



ISO 9001 : 2000 REGISTERED

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**OPERATOR'S MANUAL
HOLMAN CONVEYOR OVENS
MODEL 314HXM**

**FOR SERVICE INFORMATION
U.S. AND CANADA CALL: 1-800-807-9054
24 HOURS/DAY 7 DAYS/WEEK**

TABLE OF CONTENTS

UNCRATING AND INSPECTION	PAGE 1
ASSEMBLY AND INSTALLATION	PAGE 1, 2, & 3
STACKING INSTRUCTIONS	PAGE 3
OPERATION	PAGE 4
CLEANING PROCEDURES	PAGE 4
TROUBLESHOOTING GUIDE	PAGE 5, 6, & 7,
MAINTENANCE PROCEDURES	PAGE 8, 9, & 10
PARTS LIST/EXPLODED VIEW	PAGE 11

DRAWINGS

ADJ. HEAT SHIELDS, FRONT VIEW	PAGE 2
LOAD AND UNLOAD TRAYS	PAGE 3 or 4
HEAT REFLECTOR/CRUMB TRAYS	PAGE 6
DRIVE SYSTEM	PAGE 7
HEATER TUBE & FAN MOTOR INSTALLATION	PAGE 8
WIRING DIAGRAM SINGLE PHASE, 208/240 VOLT	PAGE 12
WIRING DIAGRAM THREE PHASE, 208/240 VOLT	PAGE 12a

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2M-HG0346

Electric Cooking Equipment for the Food Service Industry

Conveyor Toasters & Ovens Cheese Melters Broilers Pretzel Bakers

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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.

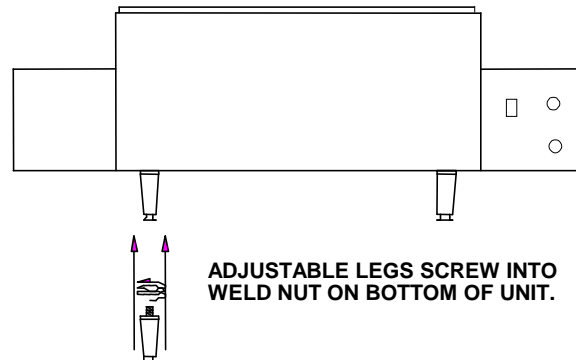
The following should be included in the container:

- A. 1ea. Conveyor oven with heaters and conveyor belt in place. **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.

NOTE: LEGS MUST BE INSTALLED BEFORE OPERATING THIS UNIT!



- B. Anti Skid pads are available at no charge and may be adhered to the foot section of each leg to prevent sliding. Contact the Holman Cooking Equipment Factory Service Team at **1-800-807-9054** for details.

CAUTION: Use of these pads is 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) Have an electrician connect input power to the unit in accordance with local electrical codes.

ASSEMBLY AND INSTALLATION CONT. ON PAGE 2

**OPERATOR'S MANUAL
HOLMAN CONVEYOR OVENS
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ASSEMBLY AND INSTALLATION (CONT)

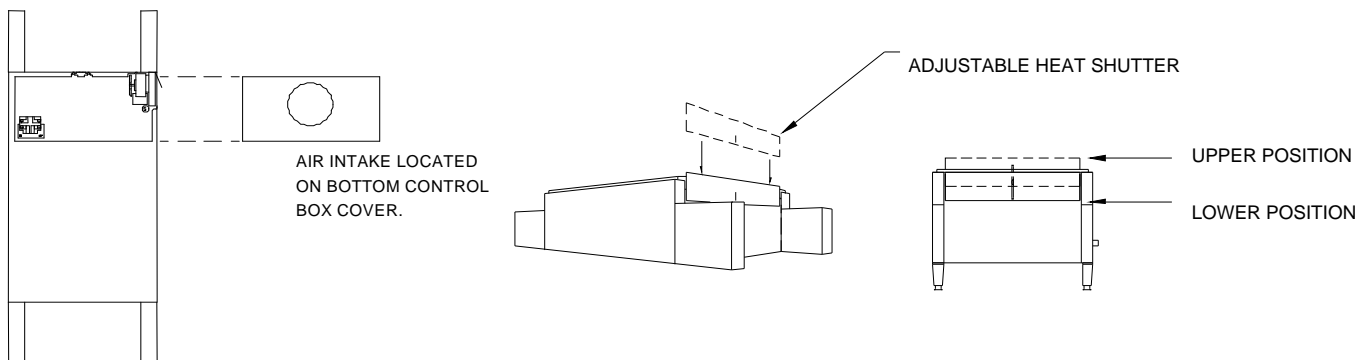
WARNING: MAKE SURE ALL INPUT POWER IS OFF BEFORE INSTALLING/REMOVING ANY PARTS.

WARNING: BEFORE INSTALLING UNIT (S), CHECK WITH LOCAL POWER COMPANY TO DETERMINE ACTUAL VOLTAGE AT JOB SITE. NEVER PLUG A 208 VOLT UNIT INTO 240 VOLTS OR A 240 VOLT UNIT INTO 208 VOLTS.

WARNING: BE ABSOLUTELY SURE THE GROUND 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.

D. 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.

E. 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. **(To ensure proper airflow into the air intake area, the legs must be on the unit.)**



F. 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.

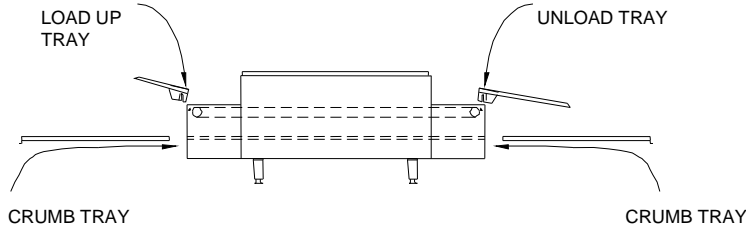
G. If a problem is discovered during start up procedures, immediately switch the Master On/Off switch to the **OFF** position and notify the **Holman Cooking Equipment Factory Service Team at 1-800-807-9054 (24 hours 7 days a week). Service will be arranged for you.**

ASSEMBLY AND INSTALLATION CONT. ON PAGE 3

**OPERATOR'S MANUAL
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MODEL 314HXM**

ASSEMBLY AND INSTALLATION (CONT.)

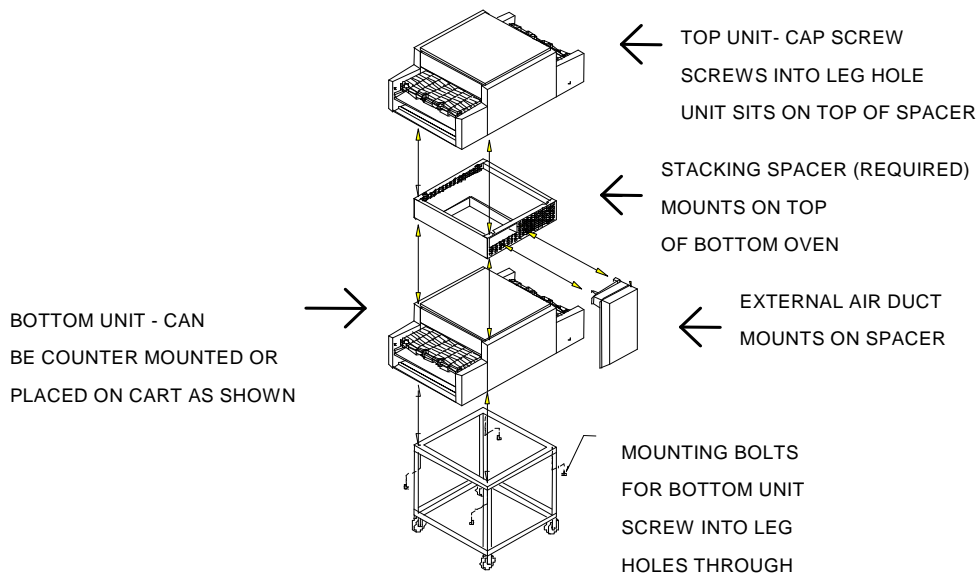
H. Install load and unload trays as shown.



I. Stacking Instructions

When stacking two Holman Proveyor 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 hole 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) Install cap screws (4ea.) into leg holes on top oven.
- 5) Place top oven on stacking spacer. Cap screws will fit 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.**



**OPERATOR'S MANUAL
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OPERATION

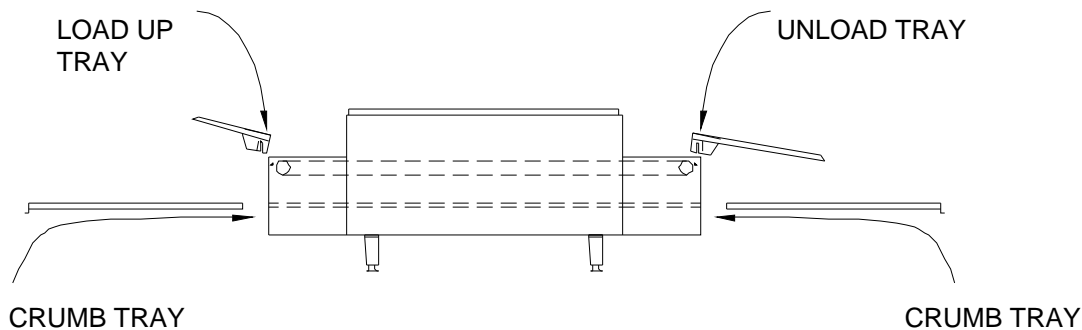
- A. Switch Master On/Off switch to the ON position and turn Variable Speed Control to fastest time setting.
- B. Allow 10 to 15 minutes for unit(s) to warm up.

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.

WARNING: HIGH VOLTAGES ARE PRESENT IN THESE UNITS. BE SURE ALL INPUT POWER IS OFF 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, **(WASH WITH HOT SOAPY WATER ONLY)**.
- C. For lightly soiled conveyor surfaces a damp cloth or scotch pad can be used without removing the conveyor belt. (daily)

NOTE: For heavily soiled conveyor surfaces a **STIFF WIRE** brush may be used to clean the conveyor belt.

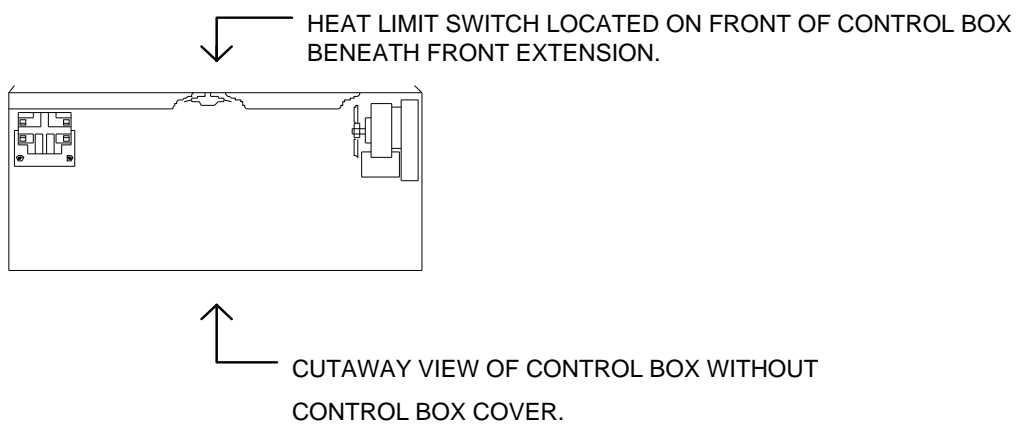
NOTE: LUBRICATION OF DRIVE CHAIN WITH A GRAPHITE BASED LUBRICANT IS REQUIRED AS PERIODIC MAINTENANCE. CALL THE HOLMAN COOKING EQUIPMENT FACTORY SERVICE TEAM AT 1-800-807-9054 FOR DETAILS.

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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 FREELY.

- 1) **MAKE SURE AIR INTAKE ON BOTTOM OF UNIT IS FREE OF OBSTRUCTIONS.**
- 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.
- 3) For further assistance call the **Holman Cooking Equipment Factory Service Team at: 1-800-807-9054 (24 hours/day 7days a week).**

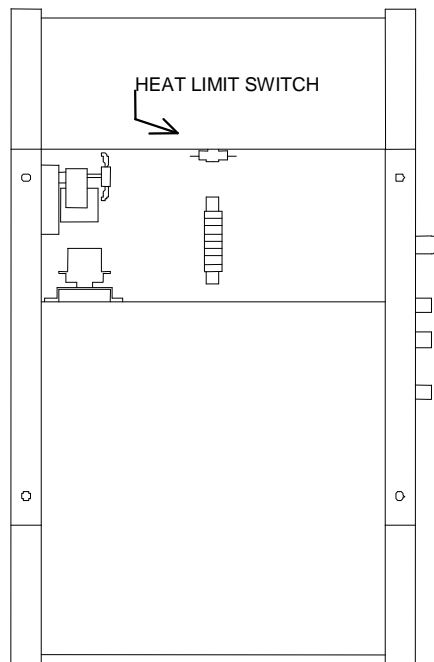
TROUBLESHOOTING GUIDE CONT. ON PAGE 6

**OPERATOR'S MANUAL
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TROUBLESHOOTING GUIDE CONT.

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 190F (88C). This Limit Switch can be reset manually by pushing the button in the center of the switch, which is located as shown below.

C. HEAT LIMIT SWITCH

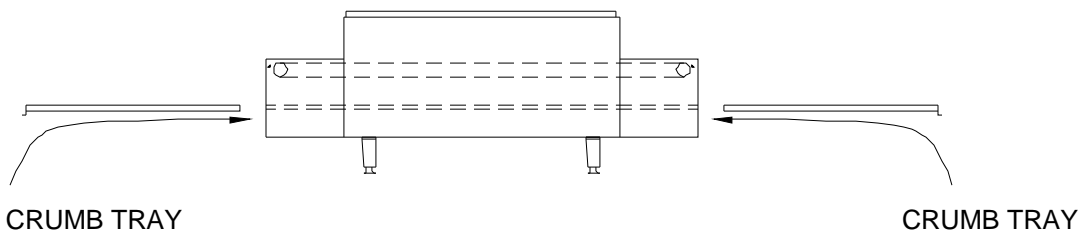


THE HEAT LIMIT SWITCH CAN BE ACTIVATED IF THERE IS NOT A PROPER AMOUNT OF AIR FLOW BEING GENERATED BY THE COOLING FAN. IF THIS OCCURS:

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.

TROUBLESHOOTING GUIDE CONT. ON PAGE 7

**OPERATOR'S MANUAL
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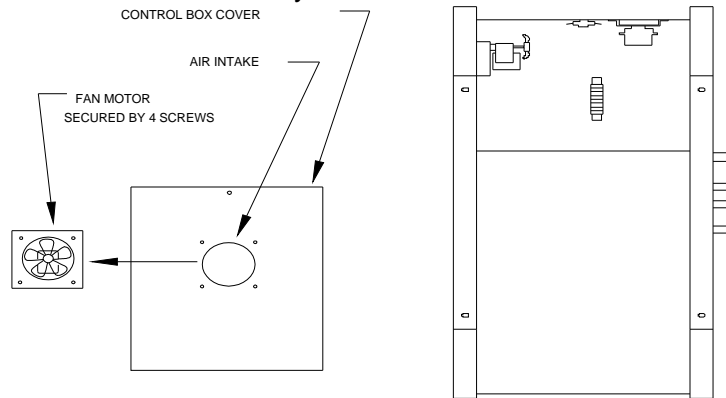
TROUBLESHOOTING GUIDE CONT.

D. CONVEYOR WILL NOT TURN, UNIT HEATS PROPERLY.

1) DISCONNECT UNIT FROM POWER SOURCE.

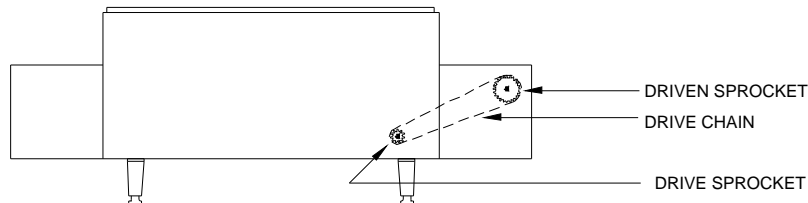
2) Check to see if there are obstructions in the conveyor system that may cause a jam.

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 cord side panel and Drive Motor Sprocket (see below). Manually move Conveyor Belt to check for mechanical binding. If Conveyor moves freely, contact the **Holman Cooking Equipment Factory Service Team at 1-800-807-9054** as Drive Motor and/or Variable Speed Control may have to be replaced (refer to page 10 for instructions on replacing drive motor).



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

1) Call the **Holman Cooking Equipment Factory Service Team at 1-800-807-9054** as Variable Speed Control may have to be replaced.

F. COOLING FAN DOES NOT START.

1) DISCONNECT UNIT FROM POWER SOURCE.

2) Remove Control Box Cover and check Fan Blade for obstructions.

3) Check Fan Motor Cord for secure connection.

4) Call the **Holman Cooking Equipment Factory Service Team at 1-800-807-9054** as the Fan Switch and/or Fan Motor may have to be replaced.

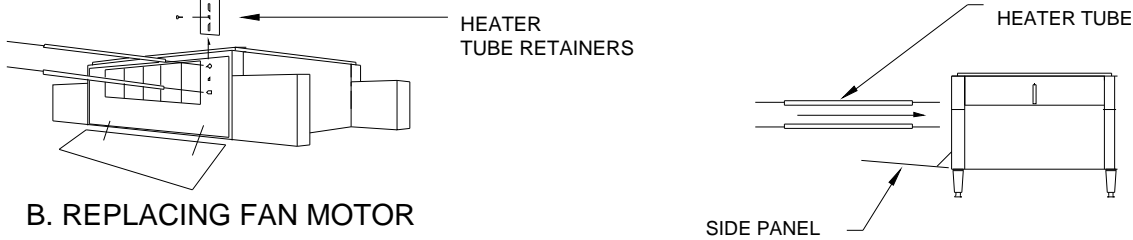
**OPERATOR'S MANUAL
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MAINTENANCE PROCEDURES

A. REPLACING HEATER TUBES (see below)

1) DISCONNECT UNIT FROM POWER SOURCE.

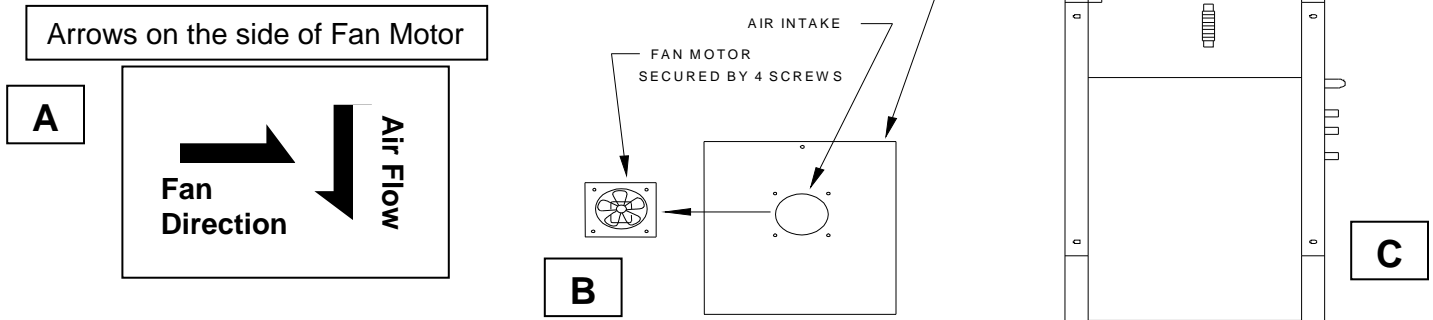
- 2) Remove left and right side panels by removing the truss head screws in each panel. Pull the top of each panel out slightly and lift up.
- 3) Disconnect heater tube wires, which require replacement from terminal block connections.
- 4) Remove Heater Tube Retainer by removing retainer screw with washer (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. Call the **Holman Cooking Equipment Factory Service Team at 1-800-807-9054** assistance is required.



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 that hold Fan Motor and grill to cover.
- 5) On the side of the fan motor there are two arrows. One facing down (air flow) and the other facing the side (fan direction) (see below Fig. A) Attach the replacement motor to the control box cover with the up and down arrow pointed towards the internal controls. The label on the motor should also face towards the internal controls and the side arrow should be pointed left. Secure the motor and grill to the control box cover with the screws.
- 6) Reconnect power supply cord to Fan Motor.
- 7) Replace control box cover.



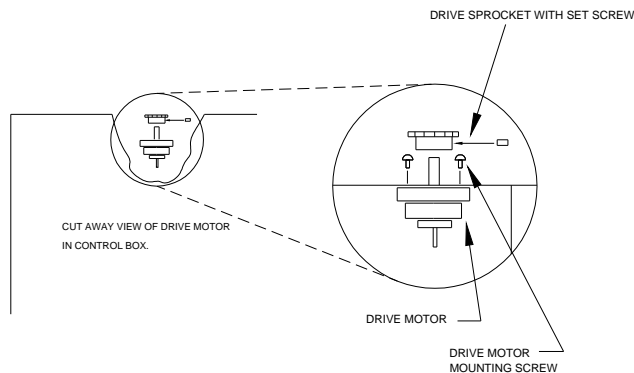
**OPERATOR'S MANUAL
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MAINTENANCE PROCEDURES CONT.

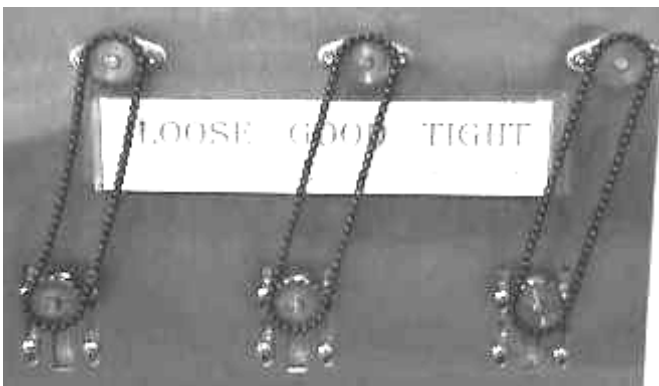
C. REPLACING BELT DRIVE MOTOR

1) DISCONNECT UNIT FROM POWER SOURCE.

- 2) Remove power cord side panel and control box cover.
- 3) Remove sprocket from motor shaft by loosening the allen screw on the sprocket.
- 4) Disconnect the leads from the Drive Motor 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. Align drive and driven sprockets evenly before tightening to prevent binding. Tighten the Drive Motor screws.



- 9) Rewire the Drive Motor as described in step 4 above. Replace the panels and test for proper operation.

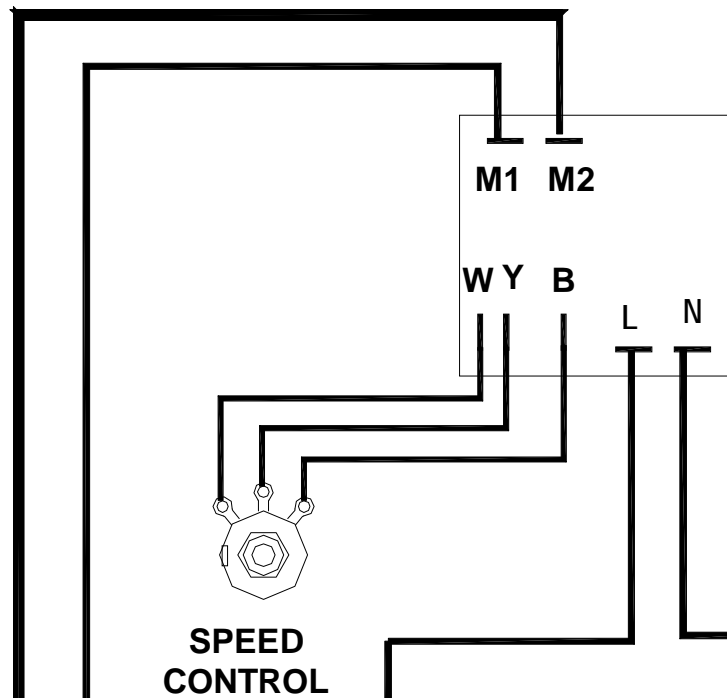
**OPERATOR'S MANUAL
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MAINTENANCE PROCEDURES CONT.

D. REPLACING THE VARIABLE SPEED CONTROL (see below)

1) DISCONNECT UNIT FROM POWER SOURCE.

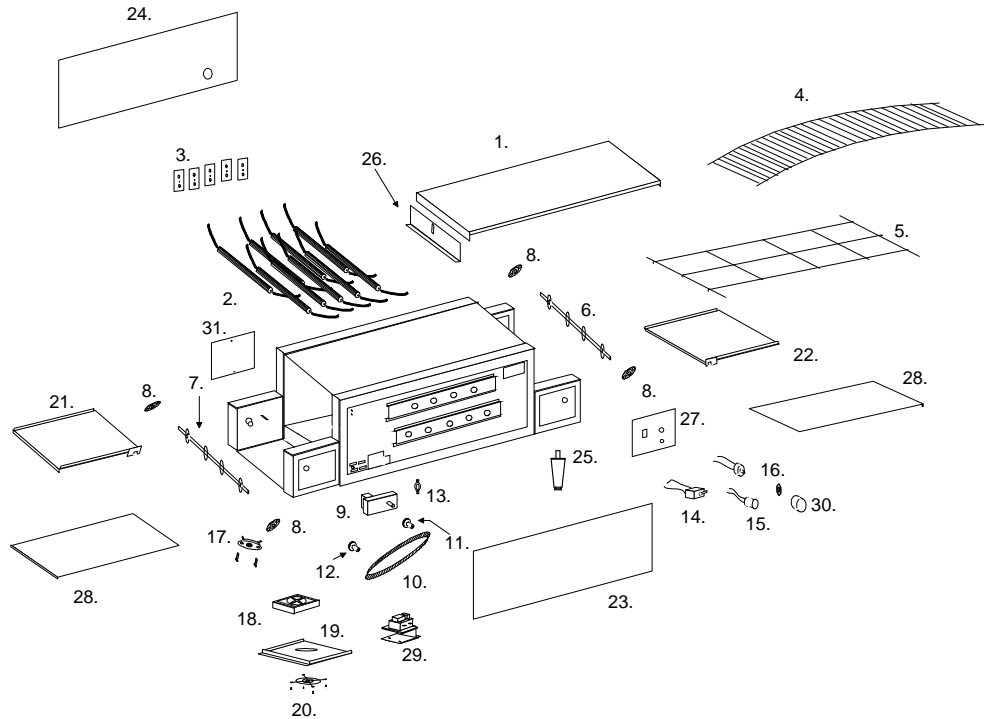
- 2) Turn unit over and lay on top cover with the legs pointing at the ceiling.
- 3) Remove Phillips head screws holding control box cover in place. Lift and slide forward to remove cover.
- 4) Locate the motor controller mounted in the top center of the control box.
- 5) Wires from Variable Speed Control go in to terminals located on the controller. **Note the location of the colored leads** and remove wires for Variable Speed Control.
- 6) Disconnect the wires from terminals marked L, N, M1 and M2 (**note which wires go to each terminal**).



- 7) Remove Phillips head screws (4ea.) holding controller in place.
- 8) Mount replacement control in the same manner as the old control.
- 9) Reconnect wires removed from old control (refer to diagram on page 13 for wire locations).
- 10) Replace control box cover, place unit on legs and connect to power supply. Test for proper operation.
- 11) Call the Holman Factory Service Team at **800-807-9054** if assistance is required.

**OPERATOR'S MANUAL
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PARTS LIST

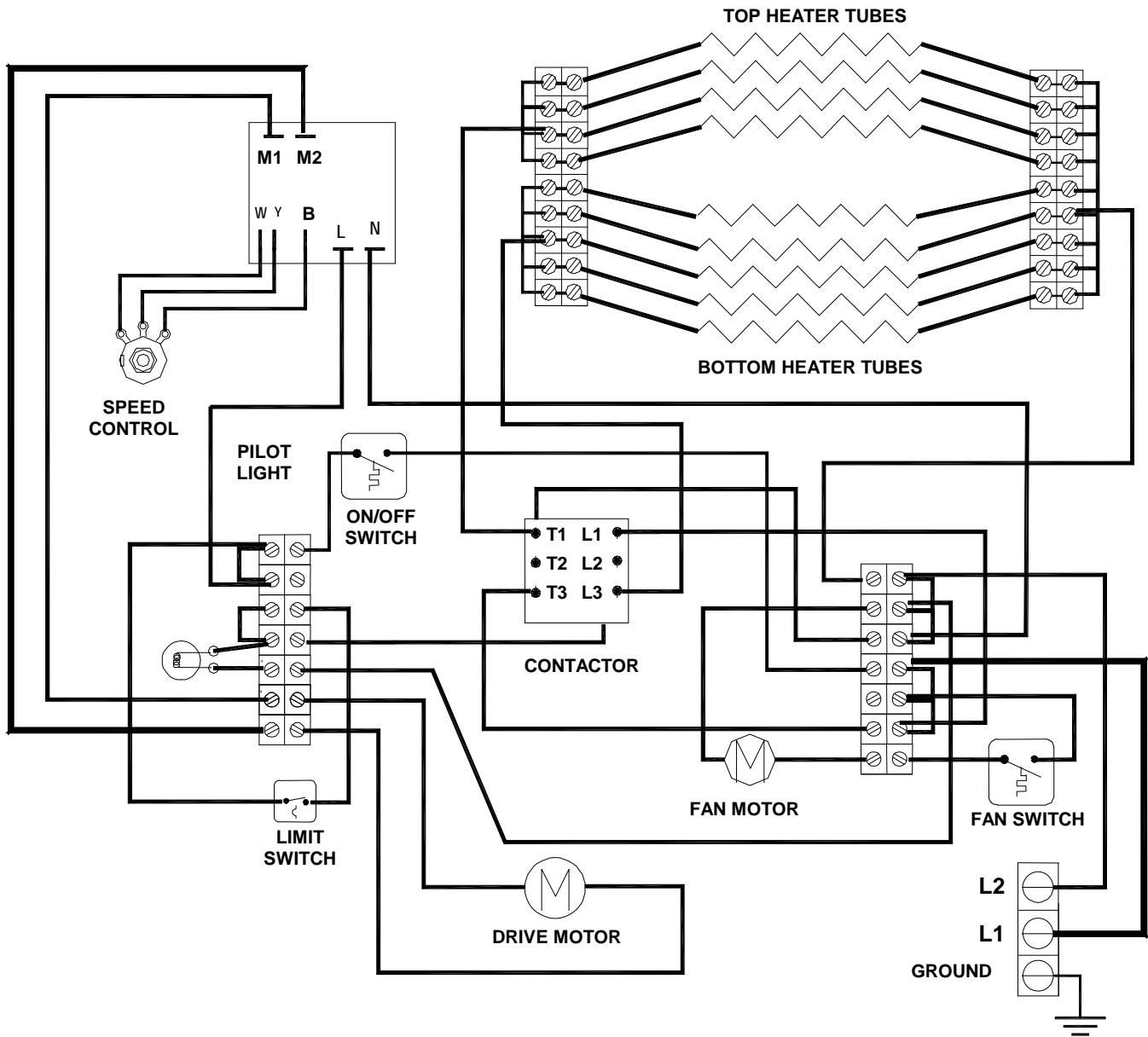


No.	PART No.	DESCRIPTION	Qty
1	GD-401168	Cover, Top	1
2	GD-197991	Heater Tube, Top, 208V	4
	GE-197988	Heater tube, Bottom 208V	5
2a.	GE-197992	Heater Tube, Top, 240V	4
	GE-197990	Heater Tube, Bottom 240V	5
3	GD-401232	Retainer, Heater Tube	5
4	GD-160008	Conveyor Belt	1
5	GD-100707	Belt Support Rack	1
6	GD-101251	Idler Shafts	1
7	GD-101252	Drive Shaft	1
8	GB-112262	Bearing	4
9	2U-200504	Drive Motor	1
10	GD-150023	Drive Chain	1
11	2P-200652	Driven Sprocket 3/8"	1
12	2P-200646	Drive sprocket 5/16"	1
13	2E-200574	Fan Switch	1
14	2E-200552	On/Off Switch/Rocker Swt	1
15	2J-200427	Pilot Light	1

No.	PART No.	DESCRIPTION	Qty
16	GB-118062	Speed control	1
17	2E-200566	Reset Switch	1
18	2U-200561	Fan Motor	1
19	GD-401636	Cover, Control Box	1
20	2R-200562	Grill, Fan Motor	1
21	GD-100403	Load Up Tray	1
22	GD-101403	Unload Tray	1
23	GD-416764	Side Panel	1
24	GD-401376	Side Panel, Cord	1
25	2R-200716	Leg, Metal, 2"	4
26	GD-401233	Shutter, Heat	2
27	GD-416162	Panel, Controls	1
28	GD-401227	Crumb Tray	2
29	2E-Z8966	Contactora 50 AMP 208/240V, HXM	1
	PS-Z14660	Contactora 40 AMP 208/240V, HXMA	1
30	SP-115360	Knob, Speed control	1
31	GD-401206	Cover, Extensions	3
	2U-200579	Motor Controller (not shown)	1

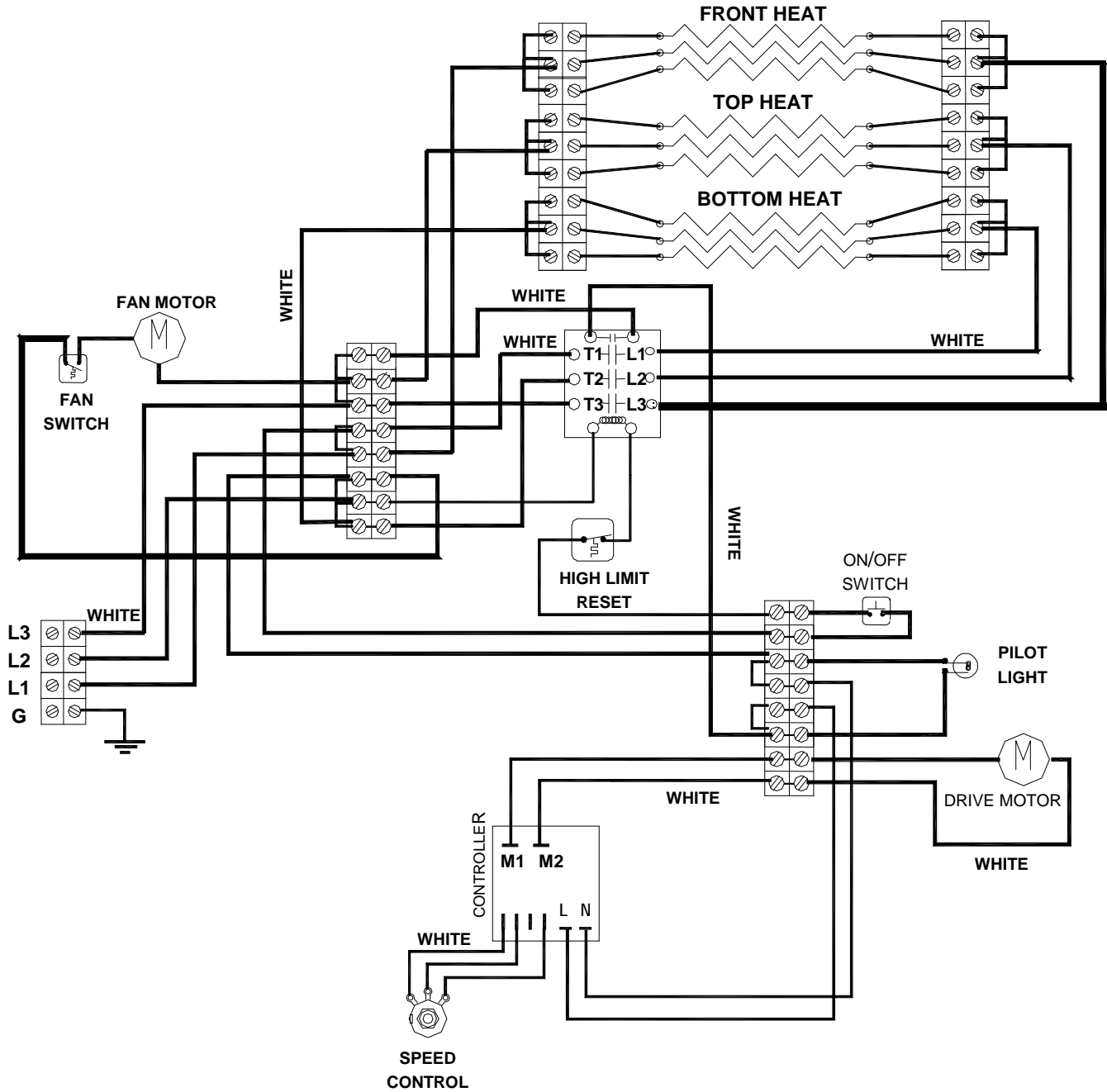
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WIRE DIAGRAM FOR MODEL 314HXM



OPERATOR'S MANUAL
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WIRE DIAGRAM MODEL 314HXM THREE (3) PHASE



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