

E3941
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The Signature of Quality®

**SNR48, SNR59, SNR77
SN48-3, SN59-3, SN77-3
SN4CD, SN6CD, SN77CD**

Self-Contained & Remote Models

**INSTALLATION & OPERATION
INSTRUCTIONS**



KEEP THIS MANUAL FOR FUTURE REFERENCE

Engineering and technical data are subject to change without notice.

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INTRODUCTION

Thank you for purchasing a Federal Industries display case. This manual contains important instructions for installing and servicing the Series '90 Refrigerated Bakery Cases. 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 electrical 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.

REGISTRATION & SERIAL NUMBER

It's important to keep a record of the model and serial number of your merchandiser for warranty and part identification. Please write them here for your quick reference.

Register your product online! Visit our website at www.federalindustries.com and register your product today.

Case Model _____ Serial Number _____

We're here to provide you with the best possible experience with your new product, however, we cannot cover everything about your merchandiser in this manual, so if you have any additional questions or issues, please see the SERVICE INFORMATION PAGE to find who you should contact.

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 potential for personal injury or damage to your equipment.

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



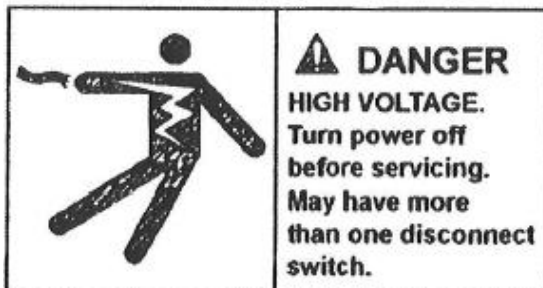
Notice to Employers

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 warnings 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.

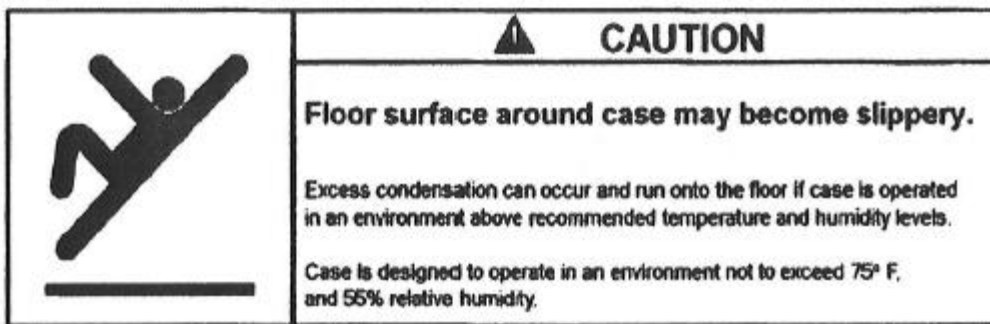
The warning and safety labels shown throughout this manual are placed on your Federal Industries case at the factory. Follow all warning label instructions. If any warning or safety labels become lost or damaged, call our customer service department at 1(800)356-4206 for replacements.



This label is located on the back of the display case.



This label is located below the display pan.



This label is located on the back of the display case.

PRE-INSTALLATION PROCEDURES

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 or 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 immediate inspection of your concealed damage item. Crating material must be retained to show the inspector from the truck line.

INSTALLATION INSTRUCTIONS

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 is excessive air movement or air disturbances.

The condenser inlet is located at the rear of the case. Do not block this inlet and do not locate the air inlet near a source of heat.

Removing the case from Shipping Skid

CAUTION:



Do not push against the curved 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.

Move the case as near as possible to the final location before removing it from the shipping skid.

Remove the four (4) bolts that secure the case to the skid. Do not remove the shipping brackets from the case. The brackets are intended to be used as hand grips for locating the case.

Remove the brackets when the case is in the final location

Removing Packaging Material

Remove the brackets that held the case to the shipping skid.

Remove the plastic ties that hold the wire shelves and shelf brackets in place.

Remove the shipping tape that secures the doors and lift-up glass. If it is necessary to remove tape residue from plastic materials, use cleaning compounds recommended in the cleaning section of this manual.

Leveling the Case

The case must be level for proper drainage of defrost condensate to the condensate evaporator.

Four (4) leg levelers are provided for leveling the case. The leg levelers can be turned in and the case can be placed with the base frame on the floor.

The leveled case must be sealed to the floor using an NSF listed Sealant.

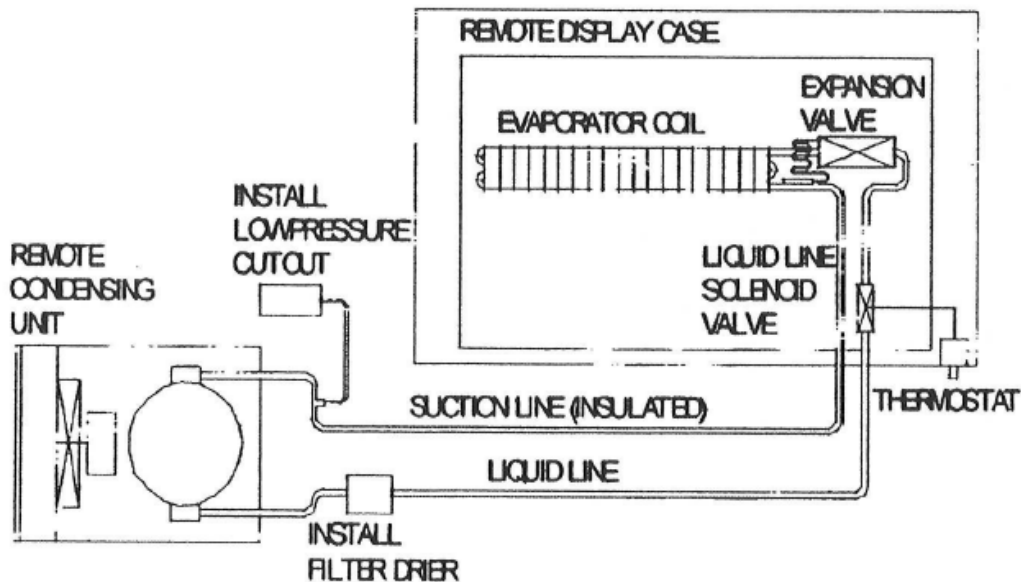
Refrigeration Installation

Self-Contained Models

The self-contained models are shipped from the factory with a completely operational refrigeration system and require no modifications or adjustments of the system upon installation.

Remote Models (Obsolete as of 1/1/2012)

The remote models are designed to use 134A refrigerant and shipped from the factory with the evaporator coil, expansion valve, refrigerant solenoid valve, and thermostat. The thermostat senses interior case temperature and opens and closes the refrigerant solenoid valve as needed to maintain proper case temperatures. The condensing unit is optionally supplied from the factory for remote location installation.



- A. Mount condensing unit indoors as close to the remote display as practical. The refrigeration line should be as short as possible.
- B. All refrigeration and/or electrical materials between the condensing unit and display case are to be supplied by installing contractor.
- C. Route properly sized and designed refrigeration lines from the condensing unit to the cabinet. Horizontal suction lines should be pitched downward towards the condensing unit and least $\frac{1}{2}$ " per 10' run to aid the oil drainage. A "P" trap must be installed in the suction line at the foot of every riser to insure oil return. Dry nitrogen should be used to flow through tubing while brazing refrigeration lines.
- D. Suction line must be insulated the entire length with Armaflex (or equivalent). Do not run liquid line inside insulation with suction line.
- E. The filter drier, sight glass, and low-pressure control are not furnished with remote display case models. The recommended low pressure setting for R134A refrigerant is 32# cut in and 0# cut-out.
- F. Leak check condensing unit, cabinet, and all connecting tubing. Cabinet and condensing unit tubing should be checked to insure no leaks occurred during shipping or from rough handling. Make certain all refrigeration valves are opened and evacuate system to 500 microns. Charge the system with refrigerant type specified on the data plates.

Grill Removal



DANGER: Electric shock hazard. Do not operate unit with panels removed.

The front of the case has a removable base panel to access the anti-fogging fans and the front leg levelers from inside of the case. Normally it is not necessary to remove the panel to install the case. This panel must be in place for proper operation of the case.

There are two (2) removable panels on the back of the case. The left side panel allows access to the light ballasts, the pullout condensing unit, and the field wiring connection box. Remove this panel to make field wiring connections.

The right side panels has the thermometer, power switch, light switch, and thermostat mounted to it. Removing this panel allows access to the terminal board, branch circuit fuse, condensate evaporator, and compressor service ports. Normally it is not necessary to remove this panel to install the case.

Condensate Evaporator

This case is furnished with an electric condensate evaporator. Plumbing connections are not required.

The condensate evaporator is located behind the control panel box and is accessible from the rear of the case.

Lights

Make certain that the light cord plugs are completely inserted into the sockets or arcing may result causing damage to the plugs and sockets.

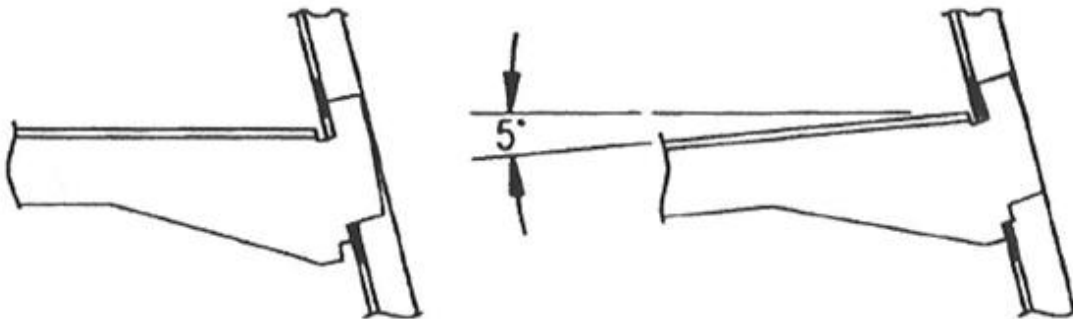
The ballasts used on this case allow removal of one or more shelf lights without affecting the remaining lights.

Shelving

Remove both rear doors from the track by lifting them upward until the bottom edge clears the lower door track and then outward.

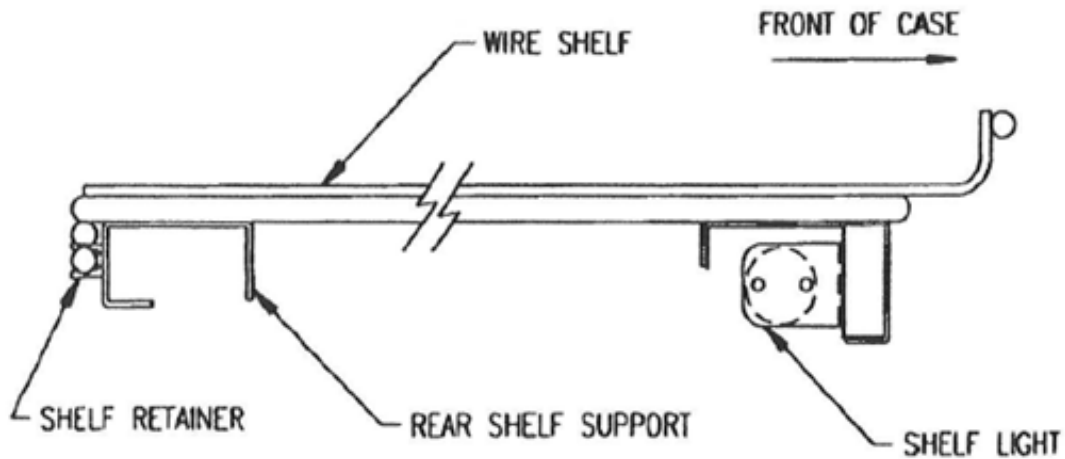
Lift up the front glass to the fully open position.

Put the shelf support assembly in the desired shelf standard slots.



Plug the shelf light cords in the appropriate light socket. Make certain that the light cords are completely inserted into the sockets or arcing may result causing damage to the plugs and sockets.

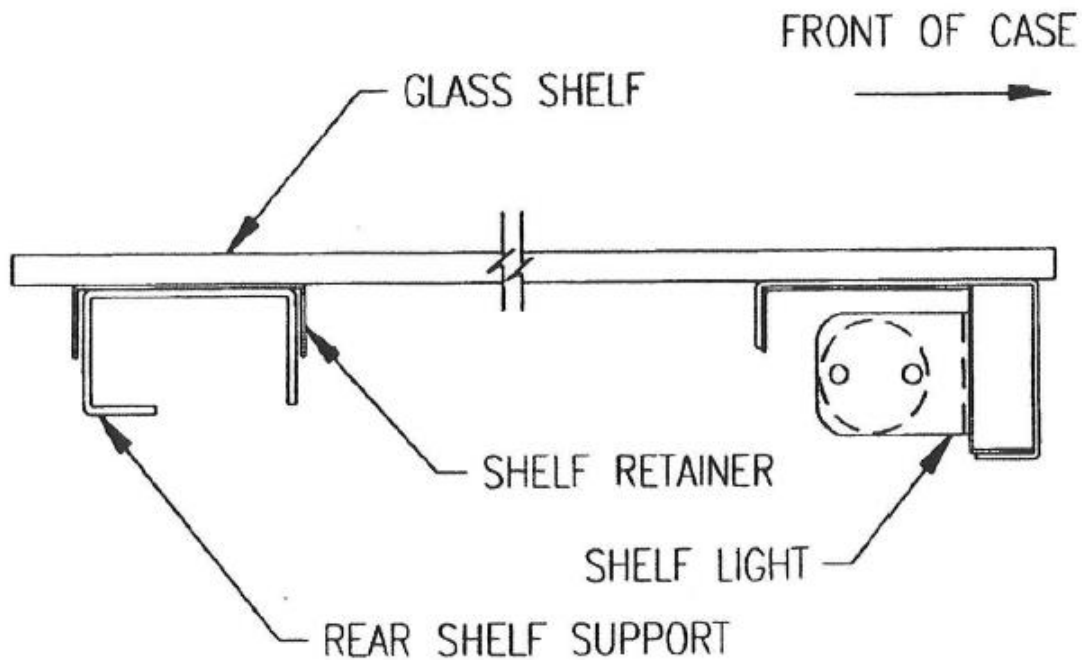
Put the wire shelves on the rear shelf support assembly as shown. Push the bar on the bottom of the wire shelf into the shelf retainer clip on the shelf support assembly. If the shelf is not in the proper position, it may disrupt the air flow in the case and cause product loss.



Close the front glass and reinstall both rear doors.

Optional Glass Shelves

Put the glass shelves on the rear shelf support and shelf light housing as shown. The shelf retainer should sit over the rear shelf support. If the shelf is not in the proper position, it may disrupt the air flow in the case and could cause product loss.



Reinstall both rear doors.

Cleaning

For initial set up, clean the case as outlined in the weekly cleaning section.

ELECTRICAL INFORMATION & GROUNDING

THE CASE MUST BE GROUNDED



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

All case electrical connections must be performed by a licensed electrician.

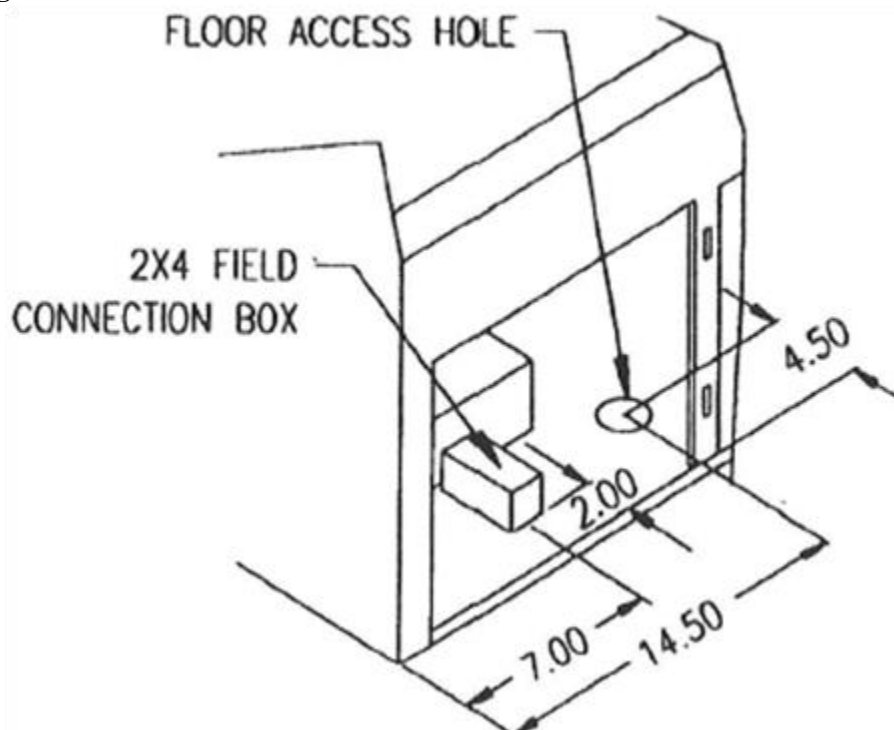
All electrical wiring hookups must be done in accordance with all applicable local, regional, or national electrical standards.

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 next to electrical junction box for proper circuit size and wire ampacity.

A 7/8" diameter hole is provided in the back of the case for field wiring connections. An access hole is also provide in the unit base for running power supply up through the floor. See diagram below.



OPERATING INSTRUCTIONS

Initial Start-Up

After all the checks outlined in the installation section of this manual have been made, the case is ready to be put into service. The service valves on the refrigeration system are back seated when the unit leaves the factory.

Controls

Power Switch

This switch controls power to the entire case. It is labeled with on and off positions

Light Switch

This switch controls the power to the lighting circuit. The switch rocker is red in the “on” position, black in the “off” position.

Temperature Control

This controls the case temperature by cycling the compressor/condensing unit. It has an “off” position and numbered positions 1 through 9. The coldest setting is 9. Set this control at the smallest number while maintaining desired case temperature.

Thermometer

This is a solar powered device. It changes the temperature display approximately every 10 seconds.

Doors

The doors can be removed by lifting the door up until the bottom clears the bottom track.

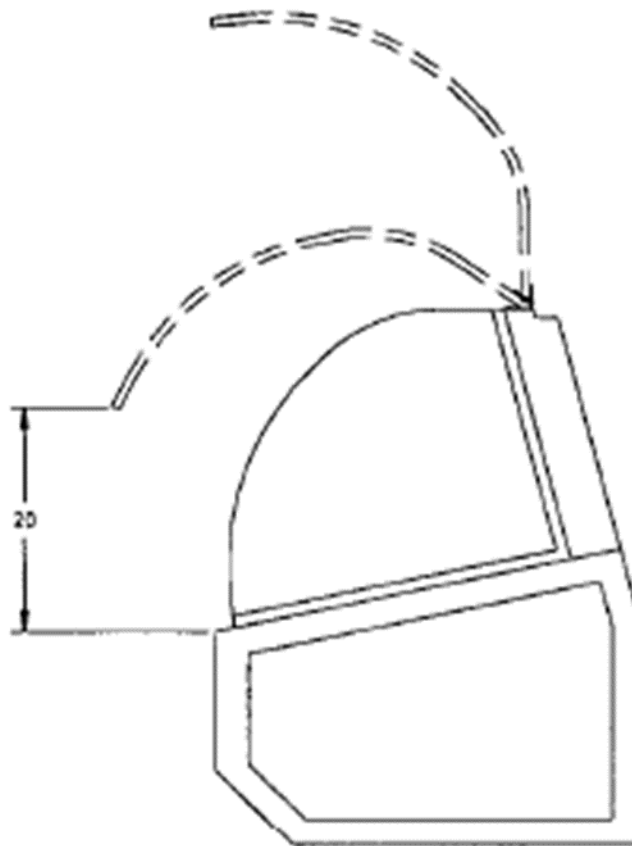
Clean the door track frequently for easy door operation. A very light film of lubricant, such as PAM, will help the doors slide easily.

Anti-Fogging Fans

Two fans are mounted in the base of the unit to blow arm air from the refrigeration system over the curved glass to prevent fogging. The warm air is vented through the slots in the glass handle. Do not block these vents or the front glass will fog. These fans run continuously when the power switch is on.

Hinged Front Glass

The front glass hinges up for easy cleaning of the case interior. Pneumatic cylinders assist in lifting the glass. The glass will hold in any position beyond approximately the first 20° of travel. In the first 20° of travel, the glass will gently close. See diagram below:



The hinged glass mechanism will give years of reliable operation in normal usage. Service on the lift mechanism is required if...

- The glass becomes difficult to open.
- The glass does not hold in the open position.
- The glass closes fast.

Consult factory if service is required.

CAUTION:



OPERATION OF THE LIFT-UP GLASS IS TO BE DONE BY TRAINED STORE PERSONNEL ONLY. THIS CASE IS NOT INTENDED TO BE USED AS A SELF-SERVE UNIT. DO NOT ALLOW CUSTOMERS TO OPERATE LIFT-UP GLASS.

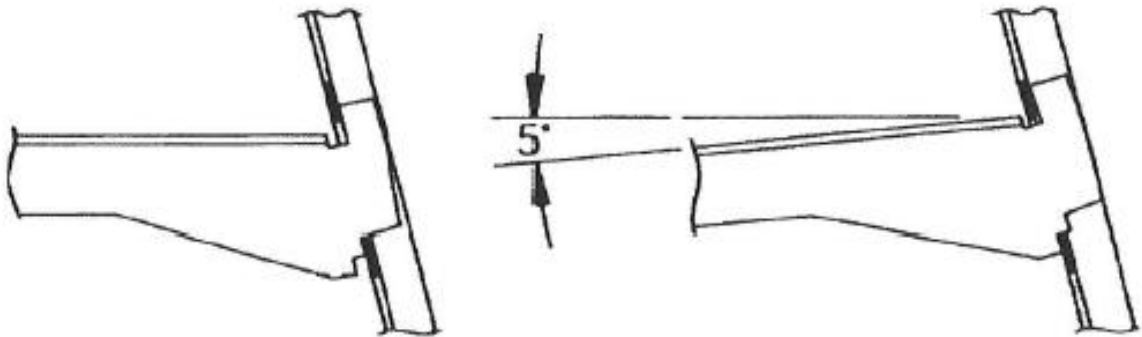
Shelves

The shelves are adjustable up and down in 2" increments. To reposition shelves:

1. Turn the shelf lights off.
2. Unplug the shelf light cord.
3. Remove all shelves from the shelf supports.
4. Grasp the shelf support at each end.
5. Tip the front of the shelf support up until it can be removed from the shelf standard.
6. Reposition the shelf as desired.

The shelves can be installed horizontally or slanted at 5° to change the shelf slant:

1. Remove the shelves from the shelf support.
2. Grasp the shelf support at each end.
3. Lift the shelf support up at the back until the brackets can be repositioned in the shelf standard slots. See diagram below:



Light Replacement

The light fixtures use a spring-loaded socket on one end. To remove a light, push the bulb toward the spring-loaded socket until the opposite end drops out of the socket.

The bulbs are furnished with plastic safety light shields. Make certain the light shields are always in place to safeguard against bulb breakage.

When replacing lights, use direct equivalents to the original bulbs.

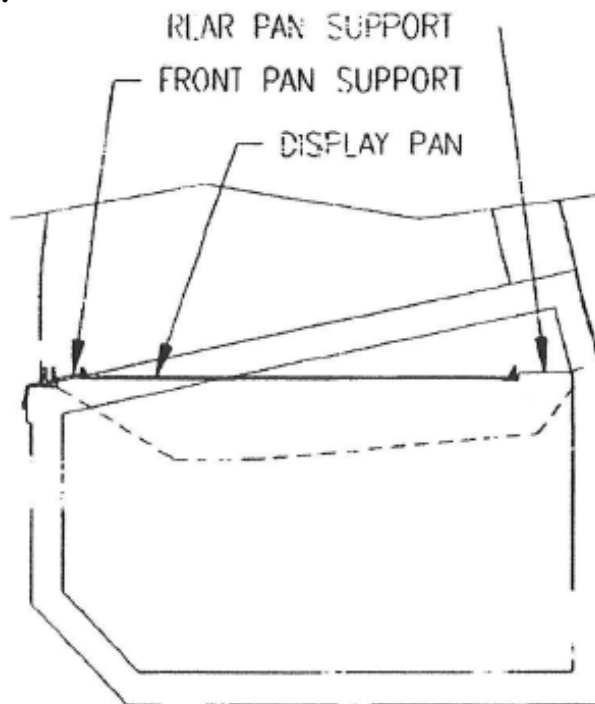
Placing Product into Case

Do not overhang the wire shelves with product or display pans. Overhanging the shelves will block the refrigerated air flow and could cause product loss.

Do not block the slots along the front or rear of the case display floor.

CASE SHOULD BE STOCKED WITH PRE-CHILLED PRODUCT ONLY.

The display pans are removable for cleaning and can become dislodged in shipment. To ensure proper air flow and performance of the case, make sure that the display pans are positioned as shown. Check that the pans are installed properly before placing product on the display pans.



Periodic Maintenance

Cleaning Condenser Coil

Disconnect power to the unit.

Remove the rear grill and vacuum the front surface of the condenser coil. This should be done everyone to two months as necessary.

CLEANING INSTRUCTIONS

Daily Cleaning

The case should be cleaned thoroughly, as described in the weekly cleaning section, 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 enough time for the unit to reach room temperature before proceeding with cleaning.

Note: For major spills or foreign material buildup use complete weekly cleaning instruction.

1. Clean all foreign materials from the door opening.
2. Wipe complete interior of case using a damp cloth.
3. The glass can be cleaned with common window cleaners. The remaining exterior surface should be wiped down using any ammoniated cleansers or soapy warm water.

Note: Detergents are not recommended.

Weekly Cleaning

This procedure is recommended on a weekly basis. It may need to be performed more often if necessary, to maintain a clean, sanitary case. The case should be cleaned to this procedure before using 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 enough time for the unit to reach room temperature before proceeding with cleaning.

Interior Cleaning

1. Remove rear doors from track by lifting door upward until the bottom of the door clears the lower door track and then outward. Remove the inner door in the same manner.
2. Lift up the front glass to the fully open position.
3. Remove all shelves from the case.
4. Unplug the shelf lights and lift the shelf support assembly out of the shelf standard slots.
5. Remove the two (2) thumb screws holding the shelf standard to the side wall and take the shelf standard out of the case.
6. Lift the display pans up and take them out of the case.
7. Clean the entire interior of the case using warm soapy water. Wipe off all soapy water with a damp cloth and allow to dry.

Note: Depending on the amount and spillage of foreign material, some fasteners may have to be removed and parts disassembled to allow proper cleaning of the unit.

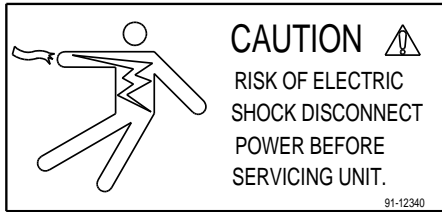
8. Clean all shelves, shelf support assemblies, shelf standards, and display pans using warm soapy water and a brush. Rinse thoroughly and allow to dry.
9. Clean all foreign material from inner and outer rear door tracks using warm soapy water and a brush. Apply a light film of lubricant, such as PAM, to make the doors operate smoother.
10. Clean both sides of the doors and interior of the front glass using any common window cleaner.
11. Reassemble the case in reverse order starting with step 6.

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.

Plastic exterior surfaces can be cleaned with any ammoniated household cleaner. Stains can be removed by scrubbing with TRIAENE Soap, ETHYL CELLOSOLVE, CARBONA, or similar solvent base cleaning fluids. The surfaces must be thoroughly rinsed with warm water after using solvent based cleaners.

SERVICE INFORMATION



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

To find a service company in your area, please visit our website at www.federalindustries.com. There you can also find self-service tools to help you get the answers you need faster!

For Warranty Service Requests & ALL Technical Support please contact:

- **Phone:** (800) 356-4206 and choose the Tech Support/Warranty Option
- **Email:** Service@federalind.com

For Warranty Compressors please contact the Parts Department:

- **Phone:** (800) 356-4206 and choose the Warranty Parts Option
- **Email:** Parts@Federalind.com



Federal Industries has partnered with Parts Town for ALL Non-Warranty Part Identification, Pricing, Lead Times, Orders & Freight Quotes. Please contact Parts Town directly if you need parts:

- **Website:** PartsTown.com
- **Email:** CustomerService@PartsTown.com
- **Phone:** 833-809-8188

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 or fuse box.

1. Case Does Not Operate

- a. Check for disconnected power supply.
- b. Check for tripped breaker or blown fuse.
- c. Check that the power switch and thermostat are not “off”

2. Lights Do Not Operate

- a. Check that the light switch is on.
- b. Be sure light is properly seated in the sockets.
- c. Check that light cord(s) are tight in the sockets.

3. Case Temperature Too Warm

- a. Check that the cold air inlet and outlet slots are not blocked.
- b. Be sure front glass is closed tightly and back doors are closed.
- c. Check for a blocked or dirty condenser coil.
- d. Check cold air flow. Lack of adequate cold air flow could be a defective evaporator fan or blocked evaporator coil. Check that paper or foreign material is not blocking evaporator. If the evaporator coil is blocked due to excessive frost, turn the thermostat knob to the “off” position for approximately one hour to defrost. Excessive frost will build-up if the case is operated with the door open or ajar.

4. Glass Fogging

- a. Check room ambient- Case is designed to operate in an environment not to exceed 75F and 55% relative humidity.
- b. Check case temperature- Case is designed to operate between 38F and 42F.
- c. Check that nothing is blocking the warm air vents in the glass handle. Check that warm air is being blown evenly across the front glass surface. If the air is not blowing or is not blown evenly, service is required.
- d. Check that the air flow is not being disturbed by a nearby fan or air duct.
- e. Check that nothing is placed on top of the glass case.

Special Service Situations

There are rare occasions when the refrigerant charge must be evacuated from a case in order to perform service work. In those situations, Federal Industries recommends that the refrigerant charge be evacuated into a recovery system to prevent the possibility of hydrofluorocarbons (HFC's) from being released into the atmosphere. The release of HFC's into the atmosphere is a potential source of global warming.

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 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.

SALE & DISPOSAL

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.

If you sell or give away your Federal Industries case and you evacuate the refrigerant charge before shipment, Federal Industries recommends that the charge be evacuated into a recovery system to prevent the possibility of HFC's from being released into the atmosphere. The release of these HFC's is a potential source of global warming.

REFRIGERATION & ELECTRICAL DATA

SELF-CONTAINED:

SNR48SC-2, SNR59SC-2, SNR77SC-2

| | SNR48SC-2 | SNR59SC-2 | SNR77SC-2 |
|---------------------------------|-----------|-----------|-----------|
| Refrigerant | | | |
| Charge (R-22 before 1/1/2000) | 2 lbs. | 2.5 lbs. | 3 lbs. |
| Charge (R-134a before 1/1/2020) | 22oz. | 22oz. | 28 oz. |
| Charge (R513a after 1/1/2020) | 21oz. | 21oz. | 27 oz. |

ALL MODELS ARE 120 VOLT, 1 PHASE, 60 HERTZ

| | AMPS | AMPS | AMPS |
|---------------------------------------|--------|--------|------------|
| Compressor | | | |
| RLA | 8.8 | 8.8 | 10.1 |
| LRA | 58.8 | 58.8 | 68.0 |
| Condenser Fan Motor | 0.5 | 0.5 | 1.4 |
| Evaporator Fan Motor | 0.3ea. | 0.3ea. | 0.3ea. (2) |
| Anti-Fogging Fan Fan Motor (2) | 0.3ea. | 0.3ea. | 0.3ea. |
| Lights | 0.9 | 0.9 | 1.3 |
| Condensate Evaporator | 1.6 | 1.6 | 1.6 |

Refer to the rating plate data attached to the rear of the case for Maximum Fuse Size and Minimum Circuit Ampacity.

SN48-3SC, SN59-3SC, SN77-3SC

| | SN48-3SC | SN59-3SC | SN77-3SC |
|--|---------------|---------------|---------------|
| Refrigerant | | | |
| Charge (R-22 before 1/1/2000) | 2 lbs. | 2lbs. | 2lbs. |
| Charge (R-134a before 1/1/2020) | 20oz. | 20oz. | 20 oz. |
| Charge (R513a after 1/1/2020) | 19 oz. | 19 oz. | 19 oz. |

ALL MODELS ARE 115 VOLT, 1 PHASE, 60 HERTZ

| | AMPS | AMPS | AMPS |
|-------------------------------|-------------|-------------|-------------|
| Compressor | | | |
| RLA | 8.1 | 8.1 | 8.1 |
| LRA | 40.0 | 40.0 | 40.0 |
| Condenser Fan Motor | 0.5 | 0.5 | 0.5 |
| Evaporator Fan Motor | 0.3 | 0.3 | 0.3 |
| Anti-Fogging Fan Motor | 0.3 | 0.3 | 0.3 |
| Lights | 0.9 | 0.9 | 0.9 |
| Condensate Evaporator | 1.6 | 1.6 | 1.6 |

Refer to the rating plate data attached to the rear of the case for Maximum Fuse Size and Minimum Circuit Ampacity.

SN4CD, SN6CD, SN8CD

| | SN4CD | SN6CD | SN8CD |
|--|---------------|---------------|-----------------|
| Refrigerant | | | |
| Charge (R-22 before 1/1/2000) | 2 lbs. | 3 lbs. | 3.5 lbs. |
| Charge (R-134a before 1/1/2020) | 22oz. | 28oz. | 32 oz. |
| Charge (R513a after 1/1/2020) | 21oz. | 27oz. | 31 oz. |

ALL MODELS ARE 120 VOLT, 1 PHASE, 60 HERTZ

| | AMPS | AMPS | AMPS |
|---------------------------------------|---------------|---------------|-------------------|
| Compressor | | | |
| RLA | 8.8 | 10.1 | 10.1 |
| LRA | 58.8 | 68.0 | 68.0 |
| Condenser Fan Motor | 0.5 | 1.4 | 1.4 |
| Evaporator Fan Motor | 0.3ea. | 0.3ea. | 0.3ea. (2) |
| Anti-Fogging Fan Fan Motor (2) | 0.3ea. | 0.3ea. | 0.3ea. |
| Lights | 0.9 | 1.3 | 1.3 |
| Condensate Evaporator | 1.6 | 1.6 | 1.6 |

Refer to the rating plate data attached to the rear of the case for Maximum Fuse Size and Minimum Circuit Ampacity.

REFRIGERATION & ELECTRICAL DATA

REMOTE:

SNR48R-2, SNR59R-2, SNR77R-2 OBSOLETE 1/1/2012

| | SNR48R-2 | SNR59R-2 | SNR77R-2 |
|-------------------------------|----------|----------|----------|
| Refrigerant (before 1/1/2000) | R-22 | R-22 | R-22 |
| Refrigerant (after 1/1/2000) | R-134A | R-134A | R-134A |

ALL MODELS ARE 120 VOLTS, 1 PHASE, 60 HERTZ

| | AMPS | AMPS | AMPS |
|----------------------------|---------|---------|-------------|
| Evaporator Fan Motor | 0.3 | 0.3 | 0.3 ea. (2) |
| Anti-Fogging Fan Motor (2) | 0.3 ea. | 0.3 ea. | 0.3 ea. |
| Lights | 0.9 | 0.9 | 1.3 |
| Condensate Evaporator | 1.6 | 1.6 | 1.6 |

Refer to the rating plate data attached to the rear of the case for Maximum Fuse Size and Minimum Circuit Ampacity.

SN48R-3R, SN59-3R, SN77-3R OBSOLETE 1/1/2012

| | SN48-3R | SN59-3R | SN77-3R |
|---------------------------------|---------|---------|---------|
| R Refrigerant (before 1/1/2000) | R-22 | R-22 | R-22 |
| Refrigerant (after 1/1/2000) | R-134A | R-134A | R-134A |

ALL MODELS ARE 115 VOLTS, 1 PHASE, 60 HERTZ

| | | | |
|------------------------|-----|-----|-----|
| Evaporator Fan Motor | 0.3 | 0.3 | 0.3 |
| Anti-Fogging Fan Motor | 0.3 | 0.3 | 0.3 |
| Lights | 0.9 | 0.9 | 0.9 |
| Condensate Evaporator | 1.6 | 1.6 | 1.6 |

Refer to the rating plate data attached to the rear of the case for Maximum Fuse Size and Minimum Circuit Ampacity.

SN4CD-R, SN6CD-R, SN8CD-R OBSOLETE 1/1/2012

| | SN4CD-R | SN6CD-R | SN8CD-R |
|-------------------------------|---------|---------|---------|
| Refrigerant (before 1/1/2000) | R-22 | R-22 | R-22 |
| Refrigerant (after 1/1/2000) | R-134A | R-134A | R-134A |

ALL MODELS ARE 120 VOLTS, 1 PHASE, 60 HERTZ

| | AMPS | AMPS | AMPS |
|----------------------------|---------|---------|-------------|
| Evaporator Fan Motor | 0.3 | 0.3 | 0.3 ea. (2) |
| Anti-Fogging Fan Motor (2) | 0.3 ea. | 0.3 ea. | 0.3 ea. |
| Lights | 0.9 | 1.3 | 1.3 |
| Condensate Evaporator | 1.6 | 1.6 | 1.6 |

Refer to the rating plate data attached to the rear of the case for Maximum Fuse Size and Minimum Circuit Ampacity.

REPLACEMENT PARTS:

SNR48SC-2, SNR59SC-2 & SNR77SC-2

| Part Description | Part Number | | |
|---|-------------------------|-------------------------|-------------------------|
| | <u>SNR48SC-2</u> | <u>SNR59SC-2</u> | <u>SNR77SC-2</u> |
| <u>Refrigeration System</u> | | | |
| Condensing Unit (SC only before 5/1/16) | 30-14218 | 30-14218 | 30-14219 |
| Compressor (Replacement before 5/1/16) | 30-15036 | 30-15036 | 30-15038 |
| Condensing Unit (SC only after 5/1/16) | 30-20513 | 30-20513 | 30-14219 |
| Compressor (Replacement after 5/1/16) | 30-20966 | 30-20966 | 30-15038 |
| Evaporator Coil | 33-50053 | 33-11499 | 33-50037 |
| Expansion Valve | 32-12625 | 32-12625 | 32-12625 |
| Evaporator Fan Motor | 41-11628 | 41-11628 | 41-11628 |
| Evaporator Fan Blade | 72-32507 | 72-32507 | 72-11450 |
| Filter Drier | 32-12626 | 32-12626 | 32-12391 |
| Thermostat | 32-15495 | 32-15495 | 32-15495 |
| Thermostat Knob | 72-15447 | 72-15447 | 72-15447 |
| Base Service Valve | 32-11723 | 32-11723 | 32-11723 |
| Solenoid Valve (Remote Only) | 32-30141 | 32-30141 | 32-30141 |
| | | | |
| <u>Electrical Components</u> | | | |
| Power Switch | 41-11066 | 41-11066 | 41-11066 |
| Light Switch | 41-11066 | 41-11066 | 41-11066 |
| Terminal Block | 45-11056 | 45-11056 | 45-11056 |
| Ballast | ----- | ----- | 39-12902 |
| Ballast | 39-12904 | 39-12904 | 39-12904 |
| Light Bulb | 42-11069 | 42-11070 | 42-11071 |
| Light Cord (w/Receptacle) | 43-12269 | 43-12269 | 43-12269 |
| Light Cord (w/Plug) | 43-10989 | 43-10989 | 43-10989 |
| Light Socket (Stationary) | 42-10834 | 42-10834 | 42-10834 |
| Light Socket (Spring Loaded) | 42-10833 | 42-10833 | 42-10833 |
| Compressor Receptacle | 45-11677 | 45-11677 | 45-11677 |
| Condensate Evaporator | 40-20420 | 40-20420 | 40-20420 |
| | | | |
| <u>Misc. Components</u> | | | |
| Front Glass | 50-10995 | 50-10996 | 50-10998 |
| End Glass- Clear | 50-11115 | 50-11115 | 50-11115 |
| Reflective End L.H. | 50-11173 | 50-11173 | 50-11173 |
| Reflective End R.H. | 50-11174 | 50-11174 | 50-11174 |
| Door L.H.- Clear | 53-11091 | 53-11095 | 53-11099 |
| Door R.H.- Clear | 53-11092 | 53-11096 | 53-11100 |
| Door L.H.- Reflective | 53-11093 | 53-11097 | 53-11101 |
| Door R.H.- Reflective | 53-11094 | 53-11098 | 53-11102 |
| Wire Shelf- Top | 63-11025 | 63-11028 | 63-11031 |
| Wire Shelf- Middle | 63-11026 | 63-11029 | 63-11032 |
| Wire Shelf- Bottom | 63-11027 | 63-11030 | 63-30242 |
| Glass Shelf- Top | 52-11214 | 52-11217 | 52-11220 |
| Glass Shelf- Middle | 52-11215 | 52-11218 | 52-11221 |
| Glass Shelf- Bottom | 52-11216 | 52-11219 | 52-11222 |
| Light Shield | 42-30200 | 42-15641 | 42-15637 |
| Decal- Slip Hazard | 91-11175 | 91-11175 | 91-11175 |
| Thermometer | 32-11068 | 32-11068 | 32-11068 |
| Glass Handle | 66-11077 | 66-11078 | 66-11080 |
| Clamp (Glass) | 81-11043 | 81-11044 | 81-11045 |
| Gas Cylinder | 81-11046 | 81-11047 | 81-11046 |
| Pivot Hinge | 66-11076 | 66-11076 | 66-11076 |
| Leg Leveler | 65-11486 | 65-11486 | 65-11486 |

SN48-3SC-2, SN59-3SC-2, SN77-3SC-2

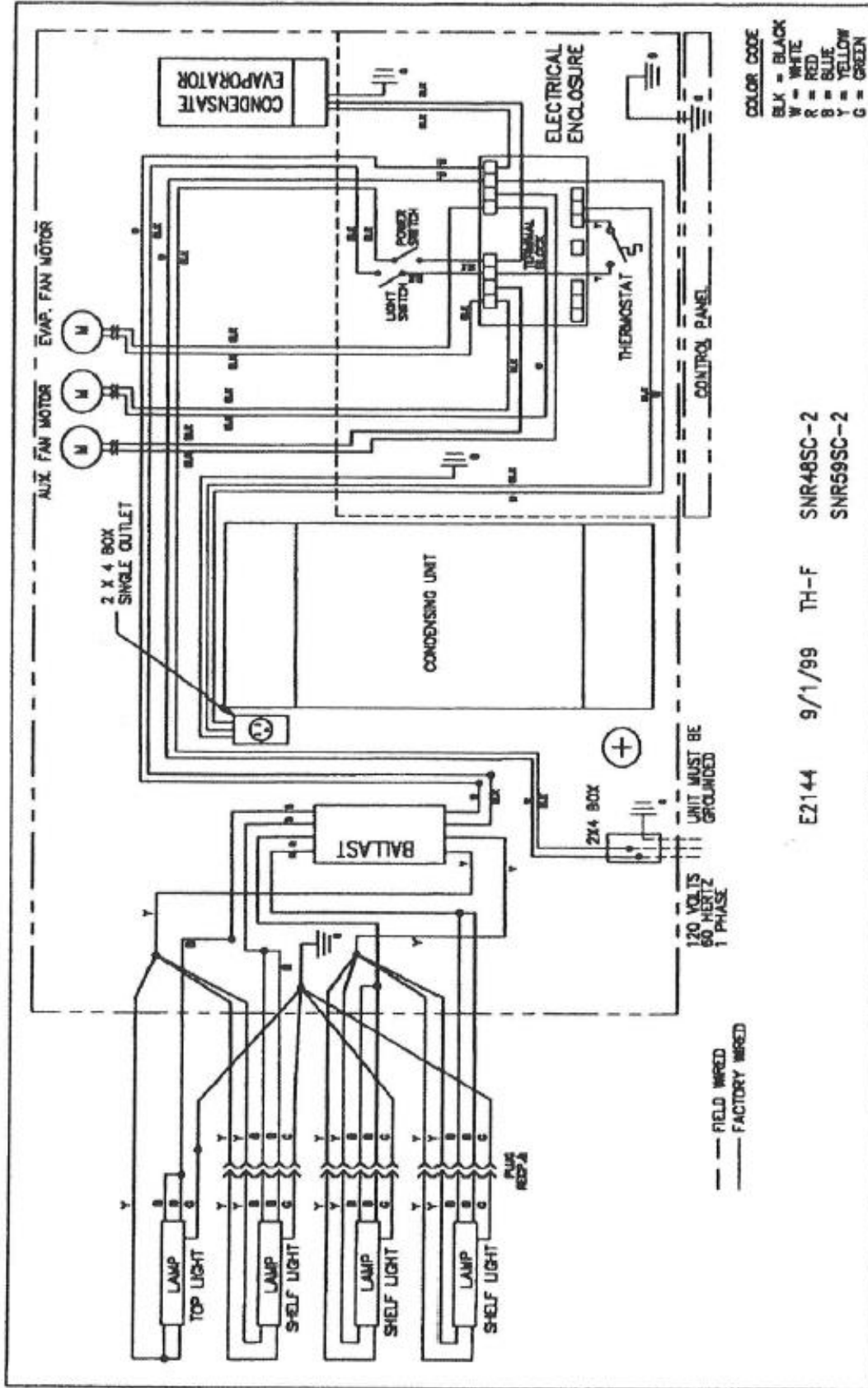
| <u>Part Description</u> | <u>Part Number</u> | | |
|---|--------------------|-------------------|-------------------|
| <u>Refrigeration System</u> | <u>SN48-3SC-2</u> | <u>SN59-3SC-2</u> | <u>SN77-3SC-2</u> |
| Condensing Unit (SC only before 5/1/16) | 30-14217 | 30-14217 | 30-14217 |
| Compressor (Replacement before 5/1/16) | 30-15034 | 30-15034 | 30-15034 |
| Condensing Unit (SC only after 5/1/16) | 30-20347 | 30-20347 | 30-20347 |
| Compress (Replacement after 5/1/16) | 30-20380 | 30-20380 | 30-20380 |
| Evaporator Coil | 33-12080 | 33-10992 | 33-50051 |
| Expansion Valve | 32-12625 | 32-12625 | 32-12625 |
| Evaporator Fan Motor | 41-11628 | 41-11628 | 41-11628 |
| Evaporator Fan Blade | 72-32507 | 72-32507 | 72-32507 |
| Filter Drier | 32-12626 | 32-12626 | 32-12626 |
| Thermostat | 32-15495 | 32-15495 | 32-15495 |
| Thermostat Knob | 72-15447 | 72-15447 | 72-15447 |
| Base Service Valve | 32-11723 | 32-11723 | 32-11723 |
| Solenoid Valve (Remote only) | 32-30141 | 32-30141 | 32-30141 |
| | | | |
| <u>Electrical Components</u> | | | |
| Power Switch | 41-11066 | 41-11066 | 41-11066 |
| Light Switch | 41-11066 | 41-11066 | 41-11066 |
| Terminal Block | 45-11056 | 45-11056 | 45-11056 |
| Ballast | 39-18568 | 39-12904 | 39-12904 |
| Light Bulb | 42-30201 | 42-11519 | 42-11519 |
| Light Cord (w/Receptacle) | 43-12269 | 43-12269 | 43-12269 |
| Light Cord (w/Plug) | 43-10989 | 43-10989 | 43-10989 |
| Light Socket (Stationery) | 42-10834 | 42-10834 | 42-10834 |
| Light Socket (Spring Loaded) | 42-10833 | 42-10833 | 43-10833 |
| Compressor Receptacle | 45-11677 | 45-11677 | 45-11677 |
| Condenser Evaporator | 40-20420 | 40-20420 | 40-20420 |
| | | | |
| <u>Misc. Components</u> | | | |
| Front Glass | 50-10995 | 50-10996 | 50-10998 |
| End Glass- Clear | 50-11115 | 50-11115 | 50-11115 |
| Reflective End L.H. | 50-11173 | 50-11173 | 50-11173 |
| Reflective End R.H. | 50-11174 | 50-11174 | 50-11174 |
| Door L.H.- Clear | 53-11091 | 53-11095 | 53-11099 |
| Door R.H.- Clear | 53-11092 | 53-11096 | 53-11100 |
| Door L.H.- Reflective | 53-11093 | 53-11098 | 53-11101 |
| Door R.H.- Reflective | 53-11094 | 53-11098 | 53-11102 |
| Wire Shelf- Top | 63-11693 | 63-11696 | 63-11699 |
| Wire Shelf- Middle | 63-11694 | 63-11697 | 63-11700 |
| Wire Shelf- Bottom | 63-11695 | 63-11698 | 63-11701 |
| Glass Shelf- Top | 52-12213 | 52-12052 | 52-12034 |
| Glass Shelf- Middle | 52-12214 | 52-12053 | 52-12035 |
| Glass Shelf- Bottom | 52-12215 | 52-12054 | 52-12036 |
| Light Shield | 42-30199 | 42-15639 | 42-15639 |
| Decal- Electrical Hazard | 91-10743 | 91-10743 | 91-10743 |
| Decal- Slip Hazard | 91-11175 | 91-11175 | 91-11175 |
| Thermometer | 32-11068 | 32-11068 | 32-11068 |
| Glass Handle | 66-11077 | 66-11078 | 66-11080 |
| Clamp (Glass) | 81-11043 | 81-11044 | 81-11045 |
| Gas Cylinder | 81-11046 | 81-11047 | 81-11046 |
| Pivot Hinge | 66-11076 | 66-11076 | 66-11076 |
| Leg Leveler | 65-11486 | 65-11486 | 65-11486 |

SN4CD, SN6CD, & SN8CD

| Part Description | Part Number | | |
|---|---------------------|---------------------|---------------------|
| <u>Refrigeration System</u> | <u>SN4CD</u> | <u>SN6CD</u> | <u>SN8CD</u> |
| Condensing Unit (SC only before 5/1/16) | 30-14218 | 30-14219 | 30-14219 |
| Compressor (Replacement before 5/1/16) | 30-15036 | 30-15038 | 30-15038 |
| Condensing Unit (SC only after 5/1/16) | 30-20513 | 30-14219 | 30-14219 |
| Compress (Replacement after 5/1/16) | 30-20966 | 30-15038 | 30-15038 |
| Evaporator Coil | 33-50053 | 33-50037 | 33-11360 |
| Expansion Valve | 32-12625 | 32-12625 | 32-15346 |
| Evaporator Fan Motor | 41-11628 | 41-11628 | 41-11628 |
| Evaporator Fan Blade | 72-32507 | 32-32507 | 72-32507 |
| Filter Drier | 32-12626 | 32-12391 | 32-12391 |
| Thermostat | 32-15495 | 32-15495 | 32-15495 |
| Thermostat Knob | 72-15447 | 72-15447 | 72-15447 |
| | | | |
| <u>Electrical Components</u> | | | |
| Power Switch | 41-11066 | 41-11066 | 41-11066 |
| Light Switch | 41-11066 | 41-11066 | 41-11066 |
| Terminal Block | 45-11056 | 45-11056 | 45-11056 |
| Ballast | 39-12902 | 39-12903 | 39-12904 |
| Light Bulb | 42-11069 | 42-11071 | 42-11069 |
| Light Cord (w/Receptacle) | 43-10988 | 43-10988 | 43-10988 |
| Light Cord (w/Plug) | 43-10989 | 43-10989 | 43-10989 |
| Light Socket (Stationery) | 42-10834 | 42-10834 | 42-10834 |
| Light Socket (Spring Loaded) | 42-10833 | 42-10833 | 42-10833 |
| Compressor Receptacle | 45-11677 | 45-11677 | 45-11677 |
| Condensate Evaporator | 40-20420 | 40-10420 | 40-20420 |
| | | | |
| <u>Misc. Components</u> | | | |
| End Glass- Clear | 50-11115 | 50-11115 | 50-11115 |
| End Glass- Mirrored L.H. | 50-11173 | 50-11173 | 50-11173 |
| End Glass- Mirrored R.H. | 50-11174 | 50-11174 | 50-11174 |
| Front Glass- Clear | 50-10995 | 50-10997 | 50-10995 |
| Glass Handle | 66-11077 | 66-11079 | 66-11077 |
| Clamp (Glass) | 81-11043 | 81-11263 | 81-11043 |
| White Hood Top | 15-12759 | 15-12760 | 15-12761 |
| Lamp Shield | 42-30200 | 42-15637 | 42-30200 |
| Door L.H.- Clear | 53-11318 | 53-11256 | 53-11318 |
| Door R.H.- Clear | 53-11319 | 53-11257 | 53-11319 |
| Door- Mirrored L.H. | 53-11320 | 53-11258 | 53-11320 |
| Door- Mirrored R.H. | 53-11321 | 53-11259 | 53-11321 |
| Gas Cylinder | 81-11046 | 81-11046 | 81-11046 |
| Pivot Hinge | 66-11076 | 66-11076 | 66-11076 |
| Leg Leveler | 65-11486 | 65-11486 | 65-11486 |
| Thermometer | 32-11068 | 32-11068 | 32-11068 |
| Mezzanine Shelf | M-9561-1 | M-9561-2 | M-9561-1 |
| Decal- Electrical Hazard | 91-10743 | 91-10743 | 91-10743 |
| Decal- Slip Hazard | 91-11175 | 91-11175 | 91-11175 |

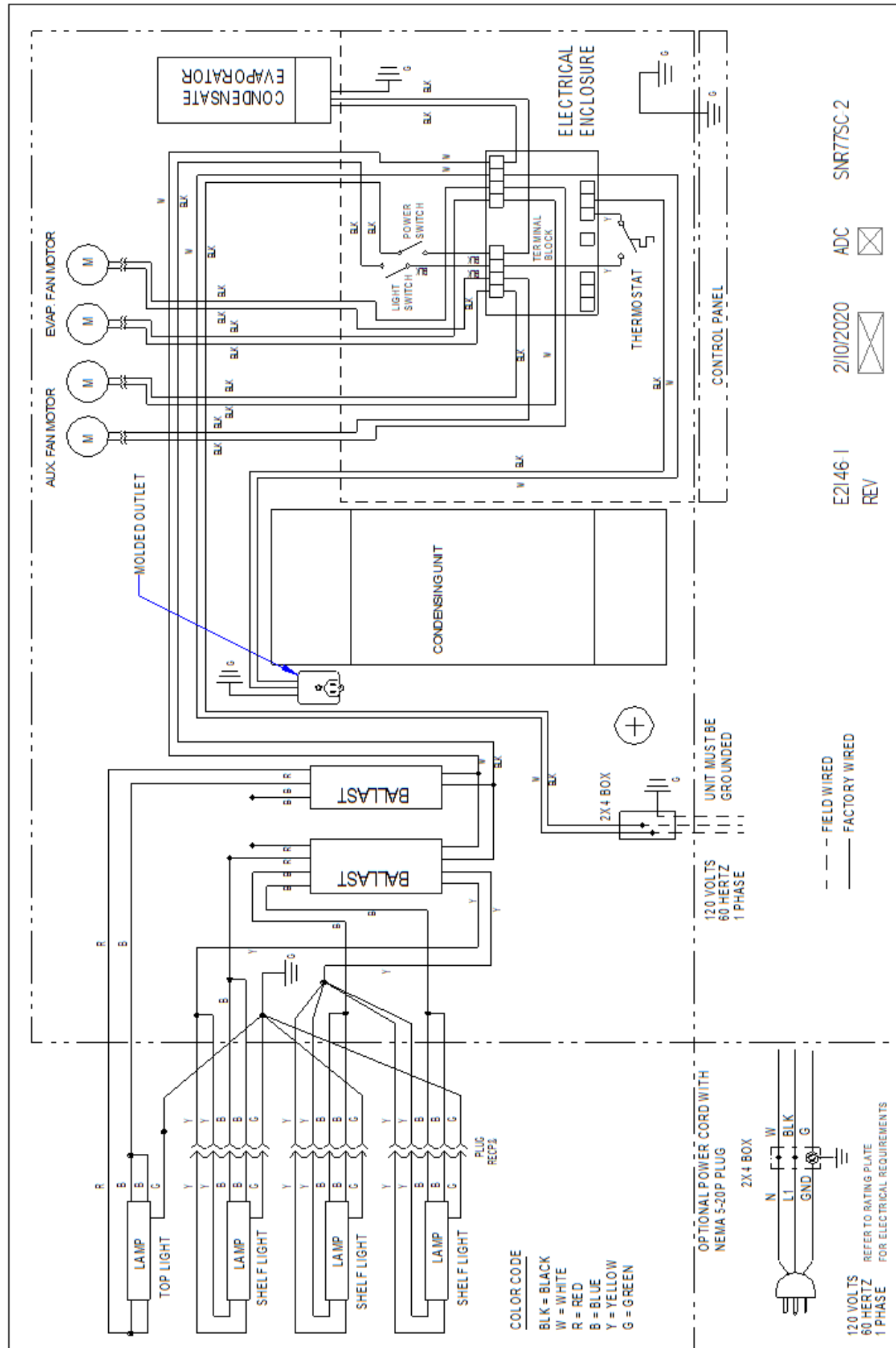
WIRING DIAGRAM SELF-CONTAINED:

WIRING DIAGRAM: SNR48SC-2, SNR59SC-2

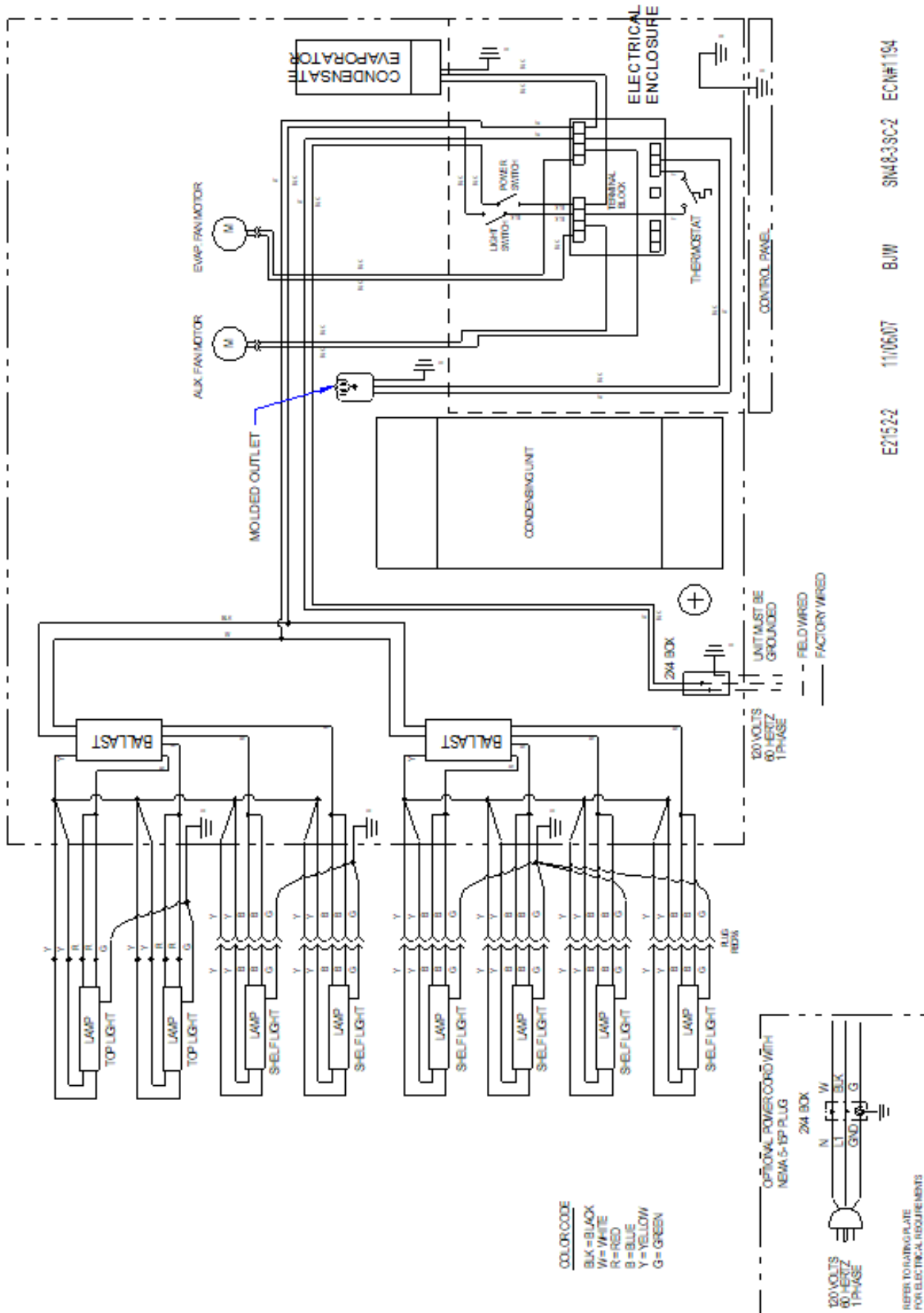


E2144 9/1/99 TH-F SNR48SC-2 SNR59SC-2

WIRING DIAGRAM: SNR77SC-2



WIRING DIAGRAM: SN48-3SC-2



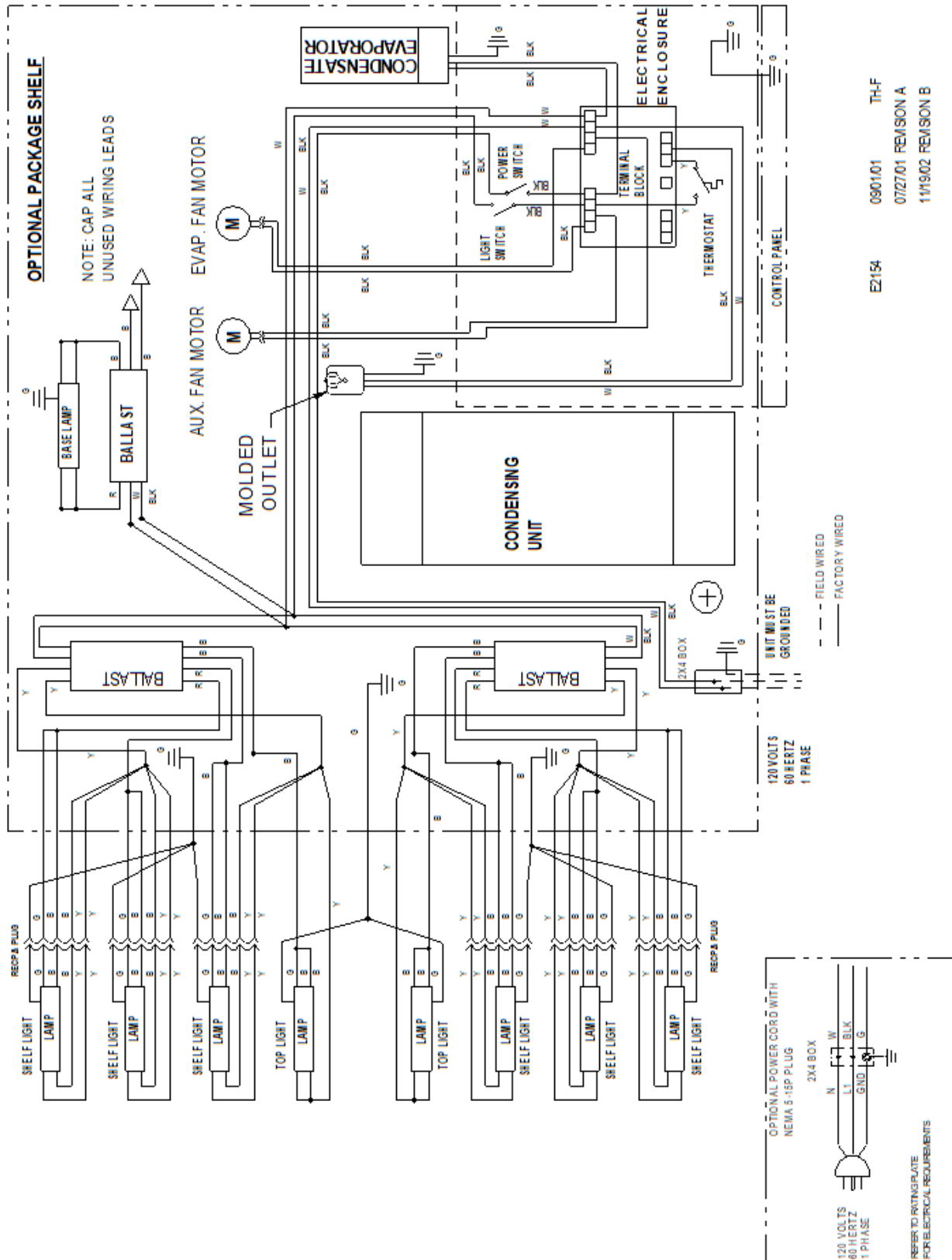
E2152-2 11/06/07 BUW SN48-3SC-2 ECM#154

WIRING DIAGRAM: SN59-3SC-2 & SN77-3SC-2

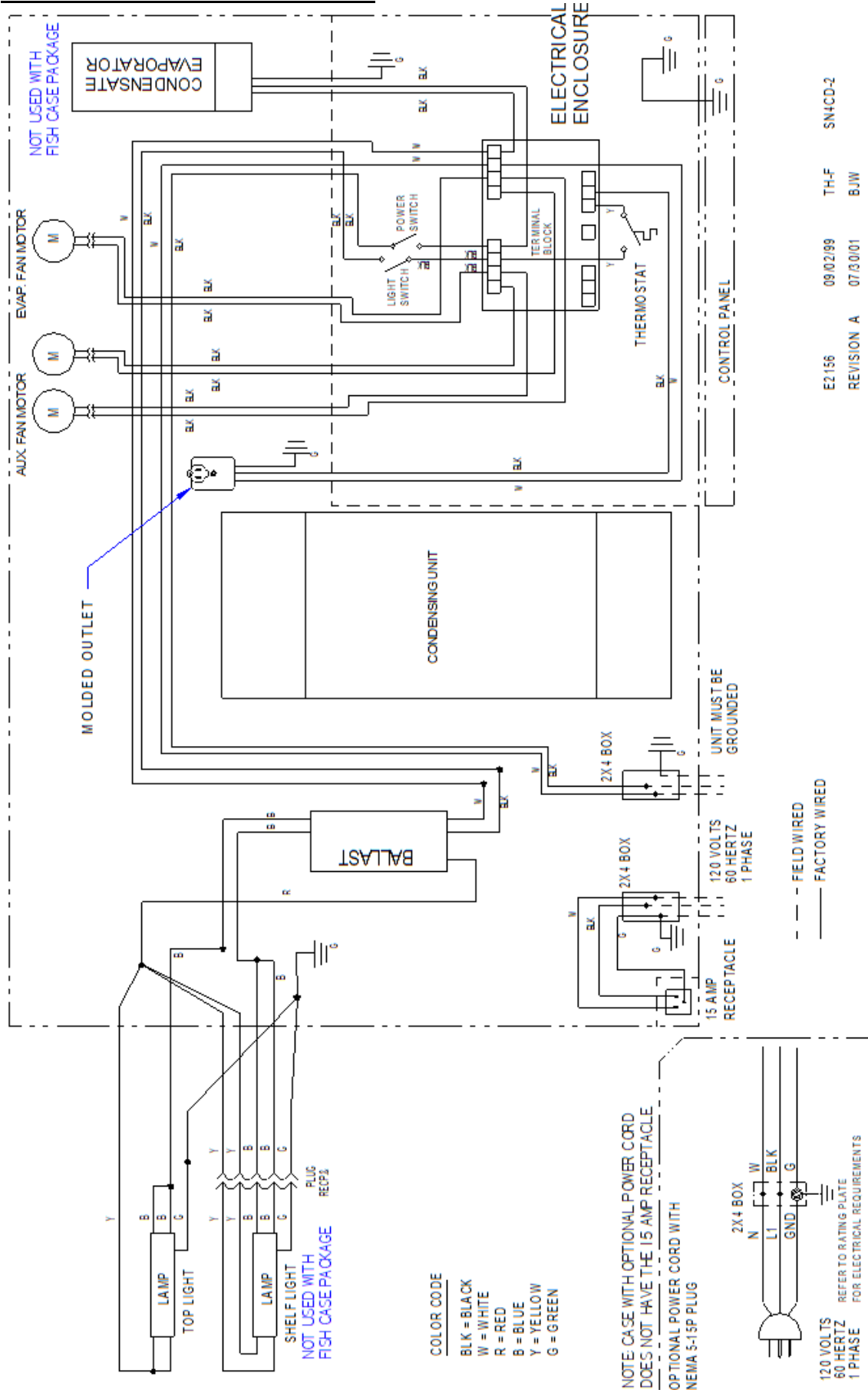
COLOR CODE

BLK = BLACK
 W = WHITE
 R = RED
 B = BLUE
 Y = YELLOW
 G = GREEN

SN69-3SC-2
 SN77-3SC-2

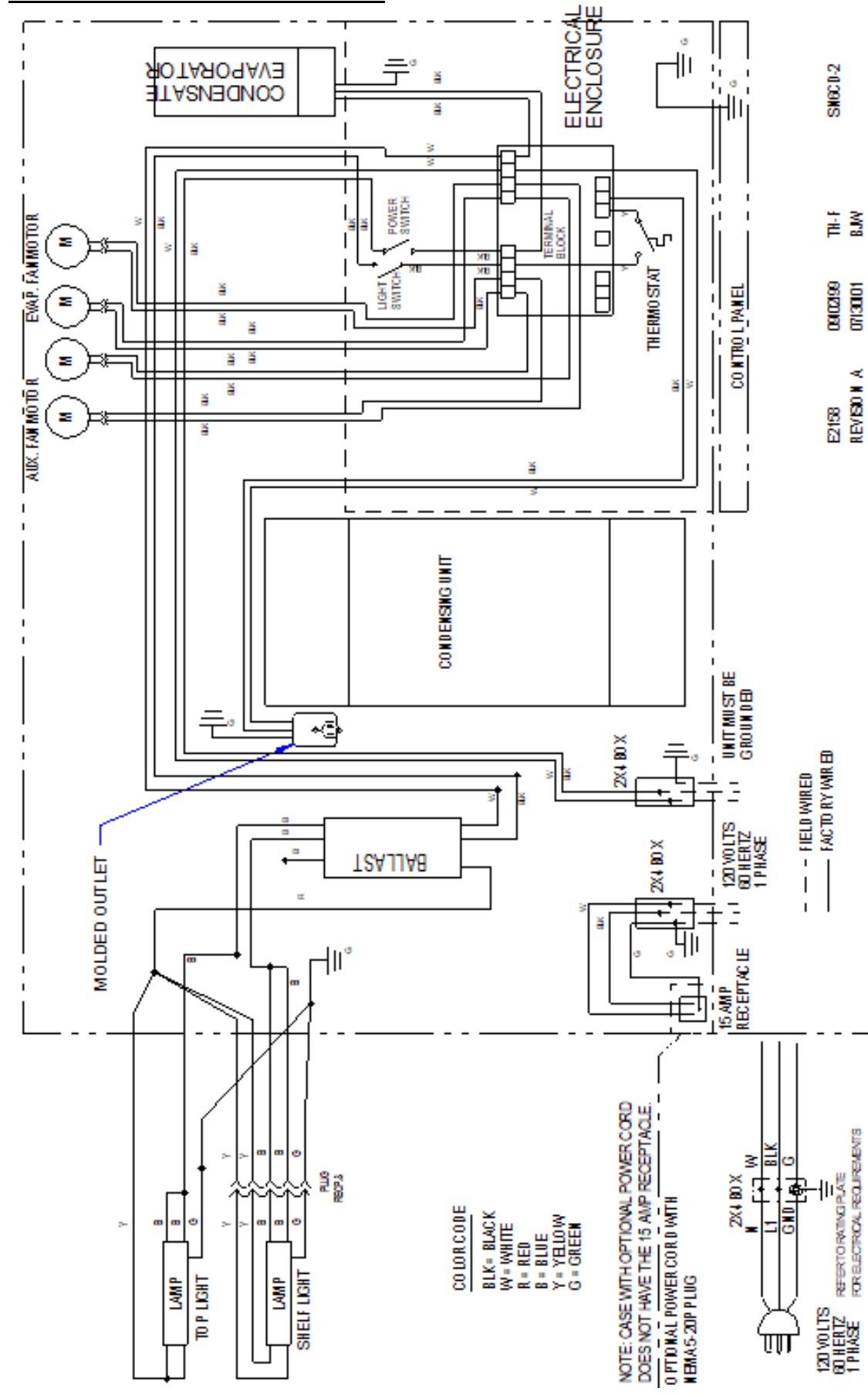


WIRING DIAGRAM: SN4CD

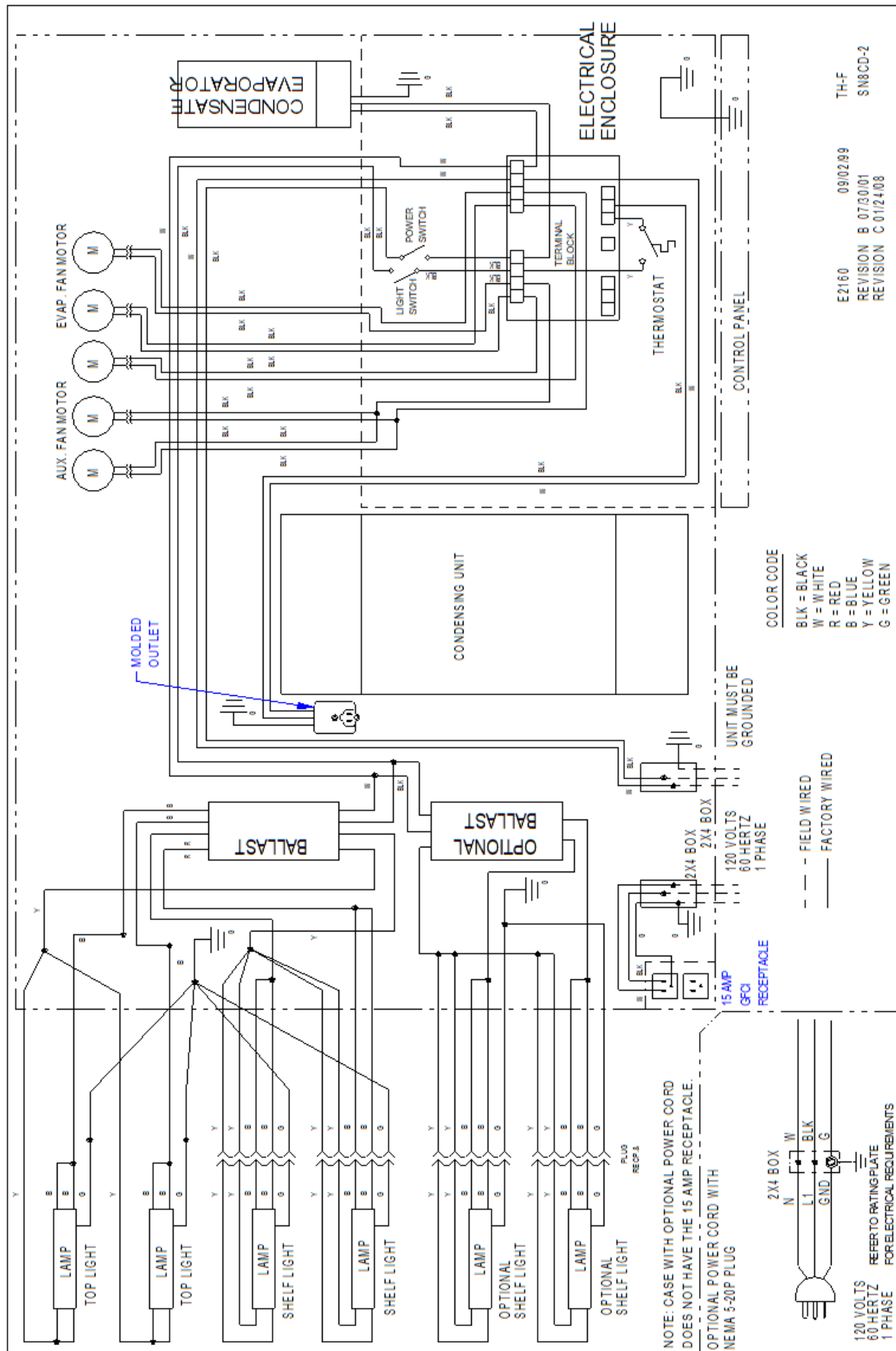


E2156 09/02/99 TH-F SN4CD-2
 REVISION A 07/30/01 BJW

WIRING DIAGRAM: SN6CD



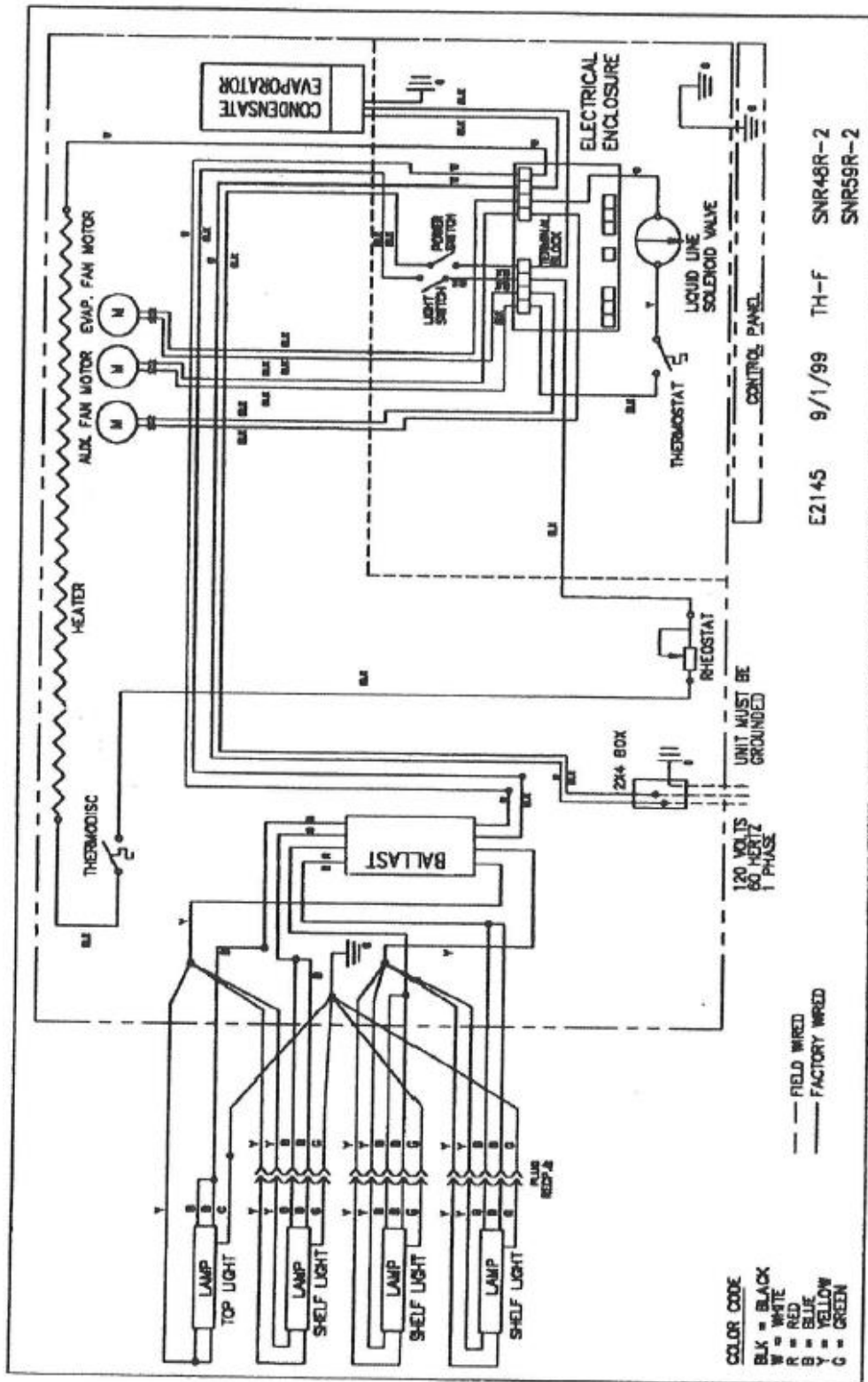
WIRING DIAGRAM: SN8CD



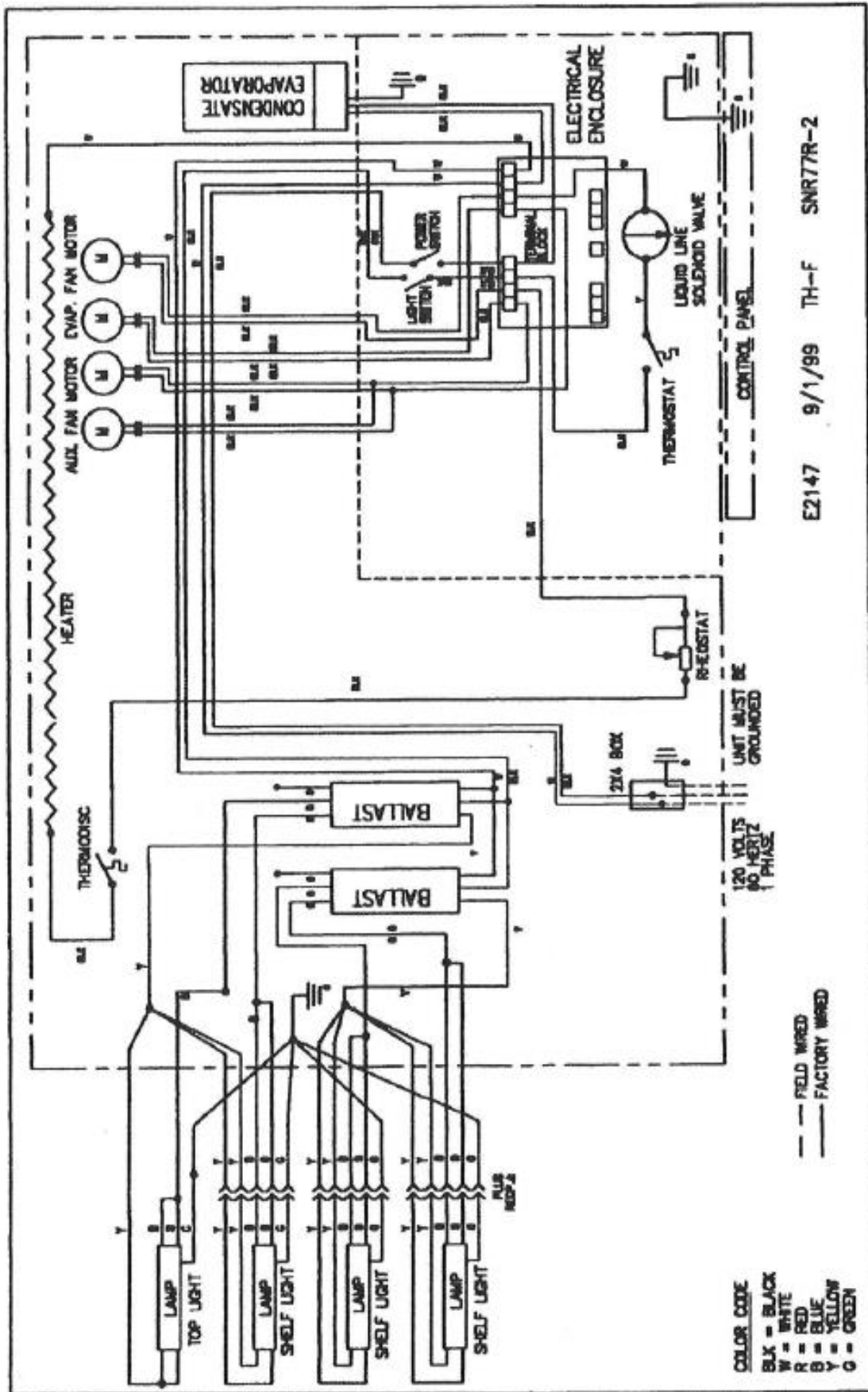
E2160 09/02/99 TH-F
 REVISION B 07/30/01 SN8CD-2
 REVISION C 01/24/08

WIRING DIAGRAM REMOTE:

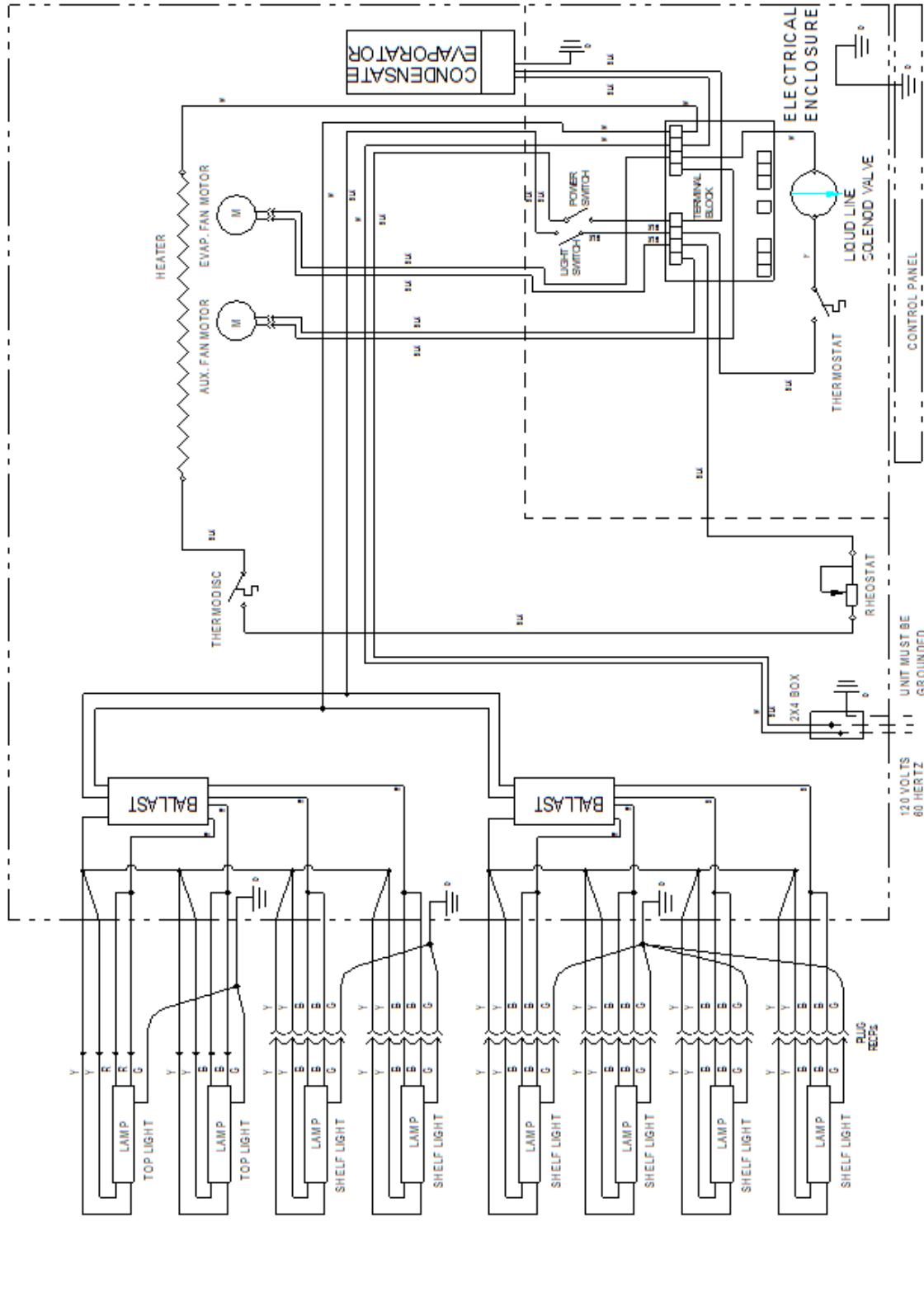
WIRING DIAGRAM: SNR48R-2 & SNR59R-2 OBSOLETE 1/1/2012



WIRING DIAGRAM: SNR77R-2 OBSOLETE1/1/2012



WIRING DIAGRAM: SN48-3R-2 OBSOLETE1/1/2012



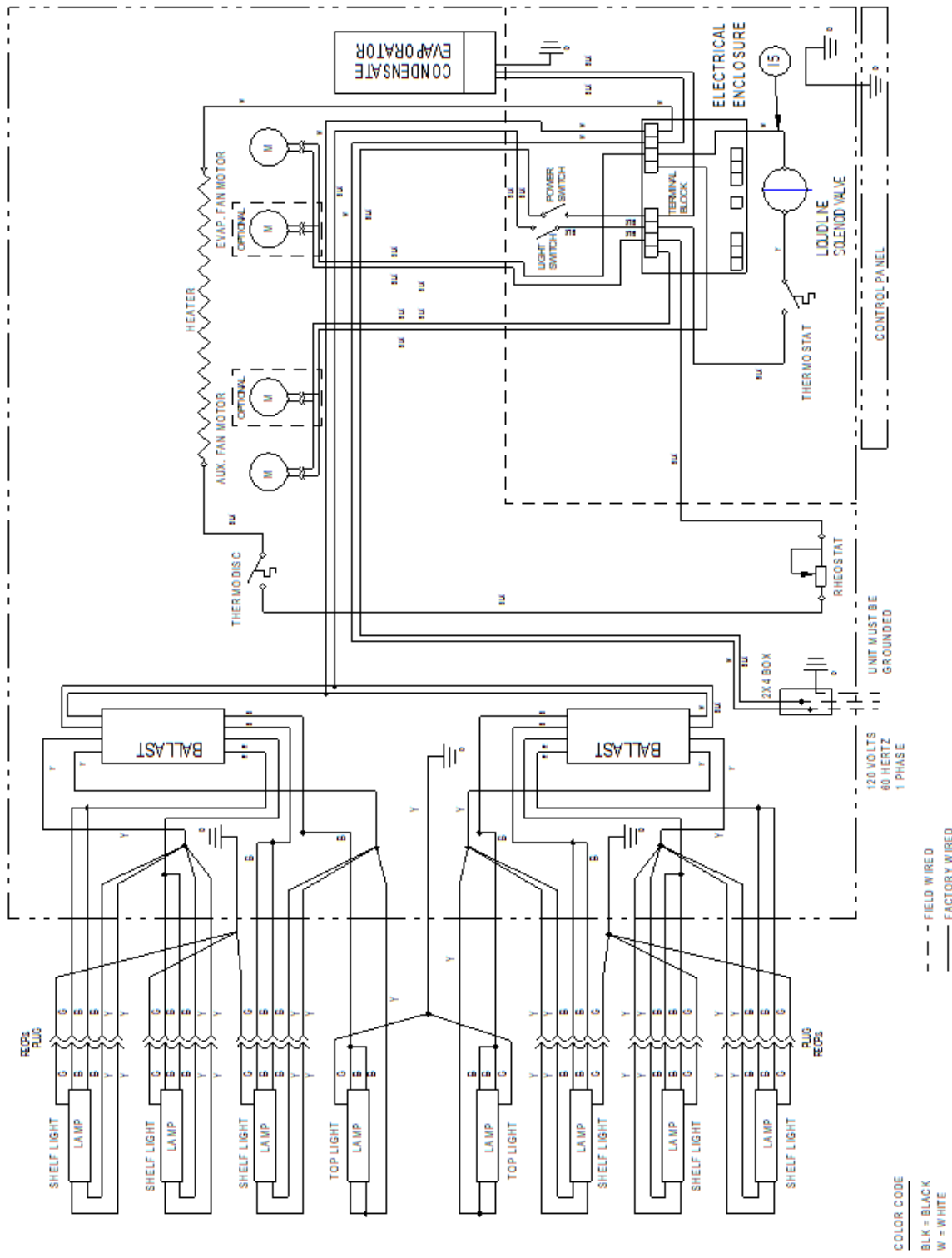
SN48-3R-2

E2153-1 11/09/07 BJW

WIRING DIAGRAM: SN59-3R-2, SN77-3R-2 OBSOLETE 1/1/2012

SN59-3R-2
SN77-3R-2

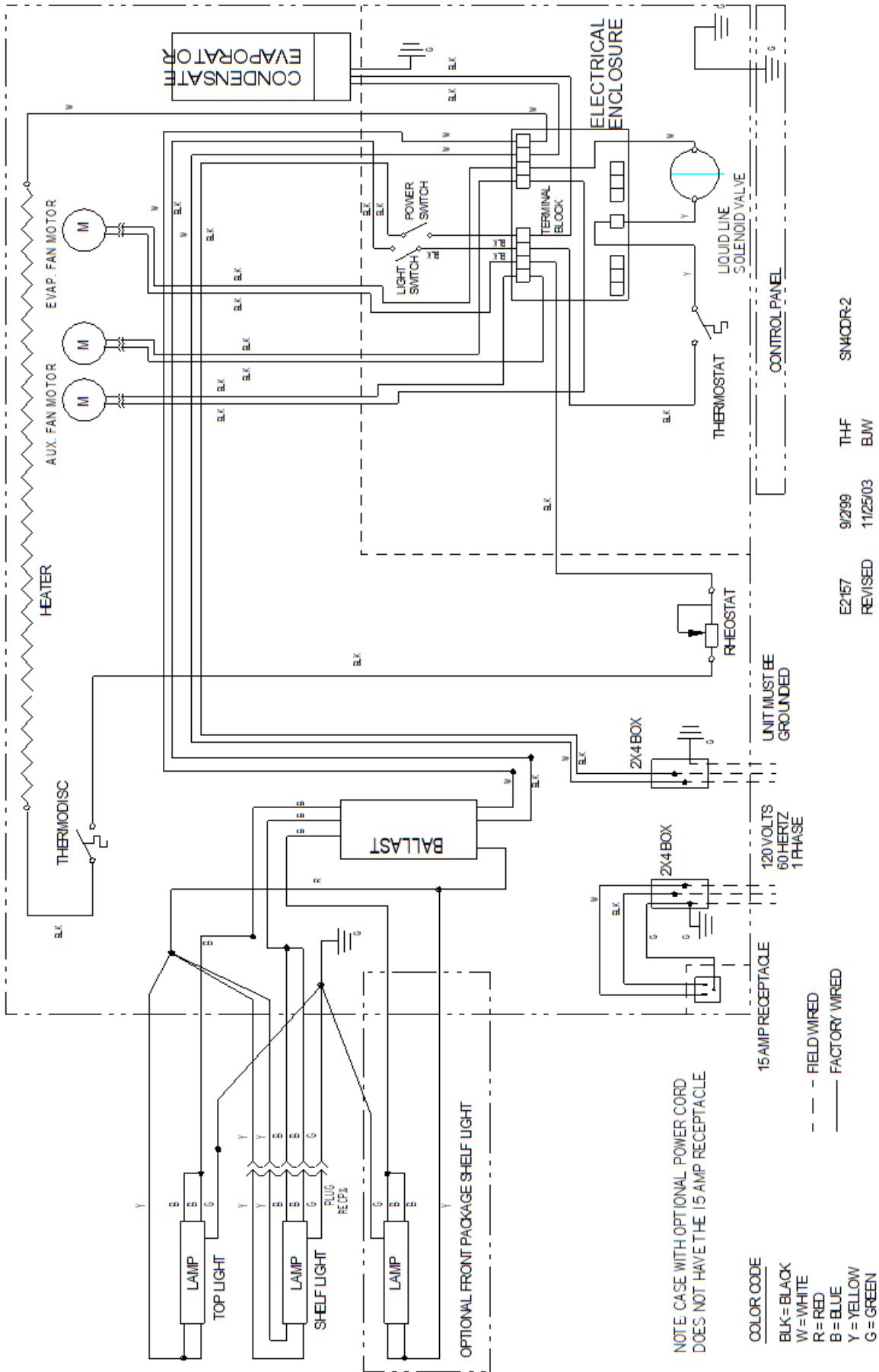
E2155 9/1/99 THF
REVISED 12/29/03 BJW



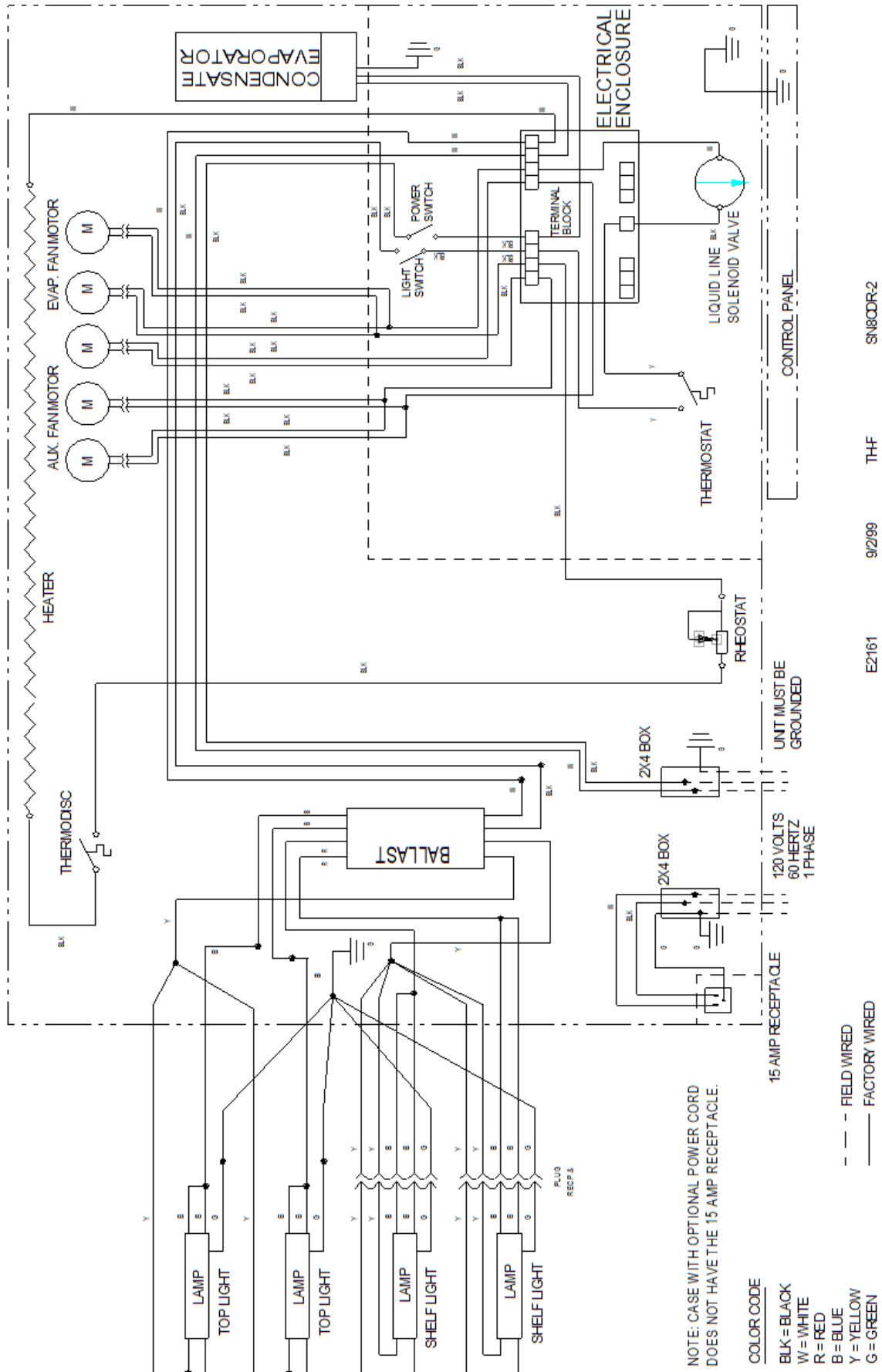
COLOR CODE
 BLK = BLACK
 W = WHITE
 R = RED
 B = BLUE
 Y = YELLOW
 G = GREEN

--- FIELD WIRED
 — FACTORY WIRED

WIRING DIAGRAM: SN4CDR OBSOLETE 1/1/2012



WIRING DIAGRAM: SN8CDR OBSOLETE 1/1/2012



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

