



**ISO 9001 : 2000 REGISTERED**

10 SUNNEN DRIVE, ST. LOUIS, MO/U.S.A. 63143  
PHONE (314) 781-2777 FAX (314) 781-3636

## **HOLMAN CONVEYOR SANDWICH WARMER MANUAL MODEL QT14**

**FOR SERVICE INFORMATION U. S. AND CANADA CALL:  
TOLL FREE 1-800-807-9054**

<b><u>SUBJECT</u></b>	<b><u>TABLE OF CONTENTS</u></b>	<b><u>PAGE</u></b>
UNCRATING AND INSPECTION		1
ASSEMBLY AND INSTALLATION		1 & 2
OPERATION		3
BASIC CLEANING PROCEDURES		3 & 4
TROUGLESHOOTING		5 & 6
PREVENTATIVE MAINTENANCE & SCHEDULED CLEANING		
• DAILY CLEANING		7 & 8
• WEEKLY BELT CLEANING		9
• MONTHLY CLEANING		10 & 11
• LONG TERM CLEANING		12
• REPLACING HEATER TUBES		13 & 14
• REPLACING COOLING FANS		15
• REPLACING BELT DRIVE MOTOR		16 & 17
WARRANTY PAGE		18
PARTS LIST AND HEATER TUBE LISTING		19 - 21
WIRING DIAGRAMS		22 - 24



Certain Models

Electric Cooking Equipment for the Food Service Industry  
Conveyor Toasters & Ovens Cheese Melters Broilers Pretzel Bakers



## Common Questions, Myths, and Misconceptions of Holman Conveyor Ovens

***Misconception:***

High Voltage (208v typical) is always the same.

***Reality:***

An oven designed for 208v should operate from 208-215v. This range is typical of local power grids and daily fluctuations. Some municipalities operate at 220 and 240v which would require design variations. Improper voltage can result in reduced control, performance, and reliability. Voltage mismatches or daily fluctuations can be monitored for corrective action.

***Misconception:***

The under-carriage of your oven is a safe haven for paper wraps and utensils.

***Reality:***

The high-speed fan is the lungs of your oven. The oven has under-clearance to maximize fan performance, cooling, safety, and reliability. Please maximize the air-circulation to your fan and clean the debris on fan-grill often. Note: Beware of paper and plastic wraps being drawn into fan-grill.

***Misconception:***

Vent hoods can be hard-wired into the oven or to the same wall circuit.

***Reality:***

Your conveyor oven can not support the current draw of the oven and a hood. This practice will decrease performance and reliability as well as jeopardize the Underwriter Laboratory's safety certification. Please have a qualified electrician wire your vent hood to a separate circuit.

***Misconception:***

My conveyor oven is maintenance-free.

***Reality:***

Proactive or preventive maintenance (PM) is the best way to protect against a catastrophic failure (Murphy's Law states: components will fail at peak sandwich time). Maintenance provisions include heater-tubes, fan, chain, belt, incoming power, lubrication, working and aesthetic surfaces, overall cleanliness, and ventilation. Refer to weekly, monthly, and long-term maintenance manuals for step-by-step instruction. Owning an emergency repair kit is also recommended.

***Misconception:***

My heater-tubes will last forever.

***Reality:***

Your infra-red radiant style heating elements use a quartz sheath. They are extremely effective and efficient in the bake, as well as producing quick rise-time from cold start to full bake. However, just like a light bulb, quartz is brittle and can break from jarring or careless maintenance. Long term degradation of quartz also occurs from air borne sugars, salts, and debris settling on the sheath. For consistent performance replace your tubes at prescribed intervals.

*"It's what you learn after you know it all that counts." -John Wooden*

## **UNCRATING AND INSPECTION**

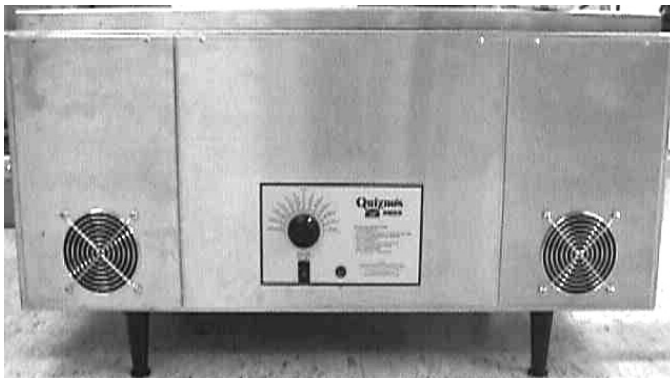
Unpack unit and components from container. Remove all visible packing material, inspect unit for damage. If damage is discovered, file a claim immediately with the carrier that handled the shipment.

The following should be included in the container:

- 1ea. baking oven with heaters, and conveyor belt in place.  
**(NOTE): Remove heating element-shipping supports.**
- 1ea. stainless steel unload tray, 1ea. stainless "Bake Aid" bracket  
1ea. "Bake Aid" magnet label, 2ea. crumb trays & 4ea. metal legs.

## **ASSEMBLY AND INSTALLATION**

1. Attach legs by screwing into weld nuts.



**ADJUSTABLE LEGS SCREW  
INTO BOTTOM OF UNIT**

2. Anti Skid pads are available at no charge and may be adhered to the foot section of each leg to prevent sliding. Call 1-800-807-9054 for details.

**CAUTION:** The National Sanitation Foundation does not approve use of these pads.

3. Install unit in its operating position. The load & unload ends must be at least 6" from any vertical combustible surfaces. Allow sufficient space for operating personnel. Have an electrician connect input power to the unit in accordance with local electrical codes.

**WARNING:** MAKE SURE ALL INPUT POWER IS OFF BEFORE INSTALLING/REMOVING ANY PARTS.

**WARNING:** BEFORE INSTALLING UNIT, HAVE YOUR ELECTRICIAN CHECK WITH LOCAL POWER COMPANY TO DETERMINE ACTUAL VOLTAGE AT JOB SITE.

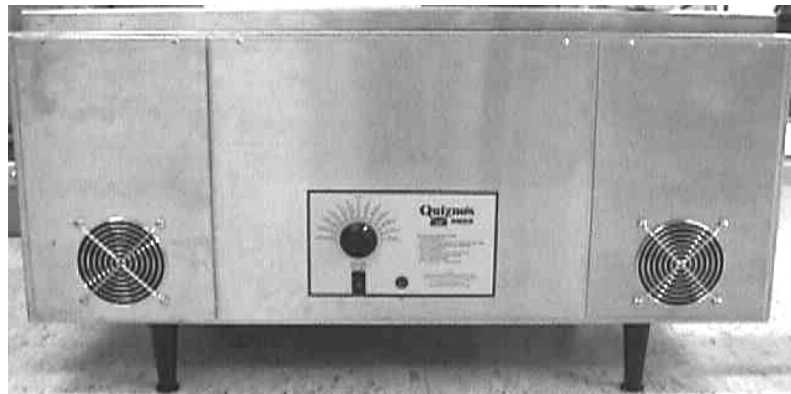
**WARNING:** BE ABSOLUTELY SURE THE GROUND (EARTH) CONNECTION IS PROPERLY WIRED. NEVER CONNECT UNIT TO POWER WITHOUT PROPER GROUND CONNECTIONS. IMPROPER GROUND MAY RESULT IN SEVERE INJURY OR FATALITY.

4. Before applying input power to the unit check heating elements for breakage. Do not apply power to the unit if a broken tube is found. If no broken tubes are found apply input power by switching the master On/Off toggle to the ON position. Turn conveyor belt speed control to the maximum setting and check all heater tubes and conveyor for proper operation.

IF FURTHER ASSISTANCE IS REQUIRED:  
CONTACT STAR/HOLMAN FACTORY SERVICE TEAM AT 1-800-807-9054

5. Allow approximately 5 to 8 minutes for the twin-fan cooling system to come on. Check the air intake fan area as noted below and be sure that there is a sufficient flow of air into the control box.

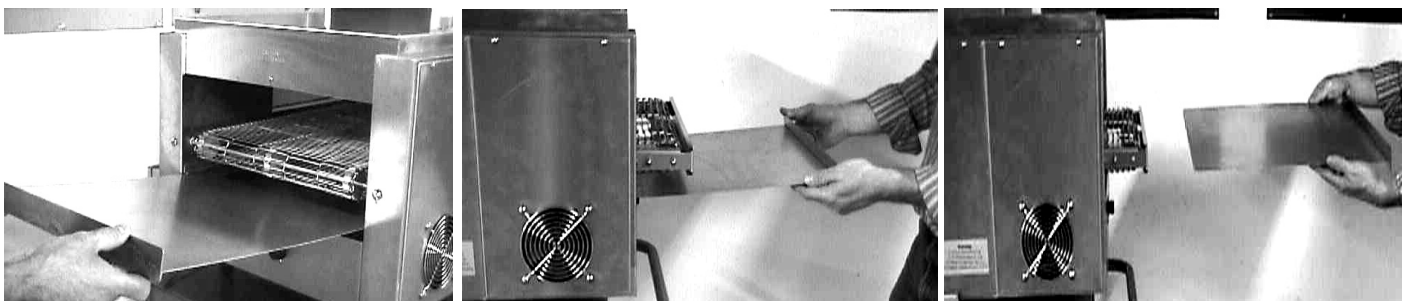
***Air intake areas are located on each side of the control panel.***



6. If all heaters and conveyor system are operating properly, turn the master On/Off switch to the OFF position and allow unit to cool. The fans will continue to circulate cool air throughout the unit until the internal temperatures have been decreased.
7. If a problem is discovered during start up procedures, immediately turn the Master **On/Off** switch to the **OFF** position and call the Holman Cooking Equipment Factory Service Team at 1-800-807-9054.
8. The unload tray has a key-hole slot on the end of the tray that will slide over the two screw heads on the end of the oven as shown below;



9. The crumb trays slide into each end of the warmer under the conveyor. A slot is formed by two pieces of metal on each side of the area for the tray to slide into. The crumb trays are important by keeping the interior of the machine clean and reflecting heat away from the controls inside the bottom of the machine back up to the sandwiches. A layer of aluminum foil on the tray (check that it will not interfere with the conveyor) will make the tray more reflective and make cleanup quicker.



IF FURTHER ASSISTANCE IS REQUIRED:  
CONTACT STAR/HOLMAN FACTORY SERVICE TEAM AT 1-800-807-9054

## **OPERATION**

1. Turn Master On/Off switch to the ON position and variable speed control to fastest time setting. Allow 1 hour for complete machine warm up.
2. Adjust speed control to desired speed.
3. Adjust speed as required during operation to achieve a good bake.
4. When done for the day, turn Master On/Off switch to the OFF position. The conveyor will stop and the elements will go off. The two fans should continue to run. They are controlled by a thermostat that will allow the fans to cool the machine. Do not begin to service or clean the machine until the fans have stopped. **CAUTION: Some parts of the machine will still be warm.**

Refer to the **Troubleshooting** section if the machine is not performing as expected.

## **BASIC CLEANING PROCEDURES**

Preventive maintenance for your Holman oven consists of the following recommended cleaning procedures. To keep your oven in its top operating condition, these steps should be performed daily or weekly as indicated. Also refer to the **Preventative Maintenance** section for more complete cleaning activities that should be performed on a less frequent basis.

Turn power off and allow cooling fans to run until the control box is cooled off. The fans are controlled by a thermostat in the control box.

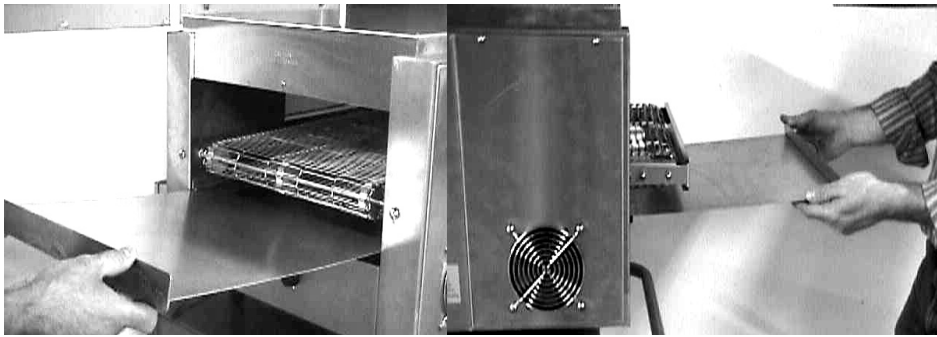
**DISCONNECT UNIT FROM POWER SUPPLY OR TURN POWER OFF AT WALL BREAKER. BE SURE THE SANDWICH WARMER IS COMPLETELY COOLED BEFORE PERFORMING ANY OF THE FOLLOWING PROCEDURES.**



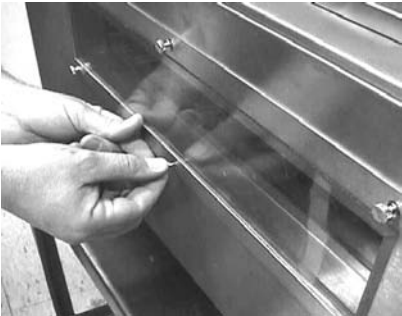
1. Remove Unload Tray (daily) as shown and wash with hot, soapy water.



IF FURTHER ASSISTANCE IS REQUIRED:  
CONTACT STAR/HOLMAN FACTORY SERVICE TEAM AT 1-800-807-9054



2. Remove the Crumb Trays from both sides of the oven (daily) as shown below  
**(DO NOT CLEAN WITH CAUSTIC CLEANERS).**
3. For lightly soiled conveyor surfaces a damp cloth or scotch pad can be used without removing the conveyor belt. (daily) For heavily soiled conveyor surfaces refer to the **Preventative Maintenance** section for more detailed instruction to remove the conveyor belt. The belt will need removed for more thorough cleaning.
4. Check air intake area for dust and grease. To clean, vacuum and wipe with a dry cloth. (daily) Do not spray cleaning fluids into the air intake. This may result in component failure.
5. Carefully remove and clean the Neo-ceram window. (daily) Remove the thumbscrews securing the window ring. Remove the window ring, the glass retainer, and the piece of glass. Wash with hot, soapy water.

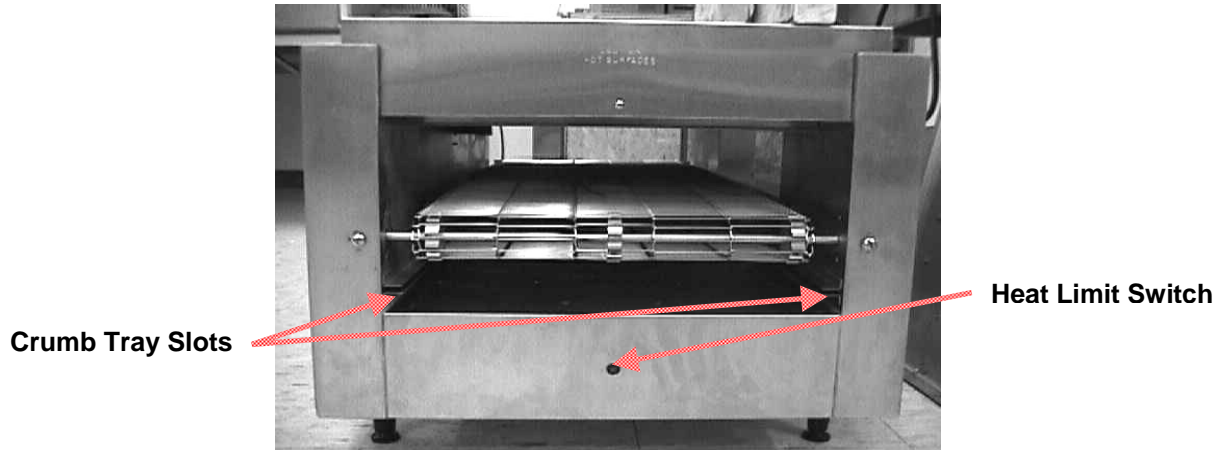


**WARNING:** THE GLASS THAT IS SUPPLIED WITH THIS OVEN IS SPECIFICALLY DESIGNED FOR IT. DO NOT SUBSTITUTE ANY OTHER GLASS PRODUCTS IN ITS PLACE. NEVER OPERATE THE OVEN WITHOUT THE GLASS. NEVER ATTEMPT TO TOUCH OR REMOVE THE GLASS WHILE THE OVEN IS HOT. ALLOW THE OVEN TO COOL FOR SEVERAL HOURS BEFORE STARTING THE CLEANING PROCEDURE.

6. Re-assemble unit and check to be sure it is operating properly. If assistance is required contact the **Star/Holman Factory Service Team at 1-800-807-9054 (24 hours/day 7days a week).**

## **TROUBLESHOOTING GUIDE**

- ✘ UNIT WILL NOT HEAT, CONVEYOR BELT WILL NOT TURN.
- Be sure main circuit breaker is switched to the ON position.
  - Check that the unit is connected to power and Master On/Off switch is ON.
  - Be sure HEAT LIMIT SWITCH is pushed in (see below).



- ✘ UNIT WILL NOT HEAT, CONVEYOR TURNS.
- Check to see if the Master On/Off Switch is in the ON position.
  - Press heat limit switch, located beneath the unload tray as shown above

Your Holman Conveyor Oven is equipped with an automatically activated HEAT LIMIT SWITCH that interrupts the heater tube connections if the air temperature in the control box exceeds 190°F (88°C). This limit switch can be reset manually by pushing the button in the center of the switch that is located beneath the unload tray.

THE HEAT LIMIT SWITCH CAN BE ACTIVATED IF THERE IS NOT A PROPER AMOUNT OF AIR FLOW BEING GENERATED BY THE COOLING FANS. IF THIS OCCURS:

- **DISCONNECT UNIT FROM POWER SOURCE.**
- Make sure the air intakes in the front of the unit are free of dust, grease or other obstructions.
- Make sure the crumb trays (heat reflectors) are in place (see photos this page and page 2) NEVER OPERATE UNIT WITHOUT CRUMB TRAYS IN POSITION AS THIS CAUSES OVERHEATING IN THE CONTROL BOX AND WILL SHUT DOWN THE MACHINE.
- If the outside of the air intakes is clear and the crumb trays are in place and the unit continues to shut down because of the Heat Limit Switch, refer to the cleaning instructions in the more complete **Preventative Maintenance** section. A heavy buildup of dust and grease from the kitchen can cover parts inside the control box area and cause overheating.

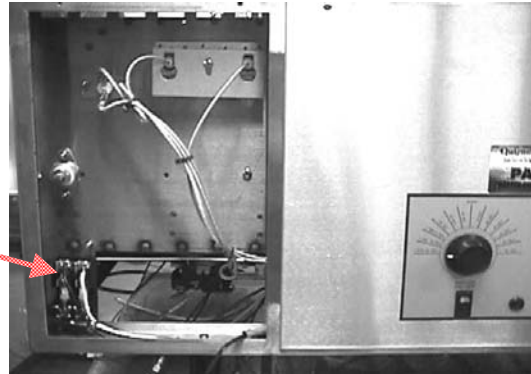
IF FURTHER ASSISTANCE IS REQUIRED:  
CONTACT STAR/HOLMAN FACTORY SERVICE TEAM AT 1-800-807-9054



✘ CONVEYOR WILL NOT TURN, UNIT HEATS PROPERLY

- **DISCONNECT UNIT FROM POWER SOURCE**
- Check both fuses (replace if necessary)

Twin Fuse Block

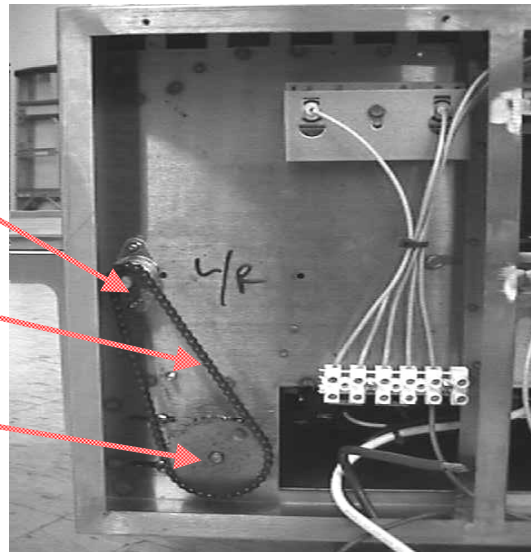


- Check for obstructions that may have caused a conveyor jam. Utensils, foil or large pieces of food could stall the motor. If there are no visible obstructions, try turning the belt manually. If the belt turns, remove the power supply panel and check for loose sprockets or chain. Realign any loose sprockets and re-tighten the setscrews making sure the setscrews seat on the flats of the motor and drive shafts.

Driven Sprocket

Drive Chain

Driver Sprocket



- If further assistance is required, contact the **Star/Holman Factory Service Team at 1-800-807-9054 (24 hours/day 7 days a week)**.

✘ COOLING FANS DO NOT START (fans should start after the machine is warmed up)

- **DISCONNECT UNIT FROM POWER SOURCE**
- Remove panels with fan motors and check fan blades for obstructions/breakage.
- Check motor cords for secure connection
- Call the Star/Holman Factory Service Team, as the fan switches and/or fan motor(s) may need to be replaced.

IF FURTHER ASSISTANCE IS REQUIRED:  
CONTACT STAR/HOLMAN FACTORY SERVICE TEAM AT 1-800-807-9054



## **PREVENTIVE MAINTENANCE**

### **DAILY CLEANING PROCEDURES**

TO KEEP YOUR HOLMAN MODEL QT14 CONVEYOR SANDWICH WARMER AT PEAK OPERATING EFFICIENCY, THE FOLLOWING INSTRUCTIONS ARE RECOMMENDED:

Turn power off and allow cooling fans to run until the control box is cooled off. The fans are controlled by a thermostat in the control box.

**DISCONNECT UNIT FROM POWER SUPPLY OR TURN POWER OFF AT WALL BREAKER. BE SURE THE SANDWICH WARMER IS COMPLETELY COOLED BEFORE PERFORMING ANY OF THE FOLLOWING PROCEDURES.**



1. Remove the unload tray as shown below.
  - a. For lightly soiled tray, clean with a damp cloth.
  - b. For heavily soiled tray, use an abrasive pad and mild cleaner.
2. Remove crumb trays from beneath each end of conveyor belt and discard soiled aluminum foil. If cleaning is necessary, use a wet cloth and mild detergent cleaner. Do not use a caustic cleaner to clean the crumb tray.

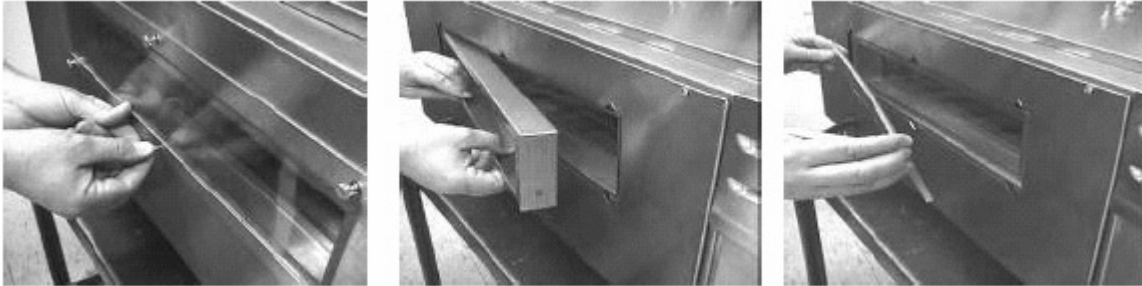


3. Cover crumb tray with clean aluminum foil and return crumb tray to oven.

**(NOTE: DO NOT RUN SANDWICH WARMER WITHOUT CRUMB TRAYS INSTALLED)**

IF FURTHER ASSISTANCE IS REQUIRED:  
CONTACT STAR/HOLMAN FACTORY SERVICE TEAM AT 1-800-807-9054

4. Wipe exterior of unit with a damp cloth.
5. Wipe fan grills/air intakes (located on side of the unit) to remove any dust build up using a damp cloth. Reassemble unit making sure crumb trays are properly installed. The crumb tray should slide into the slot on each side of the area under the belt.
6. Clean the viewing window by removing the six thumbscrews on the rear of the sandwich warmer. Remove the window trim ring. Then remove the window spacer. Then carefully remove the Neo-Ceram glass.



7. Clean the Neo-Ceram glass using the mild soap. DO NOT use any abrasive cleaner or scrub pad. A scratched glass is more easily broken and will get dirtier faster.
8. Re-assemble the viewing window by carefully placing the Neo-Ceram glass back in. Place the window spacer with the flanged side against the glass in. Line up the six holes of the window trim ring with six holes on the side of the warmer and re-install the thumbscrews.

## **WEEKLY CONVEYOR BELT CLEANING PROCEDURES**

TO KEEP YOUR HOLMAN MODEL QT14 CONVEYOR SANDWICH WARMER AT PEAK OPERATING EFFICIENCY, THE FOLLOWING INSTRUCTIONS ARE RECOMMENDED:

Turn power off and allow cooling fans to run until the control box is cooled off. The fans are controlled by a thermostat in the control box.

**DISCONNECT UNIT FROM POWER SUPPLY OR TURN POWER OFF AT WALL BREAKER. BE SURE THE SANDWICH WARMER IS COMPLETELY COOLED BEFORE PERFORMING ANY OF THE FOLLOWING PROCEDURES.**



1. Remove the unload tray as shown in daily cleaning instructions earlier.
  - a. For lightly soiled tray, clean with a damp cloth.
  - b. For heavily soiled tray, use an abrasive pad and mild cleaner.
2. Using a wire grill brush or dry abrasive pad, clean the exposed surface of Conveyor Belt by passing the brush or pad, back and forth across the surface of the Conveyor Belt.
3. When a section of Conveyor Belt is clean, remove wire brush or abrasive pad from conveyor surface. Reconnect power or turn power back on. Switch the ON/OFF switch to the ON position. Allow the Conveyor Belt to advance to expose another section of belt surface. Switch the ON/OFF Switch to the OFF position. **Disconnect or turn power off at wall breaker.**
4. Repeat steps 2 and 3 until the entire surface of the Conveyor Belt has been cleaned.
5. Remove Crumb Trays from beneath Conveyor Belt and discard the aluminum foil. If cleaning is necessary, use a wet cloth and mild detergent cleaner. Do not use a caustic cleaner to clean the crumb tray.
6. Cover Crumb Trays with clean aluminum foil (shiny side facing up) and return Crumb Trays to Sandwich Warmer. The crumb tray should slide into the slot on each side of the area under the belt.

**(NOTE: DO NOT RUN WARMER WITHOUT CRUMB TRAYS INSTALLED)**

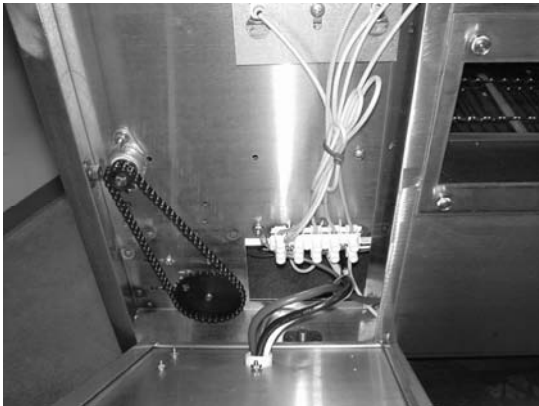
## **MONTHLY CLEANING PROCEDURES**

Turn power off and allow cooling fans to run until the control box is cooled off. The fans are controlled by a thermostat in the control box.

**DISCONNECT UNIT FROM POWER SUPPLY OR TURN POWER OFF AT WALL BREAKER. BE SURE THE SANDWICH WARMER IS COMPLETELY COOLED BEFORE PERFORMING ANY OF THE FOLLOWING PROCEDURES.**



1. Working from the power supply side of the oven, locate the electrical box side panel. Remove two screws holding panel in place and remove panel. Drive chain is now exposed.



2. Check drive chain tension.
  - a. When properly adjusted, chain will have about 1/8" play but will not sag.
  - b. To adjust drive chain tension remove power supply side panel and locate drive motor mounting screws (located behind drive motor sprocket). Loosen screws holding drive motor in place and slide drive motor forward or backward to adjust chain tension. With proper chain tension, retighten motor screws.
  - c. Lubricate drive chain and sprocket teeth with a high temp synthetic or graphite based lubricant.

**NOTE: WD-40 and similar lubricants are not recommended. Using an extreme pressure, synthetic chain lubricant with a temperature range up to 400°F. Apply liberally onto chain and sprockets. This grease is available as part no. 1P-Z8914.**



IF FURTHER ASSISTANCE IS REQUIRED:  
CONTACT STAR/HOLMAN FACTORY SERVICE TEAM AT 1-800-807-9054

3. Clean air intake on the side of Sandwich Warmer by vacuuming any dust and debris built up on fan grill.
4. Return unit to counter and remove screw holding power supply side panel in place. Carefully lift panel up and out. Two ground straps hold panel to oven chassis. **DO NOT REMOVE GROUND STRAPS OR DISCONNECT POWER SUPPLY CORD.** Vacuum any dust and debris from inside of unit (repeat for opposite side).



5. Replace all panels when done. **CHECK THAT ALL WIRES DO NOT GET PINCHED AS THE PANELS ARE REPLACED. ALSO CHECK ANY WIRES AROUND THE MOTOR TO MAKE SURE THEY DO NOT GET PUSHED INTO THE SPROCKETS.** Mounting screws for panels should be started by hand, and then tightened with a screwdriver.
6. For exterior portions of unit that are heavily soiled, an abrasive pad may be used for cleaning. Be sure to pass the pad in the direction of the grain in the metal to maintain the surface's finish. Lightly soiled surfaces may be cleaned with a damp cloth and mild cleaner.



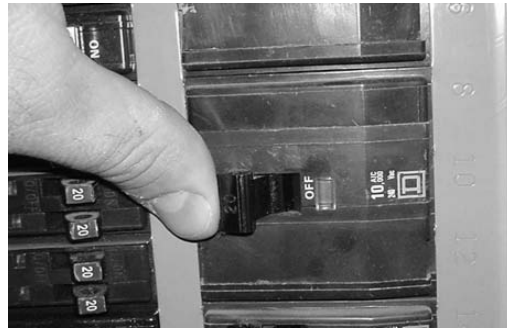
7. Reconnect unit to power supply and test for proper operation.

IF FURTHER ASSISTANCE IS REQUIRED:  
CONTACT STAR/HOLMAN FACTORY SERVICE TEAM AT 1-800-807-9054

## **LONG TERM CLEANING PROCEDURES (every 6 months)**

Turn power off and allow cooling fans to run until the control box is cooled off. The fans are controlled by a thermostat in the control box.

**DISCONNECT UNIT FROM POWER SUPPLY OR TURN POWER OFF AT WALL BREAKER. BE SURE THE SANDWICH WARMER IS COMPLETELY COOLED BEFORE PERFORMING ANY OF THE FOLLOWING PROCEDURES.**



1. With the power off, allow the unit to cool completely. Place Sandwich Warmer on non-extension end. Remove screws holding control box covers in place and remove.



### **NOTE:**

**TO PREVENT DAMAGE TO CONTROLS OR ELEMENTS, DO NOT SET THE MACHINE ON SIDE PANELS.  
TO PREVENT DAMAGE TO ACCESSORIES, REMOVE CRUMB TRAYS AND UNLOAD TRAY BEFORE LIFTING OVEN TO UPRIGHT POSITION**

2. Remove screws holding control box covers in place and remove.
3. Using a vacuum, clean the inside of control box. Wipe any buildup that cannot be vacuumed with a dry towel.
4. Replace control box covers and fasten with screws. Put the machine back on its feet.
5. Remove side panels and vacuum compartments as performed under monthly cleaning procedures.



IF FURTHER ASSISTANCE IS REQUIRED:  
CONTACT STAR/HOLMAN FACTORY SERVICE TEAM AT 1-800-807-9054

## **MAINTENANCE PROCEDURES**

### **REPLACING HEATER TUBES**

FOR BEST TOASTING PERFORMANCE, THIS PROCEDURE SHOULD BE DONE EVERY SIX MONTHS

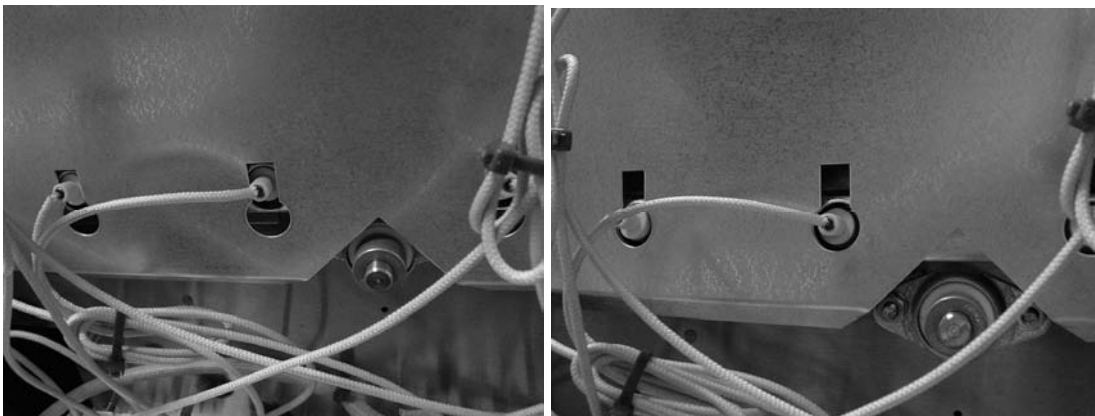
Turn power off and allow cooling fans to run until the control box is cooled off. The fans are controlled by a thermostat in the control box.

**DISCONNECT UNIT FROM POWER SUPPLY OR TURN POWER OFF AT WALL BREAKER.**



**NOTE: PERFORM THIS MAINTENANCE ONLY WHEN THE CONVEYOR SANDWICH WARMER IS COMPLETELY COOL.**

1. Position unit for access to front and rear panels. Also remove the viewing window per instruction in daily cleaning.
2. Remove screws holding front and rear panels. Lift panels up and out to remove.
3. Each heater tube has its own connection to a terminal block at the front and back of the sandwich warmer.  
NOTE: MARK WIRE LOCATIONS IN TERMINAL BLOCKS BEFORE DISCONNECTING ANY WIRES. REPLACE ONLY ONE HEATER TUBE AT A TIME TO AVOID INCORRECT REWIRING.
4. The heater tubes are held in place by key slot heater tube retainers that are accessible on the control side of the machine.

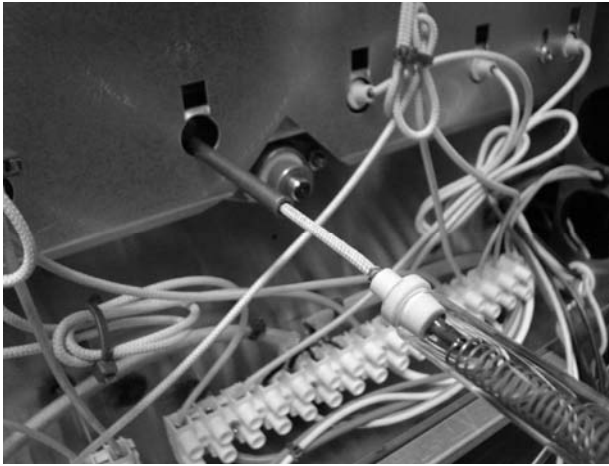


5. Using a screwdriver, loosen the screws holding the retainer in place.
6. Slide the retainer to line up the round part of the keyhole with the tube. Re-tighten one or two of the screws to hold the retainer up.
7. Select the first heater tube to be replaced and remove the wires from terminal block connections (both sides).

IF FURTHER ASSISTANCE IS REQUIRED:  
CONTACT STAR/HOLMAN FACTORY SERVICE TEAM AT 1-800-807-9054



8. Gently slide one heater tube out of hole in warmer wall.
9. Select new heater tube to be installed. To ease installation, a short piece of tubing such as an automotive brake line or sipping straws may be used. Insert heater tube wire into one end of tubing. Slide the tubing over the wire and use the tube to guide the wire and heater tube through the body of the machine.



**NOTE: Top and bottom tubes are of different wattage ratings. Make sure that the correct tubes are being replaced or toasting will be dramatically affected.**

10. When the heater tube is installed correctly the ceramic end of the heater tube will stick out of the tube retainers. (Fig.7)
11. Reconnect wires to terminal block and check connections.
12. Tug lightly on wire to ensure a good connection.
13. Repeat above steps for each heater tube.
14. Loosen the screw(s) holding the retainer secure and slide the retainer back to secure the heater tubes.
15. Secure all loose heater tube wires with high temperature wire ties.

## **REPLACING FAN MOTORS**

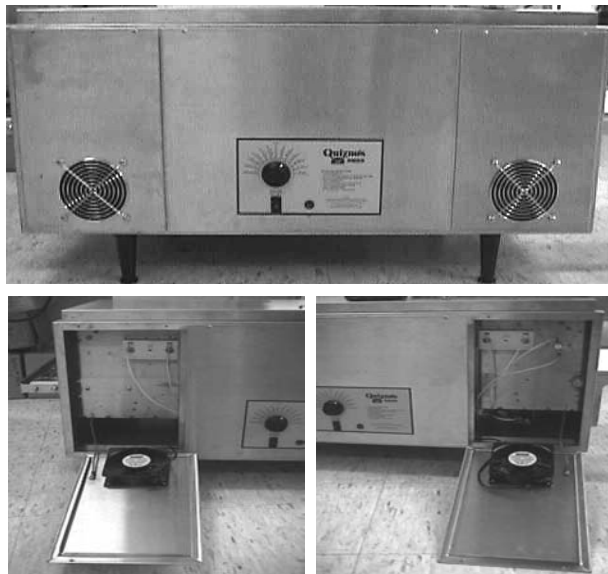
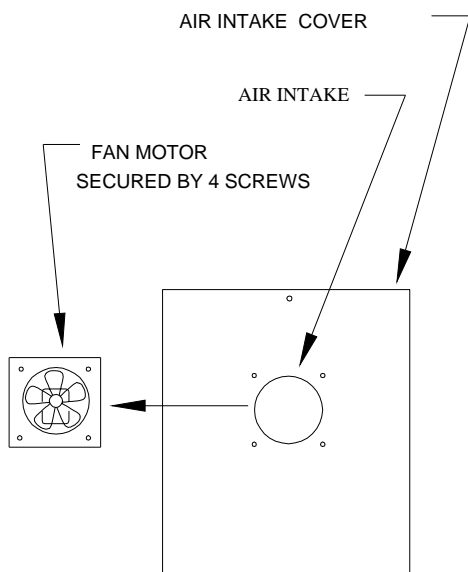
Turn power off and allow cooling fans to run until the control box is cooled off.

**DISCONNECT UNIT FROM POWER SUPPLY OR TURN POWER OFF AT WALL BREAKER.**



**NOTE: PERFORM THIS MAINTENANCE ONLY WHEN THE CONVEYOR SANDWICH WARMER IS COMPLETELY COOL.**

1. Remove the panel with the fan that needs replaced.
2. Unplug the power supply cord. Remove any wire ties holding the cord to the fan. Disconnect the ground wire if present.
3. Remove the four screws attaching the fan and grill to the panel.
4. Place the new fan on the panel in the same orientation and re-attach using the grill and screws.
5. Reconnect the power cord to the fan and secure it to the fan with wire ties in the original location.
6. Replace the air intake panel and turn on the machine.
7. Check that both fans come on after the oven has heated up.



IF FURTHER ASSISTANCE IS REQUIRED:  
CONTACT STAR/HOLMAN FACTORY SERVICE TEAM AT 1-800-807-9054

## **REPLACING BELT DRIVE MOTOR**

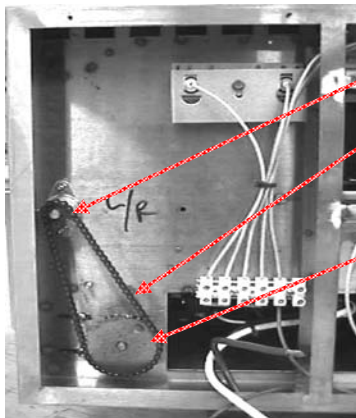
Turn power off and allow cooling fans to run until the control box is cooled off.

**DISCONNECT UNIT FROM POWER SUPPLY OR TURN POWER OFF AT WALL BREAKER.**



**NOTE: PERFORM THIS MAINTENANCE ONLY WHEN THE CONVEYOR SANDWICH WARMER IS COMPLETELY COOL.**

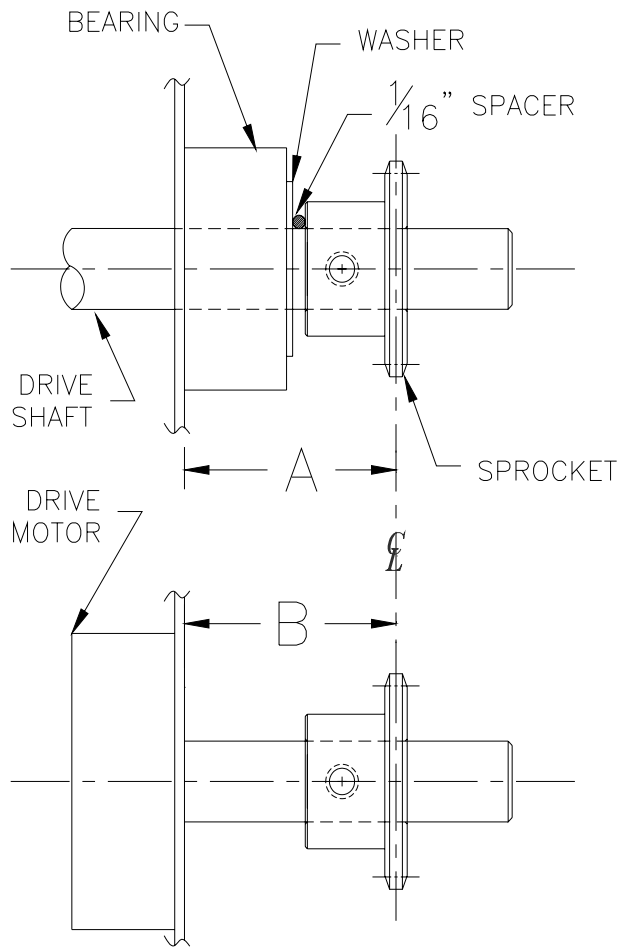
1. Remove the unload tray and crumb trays.
2. Lift the machine to stand on the unload end. The machine can then be rotated again to rest it on the top. This will give the most stable access to the bottom control box area.



3. Remove the panel with the power input box and bottom control box cover.
4. Loosen the screws holding the motor in place. Slide the motor to loosen the chain. Remove the chain. Remove the sprocket on the motor by loosening the setscrew and sliding the sprocket off.
5. Disconnect the drive motor leads to the internal wiring. The motor can be used in 208 or 240 volt ovens. Note how the old motor is wired for replacement. For reference, use the black and white wires for 208 volt ovens and the black and blue wires for 240 volt ovens. The unused wire should be taped on the end and bundled with the existing wires so it will not get tangled in any moving parts.
6. Remove the screws holding the motor in place and remove the drive motor.
7. Install the new motor in place and loosely re-attach using the screws removed earlier.
8. Replace the sprocket onto the motor shaft and replace the chain onto the sprockets.
9. Slide the motor until the drive chain has about 1/8" slack when lightly pushed at the center of the upper section. Tighten the drive motor screws. Align driver and driven sprockets and tighten the setscrews onto the flat areas on the motor and drive shafts.
10. Rewire the new motor as noted in the disconnect instructions above.

IF FURTHER ASSISTANCE IS REQUIRED:

CONTACT STAR/HOLMAN FACTORY SERVICE TEAM AT 1-800-807-9054



Note: During factory assembly, a 1/8" side-to-side play is adjusted into the driveshaft to allow for chassis expansion.

1. Unit must be cool
2. Do not adjust the sprocket on the driveshaft.
3. Insert a 1/16" spacer (drill bit etc) between the driveshaft sprocket and the washer that is outside the bearing.
4. Measure the distance "A" while holding the sprocket against the spacer.
5. Adjust the sprocket on the drive motor so that dimension "B" is equal to "A"  $\pm$  1/16".

IF FURTHER ASSISTANCE IS REQUIRED:  
CONTACT STAR/HOLMAN FACTORY SERVICE TEAM AT 1-800-807-9054

### THOROUGHLY INSPECT YOUR UNIT ON ARRIVAL

This unit has been tested for proper operation before leaving our plant to insure delivery of your unit in perfect condition. However, there are instances in which the unit may be damaged in transit. In the event you discover any type of damage to your product upon receipt, you must immediately contact the transportation company who delivered the item to you and initiate your claim with same. If this procedure is not followed, it may affect the warranty status of the unit.

### LIMITED EQUIPMENT WARRANTY

All workmanship and material in Star products have a one (1) year limited warranty on parts & labor in the United States and Canada. Such warranty is limited to the original purchaser only and shall be effective from the date the equipment is placed in service. Star's obligation under this warranty is limited to the repair of defects without charge, by the factory authorized service agency or one of its sub-agencies. Models that are considered portable (*see below*) should be taken to the closest Star service agency, transportation prepaid.

- > Star will not assume any responsibility for loss of revenue.
- > On all shipments outside the United States and Canada, see International Warranty.
- \* The warranty period for the JetStar series six (6) ounce popcorn machines is two (2) years.
- \* The warranty period for the Chrome-Max Griddles is five (5) years on the griddle surface. See detailed warranty provided with unit.
- \* The warranty period for Teflon/Dura-Tec coatings is one year under normal use and reasonable care. This warranty does not apply if damage occurs to Teflon/Dura-Tec coatings from improper cleaning, maintenance, use of metallic utensils, or abrasive cleaners. This warranty does not apply to the "non-stick" properties of such materials.
- > This warranty does not apply to "Special Products" but to regular catalog items only. Star's warranty on "Special Products" is six (6) months on parts and ninety (90) days on labor.
- > This warranty does not apply to any item that is disassembled or tampered with for any purpose other than repair by a Star Authorized Service Center or the Service Center's sub-agency.
- > This warranty does not apply if damage occurs from improper installation, misuse, wrong voltage, wrong gas or operated contrary to the Installation and Operating instructions.
- > This warranty is not valid on Conveyor Ovens *unless* a "start-up/check-out" has been performed by a Factory Authorized Technician.

### PARTS WARRANTY

Parts that are sold to repair out of warranty equipment are warranted for ninety (90) days. The part only is warranted. Labor to replace the part is chargeable to the customer.

### SERVICES NOT COVERED BY WARRANTY

- |  |   |
|--|---|
| 1. Travel time and mileage rendered beyond the 50 mile radius limit  | 10. Voltage conversions   |
| 2. Mileage and travel time on portable equipment ( <i>see below</i> )  | 11. Gas conversions   |
| 3. Labor to replace such items that can be replaced easily during a daily cleaning routine, ie; removable kettles on fryers, knobs, grease drawers on griddles, etc. | 12. Pilot light adjustment  |
| 4. Installation of equipment   | 13. Miscellaneous adjustments   |
| 5. Damages due to improper installation  | 14. Thermostat calibration and by-pass adjustment   |
| 6. Damages from abuse or misuse  | 15. Resetting of circuit breakers or safety controls or reset buttons                           |
| 7. Operated contrary to the Operating and Installation Instructions  | 16. Replacement of bulbs  |
| 8. Cleaning of equipment   | 17. Replacement of fuses  |
| 9. Seasoning of griddle plates   | 18. Repair of damage created during transit, delivery, & installation OR created by acts of God |

### PORTABLE EQUIPMENT

Star will not honor service bills that include travel time and mileage charges for servicing any products considered "Portable" including items listed below. These products should be taken to the Service Agency for repair:

- \* The Model 510FD Fryer.
- \* The Model J4R, 4 oz. Popcorn Machine.
- \* The Model 518CMA & 526CMA Cheese Melter.
- \* The Model 12MC & 15MC & 18MCP Hot Food Merchandisers.
- \* The Model 12NCPW & 15NCPW Nacho Chip/Popcorn Warmer.
- \* All Hot Dog Equipment **except Roller Grills & Drawer Bun Warmers.**
- \* All Nacho Cheese Warmers **except Model 11WLA Series Nacho Cheese Warmer.**
- \* All Condiment Dispensers **except the Model HPDE, & SPDE Series Dispenser.**
- \* All Specialty Food Warmers **except Model 130R, 11RW Series, and 11WSA Series.**
- \* All QCS/RCS Series Toasters **except Model QCS3 & RCS3 Series.**

#### ALL:

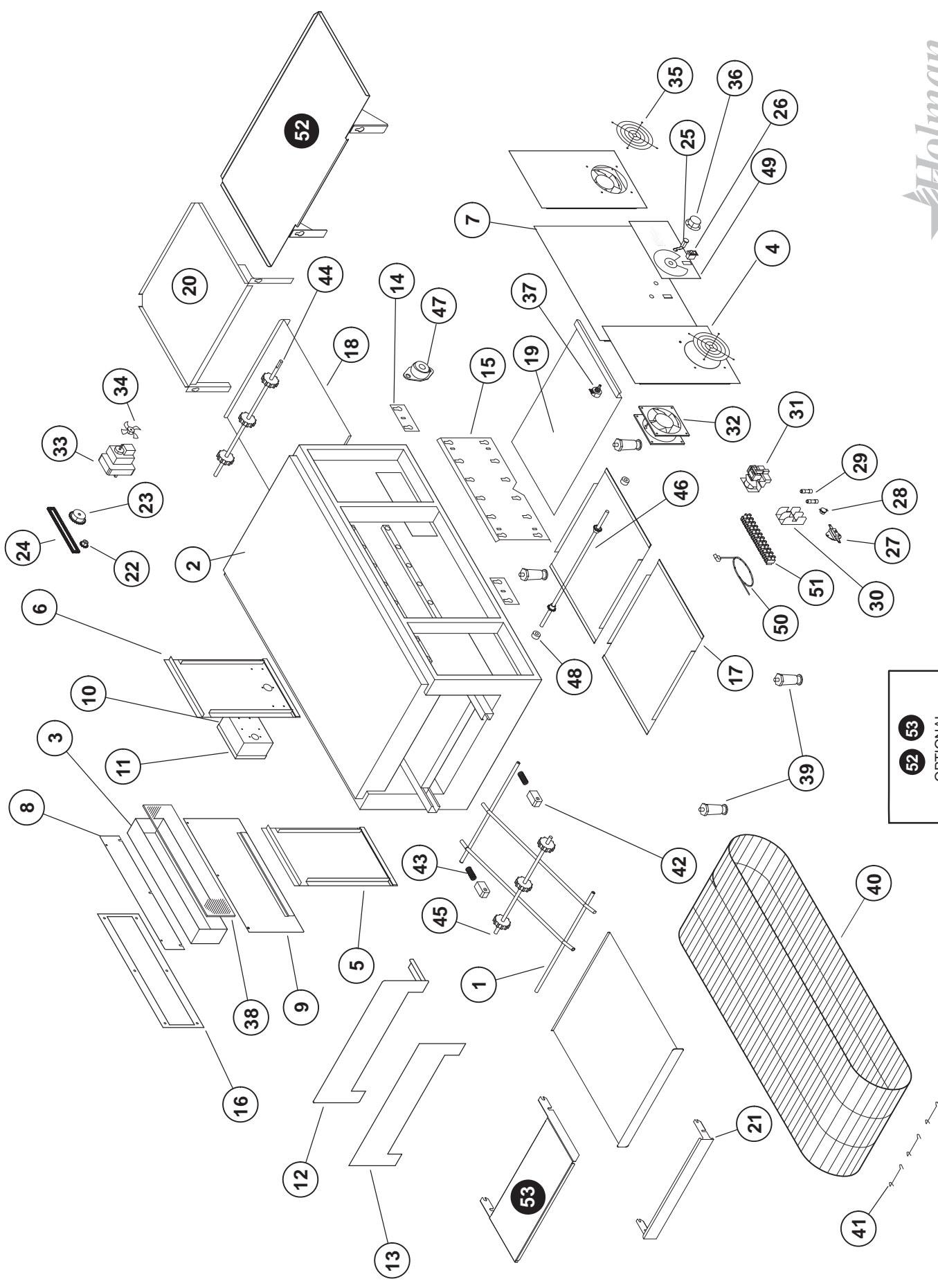
- \* Pop-Up Toasters
- \* Butter Dispensers
- \* Pretzel Merchandisers
- \* Pastry Display Cabinets
- \* Nacho Chip Merchandisers
- \* Accessories of any kind
- \* Sneeze Guards
- \* Pizza Ovens
- \* Heat Lamps
- \* Pumps

The foregoing warranty is in lieu of any and all other warranties expressed or implied and constitutes the entire warranty.

### FOR ASSISTANCE

Should you need any assistance regarding the Operation or Maintenance of any Star equipment; write, phone, fax or email our Service Department. In all correspondence mention the Model number and the Serial number of your unit, and the voltage or type of gas you are using.





**52 53**  
OPTIONAL  
ACCESSORY PARTS

# TYPICAL QT14 EXPLODED PARTS VIEW

REFER TO THE PARTS LIST SPECIFIC TO YOUR MODEL FOR MORE DETAIL INFORMATION.





# PARTS LIST

April 14, 2009, Rev D

HOLMAN CONVEYOR SANDWICH WARMER  
MODEL QT14 - QT14R

Key Number	Part Number	Number Per Unit	Description and Model Designation
1	GE-100715	1	BELT SUPPORT
2	GE-100991	1	TOP COVER
3	GE-101390	1	WINDOW SPACER
4	GE-402340	2	PANEL - FAN MOUNT
5	GE-402356	1	PANEL - PLAIN SIDE
6	GE-402705	1	PANEL - POWER INPUT
7	GE-402609	1	PANEL - CONTROL SIDE
8	GE-402689	1	PANEL - UPPER BACK
9	GE-101028	1	PANEL - LOWER BACK
10	GE-402709	1	ELECTRICAL BOX (POWER INPUT)
11	GE-402710	1	ELECTRICAL BOX COVER
12	GE-402729	1	BAKE AID BRACKET
13	2M-200816	1	BAKE AID MAGNET
14	GE-402651	2	HEATER TUBE RETAINER - SMALL
15	GE-402359	1	HEATER TUBE RETAINER - LARGE
16	GE-402631	1	WINDOW RETAINER - OUTSIDE
17	GE-402344	2	CONTROL BOX COVER
18	GE120303	2	CRUMB TRAY
19	GE-402654	1	CRUMB TRAY - LOWER
20	GE-100944	1	UNLOAD TRAY
21	GE-402610	1	CONVEYOR END GUARD
22	2P-115362	1	SPROCKET DRIVEN - 25B11x3/8
23	2P-200650	1	SPROCKET DRIVE - 25B24x5/16
24	2P-150000	1	CHAIN, DRIVE - #25x16"
25	2J-200427	1	PILOT LIGHT - RED
26	2E-200552	1	SWITCH, MAIN ON/OFF
27	2E-200566	1	SWITCH, OVERTEMP (RESET)
28	2E-200574	1	SWITCH, FAN (COOLDOWN)
29	2E-200596	2	FUSE - 15A TYPE G
30	2E-200597	1	FUSEHOLDER - 2 POSITION, TYPE G
31	2E-Z8966	1	CONTRACTOR/RELAY - 1 PHASE OVENS
31b	2E-200573	1	CONTRACTOR/RELAY - 3 PHASE OVENS
32	2U-200577	2	COOLING FAN - 240V HIGH OUTPUT
33a	PS-Z10285	1	CONVEYOR MOTOR LEFT TO RIGHT
33b	PS-Z10286	1	CONVEYOR MOTOR RIGHT TO LEFT
	<b>PS-Z10285 INCLUDES:</b>		
	2U-Z9658	1	MOTOR AC 11 RPM CCW
	2P-200652	1	SPROCKET DRIVEN -17 tooth 3/8"
	2P-200646	1	SPROCKET DRIVE - 20 tooth 5/16"
	2C-Z10075	1	SCREW - 1/4-20X3/8
	2A-Z10161	1	SPACER-STEEL
	2M-Z10161	1	INSTRUCTIONS - QT14 DRIVE MOTOR REPLAC.

QT14R-V12

QT14 50/60Hz  
QT14R 50/60Hz

**IMPORTANT: WHEN ORDERING, INCLUDE MODEL AND SERIAL NUMBER**

Some items are included for illustrative purposes only and in certain instances may not be available.



# PARTS LIST

April 14, 2009, Rev D

HOLMAN CONVEYOR SANDWICH WARMER  
MODEL QT14 - QT14R

Key Number	Part Number	Number Per Unit	Description and Model Designation
	<b>PS-Z10286 INCLUDES:</b>		
	2U-Z9657	1	MOTOR AC 11 RPM CW
	2P-200652	1	SPROCKET DRIVEN -17 tooth 3/8"
	2P-200646	1	SPROCKET DRIVE - 20 tooth 5/16"
	2C-Z10075	1	SCREW - 1/4-20X3/8
	2A-Z10161	1	SPACER-STEEL
	2M-Z10161	1	INSTRUCTIONS - QT14 DRIVE MOTOR REPLAC.
34	2R-200721	1	FAN BLADE - CONVEYOR MOTOR
35	2R-200562	1	FAN GUARD - COOLING FAN
36	2R-200761	1	KNOB, SPEED CONTROL
37	GE-118067	1	SPEED CONTROL POTENTIOMETER
38	2Q-200588	1	WINDOW - NEO SARAMA
39	2A-Z0314	4	LEG - 4"
40	GE-160031	1	CONVEYOR BELT W/ 3 LINKS - 82.5" LONG
41	2B-200620	3	CONVEYOR BELT SINGLE SPACE CLIP
42	2P-200785	2	BEARING, SPRING LOADED
43	2P-200766	2	SPRING, BEARING
44	GE-101254	1	DRIVE SHAFT ASSY (W/SPROCKETS)
45	GE-101255	1	IDLER SHAFT ASSY (W/SPROCKETS)
46	2A-101257	1	RETURN SHAFT ASSY (W/SPROCKETS)
47	GB-112262	4	BEARING ASSY. 3/8" FLANGED
48	2A-200672	3	SHAFT COLLAR - 3/8"
49	2M-201822	1	LABEL, MAIN CONTROL
50	2E-200387	2	FAN CORD
51	2E-200554	6	TERMINAL BLOCK - 12 TRIMMABLE, "WHITE"
	<b>ACCESSORIES</b>		
52	QTEXT14	-	EXIT SHELF FOR QT14 QUIZNO'S - 14 X 28
53	QTEXTY7	-	ENTRY SHELF FOR QT14 QUIZNO'S
NI	2E-200487	1	TERMINAL BLOCK - 6 POSITION, "BLACK"
NI	SP-115402	1	TERMINAL BLOCK - MAIN POWER, "BLACK"
NI	2M-HG0300	1	VIDEO MAINTENANCE
NI	1P-Z8914	1	EXTREME PRESSURE MULTIPURPOSE SYNTHETIC GREASE (80°F TO 400°F) , TUBE 8 oz.
	<b>HEATER TUBE LISTING</b>		
	GE-198077	6	675W 208V BOTTOM
	GE-198078	10	375W 208V TOP
	GE-198080	6	675W 240V BOTTOM
	GE-198081	10	375W 240V TOP
	GE-198082	6	700W 220V BOTTOM
	GE-198083	10	375W 220V TOP
	GE-198087	9	417W 208V TOP 3PHASE
	GE-198077	6	675W 208V BOTTOM

**IMPORTANT: WHEN ORDERING, INCLUDE MODEL AND SERIAL NUMBER**

Some items are included for illustrative purposes only and in certain instances may not be available.

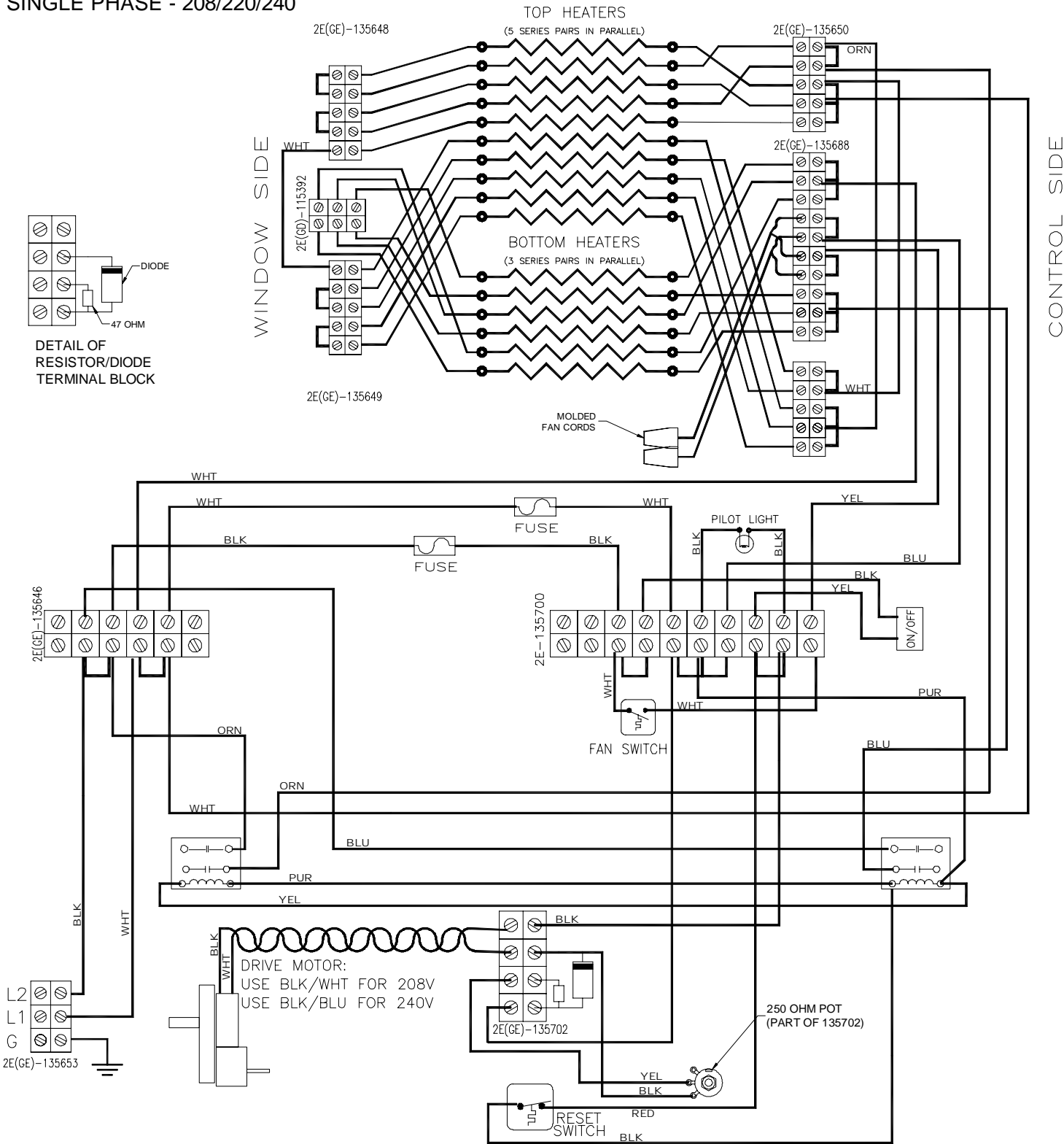


QT14 W/ POT SPEED CONTROL  
THREE PHASE DELTA SOURCE

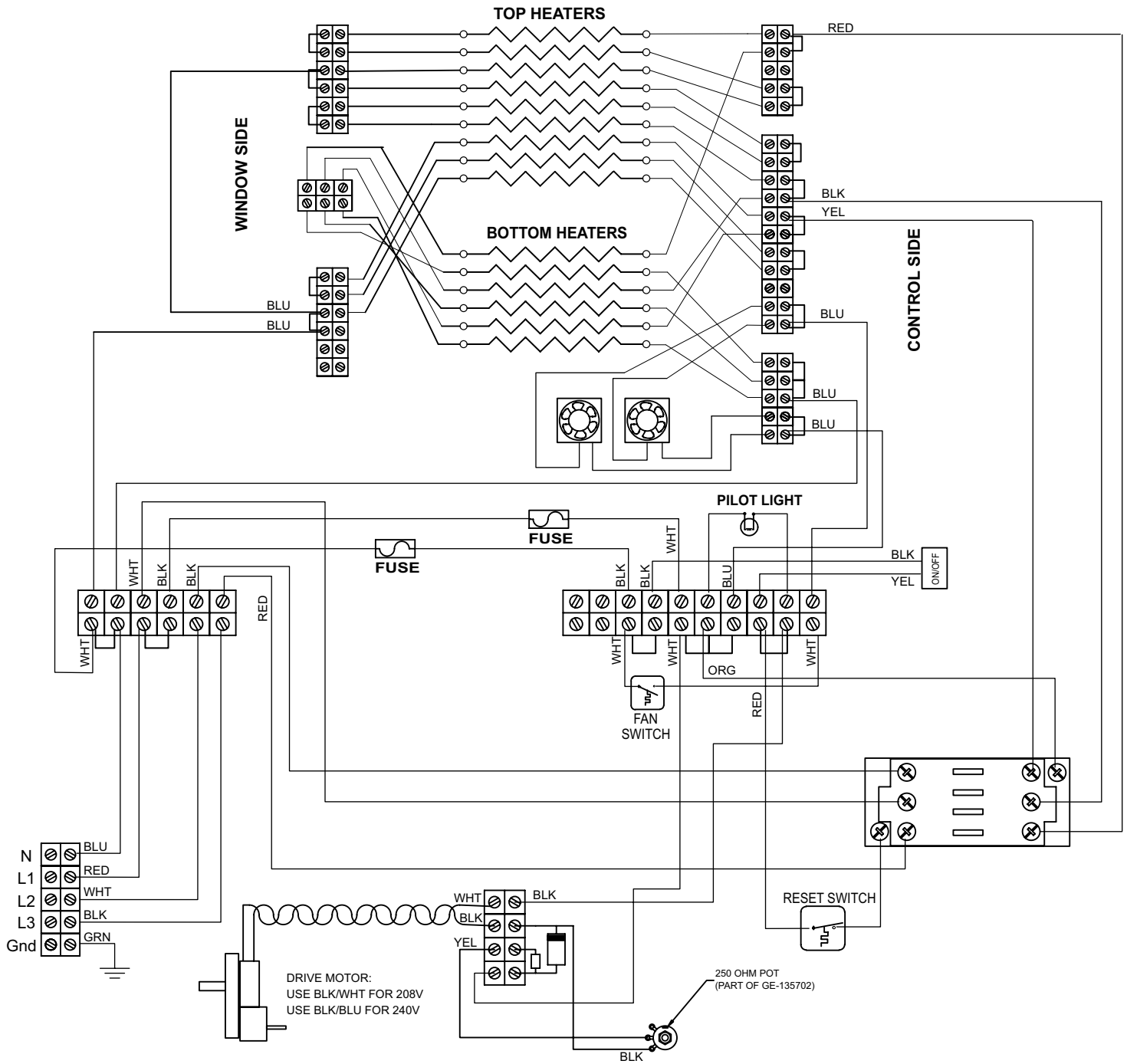


WIRING DIAGRAM #020513A

QT14 W/ POT SPEED CONTROL  
SINGLE PHASE - 208/220/240



IF FURTHER ASSISTANCE IS REQUIRED:  
CONTACT STAR/HOLMAN FACTORY SERVICE TEAM AT 1-800-807-9054



THIS DRAWING CONTAINS INFORMATION  
CONFIDENTIAL TO STAR MFG. INT'L. INC.  
NO REPRODUCTION OR DISCLOSURE  
OF ITS CONTENTS IS PERMITTED.



MODEL: QT14 380/220/60 3 phase, 15 TUBE - SERIES

STAR MANUFACTURING INTERNATIONAL INC.

020525

Rev -

2/06/2006

**STAR MANUFACTURING GROUP**

Star - Holman - Lang - Wells - Bloomfield  
10 Sunnen Drive, St. Louis, MO 63143 U.S.A.  
(800) 807-9054    (314) 781-2777  
Parts & Service (800) 807-9054  
[www.star-mfg.com](http://www.star-mfg.com)