



*The Signature of Quality®*

## INSTALLATION & OPERATIONS INSTRUCTIONS

### *HOT DELI DISPLAYS*



**KEEP THIS MANUAL FOR FUTURE REFERENCE**

Engineering and technical data are subject to change without notice.

FEDERAL INDUSTRIES  
Toll Free 1(800) 356-4206

215 Federal Avenue  
WI Phone (608) 424-3331

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# INTRODUCTION

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Thank you for purchasing a Federal Industries display case. This manual contains important instructions for installing and servicing the Curved Glass and Hi-Volume Refrigerated Hot Deli displays. A repair parts list and wiring diagram are also included in the manual. Read all of these documents carefully before installing or servicing your case.



## NOTICE

**Read this manual before installing your case. Keep this manual and refer to it before doing any service on the equipment. Failure to do so could result in personal injury or damage to the case.**



## NOTICE

**Installation and service of the electrical components in the case must be performed by a licensed electrician.**

The portions of this manual covering components contain technical instructions intended only for persons qualified to perform electrical work.



## DANGER

**Improper or faulty hookup of electrical components in the case can result in severe injury or death.**

**All electrical wiring hookups must be done in accordance with all applicable local, regional, or national standards.**

## SERIAL NUMBER

Record the model and serial numbers of the case for easy reference. Always refer to both model and serial numbers in your correspondence regarding the case.

Case Model \_\_\_\_\_ Serial Number \_\_\_\_\_

This manual cannot cover every installation, use, or service situation. If you need additional information, call or write us:

### WARRANTY/TECHNICAL SERVICE DEPARTMENT

**Federal Industries**

**215 Federal Avenue**

**Belleville, WI 53508**

**Toll Free (800) 356-4206 / WI Phone (608) 424-3331**

# WARNING LABELS & SAFETY INSTRUCTIONS



This is the safety-alert symbol. When you see this symbol on your case or in the manual, be alert to the potential for personal injury or damage to your equipment.

Be sure you understand all safety messages and always follow recommended precautions and safe operating procedures.



## NOTICE TO EMPLOYERS

**You must make sure that everyone who installs, uses, or services your case is thoroughly familiar with all safety information and procedures.**

Important safety information is presented in this section and throughout the manual. The following signal words are used in the warning and safety messages:

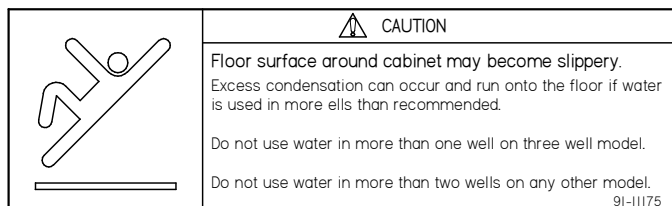
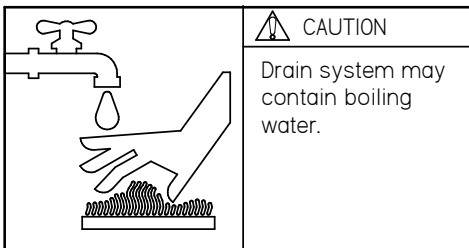
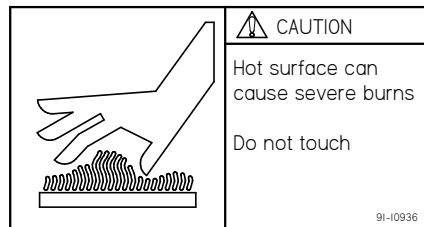
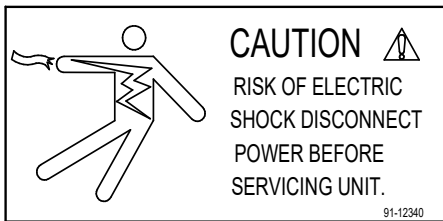
**DANGER:** Severe injury or death will occur if you ignore the message.

**WARNING:** Severe injury or death can occur if you ignore the message.

**CAUTION:** Minor injury or damage to your case can occur if you ignore the message.

**NOTICE:** This is important installation, operation, or service information. If you ignore the message, you may damage your case.

The warning and safety labels shown throughout this manual are placed on your Federal Industries case at the factory. Follow all warning label instructions. If any warning or safety labels become lost or damaged, call our customer service department at 1(800) 356-4206 for replacements.



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# PRE-INSTALLATION PROCEDURES

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## Inspection for Shipping Damage

You are responsible for filing all freight claims with the delivering truck line. Inspect all cartons and crates for damage as soon as they arrive. If damage is noted to shipping crates, cartons, or if a shortage is found, note this on the bill of lading (all copies) prior to signing.

If damage is discovered when the case is uncrated, immediately call the delivering truck line and follow up the call with a written report indicating concealed damage to your shipment. Ask for an immediate inspection of your concealed damage item. Crating material must be retained to show the inspector from the truck line.

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# INSTALLATION INSTRUCTIONS

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## Locating the Display Case

The case should be located where it is not subjected to the direct rays of the sun, heating ducts, grills, radiator, or ceiling fans, nor should it be located near open doors or main door entrances. Also, avoid locations where there are excessive air movement or air disturbances.

## Removing Case From Shipping Skid



**CAUTION: Do not push against the top glass, front glass, end glass, doors or door frames when removing the case from the skid or moving the case. Case damage or glass breakage could result.**

1. Remove crate top and sides and note missing or damaged items as explained in the pre-installation procedures outlined above.
2. Move the case as near as possible to the final location and before removing it from the shipping skid.
3. If your case is supplied with plastic end panels, remove them by lifting them in an upward direction. Set these end panels aside to be reinstalled after case is placed in proper position.
4. Remove the (4) brackets that secure the case to the shipping skid.
5. Use the lifting handles located in each end of the case and lift case off of skid and into required position.
6. Level and square the case as needed by placing shims under each corner of base.
7. The leveled case must be sealed to the floor using a NSF Listed Sealant.
8. If plastic end panels are required reinstall them on to case. Hook the key slot located on the inside of the end panel down over screws located on each end of case.

## Cleaning

For initial setup, clean the case as outlined in the daily cleaning section of this manual.

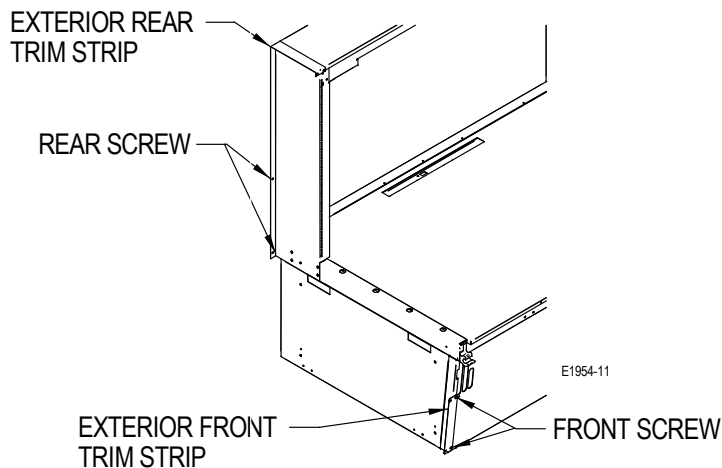
## **Trim Kits Installation**

Follow the “Case Installation” procedures in this manual for each display case that is going to be adjoined in a lined up. Additional cases must be place directly next to the adjoining end of the first case. Push cases together as close as possible keeping the front of the cases in alignment. Once adjoining case is in proper position complete all of the procedures outlined in the “Case Installation” section in this manual before installing the trim kit as outlined below.

Note: The Laminated plastic end panels and end panel screws are not used on the adjoining ends of the cases that are to be butted together.

### Exterior Trim

1. Remove the (3) 8-32 screws located on rear corner of each case and set aside (If Preinstalled). These screws will be used to attach rear exterior trim strip to case. Note: For units with rear packing shelf , These screws hold the package shelf standard to the case. The packing shelf and packing shelf standard must be temporarily removed for installation of rear exterior trim.



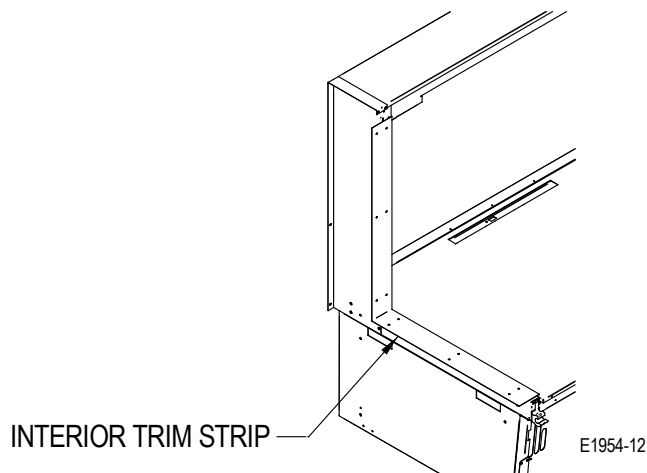
2. Remove the adhesive liner from the inside of the rear exterior trim strip and firmly place it over the top and down the back of case. Be sure to center rear exterior trim strip over seem between cases and to align slots with holes in case rear (If holes are provided).
3. Fasten rear exterior trim strip to each case with the (3) 8-32 screws previously removed. If no holes are provided to fasten trim strip, use the (3) #8 self drilling screws provided.  
Note: For units with rear packing shelf, Reattach rear packing shelf standard over the top of rear exterior trim strip using the existing holes in case. Place packing shelf back on to case in desired standard slot.
4. Use a NSF approved silicone to seal rear exterior trim strip along the top surface of case.

- Remove the (2) screw located on the front corner of each case and set aside. These screws will be used to attach front exterior trim strip to case. Note: For units with front package shelf, these screws hold the package shelf to the case. The package shelf must be temporarily removed for installation of front exterior trim.
- Fasten front exterior trim strip to each case with the (2) 8-32 screws previously removed. Note: For units with front package shelf, Reattach front package shelf over the top of front exterior trim strip case with the (2) 8-32 screws previously removed.

### **Interior Trim**

The interior trim kit is used when adjoining cases have one glass panel or no glass panel between them.

- On units with sliding rear doors, remove both rear doors from track by lifting doors upward until the bottom edge of door clears the lower track. Swing the bottom of door outward and down out of top track.  
On units with rear swing doors completely open doors to allow access to interior of case.
- Cases with no glass panels:** Remove the adhesive liner from the inside of the interior trim strip and firmly place it over the center gap between the case interiors.  
**Cases with one glass panel:** The interior glass trim is placed in the adjoining case that does not have an end glass panel. Remove the adhesive liner from the inside of the interior trim strip and firmly place it against the glass trim of adjoining case with the end glass panel.



- Fasten interior glass trim with the stainless steel self drilling screws supplied with interior trim kit

### **Plumbing Connection (Well Drain)**

Each well is supplied with a ½” NPT female drain connection and drain valve. The well drains are used to drain the used water from each well after use.

The ½” NPT outlet of each well drain can be field piped to a nearby drain source to simplify the used water draining process. Pipe, copper, or flexible tubing can be used, but components must be rated to withstand 250° F.

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# ELECTRICAL INFORMATION & GROUNDING

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## This Case Must Be Grounded



**DANGER:** Improper or faulty hookup of electrical components in the display case can result in severe injury or death.

Only a licensed electrician must perform all case electrical connections.

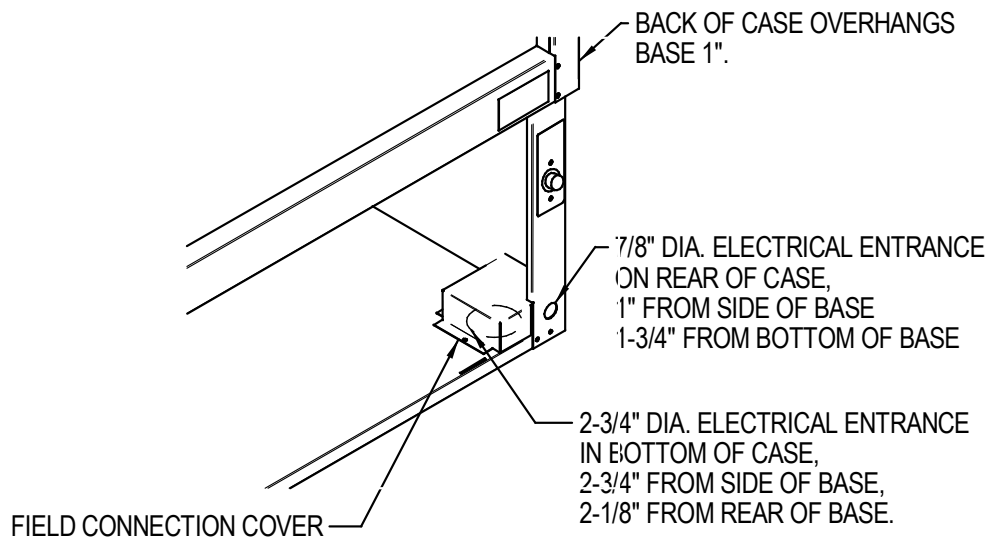
All electrical wiring hookups must be done in accordance with all applicable local, regional, or national electrical standards.

A separate circuit for each display case is recommended to prevent other appliances on the same circuit from overloading the circuit and causing malfunction.

The electrical service must be grounded upon installation.

This unit is designed for permanent connection to a power source. See the electrical data plate located at the rear of the case for proper circuit size and wire ampacity.

The electrical connection box is accessible from the rear of the case. Remove rear grill on refrigerated models. (See "Grill Removal" in the installation section of this manual.) See diagram below for location of the field wiring connection box.



E2226-1



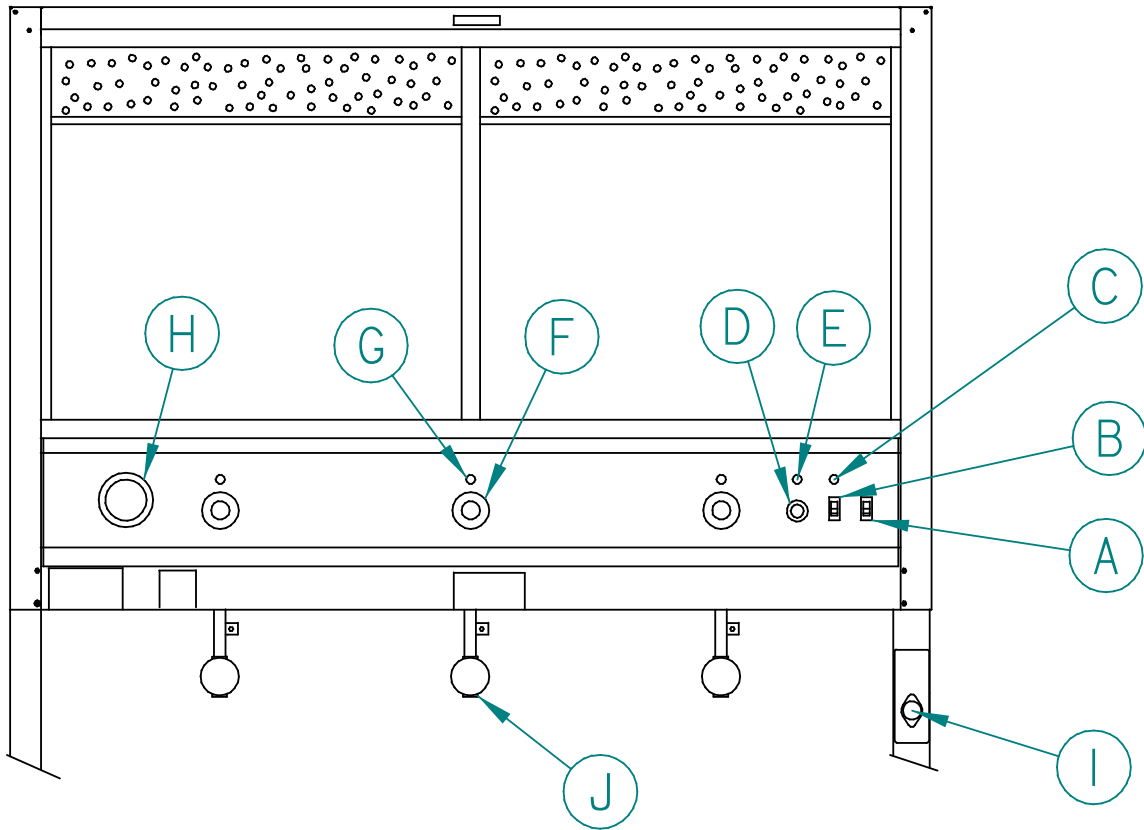
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# OPERATING INSTRUCTIONS

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## **Controls**

### **A. Light Switch**

This switch turns on and off the lights that are located in the overhead infrared heater assembly. The infrared heater does not need to be on for lights to operate.

### **B. Fan Switch**

This switch turns on and off the air-circulating fan. The air-circulating fan pulls warm air from around the bottom of heat wells and circulates it through the interior of the case. The air movement reduces moisture build-up and equalizes temperature within the interior of the case. The fan should always be used when water is being used in heater well.

### **C. Fan on Indicator Light**

Indicates when the fan switch is in the on position.

### **D. Infrared Overhead Heater Thermostat**

Controls the temperature of the overhead infrared heater and turns it off. Turn the temperature control to the lowest possible number that will maintain proper product temperature.

### **E. Infrared Heater On Indicator Light**

Indicates when the heater is on. The indicator light will go off when the infrared heater reaches the set temperature.

#### **F. Heated Well Temperature Control**

Controls the temperature of each heat well and turns it off. Each heater well has a separate temperature control. Turn the control to the correct numbered position for either wet or dry operation, depending on the type of product stored. The temperature control should be set at the lowest possible number that will maintain proper product temperature.

#### **G. Heated Well On Indicator Light**

Indicates when the heater well is on. The indicator light will go out when the heated well reaches set temperature. Each heater well has an indicator light along with the temperature control.

#### **H. Temperature Gauge**

Indicates the approximate temperature of the interior of the case. The sensor is located at the top of case next to the infrared heater. It does not indicate well or food temperature.

#### **I. Fuse**

This fuse protects 120 Volt components of case, top lights, and fan motor. The fuse must always be replaced with an identical fuse as supplied from factory. (Buss Type SC-10 time delay fuse)

#### **J. Well Drain Valve**

This valve drains the used water from each well after use. Each well has its own drain that can be piped to a nearby drain source. This would simplify the used water draining process. (See Plumbing Connection section in this manual)

### **Rear Package Shelf**

The rear package shelf is removable and adjustable up and down. It can be removed or adjusted by lifting rear package shelf up and out until the bracket is disengaged from shelf standard. It can then be moved to desired height location and reattached.

### **Sliding Rear Doors**

The doors can be easily removed by lifting doors upward until the bottom edge of door clears the lower track. Swing the bottom of door outward and down out of top track.

Clean the door track frequently for easy door operation. A Very light film of lubricant, such as PAM, will help the doors slide easily.

## Using Water in Hot Well



**NOTICE:** This case should not be operated with warm water in all the wells. Excess condensation can occur and run onto the floor creating a slip/fall hazard around the case.

The case will keep many products at the proper temperatures without the use of water. The type of food product being kept in the case is the determining factor as to whether water is used in the well(s). Any product that can be run dry should be run dry to prevent excess condensation forming on the glass. Do not use water in more than one well on units with three wells and no more than two wells on any other model. Using water in more wells than recommended will cause excess condensation that will run onto the floor and create a slip/fall hazard around the cabinet. Note: Using deionized water will minimize scale build-up on water heater components.



**NOTICE:** Never allow wet wells to boil. A water temperature of 180 to 190 Deg. F is recommended. The water level in a wet well should always be high enough to touch the bottom of the pan holding the product.



**NOTICE:** Never pour water into a heated, dry well  
The shock of cool water on a heated dry well could cause damage to heat well.

## Initial Start-Up & Placing Product into Case

1. If wet well(s) are desired, place water in desired well(s) as follows. Close the water drain valve located in the lower compartment for any well(s) to be run wet. Fill any well(s) to be run wet with three to four inches of water. The water level in a wet well should always be high enough to touch the bottom of the pan holding the product. Note: Using deionized water will minimize scale build-up on water heater components.
2. Turn on the heat to each well that will be used, by turning the temperature control knob to the desired level. Each well has its own temperature control that is located directly behind the well to be controlled (see control section of this manual). Allow each well being used to preheat before placing product into the case to assure the product will maintain the proper temperature.
3. Turn the Top infrared heater on by using the temperature control located on the right side of rear control panel (see control section of this manual). The top infrared heater should always be used whenever food product is being kept in the case. The heater helps to maintain proper product temperature.
4. If lighting is desired, turn on the top lights. The light switch is located on the right side of rear control panel (see control section of this manual).
5. Place the deli pans containing the product into the preheated wells. Freshly cooked products should never be added to the display if probed temperature is less than 170° F. If you are using a wet well, make sure the bottom of the deli pan containing the product touches the preheated water in the well.
6. Turn on the circulating fan if moisture build up occurs on case interior. Always use circulating fan when wet wells are used. The fan switch is located on the right side of rear control panel (see control section of this manual).

## Unit Shut Down

Remove product from case and shut down unit in the reverse order as described in the “Initial Start Up & Placing Product into Case” section above.

## Draining Wet Wells



**CAUTION: ALLOW WATER TO COOL IN WELL BEFORE DRAINING TO PREVENT BURNS.**

Each well has its own drain that simplifies draining of used water from each well. To drain wet well place a catch container under desired valve outlet and open valve. The wells should be flushed with a generous amount of water to remove any residue.

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# **MAINTENANCE**

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**CAUTION:** Before any service work is performed on the case, make sure all power is disconnected to the case.



**NOTICE:** Installation and service of the electrical components in the case must be performed by a licensed electrician.

Service problems or request for repair parts from authorized service agencies, trained service personnel, or owners should be referred to:

**CUSTOMER SERVICE DEPARTMENT  
Federal Industries  
215 Federal Avenue  
Belleville, WI 53508  
Toll Free: (800) 356-4206 / WI Phone (608) 424-3331  
Fax: (608) 424-3234**

## LIGHT BULB REPLACEMENT

Light bulbs are removed by unscrewing counter clockwise. Install bulbs by screwing in clockwise. Do not over tighten. When replacing lights, use direct equivalent to the original bulbs. Bulbs must have protective coating to prevent shattering if broken.



**NOTICE:** Lights in this case are an additional source of heat and allow unit to heat to its maximum capacity. Replace burned out bulbs as soon as possible. Bulbs must have protective coating to prevent shattering if broken.

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# **CLEANING INSTRUCTIONS**

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## **Daily Cleaning**

The case should be cleaned thoroughly before it is used for the first time.



**NOTICE:** Avoid splashing or soaking any electrical components with water to prevent electrical damage to the case.



**NOTICE:** Shut off lights and power switches and remove all product from case. Allow sufficient time for the unit to reach room temperature before proceeding with cleaning.



**NOTICE:** Remove all product from case before proceeding with cleaning procedure.

## **Cleaning Door Tracks**

The rear doors may be removed for cleaning by lifting the door upward until the bottom Clears the lower door track and then outward.

Clean all foreign material from the door tracks daily. Build-up of crumbs may make doors slide hard. A light film of lubricant, such as PAM, can be applied to the tracks to make the doors slide easier.

## **Exterior Cleaning**

1. Clean the front glass using any common window cleaner.
2. The exterior surfaces should be wiped down using any ammoniated cleansers or warm soapy water.

NOTE: For major spills or foreign material build-up use complete weekly cleaning instruction

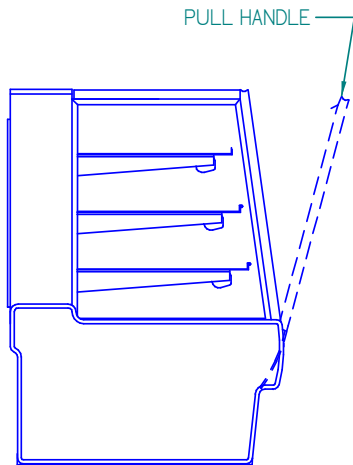
## Cleaning Case Interior

1. Remove products from case, turn off the well heaters, infrared heater, lights, and blower fan.



**CAUTION:** Allow the wells and infrared heater to cool before cleaning.

2. Drain used water from heater well(s) as described in the “Draining Wet Wells” section of this manual.
3. Clean the case interior with warm soapy water. Mild cleansers and plastic scouring pads may be used to remove baked on food and water scale.



### OPEN FRONT GLASS:

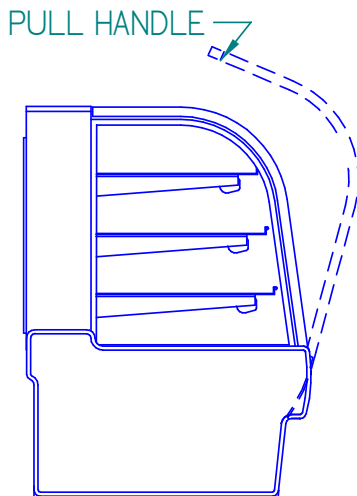
1. Stand in front of unit and grab the pull handle with both hands. It may be necessary to push on front glass from inside of case.
2. Pull front glass outward until the glass rests on front glass stops.

### CLOSE FRONT GLASS:

1. Stand in front of unit and push on front of front glass with both hands.
2. Firmly push front glass towards rear of unit until front glass handle is against top glass front.

STRAIGHT GLASS

EI954-10



### OPEN FRONT GLASS:

1. Stand in front of unit and grab the pull handle with both hands.
2. Pull front glass outward until the glass rests on front glass stops.

### CLOSE FRONT GLASS:

1. Stand in front of unit and push on front of pull handle with both hands.
2. Firmly push glass towards rear of unit until front glass rests in closed position

CURVED GLASS

4. The remaining exterior surface should be wiped down using any ammoniated cleaners or soapy warm water.

Note: Detergents are **not** recommended, do not use abrasive cleaners or pads to prevent scratching of surfaces.

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# SERVICE INFORMATION

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**CAUTION**  
RISK OF ELECTRIC SHOCK

DISCONNECT POWER  
BEFORE SERVICING UNIT

Before any service work is performed on the case, make sure all power is disconnected to the case.

Service problems or request for repair parts from authorized service agencies, trained service personnel, or owners should be referred to:

## CUSTOMER SERVICE DEPARTMENT

Federal Industries  
215 Federal Avenue  
Belleville, WI 53508

Toll Free: (800) 356-4206 / WI Phone (608) 424-3331

Fax: (608) 424-3234

### Pre-Service Checklist

You may avoid the cost and inconvenience of an unnecessary service call by first reviewing this checklist of frequently encountered situations that can cause unsatisfactory case performance.



**CAUTION:** Before servicing case turn off power at the main breaker of fuse box.

### *Case Does Not Operate*

Check for disconnected power supply.

Check for tripped breaker or blown fuse.

Check that the temperature controls are not “off”.

### *Hot Wells Do Not Operate*

Check that corresponding temperature control(s) are “on” as indicated by the pilot light(s).

Check for tripped breaker or blown fuse.

### ***Infrared Heater Does Not Operate***

Check that the temperature control is “on” as indicated by the pilot light.

Check for tripped breaker or blown fuse.

### ***Lights Do Not Operate***

Check that light switch is “on”.

Check that bulbs are properly seated in the sockets.

Check if internal fuse is blown.

### **Light Replacement**

Light bulbs are removed by unscrewing counter clockwise. Install bulbs by screwing in clockwise. Do not over tighten.

When replacing lights, use direct equivalent to the original bulbs. Bulbs must have protective coating to prevent shattering if broken.

### ***Glass Fogging***

Check room ambient- Case is designed to operate in an environment not to exceed 75° F and 55% relative humidity.

Check that blower switch is “on”

Check that nothing is blocking the front air vents.

Check that air is being blown evenly across the front glass surface. If the air is not blowing or is not blown evenly, service is required.

Check if internal fuse is blown.

### **Special Service Situations**

If moisture or liquid is observed around or under a Federal Industries case, an immediate investigation should be made by qualified personnel to determine the source of the moisture or liquid. The investigation made should determine if the case is malfunctioning or if there is a simple housekeeping problem.

Moisture or liquid around or under a case is a potential slip/fall hazard for persons walking by or working in the general area of the case. Any case malfunction or housekeeping problem that creates a slip/fall hazard around or under a case should be corrected immediately.



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# SALE & DISPOSAL

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## Owner Responsibility

If you sell or give away your Federal Industries case you must make sure that all safety labels and the Installation-Service Manual are included with it. If you need replacement labels or manuals, Federal Industries will provide them free of charge. Contact the customer service department at Federal Industries at (800) 356-4206.

The customer service department at Federal Industries should be contacted at the time of sale or disposal of your case so records may be kept of its new location.

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## ELECTRICAL DATA for HD Models

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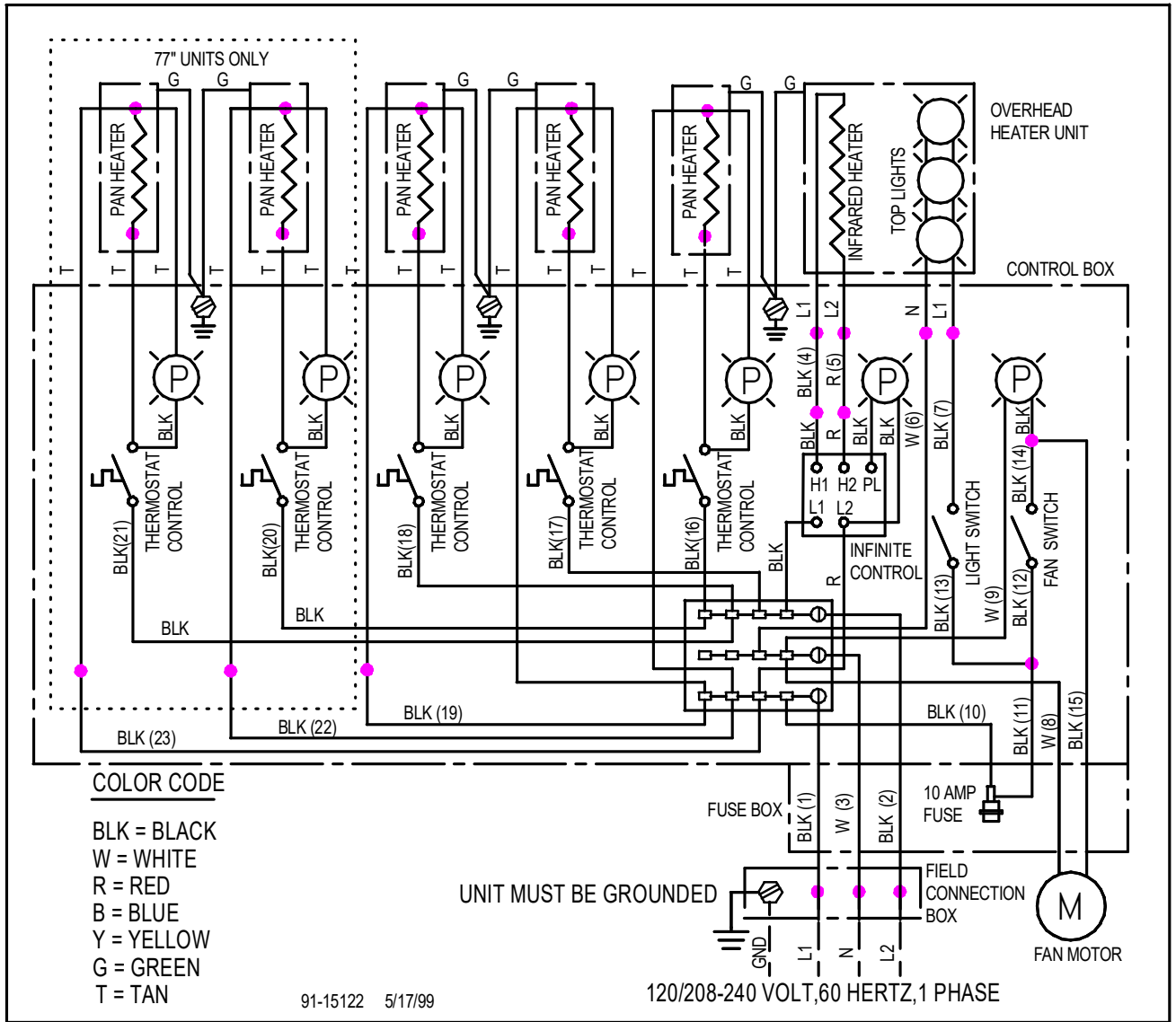
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ALL MODELS ARE 120/208-240 VOLT, 1 PHASE, 60 HERTZ

	SG5048HD CG5048HD	SG5948HD CG5948HD	SG7748HD CG7748HD
	AMPS	AMPS	AMPS
Well Heaters (208/240)	5.0 (3 ea)	5.0 (3 ea.)	5.0 (5 ea.)
Overhead Warmer (208/240)	2.4	2.4	4.1
Fan (120V)	0.7	0.7	0.7
Lights (120V)	1.5	1.5	2.5
Total Rated AMPS	19.6	19.6	32.3

Refer to the rating plate data attached to the rear of the case for electrical requirements.

# WIRING DIAGRAM



# REPLACEMENT PARTS

## ELECTRICAL COMPONENTS

MODELS		LIGHT & FAN SWITCH	PILOT LIGHT 120VOLT	PILOT LIGHT 240VOLT	INFRARED HEATER THERMOSTAT	INFARED HEATER	FUSE	FUSE HOLDER	BLOWER FAN	LIGHT BULB	MAIN WIRING DIAGRAM
CG5048HD	SG5048HD	41-11066	42-31607	42-13311	41-13446	47-14232	41-10713	41-30513	41-32512	42-11248	91-15122
CG5948HD	SG5948HD	41-11066	42-31607	42-13311	41-13446	47-14232	41-10713	41-30513	41-32512	42-11248	91-15122
CG7748HD	SG7748HD	41-11066	42-31607	42-13311	41-13446	47-13308	41-10713	41-30513	41-32512	42-11248	91-15122

## GLASS COMPONENTS

MODELS	CURVED FRT. GLASS	END GLASS CLEAR	END GLASS MIRROR L.H.	END GLASS MIRROR R.H.	MODELS	FRONT GLASS	TOP GLASS	END GLASS CLEAR	END GLASS MIRROR L.H.	END GLASS MIRROR R.H.
CG5048HD	50-13398	51-13473	51-14404-L	51-14404-R	SG5048HD	51-13433	51-13434	51-13444	51-14408-L	51-14408-R
CG5948HD	50-13399	51-13473	51-14404-L	51-14404-R	SG5948HD	51-13437	51-13438	51-13444	51-14408-L	51-14408-R
CG7748HD	50-13400	51-13473	51-14404-L	51-14404-R	SG7748HD	51-13441	51-13442	51-13444	51-14408-L	51-14408-R

## DOOR & SHELF COMPONENTS

MODELS		DOOR LEFT CLEAR	DOOR RIGHT CLEAR	DOOR LEFT REFLECTIVE	DOOR RIGHT REFLECTIVE
CG5048HD	SG5048HD	SA3143-1	SA3144-1	SA3143-4	SA3144-4
CG5948HD	SG5948HD	SA3143-2	SA3144-2	SA3143-5	SA3144-5
CG7748HD	SG7748HD	SA3143-3	SA3144-3	SA3143-6	SA3144-6

California Residents Only.



WARNING

This product can expose you to chemicals including chromium which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)