

For NU-VU® Model:

XO-1M

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* ABOUT YOUR NU-VU® EQUIPMENT *

NU-VU® as a product line has been in existence for over twenty-one years. Its units are in use throughout the United States and Canada and have been exported to other parts of the world. NU-VU® continually modifies and updates its equipment to improve the capabilities as new innovations become available. This enables the user to obtain better and more useful results. NU-VU® currently manufactures an entire line of equipment in Menominee, Michigan. All of the equipment is tested under anticipated operating conditions prior to shipment.

Any prospective customer is invited to try different food products in the newly completed test kitchen in Menominee, Michigan. Seminars for both dealers and customers are available on-site at the Menominee facility, at a dealer's showroom, or on the customer's premises.

NU-VU® has, over a period of time, developed a series of Ovens, Proofers, Steamers, Smokers and Warmers designed to provide maximum performance with minimum energy requirements and care by the operator. NU-VU® Food Service Systems offers the widest variety of equipment and range of options through the varied use of heat, moisture, steam and smoke. NU-VU® has combined quality construction, superior performance, long life components, multiple use operation and amplified operating procedures to produce the finest equipment available. This means the end user has the best of ALL worlds.

NU-VU® can provide a wide range of equipment with any of the following features:

- Bakery Ovens with either INTERNAL or EXTERNAL STEAM generating capabilities. These Ovens may be equipped with COOK-N-HOLD capabilities for broader use.
- COOK-N-HOLD Ovens for either high temperature or low temperature operation with moisture and smoking capabilities.
- Low temperature Ovens with smoking and supplemental moisture capabilities.
- Steamer Ovens with high and low temperature capabilities.
- Multi-Ovens that dry bake, steam, and/or bake with steam.
- Bakery Proofer/Warmers with separate temperature and humidity control systems in either manual fill or automatic humidity systems.
- General purpose Proofer/Warmer units for reconstituting, slow cooking, holding, steaming, and/or warming.

NU-VU® Ovens in the XO- series are well-suited for baking, cooking, roasting, re-heating and slow cooking, and can be used for:

- | | | |
|--------------|-----------|-----------|
| • Breads | • Rolls | • Pies |
| • Pastries | • Cakes | • Cookies |
| • Croissants | • Muffins | • Danish |

plus a variety of other bakery items.

The NU-VU® XO- series Ovens can also be used for:

- Meats
- Poultry
- Seafood
- Pizza
- Vegetables
- Casseroles
- Potatoes
- Food combinations
- Hot dishes

All Ovens of the XO- series are designed for the following:

- Automatic pan positioning
- Dependability
- Rapid and even baking
- Low energy requirements
- Easy cleaning
- Low maintenance
- Simple operation
- Rapid servicing

AVAILABILITY AND TESTING:

A prospective customer may see a unit in operation as follows:

- At a dealer's showroom.
- At an existing installation.
- At NU-VU®'s manufacturing facilities.

If contacted NU-VU® will provide information on the nearest location and availability. In the event that a customer desires to test at his place of business arrangements can be made based on a specifically defined program. If a customer wants to try a specific product arrangements can be made to determine what conditions are necessary for baking so that the customer can determine the suitability for his or her program. Technical product information can be generated by customer-requested testing of various products and equipment.

CONSTRUCTION:

NU-VU® XO- series Ovens are constructed of stainless steel both inside and outside. All of the exterior frame members and interior shells are welded to provide unparalleled durability, rigidity, and long life construction. Components such as temperature controls, timers, switches, motors, heating elements, and others are thoroughly tested before shipment. Ongoing research and development projects are used to introduce the latest and most dependable parts.

SHIPMENT:

NU-VU® equipment is usually shipped directly from the factory or delivered from a dealer, unless sold at a show or after a test or demonstration. Unless otherwise agreed to by NU-VU® freight is paid by the buyer F.O.B. NU-VU®'s plant in Menominee, Michigan. Shipping time may vary depending upon the original shipping point, time of year and shipper or shippers used.

NU-VU® works closely with all of its customers in tracing shipments to speed delivery and minimize handling. NU-VU® employs the latest accepted packaging standards to ensure that your equipment arrives in excellent condition. However, damage may still occur due to accident or mishandling by the freight company. For this reason it is necessary for the receiving party to immediately do a thorough inspection of the equipment when it arrives.

NU-VU® MODEL XO-1M:

The NU-VU® XO-1M unit is electrically powered and generally does not require ventilation hoods. However, the ultimate decision as to hood requirements rests with your local authorities. The XO-1M is constructed of stainless steel inside and outside for minimum maintenance and maximum durability. The XO-1M can hold up to five (5) 13"x18" half-size pans or up to five (5) 2½" x 12" x 20" food service pans on the standard Side Racks. Optional 4-Pan Side Racks are available for those who require increased shelf spacing to bake larger products. Both units measure 26½" wide, 24" deep (26½" with the Door Latch), and 21¼" high. The XO-1M unit takes up less than *five square feet of table or counter space!*

* NU-VU® EQUIPMENT WARRANTY *

THIS IS THE STANDARD WARRANTY THAT APPLIES TO ALL NU-VU® EQUIPMENT WITH THE FOLLOWING EXCEPTION: DUE TO THE SMALL SIZE THE XO-1M NU-VU® WILL NOT ALLOW THE CHARGING OF TRAVEL TIME BY A SERVICE AGENCY. IF YOUR XO-1M REQUIRES THE ATTENTION OF A SERVICE TECHNICIAN WE REQUEST THAT YOU TRANSPORT THE UNIT TO YOUR LOCAL APPROVED SERVICE AGENCY YOURSELF.

NU-VU® products are warranted against defects in workmanship and materials. No other express warranty, written or oral, applies. No person is authorized to give any other warranty or assume any other liability on behalf of NU-VU®, except by written statement from an officer of NU-VU®.

The standard NU-VU® EQUIPMENT WARRANTY is composed of the following items:

PARTS - -

This warranty covers electro-mechanical, mechanical and electronic components including hinges, latches, thermostats, sensors, thermocouples, relays, contactors, solenoids, power terminal blocks, timers, buzzers, micro-switches, motors, motor speed controls, rocker switches, valves, doors, elements, blower wheels, water pans, and similar components. Defective parts or components are warranted for a period of *TWELVE (12) MONTHS* from the date of installation or thirteen (13) months from the date of shipment, whichever occurs first. Replacement parts and components covered by this warranty will ship C.O.D.; customers who maintain an open account may purchase against their account. The return of defective parts is required. The return of a defective part or component must be made prior to the issuance of a credit on an open account. If a part that is returned tests satisfactory in the NU-VU® factory or at an authorized NU-VU® dealer or service agency, NU-VU® may withhold issuing credit. Replacement parts will be warranted for a period of *ninety(90) days* provided they are installed in a manner authorized by NU-VU®.

The following are *excluded* from the parts warranty:

- Parts damaged from failure to practice listed maintenance procedures.
- Fuses.
- Defective parts or components resulting from misuse, abuse or failure to follow instructions set forth in the operating manual.
- Heating Element (depending on use).
- Parts damaged by freight or handling beyond the confines of the NU-VU® factory.
- Parts damaged due to incorrect installation or wiring.
- Door Gasket.
- Leaks resulting from the removal of any sealant in the Oven.

LABOR - -

We require that you call our NU-VU® Service Department at (906) 863-4401 for service authorization BEFORE you call any service agency if you wish to claim a labor expense under the warranty. We may be able to solve your problem over the telephone, or be able to recommend one or more capable and reliable service agencies in your area.

This warranty covers the installation and replacement of defective parts and components which are included under **PARTS** for a period of not more than *TWELVE (12) MONTHS* from date of installation or thirteen (13) months from date of shipment, whichever occurs first.



IMPORTANT: IF YOUR UNIT IS SET UP AND WORKING PROPERLY AS VERIFIED BY AN AUTHORIZED SERVICE AGENCY NU-VU® WILL NOT PAY FOR ANY SERVICE CALLS AS WARRANTY WORK IF THERE IS NOTHING FOUND TO BE EITHER ELECTRICALLY OR MECHANICALLY WRONG WITH YOUR UNIT!!!

The coverage is limited to the normal labor rate times the allowable hours for performing the work as set forth in the following listing:

**NU-VU® FOOD SERVICE SYSTEMS
STANDARD TIME ALLOWANCES FOR WARRANTY REPLACEMENTS**

<u>CHANGE PERFORMED</u>	<u>CHANGE TIME</u>	<u>TEST TIME</u>	<u>TOTAL TIME</u>
Oven Motor/Rebalance Wheel	1 hr.	½ hr.	1 ½ hr.
Oven Heating Element	1 hr.	½ hr.	1 ½ hr.
Temperature Control (standard)	¾ hr.	½ hr.	1 ¼ hr.
Temperature Control (solid state)	½ hr.	½ hr.	1 hr.
Programmable Control (XO-1P)	½ hr.	½ hr.	1 hr.
Timers and/or Buzzer	½ hr.	5 min.	½ hr.
Electrical Relay	½ hr.	5 min.	½ hr.
Indicator Light	¼ hr.	5 min.	¼ hr.

NU-VU® has determined that the listed times, which are based on the period necessary for a trained service person to perform the work noted, are fair and reasonable. If a problem is not diagnosed within a half hour, the service person must contact NU-VU®'s Service Department via telephone at (906) 863-4401. Additional time for problem solving will not be allowed unless this procedure is followed. An appointment for servicing a unit should be set up since time will not be allowed for waiting to service a unit. Unless the service person justifies extra time for performing the work noted, charges for work performed by the service person in excess of the allowed time shall either be billed to the owner of the equipment or denied.

EXTENDED WARRANTY:

Available at an additional charge. Please ask for a quote depending upon warranty requested.

WARRANTY LIMITATIONS:

NU-VU®'s warranty for parts and labor is subject to the following limitations:

- NU-VU® will pay for service under warranty if there is a defective component, but not for:
 - A service call when the returned part test shows that the part works as per specification.
 - Parts or equipment that have been abused requiring replacement or adjustment.
 - Calls where the problem involves procedures rather than parts or components.
 - Any overtime charges. NU-VU® will pay straight time only for any work performed on NU-VU® equipment.
- This warranty will not apply if the unit is moved from the initial place of installation unless NU-VU® agrees in writing to continue the warranty after such a relocation.

Food service equipment and parts must be installed and maintained in accordance with NU-VU® instructions. Users are responsible for the suitability of the units or parts to their application. There is no warranty against damage resulting from accident, abuse, alteration, misapplication, inadequate storage prior to installation, or improper specification or other operating conditions beyond our control. Claims against carriers' damage in transit must be filed by the buyer and, therefore, the buyer must inspect the product immediately upon receipt.

***THIS WARRANTY DOES NOT COVER ADJUSTMENTS
DUE TO NORMAL ON-GOING USE!***

PARTS RETURN PROCEDURES AND CONDITIONS:

The following procedure shall be followed for the return of parts to the factory for credit consideration:

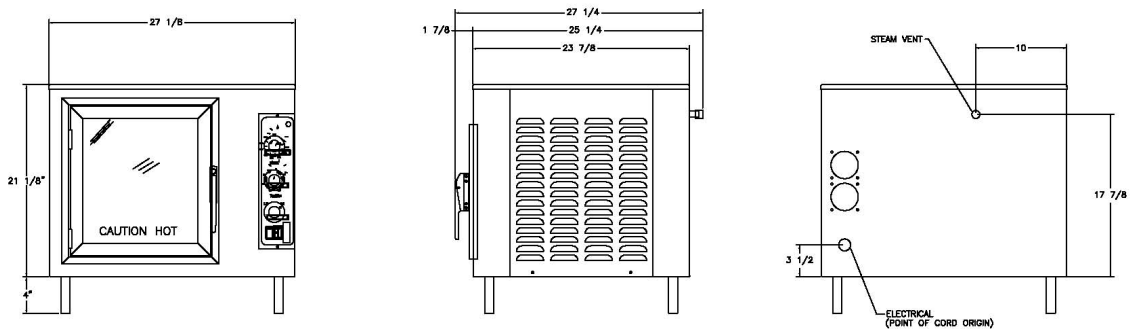
- All parts received by NU-VU® must have a completed return authorization form as supplied by NU-VU® with the part. Complete and return this Authorization Form *with the defective part(s)*.
- Parts MUST be packed securely so that in-transit damage cannot occur.
- Prepay shipment. Any parts returned collect will be refused by our Receiving Department. Credit will be issued on proper returns only.
- As soon as parts are tested defective, credit will be issued against them.
- If the Engineering test shows the component is not defective and in good working condition it may be returned to you along with your request for payment.

* RECEIPT AND INSTALLATION *

RECEIPT:

It is essential to inspect the unit immediately when it arrives. NU-VU® has placed instructions on the packaging to help avoid damage in transit. However, accidents or negligent handling can produce hidden damage. These steps should be followed:

- A. Inspect the entire perimeter of the package for damage or punctures to the packing material. This may indicate damage to the unit inside. Call any and all packing damage to the attention of the trucker.
- B. If any packing damage is found uncrate the unit immediately *in the presence of the delivery person* to determine if the unit is damaged. If any damage is found indicate the type and amount of damage on the shipping documents and notify NU-VU® at (906) 863-4401 immediately after filing a freight claim.
- C. Uncrate the unit carefully and check the entire unit (top, sides, front and back) for any visible or hidden damage.
- D. Remove the unit from the shipping pallet and inspect the bottom (including the Casters) for any damage.
- E. If any damage is noted after the driver leaves immediately contact the freight company and NU-VU® Food Service Systems.
- F. Check the Oven Door. Make sure the Oven Door closes completely, and that the Door Gasket seals firmly. If it does not close and seal properly please contact NU-VU®'s Service Department for instructions and assistance in any required adjustments.



INSTALLATION PROCEDURES:

Attach the Appliance Legs to the base of the unit if your Oven will sit on a table or counter. Legs are not necessary if the unit is to be fastened and sealed to the table or counter surface. Move the unit into the position where it is to be operated. Check to determine that the power source is the same voltage and phase as that indicated on the label on the side of the unit. If the voltage and/or phase is not the same call NU-VU® for instructions on changing the voltage and/or phase of your equipment or power supply.

The NU-VU® XO-1M is normally equipped for 208 volt or 240 volt operation in single phase configurations.



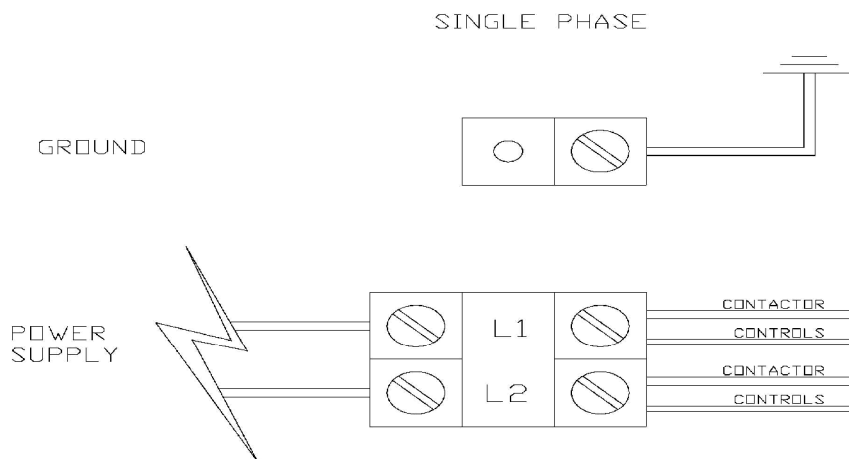
IMPORTANT: DO NOT ATTACH UNIT IF THE POWER SOURCE DOES NOT COINCIDE WITH THE UNIT LABEL!!!

Connect your unit according to all national and local electrical codes, either through a plug-type connection or direct wiring. All connections must be made with *COPPER WIRE ONLY* in the correct gauge for the application. Provide enough slack in the wiring to allow for equipment to be moved about during the initial installation, the connection of any optional water supply, and any future maintenance or required service work.

Your qualified installer or electrician should remove the Side Access Panel of the unit to expose the Power Terminal Block connections. A copy of the unit's wiring schematic is attached to the inside of the unit near the power terminal connections.



IMPORTANT: ALL POWER SHOULD BE TURNED OFF AT THE WALL BREAKER WHILE THE UNIT IS BEING CONNECTED!!!



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Refer to the illustration of the Power Terminal Block connections on page 8 and carefully follow these steps to safely complete the electrical portion of the Installation Procedure:

- A. Take note of the labeling on the terminal connections (Line 1, Line 2) at the Power Terminal Block.
- B. Carefully identify the power source connections and attach them to the appropriate terminals. Make sure all connections are clean and tight.
- C. Be sure the unit is properly grounded BEFORE USE by attaching a grounding wire to the Ground Lug next to the Power Terminal Block.
- D. Carefully set all Switches and Controls on the unit to the **OFF** position and engage the main power supply.
- E. Check the voltage at the connections on the Power Terminal Block with a voltmeter to confirm conformity with the unit label requirements. If all readings are correct you may proceed with the connection of the optional water supply (if required) followed by the INITIAL START-UP. If the readings DO NOT coincide with the unit requirements you must call NU-VU®'s Service Department for instructions on changing the voltage and/or phase of your equipment or power source.
- F. Replace the Side Access Panel on the unit. Be careful not to pull or pinch any wires while installing the Panel (replace the Side Access Panel only if you do not intend to do the INITIAL START-UP immediately).
- G. Complete the installation of the optional water supply to the unit (refer to *INSTALLATION OF WATER SUPPLY* immediately following).
- H. Position the unit in its place of operation and adjust the Appliance Legs (if so equipped) so that the unit sits firm and level.

INSTALLATION OF OPTIONAL WATER SUPPLY:



IMPORTANT: FAILURE TO FOLLOW THESE INSTRUCTIONS OR IMPROPER INSTALLATION MAY CAUSE SEVERE EQUIPMENT DAMAGE OR EVEN PERSONAL INJURY, AND MAY ALSO VOID ALL OR PART OF YOUR NU-VU® EQUIPMENT WARRANTY!!!

IMPORTANT: NU-VU® strongly recommends that **SOFT WATER ONLY** be used in any unit requiring a water supply. Also, a good quality water filter **MUST** be installed in-line between the unit connection and the water supply to guard against clogging and mineral build-up in the components. This is extremely important in areas having hard water. The filter may be installed at the water source or adjacent to the Water Inlet Fitting on the rear of the unit, whichever is more convenient for you.



IMPORTANT: THIS UNIT NEEDS TO BE INSTALLED WITH ADEQUATE BACKFLOW PROTECTION TO COMPLY WITH APPLICABLE FEDERAL, STATE AND LOCAL CODES.



IMPORTANT: THIS UNIT REQUIRES A SCREEN OF AT LEAST 100 MESH TO BE INSTALLED IMMEDIATELY UPSTREAM OF ALL CHECK VALVE TYPE BACKFLOW PREVENTERS USED FOR WATER SUPPLY PROTECTION. THE SCREEN SHALL BE ACCESSIBLE AND REMOVABLE FOR CLEANING OR REPLACEMENT.

Please follow these steps to connect an optional water supply to your unit:

- A. Run $\frac{1}{4}$ " tubing from the water supply line to the unit location. Allow some slack for final unit positioning and service. Avoid any kinks or strains on the tubing and place the tubing where it will not be damaged in any way.
- B. The tubing end that attaches to the unit must not be damaged or deformed in any way. The cut end should be cut straight and clean with no deforming of the tubing. All burrs and sharp edges should be removed to ensure a proper fit and leak-free connection.
- C. Position the tubing so that the tubing runs straight into the Water Intake Fitting. Be careful not to kink the tubing if you bend it, and do not bend the tubing within two (2) inches of the end.
- D. The two-part compression fitting (tapered collar and nut) is placed approximately 1" onto the tubing so that the collar is inside of the nut and the threaded opening of the nut is toward the Water Intake Fitting.
- E. Push the tubing all the way into the Water Intake Fitting (approximately $\frac{1}{4}$ ") and hold it there while you thread the compression nut onto the Water Intake Fitting. Tighten the compression nut with a $\frac{1}{2}$ " open-end wrench, *but do not over-tighten the fitting!* If the joint leaks when tested and further gentle tightening does not stop the leak the two-part compression fitting must be replaced.

Careful attention to these simple procedures will help to ensure an installation without leaks. If you have any questions or problems please call NU-VU®'s Service Department at (906) 863-4401.

*

INITIAL START-UP

*

This START-UP procedure is used to verify that your unit has been installed correctly and will perform as intended when you put it into use. Please read completely through all the START-UP procedures before you begin.

The installation of your NU-VU® XO-1M Oven should be complete and correct before you attempt a START-UP. Please verify the following items in this order before you begin the START-UP procedures:

- All Controls and Switches on the XO-1M must be in their **OFF** positions.
- The Side Access Panel should be removed to expose the Power Terminal Block and electrical connections.
- A 208 volt, or 240 volt electrical supply must be properly connected to the Power Terminal Block, along with a grounding wire.
- A ¼" (outside diameter) water supply line must be installed and tested for leaks on those units equipped with the INTERNAL STEAM option.
- In those units requiring an optional water supply a quality water filter must be installed in the water supply line.
- The XO-1M should be completely sealed to the surface of the table or counter, or supported on the included Appliance Legs. Locate the unit under any required ventilation device and adjust the Legs so the unit is secure and level.
- The main water supply should be turned **ON**.
- The main electrical supply should be turned **ON**.

XO-1M START-UP PROCEDURE:

- A. Make sure that all Controls and Switches are set to **OFF** and that the Oven Door is closed and latched. Engage the main power supply.
 1. Set the Motor Reversing Switch to **LO**. Set the Power Switch to **ON**. The Blower Wheel should rotate in a *clockwise* direction.
 2. Set the Motor Reversing Switch to **OFF** (the center position on the Switch). The Oven Motor/Blower Wheel should come to a stop.
 3. Set the Motor Reversing Switch to **HI**. The Motor/Blower Wheel should now rotate in a *counter-clockwise* direction.



WARNING: NEVER CHANGE THE MOTOR REVERSING SWITCH FROM LO TO HI, OR FROM HI TO LO, WHILE THE OVEN MOTOR IS STILL TURNING!!! DOING SO MAY DAMAGE THE POWER SWITCH, THE OVEN MOTOR OR THE MOTOR REVERSING SWITCH!!!

- B. Slowly open the Oven Door. The Micro Switch should turn the Oven Motor OFF as the Door is opened. Leave the Oven Door open.

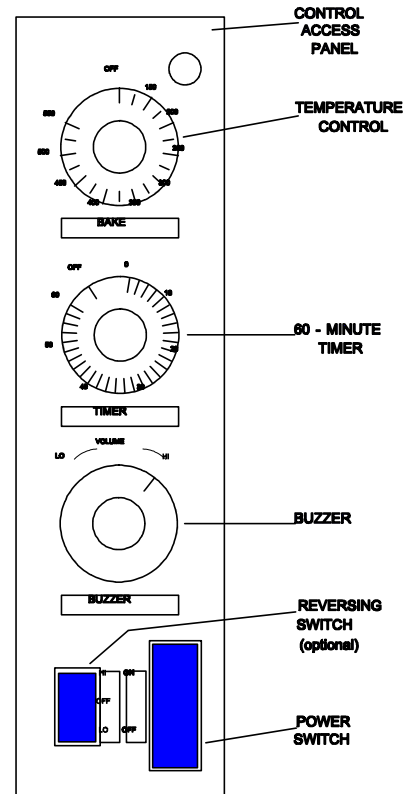
FOR THE INTERNAL STEAM OPTION - -

1. Press and release the Steam Switch. The Water Solenoid Valve should open with an audible "click", allowing a controlled and timed water mist to be sprayed from the Injection Nozzles into the Blower Wheel. The water spray should stop automatically in approximately 12 to 15 seconds.

- C. Close and latch the Oven Door. The Motor/Blower Wheel should again rotate in a *counter-clockwise* direction.

- D. Set the 60–Minute Timer to 5 minutes and allow it to count down to "0". The Buzzer Alarm should sound when the Timer reaches "0".

NOTE: If the Buzzer Alarm sounds BEFORE the Timer reaches "0" or AFTER the Timer reaches "0" the Timer Knob can be adjusted by loosening the two phillips-head screws on the back of the Knob, repositioning the clear plastic dial, and retightening the screws.



- E. Check the Oven Temperature Control(s):

FOR THE STANDARD OVEN - -

1. Set the Oven Temperature Control to 350°F. The Oven Temperature Control Indicator Light should light up.
2. Place a quality oven thermometer or the thermocouple of a test instrument in the center of the Oven. Keep the thermometer bulb or thermocouple at least 3/4" away from any metal to obtain the best temperature reading!
3. While the Oven is heating up (and the Temperature Control is activated) is the best time to measure the amperage on the electrical supply lines to the Power Terminal Block. Make sure the Temperature Control Indicator Light is lit up when you take the amperage readings. Compare the readings to the specs listed on the side of the unit. Please call NU–VU®'s Service Department immediately at (906) 863-4401 if the readings and specs differ by more than 1 or 2 amps.
4. Let the Oven temperature stabilize by allowing the Temperature Control to cycle 2 or 3 times. Check the thermometer or test instrument reading against the Temperature Control setting.
5. If the temperature difference is less than 10° the Temperature Control does not need adjustment. If the temperature difference is greater than 25° you must call NU–VU®'s Service Department at (906) 863-4401 to receive instructions in the necessary recalibration procedures BEFORE attempting any adjustment or recalibration of the equipment.
6. If the difference is at least 10° but less than 25° the Temperature Control may

only need a simple adjustment:

- a. Remove the Knob of the Temperature Control by pulling it straight out from the front of the unit.
 - b. Hold the black Knob securely with the back of the clear plastic dial toward you. Use a phillips screwdriver to loosen the two screws from $\frac{3}{4}$ to 1 full turn, *but do not remove them!*
 - c. To *increase* the temperature inside the Oven carefully rotate the index line on the clear dial clockwise. Each "click" of adjustment is equal to approximately 5° of temperature change in the Oven. To *decrease* the inside temperature rotate the clear dial counter-clockwise.
 - d. Gently tighten the dial screws and install the Knob. Check the Control setting against the test instrument and repeat this procedure if necessary.
- F. Set all Switches and Controls to their **OFF** positions. Leave the water and electrical supplies engaged.

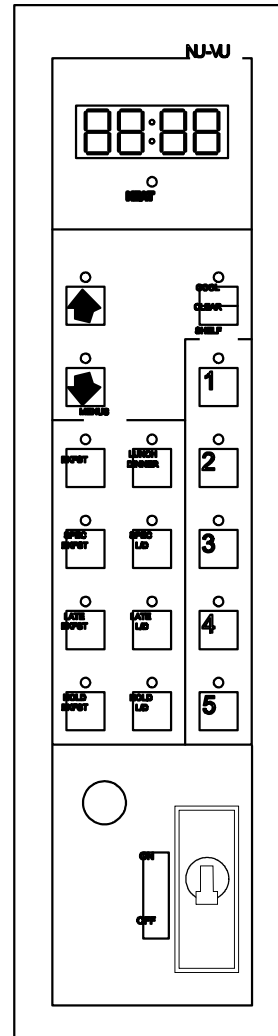
*YOUR NU-VU® XO-1M SHOULD NOW BE
READY FOR FULL OPERATIONS!!!*

XO-1M PROGRAMABLE CONTROL START-UP

PROCEDURE:

- A. Make sure that all Controls and Switches are set to **OFF** and that the Oven Door is closed and latched. Engage the main electrical supply.
- B. Refer to the illustrations at right and on the following page. Set the Power Switch to **ON** and energize the Programmable Control. Enter a short program to test the Oven and its features (refer to the *PROGRAMMING INSTRUCTIONS*).
- C. Slowly open the Oven Door. The Micro Switch should turn the Oven Motor OFF as the Door is opened.
- D. Close and latch the Oven Door. The Oven Motor and Blower Wheel should again rotate in a *counter-clockwise* direction.
- E. Place a quality oven thermometer or the thermocouple of a test instrument in the center of the Oven. Keep the thermometer bulb or thermocouple at least $\frac{3}{4}$ " away from any metal to obtain the best temperature reading!
- F. While the Oven is heating up is the best time to measure the amperage on the electrical supply lines to the Power Terminal Block. Compare the readings with the nominal values listed on the side of the unit. Turn the unit **OFF** and call NU-VU®'s Service Department immediately at (906) 863-4401 if the readings differ from the listed specs by more than 1 or 2 amps.

IMPORTANT: Make sure the Heating Elements are energized when you take the amperage readings!!!



WATLOW Control

***YOUR NU-VU® XO-1P SHOULD NOW BE
READY FOR FULL OPERATIONS!!!***

* PROGRAMMING INSTRUCTIONS *

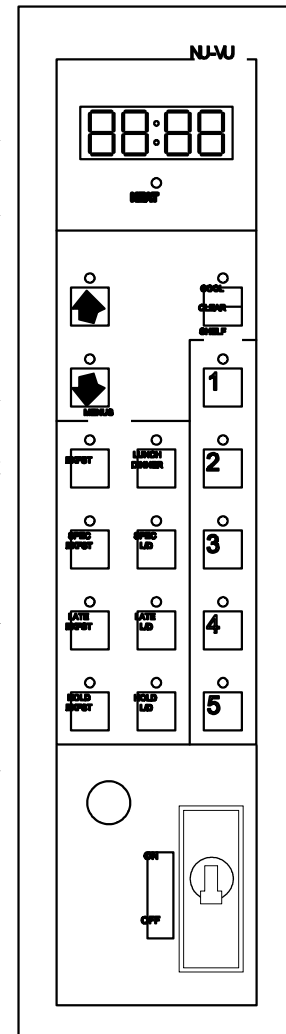
WATLOW PROGRAMMABLE CONTROL:

Your NU-VU® XO-1P Programmable Oven is fully programmed when you receive it. The Menu panel lists selections for:

- Breakfast
- Special Breakfast
- Late Breakfast
- Hold Breakfast
- Lunch / Dinner
- Special Lunch / Dinner
- Late Lunch / Dinner
- Hold Lunch / Dinner

The Programmable Control also has Arrow Keys for changing menu programs and numbered Shelf selection for up to five shelves at a time. A Cool/Clear Key is included to cancel an incorrect menu selection and to help cool the unit down at the end of the day.

- A. Turn **ON** the Power Switch located just below the Programmable Control. The Programmable Control will activate.
- B. Select and press the Menu Key of your choice. The Oven will begin pre-heating for that Menu's temperature. The display window in the Control will indicate "ready" when the Oven has reached the correct temperature.
- C. Press the Menu Key once more after the Control indicates "ready". This will enable the Shelf Timers. Your Oven is now ready for product.
- D. Open the Oven Door and load your product selection in one of the Shelf positions. Close the Oven Door securely.
- E. Press the corresponding Shelf Key on the Control to start a Timer for that Shelf location. The display window will begin counting down the processing time.
- F. More product can be loaded into the Oven at any time. Position the Shelf in the Oven, close and secure the Oven Door, and press the corresponding Shelf Key.
- G. The display window in the Control will continue counting down on the first Shelf loaded into the Oven. When it is done that Shelf light will flash on and off and the display window will show the remaining time on the next Shelf. Carefully remove the finished Shelf from the Oven.





CAUTION: STAND AWAY FROM THE FRONT OF THE OVEN WHEN OPENING THE OVEN DOOR AFTER A COOKING CYCLE TO AVOID EXPOSURE TO ESCAPING HEAT AND STEAM!!!

- H. The display window will continue to count down on each Shelf that was loaded into the Oven *as long as the appropriate Shelf Key was selected at the time of loading.*

***IMPORTANT:** The Low Temperature Warning Light next to the Power Switch on the Control Panel will illuminate if the interior temperature of the Oven does not reach the set menu temperature within 15 minutes of the menu start time.*

When all required cooking is done for the meal the unit should be cooled down and dried out (refer to the *OVEN DRY-OUT PROCEDURE* under *MAINTENANCE AND CLEANING*).

* OPERATING INSTRUCTIONS *

XO-1M:

Your XO-1M is equipped with an optional Motor Reversing Switch. There are three (2) positions for this Switch:

- HI** Motor/Blower Wheel rotation is *counter-clockwise*, air velocity and delivery volume are at the highest level.
- LO** Motor/Blower Wheel rotation is *clockwise*, air velocity and delivery volume are at the lowest level.

The Blower Wheel is designed to give different air velocities as the rotation direction is changed. The **HI** setting will give the highest velocity of heated air while the **LO** setting will deliver less air at a lower velocity. Different air speeds may be used for different products. Generally speaking the **HI** setting will be used for dough products such as breads, rolls, croissants, Danish, etc., while the **LO** setting may be used for cookies, delicate cakes and batter products such as muffins, and for slow-cooking and roasting of meats. Only you can determine the best air flow setting for your desired end results.



WARNING: NEVER CHANGE THE MOTOR REVERSING SWITCH FROM HI TO LO, OR FROM LO TO HI, WHILE THE OVEN MOTOR IS STILL TURNING!!! DOING SO MAY DAMAGE THE POWER SWITCH, THE OVEN MOTOR OR THE MOTOR REVERSING SWITCH!!!

Follow these general instructions for proper baking results. These general instructions are for use with the XO-1M.

- A. Determine the product to be baked.

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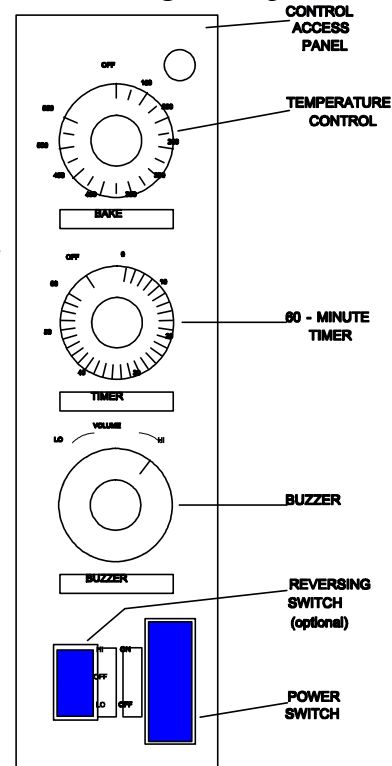
- B. Check the recommended temperature for the product to be baked and set your Temperature Control accordingly.

***NOTE:** At the beginning of each day you may want to pre-heat your Oven 25° higher than the required baking temperature. Since your Oven requires time to reach the proper operating temperature you should plan ahead so your Oven and product are ready at the same time. When the desired temperature is reached (approximately 15-20 minutes after start-up) the Oven Temperature Control Indicator Light will go out. It is not necessary to reset to pre-heat temperature with each load unless you are baking new items at a much higher temperature.*

- C. Load your Oven carefully. Center the pans between the rear of the Oven and the Door. Keep the Oven Door **CLOSED** unless loading or unloading product to maintain Oven temperature and minimize energy usage.

***NOTE:** The 5-pan Side Rack is designed to hold five (5) half-size pans or five (5) food service pans. Load the food service pans on every other pan support starting with the top bar. Load the half-size pans on every other pan support starting with the second bar from the top.*

- D. Set the Oven Timer or program for the estimated baking time less one to two minutes. This will assure an indication from the Buzzer Alarm prior to the actual end of the baking time and help prevent over-baking.
- E. As soon as the product is finished open the Oven Door and remove the product quickly. Immediately close the Oven Door to minimize temperature loss.



- F. You may bake several different items at the same time and temperature, but each individual pan should have the same type of product on it and be panned in the same manner.



CAUTION: STAND AWAY FROM THE FRONT OF THE OVEN WHEN OPENING THE OVEN DOOR AFTER A COOKING CYCLE TO AVOID EXPOSURE TO ESCAPING HEAT AND STEAM!!!

- G. Whenever the baking is completed for the day, or for an extended period, the Oven Temperature Control should be turned to the **OFF** position and the Power Switch set to **OFF** (refer to the *Daily Dry-Out Procedure* for the Oven in the *MAINTENANCE AND CLEANING GUIDE*).

INTERNAL STEAM INJECTION:

This XO-1M option uses a manually-operated Steam Switch to activate the Water Solenoid Valve and spray a fine 12 to 15 second water mist through the Water Injection Nozzles into the heated Oven chamber. This water mist flashes into steam and is circulated through-out the Oven cavity by the Blower Wheel.

To operate the INTERNAL STEAM INJECTION:

- A. Increase the setting on the Temperature Control just enough so that the Temperature Control Indicator Light comes on.
- B. Press and release the spring-loaded Steam Switch to begin a water spray in the Oven. The Solenoid Water Valve will open allowing water to spray through the Injector Nozzles and into the Oven chamber where it flashes into steam. The spray will stop automatically after 12 to 15 seconds. The air in the Oven is saturated when small water droplets appear on the Oven floor.
- C. Additional steam injections can be used later in the baking cycle for breads and rolls as long as the Temperature Control Indicator Light is illuminated.

The following chart may be used as a general baking guide:

Product	Time (in minutes)	Temperature (°F)
Croissants	11	335°
Hot Dog Buns	8 – 10	345°
Hamburger Buns	10 – 11	345°
1 lb. White Bread	22 – 25	350°– 360°
French Bread	22 – 25	350°– 360°
Submarine Rolls	14 – 15	350°– 360°
Cookies	9 – 10	290°– 300°
Pizza — Deep Dish	9	500°
— Regular	5 – 6	500°

It will be necessary for you to do some testing to determine your final conditions since your recipes may vary and your desired product appearance is one of choice.

XO-1M:

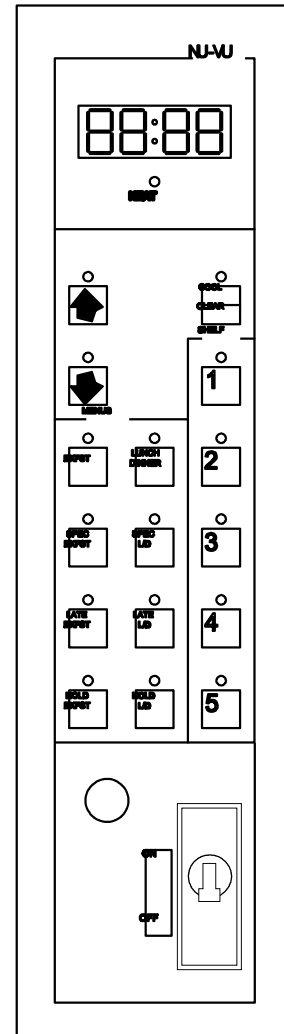
WATLOW CONTROL - -

The Watlow Control is fully programmed when you receive it. The Menu panel lists selections for:

- Breakfast
- Special Breakfast
- Late Breakfast
- Hold Breakfast
- Lunch / Dinner
- Special Lunch / Dinner
- Late Lunch / Dinner
- Hold Lunch / Dinner

This Programmable Control also has Arrow Keys for changing menu programs and numbered Shelf selection for up to five shelves at a time. A Cool/Clear Key is included to cancel an incorrect menu selection and to help cool the unit down at the end of the day.

- A. Turn **ON** the Power Switch located just below the Programmable Control. The Programmable Control will activate.
- B. Select and press the Menu Key of your choice. The Oven will begin pre-heating for that Menu's temperature. The display window in the Control will indicate "ready" when the Oven has reached the correct temperature.
- C. Press the Menu Key once more after the Control indicates "ready". This will enable the Shelf Timers. Your Oven is now ready for product.
- D. Open the Oven Door and load your product selection in one of the Shelf positions. Close the Oven Door securely.
- E. Press the corresponding Shelf Key on the Control to start a timer for that Shelf location. The display window will begin counting down the processing time.



- F. More product can be loaded into the Oven at any time. Position the Shelf in the Oven, close and secure the Oven Door, and press the corresponding Shelf Key.
- G. The display window in the Control will continue counting down on the first Shelf loaded into the Oven. When it is done that Shelf light will flash on and off and the display window will show the remaining time on the next Shelf. Carefully remove the finished Shelf from the Oven.

When all required cooking is done for the meal the unit should be cooled down and dried out (refer to the *OVEN DRY-OUT PROCEDURE* under *MAINTENANCE AND CLEANING*).

* MAINTENANCE AND * * CLEANING GUIDE *

MAINTENANCE:

NU-VU® equipment is designed to last for years of useful service. Careful consideration is given in selecting components for durability, performance and ease of maintenance. For example, the Oven Motor has sealed bearings and never needs to be lubricated. While NU-VU® equipment is designed for minimum care and maintenance certain steps are required by the user for maximum life and effectiveness:

- Proper installation of the equipment.
- Correct application and usage of the equipment.
- Dry-out Procedures performed daily.
- Thorough cleaning on a regular basis.

OVEN DRY-OUT PROCEDURE:

- A. Set the Oven Temperature Control and Oven Power Switch , or Programmable Control and Power Switch, to **OFF**.
- B. Leave the Oven Door open about 6" to 8". The residual baking heat will dry out any moisture that may be trapped in the insulation or other components of the Oven.
- C. Leave the Oven Door open about 1 to 2 inches while the Oven is not in use.



IMPORTANT: THESE DRY-OUT PROCEDURES MUST BE CARRIED OUT DAILY TO HELP MAINTAIN YOUR EQUIPMENT IN THE BEST POSSIBLE CONDITION. THE REMOVAL OF ALL RESIDUAL MOISTURE IN THE EQUIPMENT RETARDS ANY CORROSION OR DETERIORATION OF THE INSULATION AND ELECTRICAL COMPONENTS AND EXTENDS THE USEFUL LIFETIME OF YOUR NU-VU® EQUIPMENT!!!

CLEANING:

Your XO-1M should be cleaned daily and as soon as possible after a spill has occurred. It is essential to maintain a clean unit, especially if the public views the unit in your place of business. The following should be used for cleaning:

DOOR - -

- The Oven Door glass may be cleaned with any good glass-cleaning formula. Be sure to wipe down the Door Frame, and to clean behind the Door Gasket on the inside of the Oven Door. The Door can be removed for cleaning heavy soiling by opening the Door until it is perpendicular to the face of the unit and then lifting the Door straight up off of the Hinge pins. Dried-on debris or heavy soiling can be removed with hot soapy water followed by a rinse with clean fresh water. Wipe the Door dry before replacing it on the front of the Oven.

***CAUTION:** Do not use abrasive cleaners on the Door or you may scratch the Door Glass!!!*

INTERIOR - -

- The Oven interior (including the Door Jamb) should be wiped out daily. Remove the Oven Element Cover once a month for inspection and cleaning (if you have the INTERNAL STEAM option you should remove, inspect and clean the Element Cover weekly):
 - Remove the four thumbscrews holding the Right Side Rack and the Element Cover in place.
 - Mark the top of the Side Rack and pull it and the Element Cover out the front of the Oven.
- Inspect the Oven ceiling, the Blower Wheel, the Sidewall and the Element Cover for mineral deposits. Wipe these parts down with hot water and a mild soap, followed by a rinse with clean fresh water and a mild sanitizing agent; wiping the interior dry will help to prevent water spotting. Water spotting and any other mineral deposits should be removed with any mild mineral removal agent as soon as they are noticeable.
- Replace the Oven Element Cover and Side Rack; make sure the top of the Side Rack is up or your pans may sit crooked in the Oven. Secure them in place with the thumbscrews.

EXTERIOR - -

- All exterior glass may be cleaned with any good glass-cleaning formula.
- The exterior metal surfaces can be cleaned with any good stainless steel cleaner or polish, or with hot water and a mild soap followed by a thorough rinse with clean fresh water if it is very soiled.

***CAUTION:** Do not allow water near the Control surfaces!!!*

***** CAUTION *****

NU-VU® DOES NOT RECOMMEND the use of any strong commercial or caustic product on this equipment. DO NOT allow any type of caustic cleaner to come into contact with any aluminum parts, the silicon rubber Door Gaskets, or any of the sealing compound in the Oven seams and joints. These compounds may cause discoloration and degradation of these parts resulting in permanent damage. DO NOT use bleach or bleach compounds on any chromed parts; bleach may damage chrome plating.

***** NOTE *****

NU-VU® has had very good results with a product called JIFFY CLEANER. For standard cleaning simply spray JIFFY on and wipe off. Heavily soiled areas may require a short period of soaking. This cleaner is available through NU-VU® (Part #51-0002) or through your local Rochester/Midland distributor or representative.

*** SERVICE AND *
* REPLACEMENT GUIDE ***

Your XO-1M has been designed to be serviced quickly and easily. In fact, any individual who has average mechanical ability can do the work. Our Service Department is also available to you Monday through Friday from 7:00 a.m. to 5:30 p.m. (Central Standard Time) should you find yourself with a situation or problem other than we have outlined. Call NU-VU® at (906) 863-4401 and ask for our Service Department to order replacement parts, ask questions, or offer comments.

This SERVICE AND REPLACEMENT GUIDE has been prepared to cover most normal service problems. If this "trouble-shooting" information does not provide a solution for your particular problem we ask that you call us for direct assistance. Calling our Service Department before calling in a repair technician can usually save you both time and unnecessary expense. We want to do everything we can to minimize your "down-time".

You may need to remove an access panel for servicing. **DO NOT** allow any access panels to drop. When work on the component is finished replace the panel with care, making sure that all wires are properly placed and not pulled or pinched. If more than one component is being worked on try to remove only one component at a time.

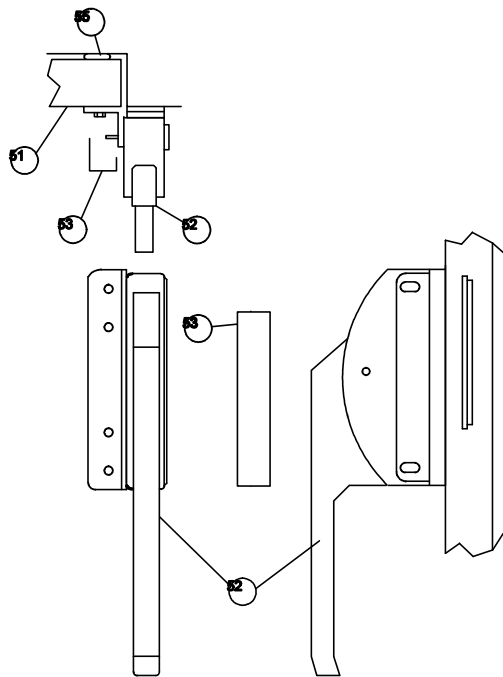
TEMPERATURE CONTROL, How to Adjust:

- A. Place a reliable thermometer (or the thermocouple of a test instrument) on a pan in the center of the Oven. Turn the unit **ON** and set the Temperature Control [23] to its normal setting. Allow the equipment to reach a stable operating temperature.
- B. Compare the Temperature Control setting to the reading on the test instrument when the Temperature Control Indicator Light [24] goes out. If there is a difference of more than 25° you may need to recalibrate the Temperature Control. Please call NU-VU®'s Service Department at (906) 863-4401 for the proper calibration procedures before attempting to calibrate the Oven!
- C. If the difference is less than 25° a simple dial adjustment may solve the problem:
 1. Remove the Knob of the Temperature Control by pulling it straight out from the face of the Control Access Panel [59].
 2. On the back of the Knob you will see two screws. Use a phillips screwdriver to loosen these screws from $\frac{3}{4}$ to 1 full turn, *but do not remove them!*
 3. Hold the black Knob securely with the back of the clear plastic dial toward you. To *increase* the temperature inside the Oven carefully rotate the index line on the clear dial clockwise. Each "click" of adjustment is equal to approximately 5° of temperature change in the Oven. To *decrease* the inside temperature rotate the clear dial counter-clockwise.
 4. Gently tighten the dial screws and install the Knob. Check the control setting against the test instrument and repeat this procedure if necessary.
- D. If this procedure fails to bring the temperature reading within the desired specs the Temperature Control will have to be replaced.

DOOR LATCH, How to Adjust:

Determine if the Oven Door is fitting too loose (it will leak steam and hot air past the Gasket) or too tight (it will not close properly, or will "pop" open unexpectedly). If it is too loose the Door Latch must be adjusted OUT (away from the unit); if it is too tight the Door Latch must be adjusted IN (towards the unit). Please proceed as follows:

- A. Loosen the two acorn nuts inside the Latch Cover with a $\frac{1}{2}$ " wrench. Pull the Latch Cover straight out from the Door to remove it and then remove the acorn nuts.
- B. Open the Door and take careful notice of the adjustment plate position against the body of the Door Latch.
- C. Hold the adjustment plate against the body of the Door Latch with one hand while you loosen the three mounting screws with the other hand. Back the screws out approximately three full turns.
- D. CAREFULLY move the Door Latch body IN or OUT under the adjustment plate *one notch at a time*. Make sure the Door Latch stays straight up and down and tighten the mounting screws. Test the Door for proper closing and sealing (refer to the *DOOR TEST PROCEDURE* outlined in this section).
- E. Repeat steps "C" and "D" if you are not satisfied with the Door adjustment. If the Door tests as satisfactory make sure the three mounting screws are tightened securely.
- F. Install the acorn nuts on the ends of the top and bottom Door Latch screws. Turn the nuts on all the way until they just contact the back side of the latch bracket, then loosen them by $1\frac{1}{2}$ to 2 full turns. Install the Latch Cover and tighten the acorn nuts lightly to hold the Latch Cover in place.



DOOR TEST PROCEDURE:

- A. Cut one or two strips of paper approximately 1" wide and 8" to 10" long.
- B. Open the Door slightly, insert a strip of paper between the Gasket and Door Jamb and close the Door.
- C. Slowly pull the paper strip out. You should feel some resistance as you pull the strip from between the Gasket and Door Jamb of a properly adjusted Door. Test the fit at regular 2" to 3" intervals around the entire Door.
 1. If you feel NO resistance at a particular spot the Door is too loose, you have found a weak or damaged spot in the Door Gasket or the Door Jamb has been bent in.
 2. If you feel HEAVY resistance at a particular spot the Door is too tight or the Door Jamb has been bent out.

DOOR GASKET, How to Replace:

Follow these instructions to correctly install your Door Gasket with minimal problems. Use the installation kit provided. If you have any problems or questions call NU-VU® at (906) 863-4401. Ask for the Service Department.

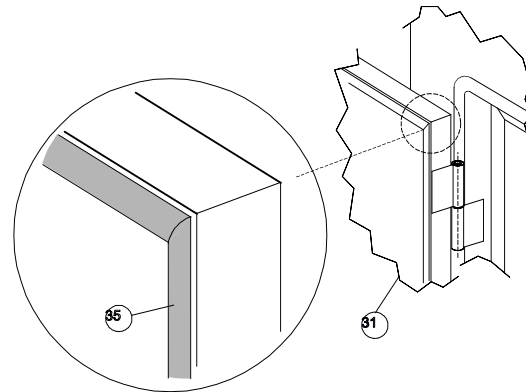
- A. Remove all pieces of the old Gasket. Thoroughly clean the Door frame in the area of the new installation. Remove the old sealant and any baked-on deposits.



IMPORTANT: DO NOT DISASSEMBLE THE ACTUAL DOOR FRAME WHEN REPLACING OR REPAIRING THE DOOR GASKET!!!

- B. Pre-cut the replacement Gasket to a size slightly longer than you require.
 C. Put a small amount of soap water into and around the slot that the new Gasket will fit into (a small trigger spray bottle works well). This step is optional but will help in the installation.

- D. Position the new Gasket over the slot, allowing the ends to extend past the end of the slot. Press the mounting flange down into the slot on the Door frame. Use a roller tool to force the mounting flange into the slot by working the tool back and forth along the Gasket. Make sure the Gasket mounting flange is completely fitted into the slot and that the Gasket is free to slide back and forth in the slot.



NEW DOOR GASKET

#8 - DOOR GASKET

E. Use a sharp knife or a single-edged razor blade to cut the ends of the Gasket at a 45° angle (you can use the mitered corner joint on the Door as an angle guide). Cut the Gasket about ¼" longer than the required length and work the excess back into the slot. This extra Gasket will help to create a nice tight corner joint, and allows for any follow-up trimming that may be necessary.



IMPORTANT: DO NOT STRETCH OR PULL ON THE GASKET DURING INSTALLATION. THIS WILL LATER CAUSE THE TRIMMED CORNERS TO SEPARATE AND PULL APART!!!

- F. Work your way around the entire Door (or the section of the Door having the Gasket replaced). Make sure the Gasket is just tight into the corners. A bulging joint or pucker along the Gasket indicates a Gasket section that is cut too long. Joints that pull apart indicate a Gasket section (or sections) that is cut too short.

- G. Seal the corner joints after the entire Gasket is properly fitted. Pull the joints apart only enough to put sealant on *all the cut edges only*. Allow the Gasket joint to come together. Smooth out any excess sealant to form a smooth surface on the face of the Gasket. Add more sealant to any spots as necessary and smooth them down.



IMPORTANT: MAKE SURE THAT THE GASKET AND THE DOOR FRAME ARE BOTH COMPLETELY DRY BEFORE APPLYING ANY SEALANT!!!

- H. A quality sealant will be dry to the touch and tack-free in one to two hours after application. However, it will not be completely cured until six to eight hours later. We recommend that you wait until after your sealant is completely cured before using your Oven.



CAUTION: SOME SEALANTS GIVE OFF ACIDIC FUMES AS THEY CURE. THESE FUMES MAY CAUSE IRRITATION TO THE EYES AND NASAL PASSAGES. USE CAUTION WHEN OPENING YOUR UNIT AFTER WAITING FOR ANY FRESH SEALANT TO SET UP OR CURE!!!

* REPLACEMENT PARTS LIST *

XO-1M & XO-1P

Reference #	Description	Replacement Part #
<u>ELECTRICAL COMPONENTS:</u>		
1	Power Terminal Block*	50-0237
2	Ground Lug	50-0062
3	Contactor	66-2013
4	Motor	66-5596
5	Heating Element:	
	120v, 2000w	60-0062-6
	208v, 4000w	60-0063-1
	240v, 4000w	60-0064-1
6	Micro Switch (optional)	252-2004
7	Cooling Fan	66-9023
8	Thermal Overload Safety (Auto Reset)	66-1014
9	Temperature Control Sensor:	
	Optional Solid State	252-3001
10	Transformer (120vac to 24vac, XO-1P)	66-8046
11	DPDT Relay (optional)	50-0433
12	Oven Temperature Control Circuit Board (Solid State Option)	252-5001
13	Hold Temperature Control Circuit Board (Solid State Option)	252-4001

CONTROL COMPONENTS (XO-1M):

14	Power Switch	252-6001
15	Motor Reversing Switch (optional)	50-0491
16	Oven Temperature Control:	
	Standard	252-5004
	Control Knob	50-0727
	Optional Solid State	252-5001
	Control Knob	253-2003
17	Oven Temperature Control Indicator Light	50-0029
18	Timer	
	60-Minute Mechanical (120V, 60Hz)	252-1004
	60-Minute Mechanical (220V, 60Hz)	252-1019
	60-Minute Mechanical (230V, 50Hz)	252-1020
	Timer Knob	253-2002
19	Buzzer Alarm	252-1003
	Buzzer Knob	50-0727

CONTROL COMPONENTS (XO-1P):

20	Power Switch	252-6001
21	Programmable Controls:	
	XO-1PCS	66-1020
	XO-1P	66-7012
	Mini-Chef	66-7016
22	Control Sensors:	
	Watlow	252-3001
	Mini-Chef	50-0634

INTERIOR COMPONENTS:

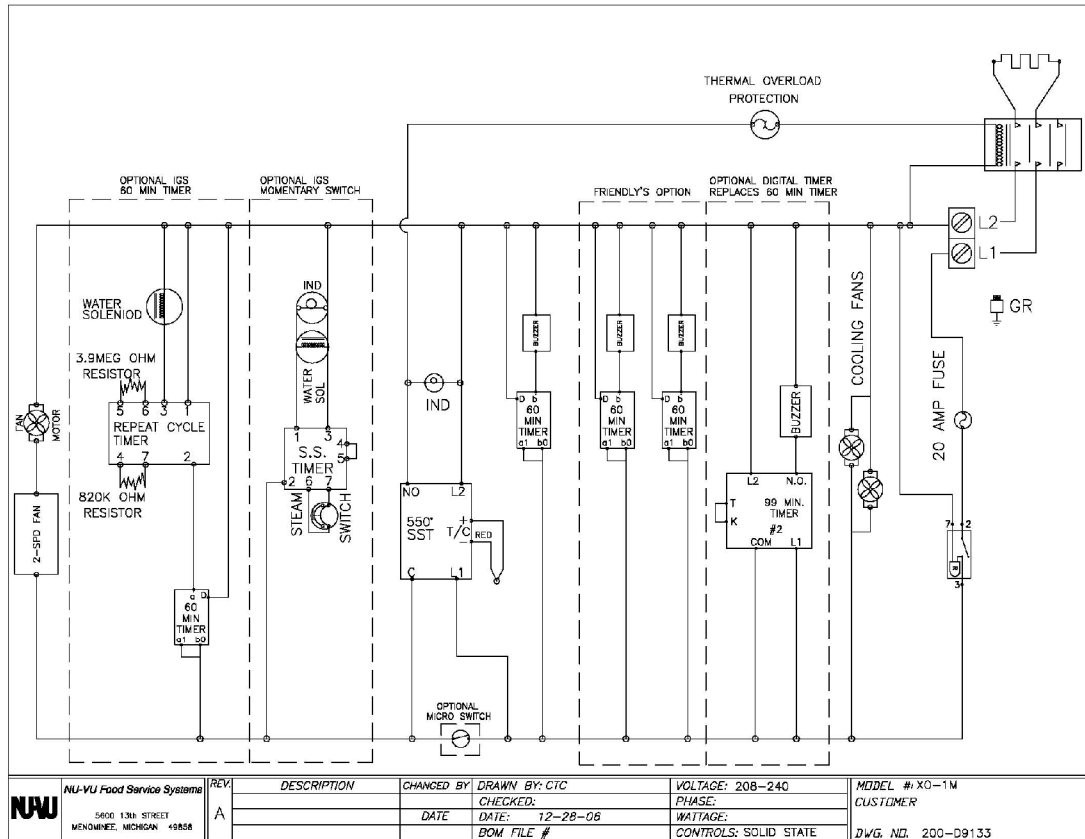
23	Motor Assy w/ Blower Wheel	250-1003
24	Side Rack (5-pan):	
	Left	98-1024
	Right	98-1028
	Side Rack (4-pan):	
	Left	98-1027
	Right	98-1023

EXTERIOR COMPONENTS:

25	Glass Door:	
	Hinged Left	98-9848
	Hinged Right	98-9836
	Optional Solid Door:	
	Hinged Left	98-9826
	Hinged Right	98-9837
26	Latch/Catch Assembly	50-1346
27	Gasket	254-1001
28	Appliance Leg, 4"	50-0610
29	Water Inlet Fitting, 1/4" (optional)	31-0058

OPTIONAL INTERNAL STEAM COMPONENTS:

30	Steam Switch (XO-1M)	50-0867
31	Steam Indicator Light (XO-1M)	50-0029-A
32	Water Solenoid Valve	50-0308
33	Water Injection Nozzle	31-0033
34	Steam Injection Timer	50-0617



 NWJ Food Service Systems 5600 13th STREET MENOMINEE, MICHIGAN 49858	REV	DESCRIPTION	CHANGED BY	DRAWN BY: CTC	VOLTAGE: 208-240	MODEL #: XO-1M	
	A		DATE	CHECKED:	PHASE:	CUSTOMER	
				DATE: 12-28-06	WATTAGE:		
				BOM FILE #	CONTROLS: SOLID STATE		DWG. NO. 200-D9133