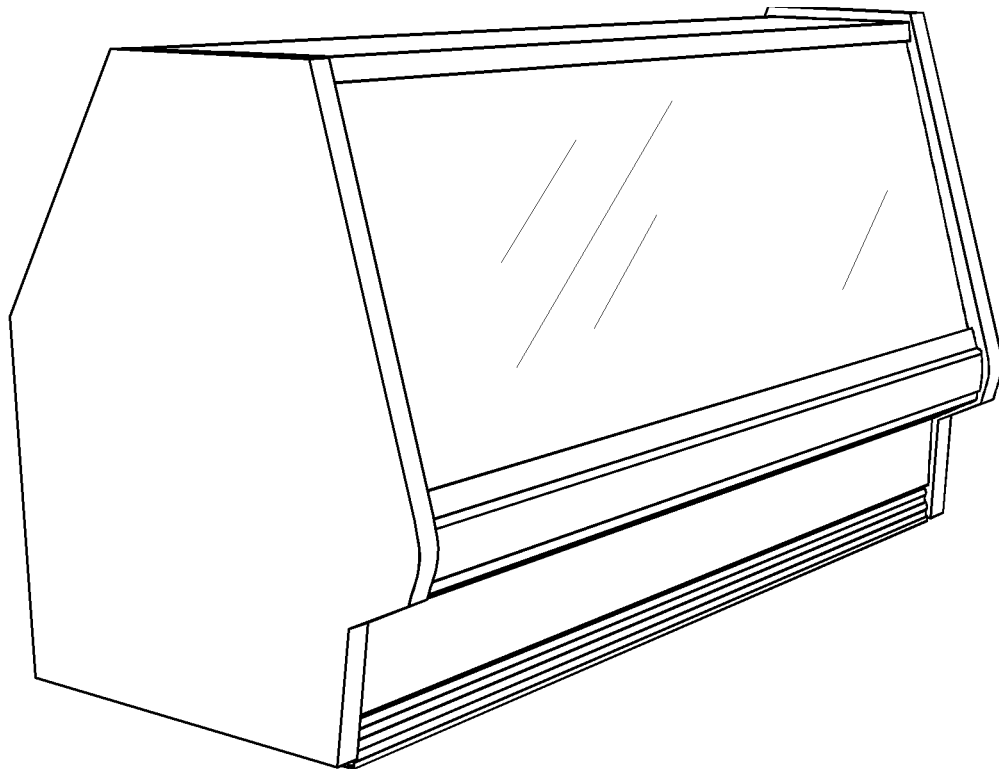


TYLER



Installation & Service Manual



LVH

VERTICAL GLASS HOT FOOD/DELI MERCHANDISERS
Hot Temperature Service Display Cases

Save the Instructions in this Manual for Future Reference!!

This merchandiser conforms to the Commercial Refrigeration Manufacturers Association Health and Sanitation standard CRS-S1-96.

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The following Hot Temperature Vertical Glass Service/Deli Merchandiser models are covered in this manual:

MODEL	DESCRIPTION
LVH	4', 6' & 8' VERTICAL GLASS HOT FOOD SERVICE/DELI MERCHANDISER

Attention

- The information contained in this manual is provided by Custom Deli's Equip., Inc. and is furnished by Tyler Refrigeration to our customers as a reference manual only. Tyler Refrigeration assumes no responsibility or liability for the accuracy or detail of the information contained herein. All information contained in this manual is subject to change.

Warranty

• Seller warrants that each new item of equipment and parts manufactured by Seller hereunder shall be free from defects in material and workmanship. Seller's obligation under this warranty shall be limited solely, at Seller's option, to repairing or replacing F.O. B. Seller's place of business, or allowing credit for, any part which under normal and proper use and maintenance, proves defective in material and workmanship, within one year from date of original shipment, provided, that notice of any such defect and satisfactory proof thereof is promptly given to Seller and thereafter such part is returned to Seller, at its request, with transportation charges prepaid and Seller's examination proves such part to have been defective.

• This warranty does not apply: (1) to used products ordered hereunder; (2) to damage to any new product or part caused by overloading, abuse, misuse, tampering, neglect or accident, or putting to a use other than normally recommended by Seller; (3) to any product or part which shall have been repaired, or altered or assembled in any way by other than the Seller, Seller's supplier or Seller's installation contractor which, in the sole judgement of Seller affects the performance, stability or purpose for which it was manufactured; (4) toward payment of any removal or installation charges of warranted parts; (5) To loss of food or contents of the equipment due to failure for any reason; (6) to the condensing unit used with said equipment unless same was furnished by the Seller; (7) when operation of the equipment covered by this order is impaired due to improper drain installation. **Used products are sold on an "as is" basis unless otherwise expressly stated on the face hereof. This warranty is in lieu of all other warranties (except of title), expressed or implied, including any implied warranty of merchantability or fitness for a particular purpose, and in no event shall seller be liable for consequential or special damages. Seller makes no warranty whatsoever in respect to items not manufactured by Seller, by instead the applicable warranties, if any, of the respective manufacturers thereof shall apply.**

Installation Procedures

Inspect the Unit

The unit should be carefully examined for damage sustained during transit, before and after unloading. The carrier must be immediately notified of any damage and the delivery receipt should be amended noting the unit was received in damaged condition.

The carrier should also be notified if concealed damage is discovered.

Preliminary Location

The unit is shipped on a skid and in some cases with end steel channel braces. The unit should be located as closely as possible to its final location before any crating and bracing is removed.

CAUTION This fixture is designed to display food in or below the food pans only. Food displayed above the level of the food pans may not maintain proper temperatures!

- The unit is not constructed to support any top load, therefore any weight in excess of 25 pounds, such as a person on top, or other equipment placed on the top, could cause damage to the unit and serious personal injury.
- Your "Deli" case is designed and classified as short term equipment, enclosed and electrically heated, which when preheated, is intended to receive food at no less than 180F (82C) and to hold the food at not less than 140F (60C) when connected to a power source.
- This case does not have the thermal capacity to heat food rapidly but is designed to hold food at the desired temperature once the food has been heated throughout using some other device.
- Foods that have been cooked and refrigerated should be reheated rapidly to 170°F or higher throughout before being placed in your "deli" case.
- In accordance with NSF Article # FM2-402 from the FOOD SERVICE AND SANITATION MANUAL.

General Information

This manual will provide the installer, serviceman and user with information and assist in the proper installation, servicing and use of the Tyler-Custom Deli Equip., Inc. Hot Food Case.

As used herein, wet operation of this case means that water is introduced into the hot well and remains at a constant predetermined level by means of an automatic water feeder. Water vapor (steam) becomes the heat transfer medium. This is the most efficient means of heat transfer with a minimum of product dehydration.

THE USE OF ANY MEDIUM OTHER THAN WATER, OR THE ADDITION OF SUBSTANCES TO THE WATER TO RAISE THE BOILING POINT COULD SERIOUSLY DAMAGE THE WELLS.

Dry operation of the case means that water is not present in the heat well and the heat is transferred by the air heated in the heat well.

Models may be operated totally wet or totally dry. If the well has been operated dry, the wells must be allowed to cool to room temperature before converting to wet operation.

Caution: Introduction of cold water into a hot dry well could cause the well to rupture and severely damage the unit.

The heating of the wells and the operation of the overhead floodlamps are all controlled to afford the operator maximum variation in product placement flexibility and a wide variety of heat and humidity conditions to best suit the food being merchandised.

A pilot light beside each control will glow when the control is in any position other than off. The heating elements below each well have been sized and contained to perform their function at highest efficiency for maximum energy conservation. It is not unusual for the element to shut off intermittently and come back on automatically as the desired temperature is maintained in the well.

In order to present the best appearance of the pre-cooked convenience foods, as well as to allow proper operation of the automatic water feeder, make certain at installation that the case is leveled front to back at each end. Shim the base as required to obtain level.**

Proper Use of the Hot Food Deli Service Case

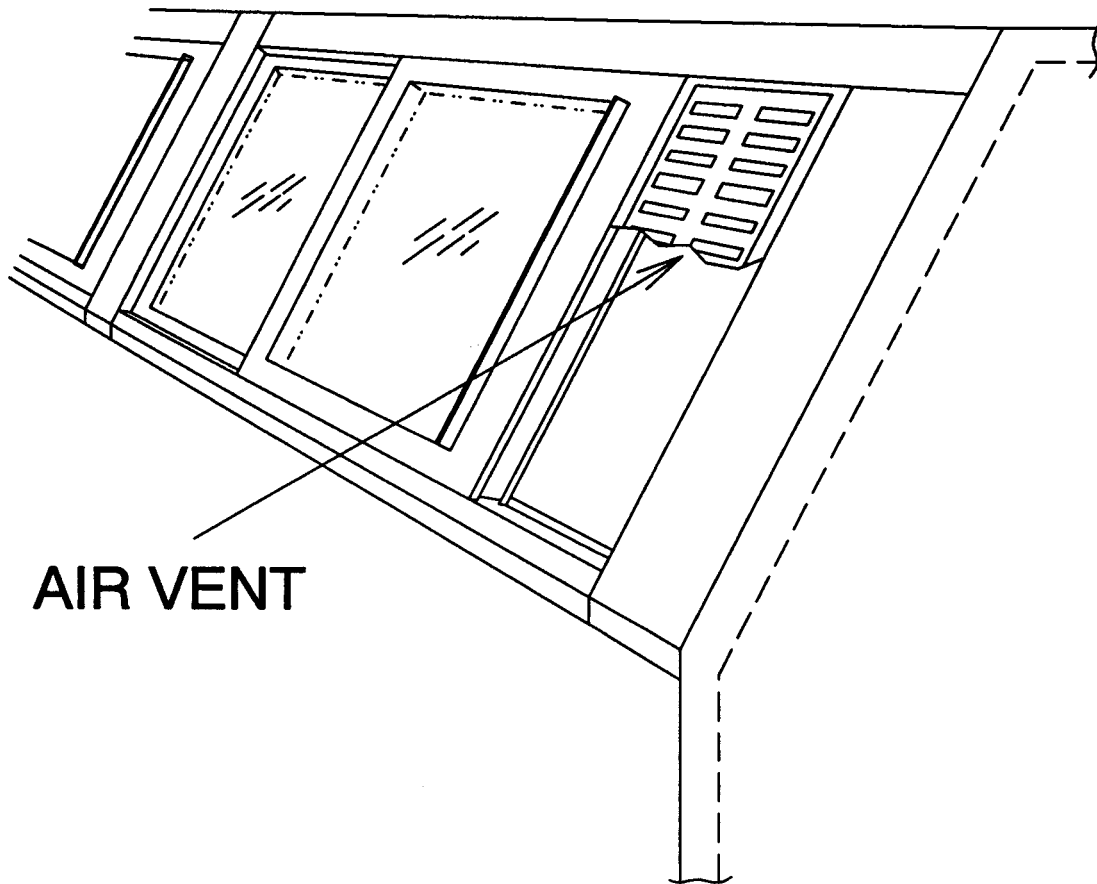
The choice of dry or moist heat and the desired food maintenance varies with the type of food, the water content of the food, other personal preferences of the food manager and the requirements of the local health authorities. The National Sanitation Foundation (NSF) recommends maintenance of a minimum of 140°F (60C) in the food product. Your Tyler-Custom Deli Equip., Inc. Hot Food Case. is designed to enable the **conscientious operator** to meet the most rigorous demands for outstanding presentations and display of pre-cooked convenience foods.

Do not attempt to cook foods in the "Deli" Case. It is designed to maintain pre-cooked foods at their taste tempting best condition in a controlled heat and humidity atmosphere. The **experienced operator** knows that holding foods at elevated temperatures for a prolonged period of time is a delicate operation demanding operator skill, attention and desire.

Normal wet operation at desired temperatures leaves the front glass free of condensate. In the event condensate does form as the case is being brought to temperature for the day's operation, opening the rear doors should clear the front glass quickly. Air vents are provided at each end of the door tracks as shown on next page. In the event that the condensate reappears - check to make certain that all wells being operated wet have food pans in place. It is imperative your deli has a complete compliment of food pans in each well during "Wet" operation to minimize steam loss and front glass condensation. Check the temperature of the food in the food pans to see that they are not high, indicating the temperature in the heat well has the water at a hard boil.

Air Vent Adjustments

This model is equipped with two air vents; one located at each end of the door opening.



MAKE CERTAIN THAT THE AIR VENT ARE UNOBSTRUCTED

Care and Upkeep

Wells operated moist will contain calcium oxide (lime) and other salts from the evaporating water. Use detergents, mild abrasive cleaners or Bon Ami to remove food which accidentally spills into wells. **DO NOT USE ORDINARY STEEL WOOL PADS** because they may cause corrosion of the wells.

Never put food directly into the wells. Always use food pans. Never let spilled food harden or bake into stainless steel as it will cause pitting of the surface.

When hard water evaporates in a unit it often leaves a mineral deposit. If this deposit is not removed it can shorten the life of the heating elements greatly. To remove this, swab or cover the bottom of the unit with a water solution containing vinegar (about 25% by volume). Follow with cleansing powder, then wash, rinse and dry.

Wells operated dry will discolor or brown at the operating temperatures within the range of this unit. To clean, use detergents, mild abrasive cleaners, or BonAmi.

With only a little care, your stainless steel hot case will remain clean and bright and provide you with excellent service for many years to come.

Food Stains

Foods that burn and stick on other metals can discolor stainless steel too. But with a stainless steel unit you can remove discoloration by applying a mildly abrasive cleanser such as Bon Ami. To soften an extremely hard layer of burnt-on grease, cover the layer with an ammonia soaked cloth for 10 to 15 minutes. You may also use a plastic or stainless steel sponge. Then wash and dry the surface as usual

Precautions

1. Strong bleaches tend to corrode many materials and should not come in contact with stainless steel sinks or utensils longer than 30 minutes. When these chemicals are used, the stainless should be rinsed thoroughly.
2. Tincture of iodine or iron should not remain in contact with stainless surfaces. These solutions, which cause stainless to discolor, should be rinsed off immediately after exposure.
3. Some foods, such as mustard, mayonnaise, lemon juice, vinegar and salt (or dressings containing these ingredients) will attack and corrode stainless. You should never store them in stainless containers.
4. Ordinary steel wool should be used sparingly to clean stainless; because particles may lodge in the surface and rust. Allowing the wool to rest on a stainless surface may cause a rusty appearance. For difficult cleaning jobs such as removing burned-on foods, stainless steel "sponges" or pads are recommended. When cleaning a highly polished, mirror finish with a metal pad, be especially careful that it does not scratch the finish.
5. Gritty, hard abrasive will mar a stainless steel finish and are not recommended.
6. Sharp knives or choppers usually have hard carbon steel edges and will leave their mark on stainless surfaces.

STEAM TABLE OPERATION INSTRUCTIONS

**** START UP 45 MINUTES PRIOR TO USE****

AUTO FILL WATER SYSTEM

NOTE: UNIT MUST BE LEVEL FOR SYSTEM TO OPERATE PROPERLY-SEE PAGE 5

1. To operate the Auto Fill systems turn all T-handled valves to the ("FILL") horizontal position. Turn the field furnished 3/8" ball valve to the ("ON") fill position. It will take approximately 30 minutes for the initial fill up. But, once this is done all wells will maintain a 2" water level automatically for the rest of the days operation.
2. After all wells are full, cover all wells with deli pans. Turn all flood lamps (small black dial) to 100% (HIGH). Turn all infinite switch controls (large black dial) to #3 setting.
**** THIS IS THE PREHEAT SETTING ****. After 45 minutes set all infinite switch controls (large black dial) to #LO setting.
However ** LEAVE BAKED CHICKEN AND FRIED CHICKEN AND MEAT PRODUCTS AT THE #3 SETTING ** THIS IS VERY IMPORTANT!
3. Now fill display pans with preheated (cooked) product only. All product must be at a minimum of 180 degrees going in the steam table. **** MAKE SURE ALL PANS FIT PROPERLY ****
4. Some adjustments may be required on flood lamps during operations.
However ** LEAVE OVERHEAD FLOOD LAMP OVER BAKED AND FRIED CHICKEN AT 100% (HIGH). ** THIS IS VERY IMPORTANT!
At the above setting all products should maintain 145 degrees as required by most health departments.
There may be some condensation at start-up when loading products. **DO NOT PANIC IT WILL GO AWAY.**
5. To drain tubs turn T-handled valves to the ("DRAIN") vertical position and wells will drain.
**** PRIOR TO DRAINING TURN ALL INFINITE SWITCHES TO THE "OFF" POSITION ****.

MANUAL FILL WITH FILLER HOSE

1. Make sure all cutoffs (ball valves) on drain system are in the "FILL" horizontal position.
2. Fill each steam table well with 2 1/2" of water using "FILLER HOSE". **DO NOT OVER FILL!** Cover all wells with pan well covers.
3. After filling steam table wells - turn all flood lamps (small black dial) to HIGH (100%). Turn all infinite switch controls (large black dial) to #3 setting **** THIS IS THE PRE-HEAT SETTING.**** After 45 minutes set all infinite switch controls (large black dial) to #LO setting.
However ** LEAVE BAKED CHICKEN AND FRIED CHICKEN AND MEAT PRODUCTS AT THE #3 SETTING ** THIS IS VERY IMPORTANT!

Now fill display pans with preheated (cooked) product only. All product must be at a minimum of 180 degrees going in the steam table. **** MAKE SURE ALL PANS FIT PROPERLY ****

4. Some adjustments may be required on flood lamps during operations.

However **** LEAVE OVERHEAD FLOOD LAMP OVER BAKED AND FRIED CHICKEN AT 100% (HIGH). ** THIS IS VERY IMPORTANT!**

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There may be some condensation at start-up when loading products. **DO NOT PANIC IT WILL GO AWAY.**

5. To drain tubs turn T-handled valves to the ("DRAIN") vertical position and wells will drain. **** PRIOR TO DRAINING TURN ALL INFINITE SWITCHES TO THE "OFF" POSITION.**

CLEANING INSTRUCTIONS

When loading chicken into the case use tongs to load individual pieces in a uniformed manner this will help prevent grease from building up on case and lights.

Make sure all infinite switch controls and flood lamps are in the "OFF POSITION". When unit is "COOL" use a mild soapy solution to wipe off surface. **DO NOT** leave any soapy residue in the case. Use a dry dish cloth to complete cleaning and wipe down. **** NEVER USE OVEN CLEANER **.**

CLEAN ALL MISCELLANEOUS FOOD PARTICLES out of steam table wells.

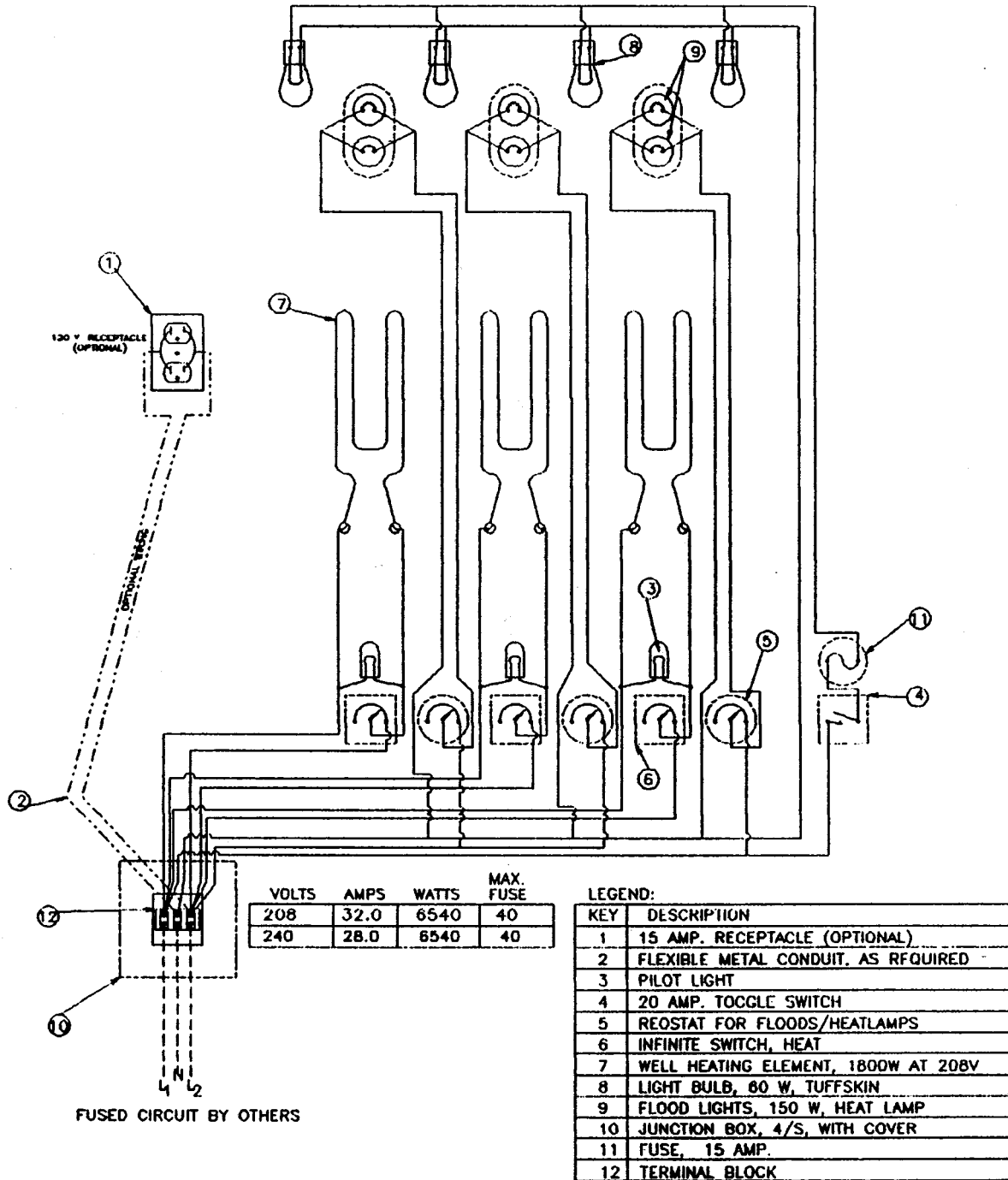
NEVER USE "DRANO" or any other type of drain cleaners in wells.

NEVER attempt to clean front glass while unit is hot. Use a quality glass cleaner.

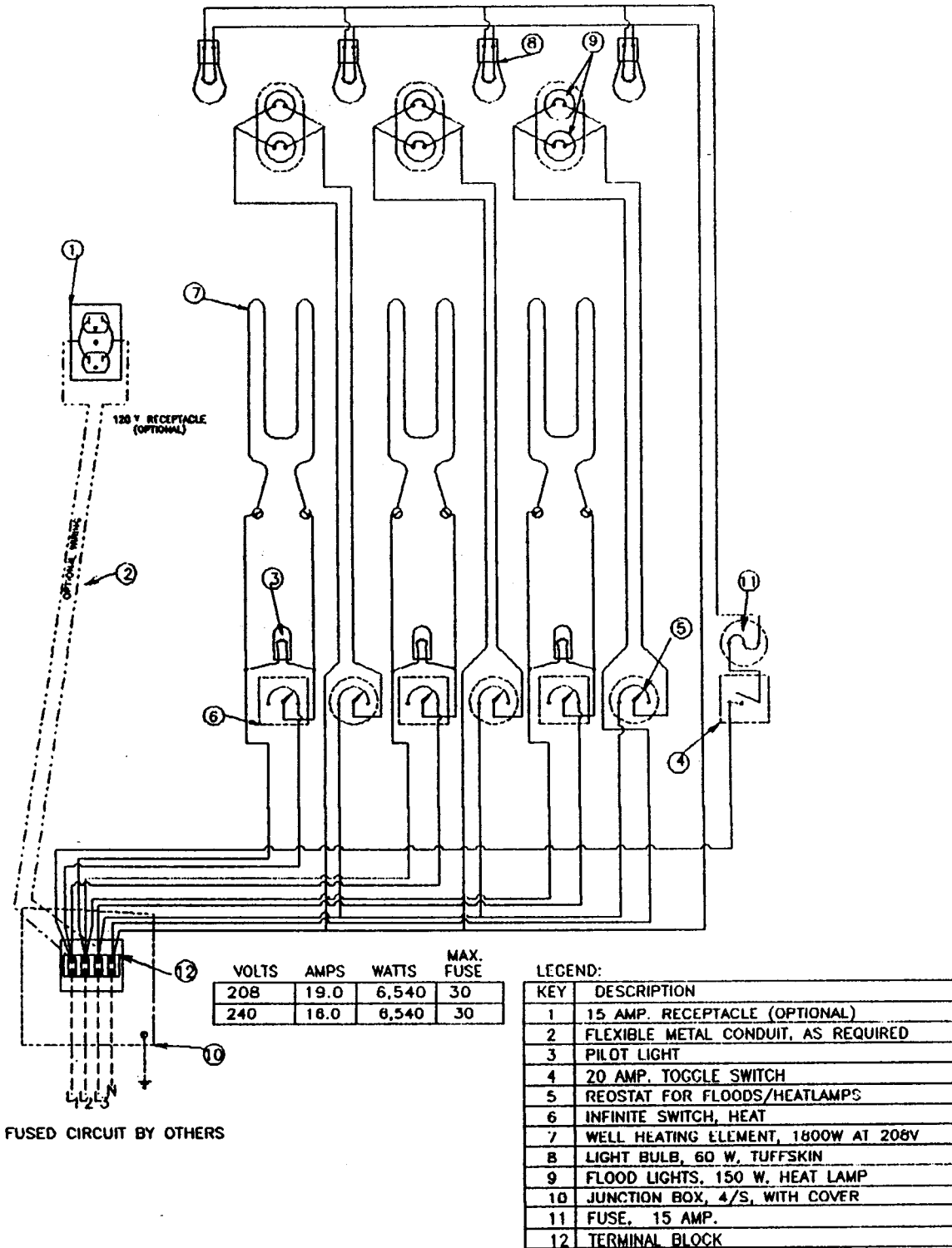
IT IS VERY IMPORTANT TO REMOVE ANY GREASE SPLATTER THAT MAY CLING TO THE FLOOD LAMPS. FAILURE TO DO THIS MAY RESULT IN LAMP OVERHEATING AND PREMATURE DETERIORATION. DO SO GENTLY AS EXCESS FORCE MAY CAUSE DAMAGE TO THE BULBS.

Proper care and cleaning of your steam table will ensure longer life and prevent unnecessary repairs.

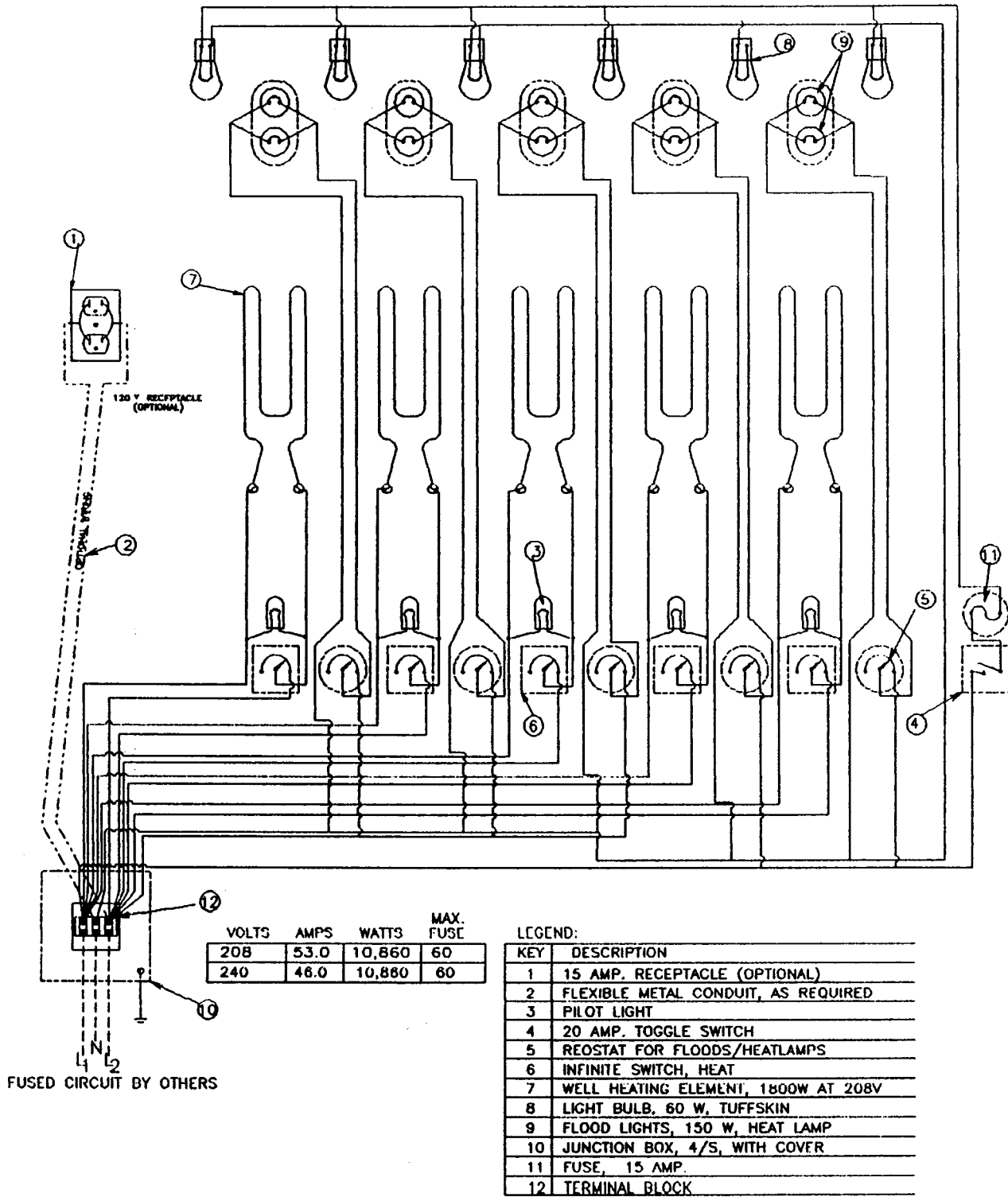
Wiring Diagram - LVH 4 208/240V 60Hz 1Ph 3W



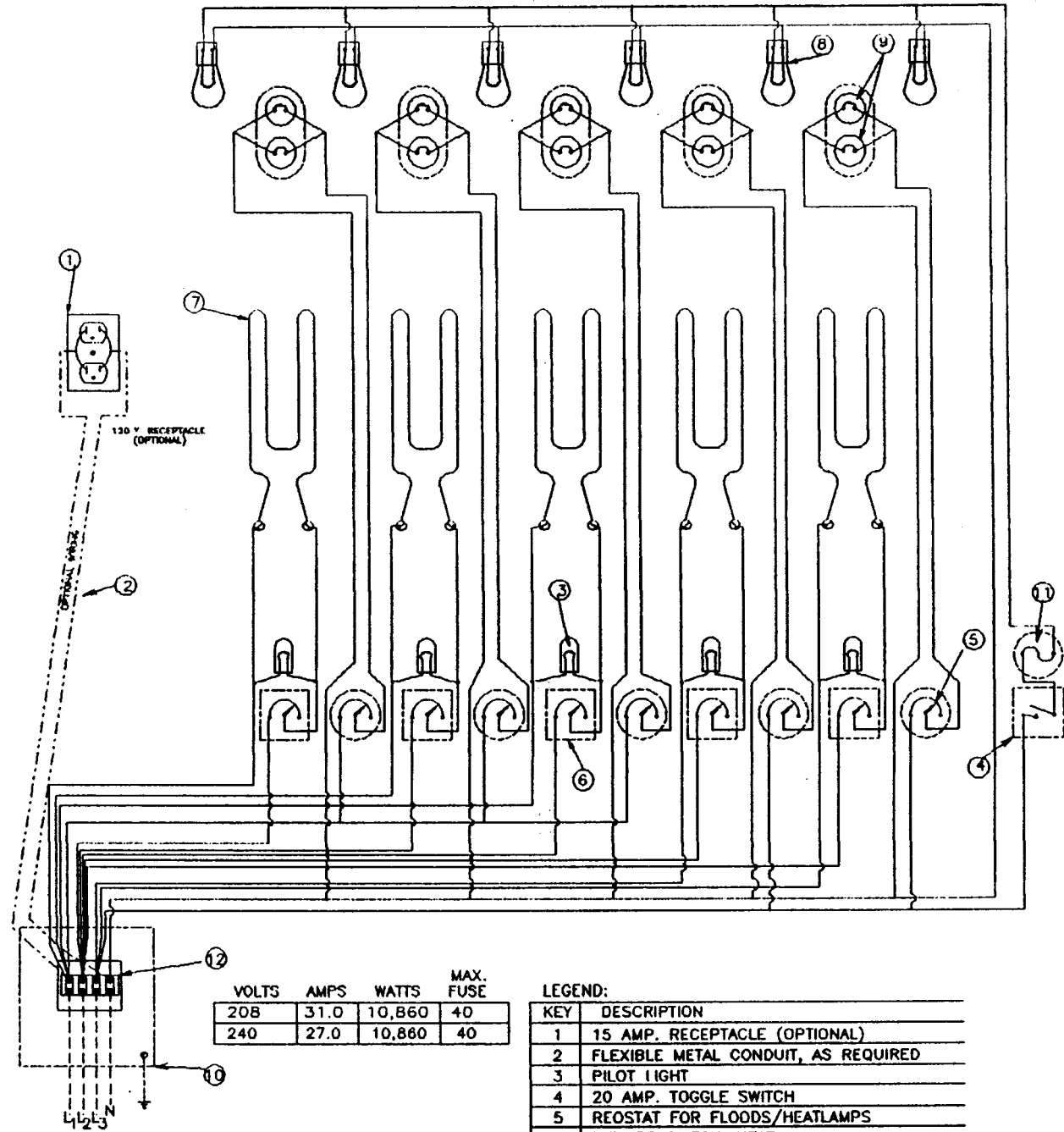
Wiring Diagram - LVH 4 208/240V 60Hz 3Ph 4W



Wiring Diagram - LVH 6 208/240V 60Hz 1Ph 3W

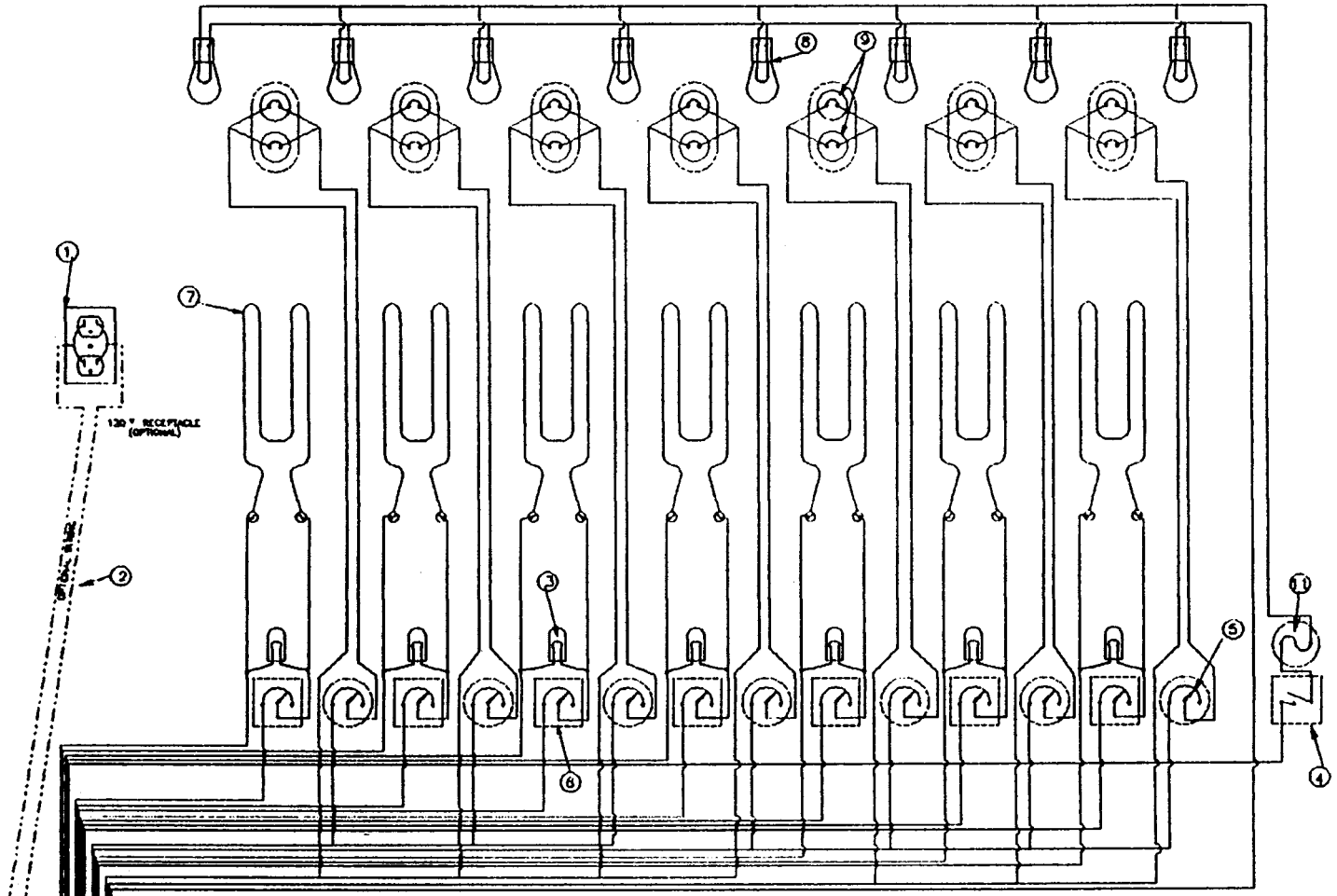


Wiring Diagram - LVH 6 208/240V 60Hz 3Ph 4W



FUSED CIRCUIT BY OTHERS

Wiring Diagram - LVH 8 208/240V 60Hz 3Ph 4W



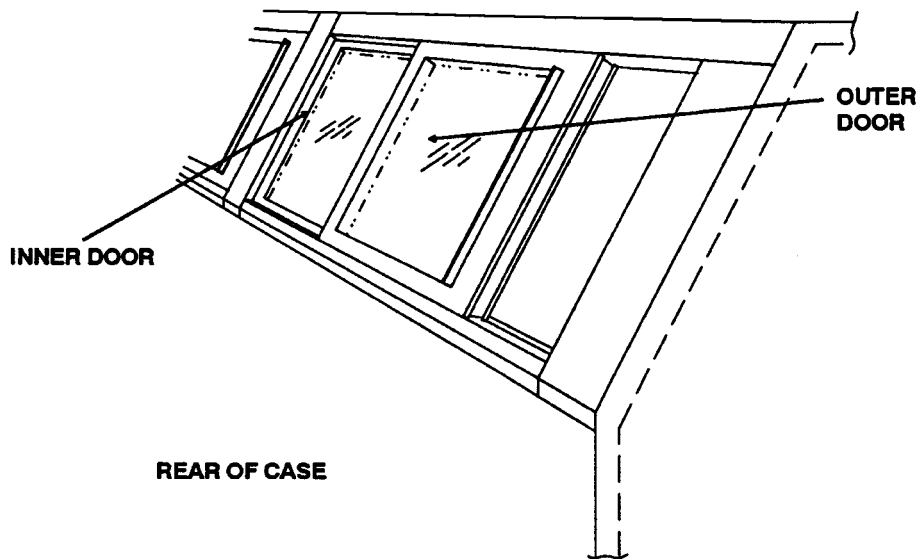
VOLTS	AMPS	WATTS	MAX. FUSE
208	43.0	15,180	60
240	37.0	15,180	60

LEGEND:

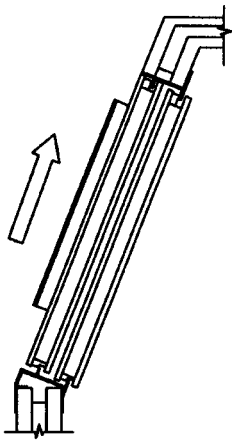
KEY	DESCRIPTION
1	15 AMP. RECEPTACLE (OPTIONAL)
2	FLEXIBLE METAL CONDUIT, AS REQUIRED
3	PILOT LIGHT
4	20 AMP. TOGGLE SWITCH
5	REOSTAT FOR FLOODS/HEATLAMPS
6	INFINITE SWITCH, HEAT
7	WELL HEATING ELEMENT, 1800W AT 208V
8	LIGHT BULB, 60 W, TUFFSKIN
9	FLOOD LIGHTS, 150 W, HEAT LAMP
10	JUNCTION BOX, 4/S, WITH COVER
11	FUSE, 15 AMP.
12	TERMINAL BLOCK

FUSED CIRCUIT BY OTHERS

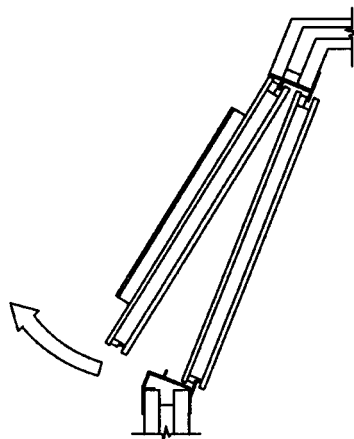
Rear Sliding Door Removal & Installation



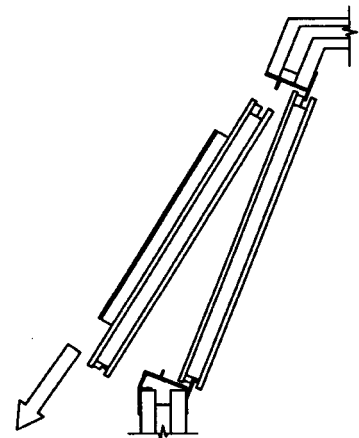
1. Slide Door to Right Side end of Door Frame



2. Lift Door Into Upper Track to Clear Door



3. Pull Bottom of Door Outward



4. Pull Door Downward to Remove

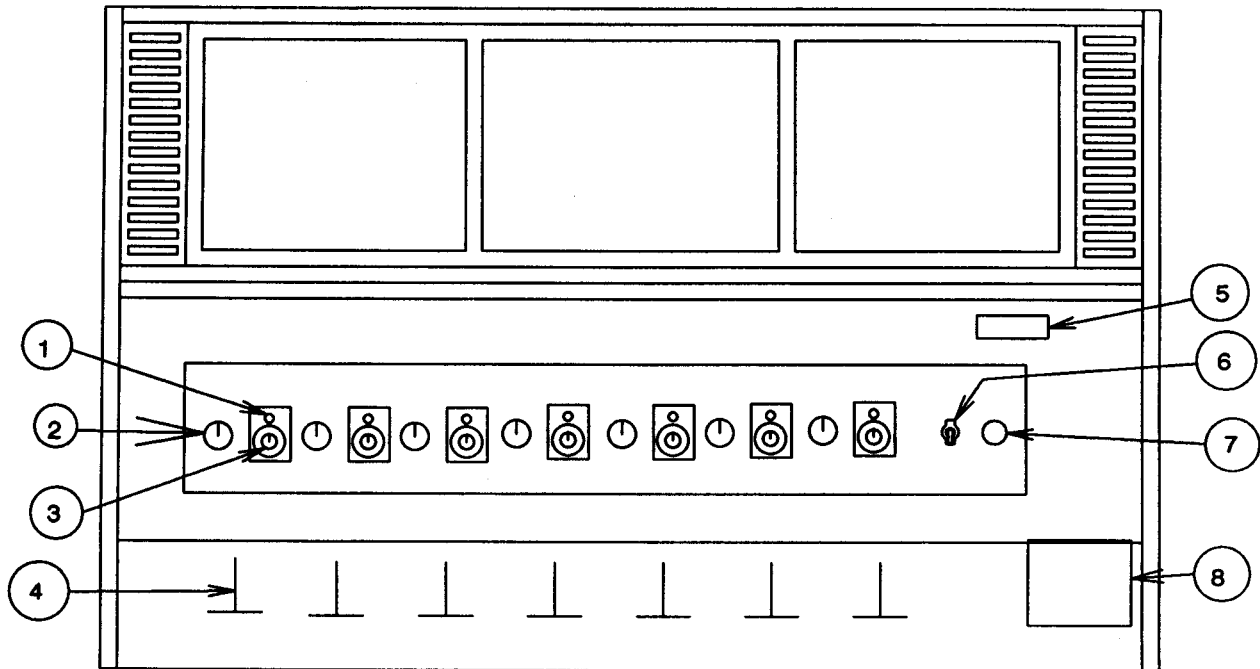
The sliding doors come installed from the factory in the door frame. These doors are removable for cleaning and to aid in case maintenance. **NOTE: DO NOT FULLY IMMERSE DOORS WHEN CLEANING.**

1. Remove the outer door by first sliding it to the right end of the door frame (within an inch of being closed).
2. Firmly grasp either side of the door and lift into the upper track until it clears the lower track.
3. Tilt the door so that the bottom comes out of the track.
4. Lower the door so that it separates from the upper track. The door should now be free. Next remove the inner door in the same manner.

To replace the doors follow the above steps in the reverse sequence. First check to see that the sealing strips are in their proper place. Remember to insert the inner door first.

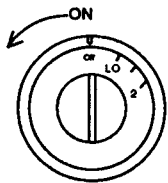
8 FOOT CASE SHOWN

Controls and Locations



1. Pilot Light: Glows when Thermostat is in any position other than OFF.

2. 150W Heat Lamps: Ranges from 0° to 100°.



3. Lower Well Heater: Ranges from LO to HI.

4' has 3 wells

6' has 5 wells

8' has 7 wells

4. Water Fill Valve: To be (Fill) horizontal position during wet operation and (Drain) vertical position during dry operation.

5. Name Plate: Shows electrical information.

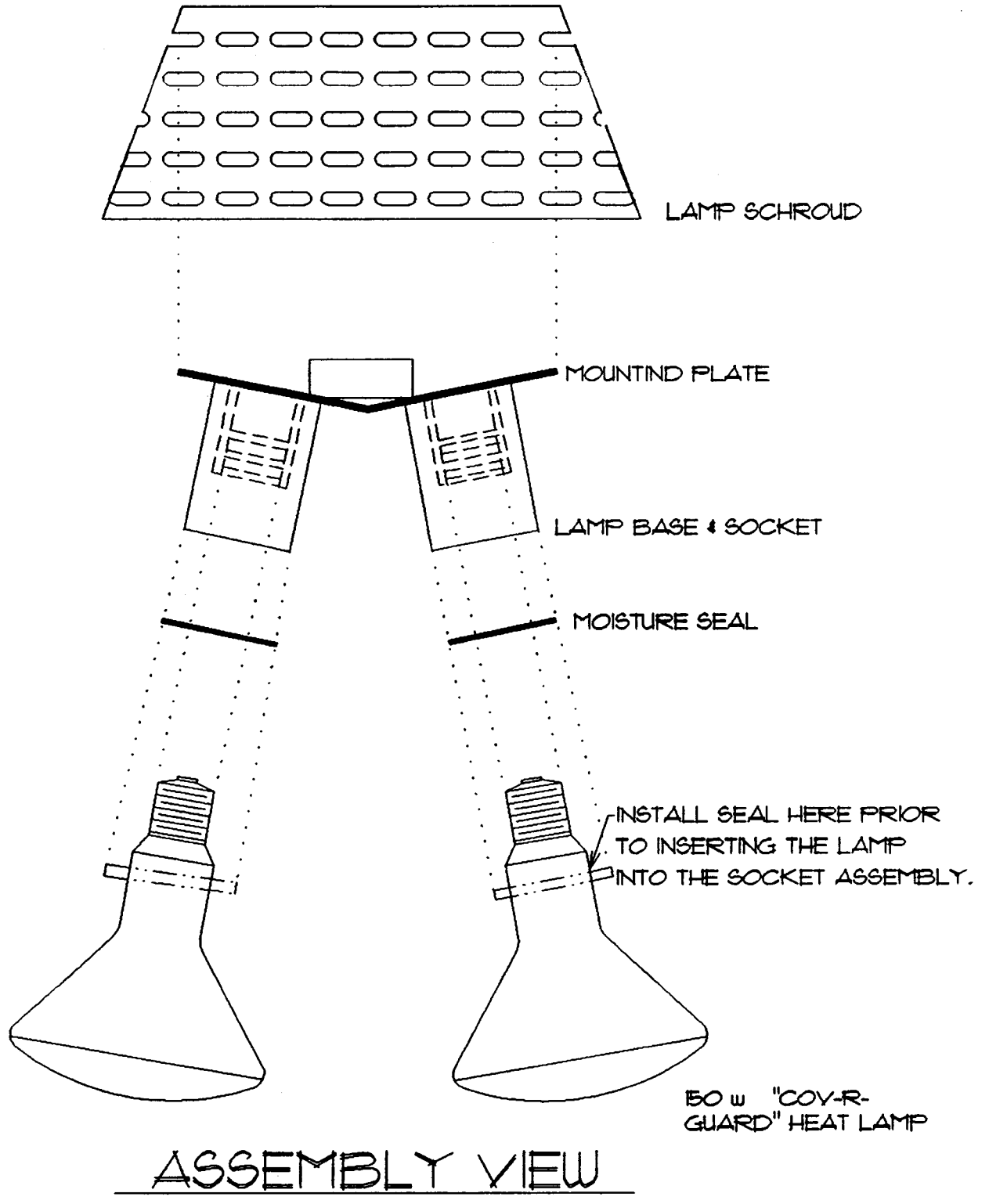


6. Toggle Switch: Turns on and off 60 W interior top lights only.

7. 15 Amp fuse. For interior lighting.

8. Electrical junction box.

Double Heat Lamp Ass'y - Moisture Seal Installation



INSTALLATION CHECK LIST

IN ADDITION TO THE STANDARD PRACTICES WHICH SHOULD BE USED IN THE INSTALLATION OF THIS CASE, THE INSTALLER SHOULD PAY PARTICULAR ATTENTION TO THE FOLLOWING ITEMS:

- IS WATER CONNECTED TO A WATER FEED FOR WET OPERATION?

- IS THE LOWER WELL THERMOSTAT SET FOR #3 FOR PRE-HEAT AND ON LO FOR OPERATION?

- IS THE VOLTAGE CORRECT AT 208V or 230V TO MATCH HEATER RATINGS?

- ARE REAR VENTS OPEN FOR WET OPERATION?

- IS FOOD BEING INTRODUCED TO THE WELLS AT TEMPERATURES AT 180°F?

SAVE TIME- AVOID CALL BACKS

PARTS INFORMATION

Operational Parts List

Case Usage	Domestic		
Electrical Circuit	115 Volt 60 Hertz		
Case Size	4'	6'	8'
Fuse Holder	5217932	5217932	5217932
Fuse	5614129	5614129	5614129
Toggle Switch	5093834	5093834	5093834
"T" Handle*	5093841	5093841	5093841
Infi-Switch*	5093830	5093830	5093830
Reostat Switch*	5093836	5093836	5093836
Steam Table, assembled includes Heat Element, Insulation & Electrical Wires*	5093832	5093832	5093832
Steam Table, unassembled Table Pan Only*	5093831	5093831	5093831
Heat Element, Wet & Dry Units*	5093829	5093829	5093829
Heat Element, Dry Unit Only*	5093837	5093837	5093837
Reservoir, Auto-Fill*	5093842	5093842	5093842
3-Way Valve*	5093840	5093840	5093840
Red Pilot Light	5093833	5093833	5093833

* = (1) per well

For information on operational parts not listed above contact the TYLER Service Parts Department.

Cladding and Trim Parts List

Item	Description	LVH	4'	6'	8'
1	Screw		5619204 (2)	5619204 (2)	5619204 (2)
2	Top Joint Trim, BRT SS		9023104	9023104	9023104
3	Tape		5615115	5615115	5615115
4	Outer Glass Joint Trim, BRT SS		9028859	9028859	9028859
5	Bumper Retainer		9025045	9025052	9025058
6	Color Band, Painted		9020989	9025979	9025980
7	Color Band Backer		9025655	9025655	9025655
8	Bumper End Trim(per patch end)		-----	color per order	-----
9	Bumper Backer		-----	color per order	-----
10	Bumper		-----	color per order	-----
11	Screw		9025833 (10)	9025833 (14)	9025833 (18)
12	Rivet		5104702 (3)	5104702 (4)	5104702 (5)
13	Upper Front Cladding, Painted		9025219	9025129	9025130
14	Screw		9025833 (4)	9025833 (6)	9025833 (10)
15	Kickplate		-----	color per order	-----
	Kickplate Backer		9041790	9041790	9041790
16	Screw		5183536 (4)	5183536 (6)	5183536 (6)
17	Kickplate Support		9041329 (2)	9041329 (3)	9041329 (3)
18	Lower Front Cladding, Painted		9025218	9025120	9025121
19	LH End Close-off, Painted		9027923	9027923	9027923
	RH End Close-off, Painted		9027924	9027924	9027924
20	Screw		5100217 (3)	5100217 (3)	5100217 (3)
21	Horizontal Joint Trim, BRT SS		5234297	5234297	5234297
22	RR Base Joint Trim, Ptd.		5233638	5233638	5233638
23	Screw		5619204 (4)	5619204 (4)	5619204 (4)
24	Screw		5199134 (4)	5199134 (4)	5199134 (4)
25	RR Lower Joint Trim, BRT SS		5233636	5233636	5233636
26	Screw		5199134 (4)	5199134 (4)	5199134 (4)
27	RR Upper Joint Trim, BRT SS		5992571	5992571	5992571
28	Inner Glass Joint Trim, BRT SS		9028859	9028859	9028859

