 10), and pull it up and out of the machine. To remove the upper wash arm, carefully loosen the retaining screw (Fig. 11) and remove the wash arm. Thoroughly clean these items in a sink.



Model WM5C Shown

Fig. 9



Model WM5C Shown

Fig. 10

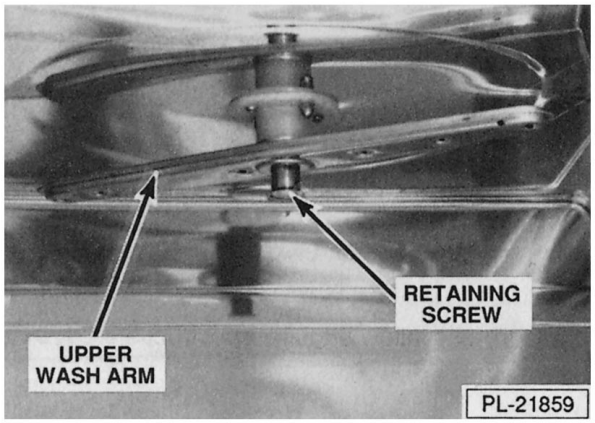


Fig. 11

With a damp cloth, wipe the interior and exterior of the machine. When cleaning the inside of the door, be sure to wipe the lip at the bottom of the door.

Reinstall the strainer and wash arms and tighten the retaining screw on both the upper and lower wash arms. Leave the door ajar overnight to allow the interior to air out and dry.

Turn the ON-OFF switch to the OFF position.

MAINTENANCE

DELIMING

The dishwasher should be delimed on a regular basis as required. The regularity will depend on mineral content of the supply water.

Inspect the machine interior for lime deposits. If deliming is necessary, a deliming agent (such as Lime Away or LSR) should be used for best results.

Depending on the model of your machine, carefully follow the appropriate procedure as outlined below.

Model WM5C (Chemical Sanitizing Model)

WARNING: DELIMING SOLUTION, RINSE AGENTS, OR OTHER ACIDS MUST NOT COME IN CONTACT WITH HOUSEHOLD BLEACH (SODIUM HYPOCHLORITE) OR OTHER CHEMICALS CONTAINING CHLORINE, IODINE, BROMINE, OR FLOURINE, AS MIXING MAY CAUSE HAZARDOUS GAS TO FORM. CONSULT YOUR LOCAL CHEMICAL REPRESENTATIVE.

Remove the standpipe assembly from the bleach container and place it as close to the floor as possible. Place a catch pan under it.

Cycle the machine six times to clear the lines of the bleach dispensing system.

Delime as follows:

NOTE: This entire procedure must be followed step by step for safe and satisfactory results.

1. Remove rack from machine.
2. Close and latch door.
3. Allow machine to fill for 10-15 seconds.
4. Unlatch door and wait 5 seconds.
5. Open door; add deliming agent (carefully follow supplier's instructions). **NOTE:** The sump holds 1.8 gallons of water.
6. Close and latch door, and allow machine to complete the wash/rinse cycle.
7. Inspect interior of machine for lime deposits. Repeat Steps 2 through 6 if necessary.

CAUTION: Do not allow deliming agent to remain in the machine longer than recommended by the deliming agent manufacturer. After deliming, the machine should be run through two cycles with no dishes in order to rinse and flush machine interior before reconnecting bleach system.

Models WM5 or WM5H (Hot Water Sanitizing Models)

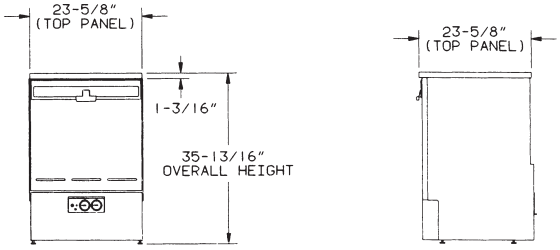
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5. Open door; add deliming agent (carefully follow supplier's instructions). **NOTE:** The sump holds 1.8 gallons of water.
6. Close and latch door, and allow machine to complete the wash/rinse cycle.
7. Inspect interior of machine for lime deposits. Repeat steps 2 through 6 if necessary.

CAUTION: Do not allow the deliming agent to remain in the machine longer than recommended by the deliming agent manufacturer. After deliming, the machine should be run through two cycles with no dishes in order to rinse and flush the machine interior.

LUBRICATION

The motor has grease-packed ball bearings and, therefore, requires no lubrication.



WM5 PANEL MACHINE

WARNING:

REQUIRED FLOWING WATER PRESSURE TO THE DISHMACHINE IS TO BE 20 PSIG. IF PRESSURES HIGHER THAN 20 PSIG ARE PRESENT, A PRESSURE REGULATING VALVE MUST BE INSTALLED IN THE WATER LINE TO THE DISHMACHINE (BY OTHERS).

ELECTRICAL AND GROUNDING CONNECTIONS MUST COMPLY WITH THE APPLICABLE PORTIONS OF THE NATIONAL ELECTRICAL CODE AND/OR OTHER LOCAL ELECTRICAL CODES.

PLUMBING CONNECTIONS MUST COMPLY WITH APPLICABLE SANITARY, SAFETY AND PLUMBING CODES.

USE ONLY 5.2% OR 8.4% SODIUM HYPOCHLORITE (LIQUID BLEACH) AS SANITIZING CHEMICAL TO INSURE PROPER OPERATION OF DISHMACHINE.

DO NOT PRE-MIX WETTING AGENT AND SODIUM HYPOCHLORITE (LIQUID BLEACH).

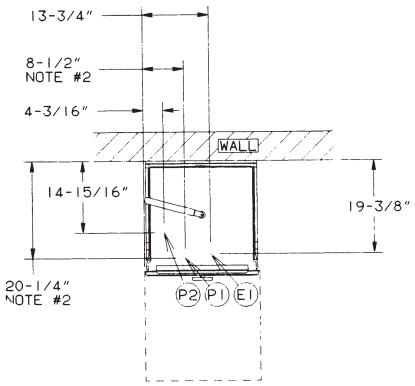
CERTAIN MATERIALS INCLUDING SILVER PLATE, ALUMINUM AND PEWTER ARE ATTACKED BY SODIUM HYPOCHLORITE (LIQUID BLEACH). SEE INSTRUCTION MANUAL.

NOTES:

1. DIMENSIONS COMMON TO WM-5 & WM-5C DISHMACHINES.
2. DIMENSIONS COMMON TO WM-5H DISHMACHINES.
3. ALL VERTICAL DIMENSIONS TAKEN FROM FLOOR MAY BE INCREASED OR DECREASED BY 1/2".
4. LOCATE LINE STRAINER (SUPPLIED BY HOBART, INSTALLED BY OTHERS) IN FILL/RINSE LINE (CONNECTION P1) ACCESSIBLE FOR MAINTENANCE.
5. IMPORTANT: THE SODIUM HYPOCHLORITE (LIQUID BLEACH) CONTAINER SHOULD BE PLACED ON FLOOR.
6. IF BLEACH CONTAINER IS TO BE PLACED IN CABINET ADJACENT TO MACHINE A 1/2" DIA HOLE IS REQUIRED IN THE CABINET TO RUN BLEACH SUPPLY LINE.
7. HEIGHT FROM FLOOR TO SIDE INLET OF DRAIN TAIL PIECE FOR "P" TRAP INSTALLATION.
8. TO EASE INSTALLION OF DRAIN PLUMBING, ASSEMBLE "P" TRAP (BY OTHERS) TO DRAIN TAIL PIECE PRIOR TO INSTALLING DISHMACHINE UNDER COUNTER.

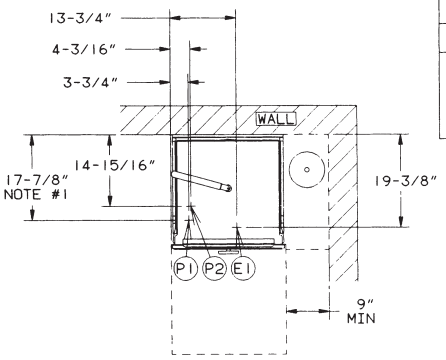
LEGEND:

P1 SINGLE FILL AND RINSE PIPE CONNECTION, 3/8" TRADE SIZE COPPER PIPE (1/2" OUTSIDE DIAMETER) SWEAT FITTING. 1-9/16" AFF.
P2 DRAIN PIPE CONNECTION. 1-1/2" DIA., 3-1/2" AFF.
E1 LOCATION OF ELECTRICAL CONNECTION. 3/4" ELEC. CONNECTOR (1-1/8" DIA HOLE). WM-5H ONLY. 1-9/16" AFF.



LEGEND:

P1 SINGLE FILL AND RINSE PIPE CONNECTION, 3/8" TRADE SIZE COPPER PIPE (1/2" OUTSIDE DIAMETER) SWEAT FITTING. 1-9/16" AFF.
P2 DRAIN PIPE CONNECTION. 1-1/2" DIA., 3-1/2" AFF.
E1 LOCATION OF ELECTRICAL CONNECTION. 1/2" ELEC. CONNECTOR (7/8" DIA) ADAPTER SUPPLIED. WM-5 & WM-5C ONLY. 2-5/8" AFF.

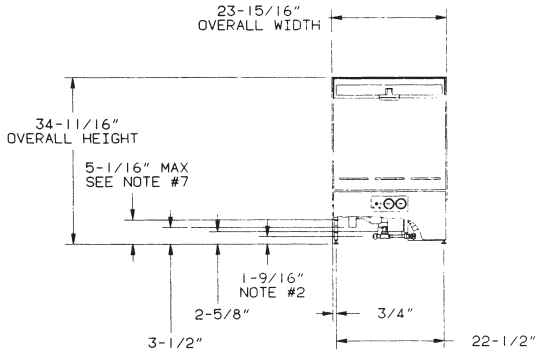


MACHINE TYPE & SPECIFICATION	RATED AMPS	MIN SUPPLY CKT CONDUCTOR AMPACITY	MAX OVERCURRENT PROTECTIVE DEVICE
WM-5 (120/60/1)	8.4	15	15
WM-5C (120/60/1)	9	15	15
WM-5H: 120/208-240 (3W)/60/1. THIS IS A 3-WIRE SYSTEM THAT REQUIRES (3) #8 AWG WIRES (75°C) INCLUDING A CURRENT CARRYING NEUTRAL. IN ADDITION, A FOURTH WIRE MUST BE PROVIDED FOR MACHINE GROUND. DO NOT CONNECT THIS MACHINE TO A 120 VAC CIRCUIT.	37.6	50	50

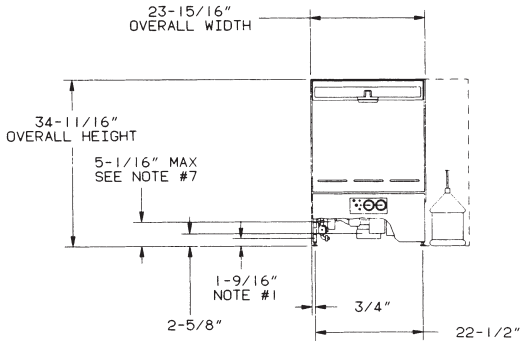
WM-5 NET WEIGHT OF MACHINE: 100 LBS
WM-5 DOMESTIC SHIPPING WT: 143 LBS

WM-5C NET WEIGHT OF MACHINE: 100 LBS
WM-5C DOMESTIC SHIPPING WT: 145 LBS

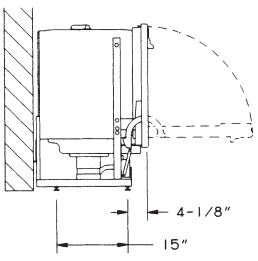
WM-5H NET WEIGHT OF MACHINE: 121 LBS
WM-5H DOMESTIC SHIPPING WT: 170 LBS

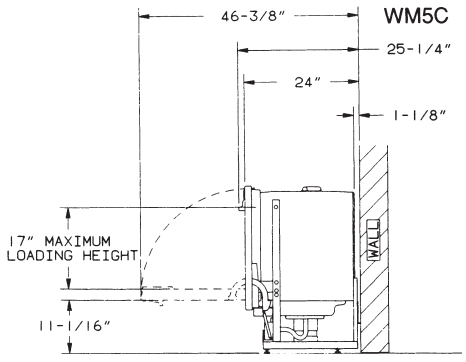


WM5H



WM5
WM5C





Installation Diagram — 270571 (G)

TROUBLESHOOTING

This section outlines various symptoms and possible causes that may be encountered in the event of abnormal machine operation. If symptoms persist after possible causes have been checked, service may be required.

SYMPTOM	POSSIBLE CAUSES
No Machine Operation	1. On-Off switch in the OFF position. 2. Blown fuse or circuit breaker off at power supply.
Dishes Not Clean	1. Strainer clogged, causing inadequate water supply to pump. 2. Obstruction in wash arm(s). Clean per instructions in CLEANING section of this manual. 3. Water temperature too low. 4. Incoming water supply turned off.
Spotting of Silverware, Glasses, or Dishes	1. Improperly loaded racks. 2. Water temperature too low. 3. Improper type or concentration of detergent. Contact your local detergent representative.