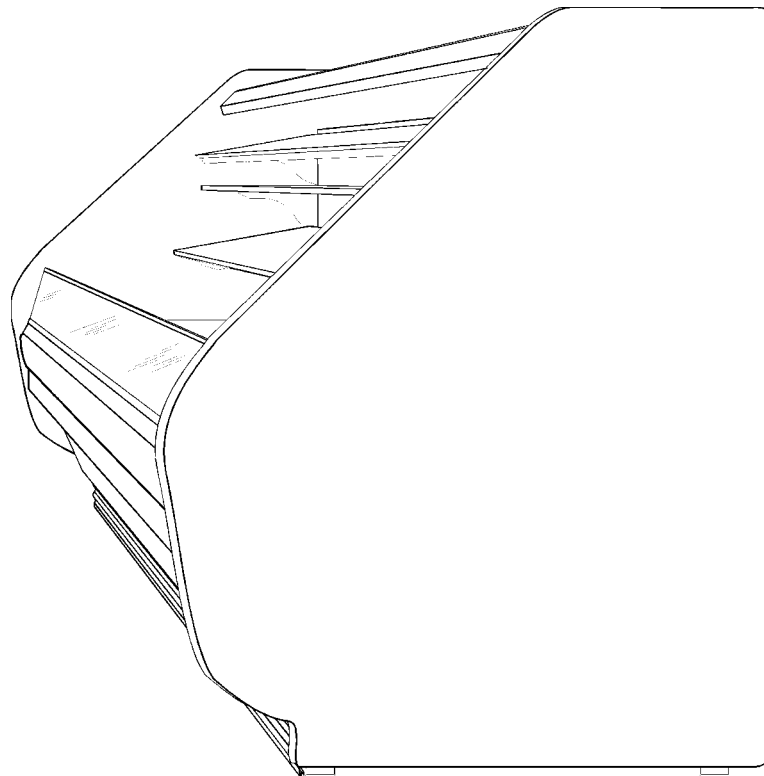


# TYLER



## Installation & Service Manual



### L3MGB

**THREE DECK MEAT/DELI MERCHANDISERS**  
**Medium Temperature Self Serve Display Cases**

This manual has been designed to be used in conjunction with the General Installation & Service Manual.

**Save the Instructions in Both Manuals for Future Reference!!**

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

PRINTED IN U.S.A.	Specifications subject to change without notice.	REPLACES EDITION	7/99	ISSUE DATE	8/99	PART NO.	9027528	REV. D
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The following Medium Temperature, Low Back, Top Display Meat and Deli Merchandiser models are covered in this manual:

MODEL	DESCRIPTION
L3MGB	6', 8' & 12' GLASS FRONT THREE DECK MEAT/DELI MERCHANDISER

**SPECIFICATIONS**

**L3MGB Three Deck Meat/Deli Merchandiser Specification Sheets**

<b>MODEL</b>	L3MGB (2 SHELF ROWS)	L3MGB (3 SHELF ROWS)
<b>USAGE</b>	MEAT/DELI	MEAT/DELI
<b>CAPACITY (BTUH/FT)*</b>	920	1029
<b>EVAPORATOR***</b>	+15F	+15F
<b>ENTER AIR°</b>	+27F	+27F

**NOTES:**

\* Capacity data listed is for cases with 1 row of T-8 canopy lights and 3 rows of optional T-8 lighted shelves. Adjustments must be made to this base rating for each option installed on the case. See CAPACITY ADJUSTMENTS below.

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

NOTE: COMPRESSOR SIZING SHOULD ALLOW FOR SUCTION LINE PRESSURE DROP.

THE ABOVE RATINGS ARE FOR COMPRESSOR SELECTION ONLY. FOR ENERGY CALCULATION DATA REFER TO THE ENERGY SECTION. FOR COMPRESSOR SIZING INFORMATION REFER TO THE "GOLD" SECTION & FOR LINE SIZING INFORMATION REFER TO THE "BUFF" SECTION OF THE TYLER SPECIFICATION GUIDE.

**CAPACITY ADJUSTMENTS:**

**DEDUCT 20 BTUH/FT** per row of lighted shelves when **NOT** using Lighted Shelves.

208 VOLT DEFROST (AMPS)													
FT	6	8	12	16	20	24	28	32	36	40	44	48	52
1 PH	6.5 TG-30	6.9 TG-30	10.3 TG-30	13.8 TG-30	17.2 TG-30	20.6 TG-30	24.1 TG-40	27.5 TG-40	30.9 TG-50	34.4 TG-50	37.8 TG-50	41.2 TG-50	44.7 TG-50
3 PH	N/A	N/A	N/A	12.0 TG-3-30	15.0 TG-3-30	18.0 TG-3-30	15.0 TG-3-30	18.0 TG-3-30	18.0 TG-3-30	21.0 TG-3-40	25.0 TG-3-40	28.0 TG-3-40	30.0 TG-3-40
CASE-TO-CASE SUCTION LINE SUB-FEED BRANCH LINE SIZING													
R22	1/2"	5/8"	5/8"	7/8"	7/8"	7/8"	7/8"	7/8"	7/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"

DEFROST CONTROL				BACKUP PRESSURE CONTROL††		EPR SETTINGS†††	
PER DAY	MODE	TIME	TERM.	CUT IN	CUT OUT	R22	R404A
4	TIME OFF	40 MIN.		34# @ R22	24# @ R22	37#	---
4	ELECTRIC	36 MIN.	50F				
4	HOT GAS	12-15 MIN.	55F†	34# @ R22	24# @ R22	37#	---

† If an Electronic Sensor is used for termination, it should be set at 70°F termination temperature.

†† Used with Thermostat or EPR Control.

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

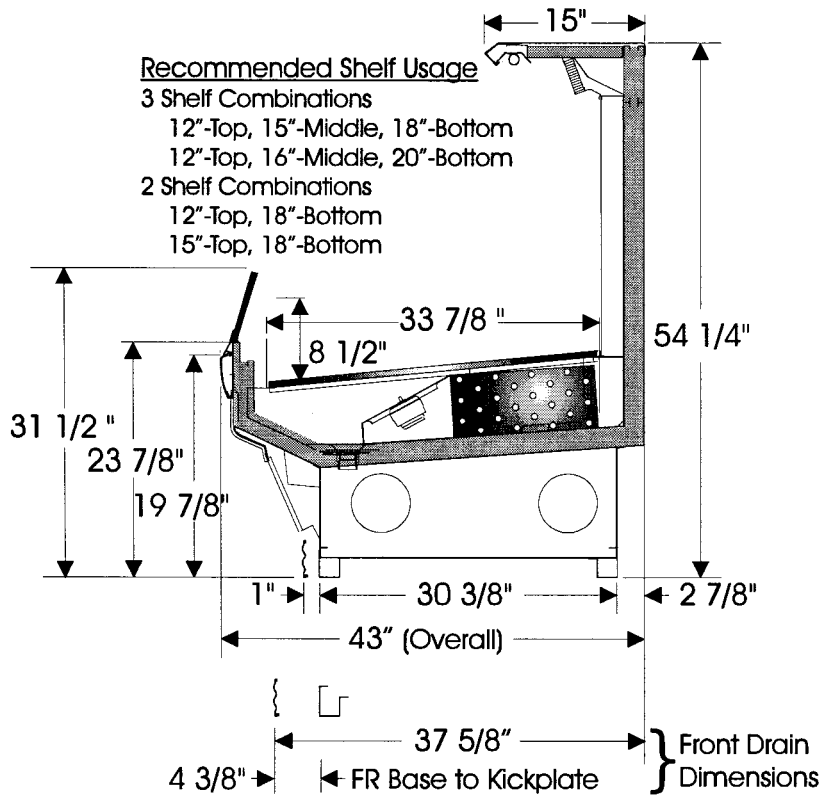
**DEFROST CIRCUITS: OFF CYCLE** defrost is standard (use TC defrost module) - **OPTIONAL**

**ELECTRIC** defrost uses a single or 3 phase circuit - **OPTIONAL HOT GAS** defrost uses 2 control wires @208v per lineup .

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

The information contained herein is based on technical data and tests which we believe to be reliable and is intended for use by persons having technical skill, at their own discretion and risk. Since conditions of use are outside Tyler's' control, we can assume no liability for results obtained or damages incurred through the applications of the data presented. SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

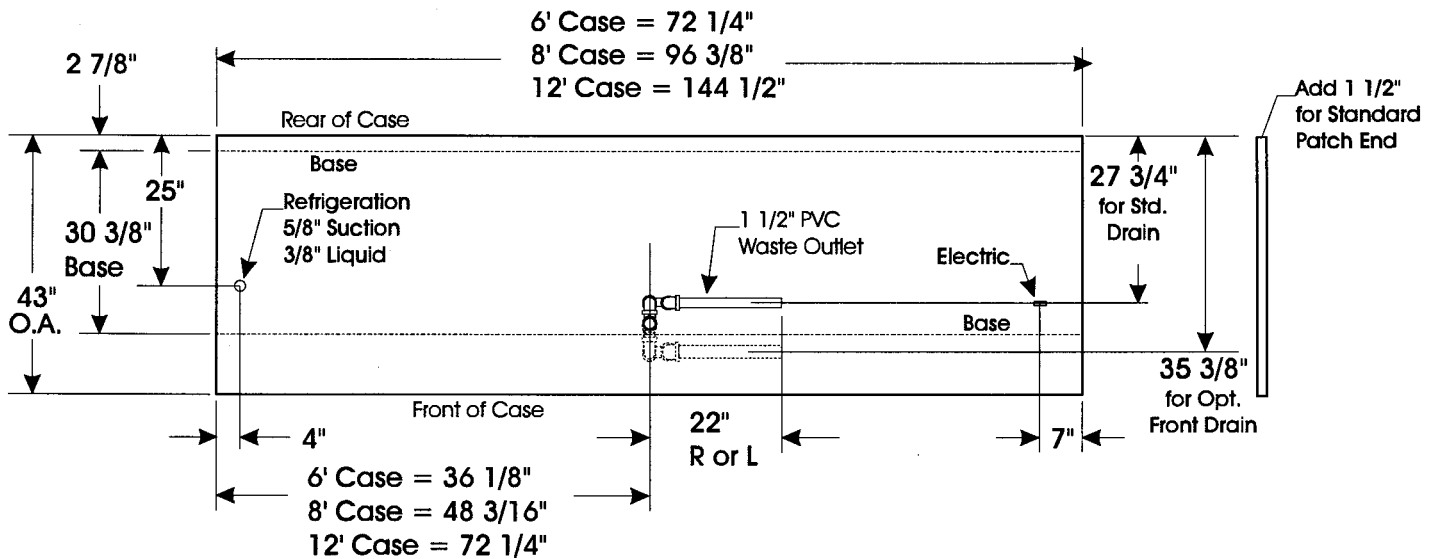
L3MGB Three Deck Meat/Deli Merchandisers



120 VOLT ELECTRICAL DATA (AMPS)			
FT	STD. FANS	ECM FANS	ANTI-SWT
6'	1.0	.4	.7
8'	1.0	.4	1.0
12'	1.5	.6	1.4

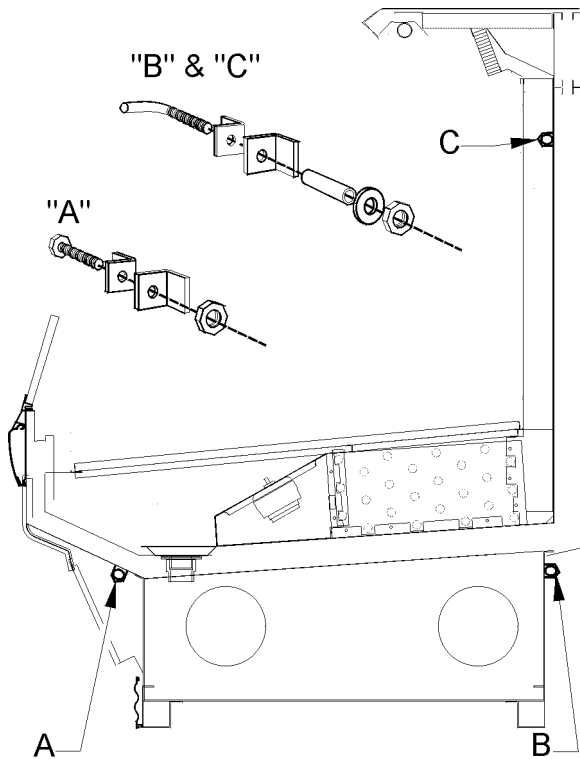
STANDARD 120 VOLT LIGHTING (AMPS) T-8/ ELECTRONIC BALLASTS (CANOPY)			
ROWS	6'	8'	12'
1	.5	.6	.9

OPTIONAL 120 VOLT T-8 LIGHTING (AMPS) T-8/ ELECTRONIC BALLASTS (SHELVES)			
ROWS	6'	8'	12'
1	.5	.6	.9
2	1.0	1.2	1.8
3	1.5	1.8	2.7



**INSTALLATION PROCEDURES**

**Carpentry Procedures**



**Case Pull-Up Locations**

The L3MGB 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 tightend starting with A and finishing with C.

See "General 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 raceway houses the electrical wiring, components and terminal blocks for the case. Since the lower front cladding is shipped loose, the raceway has immediate access.

**Case Fan Circuit**

This circuit is to be supplied by an uninterrupted, protected 120V circuit. The case fan circuit is not cycled, except when equipped for gas defrost. On gas defrost cases the fan circuit is controlled by a 50/40 klixon.

**NOTE**

With gas defrost, the fans will not start until the coil temperature reaches 40°F at the fan delay thermostat.

**Fluorescent Lamp Circuit**

L3MGB 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 T-8 canopy lights. L3MGB also offers up to 3 rows of optional T-8 shelf lights.

**Anti-Sweat Heater Circuit**

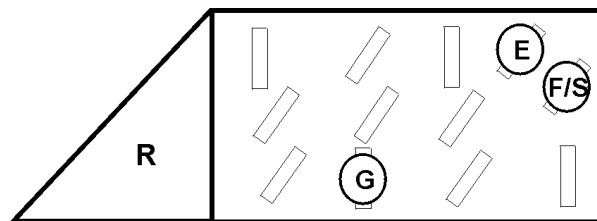
L3MGB cases have three anti-sweat heaters. One in the top light assembly, one in the front glass trim rail and one in the front glass retainer. The anti-sweat heaters are wired directly to the main power supply so they can operate at all times.

### Defrost Information

See "General I&S Manual" for operational descriptions for each type of defrost control.

### Defrost Control Chart

Defrost Type	Defrosts Per Day	Defrost Duration (Min)	Term. Temp.
Off Time	4	40	50°F
Electric	4	36	50°F
Gas	4	12-15	55°F



- E = Electric Defrost Termination
- G = Gas Defrost (Fan Delay)
- F/S = Electric Defrost Failsafe (Opt.)

### NOTE

The termination klixon for gas defrost is located at the bypass check valve at the left end of the evaporator coil.

Most klixons are located on the right end of the evaporator coil. The diagram shows the location for each defrost type that uses a klixon.

### CAUTION

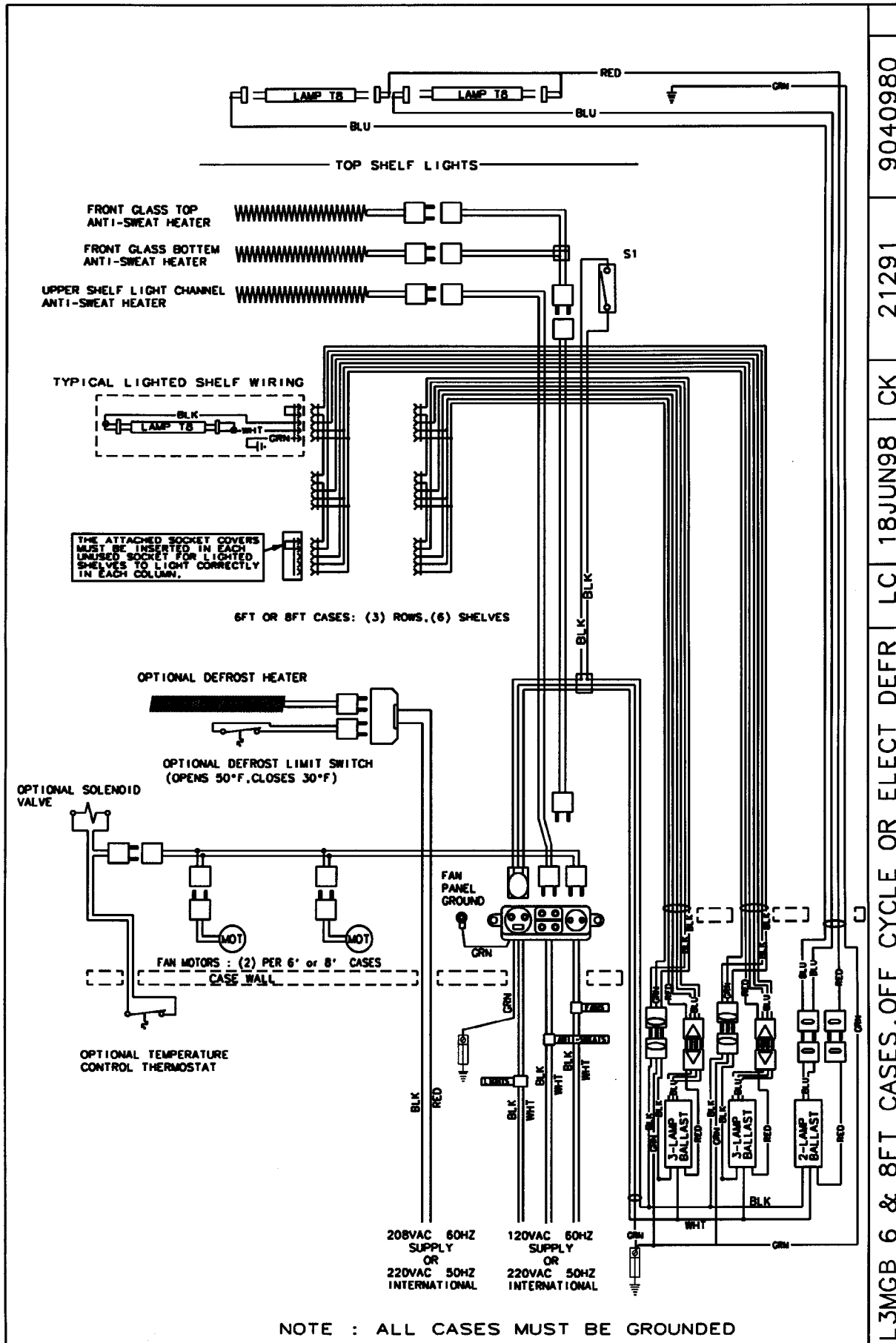
If electronic sensors are used in place of the klixons, the sensors must be located in the same location as the klixons for that defrost type. Any other locations will effect the refrigeration efficiency of the case.

## WIRING DIAGRAMS

### ELECTRICIAN NOTE - OVERCURRENT PROTECTION

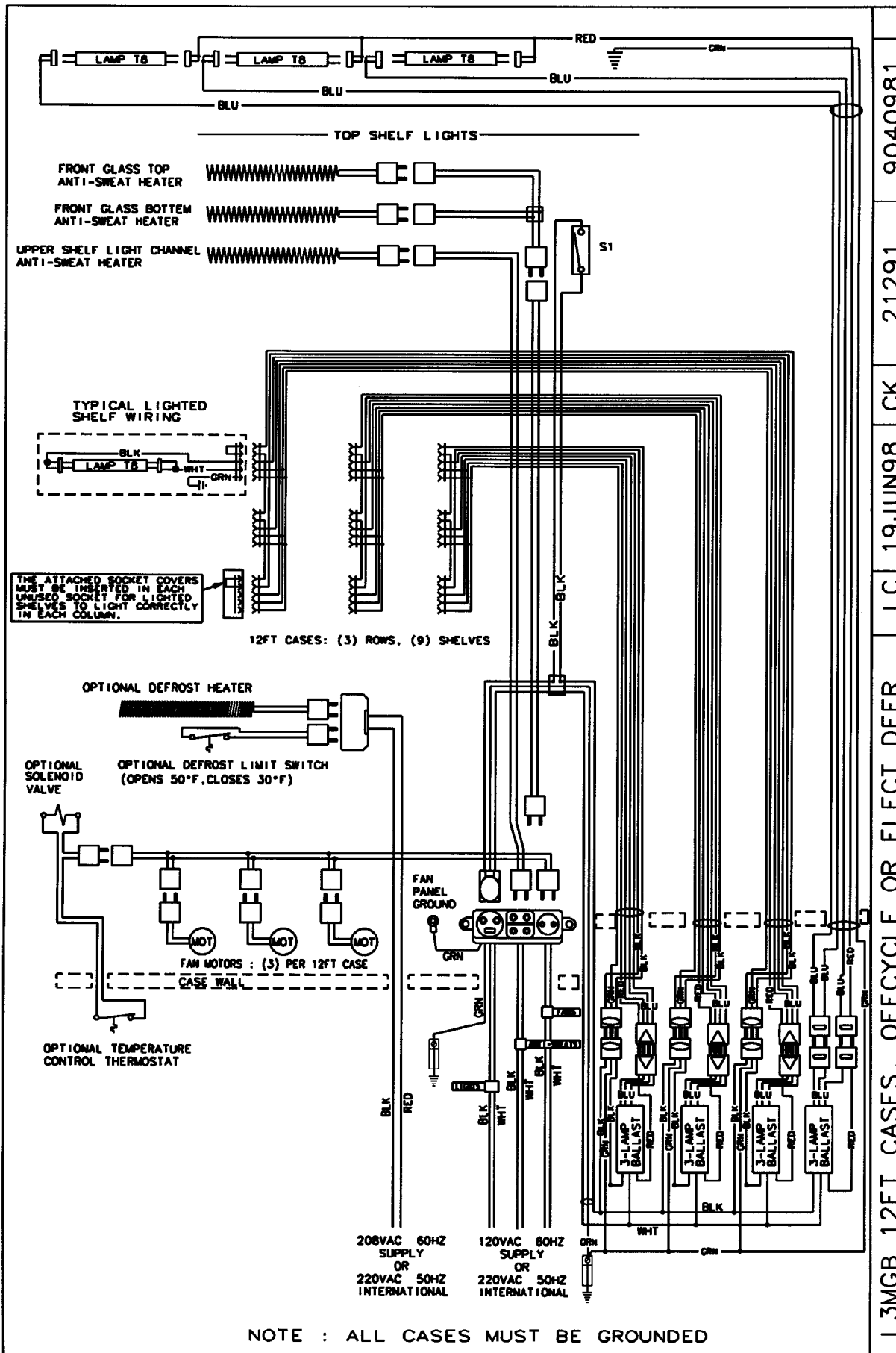
120V circuits should be protected by 15 or 20 Amp devices per the requirements noted on the cabinet nameplate or the National Electrical Code, Canadian Electrical Code - Part 1, Section 28. 208V defrost circuits employ No. 12 AWG field wire leads for field connections. On remote cases intended for end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

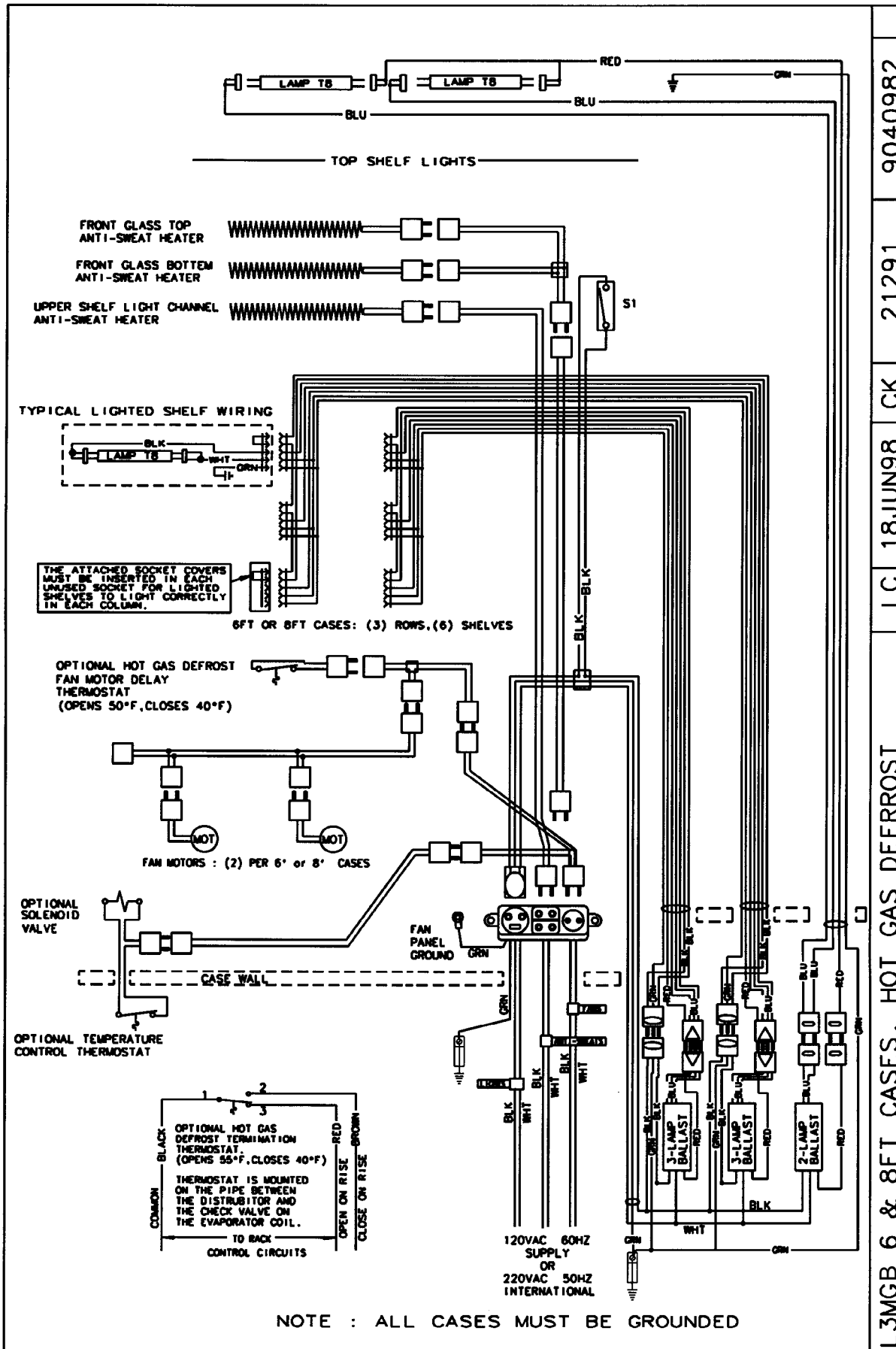
The following wiring diagrams on pages 8 thru 14 will cover the L3MGB case circuits, electric and gas defrost circuits and the lighting wiring circuits.



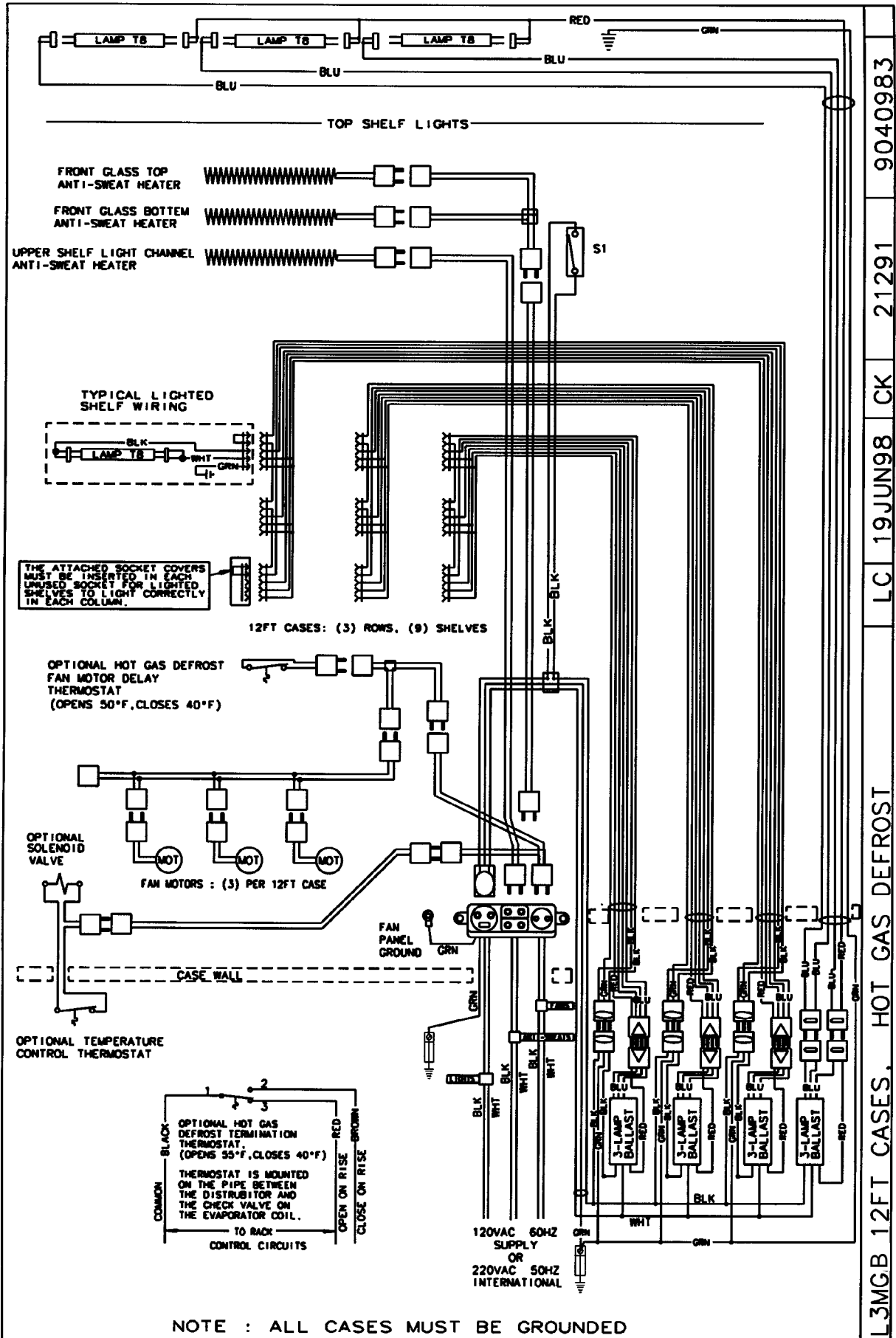
L3MGB 6 & 8FT CASES, OFF CYCLE OR ELECT DEFR LC 18JUN98 CK 21291 9040980



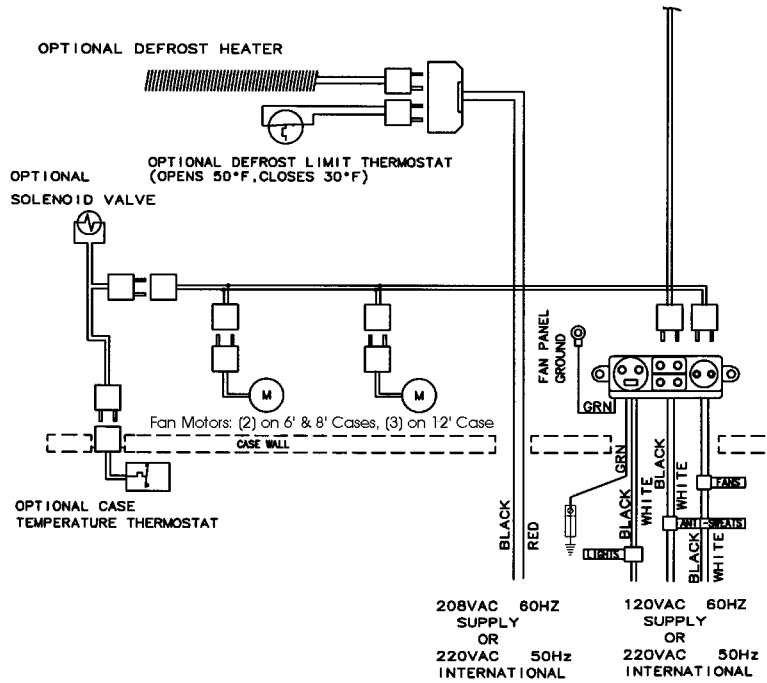




L3MGB 6 & 8FT CASES, HOT GAS DEFROST LC 18JUN98 CK 21291 9040982

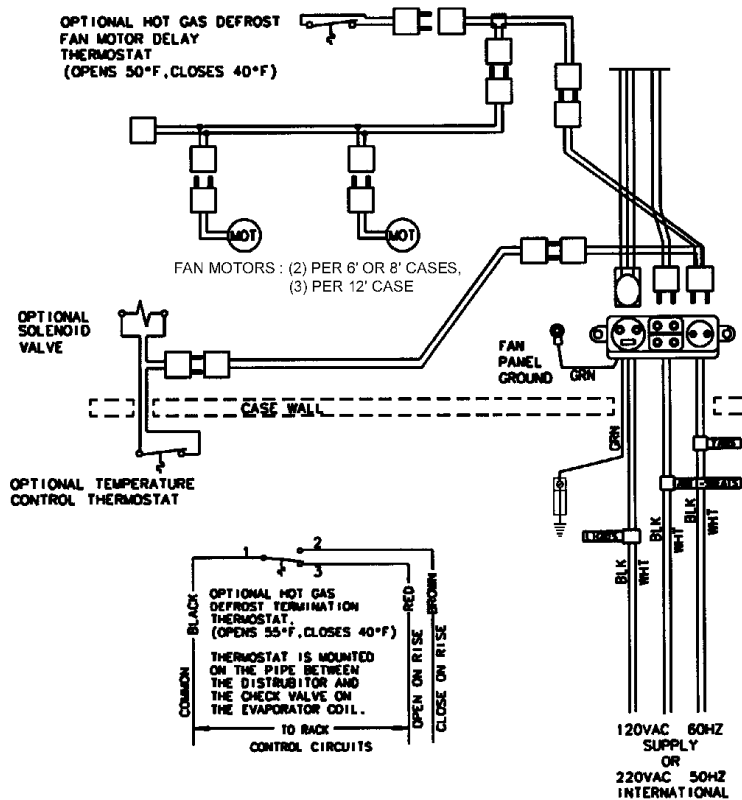


Electric Defrost Circuit



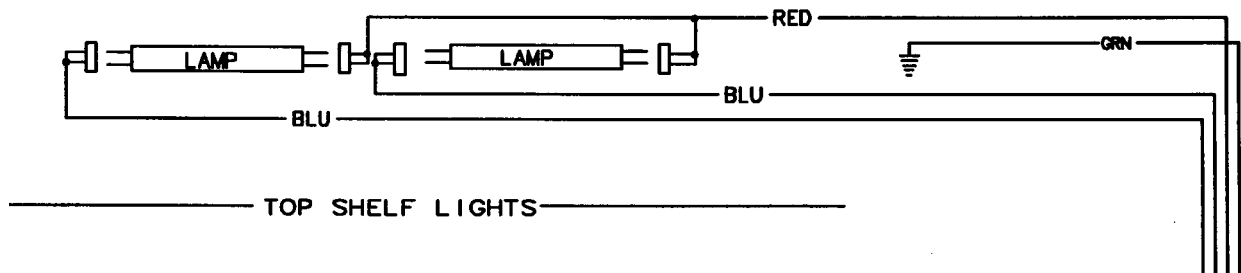
NOTE : ALL CASES MUST BE GROUNDED

Optional Gas Defrost Circuit

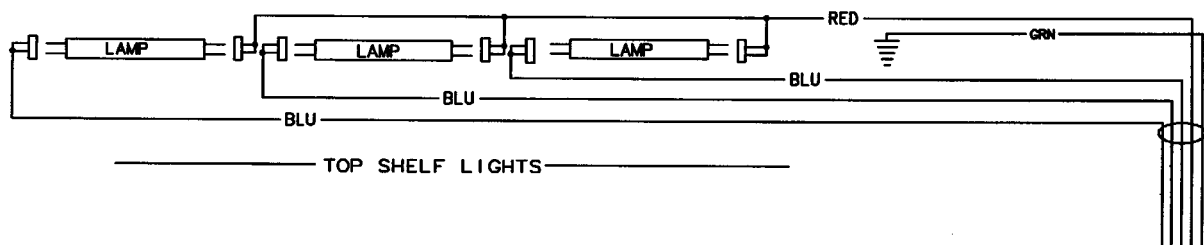


NOTE : ALL CASES MUST BE GROUNDED

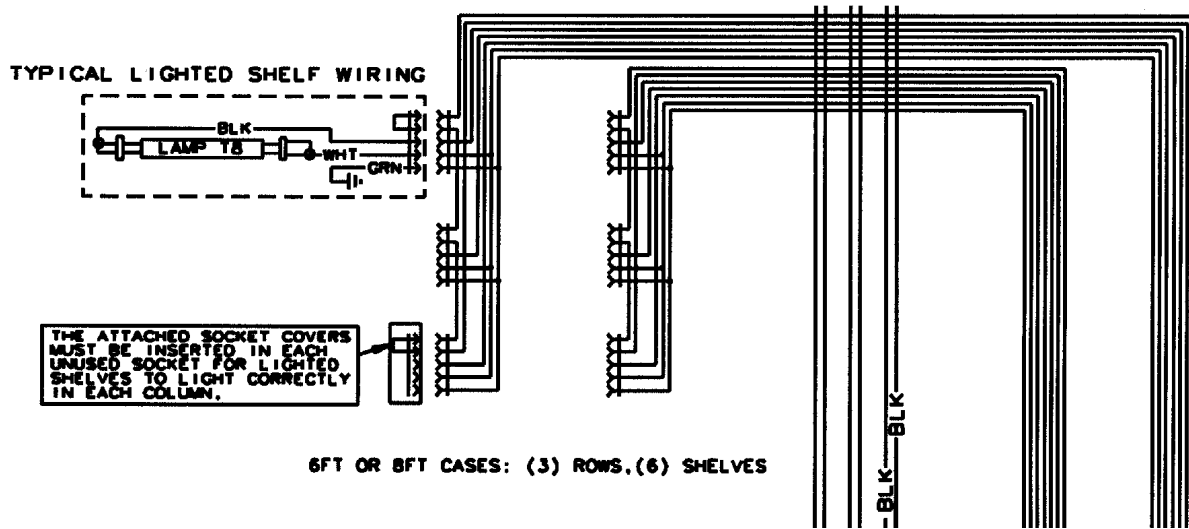
Top Shelf Lighting Circuits (6' and 8' Cases)



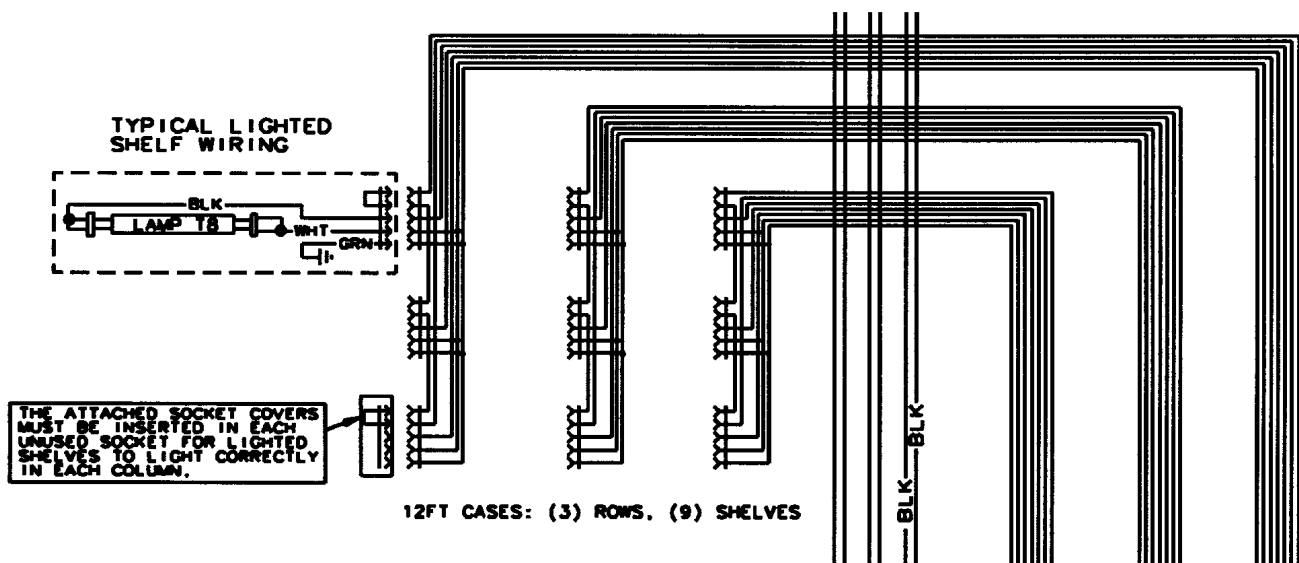
(12' Cases)



Optional Shelf Lighting Circuits (6' and 8' Cases)

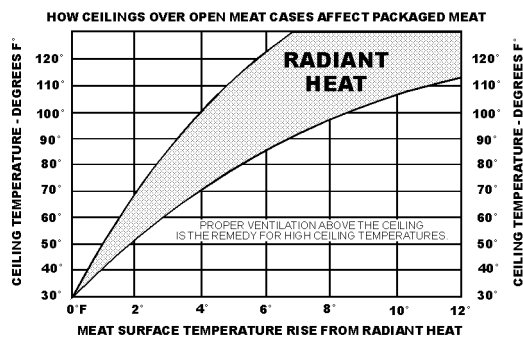
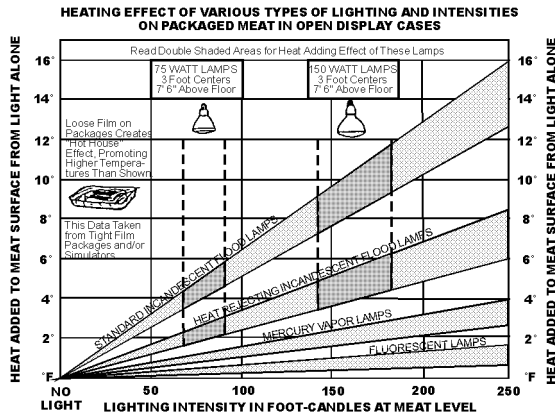


(12' Cases)



## 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.

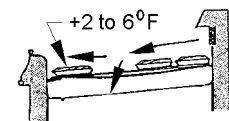
These charts were developed from the information gathered during this research. Two major sources of radiant heat are from display lights and ceiling surfaces. Additional heat sources come from bad display practices which either overload the case with product or allow voids in the product display. Poor 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.



Voids in display raise surface temperature of package in front of void 2 to 6° F.

### CAUTION

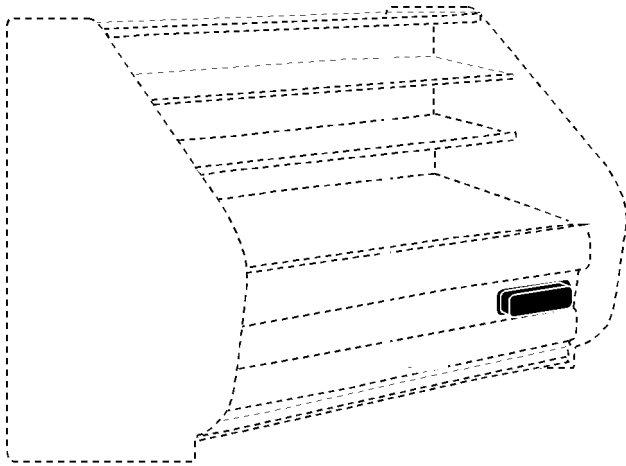
The quality damage done to meat products by high temperatures and/or contamination during delivery, cooler storage, cutting and wrapping cannot be repaired by placing the products into properly operating display cases.

## SERVICE INSTRUCTIONS

### Light Servicing

See "General I&S Manual" for T-8 and 800MA lamp, fan blade and motor, and color band and bumper replacement instructions.

### Ballast and Lighting Locations

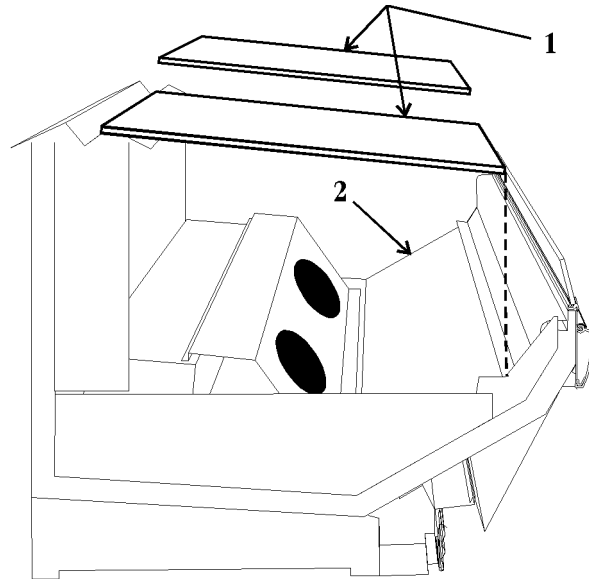


All light ballasts are located behind the lower front cladding in the raceway. This includes remote ballasts for optional shelf lights. The canopy light(s) are under the canopy light channel in the top of the case. The optional shelf lights are mounted in separate light fixtures under the front of each shelf section.

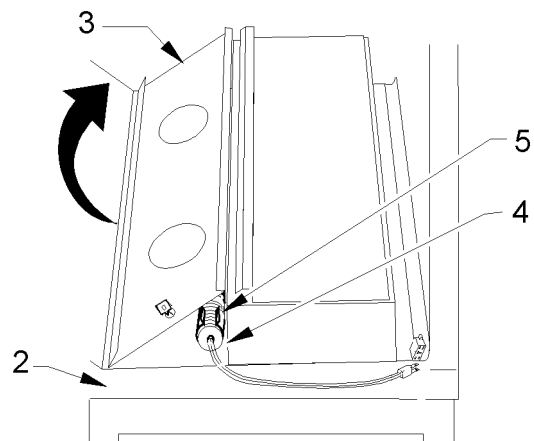
### Defrost Heater Replacement

#### WARNING

Always shut off electricity to case before replacing a defrost heater. Automatic cycling of fans or electrical power to wire ends could cause personal injury and/or death.



1. Remove bottom trays (1) from case (2).



2. Unclip and lift up fan plenum (3).
3. Disconnect and remove defrost heater (4) from mounting clips (5) and case (2).
4. Install new defrost heater (4) in reverse order.
5. Restore electrical power to case.

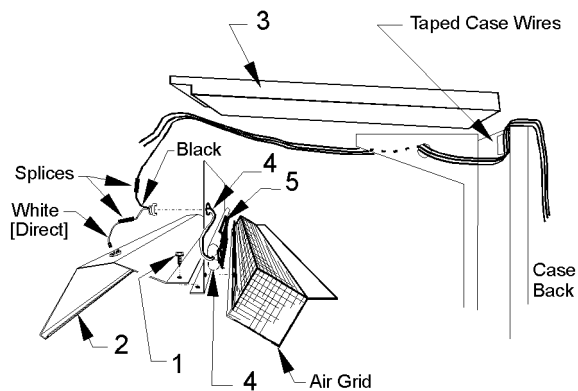


## Anti-Sweat Replacement

### WARNING

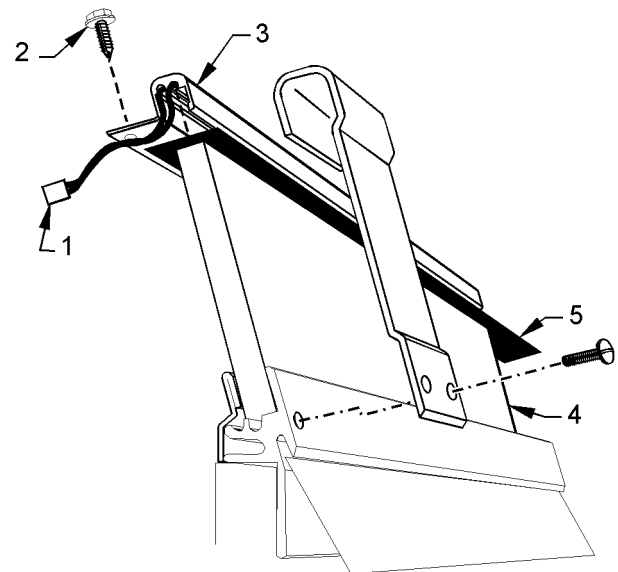
Shut off or disconnect power supply to case before changing an anti-sweat. Electrical power from wire ends could damage other components and/or cause personal injury or death.

### Top Light Channel Anti-Sweat Replacement



1. Remove screws (1) and lower the top light channel assembly (2) from top of the case (3).
2. Disconnect or cut the defective anti-sweat wires (4) from the case wires.
3. Remove and replace the aluminum tape (5) and defective anti-sweat wire (4) from the back of the top light channel assembly (2).
4. Position new anti-sweat wire (4) in case ) and secure with new aluminum tape (5).
5. Reconnect the new anti-sweat wires (4) to case wires and reinstall the top light channel assembly (2) with screws (1).
6. Restore electrical power to the case.

### Top Front Glass Anti-Sweat Replacement

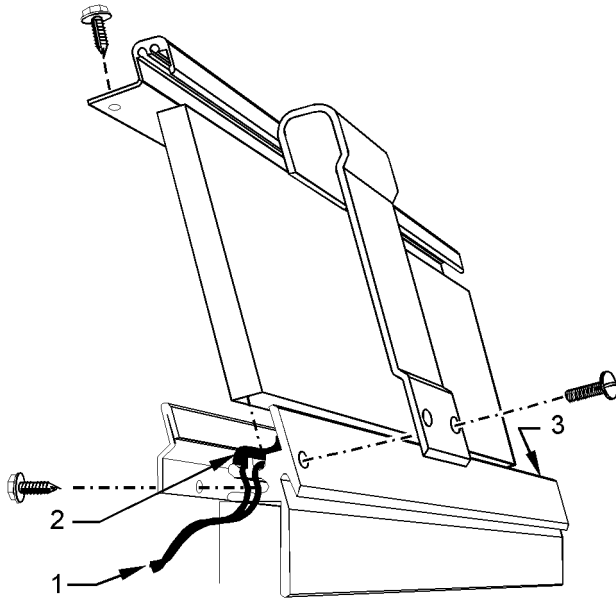


1. Remove all glass joint trim.
2. Disconnect or cut the defective anti-sweat wire (1) from the case wire.
3. Remove screws (2) and glass trim rail (3) from top of glass (4).
4. Remove and replace the aluminum tape (5) and anti-sweat wire (1) from the glass trim rail (3).
5. Replace the glass trim rail (3); reconnect the anti-sweat wire (1); and replace the glass joint trim.
6. Restore electrical power to the case.

Glass Retainer Anti-Sweat Replacement

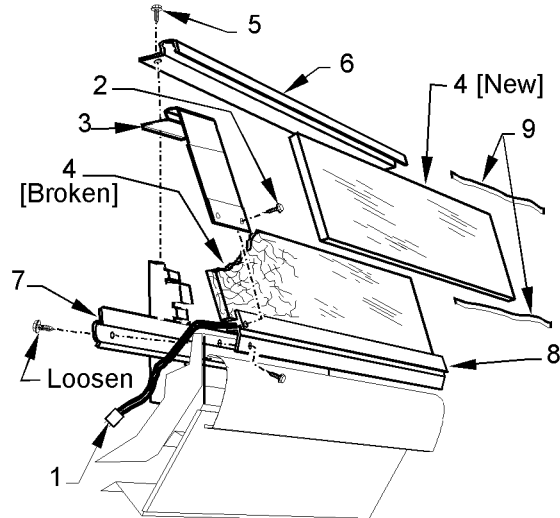
NOTE

Front glass must be removed from retainer. See "Front Glass Replacement" in this manual.



1. Disconnect or cut defective anti-sweat wire (1) from the case wires.
2. Remove and replace the aluminum tape (2) and defective anti-sweat wire (1) from the top of the front glass retainer (3).
3. Reconnect the anti-sweat wire (1) to the case wires.
4. Replace the front glass and restore electrical power to the case.

Front Glass Replacement



1. Unplug glass anti-sweat wire (1).
2. Remove two screw (2) and glass joint trim (3) from both joints of the broken glass (4).
3. Remove screws (5) and glass trim rail (6) from top of glass (4).
4. Loosen rear retainer (7) and remove broken glass (4) from glass retainer assembly (8).

NOTE

**Inspect the anti-sweat wire in glass retainer assembly. If wire is damaged or broken, replace it before replacing the front glass.**

5. Apply sealant tape (9) to top and bottom edge of new glass (4).
6. Position new glass (4) in glass retainer assembly (8) and secure by tightening rear retainer (7).
7. Install glass trim rail (6) with screws (5) over top edge of new glass (4).
8. Install glass joint trim (3) with screw (2) over the joint areas of glass (4).
9. Reconnect the anti-sweat wire (1).

## PARTS INFORMATION

### Operational Parts List

Case Usage	Domestic			Export		
	115 Volt 60 Hertz			220 Volt 50 Hertz		
Case Size	6'	8'	12'	6'	8'	12'
Fan Motor	5125532 5 Watt	5125532 5 Watt	5125532 5 Watt	----	5126572 5 Watt	5126572 5 Watt
Fan Motor Brackets	5962269	5962269	5962269	----	5962269	5962269
Fan Blades (7" 30° 5B)	5223370	5223370	5223370	----	5223370	5223370
Opt. ECM Fan Motor	9025002 8 Watt	9025002 8 Watt	9025002 8 Watt	----	----	----
Opt. ECM Fan Motor Brackets	9025005	9025005	9025005	----	----	----
Opt. ECM Fan Blades (7" 25° 5B)	9041013	9041013	9041013	----	----	----
T-8 Ballast (canopy & shelf) (canopy / 1-row)	5991029	5991029	5991030	9028437	9028437	9028438
(opt. shelf / 2-row or 3-row)	5991030(2)	5991030(2)	5991030(3)	9028438(2)	9028438(2)	9028438(3)
T-8 Lampholder (canopy)	5232279	5232279	5232279	5232279	5232279	5232279
T-8 Lampholder (shelf)	5092414	5092414	5092414	5092414	5092414	5092414
Light Switch (SPST)	5193982	5193982	5193982	5193982	5193982	5193982
Anti-Sweat Heater Wire (all locations)	5227379	5124216	5124217	----	5081147	5081148
Opt. Elec. Def. Heater	5125153	5124521	5124522	----	5124521	5124522
Opt. Elec. Def. Limit Switch	5125211	5125211	5125211	5125211	5125211	5125211
Opt. Gas Def. Fan Delay Switch	9023503	9023503	9023503	9023503	9023503	9023503
Opt. Gas Def. Term. T'stat	9023508	9023508	9023508	9023508	9023508	9023508

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

## Cladding and Trim Parts List

Item	Description	L3MGB		
		6'	8'	12'
1	Screw (per cover)	5100217 (2)	5100217 (2)	5100217 (2)
2	Joint Trim, Rear Riser	9042342	9042342	9042342
3	Glass Joint Trim	9025959	9025959	9025959
4	Screw	5048626 (2)	5048626 (2)	5048626 (2)
5	Color Band, Painted	9025238	9025239	9025240
6	Color Band Backer, Painted	9025653	9025653	9025653
7	Bumper Backer	-----	color per order	-----
8	Bumper End Trim	-----	color per order	-----
9	Bumper	-----	color per order	-----
10	Upper Front Cladding, Painted	9025129	9025130	9025131
11	Shoulder Screw, Bumper Ret.	9025833 (12)	9025833 (18)	9025833 (24)
12	Rivet, Upr. Frt. Cladding	5104702 (2)	5104702 (3)	5104702 (4)
13	Lower Front Cladding, Painted	9025120	9025121	9025122
14	Screw	5183536 (6)	5183536 (8)	5183536 (12)
15	Kickplate	-----	color per order	-----
	Kickplate Backer	9041790	9041790	9041790
16	Kickplate Support	9041329 (3)	9041329 (3)	9041329 (4)
17	Screw	5183536 (6)	5183536 (8)	5183536 (8)
18	LH End Close-off, Painted	9022460	9022460	9022460
	RH End Close-off, Painted	9022467	9022467	9022467
19	Screw	5048626 (6)	5048626 (6)	5048626 (6)
20	Raceway	5233273	5233274	5233275
21	Screw	5183536 (9)	5183536 (9)	5183536 (9)
22	Horizontal Joint Trim	5964733	5964733	5964733
23	Bumper Retainer	9025052	9025058	9025061

