

Allegro
S E R I E S™

Installation & Service Manual



LPF with Optional Rear Cabinet, Food Prep Area with Glass Sneeze Guards and Heat Lamps



LPD with Optional Food Prep Area with Glass Sneeze Guards

LPF, LPD

SELF-SERVICE PREPARED FOOD & DISPLAY DELI MERCHANDISERS Medium Temperature Service Display Cases

This manual has been designed to be used in conjunction with the
General (UL/NSF) Installation & Service Manual.

Save the Instructions in Both Manuals for Future Reference!

This merchandiser conforms to the American National Standard Institute & NSF International Health and Sanitation standard ANSI/NSF - 7 2003.

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CONTENTS

	<u>Page</u>
Specifications	
LPF Specification Sheets	4
LPD Specification Sheets	6
Line Sizing Requirements	(See General-UL/NSF I&S Manual)
Pre-Installation Responsibilities	(See General-UL/NSF I&S Manual)
Installation Procedures	8
Carpentry Procedures	8
Case Line-Up	8
Case Pull-Up Locations	8
Plumbing Procedures	(See General-UL/NSF I&S Manual)
Refrigeration Procedures	(See General-UL/NSF I&S Manual)
Electrical Procedures	8
Electrical Considerations	8
Case Fan Circuit	8
Fluorescent Lamp Circuit	8
Defrost Information	8
Defrost Control Chart	8
Installation Procedure Check Lists (See Gen.-UL/NSF I&S Manual)	
Wiring Diagrams	8
LPF Dom. & Exp. Case Circuits (6', 8' & 12' Cases)	9
LPD Dom. & Exp. Case Circuits (4', 6', 8' & 12' Cases)	9
Cleaning and Sanitation	10
Component Removal and Installation Instructions for Cleaning	10
Shelves and Shelf Brackets	10
Bottom Trays and Screens	10
Front Air Ducts	10
Rear Duct Panels (w/o Shelf Light Sockets)	10
(with Shelf Light Sockets)	10

	<u>Page</u>
Discharge Air Honeycomb	10
Front Cladding ..	10
Cleaning Instructions	11
Stainless Steel Cleaning Methods	11
General Information	(See General-UL/NSF I&S Manual)
Radiant Heat Information	13
NSF Product Thermometer Installation	14
Service Instructions	14
Preventive Maintenance	(See General-UL/NSF I&S Manual)
Fan Blade & Motor Replacement .	(See Gen.-UL/NSF I&S Manual)
Light Servicing	14
Ballast and Lighting Locations	14
Anti-Sweat Replacement	15
Front Glass Replacement	15
Parts Information	16
Cladding and Trim Parts List (LPF)	16
Cladding and Trim Parts List (LPD)	18
Operational Parts List	20
TYLER Warranty	(See General-UL/NSF I&S Manual)

The following Medium Temperature Prepared Foods & Prepared Display Service/Self-Service Deli Merchandiser models are covered in this manual:

MODEL	DESCRIPTION
LPF	6', 8' & 12' PREPARED FOODS SERVICE/SELF-SERVICE MED TEMP DELI MERCHANDISERS
LPD	4', 6', 8' & 12' PREPARED DISPLAY SERVICE/SELF-SERVICE MED TEMP DELI MERCHANDISERS

SPECIFICATIONS

LPF Prepared Foods Service/Self-Service Deli Merchandisers

Refrigeration Data:

MODEL	CASE LENGTH	CASE USAGE	CAPACITY (BTUH / FT)		EVAPORATOR (°F)	UNIT SIZING (°F)	DISCHARGE AIR		AVG. REF. CHARGE (LBS/FT)
			PARALLEL	CONVENTIONAL			TEMPERATURE (°F)	VELOCITY (FPM)	
LPF	6'/8'/12'	MED TEMP	1,000*	1,091*	+15**	+13	+28	N/A***	N/A

* Capacity data listed for cases with 1 row of T-8 canopy lights and 2 rows of optional lighted shelves. Adjustments must be made to this base rating for each option installed on this case. DEDUCT 20 BTUH/FT for each row of unlighted shelves. For sizing all refrigeration equipment other than TYLER, use conventional BTUH values.

** Evaporator temperature is defined as the saturated suction temperature leaving the case.

*** Air velocity measured 1 hour after defrost at the top discharge air duct using an ALNOR JR. velometer with a scoop.

FOR SPECIFIC COMPRESSOR SIZING INFORMATION, REFER TO TYLER APPLICATIONS FOR RACK SYSTEM COMPRESSORS AND/OR THE COMPRESSOR MANUFACTURERS FOR SINGLE COMPRESSORS. FOR LINE SIZING INFORMATION, REFER TO THE MISCELLANEOUS SECTION "BUFF" IN THE TYLER SPECIFICATION GUIDE.

Electrical Data:

Fans and Heaters (120 Volt)

MODEL	CASE LENGTH	FANS / CASE	TOTAL STANDARD FANS		TOTAL ECM FANS		TOTAL ANTI-SWEATS	
			AMPS	WATTS	AMPS	WATTS	DISCHARGE AIR AMPS	WATTS
LPF	6'	2	1.06	96.0	0.44	22.0	0.61	73.0
LPF	8'	2	1.06	96.0	0.44	22.0	0.94	113.0
LPF	12'	3	1.59	144.0	0.66	33.0	1.26	152.0

T-8 Lighting with Electronic Ballasts (120 Volt)

MODEL	CASE LENGTH	CANOPY LIGHTS*		SHELF LIGHTS – PER ROW				MAXIMUM LIGHTING (3 ROWS)	
		AMPS 1	WATTS 1	AMPS		WATTS		AMPS	WATTS
				1	2	1	2		
LPF	6'	0.40	48.0	0.50	0.80	60.0	96.0	1.20	144.0
LPF	8'	0.50	60.0	0.70	1.10	84.0	132.0	1.60	192.0
LPF	12'	0.70	84.0	1.05	1.65	126.0	198.0	1.35	282.0

* Standard lighting for this case is 1 row of canopy lights.

Defrost Data:

DEFROST TYPE*	DEFROSTS PER DAY	DURATION TIME (MIN)	TERMINATION (°F)	EPR SETTINGS **		DEFROST WATER (LB / FT / DAY)
				R22 (PSIG)	R404A (PSIG)	
TIME OFF	4	30	- - -	38	50	N/A

* If an Electronic Sensor is used for termination, it should be set at 70°F termination temperature. The sensor must be located in the same location as the defrost termination klixon for that defrost type.

** Set EPR to give this pressure at the case.

DEFROST CIRCUITS: OFF CYCLE defrost is standard (use TC defrost module) – OPTIONAL ELECTRIC defrost uses a single or 3 phase circuit – OPTIONAL HOT GAS defrost uses 2 control wires @ 208V per lineup.

CASE-TO-CASE SUCTION LINE SUB-FEED BRANCH LINE SIZING													
MODEL	6'	8'	12'	16'	20'	24'	28'	32'	36'	40'	44'	48'	52'
LPF / R-22	1/2"	5/8"	5/8"	7/8"	7/8"	7/8"	7/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"

CASE CIRCUITS: This case requires a 120V circuit for fans and lights.

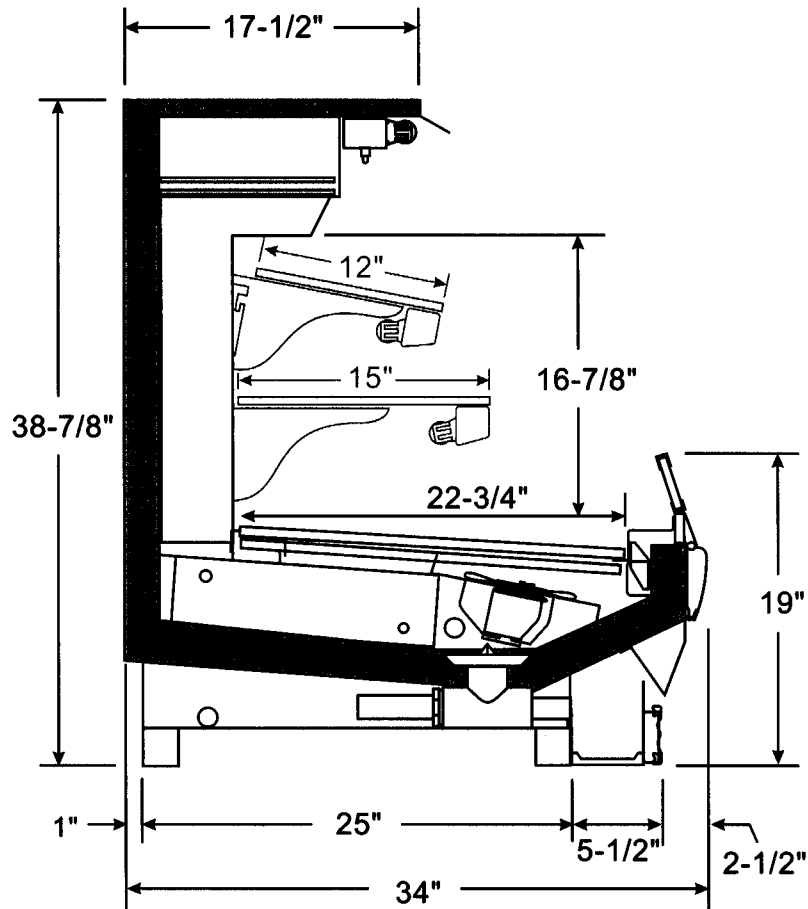
Screens are standard. Shelving must be ordered separately. All rows of shelving require a shelf gasket. Shelves are available in 12" and 15" deep sizes. When multiple shelf sizes are used, position smallest shelf size on top to largest shelf size on bottom.

UL SANITATION approved in accordance with ANSI/NSF 7.

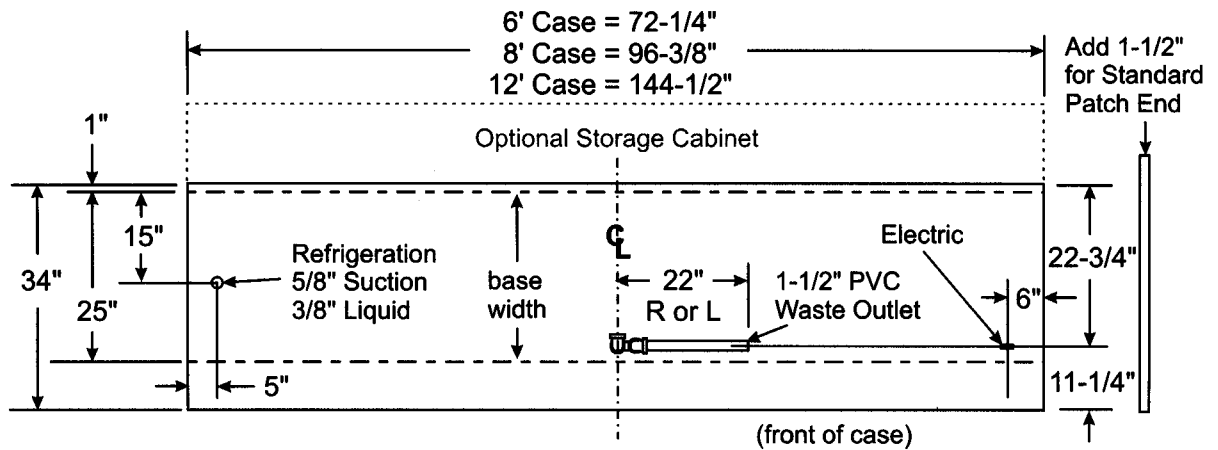
CASE BTUH REQUIREMENTS are calculated to produce approximately the indicated entering-air temperature with absolute maximum operating ambient limits of 75°F & 55RH.

The information contained herein is based on technical data and tests that we believe are reliable, and is intended for use by persons having technical skill at their own discretion and risk. Since conditions of use are outside of Tyler's control, we cannot assume any liability for results obtained or damages incurred through the applications of the data presented. SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

LPF CROSS SECTION



FLOOR PLAN



LPD Prepared Display Service/Self-Service Deli Merchandisers

Refrigeration Data:

MODEL	CASE LENGTH	CASE USAGE	CAPACITY (BTUH / FT)		EVAPORATOR (°F)	UNIT SIZING (°F)	DISCHARGE AIR		AVG. REF. CHARGE (LBS/FT)
			PARALLEL	CONVENTIONAL			TEMPERATURE (°F)	VELOCITY (FPM)	
LPD	4'/6'/8'/12'	MED TEMP	1,070*	1,167*	+15**	+13	+28	N/A***	N/A

* Capacity data listed for cases with 1 row of T-8 canopy lights and 2 rows of optional lighted shelves. Adjustments must be made to this base rating for each option installed on this case. DEDUCT 20 BTUH/FT for each row of unlighted shelves. For sizing all refrigeration equipment other than TYLER, use conventional BTUH values.

** Evaporator temperature is defined as the saturated suction temperature leaving the case.

*** Air velocity measured 1 hour after defrost at the top discharge air duct using an ALNOR JR. velometer with a scoop.

FOR SPECIFIC COMPRESSOR SIZING INFORMATION, REFER TO TYLER APPLICATIONS FOR RACK SYSTEM COMPRESSORS AND/OR THE COMPRESSOR MANUFACTURERS FOR SINGLE COMPRESSORS. FOR LINE SIZING INFORMATION, REFER TO THE MISCELLANEOUS SECTION "BUFF" IN THE TYLER SPECIFICATION GUIDE.

Electrical Data:

Fans and Heaters (120 Volt)

MODEL	CASE LENGTH	FANS / CASE	TOTAL STANDARD FANS		TOTAL ECM FANS		TOTAL ANTI-SWEATS	
			AMPS	WATTS	AMPS	WATTS	DISCHARGE AIR AMPS	WATTS
LPD	4'	1	0.34	30.2	0.22	11.0	0.45	54.0
LPD	6'	2	0.68	60.4	0.44	22.0	0.61	73.0
LPD	8'	2	1.02	90.6	0.66	33.0	0.94	113.0
LPD	12'	3	1.02	90.6	0.66	33.0	1.26	152.0

T-8 Lighting with Electronic Ballasts (120 Volt)

MODEL	CASE LENGTH	CANOPY LIGHTS*		SHELF LIGHTS – PER ROW				MAXIMUM LIGHTING (3 ROWS)	
		AMPS	WATTS	AMPS		WATTS		AMPS	WATTS
				1	2	1	2		
LPD	4'	0.35	42.0	0.35	0.50	42.0	60.0	0.85	102.0
LPD	6'	0.40	48.0	0.50	0.80	60.0	96.0	1.20	144.0
LPD	8'	0.50	60.0	0.70	1.10	84.0	132.0	1.60	192.0
LPD	12'	0.70	84.0	1.05	1.65	126.0	198.0	1.35	282.0

* Standard lighting for this case is 1 row of canopy lights.

Defrost Data:

DEFROST TYPE*	DEFROSTS PER DAY	DURATION TIME (MIN)	TERMINATION (°F)	EPR SETTINGS **		DEFROST WATER (LB / FT / DAY)
				R22 (PSIG)	R404A (PSIG)	
TIME OFF	4	30	- - -	38	50	N/A

* If an Electronic Sensor is used for termination, it should be set at 70°F termination temperature. The sensor must be located in the same location as the defrost termination Klixon for that defrost type.

** Set EPR to give this pressure at the case.

DEFROST CIRCUITS: OFF CYCLE defrost is standard (use TC defrost module) – OPTIONAL ELECTRIC defrost uses a single or 3 phase circuit – OPTIONAL HOT GAS defrost uses 2 control wires @ 208V per lineup.

CASE-TO-CASE SUCTION LINE SUB-FEED BRANCH LINE SIZING														
MODEL	4'	6'	8'	12'	16'	20'	24'	28'	32'	36'	40'	44'	48'	52'
LPD / R22	1/2"	1/2"	5/8"	5/8"	7/8"	7/8"	7/8"	7/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"

CASE CIRCUITS: This case requires a 120V circuit for fans, lights and anti-sweat heaters.

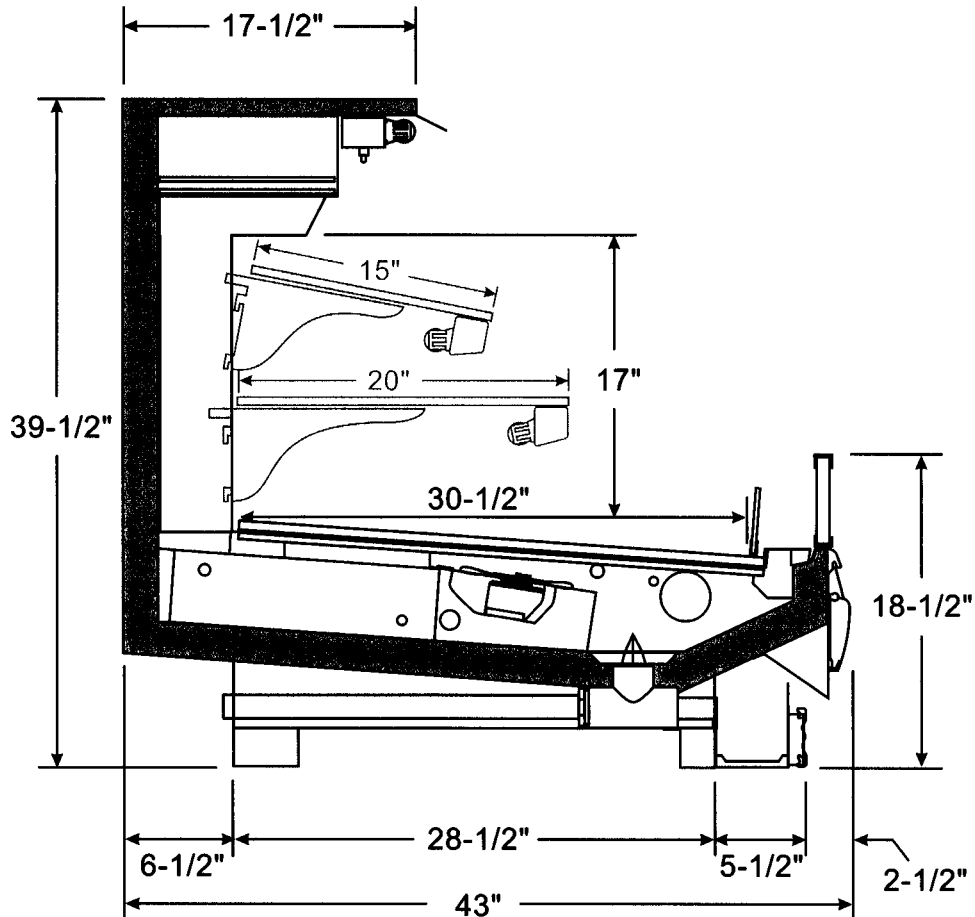
Screens are standard. Shelving must be ordered separately. All rows of shelving require a shelf gasket. Shelves are available in 12", 15", 18" and 20" deep sizes. When multiple shelf sizes are used, position smallest shelf size on top to largest shelf size on bottom.

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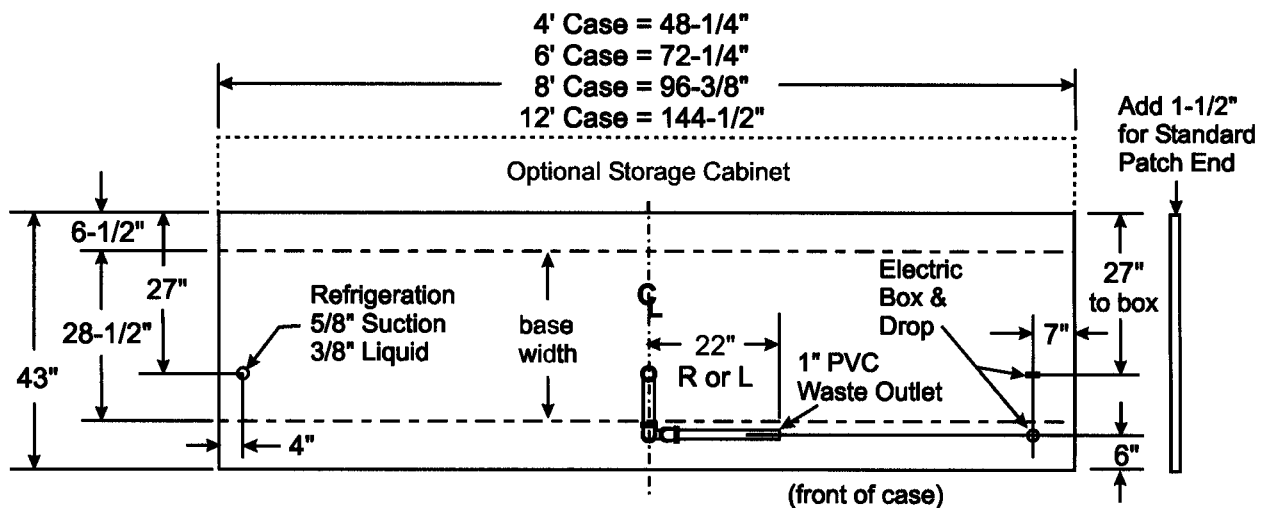
CASE BTUH REQUIREMENTS are calculated to produce approximately the indicated entering-air temperature with absolute maximum operating ambient limits of 75°F & 55RH.

The information contained herein is based on technical data and tests that we believe are reliable, and is intended for use by persons having technical skill at their own discretion and risk. Since conditions of use are outside of Tyler's control, we cannot assume any liability for results obtained or damages incurred through the applications of the data presented. SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

LPD CROSS SECTION



FLOOR PLAN



INSTALLATION PROCEDURES

Carpentry Procedures

Case Line-Up

Before starting the case line-up, review the store layout floorplans and survey the areas where case line-ups are going to be installed.

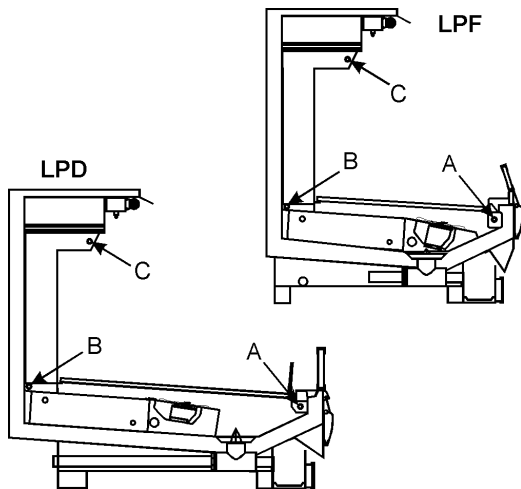
WARNING

- **These cases are very heavy and require two or more people to move, position and/or install them.**
- **Do not walk on the tops of these cases. Tops of cases are not designed to support the weight of a human being.**

Improper handling of these cases could result in personal injury.

See the “General-UL/NSF I&S Manual” for the proper case line-up procedures.

Case Pull-Up Locations



The LPF and LPD models have three pull-ups at each end of the case. Pull-ups A, B and C are located as shown and should be installed and tightened starting with A and finishing with C.

See “General-UL/NSF I&S Manual” for line-up assembly instructions.

Electrical Procedures

Electrical Considerations

CAUTION

Make sure all electrical connections at components and terminal blocks are tight. This

prevents burning of electrical terminals and/or premature component failure.

NOTE

The LPF and LPD both have front electrical raceways. Case wiring connect to terminal blocks in the raceway. All light ballasts are located with the lights.

Case Fan Circuit

This circuit is to be supplied by an uninterrupted, protected 120V circuit. The case fan circuit is not cycled during defrost on any of these cases.

Fluorescent Lamp Circuit

Case lighting is supplied by T-8 electronic ballast lights. It is controlled by a light switch in each case. The standard lighting is 1-row of canopy lights. 2-rows of optional shelf lights are available.

Anti-Sweat Circuit

All LPF and LPD cases have anti-sweat heaters in the discharge air circuit. The heaters are wired directly to the main power supply so they can operate at all times.

Defrost Information

See “General (UL/NSF) I&S Manual” for operational descriptions for Off Time defrost control.

Defrost Control Chart

LPF/LPD Defrost Option Settings

	Defrost		
Defrost Type	Defrosts Per Day	Duration (Min)	Term. Temp.
Off Time	4	30	----

WIRING DIAGRAMS

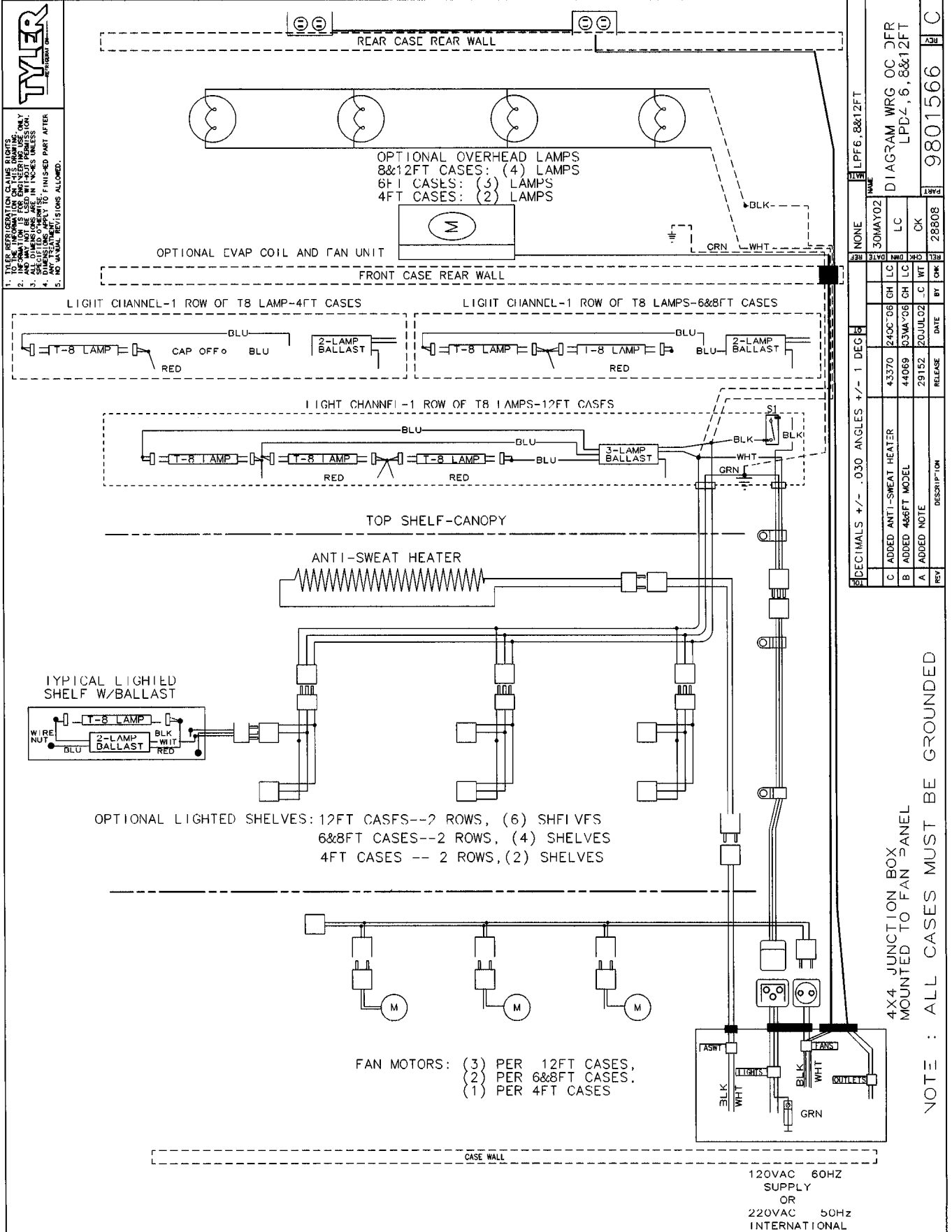
ELECTRICIAN NOTE - OVERCURRENT PROTECTION

120V circuits should be protected by 15 or 20 Amp devices per the requirements noted on the cabinet nameplate or the National Electrical Code, Canadian Electrical Code - Part 1, Section 28. 208V defrost circuits employ No. 12 AWG field wire leads for field connections. On remote cases intended for end to end line-ups, bonding for ground may rely upon the pull-up bolts.

The following wiring diagram on page 9 covers the LPF and LPD case electrical circuits.

LPF Domestic & Export (50 Hz) Case Circuits (6', 8' and 12' Cases)

LPD Domestic & Export (50 Hz) Case Circuits (4', 6', 8' and 12' Cases)



CLEANING AND SANITATION

Component Removal and Installation Instructions for Cleaning

Shelves and Shelf Brackets

1. Remove product from shelves.
2. If shelf has a light, unplug the light cord from socket from the rear duct panel. Completely insert socket cover in the light socket to protect the receptacle.
3. Push shelves back and then lift up and out to remove them from the shelf brackets.
4. Remove shelf brackets from slots in rear uprights.
5. After cleaning, replace in reverse order.

Bottom Trays

1. Remove product from bottom of case.
2. Grasp and lift each of the bottom trays from the case interior.
3. After cleaning, replace bottom trays with lips down in reverse order.

Front Air Ducts

1. Remove bottom trays, see above.
2. Lift out front air duct sections.
3. After cleaning, replace in reverse order.

Rear Duct Panels (w/o Shelf Light Sockets)

1. Remove shelves and bottom trays, see above.
2. Remove mounting screws and rear duct panels from case.
3. After cleaning, replace and secure rear duct panels in reverse order.

(with Shelf Light Sockets)

1. Remove shelves and bottom trays, see above.
2. Remove mounting screws from rear duct panels.

3. Slowly lift out each rear duct panel until the shelf harness connector can be accessed.
4. Disconnect shelf harness connector and complete removing the rear duct panels.

WARNING

Rear duct panels with receptacles can be cleaned without removing the electrical receptacles. Do not get moisture on electrical wires when cleaning under this cover. Moisture on wires could cause premature product failure and/or personal injury or death from electrical shock.

5. After cleaning, reconnect each shelf harness connector and replace and secure the rear duct panels in reverse order.

Discharge Air Honeycomb

1. Loosen screws securing rear retainer plate.

NOTE

Note position of the honeycomb grid during removal so it can be reinstalled the same way.

2. Slide rear retainer plate back until the honeycomb grid sections can be removed from the top duct.

CAUTION

Improper installation of the honeycomb grid could result in improper air flow and/or poor refrigeration.

3. After cleaning, replace honeycomb grid sections as they were removed and secure with the bottom retainer plate and screws.

Front Cladding

NOTE

Front cladding is not removable.

1. Wipe surface clean with a damp soapy cloth.
2. Rinse with clean damp cloth and dry surface completely.

Cleaning Instructions**WARNING**

TYLER Refrigeration does not recommend the use of high pressure cleaning equipment on display cases!! High pressure cleaners can penetrate and/or damage joint seals. Damaged seals allow water leaks and/or air leaks that can cause poor case refrigeration.

CAUTION

- When cleaning this case, try not to introduce water into the case faster than it can be carried away by the waste outlet.
- Liquid chlorine bleach is corrosive to metals. The use of bleach or products containing bleach will damage metal surfaces and void the case warranty.
- Sanitize the case with Quaternary Ammonium Solutions (ex: KAYQUAT II, J-512 Sanitizer, SANIQUAT 512, etc...) approved per 21CFR 178.1010, followed by adequate draining and air drying. These solutions may be obtained from Kay Chemical Co., Johnson Wax Professional, Coastwide Laboratories, etc....
- Always use a soft cloth or sponge with mild detergent and water to clean any glass. Never use abrasives or scouring pads to clean glass. They can scratch and/or damage the glass.

See "General (UL/NSF) I&S Manual" for case cleaning instructions.

Stainless Steel Cleaning Methods

The cleaning data in the following stainless steel cleaning chart was supplied by AISI. The information was supplied by Prime Metals Division, Alumax Aluminum Corporation.

<u>TYPE OF CLEANING</u>	<u>CLEANING AGENT*</u>	<u>APPLICATION METHOD**</u>	<u>EFFECT ON FINISH</u>
Routine cleaning	Soap, ammonia or detergent and water.	Sponge with cloth, then rinse with clear water and wipe dry.	Satisfactory for use on all finishes.
Smears and fingerprints	Arcal 20, Lac-O-Nu, Lumin Wash O'Cedar Cream Polish, Stainless Shine	Rub with cloth as directed on the package.	Satisfactory for use on all finishes. Provides barrier film
Stubborn spots and stains, baked-on splatter, and other light discolorations	Allchem Concentrated Cleaner	Apply with damp sponge or cloth.	Satisfactory for use on all finishes.
	Samae, Twinkle, or Cameo Copper Cleaner	Rub with damp cloth.	Satisfactory for use on all finishes if rubbing is light.
	Grade FFF Italian pumice, whitening or talc	Rub with damp cloth.	Use in direction of polish lines on No. 4 (polished) finish. May scratch No. 2 (mill) and No. 7 and 8 (polished) finishes.
	Liquid NuSteel	Rub with dry cloth. Use a small amount of cleaner.	Use in direction of polish lines on No. 4 (polished) finish. May scratch No. 2 (mill) and No. 7 and 8 (polished) finishes.
	Paste NuSteel or DuBois Temp	Rub with dry cloth. Use a small amount of cleaner.	Use in direction of polish lines on No. 4 (polished) finish. May scratch No. 2 (mill) and No. 7 and 8 (polished) finishes.
	Cooper's Stainless Steel Cleaner, Revere Stainless Steel Cleaner	Apply with damp sponge or cloth.	Use in direction of polish lines on No. 4 (polished) finish. May scratch No. 2 (mill) and No. 7 and 8 (polished) finishes.

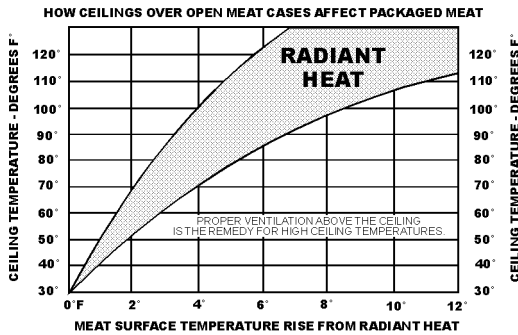
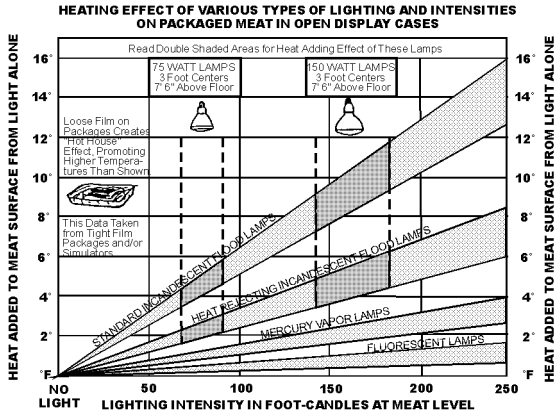
<u>TYPE OF CLEANING</u>	<u>CLEANING AGENT*</u>	<u>APPLICATION METHOD**</u>	<u>EFFECT ON FINISH</u>
	Grade F Italian pumice, Steel Bright, Lumin Cleaner, Zud or Restoro	Rub with a damp cloth.	Use in direction of polish lines on No. 4 (polished) finish. May scratch No. 2 (mill) and No. 7 and 8 (polished) finishes.
	Penny-Brite or Copper-Brite	Rub with a dry cloth. Use a small amount of cleaner.	Use in direction of polish lines on No. 4 (polished) finish. May scratch No. 2 (mill) and No. 7 and 8 (polished) finishes.
Heat tint or heavy discoloration	Penny-Brite or Copper-Brite	Rub with a dry cloth.	Use in direction of polish lines on No. 4 (polished) finish. May scratch No. 2 (mill) and No. 7 and 8 (polished) finishes.
	Paste NuSteel or DuBois Temp	Rub with dry cloth. Use a small amount of cleaner.	Use in direction of polish lines on No. 4 (polished) finish. May scratch No. 2 (mill) and No. 7 and 8 (polished) finishes.
	Revere Stainless Steel Cleaner	Apply with a damp sponge or cloth.	Use in direction of polish lines on No. 4 (polished) finish. May scratch No. 2 (mill) and No. 7 and 8 (polished) finishes.
	Allen Polish, Steel Bright, Wyandotte, Bab-O or Zud	Rub with a damp cloth.	Use in direction of polish lines on No. 4 (polished) finish. May scratch No. 2 (mill) and No. 7 and 8 (polished) finishes.
Burnt-on foods and grease, fatty acids, milkstone (where swabbing or rubbing is not practical)	Easy-Off, De-Grease-It, 4-6% hot solution of such agents as trisodium tripolyphosphate, or 5-15% caustic soda solution	Apply generous coating. Allow to stand for 10-15 min. Repeated application may be necessary.	Excellent removal, satisfactory for use on all finishes.
Tenacious deposits, rusty discolorations, industrial atmospheric stains	Oakite No. 33, Dilac, Texo 12, Texo N.Y., Flash-Klenz, Caddy Cleaner, Turco Scale 4368 or Permag 57.	Swab and soak with clean cloth. Let stand 15 minutes or more according to directions on package. Rinse and dry.	Satisfactory for use on all finishes.
Hard water spots and scale	Vinegar	Swab or wipe with a cloth. Rinse with water and dry.	Satisfactory for use on all finishes.
	5% oxalic acid, 5% sulamic acid, 5-10% phosphoric acid, or Dilac, Oakite No. 33, Texo 12 or Texo N.Y.	Swab or soak with a cloth. Let stand 10-15 minutes. Always follow with neutralizer rinse, and dry.	Satisfactory for use on all finishes. Effective on tenacious deposits or where scale has built up.
Grease and oil	Organic solvents such as carbon tetrachloride, trichlorethylene, acetone, kerosene, gasoline, benzene, alcohol and chlorethane n.u.	Rub with a cloth. Organic solvents may be flammable and/or toxic. Observe all precautions against fire. Do not smoke while vapors are present. Be sure area is well ventilated.	Satisfactory for use on all finishes.

* Use of proprietary names is intended only to indicate a type of cleaner, and does not constitute an endorsement, nor is omission of any proprietary cleanser to imply its inadequacy. It should be emphasized that all products should be used in strict accordance with instructions on package.

** In all applications a sponge or fibrous brush or pad are recommended. DO NOT use ordinary steel wool, steel brushes, chlorine bleach or products contained bleach for cleaning or sanitizing stainless steel.

GENERAL INFORMATION

Radiant Heat Information



A wide temperature range is shown for each type of lighting. This data does not show all situations. Many situations will have higher package warm-up figures than indicated.

It is generally known that the temperature of displayed meat in refrigerated cases will run higher than the circulated air temperature of the cases. A dial thermometer stuck into the center of a piece of meat compared with one in the air stream quickly confirms this fact. Another fact is that the surface temperature of the meat will be higher than the center temperature due to radiant heat. TYLER's ongoing research identifies sources of radiant heat and accurately measures and records it. These charts were developed from the information gathered during this research. Two major sources of radiant heat are from display lights and ceiling surfaces. Additional heat sources come from bad display practices which either overload the

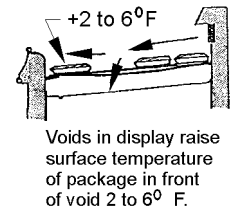
case with product or allow voids in the product display. Poor display practices impair the efficiency of the refrigeration, adding to the surface temperature of the meat. Bacteria and molds grow when surface temperatures rise above 45°F. This prematurely discolors displayed meats and causes unnecessary meat department losses.

Radiant Heat Measurement

Place two accurate dial thermometers side by side in a case. Cover one of the thermometer stems with black friction tape. The temperature difference is the approximate amount of radiant heat. A change in display lighting or a reduction of high ceiling temperatures (over 80°F) could reduce the radiant heat in the case.

Display Practices

Encourage butchers to maintain all meat below the case load lines and to eliminate product voids. Case screens could be covered in some instances to keep the refrigerated air over the display.



CAUTION

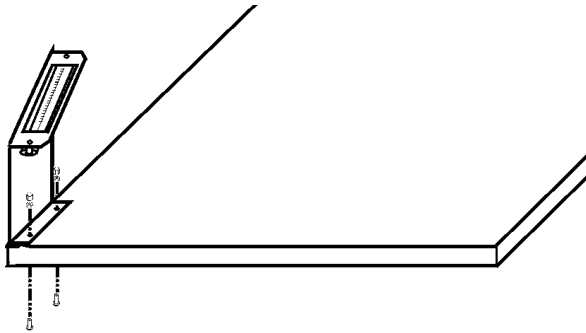
The quality damage done to meat products by high temperatures and/or contamination during delivery, cooler storage, cutting and wrapping cannot be repaired by placing the products into properly operating display cases.

NSF Product Thermometer Installation

1. Unwrap the thermometer and bracket assembly shipped loose with the case.
2. Position bracket in front left corner of the left-most bottom tray. Making sure the bracket is flush with the left edge, use the bracket holes as a template for where to drill the holes.
3. Drill two .196" holes in the bottom tray.

NOTE

For ease of installation, position the washers and capnuts on the top side of the bracket and bottom tray.



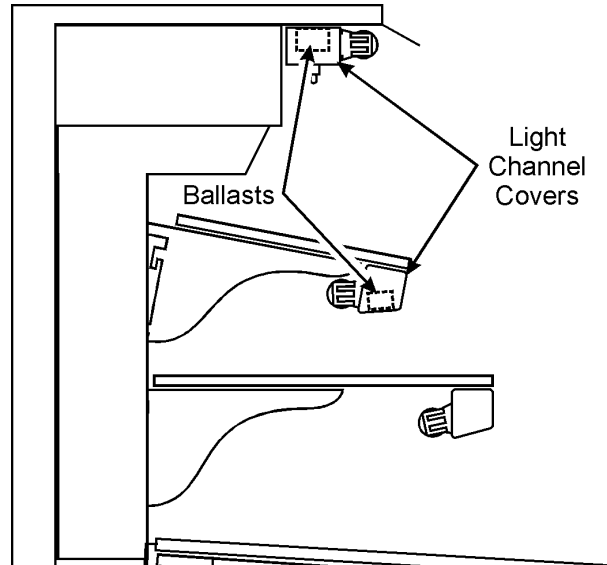
4. Mount the bracket to the bottom tray with two screws, washers and capnuts.

SERVICE INSTRUCTIONS

See "General-UL/NSF I&S Manual" for T-8 lamp, fan blade and motor, and color band and bumper replacement instructions.

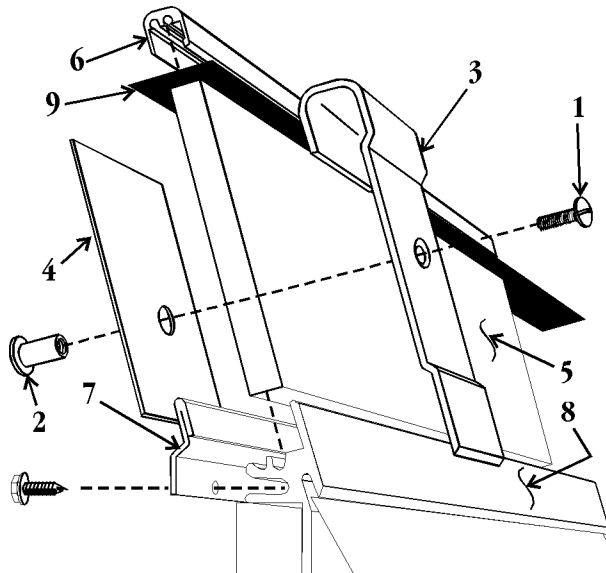
Light Servicing

Ballast and Lighting Locations



All light ballasts for the canopy lights and optional shelf lights are located inside each of the light channel assemblies. To access the light ballasts, remove the screws and the light channel cover from the light channel assembly. The canopy lights are under the canopy light channel in the top of the case. The optional shelf lights are mounted in separate light channels under the front of each shelf section.

Front Glass Replacement



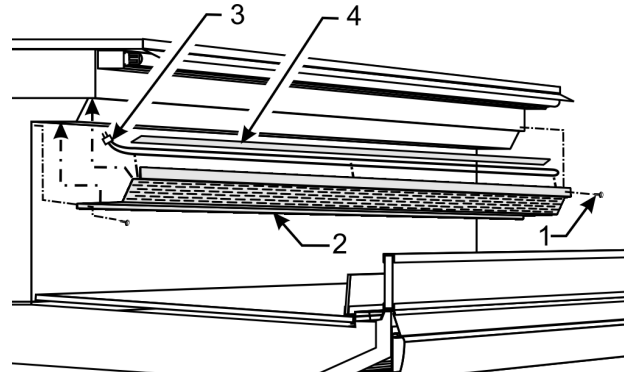
1. Remove screw (1), screw nut (2), glass joint trim (3) and glass joint backer (4) from both joints of the broken glass.
2. Remove glass trim rail (6) from the top of the glass (5)
3. Loosen rear retainer (7) and remove broken glass from the glass retainer assembly (8).
4. Apply sealant tape (9) to the top and bottom edge of the new glass (5).
5. Position the new glass (5) in the glass retainer assembly (8) and secure by tightening the rear retainer (7).
6. Install the glass trim rail (6) over the top edge of the new glass (5).
7. Install the glass joint backer (4), glass joint trim (3) with screw (1) and screw nut (2) over both joint areas of the new glass (5).

Anti-Sweat Replacement

All cases have an anti-sweat heater in the discharge air circuit. The anti-sweat heaters are wires that run the length of the discharge air duct. Use the following instructions to replace an anti-sweat heater.

WARNING

Shut off or disconnect power supply to case before changing an anti-sweat. Electrical power from wire ends could damage other components and/or cause personal injury or death.

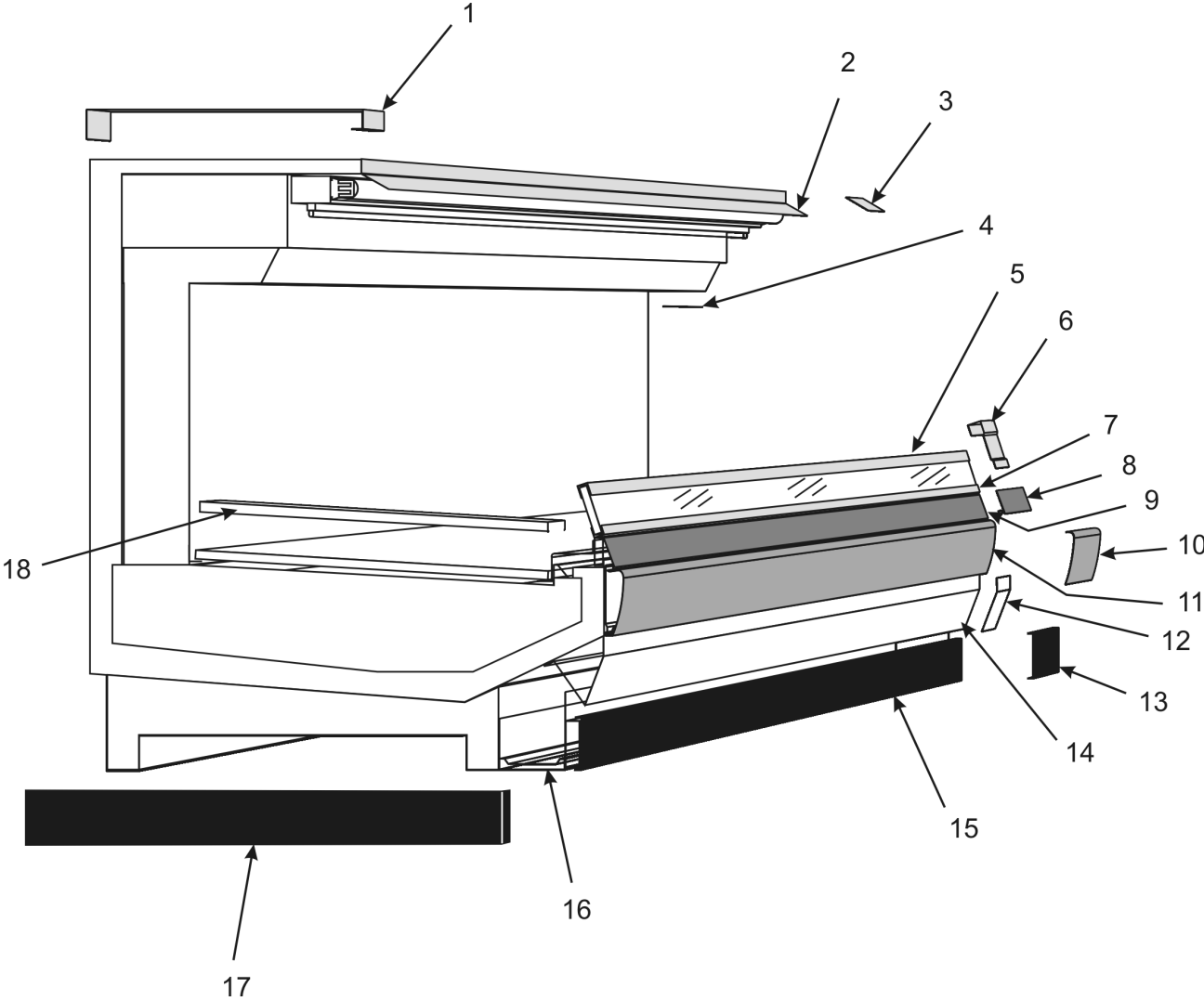


1. Remove screws (1) and carefully lower top duct (2) to expose anti-sweat wires (3) on back side of top duct.
2. Disconnect or cut the defective anti-sweat wires (3) from the case wires. The top duct (2) can now be removed from the case.
3. Remove the aluminum tape (4) and the defective anti-sweat wires (3) from the top duct (2).
4. Position new anti-sweat wires (3) on back side of top duct (2) and secure with new aluminum tape (4).
5. Connect or splice the new anti-sweat wires (3) to the case wires.
6. Replace the top duct (2) and secure with screws (1).
6. Restore electrical power to case.

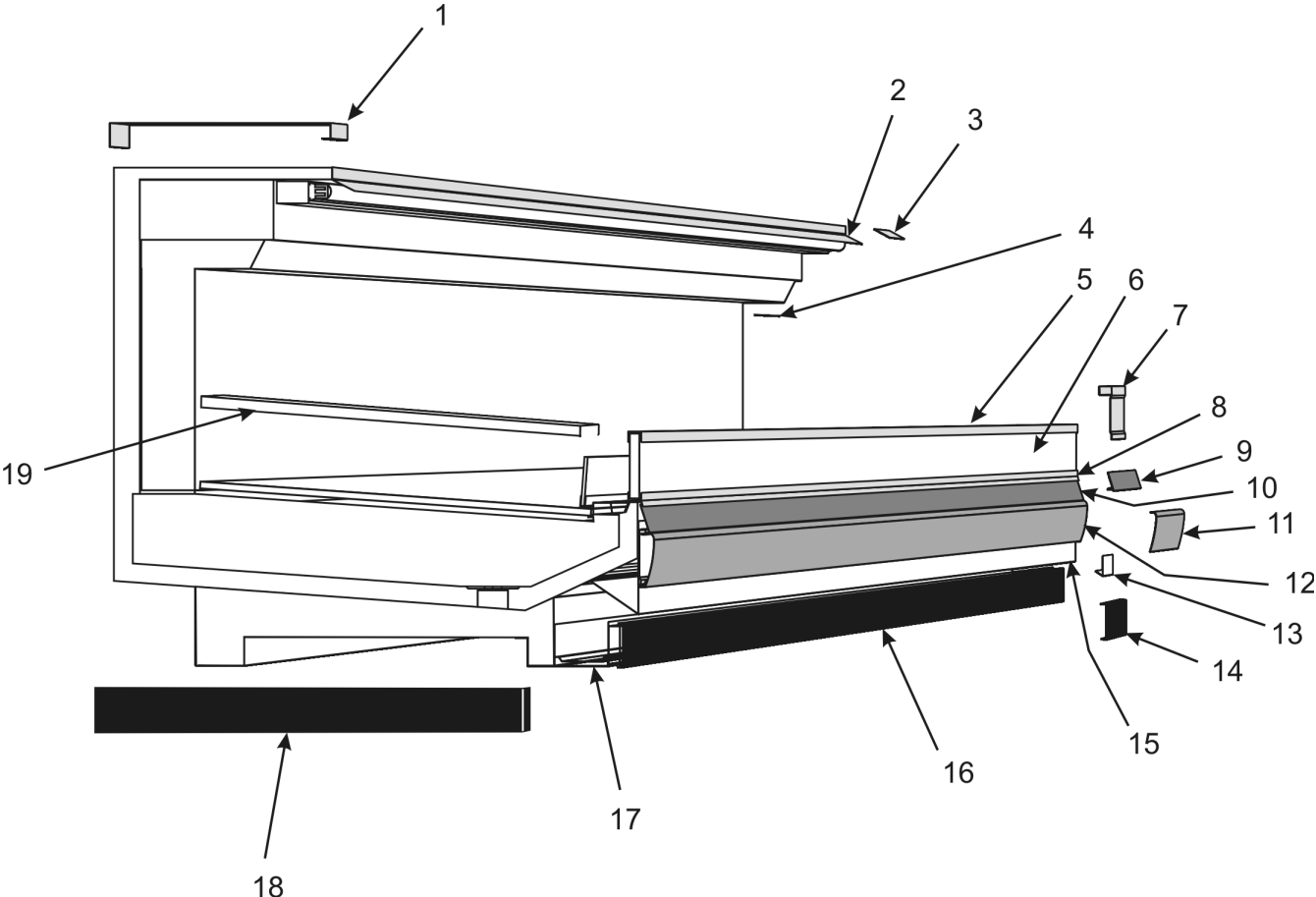
PARTS INFORMATION

Cladding and Trim Parts List

Item Description	LPF		
	6'	8'	12'
1 Top Shelf Joint Trim, MB	9807904	9807904	9807904
Screw	5100207 (4)	5100207 (4)	5100207 (4)
2 Light Shield, MB	9801379	9801380	9801381
3 Light Channel Joint Trim, MB	9801581	9801581	9801581
4 Top Duct Pull-up Cover, Ptd.	5204628 (2)	5204628 (2)	5204628 (2)
5 Top Glass Trim Rail	9805046	9026561	9026562
6 Front Glass Joint Trim	9026907	9026907	9026907
7 Front Glass Retainer	9026024	9026025	9026026
Rear Glass Retainer	9805047	9026549	9026550
8 Color Band Backer, Ptd.	9040223	9040223	9040223
9 Color Band, Ptd.	9036804	9036805	9036806
10 Bumper Backer	-----	color per order	-----
11 Bumper	-----	color per order	-----
Bumper Retainer	9025052	9025058	9025061
12 Front Cladding Joint Trim, Ptd.	9805547	9805547	9805547
13 Kickplate Joint Trim, Ptd.	9039020	9039020	9039020
14 Front Cladding, Ptd.	9805057	9801525	9801526
15 Metal Kickplate, Ptd.	9039268	9039269	9039270
16 Kickplate Support Assembly	9043461	9043461	9043461
17 Opt. Base End Closeoff, Ptd. (per patch end)	9807875	9807875	9807875
18 Horizontal End Trim	5964733	5964733	5964733



Item Description	LPD			
	4'	6'	8'	12'
1 Top Shelf Joint Trim, MB	9807904	9807904	9807904	9807904
Screw	5100207 (4)	5100207 (4)	5100207 (4)	5100207 (4)
2 Light Shield. MB	9807687	9801379	9801380	9801381
3 Light Channel Joint Trim, MB	9801581	9801581	9801581	9801581
4 Top Duct Pull-up Cover, Ptd.	5204628 (2)	5204628 (2)	5204628 (2)	5204628 (2)
5 Top Glass Trim Rail, MB	9807690	9801382	9801383	9801384
6 Front Glass, Thermopane	9807689	9801405	9802039	9801407
LH Glass Support, MB	9802052	9802052	9802052	9802052
RH Glass Support, MB	9802051	9802051	9802051	9802051
7 Front Glass Joint Trim	9807991	9807991	9807991	9807991
8 Lower Glass Retainer, MB	9807691	9801385	9801386	9801387
9 Color Band Backer, Ptd.	9040223	9040223	9040223	9040223
10 Color Band, Ptd.	9023791	9023796	9023799	9023801
11 Bumper Backer	-----	color per order	-----	-----
12 Bumper	-----	color per order	-----	-----
Bumper Retainer	-----	color per order	-----	-----
13 Lower Cladding Joint Trim, Ptd.	9801250	9801250	9801250	9801250
14 Kickplate Joint Trim, Ptd.	9039020	9039020	9039020	9039020
15 Bumper Retainer Support, Ptd.	9806245	9801369	9801370	9801371
16 Metal Kickplate, Ptd.	9039267	9039268	9039269	9039270
17 Kickplate Support Assembly	9043461 (2)	9043461 (3)	9043461 (4)	9043461 (4)
18 Opt. Base End Closeoff, Ptd. (per patch end)	9801693	9801693	9801693	9801693
19 Horizontal End Trim	5964733	5964733	5964733	5964733



Operational Parts List

Case Usage	Domestic			
	115 Volt 60 Hertz			
Case Size	4'	6'	8'	12'
Electrical Circuit				
Fan Motor (LPF)	-----	5243498 9 Watt	5243498 9 Watt	5243498 9 Watt
(LPD)	5125532 5 Watt	5125532 5 Watt	5125532 5 Watt	5125532 5 Watt
Fan Motor Brackets (LPF)	-----	5962268	5962268	5962268
(LPD)	5962269	5962269	5962269	5962269
Fan Bracket Plate	9041077	9041077	9041077	9041077
Fan Blades (7" 20° 5B)(LPF)	-----	5960934	5960934	5960934
(7" 30° 5B)(LPD)	5223370	5223370	5223370	5223370
Opt. ECM Fan Motor (all models)	9025002 8 Watt	9025002 8 Watt	9025002 8 Watt	9025002 8 Watt
Opt. ECM Fan Motor Brackets (all models)	9025005	9025005	9025005	9025005
Opt. ECM Fan Blades (7" 15° 5B)(LPF)	-----	5223891	8223891	5223891
(7" 20° 5B)(LPD)	5960943	5960943	5960943	5960943
T-8 Lamp Ballast (canopy)(1-row)	5991029	5991029	5991029	5991030
(opt. shelf)(per row)	5991029	5991029	5991029	5991029
T-8 Lampholder (canopy)	9041897	9041897	9041897	9041897
T-8 Shelf Harness	9027906	9027906	9027906	9027906
Anti-Sweat Heater Wire (discharge air)(LPF)	-----	5141468	5218331	5124819
(LPD)	9054819	5141468	5218331	5124819
NSF Product Thermometer	5967100	5967100	5967100	5967100

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