



**ISO 9001 : 2000 REGISTERED**  
10 SUNNEN DRIVE, ST. LOUIS MO 63143  
PHONE 314-781-2777, FAX 314-781-3636

**OPERATOR'S MANUAL  
HOLMAN CONVEYOR BAKERS  
MODEL MM14**

**FOR SERVICE INFORMATION  
U. S. AND CANADA CALL: TOLL FREE 1-800-225-3958**

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**UNCRATING AND INSPECTION**

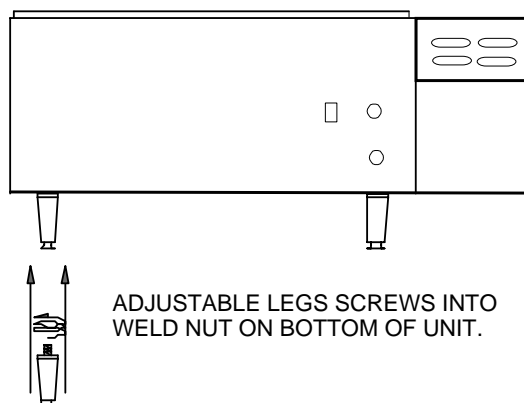
Unpack unit and components from container. Remove all visible packing material, inspect unit for damage. If damage is discovered, file a claim immediately with the carrier that handled the shipment.

The following should be included in the container:

- A. 1ea. Baking oven with heaters, tunnel extender, power supply lead and conveyor belt in place.  
**(NOTE): Remove heating element shipping supports.**
- B. 1ea. Stainless Steel Unload Tray and 1ea. Stainless Steel Load Up Tray.

**ASSEMBLY AND INSTALLATION**

- A. Attach legs by screwing into weld nuts, as shown



- B. Anti Skid pads are available at no charge and may be adhered to the foot section of each leg to prevent sliding. Call 1-800-225-3958 for details.

**CAUTION:** Use of these pads are not approved by the National Sanitation Foundation.

- C. 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.
  1. Your model MM14 conveyor oven is supplied with a six foot power supply lead. Have an electrician connect input power to the unit in accordance with local electrical codes.

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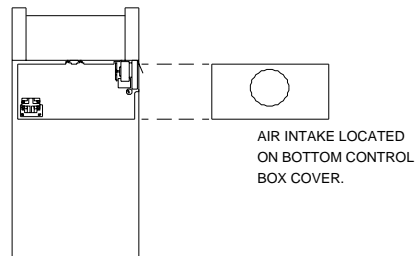
**ASSEMBLY AND INSTALLATION (CONT)**

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

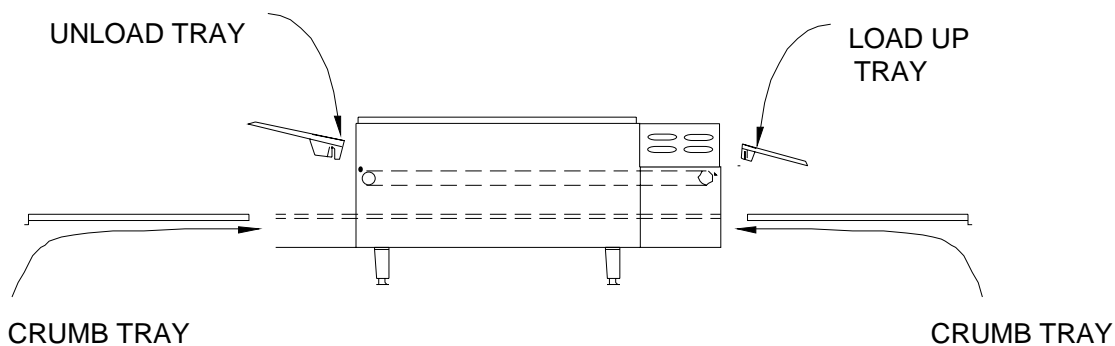
**WARNING:** BEFORE INSTALLING UNIT(S), HAVE YOUR ELECTRICIAN CHECK WITH LOCAL POWER COMPANY TO DETERMINE ACTUAL VOLTAGE AT JOB SITE.

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

- E. Before applying input power to the unit(s) check heating elements for breakage, do not apply power to the unit(s) 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.
- F. Allow approximately 5 to 8 minutes for the fan cooling system to come on, check the air intake area as noted below and be sure that there is a sufficient flow of air into the control box.



- G. If all heaters and conveyor system are operating properly, switch the master on/off switch to the OFF position and allow unit to cool. The fan will continue to circulate cool air through out the unit until the internal temperatures have been decreased.
- H. If a problem is discovered during start up procedures, immediately switch the Master On/Off switch to the OFF position and notify a service agent in your area. Install load and unload trays as shown.



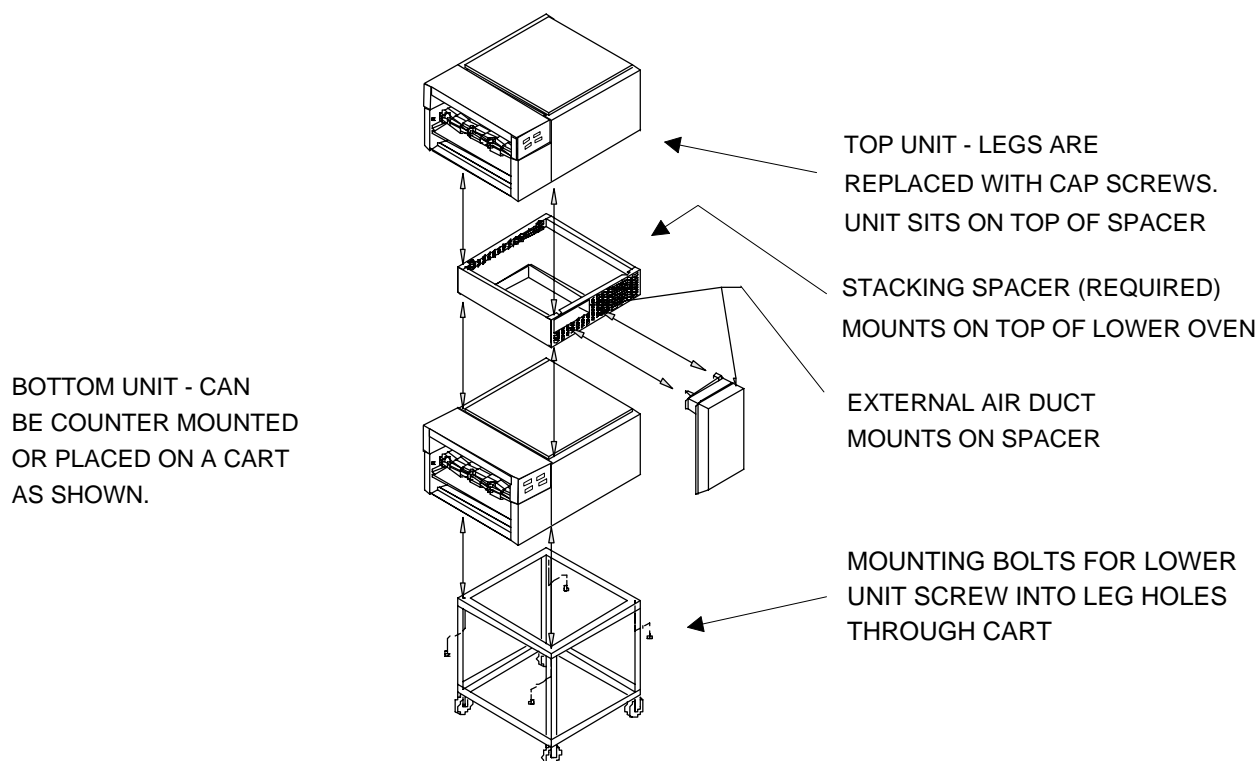
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**ASSEMBLY AND INSTALLATION (CONT.)**

F. Stacking Instructions

**When stacking two Holman Conveyor ovens a stacking spacer with external air duct must be used to prevent overheating of the control box in the top oven.**

- 1). If cart is to be used with units, place bottom unit on cart and align leg holes of unit to holes in top portion of cart. Insert 3/8" bolts through cart and into leg holes to secure bottom unit to cart as shown below.
- 2). Place stacking spacer on top of bottom oven with **internal** air duct facing up and toward the rear of the oven.
- 3). Mount **external** air duct on stacking spacer as shown below. External air duct must be installed for cooling system of top unit to function properly.
- 4). Screw cap screws (4ea.) into leg holes on top oven.
- 5). Place top oven on stacking spacer. Cap screws will set into cut outs in top of stacking spacer to lock unit into position. **(NOTE) Air intake of top unit must fit over the internal air duct of stacking spacer to allow airflow into the control box of the top oven. For stacking spacer to work properly, both ovens must have the same belt travel direction.**



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**OPERATION**

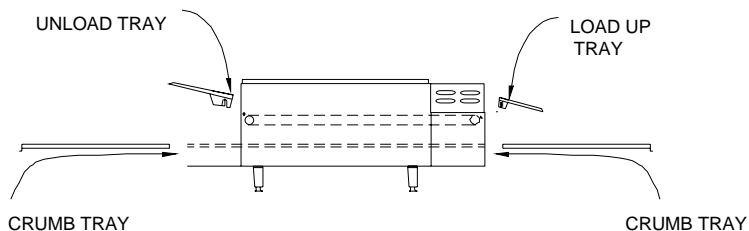
- A. Switch Master On/Off switch to the ON position and turn Variable Speed Control to fastest time setting.
- B. Allow 10 to 15 minutes for unit(s) to warm up.
- C. Adjust conveyor belt speed to the desired pass time and place product on conveyor belt.

**CLEANING PROCEDURES**

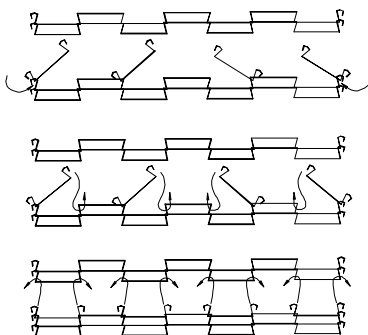
Preventive maintenance for your Holman oven consists of the following recommended cleaning procedures. To keep your oven in its top operating condition, these steps should be performed daily or weekly as indicated.

**WARNING:** HIGH VOLTAGES ARE PRESENT IN THESE UNITS. DISCONNECT UNIT FROM POWER SUPPLY BEFORE SERVICING OR CLEANING UNIT.

- A. Remove Load and Unload Trays (daily) as shown and wash with hot soapy water.



- B. Remove the Crumb Trays from both load and unload ends of the oven (daily) as shown above, **(DO NOT CLEAN WITH CAUSTIC CLEANERS)**.
- C. For lightly soiled conveyor surfaces a damp cloth or scotch pad can be used without removing the conveyor belt. (daily)
- D. For heavily soiled conveyor surfaces disconnect and remove the conveyor as shown and soak in hot soapy water overnight (as required).



**NOTE: LUBRICATION OF DRIVE CHAIN WITH A GRAPHITE BASED LUBRICANT IS REQUIRED AS PERIODIC MAINTENANCE. CALL HOLMAN FACTORY SERVICE DEPARTMENT FOR DETAILS.**

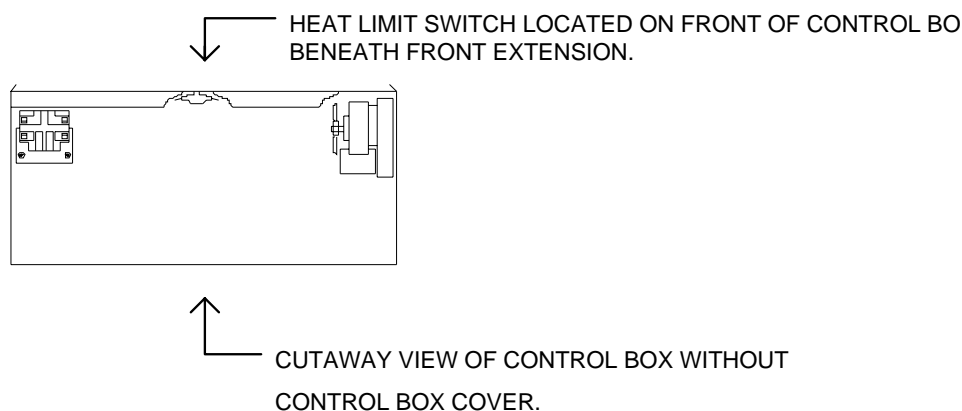
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**CLEANING PROCEDURES CONT.**

- E. Check Air Intake area for dust and grease. To clean, remove the Control Box Cover and wipe with a dry cloth. Do not spray cleaning fluids into the Air Intake. This may result in component failure.
- F. Re-assemble unit and check to be sure it is operating properly. Contact the Holman Cooking Equipment Factory Service Team if assistance is required.

**TROUBLESHOOTING GUIDE**

- A. UNIT WILL NOT HEAT, CONVEYOR BELT WILL NOT TURN.
  1. Be sure main Circuit Breaker is switched to the ON position and there is power at the outlet.
  2. Check to see that the unit is connected to power and Master On/Off is switched to the ON position.
  3. Be sure HEAT LIMIT SWITCH is pushed in (see below).



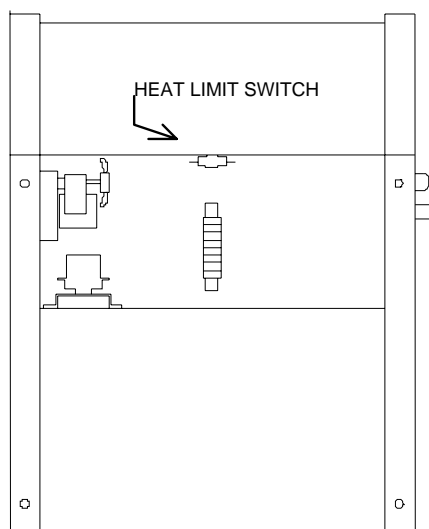
- B. UNIT WILL NOT HEAT, CONVEYOR TURNS.
  1. Check to see if the Master On/Off Switch is in the on position.
  2. Press Heat Limit Switch, located on the front section of the control box as shown above. If this reactivates the Heater Tubes, see section C page 6.
  3. Contact the Holman Cooking Equipment Factory Service Team if assistance is required.

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**TROUBLESHOOTING GUIDE CONT.**

**C. HEAT LIMIT SWITCH**

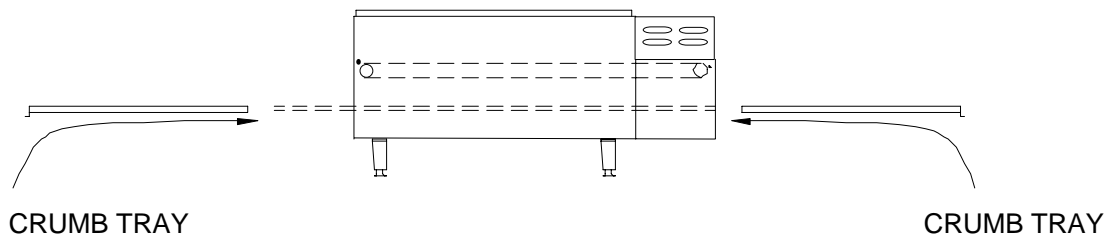
Your Holman Conveyor Oven is equipped with an automatically activated HEAT LIMIT SWITCH which interrupts the heater tube connections if the air temperature in the control box exceeds 190F (88C). This Limit Switch can be reset manually by pushing the button in the center of the switch which is located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



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

1. DISCONNECT UNIT FROM POWER SOURCE.
2. Check to see if air intake area (openings in bottom center of Control Box) is free of dust, grease or other obstructions.
3. Check to see if Crumb Trays (heat reflectors) are in place.

NEVER OPERATE UNIT WITHOUT CRUMB TRAYS IN POSITION AS THIS CAUSES OVERHEATING IN THE CONTROL BOX.



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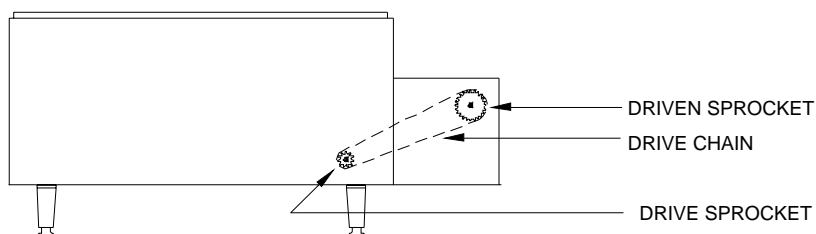
**TROUBLESHOOTING GUIDE CONT.**

**D. CONVEYOR WILL NOT TURN, UNIT HEATS PROPERLY.**

1. DISCONNECT UNIT FROM POWER SOURCE.
2. Check to see if there are obstructions in the conveyor system that may cause a jam.
3. Remove Air Intake Cover as shown on page 9 and spin the Drive Motor Shaft as shown on page 10. Recheck to see if the Conveyor now works.

**IF CONVEYOR STILL DOES NOT TURN;**

4. Remove power supply Side Panel and Drive Motor Sprocket (see below). Manually move Conveyor Belt to check for mechanical binding. If Conveyor moves freely, call Holman Service Department **(1-800-225-3958)** as Drive Motor and/or Variable Speed Control may have to be replaced (refer to page 9 for instructions on replacing drive motor).



**E. CONVEYOR TURNS AT ONE SPEED REGARDLESS OF SPEED CONTROL SETTING.**

1. Call Holman Service Department **(1-800-225-3958)** as Variable Speed Control may have to be replaced. (refer to page 10 for instructions on replacing the Variable Speed Control).

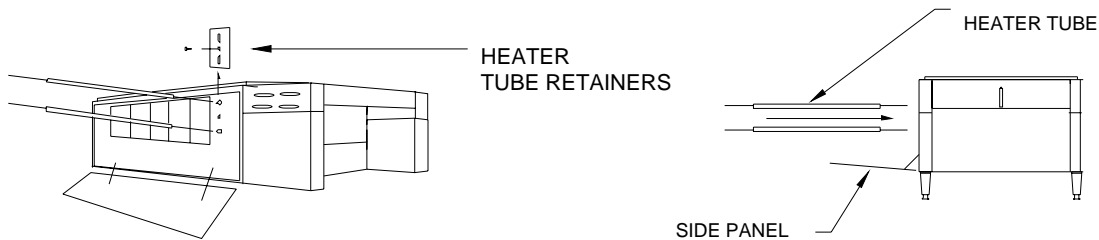
**F. COOLING FAN DOES NOT START.**

1. Remove Control Box Cover and check Fan Blade for obstructions.
2. Check Fan Motor Cord for secure connection.
3. Call Holman Factory Service Team as the Fan Switch and/or Fan Motor may have to be replaced.

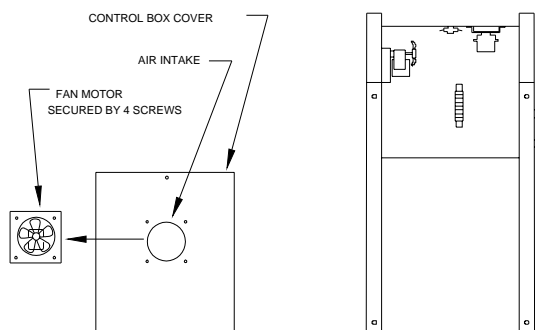
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**MAINTENANCE PROCEDURES**

- A. REPLACING HEATER TUBES (see below)
1. DISCONNECT UNIT FROM POWER SOURCE.
  2. Remove left and right side panels by removing the philips head screws in each panel. Pull the top of each panel out slightly and lift up.
  3. Disconnect heater tube wires which require replacement from terminal block connections.
  4. Remove Heater Tube Retainer by removing retainer screw with washer (retainers are located on power supply side of unit).
  5. GENTLY, pull defective Heater Tube out of unit.
  6. GENTLY, place new Heater Tube into unit.
  7. Replace heater tube retainers.
  8. Reconnect heater wires to terminal block connections.
  9. Replace side panels and test unit for proper operation



- B. REPLACING FAN MOTOR
1. DISCONNECT UNIT FROM POWER SOURCE.
  2. Remove control box cover with Fan Motor.
  3. Unplug power supply cord from Fan Motor.
  4. Remove(4)screws which hold Fan Motor and grill to cover.
  5. Put replacement motor and grill in place and secure to the control box cover with screws.
  6. Reconnect power supply cord to Fan Motor.
  7. Replace control box cover.

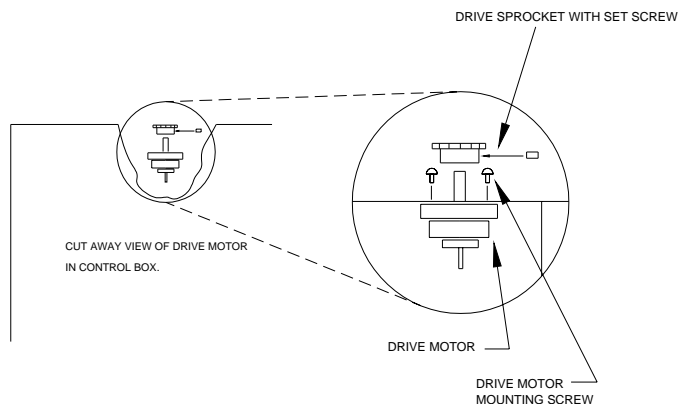


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**MAINTENANCE PROCEDURES CONT.**

**C. REPLACING BELT DRIVE MOTOR**

1. DISCONNECT UNIT FROM POWER SOURCE.
2. Remove power supply side panel and control box cover as described in section B in previous procedure.
3. Remove sprocket from motor shaft by loosening the allen screw on the sprocket collar.
4. Disconnect the Drive Motor leads to the internal wiring. Motors are rated 208 Volts or 240 Volts, note which color leads are being used for these connections and which lead is capped with white tape. The new Drive Motor should use the same arrangement.
5. Remove the four screws that hold the Drive Motor in place.
6. Put the new motor in place and loosely attach with the four screws removed from step 5.
7. Replace the Sprocket onto the motor shaft, then replace the Drive Chain onto the sprockets.

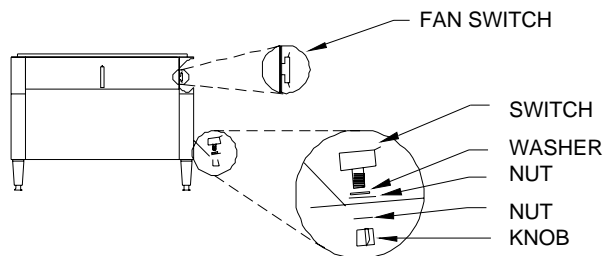


8. Slide the Drive Motor until the Drive Chain has about 1/8" slack when lightly pushed at the center of its top open run. Tighten the Drive Motor screws.
9. Rewire the Drive Motor as described in step 4 above. Replace the panels and test for proper operation.

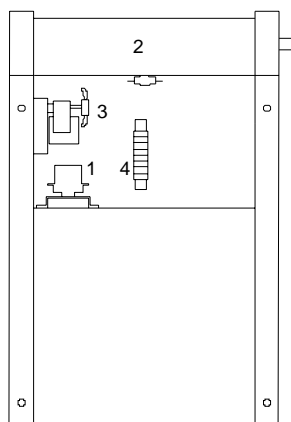
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**MAINTENANCE PROCEDURES CONT.**

- D. REPLACING THE VARIABLE SPEED CONTROL (see below)
1. DISCONNECT UNIT FROM POWER SOURCE.
  2. Remove two philips head screws holding control side panel in place and remove side panel.
  3. Remove the Variable Speed Control knob and the lock nut holding the Variable Speed Control in place.
  4. Wires from Variable Speed Control go in to terminal block located on side of chassis. Remove wires for old Variable Speed Control and insert wires for new Variable Speed Control in same positions as shown on wiring diagram on page 12.
  5. When replacing the Variable Speed Control in the side panel be sure to reposition the anti-rotation pin in the anti-rotation slot on the panel.
  6. Replace lock nut and control knob

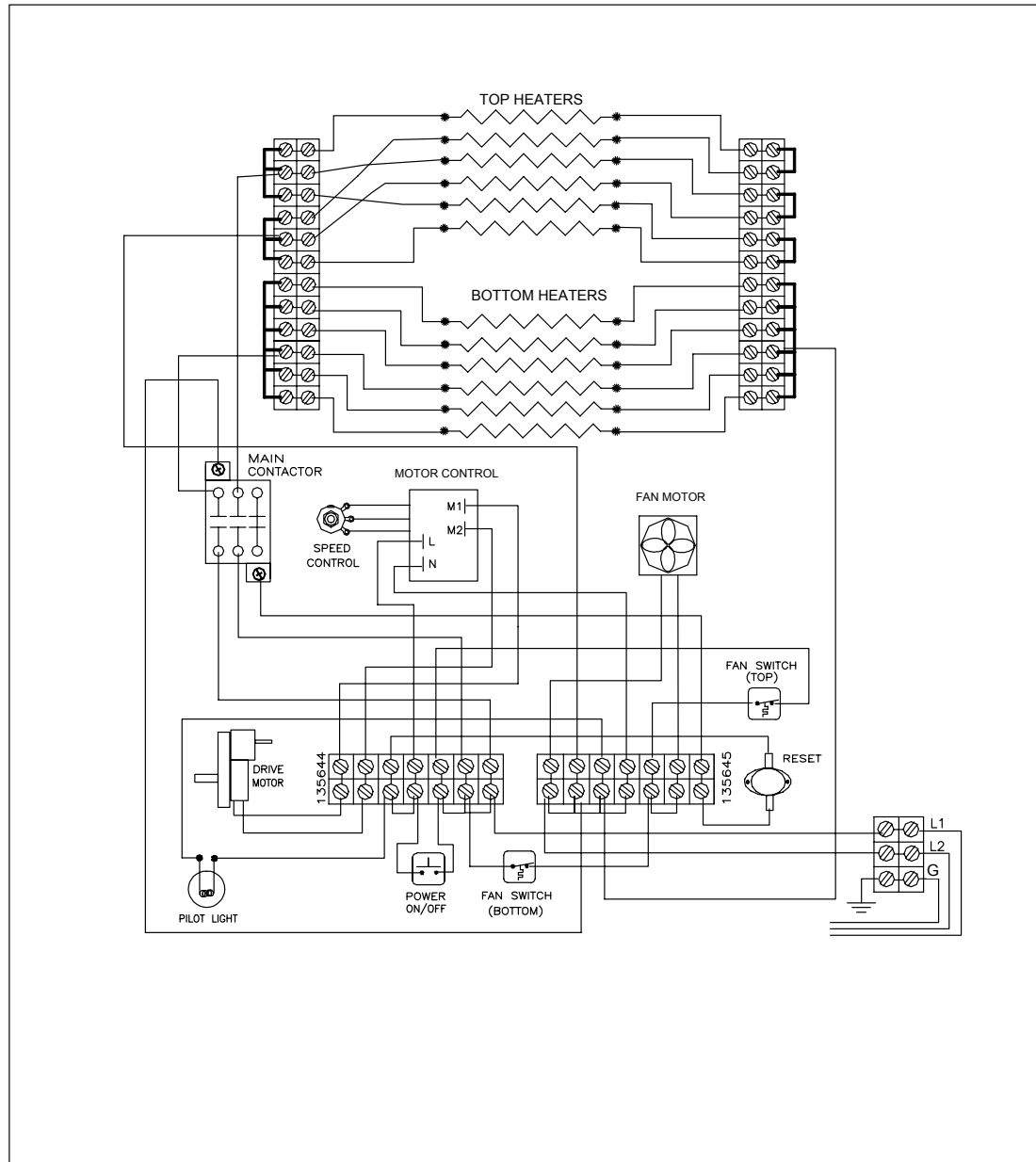


- E. REPLACING HEAT CONTROLS
1. DISCONNECT UNIT FROM POWER SOURCE.
  2. Remove two philips head screws holding control side pane in place and remove side panel.
  3. Remove the Control Box Cover by removing the two screws and pulling down and out to the front.
  4. Remove the lock washers and nuts holding the mounting brackets in place.
  5. Place the new control into position and replace mounting nut and washer, exchange wires one terminal at a time from the defective control to the replacement control.
  6. Replace control box cover.
- 1). Contactor/Relay 2). Heat Limit Switch 3). Drive Motor 4). Terminal Strip



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WIRE DIAGRAM



**HEATER TUBE PART LIST**

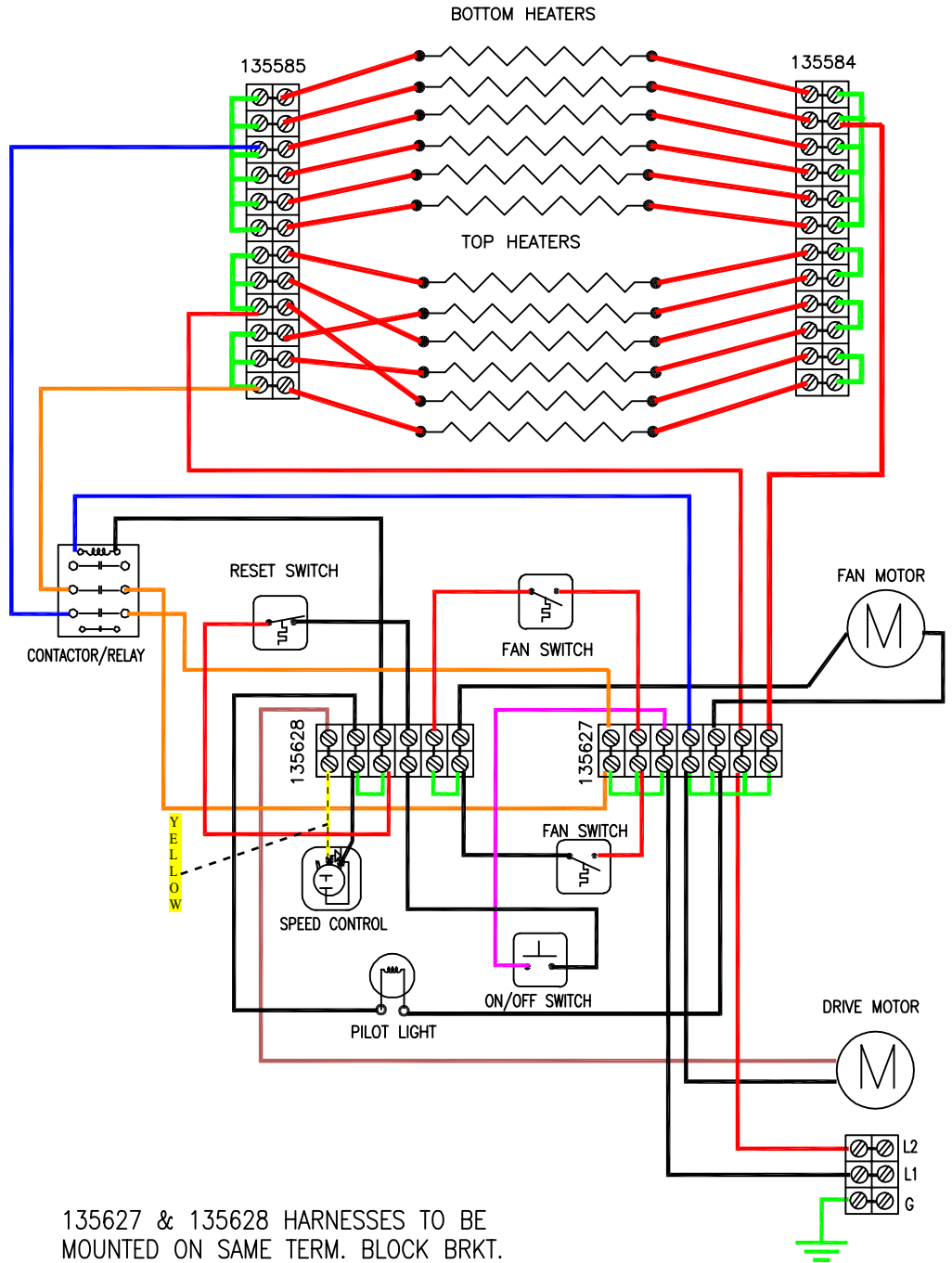
PART NUMBER	DESCRIPTION	QTY.
198010	HEATER TUBE QUARTZ, TOP, <b>208V</b>	6
209195	HEATER TUBE METAL, BOTTOM, <b>208V</b>	6
198011	HEATER TUBE QUARTZ, TOP, <b>240V</b>	6
209196	HEATER TUBE METAL, BOTTOM, <b>240V</b>	6

#020259

MM14 208/240 VOLT  
H:\Y2KWDIAG\020259

REV	DESCRIPTION	DATE	CHECKED	APPROVED
X	X	X	X	X

ALSO USED AS  
 020259 020300  
 020260 020301  
 020261 020302  
 020262 020303  
 020263 020304  
 020264 020305  
 020265 020306  
 020266 020307  
 020268



135627 & 135628 HARNESSES TO BE MOUNTED ON SAME TERM. BLOCK BRKT.

WIRE DIAGRAM FOR MODEL  
 MM14 208/240 VOLT WITH  
 TWO FAN SWITCHES, 450 WATT  
 TOP ELEMENTS WIRED SERIES,  
 500 WATT BOTTOM  
 WIRED PARALLEL.

MASTER COPY APPROVED BY:

ENG. \_\_\_\_\_ DATE \_\_\_\_\_

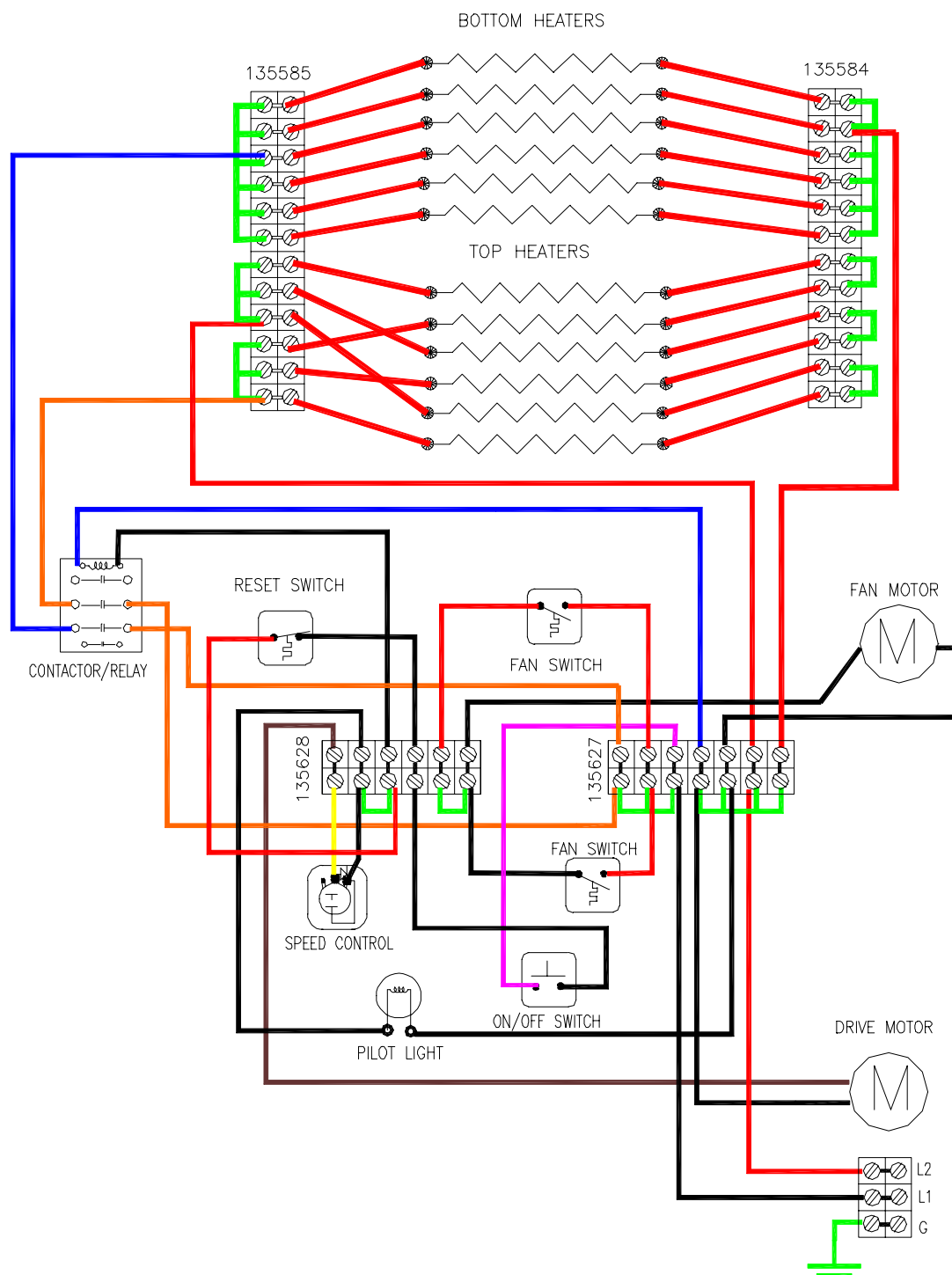
QUAL. \_\_\_\_\_ DATE \_\_\_\_\_

PROD. \_\_\_\_\_ DATE \_\_\_\_\_

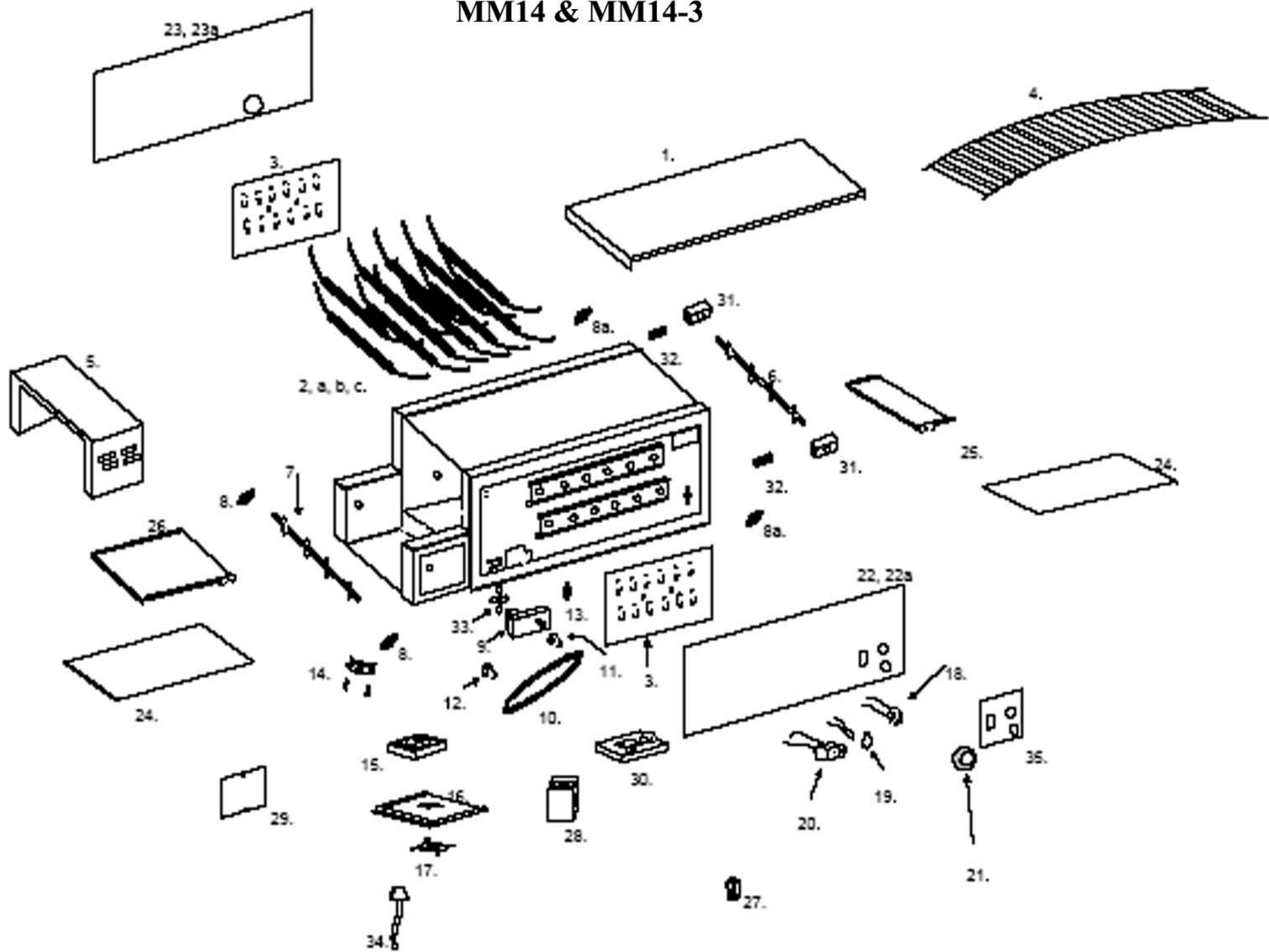
		Part Description:	
	Third Angle Projection	WIRING DIAGRAM PROVEYOR MM14	
Holman Cooking Equipment, Inc. 90 Industrial Park Road P.O. Box 880 Saco, Maine 04072 Phone # (207)-282-1589	All dimensions in decimal inches	Size A Finish -----	
	All angles 90°, unless specified All angles +/- 1°	Part No. 020259	
	Tolerance .X +/- .060 .XX +/- .030 .XXX +/- .015	Drawn by: S.Macomber Date: 3/20/00	
		Approved By: G.Cole Date: 3/20/00	Scale: FULL Sheet 1 of 1

# OPERATOR'S MANUAL HOLMAN CONVEYOR BAKERS MODEL MM14

## WIRE DIAGRAM



# MM14 & MM14-3



**MM14 & MM14-3 Parts**

KEY	Serial Number Range	0801 to 0102		0999 to 0701		0998 to 0899	
		DESCRIPTION	PART #	QTY	PART #	QTY	PART #
1	COVER, TOP	GE-402163	1	GE-402163	1	GE-402224	1
3	RETAINER, HEATER TUBE	GE-402629	1	GE-402161	1	GE-402303	1
4	CONVEYOR BELT	GD-160008	1	GD-160008	1	GD-160008	1
NS	LINK, CONVEYOR BELT	2B-200624	EA	2B-200624	EA	2B-200624	EA
NS	LINK, MASTER, CONVEYOR BELT	2B-200626	3	2B-200626	3	2B-200626	3
5	TUNNEL EXTENDER	GE-100982	1	GE-100982	1	GE-100956	1
6	SHAFT, IDLER	GE-101257	1	GE-101257	1	GE-101257	1
7	SHAFT, DRIVE	GD-101252	1	GD-101252	1	GD-101252	1
8	BUSHING, REAR, <i>FIXED</i>	GB-112262	2	GB-112262	2	GB-112262	2
8a	BUSHING, FRONT, <i>NON-SPRING LOAD</i>	N/A	N/A	GB-112262	2	GB-112262	2
9	MOTOR, DRIVE ( <i>L-R</i> )	2U-200504	1	2U-200504	1	2U-200504	1
9	MOTOR, DRIVE ( <i>R-L</i> )	2U-200509	1	2U-200509	1	2U-200509	1
10	CHAIN, DRIVE (27")	GD-150023	1	GD-150023	1	GD-150023	1
11	SPROCKET, DRIVE (25B24 X 5/16")	2P-200650	1	2P-200650	1	2P-200650	1
12	SPROCKET, DRIVEN (25B11 X 3/8")	2P-115362	1	2P-115362	1	2P-115362	1
13	SWITCH, FAN MOTOR	2E-200574	2	2E-200574	2	2E-200574	2
14	SWITCH, HIGH LIMIT RESET	2E-200566	1	2E-200566	1	2E-200566	1
15	MOTOR, FAN	2U-200561	1	2U-200561	1	2U-200561	1
16	COVER, CONTROL BOX	GE-402635	1	GD-401636	1	GD-401636	1
17	GUARD, FAN MOTOR	2R-200562	1	2R-200562	1	2R-200562	1
18	SWITCH, SPEED CONTROL	* GE-118064	1	GD-118060	1	GD-118060	1
19	LIGHT, PILOT	2J-200427	1	2J-200427	1	2J-200427	1
20	SWITCH, MASTER ON/OFF	2E-200552	1	2E-200552	1	2E-200552	1
21	KNOB, SPEED CONTROL	2R-200761	1	SP-115360	1	SP-115360	1
22	PANEL, CONTROL SIDE ( <i>L-R</i> )	GE-402638	1	GE-402231	1	GE-402231	1
22a	PANEL, CONTROL SIDE ( <i>R-L</i> )	GE-402639	1	GE-402230	1	GE-402230	1
23	PANEL, CORD SIDE ( <i>L-R</i> )	GE-402156	1	GE-402156	1	GE-402156	1
23a	PANEL, CORD SIDE ( <i>R-L</i> )	GE-402155	1	GE-402155	1	GE-402155	1
24	TRAY, CRUMB	GE-100955	2	GE-100955	2	GE-100955	2
25	TRAY, LOAD-UP	GE-402640	1	GE-100957	1	GE-100957	1
26	TRAY, UNLOAD	GE-100944	1	GE-100978	1	GE-100978	1
27	LEG, 2 1/2" METAL	2R-200716	4	2R-200716	4	2R-200716	4
28	CONTACTOR, 40 AMP	2E-200573	1	2E-200573	1	2E-200573	1
29	PANEL, CONVEYOR EXTENSION	GD-401206	2	GD-401206	2	GD-401206	2
30	* CONTROL, MOTOR BOARD ANACON	* 2U-200579	1	N/A	N/A	N/A	N/A
31	* BUSHING, FRONT, SPRING LOADED	* 2P-200765	2	N/A	N/A	N/A	N/A
32	* SPRING, CONVEYOR BUSHING	* 2P-200766	2	N/A	N/A	N/A	N/A
33	BLADE, FAN 3"	2R-200721	1	2R-200721	1	2R-200721	1
34	CORD, FAN MOTOR	2E-200387	1	2E-200387	1	2E-200387	1
35	LABEL, CONTROL PANEL	2M-200890	1	2M-200890	1	2M-200890	1
NS	CORD, 10/3, <i>NO PLUG</i>	GE-140062	1	GE-140062	1	GE-140062	1
NS	TERMINAL BLOCK, 12 POS., LARGE	2E-200554	4	2E-200554	4	2E-200554	3
NS	JUMPER, 12 POSITION, LARGE	2B-200557	3	2B-200557	3	2B-200557	3
NS	TERMINAL BLOCK, MAIN POWER	SP-115402	1	SP-115402	1	SP-115402	1
NS	MAGNET, BAKE AID	2M-200816	1	2M-200816	1	2M-200816	1
NS	BRACKET, BAKE AID MAGNET	GE-402525	1	GE-402525	1	GE-402525	1
NS	RACK, BELT SUPPORT	GE-100713	1	GE-100713	1	GE-100713	1
<b>HEATER TUBES</b>							
KEY	Serial Number Range	0801 to 0102		0999 to 0701		0998 to 0899	
		DESCRIPTION	PART #	QTY	PART #	QTY	PART #
2	208V Top Quartz (198010=450W, 104V, 22.5 ohm)	GE-198010	6	GE-198010	6	GE-198002	6
2a	208V Bottom Quartz (500W, 208V, 81.3 ohm)	GE-198002	6	GE-198002	6	GE-198002	6
2b	208V Bottom Metal (cal-rod)	2N-209195	6	2N-209195	6	2N-209195	6
2c	240V Top Quartz (198011=450W, 120V, 30.10 ohm)	GE-198011	6	GE-198011	6	GE-198005	6
2d	240V Bottom Quartz (500W, 240V, 108.3 ohm)	GE-198005	6	GE-198005	6	GE-198005	6
2e	240V Bottom Metal (cal-rod)	2N-209196	6	2N-209196	6	2N-209196	6
2c	220V Top Quartz			ZZ-197884	6		
2d	220V Bottom Metal (cal-rod)			2N-209196	6		

\* PART SECIFIC TO MM14-3