






# **M-Line Enertech Swingline 3 Vanguard**


**Technical Specifications  
Installation Instructions  
Service information  
Replacement Parts**



Copyright © 2011 by

ALL rights reserved. Information in this document is subject to change without notice. Companies, names and data used in examples herein are fictitious unless otherwise noted. No part of this document may be reproduced or transmitted in any form or by any means, electronic or mechanical, for any purpose, without express permission of Anthony Manufacturing Co., Inc.

Anthony products identified in this manual are designed and certified to meet  or  for safety, and  for sanitation standards.

European products meet  requirements.

Each customer is responsible for final site approval.

# TABLE OF CONTENTS

|   |                                     |
|---|-------------------------------------|
| 1. Preliminary Considerations for Door and Frame Installation Procedures..... | 4                                   |
| 1.1. Safety.....  | 4                                   |
| 1.2. Tools.....   | 4                                   |
| 1.3. Tips.....  | 4                                   |
| 2. Parts Provided.....  | <b>Error! Bookmark not defined.</b> |
| 3. Frames.....  | <b>Error! Bookmark not defined.</b> |
| 4. Doors.....   | <b>Error! Bookmark not defined.</b> |
| 5. Lights.....  | <b>Error! Bookmark not defined.</b> |
| 6. Shelves.....   | <b>Error! Bookmark not defined.</b> |
| 7. Revision History Page.....   | 40                                  |

## 1. Preliminary Considerations for Door and Frame Installation Procedures

### 1.1. Safety

Proper safety equipment includes:



Safety Glasses



Work Gloves



Work Shoes



**NOTE:** Turn off all electrical power prior to beginning work on the door or on any electrical equipment. Use extra caution when working with or around the door glass package.

**NOTE:** Do Not use power tools for the following procedures.

### 1.2. Tools

Tools required for this procedure include:

- Level
- Phillips head screwdriver
- Slot head screwdriver
- Square
- Pliers
- Clamps

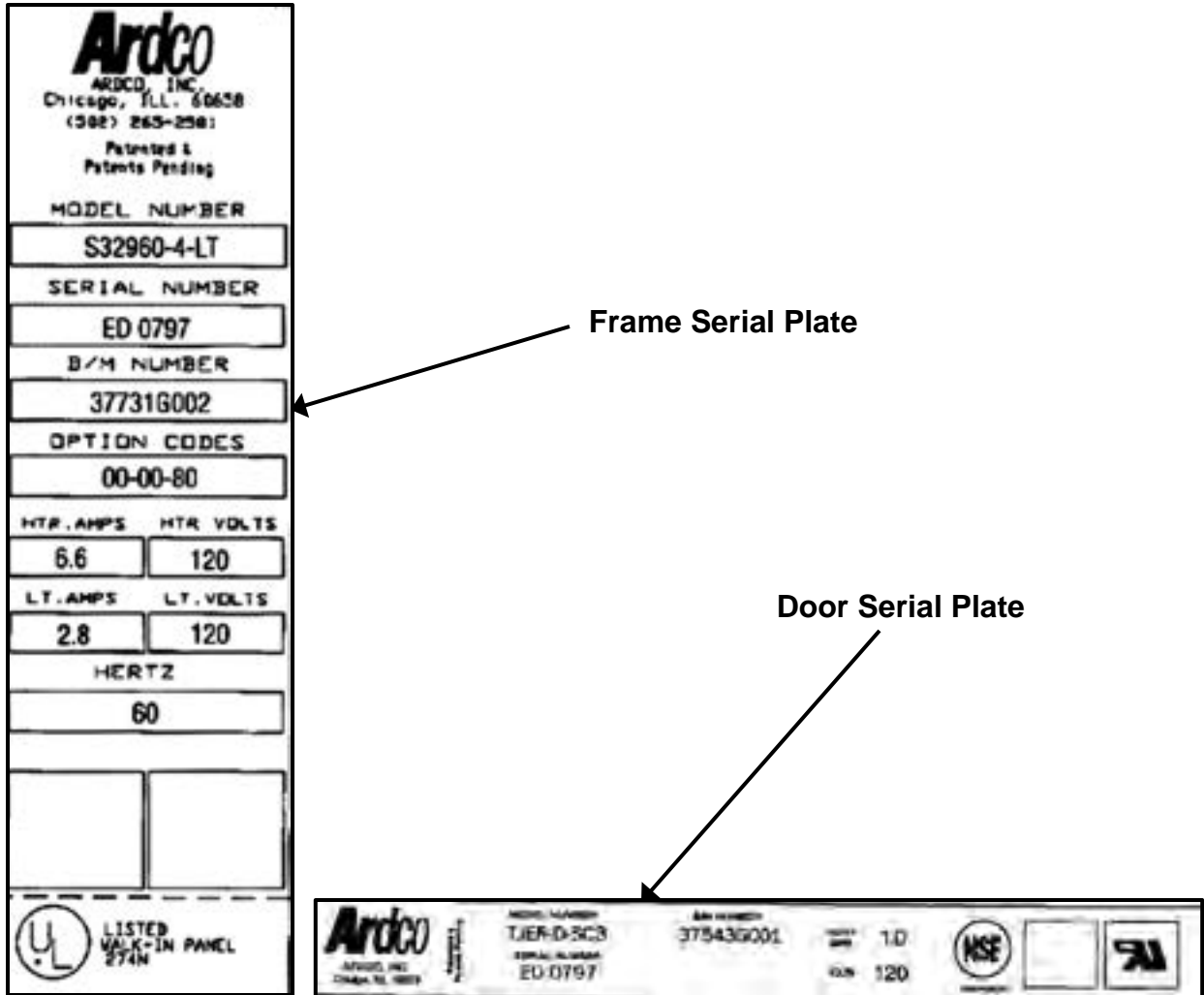
### 1.3. Tips

- Splice wires only if necessary, using proper materials: such as electrical tape, wire nuts, flux core solder and heat shrink.
- Apply liquid soap to rail plastic covers and gaskets upon installation to facilitate insertion into mounting grooves.
- Keep doors and frames clean for product efficiency. This can also help reduce energy consumption and potential health hazards.
- Whenever binding gasket or plastic parts, use food grade silicone.
- Whenever replacing fluorescent lamps, always replace lamp covers as well.
- Always use the correct tool for the job to be performed. This ensures proper installation and minimizes safety risks.
- If there is any doubt about the work to be performed, consult with a certified technician or Anthony representative.
- Preventative maintenance is recommended to ensure product longevity.

## 2. Serial Plate

To assist customers with technical questions or in ordering parts, Ardco has a serial plate on the frame, and beginning in 1994, on the door.

The frame serial plate is above the door on the right end of each case. The door serial plate is located on the top of each door.

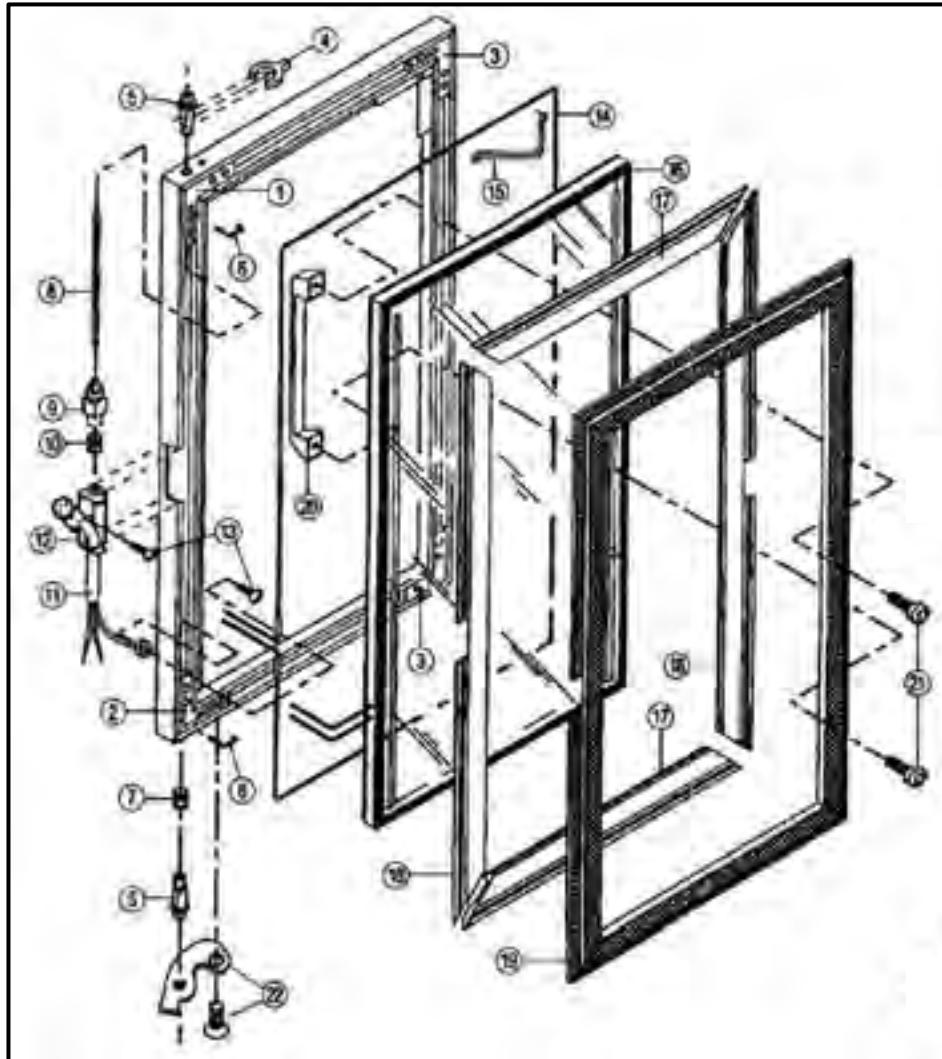


2.1. Models

- S3 - Swingline 3
- VG - Vanguard
- ML - M-Line
- ET - Enertech

| Model Number | Door Name      | Door Size            |
|--------------|----------------|----------------------|
| 2354         | Standard       | 23-1/4" x 54-5/16"   |
| 2363         | King           | 23-1/4" x 63-1/16"   |
| 2663         | K26            | 25-15/16" x 63-1/16" |
| 2372         | Super Standard | 23-1/4" x 72"        |
| 3063         | K30            | 29-15/16" x 63-1/16" |
| 2672         | Super King     | 25-15/16" x 72"      |
| 3066         | Giant          | 29-15/16" x 66"      |
| 3072         | Super Giant    | 29-15/16" x 72"      |
| 3080         | Super 80       | 29-15/16" x 80"      |

3. Ardco Door Parts

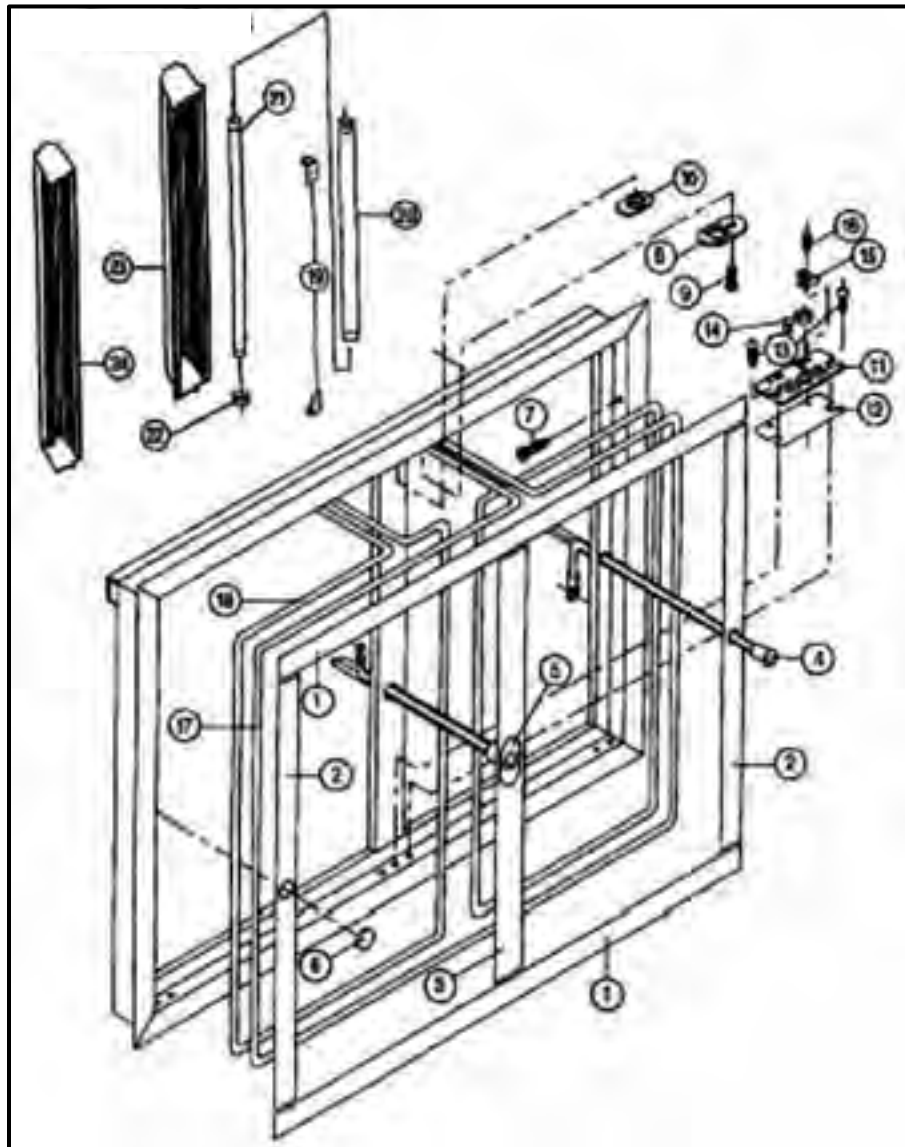


| Ref # | Description   | Part #    |
|-------|---|-----------|
| 1     | Corner Block – Top Hinge Side – RH Door   | 14435P002 |
|       | Corner Block – Top Hinge Side – LH Door   | 14435P003 |
| 2     | Corner Block – Bottom Hinge Side – RH Door  | 14435P003 |
|       | Corner Block – Bottom Hinge Side – LH Door  | 14435P002 |
| 3     | Corner Block – Top and Bottom - Handle Side   | 14591P001 |
|       | Corner Block Screw  | 12036P040 |
| 4     | Lok Clip Kit  | 18500G001 |
| 5     | Hinge Pin w/Nylon Bushing   | 17593G003 |
| 6     | Hinge Pin Retainer Clip   | 16219P001 |
| 7     | Hinge Pin Spring  | 16301P001 |
| 8     | Door Closer Torque Rod  |           |
|       | 2354 – 24-1/8"  | 16106P001 |
|       | 2363, 2663, 3063 – 28-1/2"  | 16106P002 |
|       | 3066 – 29-31/32"  | 16106P003 |
|       | 2372, 2672, 3072 – 32-31/32"  | 16106P004 |
|       | 3080 – <b>All Walk-Ins</b> – 36-31/32"  | 16106P005 |
| 9     | Door Closer Ratchet   | 17305G002 |
| 10    | Ratchet Spring  | 16132P002 |
| 11    | Power Cord  | 15692P001 |
| 12    | Power Cord Assembly (Power Cord, Bushing, Strain Relief, Coverplate and Coverplate Screw)         | 17244G023 |
| 13    | Power Cord Screw and Ground Screw   | 12036P042 |
| 14    | Door Heater – 120 Volt (Enertech and M-Line Cooler Doors do not have heaters)                     |           |
|       | 2354  | 15116G001 |
|       | 2363  | 15116G002 |
|       | 2663  | 15116G003 |
|       | 3063  | 15116G004 |
|       | 3066 & 2372 & 2672  | 15116G005 |
|       | 3072  | 15116G089 |
|       | 3080  | 15116G006 |
| 15    | Door Heater Retainer Clip   | 13137P001 |
| 16    | Insulating Glass – When ordering glass packages, give the information from the door serial plate. |           |
| 17    | Back Moulding – Widths  |           |
|       | Swingline 3, Vangard & M-Line (Order by door size)  | 16501     |
|       | Enertech (Order by door size)   | 13559     |
| 18    | Back Moulding – Handle Side (Order by Model No.)  |           |
|       | Enertech  | 13560     |
|       | Swingline 3, Vangard & M-Line   | 16502     |
| 19    | Back Moulding – Hinge Side (Order by Model No.)   |           |
|       | Enertech  | 13615     |
|       | Swingline 3, Vangard & M-Line   | 16502     |

| Ref # | Description                            | Part #    |
|-------|--|-----------|
| 20    | Magnetic Gasket                        |           |
|       | Swingline 3, Vangard & M-Line          |           |
|       | 2354                                   | 13199P001 |
|       | 2363                                   | 13199P002 |
|       | 2663                                   | 13199P003 |
|       | 3063                                   | 13199P004 |
|       | 3066                                   | 13199P005 |
|       | 2372                                   | 13199P097 |
|       | 2672                                   | 13199P006 |
|       | 3072                                   | 13199P007 |
|       | 3080                                   | 13199P009 |
|       | 2680                                   | 13199P008 |
|       | 3680                                   | 13199P010 |
|       | Enertech                               |           |
|       | 2354                                   | 13562P001 |
|       | 2363                                   | 13562P002 |
|       | 2663                                   | 13562P003 |
|       | 3063                                   | 13562P004 |
|       | 3066                                   | 13562P005 |
|       | 2372                                   | 13562P006 |
|       | 2672                                   | 13562P007 |
|       | 3072                                   | 13562P008 |
|       | 3080                                   | 13562P009 |
|       | 2680                                   | 13562P010 |
|       | 3680                                   | 13562P011 |
| 21    | Handles                                |           |
|       | Polished Chrome                        | 14414P001 |
|       | Polished Gold                          | 14414P002 |
|       | Vangard – Walnut on Gold               | 27148G001 |
|       | Vangard – Black on Silver              | 27148G002 |
|       | Vangard – Silver Satin                 | 14296P004 |
|       | Vangard – Black                        | 16750P001 |
|       | Side Mount - Silver                    | 14486P001 |
|       | Side Mount - Black                     | 14486P002 |
| 22    | Handle Screws                          |           |
|       | Face Mount Handles                     | 12036P090 |
|       | Side Mount Silver                      | 12036P222 |
|       | Side Mount Black                       | 12036P221 |
|       |  |           |
|       | <b>MISCELLANEOUS</b>                   |           |
|       |  |           |
|       | Adjustment Wrench – 5/16" Allen Wrench | 14119P002 |
|       | Door Lock                              |           |
|       | Swingline 3, Vangard                   | 27057G001 |
|       | Enertech                               | 27057G004 |



**4. Ardco Frame Parts**



| Ref # | Description  | Part #    |
|-------|--|-----------|
| 1     | Frame Vinyl Clad – Widths (Order by Model Number)      | 16631     |
| 2     | Frame Vinyl Clad – End Heights (Order by Model Number) | 16478     |
| 3     | Frame Vinyl Clad – Mullions (Order by Model Number)    | 16479     |
| 4     | Receptacle   | 13862P005 |
| 5     | Receptacle w/Plate                                     | 18510G005 |
| 6     | Receptacle Cap   | 13069P002 |
| 7     | Frame Mounting Screw                                   |           |
|       | Silver   | 12036P020 |
|       | Black  | 12036P213 |
|       | Gold   | 12036P226 |
|       | Binding Post w/Screw (for Flangeless Frames)           |           |
|       | Silver   | 12288P001 |
|       | Black  | 12288P002 |
|       | Gold   | 12288P002 |

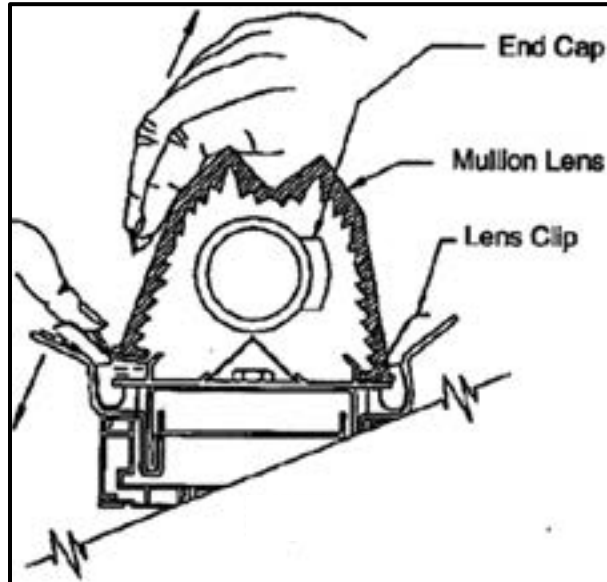
| Ref # | Description  | Part #    |
|-------|--|-----------|
| 8     | Top Mounting Plate   |           |
|       | SL3, Vanguard & M-Line   |           |
|       | Silver   | 12292P001 |
|       | Black  | 12292P002 |
|       | Enertech   |           |
|       | Silver   | 12293P001 |
|       | Black  | 12293P002 |
| 9     | Top Mounting Plate Screw   |           |
|       | Silver   | 12119P001 |
|       | Black  | 12119P009 |
| 10    | Top Plug Button  |           |
|       | Silver   | 13310P001 |
|       | Black  | 13310P002 |
| 11    | Bottom Mounting Plate  |           |
|       | Silver   | 12123P001 |
|       | Black  | 12123P002 |
| 12    | Bottom Back-Up Plate   | 14270P002 |
| 13    | Bottom Mounting Plate Screws   |           |
|       | Silver   | 12119P001 |
|       | Black  | 12119P009 |
| 14    | Hold Open Spring   |           |
|       | Silver   | 14262P001 |
|       | Black  | 14262P002 |
| 15    | Hold Open Spring Guard   | 13692P002 |
| 16    | Hold Open Spring Guard Screw   | 12054P006 |
|       | Hold Open Spring Guard Washer  | 12036P302 |
| 17    | Perimeter Heater   |           |
| 18    | Frame Opening Heater (When ordering frame heaters, give info from frame serial plate). |           |
| 19    | Lampholders  |           |
|       | T-8 Lamps – 60"  | 28187G011 |
|       | T-8 Lamps – 72" (as of January 1997)   | 28187G014 |
|       | T-10 & T-12 Lamps – Top  | 15337P001 |
|       | T-10 & T-12 Lamps – Bottom - 60" Lamps   | 15337P002 |
|       | T-10 & T-12 Lamps – Bottom - 72" Lamps   | 28163G001 |
| 20    | Lamps  |           |
|       | 60" T-8  | 15005P024 |
|       | 72" T-8  | 15005P025 |
|       | 60" T-10   | 15005P013 |
|       | 72" T-10   | 15005P017 |
|       | 60" T-12   | 15005P008 |
|       | 72" T-12   | 15005P018 |
| 21    | Durashields  |           |
|       | T-8 60" w/o End Caps   | 15620P004 |
|       | T-8 72" w/o End Caps   | 15620P005 |
|       | T-10 & T-12 60" w/End Caps   | 15025P002 |
|       | T-10 & T-12 72" w/End Caps   | 15025P003 |

|    |   |           |
|----|---|-----------|
| 22 | End Caps                                  |           |
|    | Power Lens I                              | 13923P001 |
|    | Power Lens II                             | 13923P002 |
| 23 | Power Lens - Mullions                     |           |
|    | Power Lens I                              |           |
|    | 2363, 2663, 3063                          | 36193P002 |
|    | 3066                                      | 36193P003 |
|    | 2372, 2672, 3072                          | 36193P004 |
|    | 3080                                      | 36193P005 |
|    | Power Lens II                             |           |
|    | 60" Lights                                | 37673G001 |
|    | 72" Lights                                | 37673G002 |
| 24 | Power Lens - Ends                         |           |
|    | Power Lens I                              |           |
|    | 2363, 2663, 3063                          | 36194P002 |
|    | 3066                                      | 36194P003 |
|    | 2372, 2672, 3072 – Left End               | 36194P004 |
|    | 2372, 2672, 3072 – Right End              | 36194P005 |
|    | 3080                                      | 36194P006 |
|    | Power Lens II                             |           |
|    | 60" Lights                                | 37673G004 |
|    | 72" Lights                                | 37673G005 |
|    |   |           |
|    | <b>MISCELLANEOUS</b>                      |           |
|    |   |           |
|    | Adjustment Wrench (5/32" Allen Wrench)    | 14119P003 |
|    | Ballasts                                  |           |
|    | Cooler                                    |           |
|    | T-12 60" Lamps (1 Lamp Only)              | 15550P001 |
|    | T-12 72" Lamps (1 Lamp Only)              | 15550P002 |
|    | T-8 60" Lamps (1 & 2 Lamp)                | 15651P001 |
|    | T-8 72" Lamps (1 & 2 Lamp)                | 15751P004 |
|    | Freezer                                   |           |
|    | T-10 60" Lamps (1 & 2 Lamp)               | 15651P001 |
|    | T-10 72" Lamps (1 Lamp)                   | 15651P001 |
|    | T-8 60" Lamps (1 & 2 Lamp)                | 15651P001 |
|    | T-8 72" Lamps (1 & 2 Lamp)                | 15751P004 |
|    | Lampholder Tube Locks (T-10 & T-12 Locks) |           |
|    | 60" Lamps                                 | 13576P001 |
|    | 72" Lamps                                 | 13576P002 |
|    | Lock Strike                               | 14301P001 |
|    | Lock Strike Screw (Mullions)              | 12036P188 |

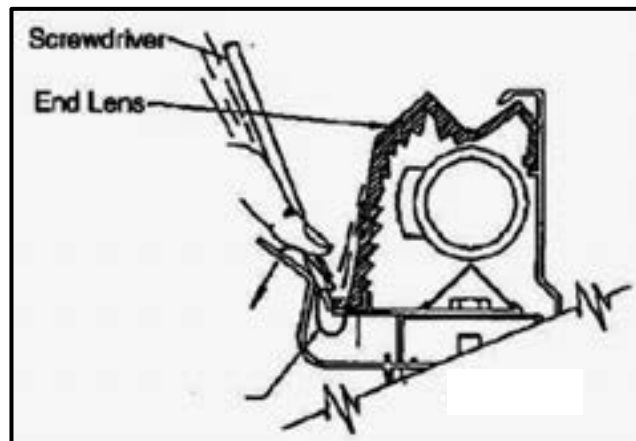
**5. Lamp Replacement – Power Lens I**

**NOTE:** Always turn power off before changing lamps.

1. To remove the mullion lens, depress the clips on one side of the lens and twist the lens.

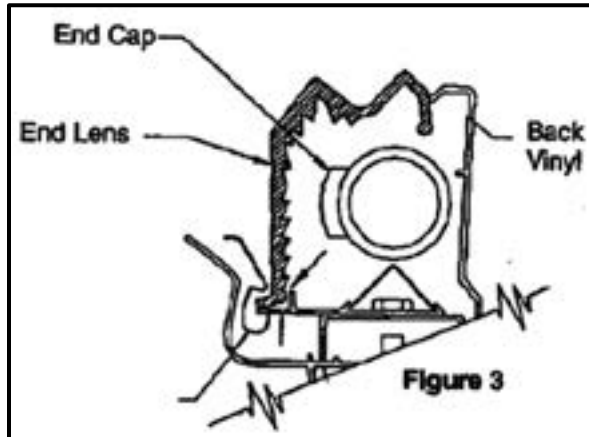


2. To remove the lamp, turn the lamp 90° and pull it away from the mullion.
3. To install the new lamp, replace the durashield and end caps and push the lamp into the top and bottom lampholders. Turn the lamp 90°.
4. To remove an end lens, depress the clips on the side of the lens, and pry out on the lens with a screwdriver.



5. To remove and install a new lamp, see steps 2 and 3.

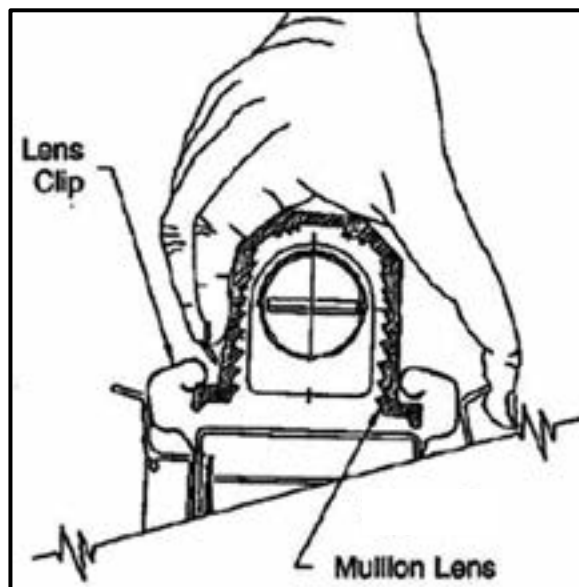
6. To replace the end lens, place the side of the lens under the lens clips and push the lens under the back vinyl.



### 6. Lamp Replacement – Power Lens II

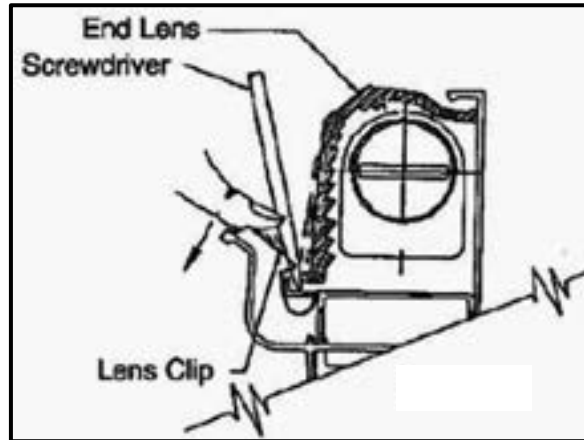
**NOTE:** Always turn power off before changing lamps.

1. To remove the mullion lens, compress one side and twist the lens.

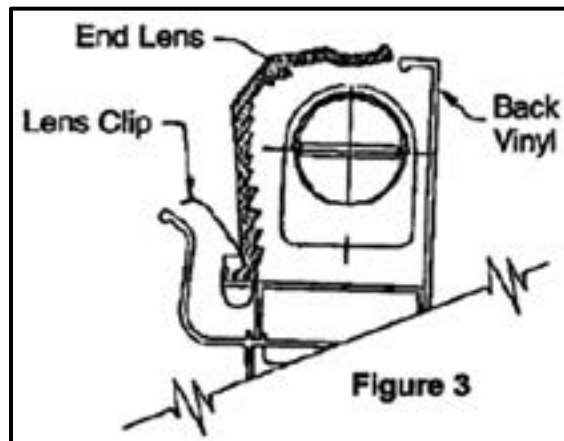


2. To remove the lamp, turn it 90° and pull it away from the mullion.
3. To install the new lamp, replace the durashield and end caps. Cooler lamps have no durashield and only a top end cap.
4. Push the lamp into the top and bottom lampholders and turn the lamp 90°.

- To remove an end lens, depress the clips on the side of the lens, and pry out on the lens with a screwdriver.

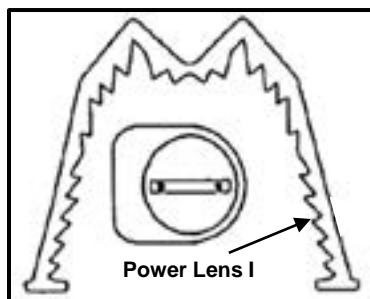


- To remove the defective lamp and install a new one, see steps 2 and 3.
- To replace the end lens, place the side of the lens under the lens clips and push the lens under the back vinyl.

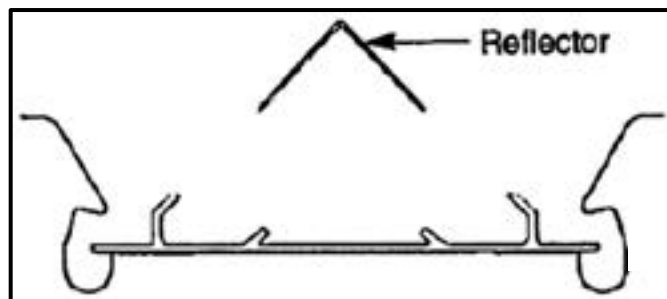


**7. Power Lens**

Ardco's Power Lens Lighting uses T-8 Lamps. The drawing below shows the positioning of the End Caps for proper lamp installation.



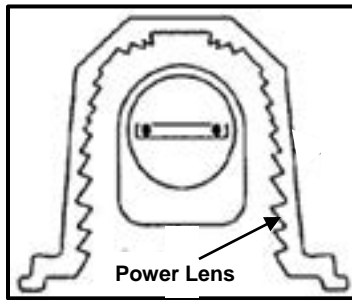
*Lamp End Cap*



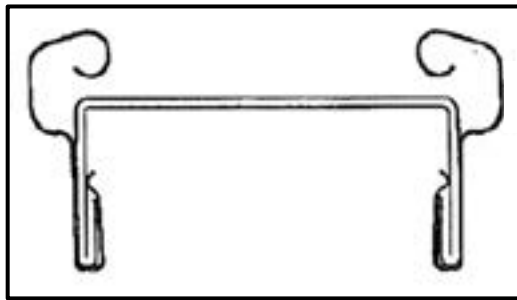
*Reflector plate with Lens Clips*

**NOTE:** The tab may point to the left or the right; however, it must be parallel to the frame.

**8. Power Lens II**



*Lamp End Cap*

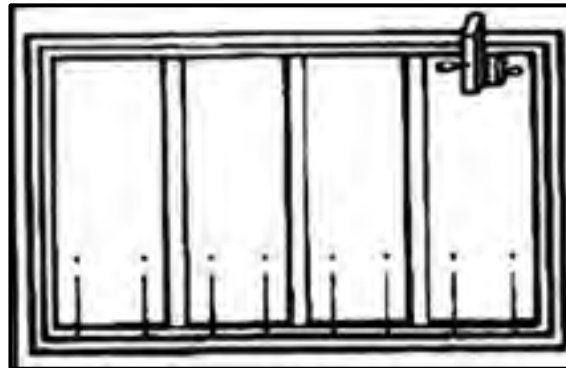


*Wireway with Lens Clips*

**NOTE:** The use of a shorter lampholder may require the tab on the lampholder to point away from the mullion.

**9. Frame Installation**

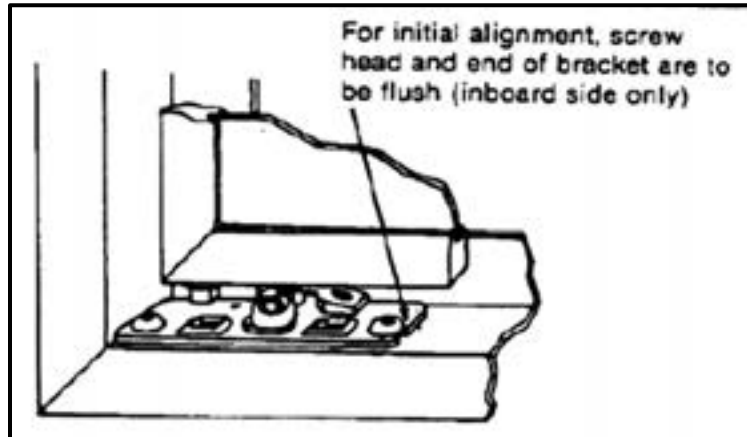
1. Place the frame into the net cooler opening.
2. Clamp the top and bottom of the frame into the cooler opening.



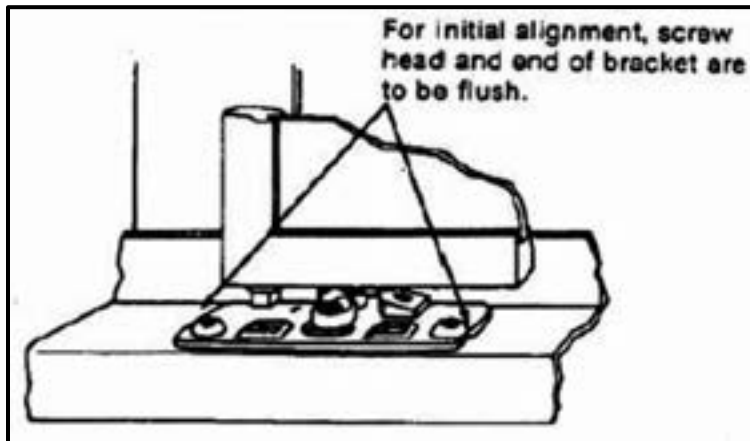
3. To remove the lamp, turn the lamp 90° and pull it away from the mullion.
4. To install the new lamp, replace the durashield and end caps and push the lamp into the top and bottom lampholders. Turn the lamp 90°.



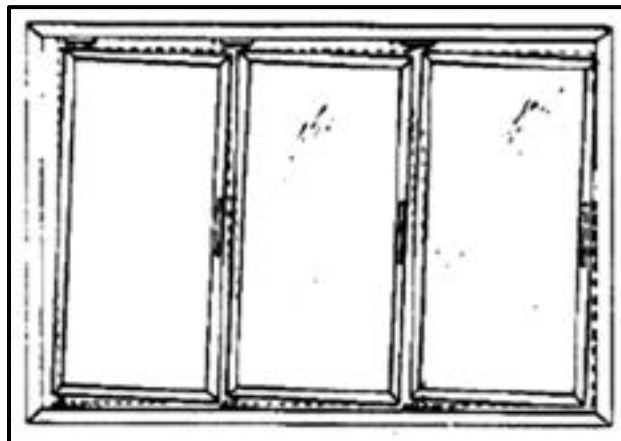
- The bottom hinge mounting plate, at the end of the frame, should have the inboard side of the plate flush with the mounting screw.



- The bottom hinge mounting plates, at the mullions, should have the mounting screws flush with the ends of the mounting plate.

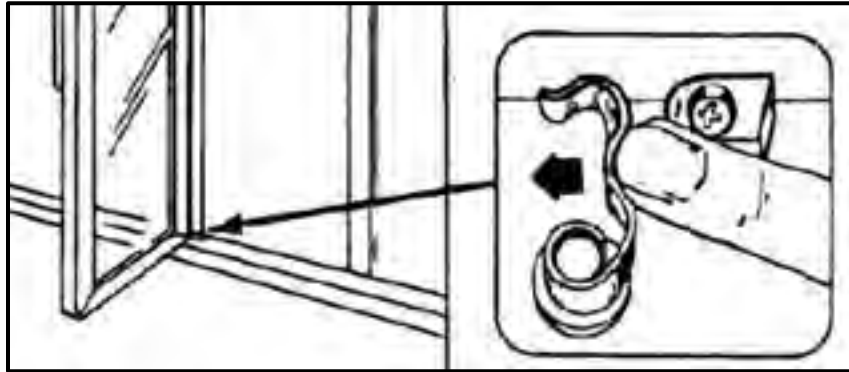


- To correct the problem shown in the following illustration, shift the top mounting plates to the left. If necessary, shift the bottom mounting plates to the right.



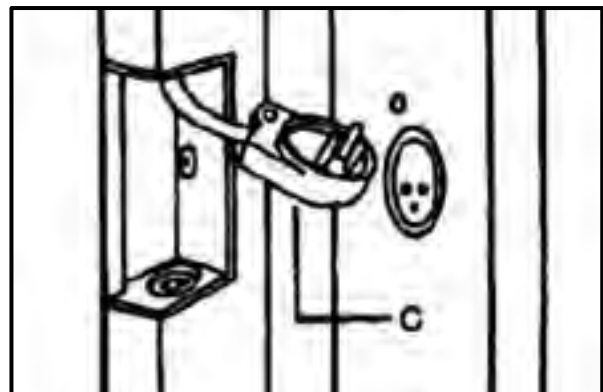
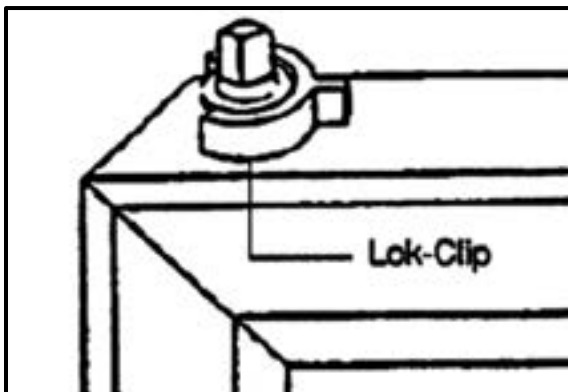


- To keep the door in an open position, open the door fully and push the Hold-Open retainer. To release, close the door.

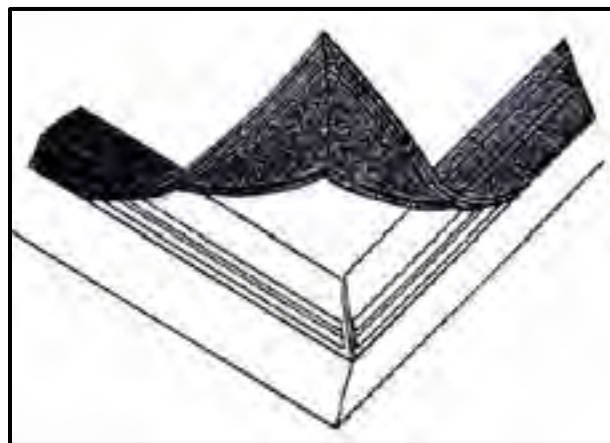


### 10. Door Disassembly

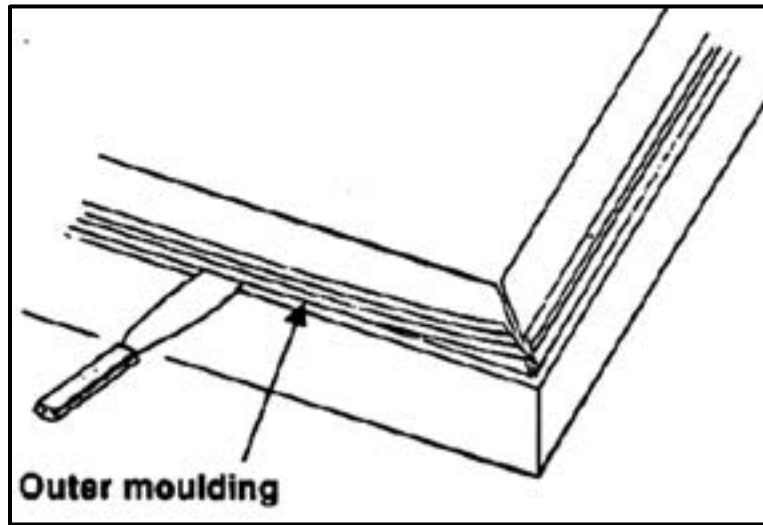
- To remove the door, open the door to approximately 45°, as shown in *Door Installation*. Remove the Lok-clip from the top of the door. Lift the door up and out to disengage the bottom door pin. Reset the door on the mounting plate and unplug the electrical cord (C). Lift the door out and place it face down on a soft cloth to protect the glass and finish.



- To remove the gasket, simply peel it from the door. The door does not need to be removed from the frame to replace the gasket.

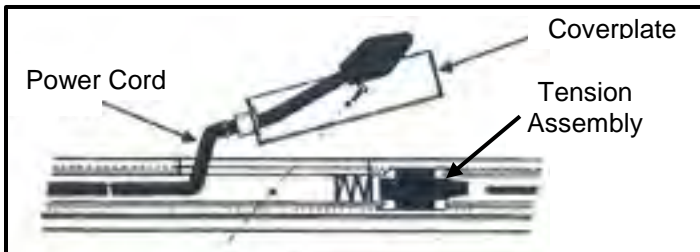


- Using a stiff putty knife, remove the aluminum moulding.

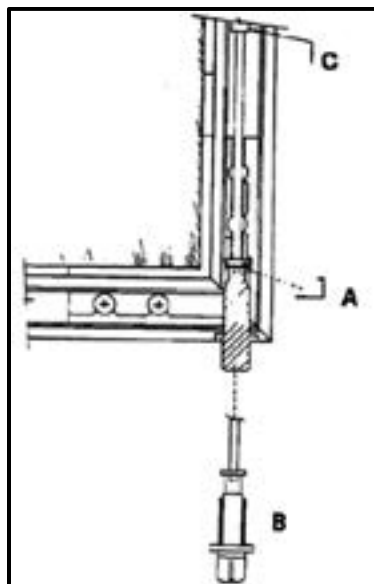


This is best done by beginning at a corner. Insert the blade of the knife between the moulding and the doorframe at the outer edge and push down on the knife, prying along the entire length. Remove the moulding as required for the repair.

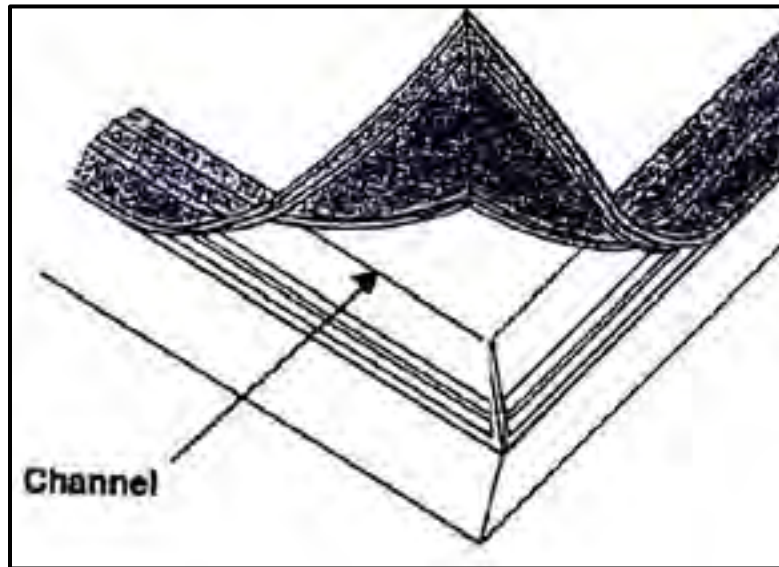
- Remove the center coverplate.



At this point, the power cord can be replaced. Also, the door closer assembly may be replaced.



5. Replace the metal mouldings and gasket.

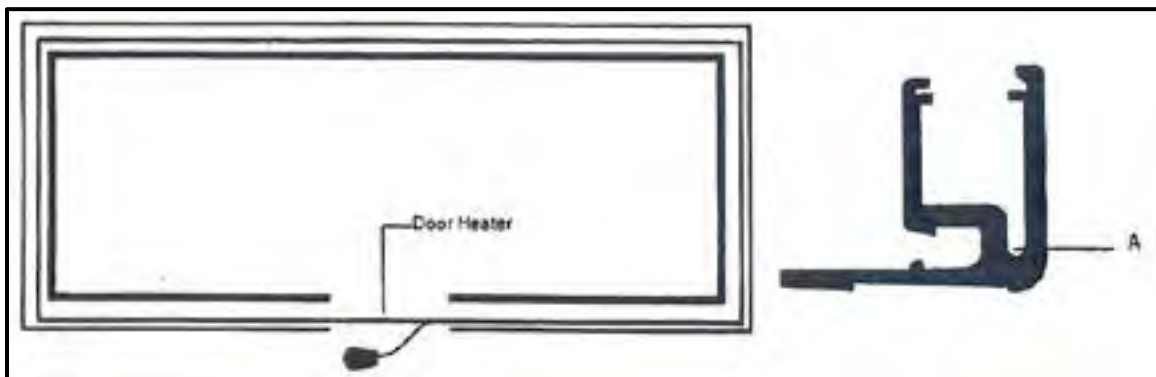


- a. Replace the moulding into the channel so that the glass side is down on the glazing tape.
- b. Starting at a corner, tap the moulding until the outer edge snaps into place. Continue along the entire edge of the moulding.
- c. Beginning at a corner, pull the inner groove of the gasket into the channel of the aluminum moulding that faces the glass. Repeat at each corner.
- d. Press the narrow dart, on the underside of the gasket, into the channel of the aluminum moulding.

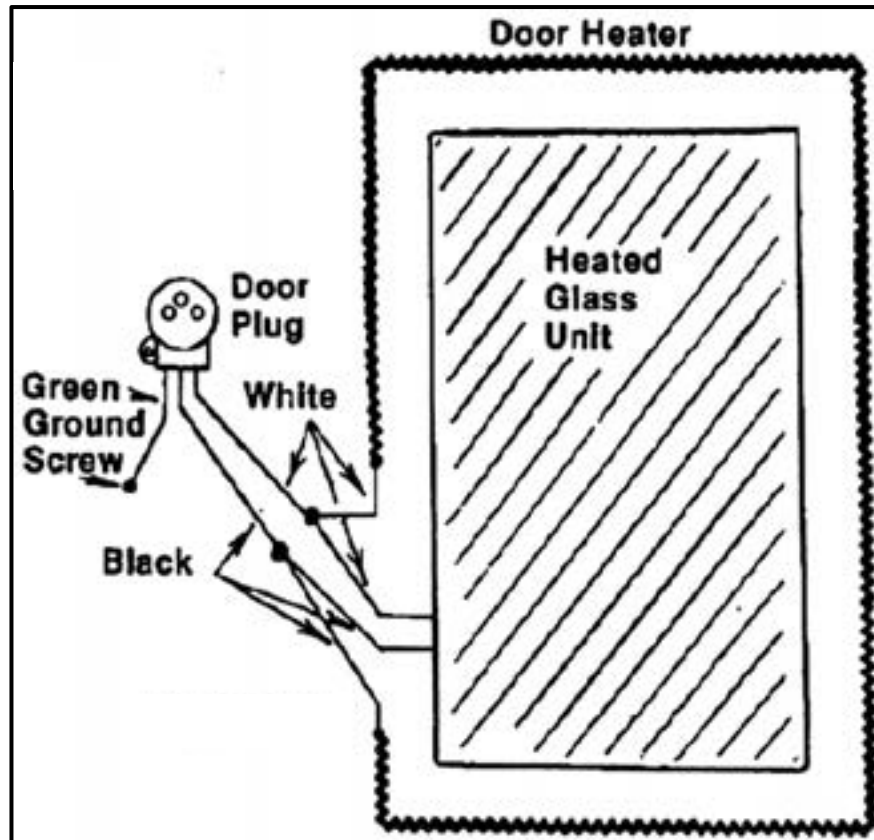
### 11. Door Heater Replacement

Steps 1 through 4 of *Door Disassembly* should be followed, removing the entire gasket and all snap-in moulding.

- a. After removing the snap-in moulding, disconnect the defective heater and connect the new heater as shown in the two following illustrations.



- b. Pull out the old heater (removing plastic retainers) and insert the new heater wire into the channel (A) in the extrusion. Make sure that the heater is pushed all the way into the channel.



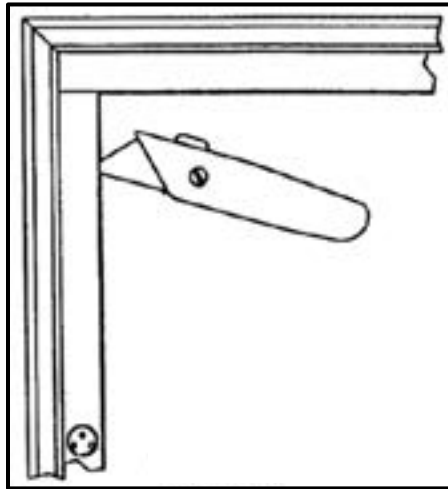
*Wiring Diagram for Low Temperature Freezer Doors with Heated Glass*

- c. Position the plastic heater retainers in the same area as they were originally.
- d. Re-install the coverplate, aluminum strips and gasket.

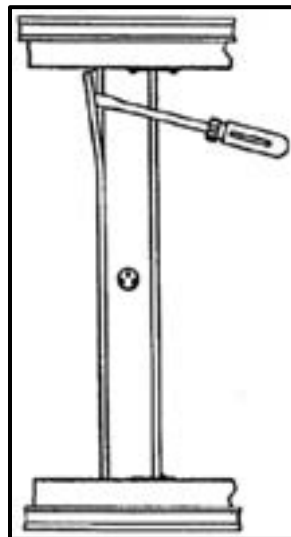
**12. Frame Heater Replacement**

1. Disconnect the frame from the power source.
2. Remove the necessary doors to expose the vinyl clad coverplates that cover the defective heater or heaters.

3. To remove the top, bottom and end height coverplates, use a utility knife.

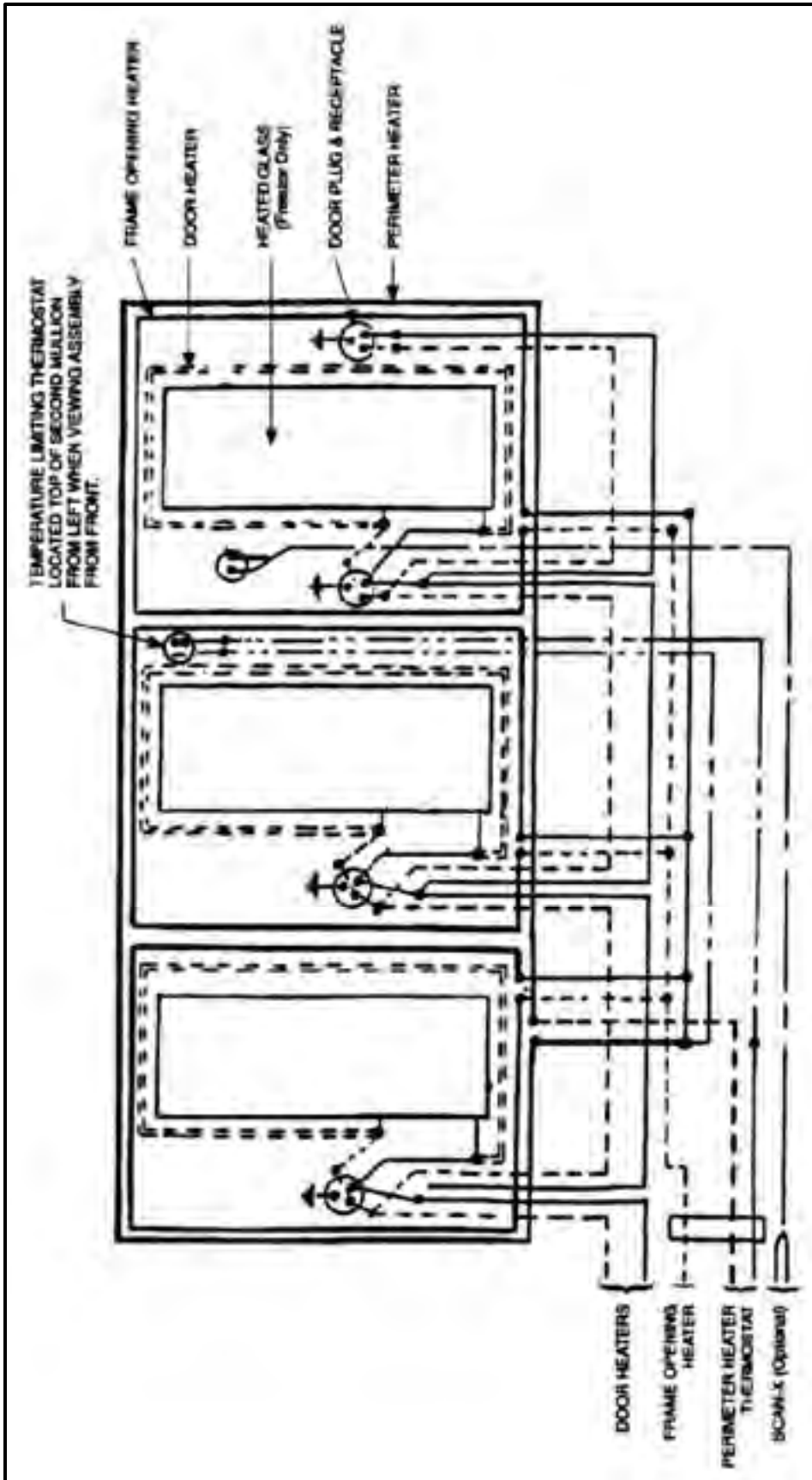


4. To remove the mullion coverplates, remove the screws on the sides, both top and bottom, of the side vinyl. Place a screwdriver under the side vinyl and slide it downward.



5. Cut the defective heater at the cold leads and remove it from the frame.
6. Install the new heater in the appropriate grooves. Splice the new heater to the cold leads using line-to-line connectors.
 

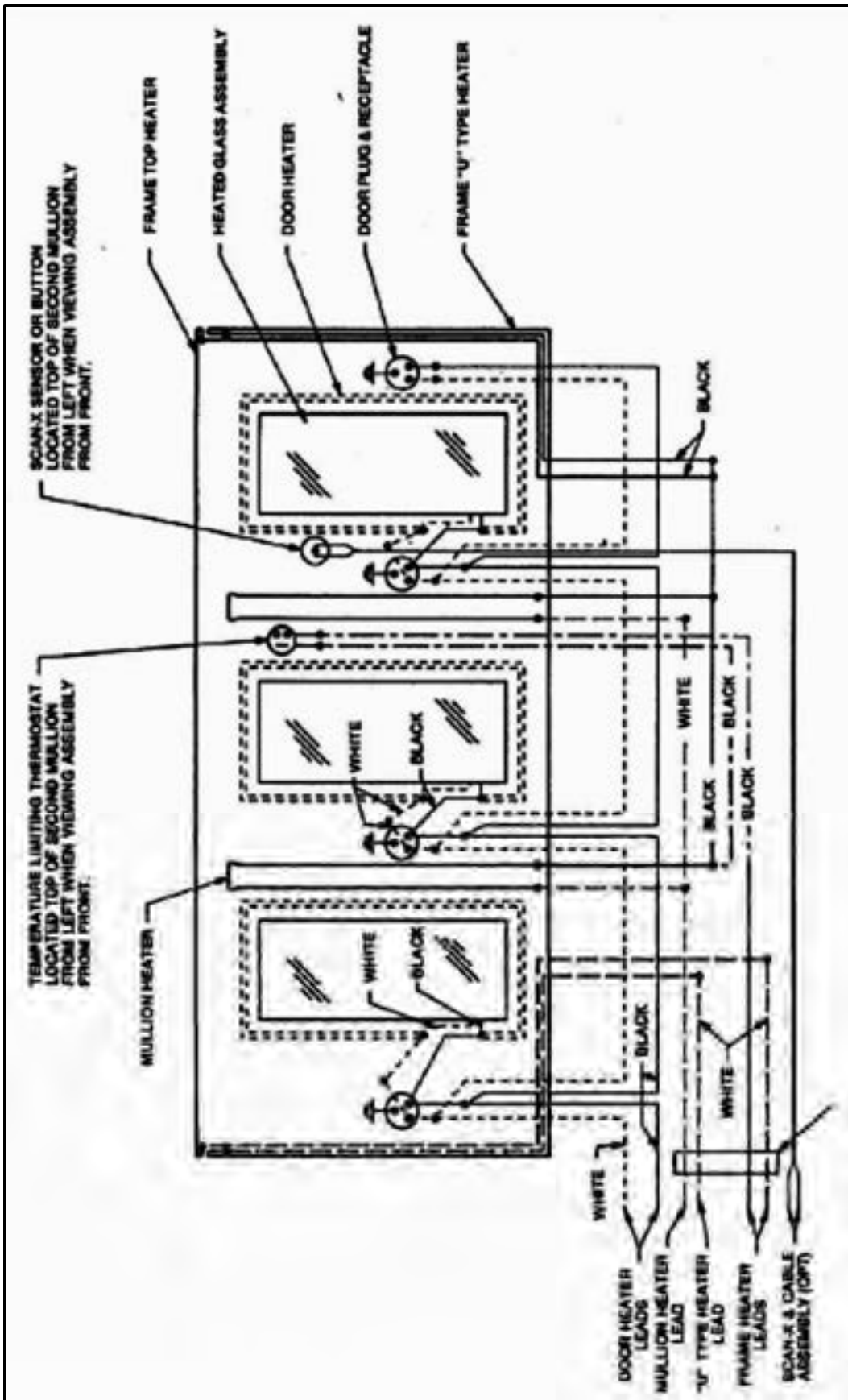
**NOTE:** Use care to prevent the heater from touching itself. It may be necessary to physically keep the heater from touching by using permagum in the area of the egress point. Check the heater for continuity.
7. When replacing the coverplates that use double-sided tape, remove the old tape from the frame and the coverplates and install new tape.
8. Reinstall the doors and Lok clips and reset the door tension.
9. Reconnect the frame to the power source.



**FRAME WIRING DIAGRAM**

All Frames with Stainless Heater Coverplates and Cooler Frames with Black Vinyl Heater Coverplates

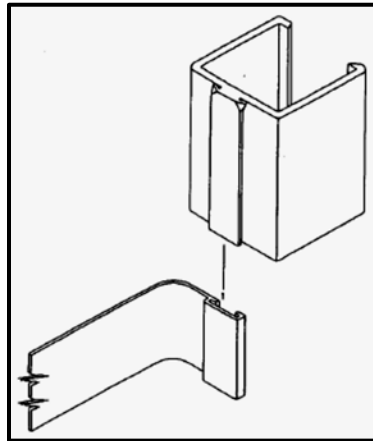




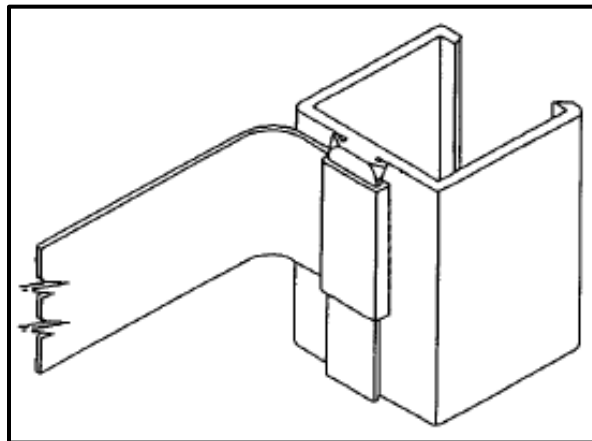
**FRAME WIRING DIAGRAM**  
Freezer Frames with Black Vinyl Heater Coverplates

### 13. Lok-Shelf System Installation

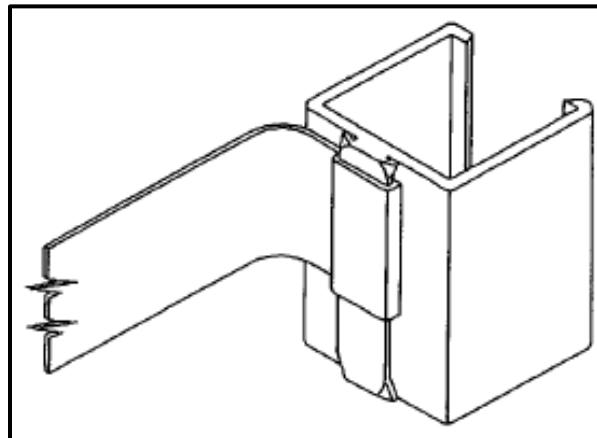
1. Ardco shelving is secured to the frames by use of brackets that are preinstalled on Ardco frames and post clips that are on the front posts.



2. Place a front post at the end of the Ardco frame. Slide the post clips down the post into the post brackets.

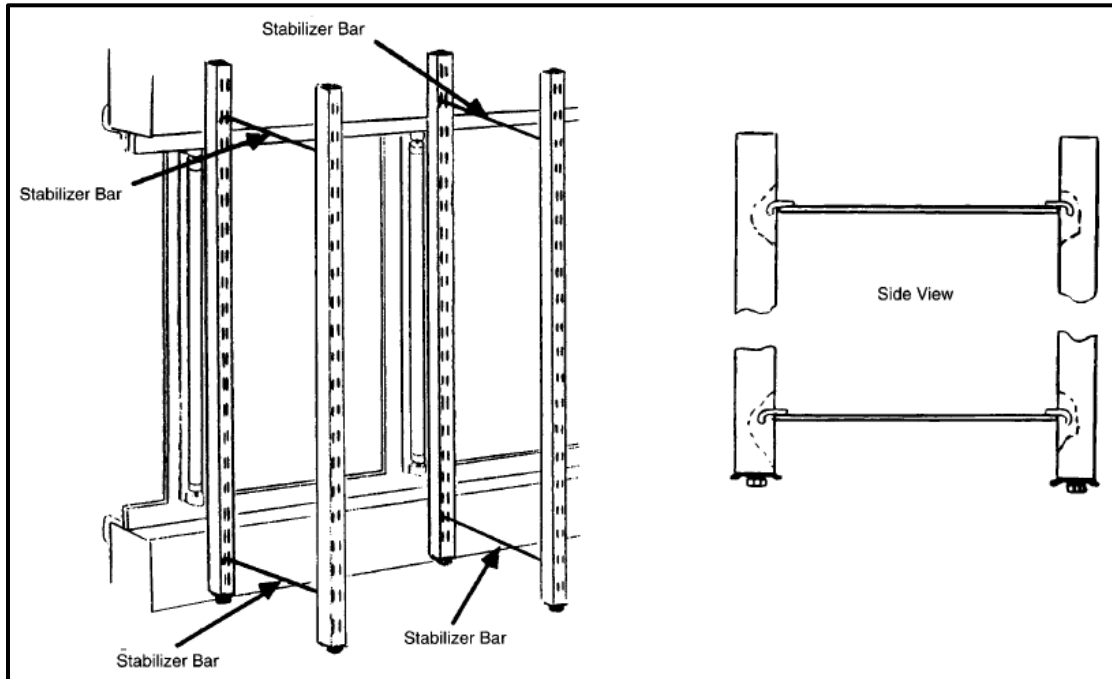


3. The post clips are pre-crimped at the top of the tongue. After the post clips are installed in the brackets, crimp the bottom of the tongue to prevent accidental disengagement of the post clip.

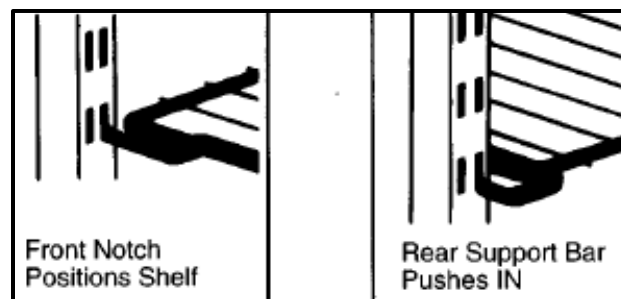




4. Continue installing the front posts for the entire lineup.
5. For ease of shelf installation, Ardc0 supplies Post Stabilizer Bars. There will be four bars per frame. Starting at one end, install one bar at the top of the posts and one at the bottom of the posts. Then proceed to the first mullion and install the stabilizer bars on these posts.

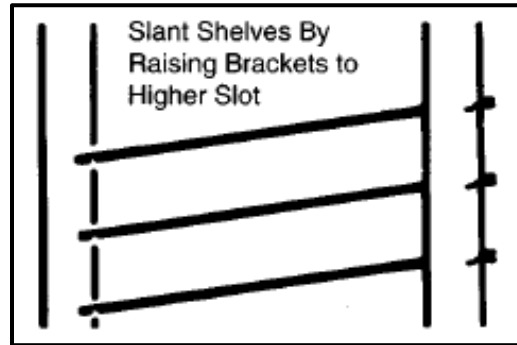


6. Install the required shelves behind the first door, then proceed to the next door.
7. At this point, remove the stabilizer bars from the first mullion and move them to the posts at the second mullion. Continue this until you have the stabilizer bars on the end posts.
8. The shelves are installed into the slots on the rear of the posts.

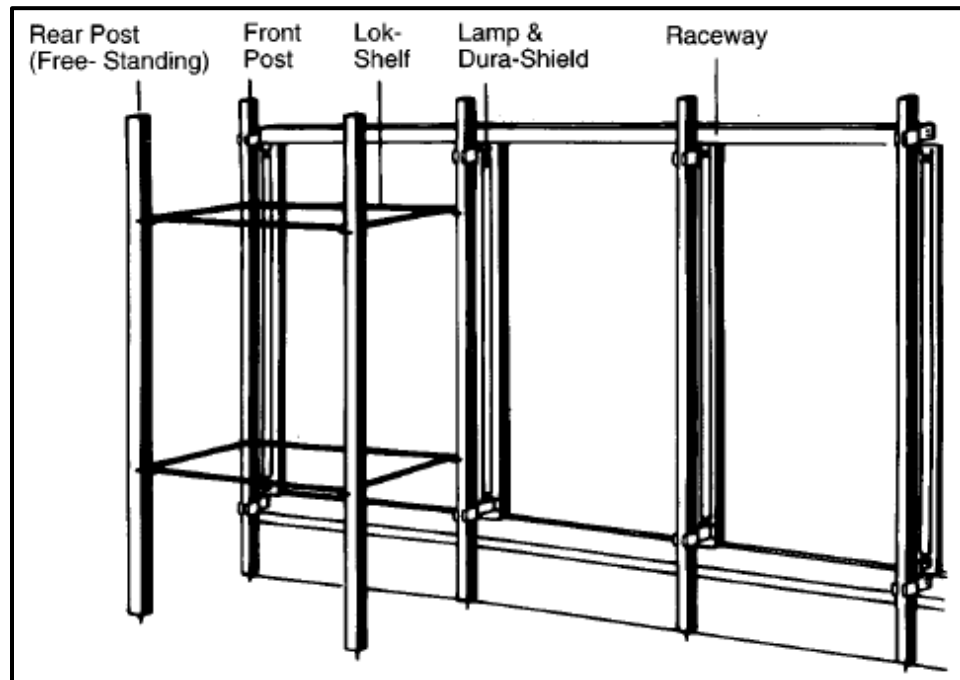


9. Shelves may be leveled by using the leveler bolt at the bottom of each post.

10. Shelves may be placed at a slant by moving the rear mounting bar to a higher slot in the rear post.

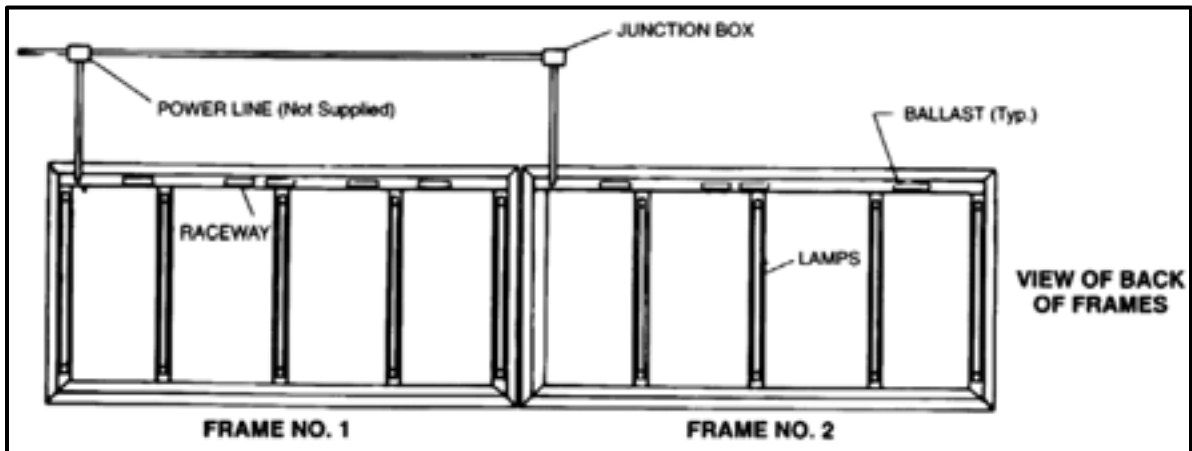


**NOTE:** When the cooler or freezer sill is 5 1/2" deep or deeper, special mounting brackets will be required for the front posts.

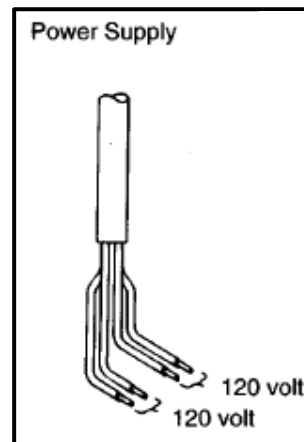
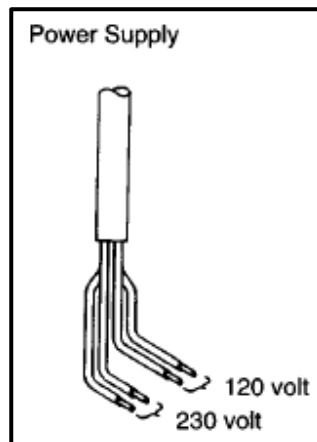


### 14. Electrical Hookup

1. After Ardco's frame (or frames) have been installed in the rough opening, bring the appropriate power to the back of the frame. Two circuits are recommended; one for the lights and one for the heaters, regardless of voltage.

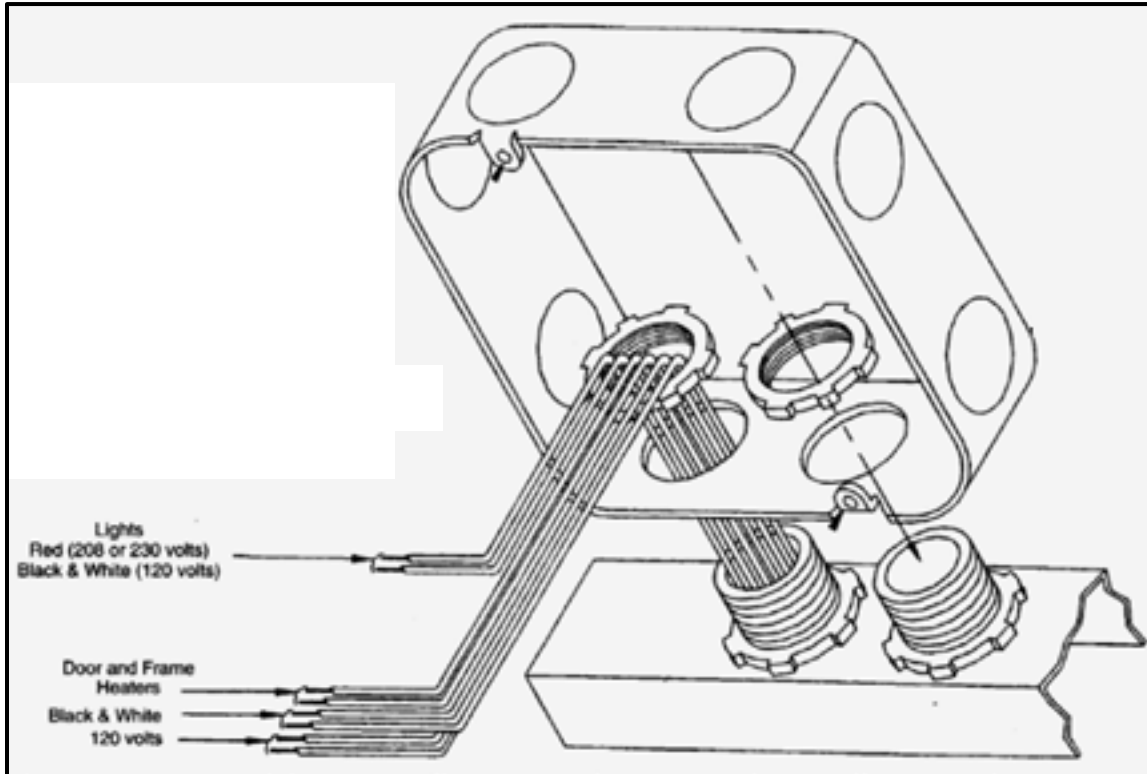


2. The heaters are 120 volts on both the coolers and the freezers. The lights on the freezers are 120 volts. The lights on the coolers may be 120 volts or 220 volts. Check the requirements on the back of the frame.



3. All heater and light wiring in Ardco frames is labeled and color coded.

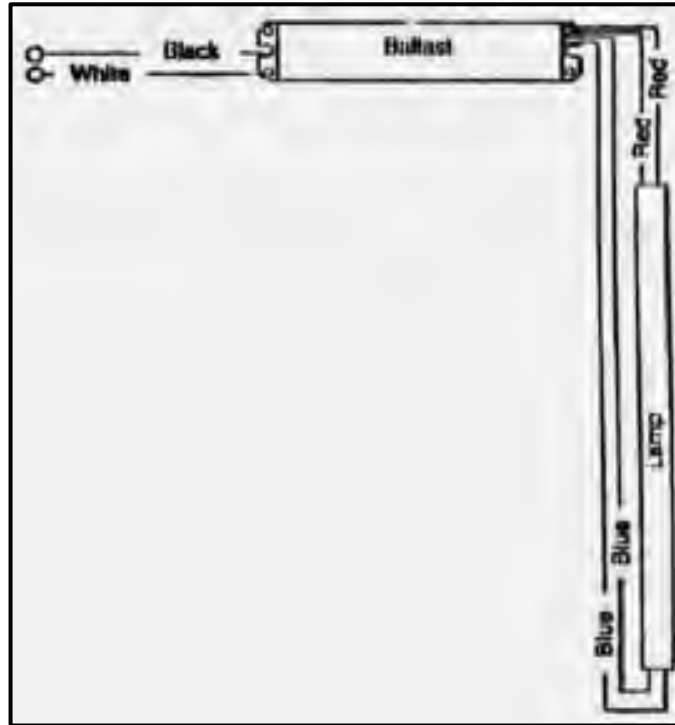
4. An electrical box is shipped separately. This box may be attached to the frame. Connections should be made in accordance with National Electrical Code and prevailing local codes



## 15. Typical Light Wiring

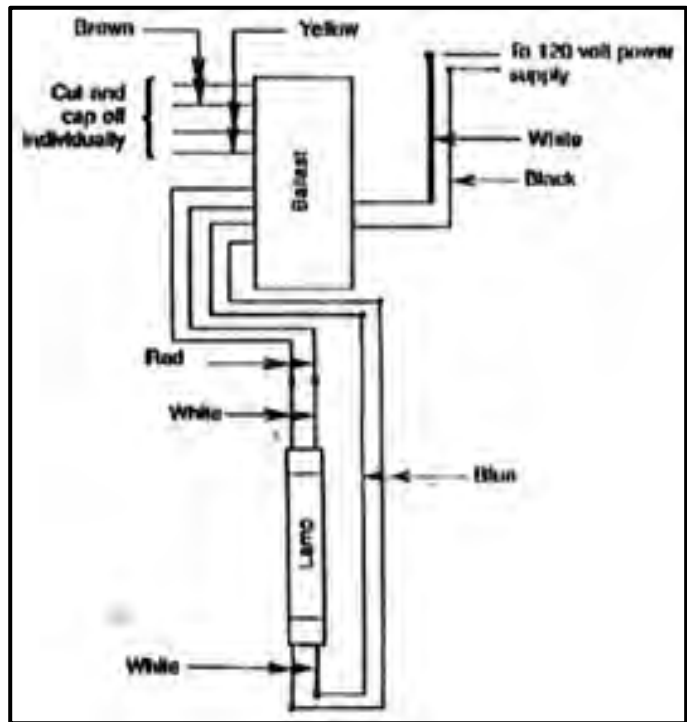
### 15.1. T-12 Lamps

The following drawing is used with Ardco ballast number 15550P001 (Catalog No. 8G4039W02) for coolers with non-electronic lighting. It is used with 48", 60" and 72" T-12 lamps. It is a one-lamp ballast only.

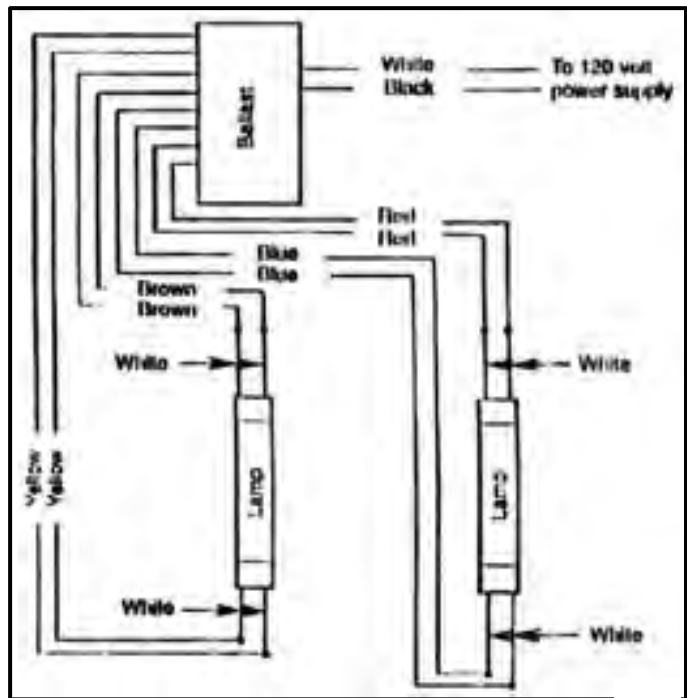


15.2. T-8/T-10 Lamps

The following diagrams are used with Ardco ballasts 15751P002 (F2X58NT) for coolers and 15751P004 (F2X70LT) for freezers. These ballasts are used with 72" T-8 and T-10 lamps.



1-Lamp Application

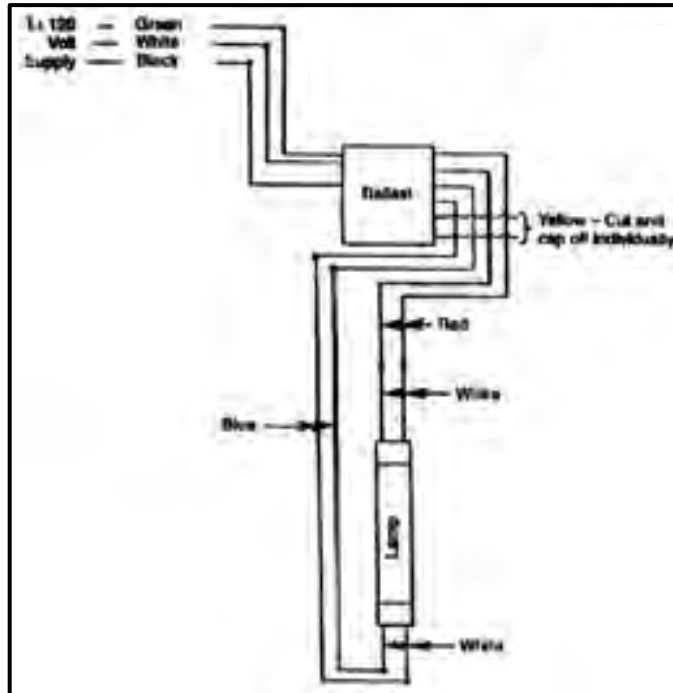


2-Lamp Application

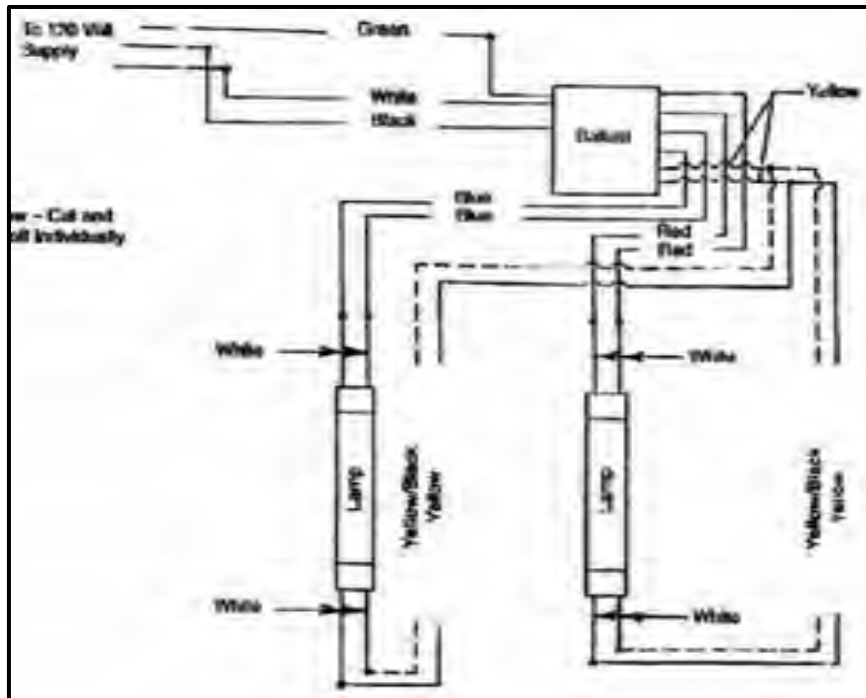
15.3. T-8/T-10 Lamps

The following diagrams are used with Ardco ballasts 15651P001 (E260SVH120). The Lighting Systems are:

- Power Lens - Cooler & Freezer - 60" T-8 Lamps
- 1500mA - Freezer - 60" T-10 Lamps

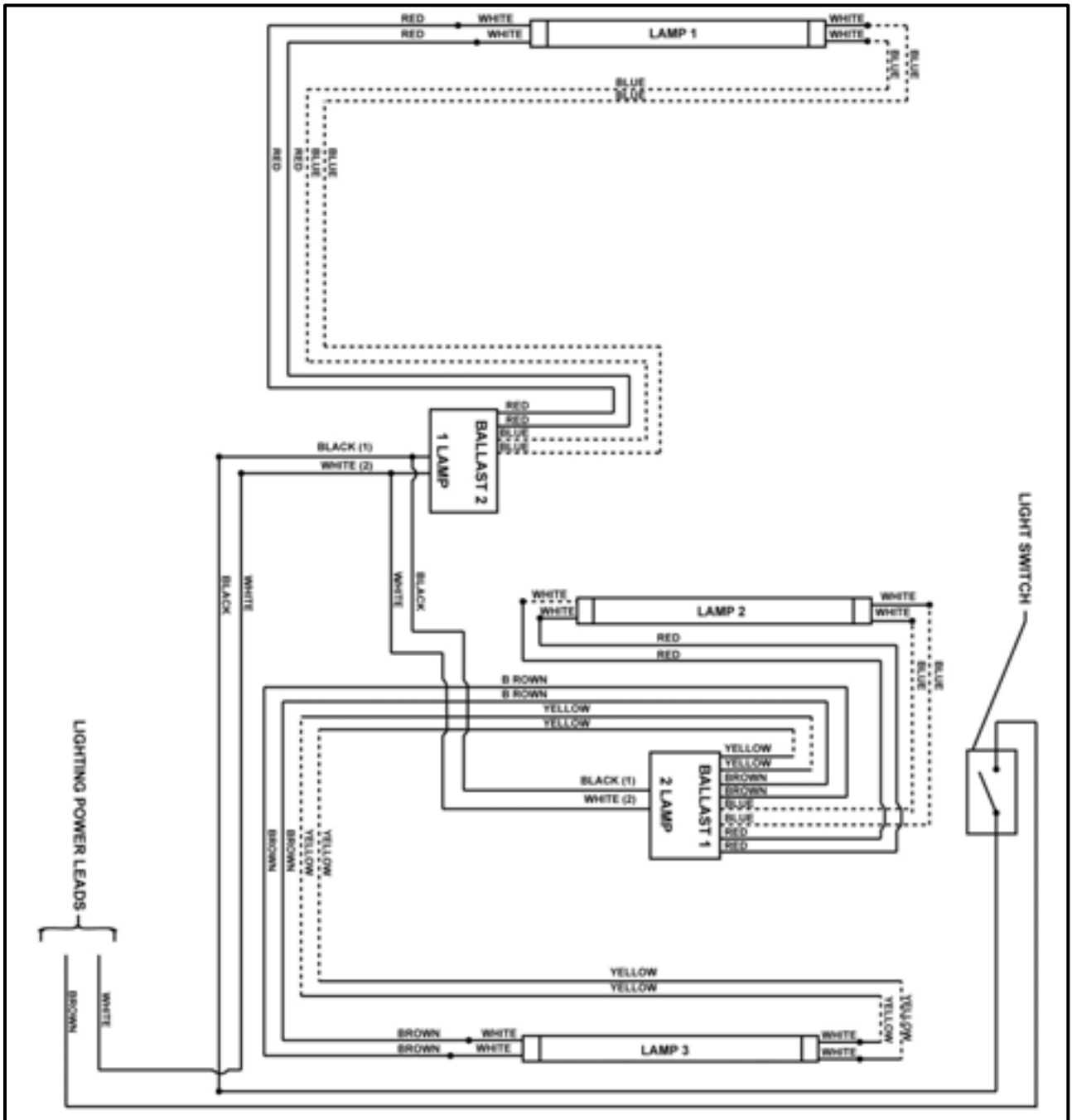


1-Lamp Application



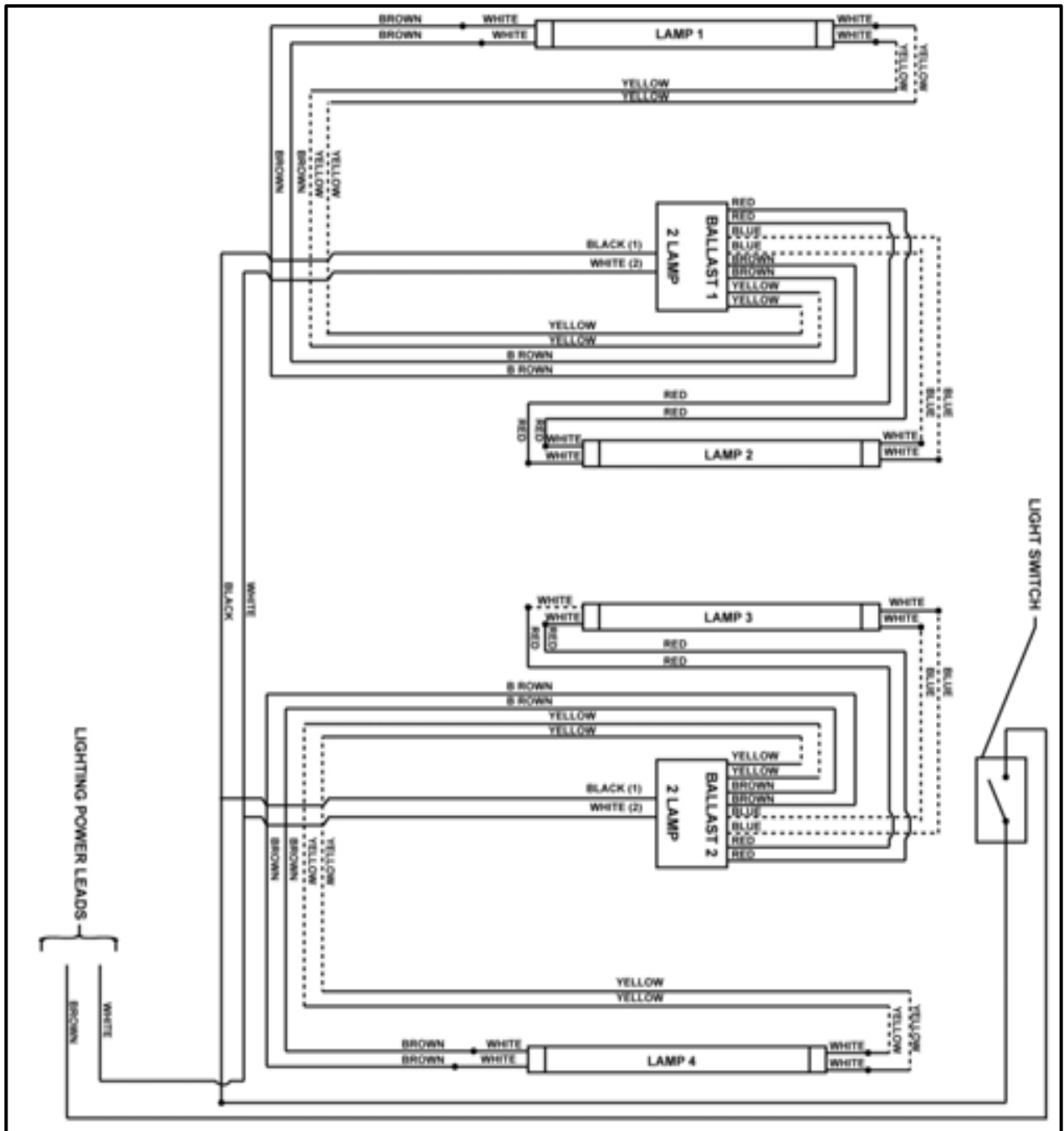
2-Lamp Application

15.4. 2-Door Frame Light Diagram Viewed from Front

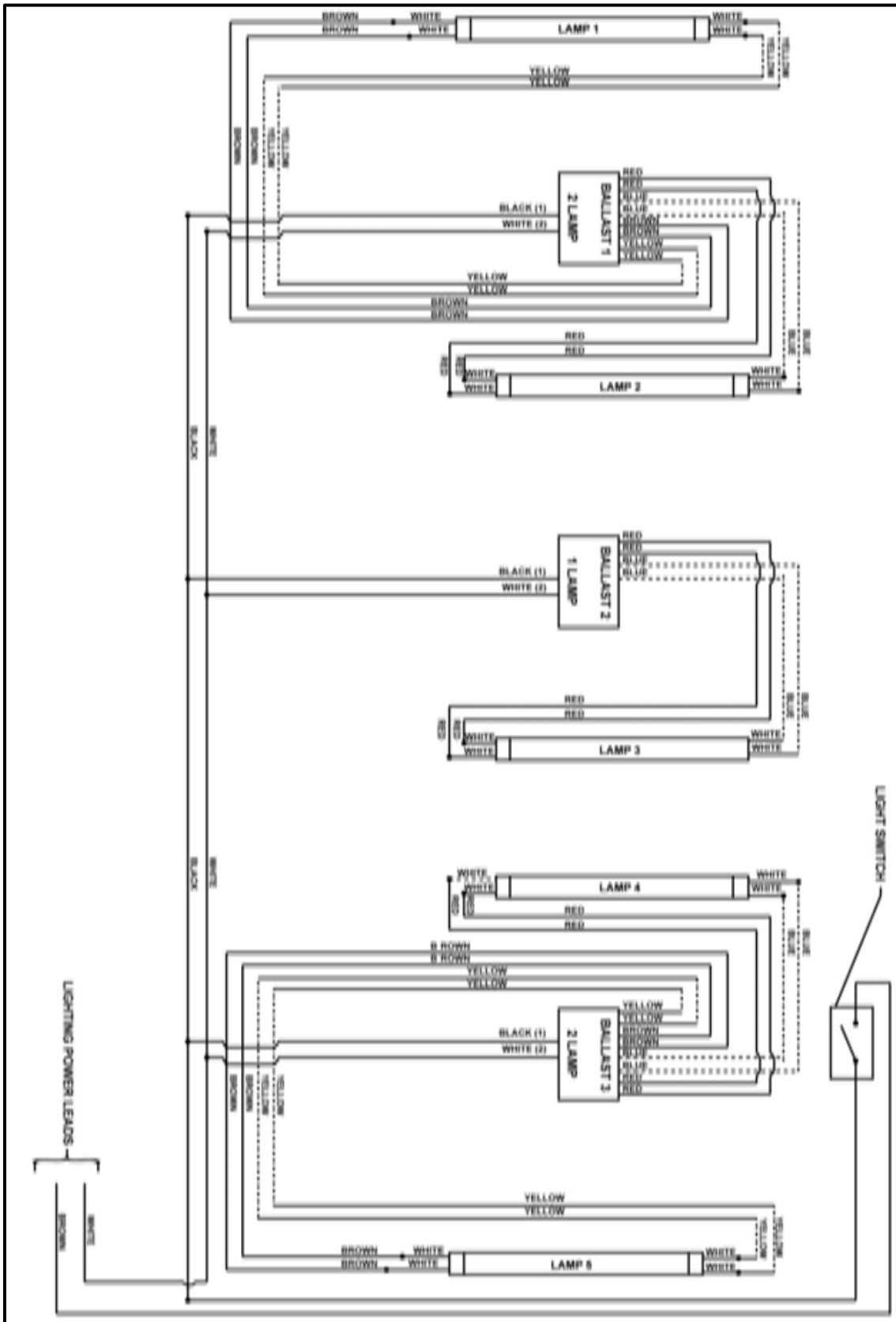




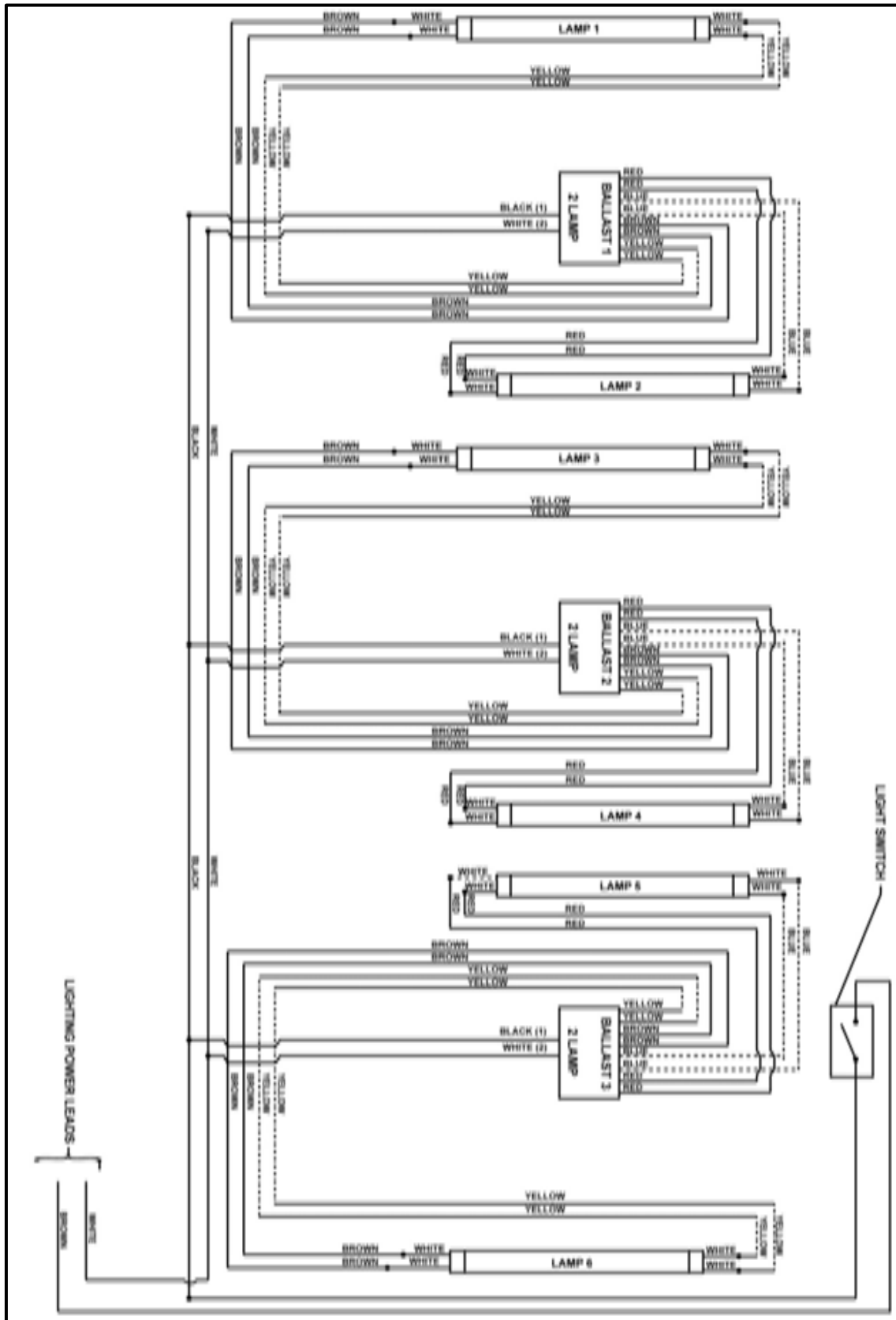
15.5. 3-Door Frame Light Diagram Viewed from Front



15.6. 4-Door Frame Light Diagram Viewed from Front

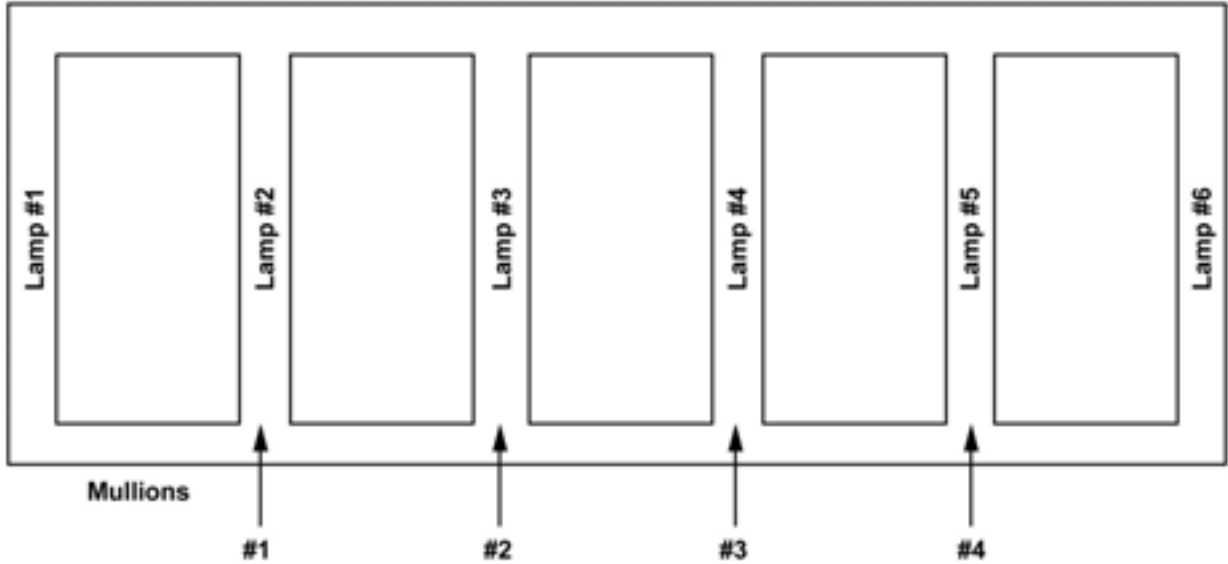


15.7. 5-Door Frame Light Diagram Viewed from Front



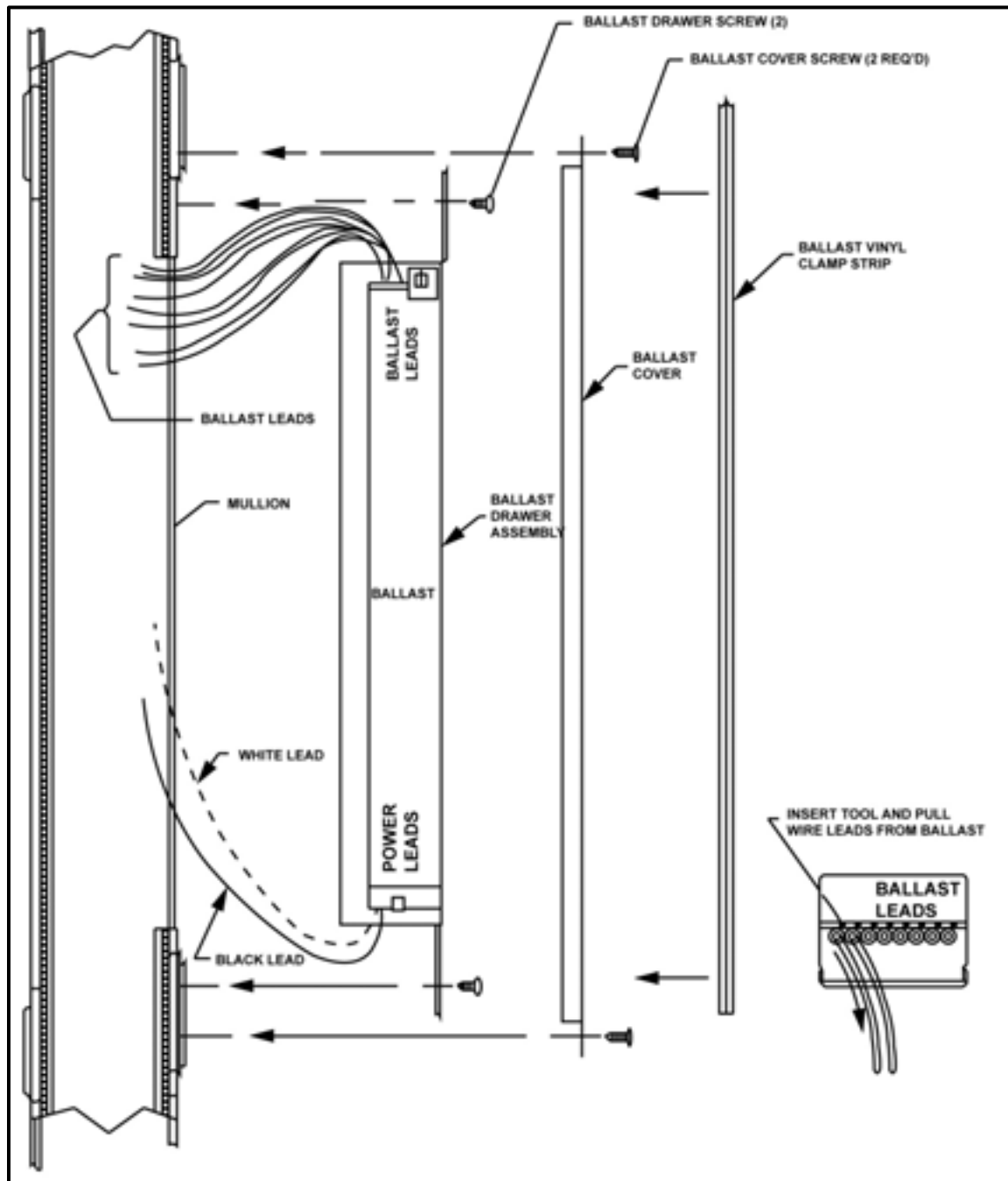
15.8. Lamp and Ballast Locations

120 Volt  
Front View  
5-Door Frame



| Frame Size | Lamps | Ballast       |
|------------|-------|---------------|
| 5-Door     | 1 & 2 | In Mullion #1 |
| 5-Door     | 3 & 4 | In Mullion #3 |
| 5-Door     | 5 & 6 | In Mullion #4 |
| 4-Door     | 1 & 2 | In Mullion #1 |
| 4-Door     | 3     | In Mullion #2 |
| 4-Door     | 4 & 5 | In Mullion #3 |
| 3-Door     | 1 & 2 | In Mullion #1 |
| 3-Door     | 3 & 4 | In Mullion #2 |
| 2-Door     | 1 & 2 | In Mullion #1 |
| 2-Door     | 3     | In Mullion #1 |

15.9. Lamp and Ballast Locations



15.9.1. To Remove Ballast: Turn off power supply before replacing ballast.

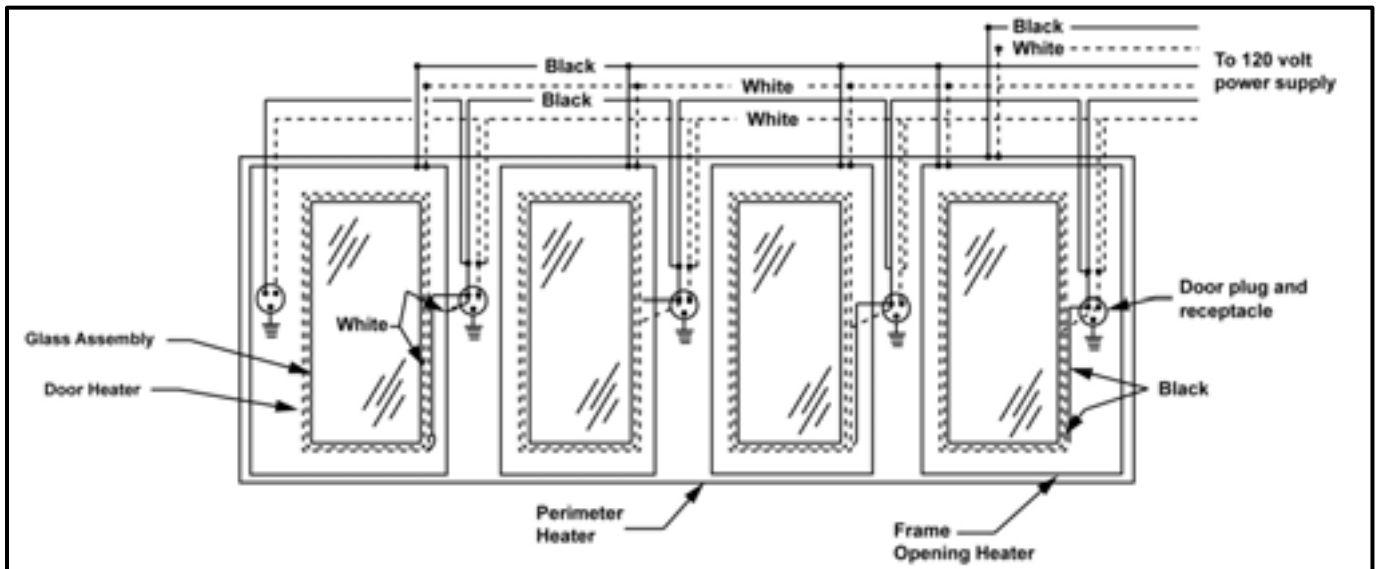
1. Remove ballas vinyl clamp strip.
2. Remove (2) ballast cover screws. Lift away ballast cover.
3. Remove (2) ballast drawer screws.
4. Pull ballast drawer from within the mullion. The optimum distance for easy servicing of the ballast is 6".

5. Remove wire leads from ballast as indicated in the illustrations for “Power Leads” and “Ballast Leads”.
6. For re-installing ballast, reverse procedure. Inserting tool into ballast not required for inserting wires back into the ballast.

15.10. Heater Connections – 120 Volt

This diagram is for:

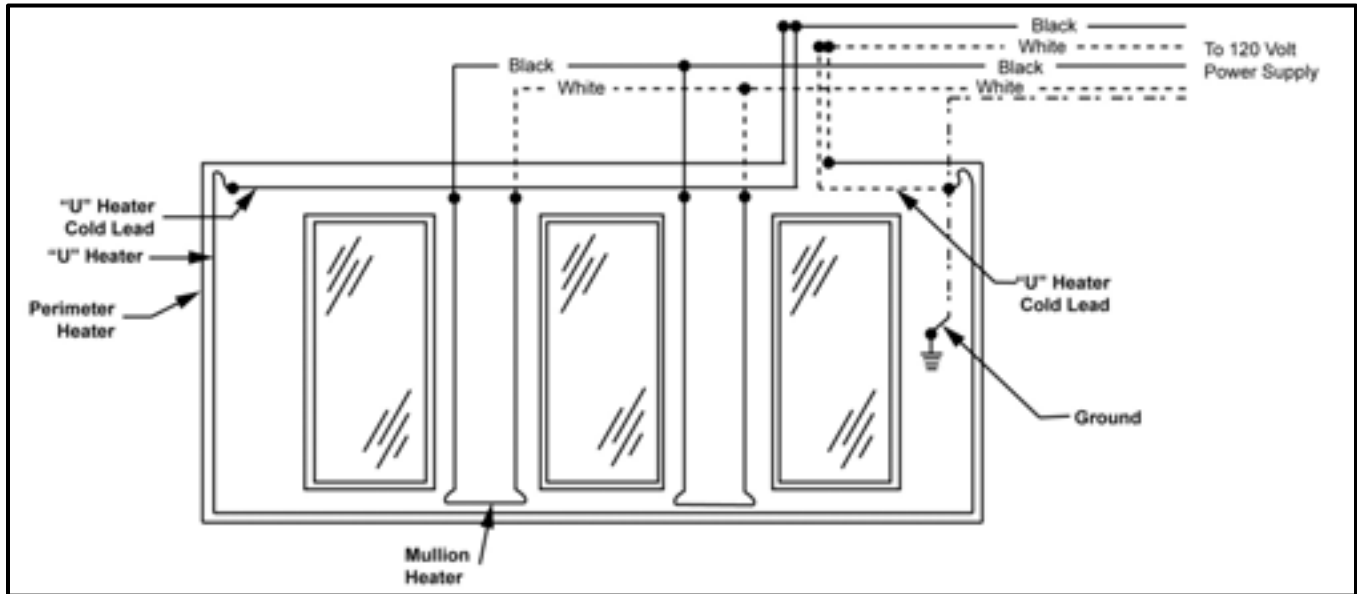
- Swingline 3 - Cooler and Freezer
- Vanguard - Cooler and Freezer
- Enertech - Freezer
- M-Line - Freezer



15.11. Heater Connections – 120 Volt

This diagram is for:

- Enertech - Freezer
- M-Line - Freezer



**16. Revision History Page**

| REV | ORIGINATOR | DESCRIPTION OF CHANGE | EFFECTIVE DATE |
|-----|------------|-----------------------|----------------|
| A   |            | Initial Release       |                |
| B   | S. Fisher  | Reformat into Word    | 08/07/2013     |