



Walker, Michigan, U.S.A. 49534-7564

**USER'S OPERATING AND INSTRUCTION MANUAL**

**MODEL 690-NC2**

STEAM CONVECTION  
OVEN





690-NC2

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## SAFETY INSTRUCTIONS

### **WARNING**

**VARIOUS SAFETY DEVICES AND METHODS OF GUARDING HAVE BEEN PROVIDED ON THIS OVEN. IT IS ESSENTIAL HOWEVER THAT THE OVEN OPERATORS AND MAINTENANCE PERSONNEL OBSERVE THE FOLLOWING SAFETY PRECAUTIONS. IMPROPER INSTALLATION, MAINTENANCE, OR OPERATION COULD CAUSE SERIOUS INJURY OR DEATH.**

1. Read this manual before attempting to operate your oven. Never allow an untrained person to operate or service this machine.
2. This oven must only be installed by qualified personnel. It also must be installed to the specifications of local plumbing and electrical codes. See the installation section of this manual for additional requirements.
3. Connect the oven to a properly grounded electrical supply that matches the requirements shown on the electrical specification plate and follow specifications of local electrical codes.
4. Disconnect and lock-out the oven from the power supply before cleaning or servicing.
5. Check and secure all guards before starting the oven.
6. Observe all caution and warning labels affixed to the oven.
7. Use only proper replacement parts.
8. Wear proper personal protective safety equipment.
9. Keep Hands away form the moving parts of this oven while it is in operation.
10. In addition to these general safety instructions, also follow the more specific safety instructions given for the different areas of the oven in the operating instructions.

### **WARNING**

**DO NOT USE FOR OTHER THAN ORIGINALLY INTENDED PURPOSE.**



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## DESCRIPTION/SPECIFICATIONS

### Description

The Oven is a stainless steel, electric, forced air, (convection), oven with steam injection capabilities. This oven offers consistent baking at all rack levels due to the careful positioning of the heating and air circulation systems.

In addition to the above, this oven also offers many other features. It is well insulated with a high quality asbestos free insulation. It is compact, attractive, quiet, and is easily maintained. Should electrical servicing ever be required the electrical components are readily accessible by removing the side or back panels.

The lighted, tempered glass door with its high temperature seal allows a full view of the trays in the oven during baking.

The oven computer allows you to bake two items at once which makes the oven more productive. It also has one of the fastest temperature recoveries on the market allowing the oven to be turned off during non-peak hours, thus saving energy.

The oven has many protective features such as not allowing heating of the elements when the door is open. Other features are resettable thermal overloads on the motors, a high-limit thermostat, and a magnetic circuit breaker on the control circuit.

The computer allows easy selection of baking programs. The programs combine precise control of the pre-heat temperature, baking temperature, time, pre-alarm, steam, and damper control. This allows precise baking by even inexperienced individuals.

### Physical Specifications

#### Electrical Options Available:

- 3 phase, 60 hz, 480VAC, 27 Amps.
- 3 phase, 60 hz, 208VAC, 48 Amps.
- 3 phase, 60 hz, 240VAC, 53 Amps.
- 3 phase, 50 hz, 375VAC, 22 Amps

#### Product Capacities:

The Standard oven will hold (8) 18" X 26" pastry baking trays these trays will be approximately 3-5/16 inches apart when in the oven.

6, 12 and 16 tray ovens are also available.



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Space Requirements:

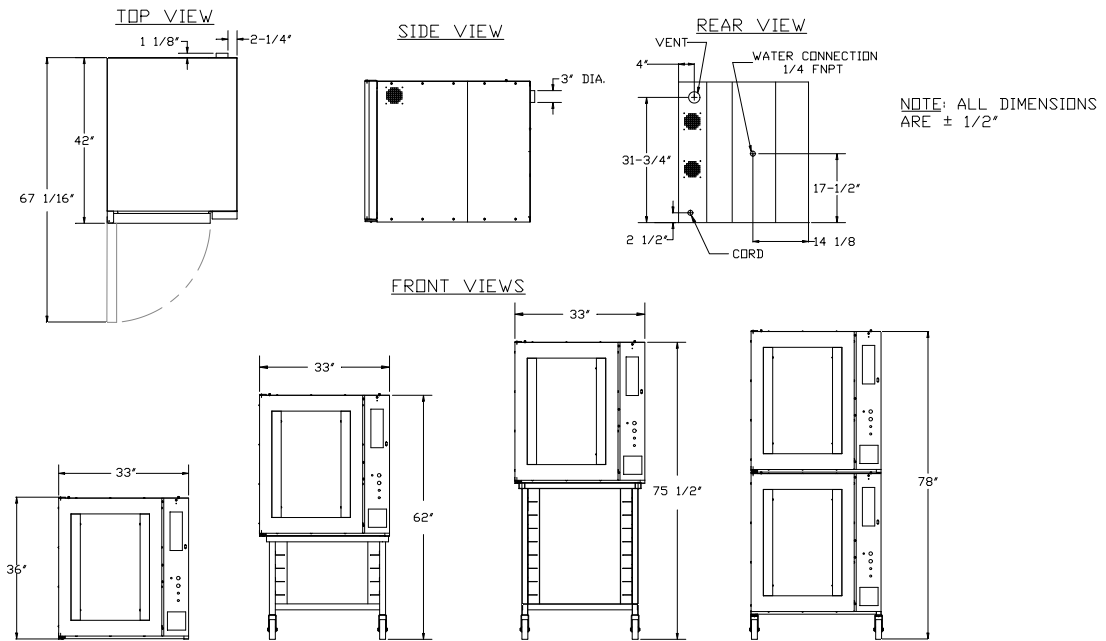


Figure 3.0

single: 42



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## INSTALLATION / SETUP

### **CAUTION**

**TO QUALIFY FOR WARRANTY COVERAGE, INSTALLATION MUST BE COMPLETED BY AN OLIVER PACKAGING & EQUIPMENT AUTHORIZED SERVICE DEALER.**

#### Inspection

Before accepting delivery inspect the carton and machine for damage. Note any damage found on the shipping documents. Remember shipping damage **is not** covered by your warranty, and is the responsibility of the carrier. Also report the damage to the dealer from which the oven was purchased for further direction and assistance in filing a claim with the carrier.

#### Location Selection

Select a location where the oven will be used. The oven must be set on a flat level surface. It should have a grounded power supply of the same rating as shown on the nameplate located on the rear of the oven and this power supply must be capable of carrying the load that the oven will put on it (See



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The oven **must be** sealed to the mounting surface to comply with local sanitation codes. For the purpose of sealing the unit a tube of NSF/FDA approved silicone sealant has been provided with your unit. Apply, to the surface that the oven will rest on, a continuous bead of sealant approximately 1/2 inch in from each of the four sides of the oven. After the oven has been placed over this bead apply a second generous continuous bead at the joint where the oven contacts the mounting surface thus totally sealing the bottom of the oven to that surface.

### Oven Setup

Ovens may be mounted to a fixed surface, attached to an





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## **CAUTION**

**SPECIAL HEAVY DUTY ELECTRICAL SERVICES AND WALL DISCONNECTS  
MUST BE PROVIDED FOR SAFE OPERATION OF THE OVEN.**

Electrical Connection (continued)

The following service requirements are recommended, dependent on the voltage of the unit you have purchased. Your oven



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### Water Connection

All water connections must comply with the basic plumbing code of the Building Officials and Code Service Sanitation Manual of the Food and Drug Administration (FDA)

## **CAUTION**

**WATER PRESSURES GREATER THEN RECOMMENDED CAN CAUSE EXCESS WATER TO ENTER THE OVEN CAUSING WATER TO LEAK AT THE DOOR AND ALSO CAUSE THE TEMPERATURE TO DROP SEVERELY AFFECTING THE BAKE. USE A PRESSURE REGULATOR TO REGULATE THE PRESSURE.**

The oven must be connected to a water supply to enable the oven to produce steam for baking. As shipped from the factory the oven will have a solenoid valve at the back center of the oven, (See figure 3.0 page 2-2). This valve has an internal 1/4



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## **WARNING**

**HOT STEAM CAN CAUSE SEVERE BURNS AND DAMAGE TO THE SENSITIVE ELECTRONICS. VENT STEAM TO OUTSIDE TO AVOID INJURIES AND DAMAGE.**

### Test Cycle (done manually without computer)

After completing the Set Up, Electrical and Water connections, and Venting, you may wish to run the oven through a test cycle to verify that everything is ready. At the lower right hand corner of the front surface of the oven you will find a small rectangular panel held in place with two thumb screws. Removing these screws and the panel they secure will expose the



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## **OPERATING INSTRUCTIONS**

### Beginning Operation

First turn the oven on by pressing the black



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### Idle Mode


From Idle mode you can:

- Run an automatic program.
- Run a manual program.
- Adjust the temperature.
- add steam.
- open and close the vent.
- change the fan setting.

### Running an Automatic Program

1. From Idle mode  enter the program number (01 - 40) using the keypad
2. Wait 3 seconds or press the start key to begin preheat stage.
3. Wait for oven to reach set temperature. The display will show lo or hi and the menu number. When the set point is reached the buzzer will sound and the display will show ready .
4. Put product into the oven.
5. Close door, bake begins.
6. Pre-Alarm #1  will sound if programmed, press  to cancel the alarm. For more details see the Pre-Alarm section.
7. Alarm will sound when bake is finished and display will show , and the program number .

Open the door to end the program, this will hold the current bake temperature, add time if required by pressing the up button. **OR**

Press cancel  to end the bake and return the holding temperature to 250 °F.



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### Running two Automatic Programs at the Same Time

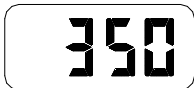
If two programs are compatible they may be run at the same time. They must both be single stage menus with identical temperatures. While the program is running (Product 1 LED will be lit) enter the second program number (01-40) and hit start. Now both product LED



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and



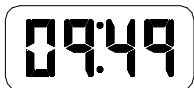
Countdown begins.

### Adjusting the Temperature

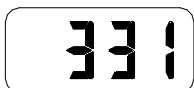
The temperature can be changed while in manual or idle mode. Here is an example of how to change the temperature from 350 to 380.

Display Shows

Press Button(s)...



or



Actual temp,

Press the temp key again





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350

Set temp.

Use  and  to scroll to 380.




380

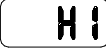



Press  to go back to





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In manual mode the fans can be set to high  or low  by pressing the 9/fan key .

In Idle mode the fans can be set to high , low , or cool down  using the 9/fan key .

*Cool down allows the oven chamber to quickly cool down by keeping the blowers running while the door is open.*




*The low fan setting is helpful for high sugar product.*



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## PROGRAMMING

The following are instructions for editing and creating a menu program.


1. Enter the Program Mode by pressing the up and down keys   simultaneously for 5 seconds.
2. Display shows  for MENU.
3. Key in the menu number you want to program (01-40), or use the up and down keys to scroll.  
Programs 01-20 can hold two stages.  
Programs 21-40 hold one stage
4. Press the



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11. Display will show  for **stage 2 time**. Stage 2 only works for menus 01-20 (For menus 21-40 skip to the Pre-alarm). Use up and down keys or keypad to enter the time in whole minutes. Entering 0 will eliminate stage 2 and skip you past the rest of the stage 2 parameters. Press



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**TROUBLESHOOTING**

**WARNING**

**TROUBLE SHOOTING OF ELECTRICAL EQUIPMENT SHOULD BE PERFORMED BY QUALIFIED PERSONNEL ONLY. ELECTRICAL POTENTIAL IS GREAT ENOUGH TO CAUSE INJURY OR DEATH.**

Error Code Display

The error code is visible in the display. The list below outlines the standard error codes associated with this unit. They are designed to isolate specific problem areas and aid in troubleshooting your control.

Problem	Probable Cause	Solution
<b>Er01-</b> (ROM) Checksum error	Internal ROM is defective	Turn Off and then Restart.
<b>Er02-</b> (RAM) Checksum error	Internal RAM is defective	Turn Off and then Restart.
<b>Er05-</b> Eprom Error	<ul style="list-style-type: none"> <li>•Power loss while storing data.</li> <li>•Eprom has been changed.</li> </ul>	Turn Off and then Restart. or Replace Eprom
<b>Er06-</b> Zone 1/Top probe A/D underflow error	<ul style="list-style-type: none"> <li>•Incorrect sensor type.</li> <li>•Measuring temperature outside the sensor range.</li> </ul>	Check sensor.
<b>Er07-</b> Zone 1/Top probe overflow error	Open sensor	Check for an open sensor.
<b>Er08-</b> Zone 2/Bottom probe A/D underflow error	<ul style="list-style-type: none"> <li>•Incorrect sensor type.</li> <li>•Measuring temperature outside the sensor range.</li> </ul>	Check sensor.
<b>Er09-</b> Zone 2/Bottom probe overflow error	Open sensor	Check for an open sensor.
<b>Er10-</b> Stack overflow error	Microprocessor error	Turn Off and then Restart.
<b>Er11-</b> Zone 1/Top probe error	Open RTD probe	Check for an open probe
<b>Er12-</b> Zone 1/Top probe shorted	Probe is out of range	Check probe for short. Should be greater than 90 ohms.



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**Error Code Display (continued):**

<b>Problem</b>	<b>Probable Cause</b>	<b>Solution</b>
<b>Er13-</b> Zone 2/Bottom probe open sensor	Open sensor	Check for an open probe.
<b>Er14-</b> Zone 2/Bottom probe shorted sensor	Probe is out of range.	Check probe for short. Should be greater than 90 ohms.
<b>Er15-</b> Zone 1 loop error	•Faulty heater •Shorted sensor •Bad heater contactor	•Check heater elements •Check sensor probe •Check switching device
<b>Er16-</b> Zone 2 loop error	•Faulty heater •Shorted sensor •Bad heater contactor	•Check heater elements •Check sensor probe •Check switching device

**CAUTION**

**BEFORE WORKING ON A OVEN WHICH HAS BEEN RECENTLY USED  
ALLOW SUFFICIENT TIME FOR IT TO COOL TO PREVENT BURNS.**

**SOLVING OTHER PROBLEMS**

*No Power.*

- The machine is not plugged in.
- There is no power available at the outlet/disconnect
- The circuit breaker has tripped. Reset by pressing the switch so that it is flush with the front panel. (Control panel only)
- A fuse has blown.
- The transformer has failed. (Control panel only)

*No Heat or Oven Heats Slowly*

A cooled dry empty oven can be heated from room temperature to 300 °F in four to six minutes. If the oven is not meeting this specification, check the following.

- Check the fuses
- Check the two contactors.

*No Heat or Oven Heats Slowly (Continued)*



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- Check heater bank continuity.
- The fault/high limit lamp is on, see the trouble shooting suggestions for this area below.

### *The Fault/High Limit Lamp Is On*

- Motor has overheated. (The blower motors are equipped with an internal thermal switch). Turn the oven off and try to restart after the motor has cooled.  
Possible causes:
  - 1.) The motor bearing or winding has failed.
  - 2.) Something is binding the motors or blower fans.
  - 3.) The rear of the oven lacks sufficient clearance to allow proper air circulation.
- Oven temperature is too high. (Your oven comes with a high temperature limit switch set at approx. 575 °F. This switch will reset when the oven has cooled.)
- A power interruption has occurred

### *No Steam*

- The water line to the oven may not have been turned on or someone has turned it off.
- Your water line filter may be plugged or need servicing.
- The water solenoid valve may be dirty and stuck shut.
- The water solenoid valve may have failed.
- The water pressure may be too low, the oven requires between 60-70 psi.
- The water spray nozzles inside the oven chamber which spray water into each of the blower fans may be plugged, remove the nozzle assembly and clean.
- The nozzle assembly, which sprays water into the blower fans, is not vertical and is not spraying the water directly into the fans as it should.

### *The Steam Will Not Stop /or Continuous Steam*

It is normal for water to drip from the spray nozzles for several seconds after steaming, however if it continues to drip or run, check the following.

- The water solenoid valve may be dirty and stuck open.
- The water solenoid valve may have failed.



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### *Steam Is Leaking From the Door*

It is normal for some steam to escape from the door during the steaming operation, however, if excessive amounts escape you should check the following.

- The door seal may be damaged.
- The door may not be latching properly.

### *The Door Will Not Close*

- Slamming the door too hard can cause it to bounce off of the seals, not allowing the door time enough to latch properly.
- Sometimes after replacement of the door seals the strike may need to be re-shimmed to generate the proper seal. Remember only a single shim should be used, order shim kit number 690-0148K when replacing seals.
- Check for a worn or broken latch or strike.
- The Latch mounted to the door may be too far away from the strike. It may be adjusted left to right.

### *One or both of The Blower Fans Will Not Run*

- The oven liner may be rubbing on the fan preventing its rotation.
- A motor fuse may need to be replaced.
- The door switch may not be working.
- The fault/high limit lamp is on, see the trouble shooting suggestions for this area above.
- The high limit switch has failed.
- A blower fan motor may have failed.

### *The Blower Fans Run Continuously*

Other than when the oven is in



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*The Oven Is Overheating*

This may be a normal condition experienced when the oven is empty. Normally the oven





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Continued

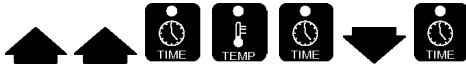
Advanced Functions (Continued)




Zone 2 temperature shows the temperature reading of the top probe without offset.

Advanced Setup Mode (Re-calibration)

To change offset temperature or run on only 1 probe enter the following key sequence.



Advance through all parameters by using the  key. Do not change any of the parameters except the ones listed below. This is only required after a probe fails. The parameters are as follows.



Default is 2, 1 can be used when only the top probe is working.



and



adjust with the up and down key for temperature offset for probe 1 and 2.



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**MAINTENANCE**

**WARNING**

**NEVER ATTEMPT TO CLEAN OR SERVICE THIS OVEN UNTIL IT HAS BEEN DISCONNECTED FROM THE POWER SUPPLY AND IS COOL TO THE TOUCH.**

**NOTE**

**REMEMBER A CLEAN OVEN WILL LAST LONGER AND WORK BETTER.**

Cleaning

The outside of the oven should be cleaned daily by wiping it with a clean damp cloth or by using any suitable stainless steel cleaner. A solution made up of a mild detergent with water will normally be sufficient for routine cleaning of the interior of the oven. When finished dry the surfaces with a clean cloth.

The glass door should be cleaned daily using normal glass cleaners.

For more difficult cleaning jobs such as where there are burned on or greasy deposits, or heat tint, you should use an abrasive pad. Remember for best results always keep the stainless steel shiny.

To simplify major cleanings the inner liner may be removed by first removing the nozzle assembly in the back of the oven with an open end wrench, and then by removing the eight slotted head screws which secure the liner. Six of these screws are in the front of the oven while two additional screws are on the rear panel adjacent to the nozzle assembly.

Clean the rear fan cover frequently to insure air circulation through the electrical compartment. This will lessen the possibility of heat related electrical problems.

The heating elements themselves normally do not require cleaning.

Lubrication

Occasionally put a few drops of oil on the pivot points of the door. No other items requires lubrication.

**CAUTION**

**NEVER LUBRICATE THE MOTORS**



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## Removal and Replacement Guide

### *Removing the Inner Liner:*

- First remove the nozzle assembly in the back of the oven.
- Remove the eight slotted head screws which secure the liner. Six of these screws are in the front of the oven while two additional screws are on the rear panel adjacent to the nozzle assembly.
- The liner can now be removed from the oven.

### *Replacing the Fan or Fan Motor:*

## **WARNING**

**NEVER ATTEMPT TO CLEAN OR SERVICE THIS OVEN UNTIL IT HAS BEEN DISCONNECTED FROM THE POWER SUPPLY AND IS COOL TO THE TOUCH.**

- First remove the inner liner as described above.
- Next, use a wrench to remove the hex head bolt in the end of the motor shaft which secures the fan.
- Loosen the two set screws in the hub of the fan.
- Always use a puller to remove the fan from the motor shaft to protect the bearings in the motor.
- Disconnect wires from motor, wiring connections are in the wiring box on the motor.
- Take off the four nuts and remove the motor.
- Re-install the fans and/or motors by reversing the disassembly procedures.

### *Changing a Bank of Heating Elements.*

- Remove the inner liner as described above.
- Remove the fan(s) as described above.
- Remove the electrical rear side panel by removing the 9 slotted head screws which secure the cover.
- Remove the wires from the ends of the affected bank of heating elements. Make sure they are marked so that they can be returned to the new bank of elements easily.



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*Changing a Bank of Heating Elements (Continued).*

- Remove the four hex head screws which secure the bank to the housing and remove the bank of elements.
- The interior surface where the bank of elements were previously attached should be cleaned completely of any remaining sealant.
- A new bank of elements must be sealed to the housing using a NSF/FDA approved silicone sealant.
- Finish installing the new elements by reversing the above disassembly procedures.

*Replacing the Exterior Door Gasket*

- Remove the 18 screws which hold the gasket retainers on.
- Remove the gasket.
- The sheet metal surface of the door where the gasket was attached and the retainers should be cleaned completely of any remaining sealant.
- Replace the gasket retainers but leave the screws loose.
- Start replacing the gasket on the hinge side of the door beginning about 1-1/2



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### Replacing the Interior Door Gasket (Continued)

- Replace gasket and use a NSF/FDA approve sealant between the metal and gasket. and gasket end to end.
- Set down door frame, rounded gasket side up and run a bead of NSF/FDA approved sealant around top edge of entire gasket.
- Place glass on top of gasket. This will seal the gasket to the glass.
- Allow sealant to dry, (approximately four to five hours).
- Replace door panel, clamp the front and back door panels together before tightening the screws.

### *Changing an Electrical Component*

## **WARNING**

**NEVER ATTEMPT TO SERVICE THIS OVEN UNTIL IT HAS BEEN DISCONNECTED FROM THE POWER SUPPLY. ALL ELECTRICAL WORK MUST BE DONE BY A QUALIFIED ELECTRICIAN.**




- Remove the front side panel which is located on the control side.
- After identifying the component which needs to be replaced remove its wires after marking them for ease of replacement.
- Remove the component.
- Re-install the component by reversing the removal procedures.

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**RECOMMENDED SPARE PARTS**

<u>PART NUMBER</u>	<u>PART DESCRIPTION</u>	<u>NO. REQ'D</u>
5725-9626	Fuse-FRN 8 (208/240V)	2
5725-9442	Fuse-FNQR 4 (375/480V)	2
5725-9634	Fuse-FRN 30 (208/240V)	6
5725-9066	Fuse-KTKR-15 (375/480V)	6
5748-6718 	Valve-Solenoid 2-Way	1
5760-3194	Transformer (240/480V)	1
5760-3195	Transformer (208/375V)	1
5749-8021	Relay-Power 3-Pole, 25A	3
5708-6808	Block-Contact 1NC	1
5708-6809	Block-Contact 1NO	1
5708-7806	Pushbutton-Green (On)	1
5708-7805	Pushbutton-Red (Off) 	1
5757-8819	Switch-Magnetic Proximity Door	1
5757-4125	Breaker-Circuit 2.5A	1
5737-2010	Lamp-Fluorescent	1
5911-9030	Latch-Body	1
0690-0149	Strike-Door	1
6542-0003	Glass-Door	1
6904-6062	Gasket-Door Interior and Exterior	17 ft 
5757-8083	Switch-Limit	2
6310-0003	Motor-Gear 1/110 h.p. (For Vent)	1

For Service Parts Call Oliver Products @ 800-253-3893


(continued)

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RECOMMENDED SPARE PARTS (continued)

<u>PART NUMBER</u>	<u>PART DESCRIPTION</u>	<u>NO. REQ'D</u>
0690-0004	Motor-Blower (208/240/480V)	2
0690-0004-2	Motor-Blower (375V only)	2
0690-0045	Wheel-Blower	2
5712-0655	Sensor-RTD 100 Ohm	2
5712-0029	Coupling-RTD Sensor	2
5704-5011	Cable-Computer/Interface 9 Pin Mate-n-Lock	1
5704-5012	Cable-Computer/Interface 12 Pin Mate-n-Lock	1
5712-3261	Interface-Watlow Compatible	1
5712-3267	 Computer-Oliver/Watlow	1
5730-2655	Heater-10KW	2
5757-9710	Switch-Thermal Surface Mount (Hi Limit)	1
6310-5027	Fan-Axial 3000 RPM (Cooling Fan)	2

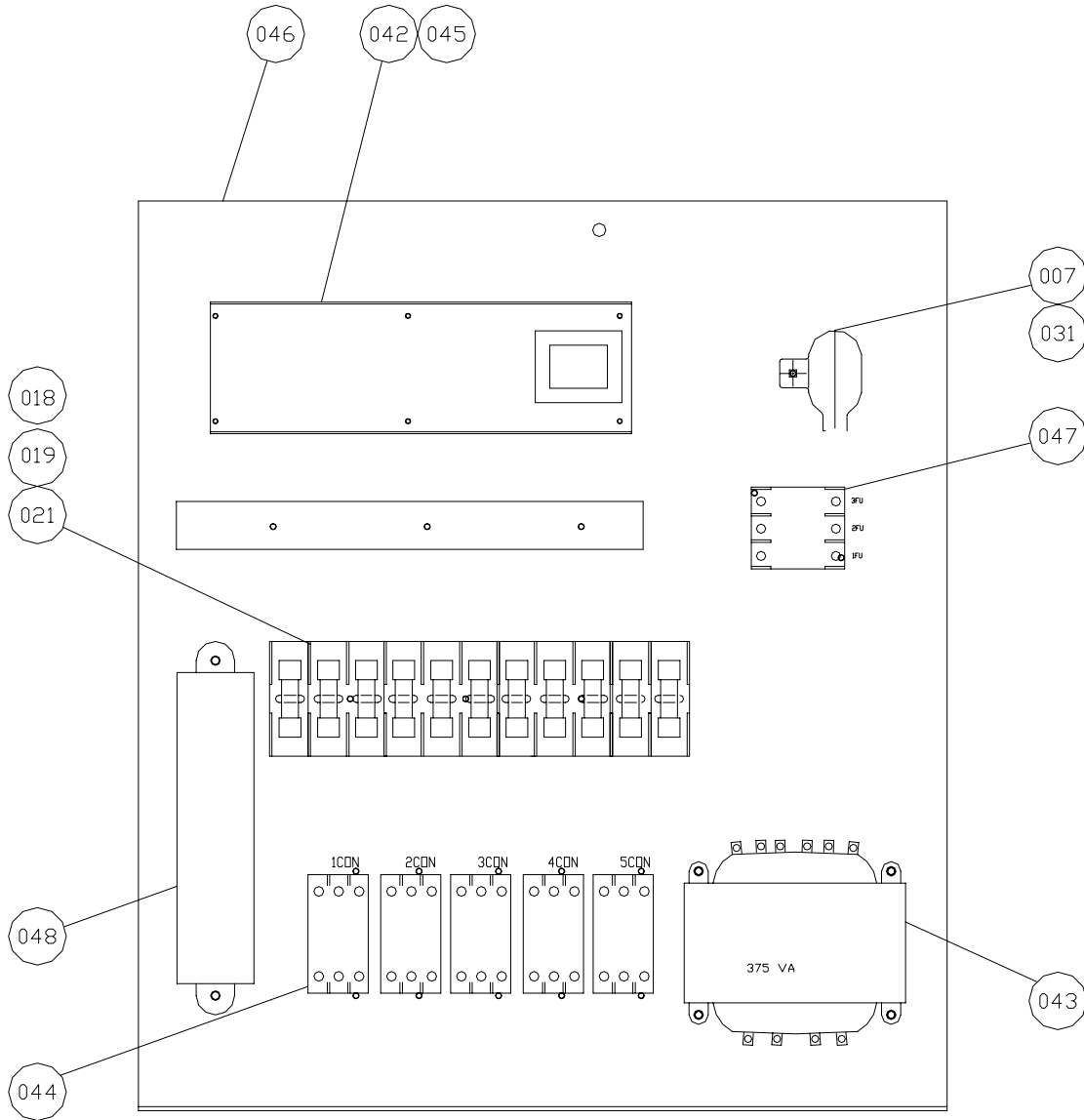
For Service Parts Call Oliver Products @ 800-253-3893

Rev. 10-22-2003



690-NC2

### ELECTRICAL SUB PANEL



Rev 2-27-09





690-NC2

**ELECTRICAL SUB PANEL PARTS LIST**

<b><u>ITEM NO</u></b>	<b><u>PART DESCRIPTION</u></b>	<b><u>PART NUMBER</u></b>
007	KIT-CAPACITOR MTG.	5704-6530
018	FUSE-FNQR 4 (375/480V)	5725-9442
	FUSE-FRN 8 (208/240V)	5725-9626
019	FUSE-KTKR 15 (375/480V)	5725-9066
	FUSE-FRN 30 (208/240V)	5725-9634
021	BLOCK-FUSE CLASS CC (375/480V)	5726-1006
	BLOCK-FUSE CLASS CC (208/240V)	5726-1080
031	CAPACITOR	5704-6199
042	INTERFACE-WATLOW COMPATIBLE	5712-3261
043	TRANSFORMER-MULTI-TAPS (all models)	5760-3196
	TRANSFORMER-208/380V OVENS ONLY	5760-3195
	TRANSFORMER-240/480V OVENS ONLY	5760-3194
044	RELAY-POWER 3 POLE 25A	5749-8021
045	SPACER-NYLON 1/2"	5767-5705
046	SUBPANEL-ELECTRICAL	0690-0039-6
047	BLOCK-TERMINAL 0-14 GA	5770-7463
048	BALLAST-DOOR LAMP	5702-2000

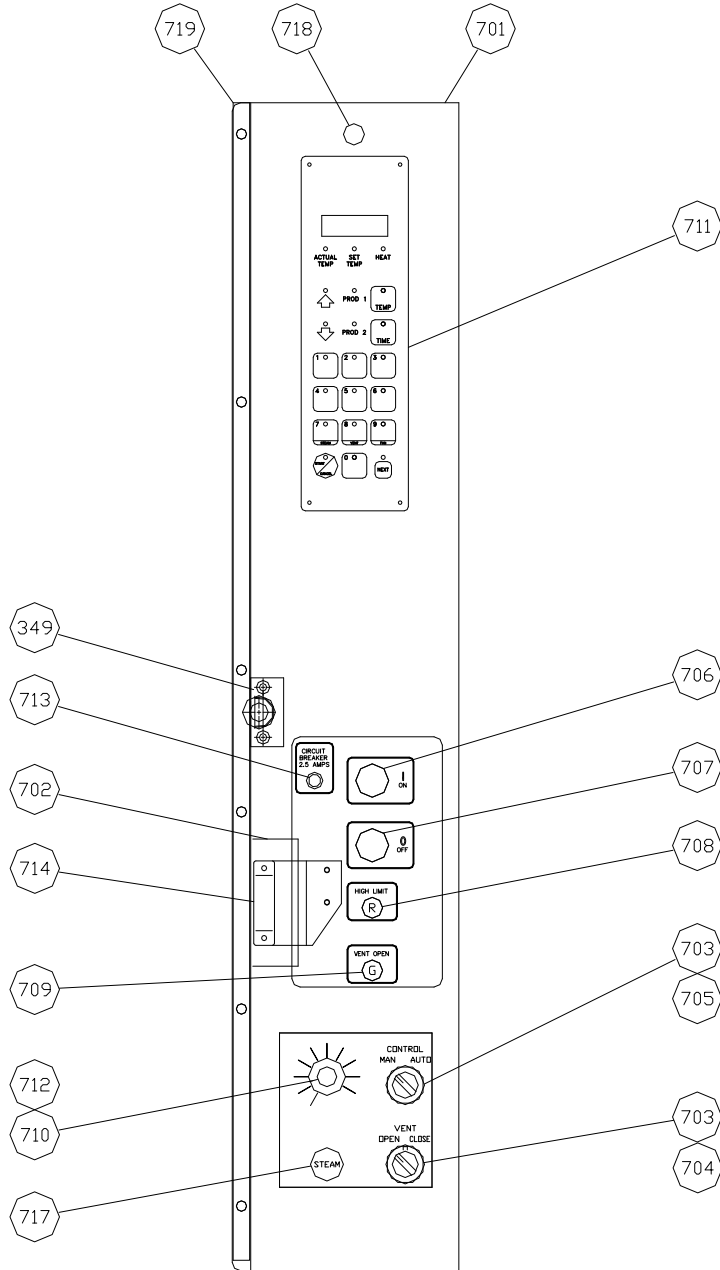
FOR SERVICE PARTS CALL OLIVER PRODUCTS @ 800-253-3893

Rev 2-27-09



690-NC2

**FRONT PANEL**



Revised 3/20/2013



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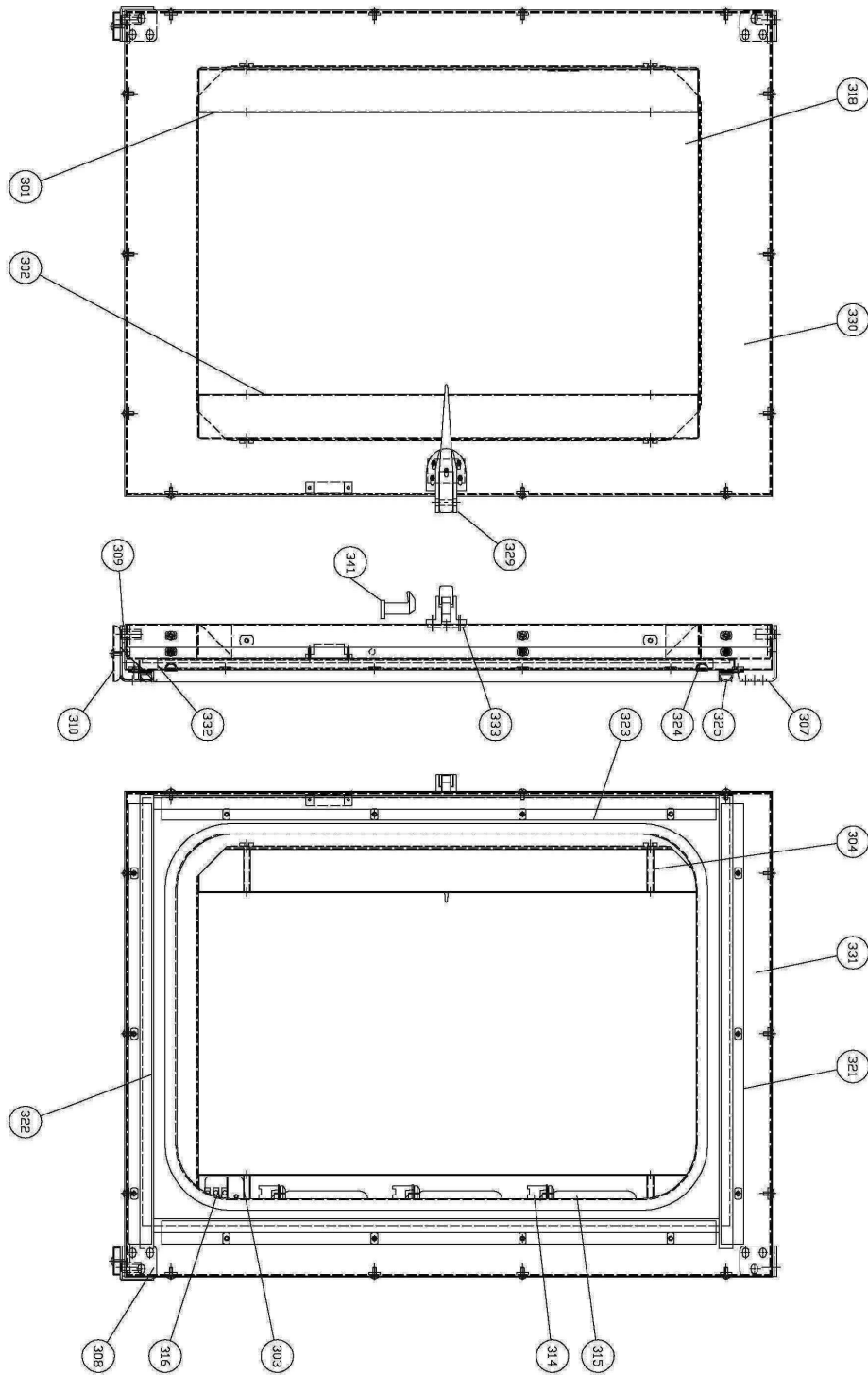
690-NC2

**FRONT PANEL PARTS LIST**

<b><u>ITEM NO</u></b>	<b><u>PART DESCRIPTION</u></b>	<b><u>PART NUMBER</u></b>
341	STRIKE-LATCH	0690-0149
701	PANEL-FRONT CONTROL	0690-0034-2
702	BRACKET-PROX. SWITCH	0690-0042
703	SWITCH-2 POSITION MAINTAINED KNOB	5708-6522
704	BLOCK-CONTACT 1NC	5708-6808
705	BLOCK-CONTACT 1NO	5708-6809
706	PUSHBUTTON-GREEN	5708-7806
707	PUSHBUTTON-RED	5708-7805
708	LIGHT-PILOT 1/2	



### 690-NC2 DOOR ASSEMBLY



Rev. 12/10/2012



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**DOOR ASSEMBLY PARTS LIST**

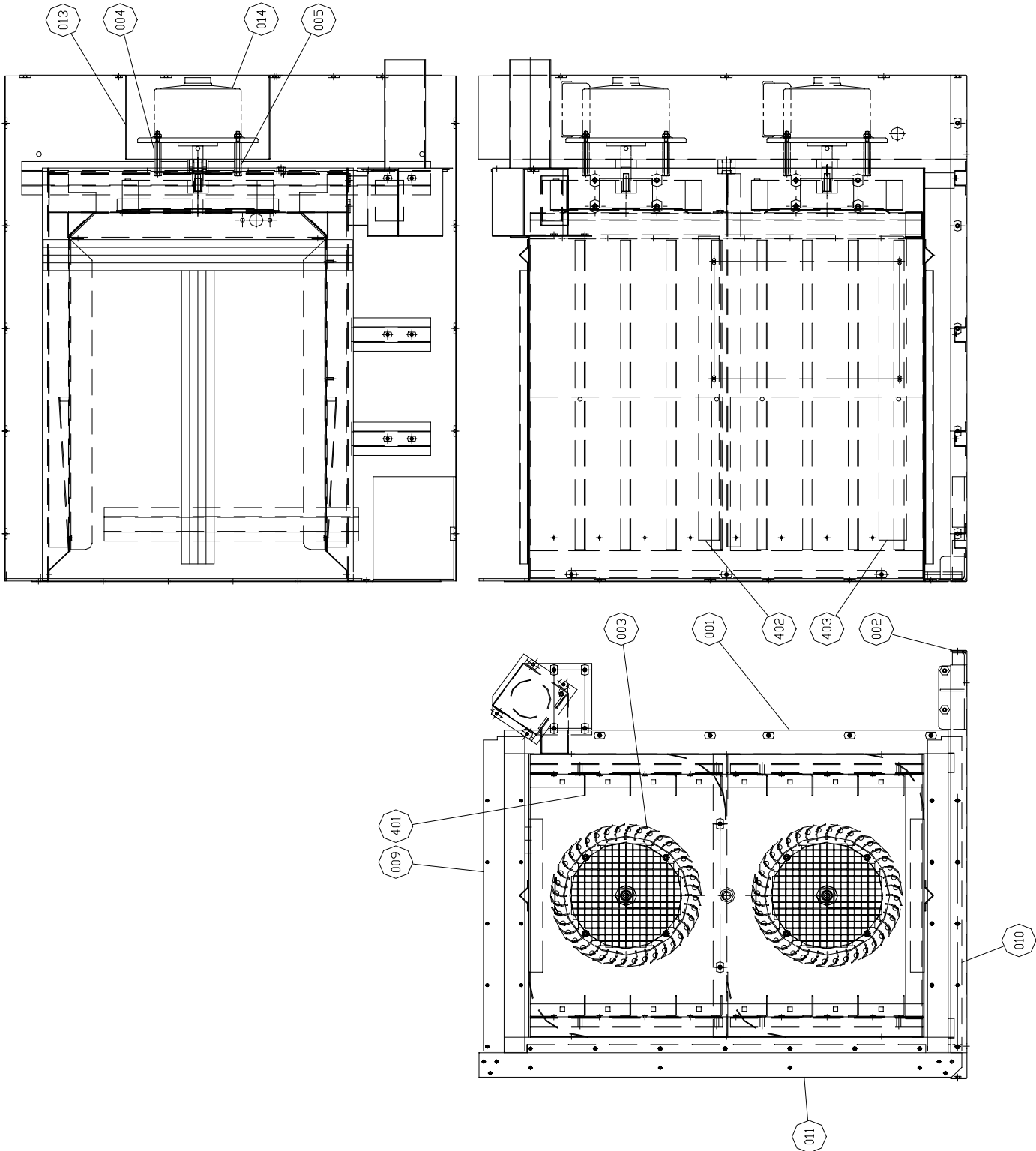
<b>ITEM NO</b>	<b>PART DESCRIPTION</b>	<b>PART NUMBER</b>
301	HOUSING-EMPTY	0690-0021
304	TUBE-SPACER	0690-0024
307	BRACKET-TOP DOOR HOLD	0690-0027
308	BRACKET-BOTTOM DOOR HOLD	0690-0028-1
309	SPACER-DOOR	0690-0030
310	COVER-WIRE	0690-0031
318	GLASS-DOOR	6542-0003
321	FRAME GASKET	0690-0152
324	GASKET-GLASS & DOOR	6904-6062
329	LATCH-BODY	5911-9030
330	DOOR-OUTSIDE	0690-0087-2
331	DOOR-OUTER BACK	0690-0088-3
332	DOOR-INSIDE ASSEMBLY	0690-0089-2
333	NUTBAR	0690-0110-2
334	LAMP-FLUORESCENT 36 WATT	5737-2010
335	SOCKET-LAMP	5737-2910
336	HOUSING-LAMP	0690-0022-1
337	RETAINER-LAMP CLIP	0690-0129
340	CLIP-HORIZONTAL LAMP	5737-2911
341	STRIKE-LATCH	0690-0149

FOR SERVICE PARTS CALL OLIVER PRODUCTS @ 800-253-3893

Rev. 12/10/2012



690-NC2  
**HOUSING/CHAMBER ASSEMBLY**





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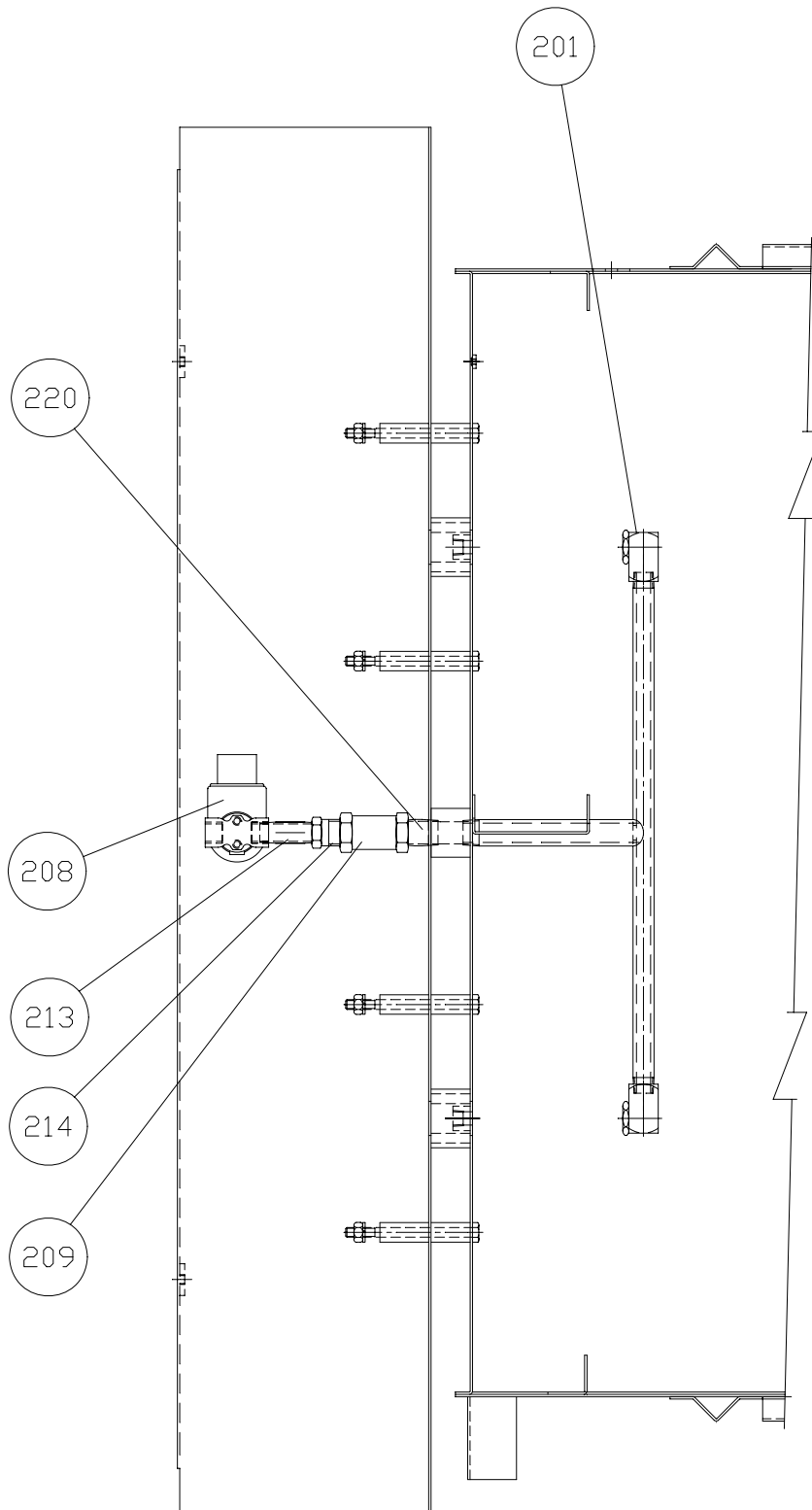
**HOUSING/CHAMBER PARTS LIST**

<b>ITEM NO</b>	<b>PART DESCRIPTION</b>	<b>PART NUMBER</b>
001	HOUSING-MAIN	0690-0029-2
002	BASE	0690-0037-1
003	WHEEL-BLOWER	0690-0045
004	SPACER-LONG MOTOR	0690-0058
005	SPACER-SHORT MOTOR	0690-0059
009	PLATE-UPPER SPLICE	0690-0063
010	PLATE-LOWER SPLICE	0690-0064
011	PLATE-SIDE SPLICE	0690-0065
013	PLATE-MOTOR BAFFLE	0690-0067-2
014	MOTOR-BLOWER 230/460/3	0690-0004
*015	HOUSING-PACKING ADJUSTABLE	0690-0158
401	INNER CHAMBER-8 SHELF	0690-0020
402	BAFFLE-UPPER	0690-0056
403	BAFFLE-LOWER	0690-0057

\*ITEMS NOT SHOWN  
FOR SERVICE PARTS CALL OLIVER PRODUCTS @ 800-253-3893  
Rev. 3/8/05



690-NC2  
**WATER SYSTEM ASSEMBLY**







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690-NC2

**WATER SYSTEM ASSEMBLY PARTS LIST**

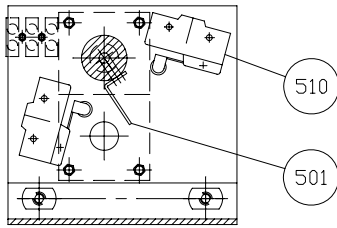
<b><u>ITEM NO</u></b>	<b><u>PART DESCRIPTION</u></b>	<b><u>PART NUMBER</u></b>
201	MANIFOLD-ASSEMBLED	0690-0011
208	VALVE-SOLENOID 2WAY	5148-6718
209	VALVE-WATER FLOW CONTROL	5148-7408
213	NIPPLE-1/4 NPT X 1-1/2	5115-8250
214	BUSHING-REDUCER 3/8x1/4 NPT	5115-8300
220	NIPPLE-CLOSE 3/8" X 1"	5115-8251



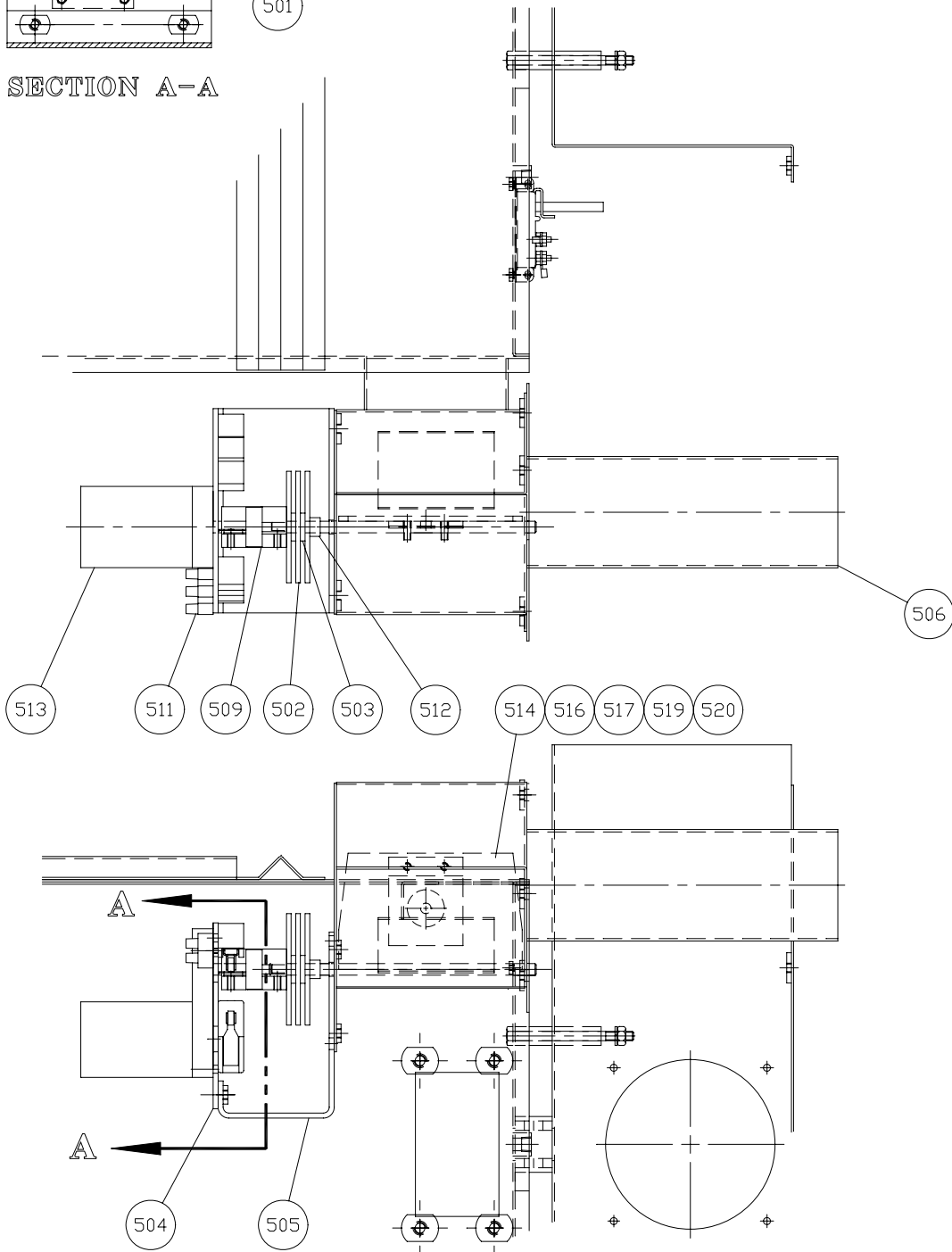
FOR SERVICE PARTS CALL OLIVER PRODUCTS @ 800-253-3893



690-NC2  
**DAMPER CONTROL ASSEMBLY**



SECTION A-A





690-NC2

**DAMPER CONTROL ASSEMBLY PARTS LIST**

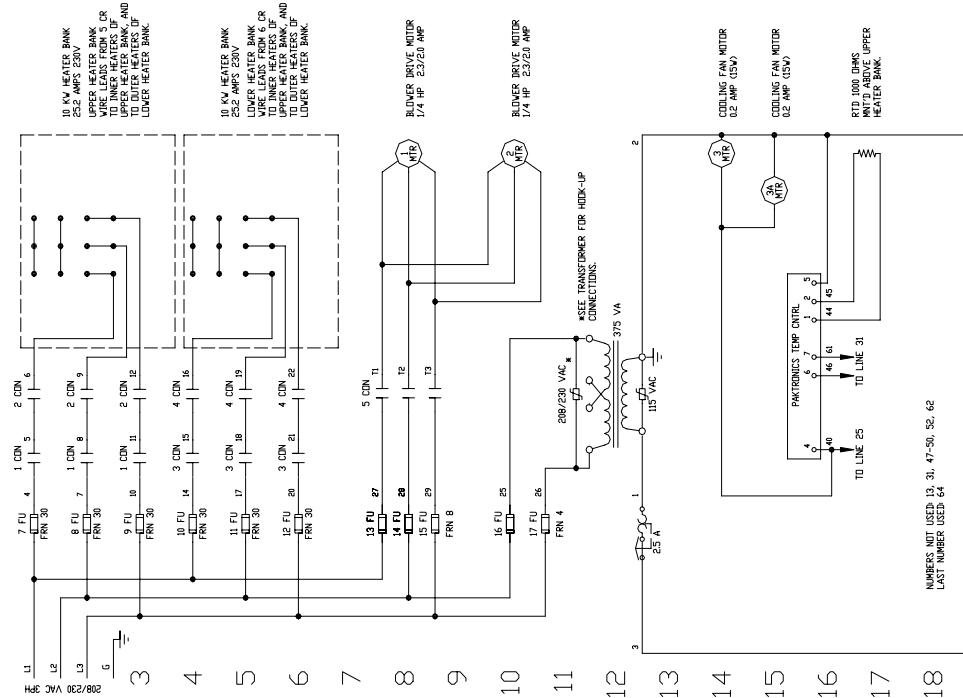
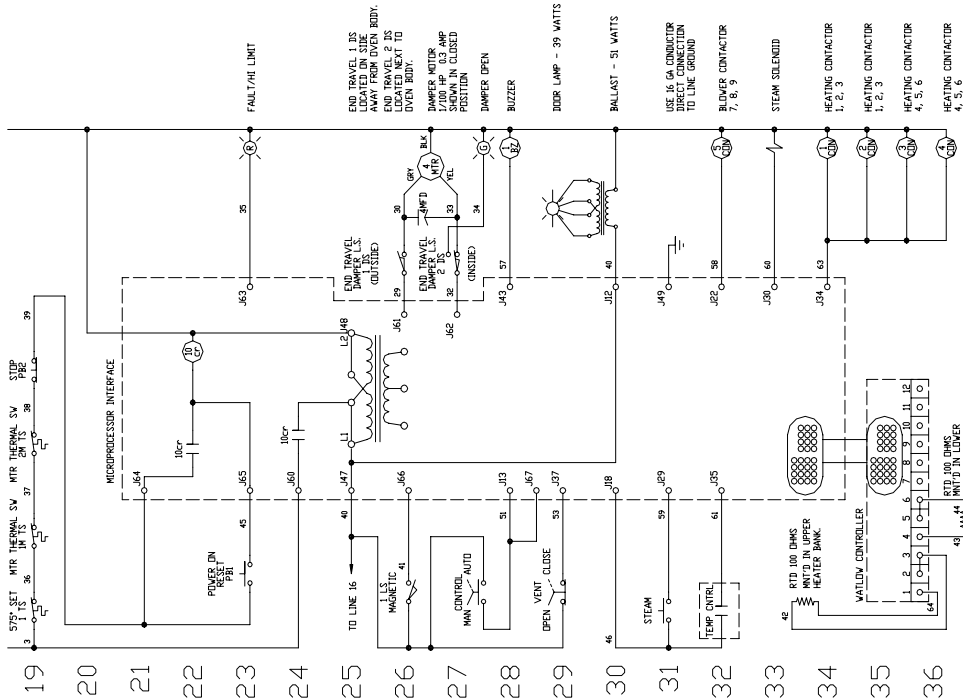
<b><u>ITEM NO</u></b>	<b><u>PART DESCRIPTION</u></b>	<b><u>PART NUMBER</u></b>
501	LEVER-LIMIT SWITCH	0690-0046
502	DISK-HEAT SINK	0690-0047
503	SPACER-HEAT SINK	0690-0048
504	PLATE-MOTOR	0690-0049
505	BRACKET-DAMPER MOTOR	0690-0050
506	CHIMNEY	0690-0051
509	COUPLING-5/16B	5604-6951
510	SWITCH-LIMIT (DAMPER)	5757-8083
511	BLOCK-TERMINAL	5770-7169
512	COLLAR-SET	5806-7053
513	MOTOR-GEAR	6310-0003
514	PLATE-DAMPER	0690-0055-1
516	BRACKET-FLAP (2 X 1/2)	0690-0101
517	FLAP-RUBBER PRES. RELIEF	0690-0102
519	SCREW-MACH #10 X 3/4	5843-5240
520	NUT-HEX MACHINE #10-24	5832-0578

FOR SERVICE PARTS CALL OLIVER PRODUCTS @ 800-253-3893



690-NC2

208/240V WIRING DIAGRAM 0690D12025

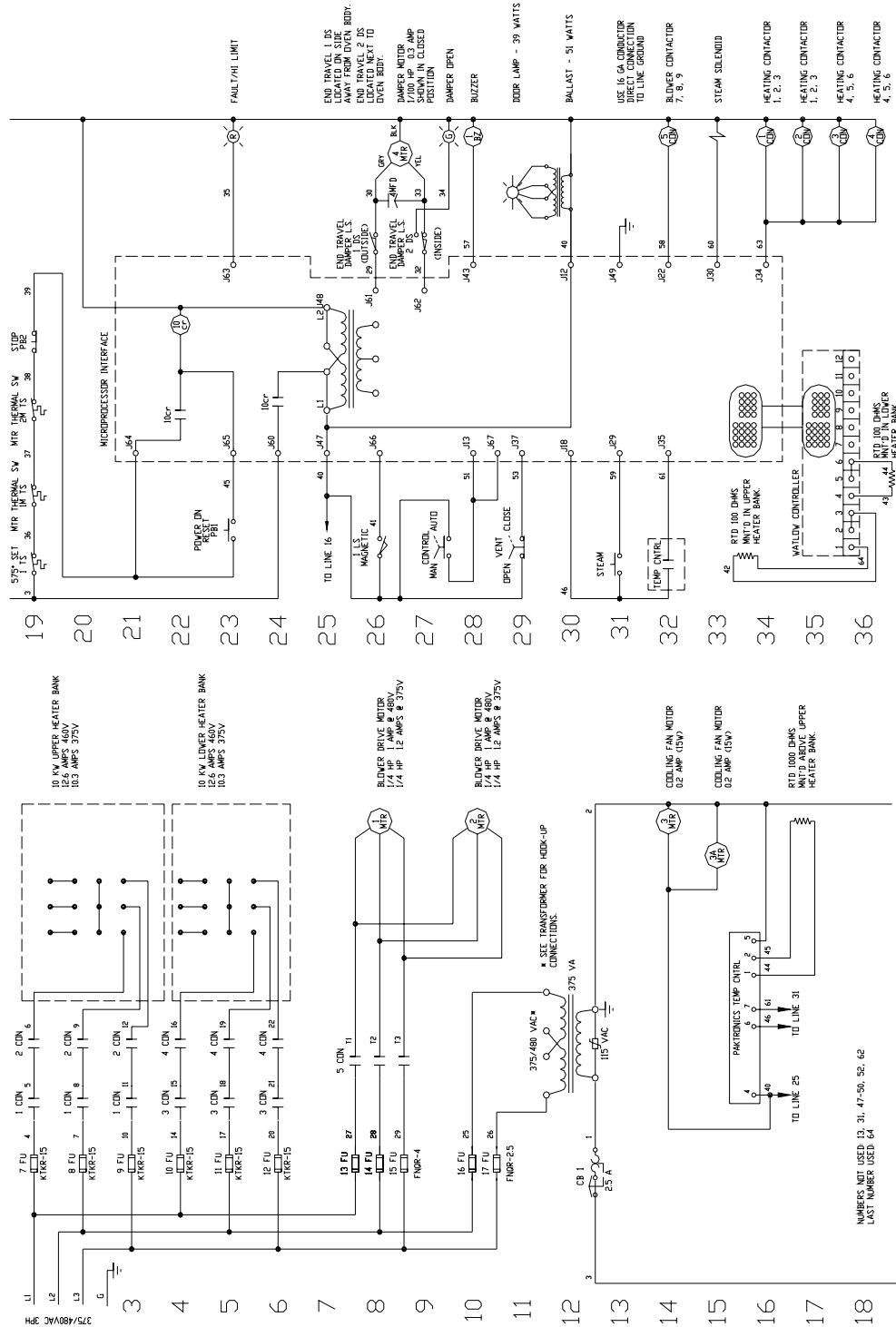


Revised 2-27-09



690-NC2

375/480V WIRING DIAGRAM 0690D12026



Revised 2-27-09





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## WARRANTY

### PARTS

Oliver Packaging & Equipment Company warrants that if any part of the equipment (other than a part not manufactured by Oliver Packaging & Equipment ) proves to be defective (as defined below) within one year after shipment, and if Buyer returns the defective part to Oliver Packaging & Equipment within one year, Freight Prepaid to Oliver Packaging & Equipment plant in Grand Rapids, MI, then Oliver Packaging & Equipment , shall, at Oliver Packaging & Equipment option, either repair or replace the defective part, at Oliver Packaging & Equipment expense.

### LABOR

Oliver further warrants that equipment properly installed in accordance with our special instructions, which proves to be defective in material or workmanship under normal use within one (1) year from installation or one (1) year and three (3) months from actual shipment date, whichever date comes first, will be repaired by Oliver Packaging & Equipment or an Oliver Packaging & Equipment Authorized Service Dealer, in accordance with Oliver Packaging & Equipment published Service Schedule.

For purposes of this warranty, a defective part or defective equipment is a part or equipment which is found by Oliver Packaging & Equipment to have been defective in materials workmanship, if the defect materially impairs the value of the equipment to Buyer. Oliver Packaging & Equipment has no obligation as to parts or components not manufactured by Oliver Packaging & Equipment, but Oliver Packaging & Equipment assigns to Buyer any warranties made to Oliver Packaging & Equipment by the manufacturer thereof.

This warranty **does not** apply to:

1. Damage caused by shipping or accident.
2. Damage resulting from improper installation or alteration.
3. Equipment misused, abused, altered, not maintained on a regular basis, operated carelessly, or used in abnormal conditions.
4. Equipment used in conjunction with products of other manufacturers unless such use is approved by Oliver Packaging & Equipment Company in writing.
5. Periodic maintenance of equipment, including but not limited to lubrication, replacement of wear items, and other adjustments required due to installation, set up, or normal wear.
6. Losses or damage resulting from malfunction.

The foregoing warranty is in lieu of all other warranties expressed or implied AND OLIVER PACKAGING & EQUIPMENT COMPANY MAKES NO WARRANTY OF MERCHANTABILITY OR FITNESS FOR PURPOSE REGARDING THE EQUIPMENT COVERED BY THIS WARRANTY. Oliver Packaging & Equipment Company neither assumes nor authorizes any person to assume for it any other obligations or liability in connection with said equipment. OLIVER PACKAGING & EQUIPMENT COMPANY SHALL NOT BE LIABLE FOR LOSS OF TIME, INCONVENIENCE, COMMERCIAL LOSS, INCIDENTAL OR CONSEQUENTIAL DAMAGES.



Oliver Packaging & Equipment Company  
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## WARRANTY PROCEDURE

1. If a problem should occur, either the dealer or the end user must contact the Parts and Service Department and explain the problem.
2. The Parts and Service Manager will determine if the warranty will apply to this particular problem.
3. If the Parts and Service Manager approves, a Work Authorization Number will be generated, and the appropriate service agency will perform the service.
4. The service dealer will then complete an invoice and send it to the Parts and Service Department at Oliver Packaging & Equipment Company.
5. The Parts and Service Manager of Oliver Packaging and Equipment Company will review the invoice and returned parts, if applicable, and approve for payment.





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## RETURNED PARTS POLICY

This policy applies to all parts returned to the factory whether for warranted credit, replacement, repair or re-stocking.

Oliver Packaging and Equipment Company requires that the customer obtain a Return Material Authorization (RMA) number before returning any part. This number should appear on the shipping label and inside the shipping carton as well. All parts are to be returned prepaid. Following this procedure will insure prompt handling of all returned parts.

To obtain an RMA number contact the Repair Parts Department toll free at (800) 253-3893.

Parts returned for re-stocking are subject to a **RE-STOCKING CHARGE**.

Thank you for your cooperation,

Repair Parts Manager  
Oliver Packaging and Equipment Company