

## Routine & Preventative Maintenance Spray Arm Pressure Testing Tool (088-1048)



088-1048, Tool, Spray Arm with pressure gauge for low temp machines



### CAUTION

You must wear approved safety eye-wear before connecting chemicals. Read the chemical manufacturer's MSDS sheets. Chemicals can damage or corrode plumbing and stainless parts of the dishmachine. Do not run chemical lines over controls or plumbing. Always secure chemical lines and check regularly for leaks. If not properly handled, chemicals can cause serious bodily injury. In the event of chemical contact to skin or eyes; wash immediately with fresh water and seek medical attention.

One of the most useful tools that can be used in evaluating a dishmachine's performance is the spray arm pressure tester. Since the machine and pump parts cannot be viewed during operation, a pressure gauge can act as a window to show what the pump and spray system's performance. Observing the movement and position of the needle will indicate certain conditions. Rotating arms will not turn when the tool is connected for testing of pressure. This will not affect the readings for pump and spray arm pressures.

### How to Use the Pressure Tester for Low Temp Machines



Remove one of the lower spray arm end caps and replace with tester end plug



Run tubing through the sump area with the gauge outside of the machine. Then refill the machine.



Close the door to start the pump, read pressures during wash and rinse, record data. Correct reading would be steady needle at full spray arm pressure. The machine can be diagnosed for several problems discussed in the following examples.

## Reading Needle Indications for Low Temp Machines



Steady pressure at 18-20 psi throughout the cycle indicates pump is fully charged (Full Spray Arm Pressure)



Steady pressure through the cycle at 14-15 psi indicates a partially clogged impeller, this can also indicate spray tips that are worn and allow too much water to pass through the spray arm.



Widely fluctuating pressure in the 5-10 psi range indicates very little water in the machine



Fluctuating pressure at or near 18-20 psi indicates an additional .05 to .10 of a gallon are needed to reach full spray arm pressure.

## How to Use the Pressure Tester for Conveyor Or HT-25



Showing the attachment of the adapter to pumped rinse arm



Attached to a wash arm tube



Hold the gauge outside the conveyor during operation



Showing attachment to HT-25 wash arm



Remove the gauge through the scrap overflow door of the HT-25 to read



Rotating arms will not turn when the tool is connected for testing of pressure. This will not affect the readings for pump and spray arm pressures.

## Reading Needle Indications for Conveyor and HT Machines



Upper wash arm pressure approx 9-10 psi



Lower wash arm pressure approx 5-6 psi



Water Curtain (Pumped Rinse) on conveyor is approx 2-3 psi

## Spray Arm Pressure Rationale

### HIGH PRESSURE/LOW VOLUME

For "Low Temp" chemical sanitizing dishmachines (batch-type design), the lower spray arm delivers high pressure (18-20 psi) at a relatively low volume of water. More pressure is not better. Higher pressures than these tend to lift certain dishware from the rack. When wash arm pressures drop below 12-15 psi at the lower arm, the mechanical action of the water is insufficient for removing most soils.

### LOW PRESSURE/HIGH VOLUME

For conveyor or high temp dishmachines (holding tank design), the volume of spraying water is greater and consequently the spray pressures must be lower, or nothing would stay in the machine. The lower wash arm is typically about 6 psi to avoid lifting the dishware. The effect is high mechanical action from the high volume of water pouring over the dishware. An analogy would be the difference between standing in the ocean and being washed over by high volume waves vs. standing in a shower with high pressure streams but low water volume. Both can be cleansing.

## To Order Parts:

### LOW TEMP PRESSURE TOOL



084-6208 End Plug

### CONVEYORS OR HT-25 TOOL



288-1055, Test adapter w/barb & spring for conveyor

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