



## TROUBLESHOOTING GUIDE

This section of the manual contains the Troubleshooting Guide which will help the Service Technician troubleshoot a model 506 undercounter icemaker .

### How to Use the Troubleshooting Guide

The list below indicates how the Troubleshooting Guide is arranged. Identify the description of the problem that the unit is experiencing from the list and go to the page indicated. To the left of the problem description is a letter. Locate that letter in the left column of the Troubleshooting Guide. The center column will identify the possible causes for the problem. And, the information in the right column will explain what tests to perform in order to determine if what you are checking is the cause and/or what action to take to correct the problem.

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PROBLEM	POSSIBLE CAUSE	TEST / ACTION
<b>A. Compressor won't run; No ice in bin.</b>	<ol style="list-style-type: none"><li>1. Unit located in cold area.</li><li>2. Power disconnected.</li><li>3. Broken wire or loose connection.</li><li>4. Defective compressor start relay.</li><li>5. Service switch in "off" position.</li><li>6. Bin thermostat contacts open.</li><li>7. Defective compressor motor.</li><li>8. Master Switch in "Clean" position</li></ol>	<ol style="list-style-type: none"><li>1. Move to warmer area (above 55° F.)</li><li>2. Connect water.</li><li>3. Locate and repair.</li><li>4. Replace relay.</li><li>5. Move switch to "on" position</li><li>6. Replace bin thermostat.</li><li>7. Replace compressor.</li><li>8. Move switch to "ON" position</li></ol>
<b>B. Compressor runs; No ice in bin.</b>	<ol style="list-style-type: none"><li>1. Water supply shut off.</li><li>2. Inoperative water valve.</li><li>3. Evap thermostat out of calibration.</li><li>4. Hot gas solenoid stuck.</li><li>5. Inoperative refrigeration system.</li><li>6. Excess use of ice cubes.</li><li>7. Cutter grid circuit open.</li><li>8. Incorrect wiring.</li><li>9. Inlet tube from valve not in water pan.</li></ol>	<ol style="list-style-type: none"><li>1. Restore water supply.</li><li>2. Check valve parts for restriction; binding or solenoid coil failure.</li><li>3. Recalibrate or replace.</li><li>4. Repair or replace solenoid</li><li>5. Repair sealed system.</li><li>6. Advise customer.</li><li>7. Check fuse and other parts of circuit.</li><li>8. Check against wiring diagram</li><li>9. Insert tube in water pump pan.</li></ol>
<b>C. Compressor runs continuously; bin full of ice.</b>	<ol style="list-style-type: none"><li>1. Bin thermostat out of calibration</li><li>2. Bin thermostat contacts stuck shut.</li><li>3. Incorrect wiring.</li></ol>	<ol style="list-style-type: none"><li>1. Recalibrate or replace.</li><li>2. Replace thermostat.</li><li>3. See Number 8 above.</li></ol>
<b>D. Low ice yield.</b>	<ol style="list-style-type: none"><li>1. Located in cold areas.</li><li>2. Water falling on ice cubes.</li><li>3. Bin thermostat out of calibration.</li><li>4. Evaporator thermostat set to produce too thin or too thick ice cubes.</li><li>5. Hot gas solenoid stuck partially open.</li><li>6. Insufficient refrigeration.</li><li>7. Not enough water being circulated over evaporator plate.</li></ol>	<ol style="list-style-type: none"><li>1. Move to warmer area above 55°F (for best results 70°F to 90°F)</li><li>2. Check water system components for proper placement.</li><li>3. Recalibrate or replace.</li><li>4. Move adjusting knob to setting to produce 1/2" x 5/8" cube.</li><li>5. Repair or replace solenoid</li><li>6. Check and repair sealed system.</li><li>7. Check for restriction in water lines. Check water pump and motor.</li></ol>
<b>E. Excessive water dripping on ice cubes.</b>	<ol style="list-style-type: none"><li>1. Water pan overflowing.</li><li>2. Water pump pan out of position.</li><li>3. Water inlet tube from water valve not inserted in water pan.</li><li>4. Ice jam on cutter grid causing water to "bridge" and drip in bin.</li><li>5. Water deflector out of position (not factory installed).</li></ol>	<ol style="list-style-type: none"><li>1. Check overflow tube for restrictions. Overflow hose not inserted in bin drain. Incorrect / worn flow washer in water valve.</li><li>2. Install correctly.</li><li>3. Locate tube properly-see pictorial drawing of water system.</li><li>4. Check cutter grid circuit. Check for mineral deposit on evaporator plate (see Category 6 below).</li><li>5. Install properly-Kit #702354.</li></ol>
<b>F. Mineral deposit on evaporator.</b>	<ol style="list-style-type: none"><li>1. High mineral contents in water.</li></ol>	<ol style="list-style-type: none"><li>1. See cleaning instructions</li></ol>
<b>G. Ice cubes too thin</b>	<ol style="list-style-type: none"><li>1. Evap thermostat set for thin cubes.</li><li>2. Not enough water being circulated over evaporator.</li><li>3. Evap thermostat out of calibration.</li></ol>	<ol style="list-style-type: none"><li>1. Turn ice thickness control knob clockwise until cube of desired thickness is obtained.</li><li>2. Check for restriction in water lines - check water pump motor and distributor tube.</li><li>3. Recalibrate or replace..</li></ol>

PROBLEM	POSSIBLE CAUSE	TEST / ACTION
<b>H. Ice cubes too thick.</b>	<ol style="list-style-type: none"> <li>1. Evaporator thermostat set at or beyond maximum thickness.</li> <li>2. Evaporator thermostat out of calibration.</li> <li>3. In cases due to refrigerant overcharge, liquid refrigerant will "spill over" and run results in longer compressor run and thicker than normal cubes.</li> </ol>	<ol style="list-style-type: none"> <li>1. Turn ice thickness control knob counter-clock wise until desired thickness is obtained.</li> <li>2. Recalibrate or replace.</li> <li>3. Remove liquid refrigerant from system; evacuate and recharge as shown on model/ serial plate.</li> </ol>
<b>I. Condenser fan won't run during icemaking cycle.</b>	<ol style="list-style-type: none"> <li>1. Fan blade binding on shroud.</li> <li>2. Defective motor.</li> <li>3. Open circuit in wiring.</li> <li>4. Defective evaporator thermostat.</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust shroud to clear fan blade.</li> <li>2. Replace motor.</li> <li>3. Locate and repair (see wiring diagram).</li> <li>4. Replace thermostat.</li> </ol>
<b>J. Water pump won't run.</b>	<ol style="list-style-type: none"> <li>1. Pump binding in housing.</li> <li>2. Open circuit in wiring.</li> <li>3. Defective motor.</li> <li>4. Defective evaporator thermostat.</li> </ol>	<ol style="list-style-type: none"> <li>1. Remove cause of bind.</li> <li>2. Locate and repair (see wiring diagram).</li> <li>3. Replace motor.</li> <li>4. Replace thermostat.</li> </ol>
<b>K. Water tank empty.</b>	<ol style="list-style-type: none"> <li>1. On initial start (after installation) water will not run to tank until first "release/defrost" cycle is initiated by evap thermostat.</li> <li>2. Open circuit to water solenoid.</li> <li>3. Complete water line restriction.</li> <li>4. Defective evaporator thermostat.</li> <li>5. Water valve stuck shut.</li> <li>6. Burnt or open solenoid coil.</li> <li>7. Water inlet tube from water valve not directing water to tank.</li> <li>8. Water inlet screen plugged.</li> </ol>	<ol style="list-style-type: none"> <li>1. This is normal. Wait first release cycle.</li> <li>2. Locate and repair (see wiring diagram)</li> <li>3. Check shut-off valve or water line restrictions.</li> <li>4. Replace.</li> <li>5. Repair or replace valve.</li> <li>6. Replace coil.</li> <li>7. Position outlet end of tube into water pump pan (see pictorial of water system).</li> <li>8. Remove screen &amp; clean.</li> </ol>
<b>L. Milky ice cubes.</b>	<ol style="list-style-type: none"> <li>1. Water hardness in excess of 15 grains (also see Category 6).</li> <li>2. Insufficient water supply in water tank.</li> </ol>	<ol style="list-style-type: none"> <li>1. Advise customer that water softener may be required (see #1 in Problem "M" below).</li> <li>2a. See Problem K. above.</li> <li>2b. Machine defrosting in less than one minute does not allow time for water to enter and overflow. Use flow washer Part #588930.</li> </ol>
<b>M. Taste in ice</b>	<ol style="list-style-type: none"> <li>1. High mineral content in water supply.</li> <li>2. Foods being stored in ice bin.</li> <li>3. Unit Packaging materials not removed.</li> </ol>	<ol style="list-style-type: none"> <li>1. Consult water treatment expert for advice.</li> <li>2. Advise customer to refrain from storing foods, etc. in ice in.</li> <li>3. Remove all packaging material.</li> </ol>
<b>N. Uneven build-up of frost on evaporator plate</b>	<ol style="list-style-type: none"> <li>1. Water valve restricted.</li> <li>2. Little or no water in water reservoir pan.</li> <li>3. Drain plug not in place on bottom of water reservoir pan.</li> <li>4. The water level is over the top of the drain tube in reservoir pan at beginning of ICEMAKING cycle.</li> <li>5. The water restrictor or the holes in the distributor are plugged.</li> <li>6. The water pump is not operating.</li> </ol>	<ol style="list-style-type: none"> <li>1. Repair or replace valve.</li> <li>2. See Problem "K" above.</li> <li>3. Install drain plug.</li> <li>4. Check water system components for proper placement.</li> <li>5. Clean or replace distributor tube. Clean or replace water restrictor.</li> <li>6. See problem "J" above.</li> </ol>



PROBLEM	POSSIBLE CAUSE	TEST / ACTION
<b>O. Unit not making ice, compressor running, and water flow over evaporator</b>	1. Evaporator freezing plate not getting cold. 2. Hot gas solenoid not operating properly.	1. Repair sealed system. 2. Repair or replace solenoid.
<b>P. Ice slab not releasing from evaporator plate during HARVEST cycle.</b>	1. Hot gas solenoid not operating properly. 2. Evaporator plate is damaged or covered in mineral build-up. 3. The FSP condensate pump, if installed, is not operating properly.	1. Repair or replace solenoid. 2. Clean or replace evaporator plate. 3. Repair or replace FSP condensate pump.
<b>Q. Ice slab with a hollow area in the center.</b>	1. The water valve is stuck open. 2. Hot gas solenoid is leaking. 3. Sealed system is undercharged or partially restricted.	1. Check valve parts for restriction; binding or solenoid coil failure. 2. Repair or replace solenoid. 3. Repair sealed system.
<b>R. Ice slab with a lip over the front of evaporator freezing plate.</b>	1. The capillary tube soldered underneath front edge of evaporator plate has broken loose.	1. Repair capillary tube.
<b>S. Ice slab has side flanges.</b>	1. Hot gas solenoid has a small leak.	1. Repair or replace solenoid.
<b>T. Ice ball forming on capillary tube at evaporator inlet.</b>	1. The bin door is cracked open, or door seal is leaking. 2. The insulation bag is not in place, blocking the passage of warm air from the unit compartment into the evaporator area.	1. Make sure bin door is closed. Repair or replace door seal. 2. Properly position insulation bag.
<b>U. Frost between outlet of evaporator and accumulator.</b>	1. Ice thickness control set too high, too thick of ice slab is forming. 2. Overcharge of refrigerant in sealed system.	1. Turn ice thickness control knob counter-clockwise until desired thickness is obtained. 2. See Serial plate for recommended amount of refrigerant charge.
<b>V. Sweating or frost on suction line.</b>	1. Accumulator not level (horizontal). 2. Overcharge of refrigerant in sealed system.	1. Position accumulator correctly. 2. See Serial plate for recommended amount of refrigerant charge.

SYSTEM / COMPRESSOR EVALUATION		
Suction Pressure	Head Pressure	Basic Cause
High	Low	Low Capacity Compressor
High	High	Excessive load on evaporator (water siphoning/ solenoid leaking)
Normal	Low	Ambient too low (below 55 degrees)
Normal	High	Air in system. Slow condenser fan. Dirty condenser. Overcharged.
Low	Normal	Short charge. Poor quality ice slab and/or hollow slab.
Low	Low	Short charge. Long defrost