

**Lang**<sup>TM</sup>

A Division of Star Mfg. Int'l, Inc.

# Electric Cruise Line Single Broiler

w/ Cabinet Base

CLB36-1-400V

CLB36-1-440V

## Installation and Operation Instructions

2M-W1256 Rev.A 1/2/2009



CLB36-1-440V



## SAFETY SYMBOL



These symbols are intended to alert the user to the presence of important operating and maintenance instructions in the manual accompanying the appliance.

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## RETAIN THIS MANUAL FOR FUTURE REFERENCE

### NOTICE

Using any part other than genuine Star factory supplied parts relieves the manufacturer of all liability.

Star reserves the right to change specifications and product design without notice. Such revisions do not entitle the buyer to corresponding changes, improvements, additions or replacements for previously purchased equipment.

Due to periodic changes in designs, methods, procedures, policies and regulations, the specifications contained in this sheet are subject to change without notice. While Star Manufacturing exercises good faith efforts to provide information that is accurate, we are not responsible for errors or omissions in information provided or conclusions reached as a result of using the specifications. By using the information provided, the user assumes all risks in connection with such use.

## MAINTENANCE AND REPAIRS

Contact your local authorized service agent for service or required maintenance. Please record the model number, serial number, voltage and purchase date in the area below and have it ready when you call to ensure a faster service.

Model No. \_\_\_\_\_

Serial No. \_\_\_\_\_

Voltage \_\_\_\_\_

Purchase Date \_\_\_\_\_

### Authorized Service Agent

Reference the listing provided with the unit

or

for an updated listing go to:

**Website:** [www.star-mfg.com](http://www.star-mfg.com)  
**E-mail** [Service@star-mfg.com](mailto:Service@star-mfg.com)  
**Telephone:** (800) 807-9054 Local (314) 781-2777

### The Star Service Help Desk

**Business Hours:** 8:00 am to 4:30 p.m. Central Standard Time

**Telephone:** (800) 807-9054 Local (314) 781-2777

**Fax:** (800) 396-2677 Local (314) 781-2714

**E-mail** [Parts@star-mfg.com](mailto:Parts@star-mfg.com)  
[Service@star-mfg.com](mailto:Service@star-mfg.com)  
[Warranty@star-mfg.com](mailto:Warranty@star-mfg.com)

**Website:** [www.star-mfg.com](http://www.star-mfg.com)

**Mailing Address:** Star Manufacturing International Inc.  
10 Sunnen Drive  
St. Louis, MO 63143  
U.S.A

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**CAUTION:** THE BROILER WEIGHS 370 LBS. (167.83 kg). FOR SAFE HANDLING, INSTALLER SHOULD OBTAIN HELP AS NEEDED, OR EMPLOY APPROPRIATE MATERIALS HANDLING EQUIPMENT (SUCH AS A FORKLIFT, DOLLY, OR PALLET JACK) TO REMOVE THE UNIT FROM THE SKID AND MOVE IT TO THE PLACE OF INSTALLATION.



**CAUTION:** ANY STAND, COUNTER OR OTHER DEVICE ON WHICH BROILER WILL BE LOCATED MUST BE DESIGNED TO SUPPORT THE WEIGHT OF THE BROILER (370 LBS.).



**CAUTION:** SHIPPING STRAPS ARE UNDER TENSION AND CAN SNAP BACK WHEN CUT.



**DANGER:** THIS APPLIANCE MUST BE GROUNDED AT THE TERMINAL PROVIDED. FAILURE TO GROUND THE APPLIANCE COULD RESULT IN ELECTROCUTION AND DEATH.



**WARNING:** INSTALLATION OF THE UNIT MUST BE DONE BY PERSONNEL QUALIFIED TO WORK WITH ELECTRICITY. IMPROPER INSTALLATION CAN CAUSE INJURY TO PERSONNEL AND/OR DAMAGE TO EQUIPMENT. UNIT MUST BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE CODES.



**NOTICE:** The data plate is located behind the access cover to the right of the unit. The broiler voltage, wattage, serial number, wire size, and clearance specifications are on the data plate. This information should be carefully read and understood before proceeding with the installation.



**NOTICE:** The installation of any components such as a vent hood, grease extractors, fire extinguisher systems, must conform to their applicable National, State and locally recognized installation standards.



**CAUTION:** ALWAYS KEEP THE AREA NEAR THE APPLIANCE FREE FROM COMBUSTIBLE MATERIALS.



**CAUTION:** KEEP FLOOR IN FRONT OF EQUIPMENT CLEAN AND DRY. IF SPILLS OCCUR, CLEAN IMMEDIATELY, TO AVOID THE DANGER OF SLIPS OR FALLS.



**WARNING:** KEEP WATER AND SOLUTIONS OUT OF CONTROLS. NEVER SPRAY OR HOSE CONTROL CONSOLE, ELECTRICAL CONNECTIONS, ETC.



**CAUTION:** MOST CLEANERS ARE HARMFUL TO THE SKIN, EYES, MUCOUS MEMBRANES AND CLOTHING. PRECAUTIONS SHOULD BE TAKEN TO WEAR RUBBER GLOVES, GOGGLES OR FACE SHIELD AND PROTECTIVE CLOTHING. CAREFULLY READ THE WARNING AND FOLLOW THE DIRECTIONS ON THE LABEL OF THE CLEANER TO BE USED.



**NOTICE:** Service on this, or any other, LANG appliance must be performed by qualified personnel only. Consult your authorized service station directory or call the factory at 1-800-807-9054, or [WWW.STAR-MFG.COM](http://WWW.STAR-MFG.COM) for the service station nearest you.



**WARNING:** BOTH HIGH AND LOW VOLTAGES ARE PRESENT INSIDE THIS APPLIANCE WHEN THE UNIT IS PLUGGED/WIRED INTO A LIVE RECEPTACLE. BEFORE REPLACING ANY PARTS, DISCONNECT THE UNIT FROM THE ELECTRIC POWER SUPPLY.



**CAUTION:** USE OF ANY REPLACEMENT PARTS OTHER THAN THOSE SUPPLIED BY LANG OR THEIR AUTHORIZED DISTRIBUTORS CAN CAUSE BODILY INJURY TO THE OPERATOR AND DAMAGE TO THE EQUIPMENT AND WILL VOID ALL WARRANTIES.



# UNPACKING

## **3.1 Receiving the Broiler**

Upon receipt, check for freight damage, both visible and concealed. Visible damage should be noted on the freight bill at the time of delivery and signed by the carrier's agent. Concealed loss or damage means loss or damage, which does not become apparent until the merchandise has been unpacked. If concealed loss or damage is discovered upon unpacking, make a written request for inspection by the carrier's agent within 15 days of delivery. All packing material should be kept for inspection. Do not return damaged merchandise to Lang Manufacturing Company. File your claim with the carrier.

## **3.2 Location**

Prior to un-crating, move the broiler as near its intended location as practical. The crating will help protect the unit from the physical damage normally associated with moving it through hallways and doorways.

## **3.3 Un-crating**

The broiler is packaged on a pallet, wrapped in plastic to protect from moisture and surrounded by a wooden frame. Remove the wood crating carefully. Improper use of tools can result in damage to the equipment. Remove and discard plastic wrap. Remove and discard desiccant bags placed inside broiler cavity.

The broiler rack frame and rack are secured for shipping purposes and for safety, and should remain secured until unit is at its final location.

Legs, where applicable, are packed inside broiler cavity or cabinet base and should remain there until unit is at the final installation location.

The unit can be safely lifted from bottom with forklift or straps. Use extreme care and follow proper safety procedure regardless of method used and be aware of gravity center, especially with banks of multiple units.



**CAUTION:** THE BROILER WEIGHS 370 LBS. (167.83 kg). FOR SAFE HANDLING, INSTALLER SHOULD OBTAIN HELP AS NEEDED, OR EMPLOY APPROPRIATE MATERIALS HANDLING EQUIPMENT (SUCH AS A FORKLIFT, DOLLY, OR PALLET JACK) TO REMOVE THE UNIT FROM THE SKID AND MOVE IT TO THE PLACE OF INSTALLATION.

**CAUTION:** ANY STAND, COUNTER OR OTHER DEVICE ON WHICH BROILER WILL BE LOCATED MUST BE DESIGNED TO SUPPORT THE WEIGHT OF THE BROILER (370 LBS.).

**CAUTION:** SHIPPING STRAPS ARE UNDER TENSION AND CAN SNAP BACK WHEN CUT.

Remove broiler from skid and place in intended location.

# INSTALLATION

**DANGER:** THIS APPLIANCE MUST BE GROUNDED AT THE TERMINAL PROVIDED. FAILURE TO GROUND THE APPLIANCE COULD RESULT IN ELECTROCUTION AND DEATH.



**WARNING:** INSTALLATION OF THE UNIT MUST BE DONE BY PERSONNEL QUALIFIED TO WORK WITH ELECTRICITY. IMPROPER INSTALLATION CAN CAUSE INJURY TO PERSONNEL AND/OR DAMAGE TO EQUIPMENT. UNIT MUST BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE CODES.



**NOTICE:** The data plate is located behind the access cover to the right of the unit. The range voltage, wattage, serial number, wire size, and clearance specifications are on the data plate. This information should be carefully read and understood before proceeding with the installation.



**NOTICE:** The installation of any components such as a vent hood, grease extractors, fire extinguisher systems, must conform to their applicable National, State and locally recognized installation standards.



## **4.1 Electrical Connection**

Electrical connection must be made behind the control compartment in the cabinet base. The electrical connection must be made in accordance with local codes or in the absence of local codes with NFPA No. 70 latest edition (in Canada use: CAS STD. C22.1).

Supply wire size must be large enough to carry the amperage load for the appliance being installed. Wire size information can be found on the data plate.

## **4.2 Broiler Voltage**

The Lang Model CLB36-1 operates on 400 or 440 Volts, depending on what voltage the unit is designed to handle. See nameplate for unit's voltage.

# INITIAL START UP

## 5.1 PRE-POWER ON

### Initial Start-up

Before the initial use of the broiler, the unit must be wiped down thoroughly with a dry rag, to remove any oils used in manufacturing. Also the unit must be thoroughly allowed to dry itself out. This is done by setting the thermostat to 350°. Allow the range oven to heat until all vapor and condensation has been eliminated. For best results allow the oven to thoroughly dry out. Allow 8 to 12 hours for this process. Note: There may be a small amount of smoke from the unit for the first couple of hours of use, this is normal.

## OPERATION

**CAUTION:** ALWAYS KEEP THE AREA NEAR THE APPLIANCE FREE FROM COMBUSTIBLE MATERIALS.

**CAUTION:** KEEP FLOOR IN FRONT OF EQUIPMENT CLEAN AND DRY. IF SPILLS OCCUR, CLEAN IMMEDIATELY, TO AVOID THE DANGER OF SLIPS OR FALLS.



### 6.1 Broiler Controls

The controls are located on the right side of the unit. There are two switches. One on top and one on bottom. The top one controls the front half of the broiler, while the bottom one controls the rear half. There are three positions on each switch: Low, Off, & High.

The broiler rack is adjustable. There are three rack positions available. To set the position, put the product on the rack, push the lever down and forward into one of the positions.



# CLEANING

## 7.1 After each Meal Cleaning

**WARNING:** KEEP WATER AND SOLUTIONS OUT OF CONTROLS. NEVER SPRAY OR HOSE CONTROL CONSOLE, ELECTRICAL CONNECTIONS, ETC.

**CAUTION:** MOST CLEANERS ARE HARMFUL TO THE SKIN, EYES, MUCOUS MEMBRANES AND CLOTHING. PRECAUTIONS SHOULD BE TAKEN TO WEAR RUBBER GLOVES, GOGGLES OR FACE SHIELD AND PROTECTIVE CLOTHING. CAREFULLY READ THE WARNING AND FOLLOW THE DIRECTIONS ON THE LABEL OF THE CLEANER TO BE USED.

Empty crumb tray daily or when 1/3 full. It is easily removed for washing.

Clean exterior of the broiler with hot water and a mild detergent to maintain a gleaming appearance.

## 7.2 Daily Cleaning

The broiler should be thoroughly cleaned at least once a week in addition to the normal daily cleaning to insure against the accumulation of foreign material. Keep the inside of the broiler and metal deck clean.



# TROUBLESHOOTING

## 9.1 Symptoms

What follows is a chart of Symptoms and Possible Causes to aid in diagnosing faults with the oven.

Refer to the Symptoms column to locate the type of failure then to the Possible Cause for the items to be checked.

To test for a possible cause, refer to the TEST section and locate the Possible Cause then refer to test to identify test procedures.

SYMPTOM	POSSIBLE CAUSE
Broiler will not heat	<ul style="list-style-type: none"><li>Failed element</li><li>Failed 2 heat switch</li></ul>
Product burning	<ul style="list-style-type: none"><li>Product is cooked too long</li></ul>

## 9.2 TESTS

### NOTICE:

Service on this, or any other, LANG appliance must be performed by qualified personnel only. Consult your authorized service station directory or call the factory at 1-800-807-9054, or WWW.STAR-MFG.COM for the service station nearest you.



### WARNING:

**BOTH HIGH AND LOW VOLTAGES ARE PRESENT INSIDE THIS APPLIANCE WHEN THE UNIT IS PLUGGED/WIRED INTO A LIVE RECEPTACLE. BEFORE REPLACING ANY PARTS, DISCONNECT THE UNIT FROM THE ELECTRIC POWER SUPPLY.**



If an item on the list is followed by an asterisk (\*), the work should be done by a factory authorized service representative.

Possible Cause	TEST
Product is cooked too long	<ul style="list-style-type: none"><li>No test available, operational condition</li></ul>
Failed 2 heat switch	<ul style="list-style-type: none"><li>Check poles on switch for continuity</li></ul>
Failed element	<ul style="list-style-type: none"><li>Remove the wires and check for continuity across the element</li></ul>

### CAUTION:

**USE OF ANY REPLACEMENT PARTS OTHER THAN THOSE SUPPLIED BY LANG OR THEIR AUTHORIZED DISTRIBUTORS CAN CAUSE BODILY INJURY TO THE OPERATOR AND DAMAGE TO THE EQUIPMENT AND WILL VOID ALL WARRANTIES.**

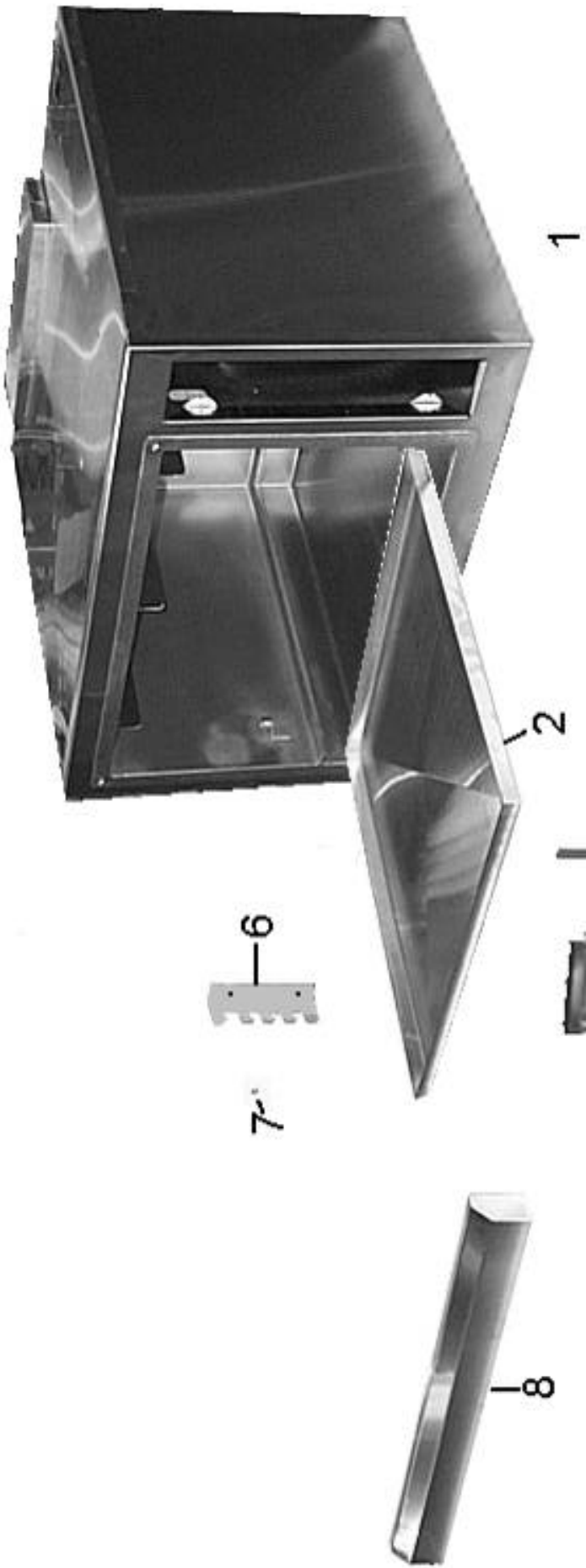


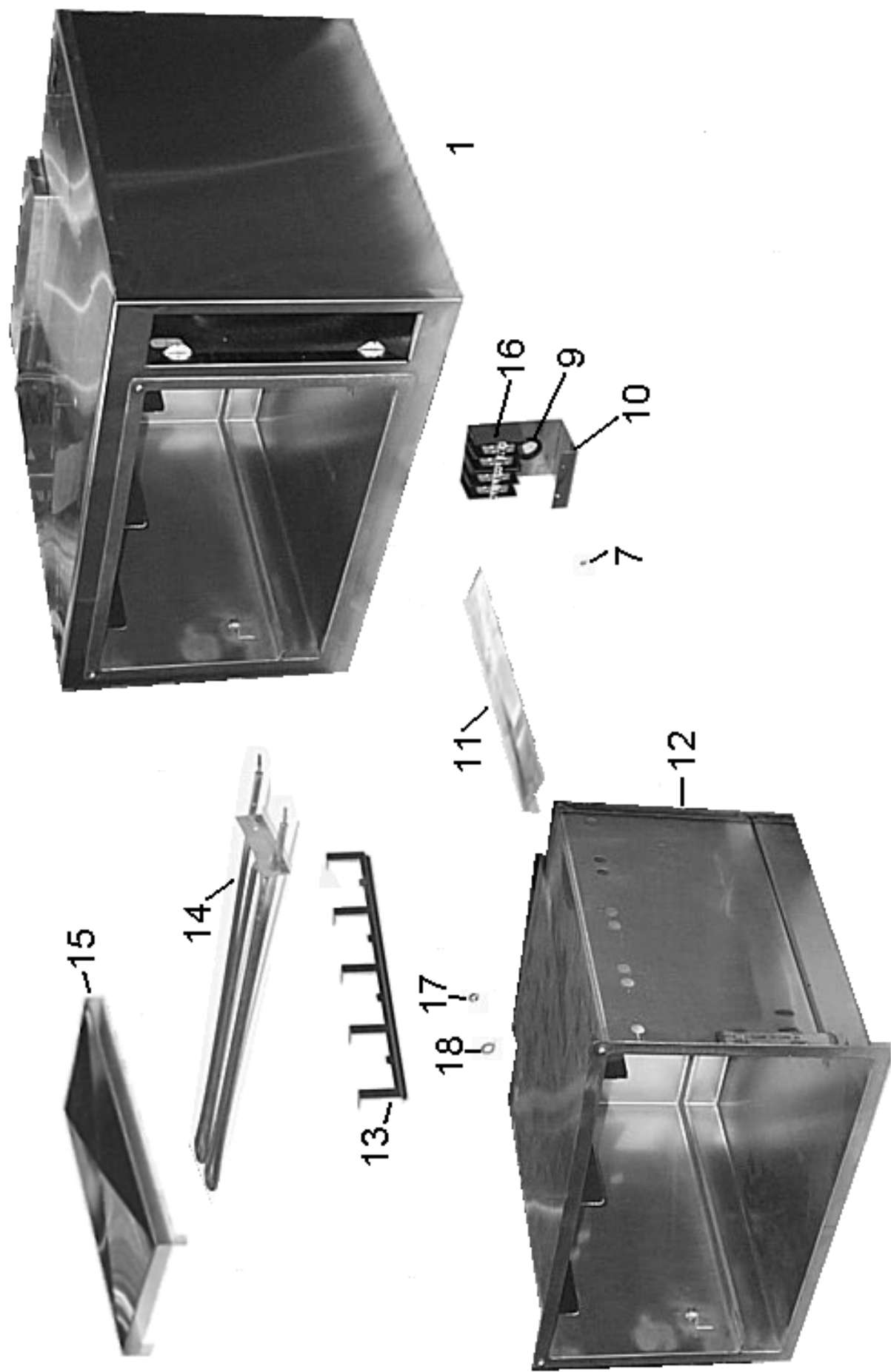
# PARTS LIST

## CLB36-1-400V & CLB36-1-440V

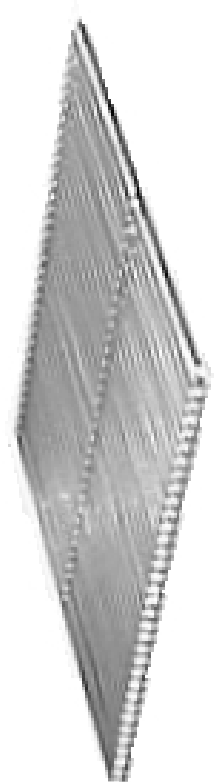
Fig No.	Part No.	Qty	Description
1	NLA	1	Body
2	J9-CLB-226	1	PAN - BROILER
3	1M-72602-04	44	GSKTTPEHITMP1/2X1/16X10YD
4	J9-CLB-225	1	SWITCH PANEL - CLB
5	2R-30304-W32-1	2	KNOB ELECTROSWITCH
6	J9-CLB-319	1	RACK ADJUSTMENT - BROILER
7	2C-20111-09	46	SCRW HXHD CAP 10-32X1/2
8	J9-CLB-212	1	FRONT HOOD - BROILER
9	2K-70801-02	1	SNAP BUSH 1 3/8 SB1375-16
10	J9-CLB-224	1	TERMINAL BLOCK MOUNT -
11	J9-CLB-218	1	HEAT SHIELD - BROILER
12	J9-CLB-001	1	BROILER CAN ASSY
13	OB-CLB-309	3	OBS ELEMENT HOLDER -
14	2N-11100-13	4	ELMNT BROILER CLS 400V
	2N-11100-11	4	ELE BROILR CLS 440V
15	J9-CLB-427	2	ELEMENT HEAT SHIELD -
16	2E-30500-11	2	TRM BLOCK 2 PLE LG 175AMP
17	2C-20303-08	32	NUT HX SS 10-24
18	2C-20203-06	32	WASHER S/S 5/16 SAE FLAT
19	2C-20111-25	6	SCRW HXHD CAP 1/4-20X1.25
20	J9-CLB-310	6	BEARING WASHER - BROILER
21	2P-70202-03	6	BEARING BROILER/FAB ONLY
22	2P-CLB-401	6	BEARING BRACKET SLEVE -
23	2C-20301-29	4	NUT HEX ACORN 1/4-20 S/S
24	J9-CLB-002	1	CARRIAGE ASSY
25	J9-CLB-420	1	HEAT SHIELD ASSY - w/ Clips
26	J9-CLB-425	1	HEAT SHIELD #2 - BROILER
27	2B-50200-80	1	RACK HEAVY DUTY CLB
28	J9-CLB-219	1	REAR FIREWALL SINGLE -
29	J9-CLB-320	1	CAN WIRE SUPPORT
30	J9-CLB-330	1	MAIN STACK ASSY SINGLE
31	J9-CLB-209	1	BACK SINGLE - BROILER
32	J9-CLB-211	2	VENT TRIM - BROILER
33	J9-CLB-244	1	PANEL VENT ASSY - BROILER
34	J9-CLB-243	1	PANEL VENT TOP - BROILER
35	2E-CLB-501	1	WIRE HARNESS SINGLE
36	2E-30304-W32	2	SWT 2 HEAT 25 AMP, Comes with #5 Knob
37	J9-CLB-625	1	C. B. PANEL - BROILER

Highlighted items indicate parts that should have at least quantity of one stocked for spares





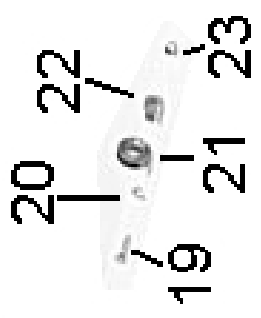
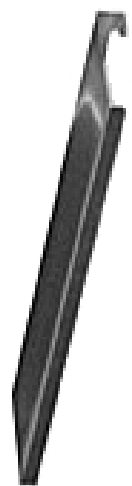
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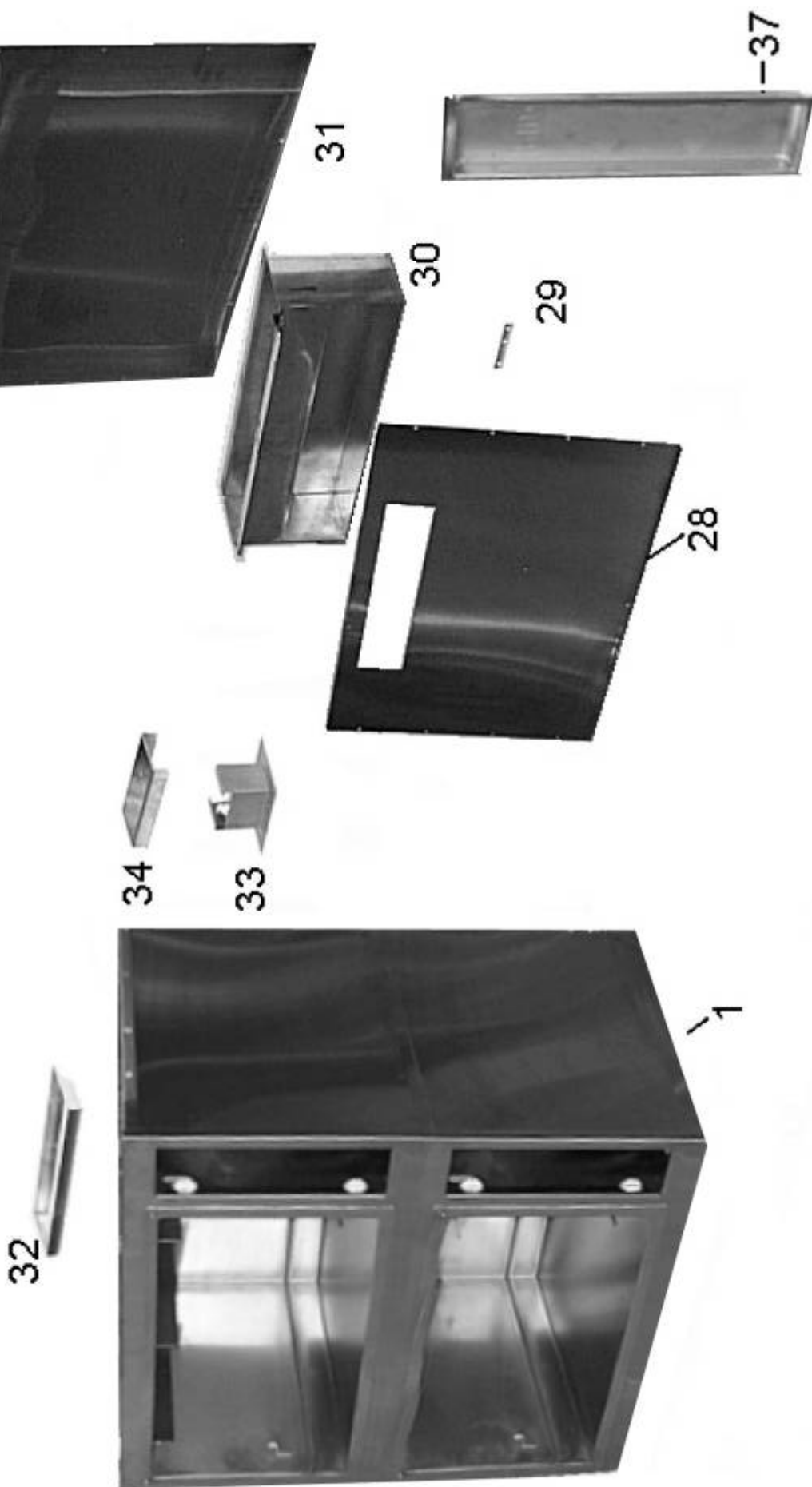


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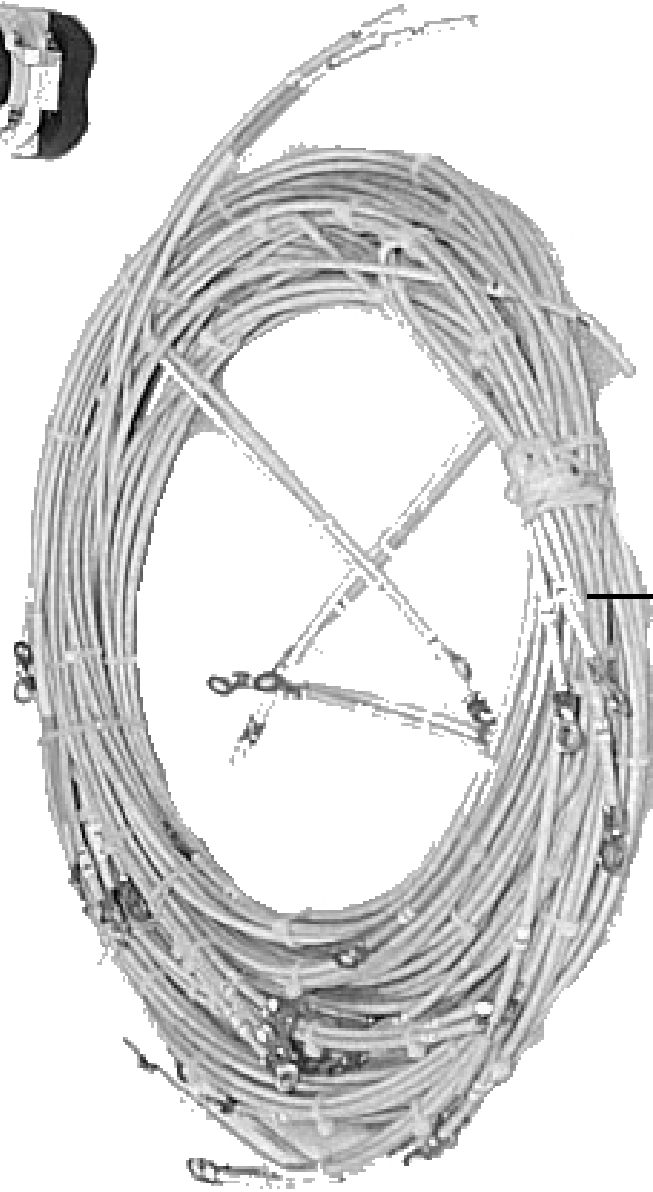
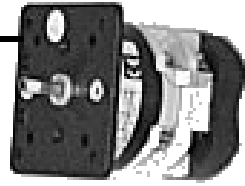


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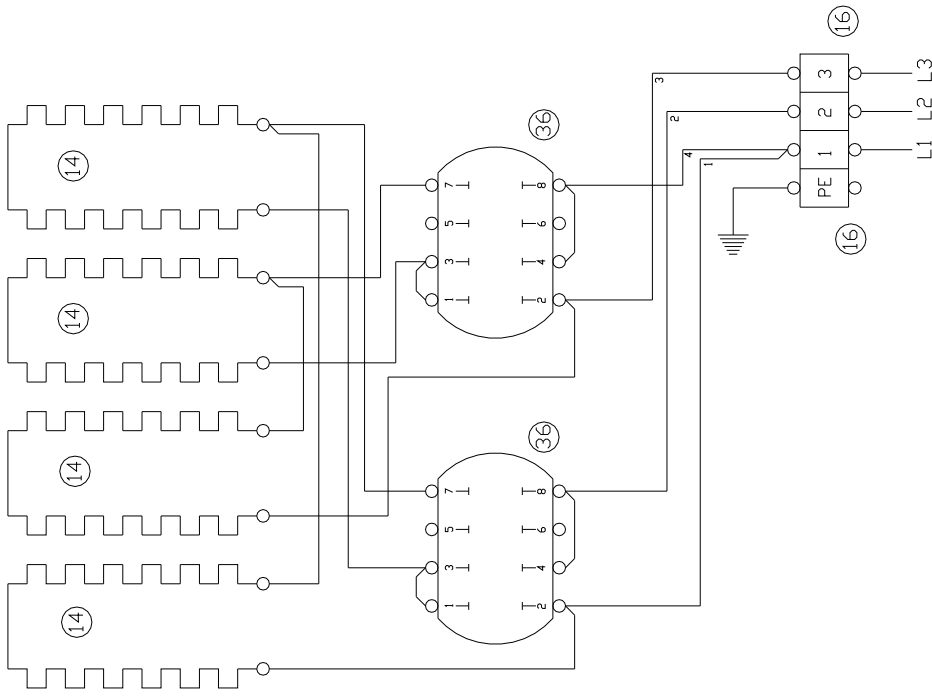


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# WIRING DIAGRAM

REVISION BLOCK			
REV	ECN NO.	DESCRIPTION	DATE



ITEM#	PART#	DESCRIPTION
14	11100-11	ELEMENT
16	30500-11	LARGE 2 POLE TERMINAL BLOCK
36	30304-32	2 HEAT SWITCH - 25 AMP

QTY	ITEM	PART NUMBER	DESCRIPTION / MATERIAL

**LANG MANUFACTURING**

DR: **BDM** DATE: **6-26-00** TITLE: **CLB-1C-S**

CK: DATE:  

TOLERANCES	DECIMALS	NEXT HIGHER ASSY.
FRACTIONS		
± 1/64	± .05	
± 1/32	± .01	
± 1/16	± .005	
± 1/8	± .0025	
± 1/4	± .00125	
± 1/2	± .000625	
± 3/4	± .0003125	
± 1	± .00015625	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES

SCALE: TO FIT

DRAWING NUMBER	SHEET	REV
61131-09	1 OF 1	A





**STAR INTERNATIONAL HOLDINGS INC. COMPANY**

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