

TYLER



Installation & Service Manual



L5DA, L5DHA, L5DSCA

NARROW MULTI-DECK DAIRY/DELI MERCHANDISERS
Medium Temperature Refrigerated 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	1/97	ISSUE DATE	5/99	PART NO.	9027542	REV.	B
-------------------	--	------------------	------	------------	------	----------	---------	------	---

CONTENTS

	<u>Page</u>
Specifications	
L5DA/L5DHA/L5DSCA Specification Sheets	4
Pre-Installation Responsibilities (See General I&S Manual)	
Installation Procedures	
Carpentry Procedures	6
Case Pull-Up Locations	6
Electrical Procedures	6
Plumbing Procedures (See General I&S Manual)	
Refrigeration Procedures (See General I&S Manual)	
Defrost Information	6
Defrost Control Chart	6
Installation Procedure Check Lists (See General I&S Manual)	
Wiring Diagrams	6
L5DA/L5DHA Domestic & Export (50Hz) 4' Case Circuits	7
L5DA/L5DHA Domestic & Export (50Hz) 6' Case Circuits	8
L5DA/L5DHA Domestic & Export (50Hz) 8' Case Circuits	9
L5DSCA Domestic & Export (50Hz) 4' and 6' Case Circuits	10
Canopy Lighting Circuits	11
Optional Shelf Light Circuits	12
Cleaning and Sanitation (See General I&S Manual)	
Service Instructions	
Preventive Maintenance (See General I&S Manual)	
Troubleshooting Self-Contained Units	13
Light Servicing	
Ballast and Lighting Locations	14
Fan Blade and Motor Replacement (See General I&S Manual)	
Color Band and Bumper Replacement . (See General I&S Manual)	
Parts Information	
Operational Parts List	15
Cladding and Optional Trim Parts List	16
TYLER Warranty (See General I&S Manual)	

The following Narrow Medium Temperature Dairy and Deli Merchandiser models are covered in this manual:

MODELS	DESCRIPTION
L5DA	4', 6' & 8' REMOTE MULTI-DECK DAIRY/DELI MERCHANDISER
L5DHA	4', 6' & 8' REMOTE DEEP WELL OR LOW FRONT MULTI-DECK DAIRY/DELI MERCHANDISER
L5DSCA	4' & 6' SELF-CONTAINED MULTI-DECK DAIRY/DELI MERCHANDISER

SPECIFICATIONS

L5DA/L5DHA/L5DSCA Multi-Deck Dairy/Deli Merchandiser Specification

MODEL	L5DA	L5DHA (DEEP WELL)	L5DHA (LOW FRONT)
USAGE	DAIRY/DELI	DAIRY/DELI	DAIRY/DELI
CAPACITY BTUH/FT*	1600	1630	1680
EVAPORATOR°	+15F	+15F	+15F
ENTER AIR°	+31F	+31F	+31F

* Capacity data is listed with one row of 800MA Canopy Lighting and 4 rows of T-8 Lighted Shelves.

DEDUCT 20 BTUH/FT per row of Unlighted Shelves.

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.

CASE-TO-CASE SUCTION LINE SUB-FEED BRANCH LINE SIZING											
FT	4	6	8	10	12	14	16	18	20	22	24
R22	5/8"	7/8"	7/8"	7/8"	7/8"	7/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"

DEFROST CONTROL			BACK-UP PRESSURE SETTING**		EPR SETTINGS	
PER DAY	MODE	TIME	CUT IN	CUT OUT	R22	R404A
4	TIME OFF	36 MIN.	34# @ R22	24# @ R22	37	---
			45# @ R404A	35# @ R404A	---	48

**Used with Thermostat or EPR control.

MAXIMUM LIGHT AMPS include allowances for one row of canopy lights and four rows of lighted shelves.

Top shelf and tilted shelving **MUST HAVE** gaskets.

Thermostat Setting: CUT IN @36-38°F, CUT OUT @28°F (Standard on Self-Contained or Optional on Remote Models).

SELF-CONTAINED ELECTRICAL SPECIFICATION:

NOTE: Two Electrical Circuits are required for Self-Contained cases; a 220V Circuit is required for the Condensing Unit and a 120V Circuit is required for the Lights and Fans.

	L5DSCA4	L5DSCA6
220V Min. Circuit Ampacity	15.5 A	22 A
220V Max. Overcurrent Protection	20 A	30 A

NOTE: 4' = 1 1/4 HP 6' = 1 3/4 HP
L5DHA not available as Self-Contained unit.

The refrigeration charge for the 4' and 6' L5DA cases are 8 lbs. and 10 lbs. respectively (R-22)

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

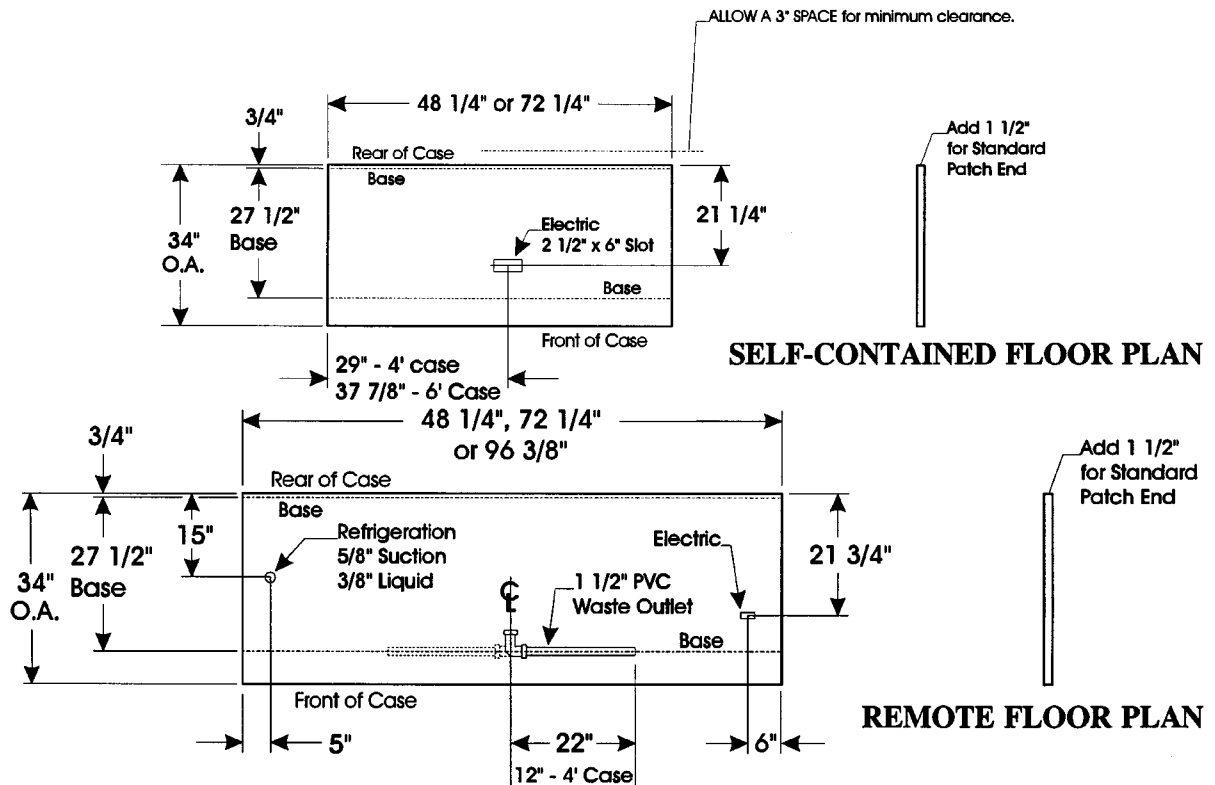
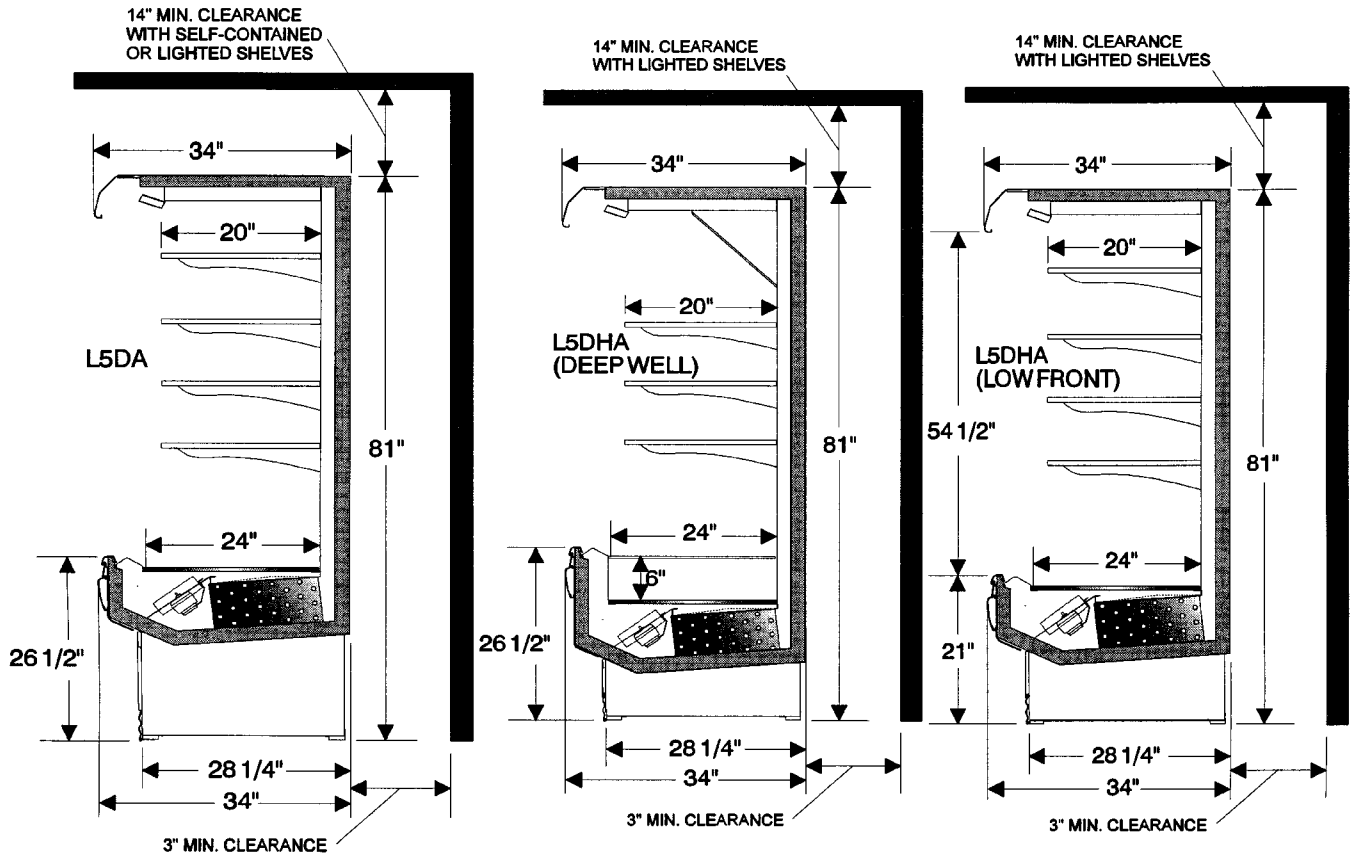
120 VOLT ELECTRICAL DATA (AMPS)		
FT	STANDARD FANS	ECM FANS
4	1.0	.4
6	1.0	.4
8	1.5	.6

STANDARD 120 VOLT LIGHTING (AMPS) HIGH OUTPUT 800MA (CANOPY)			
ROW	4'	6'	8'
1	1.0	1.3	1.3

OPTIONAL 120 VOLT LIGHTING (AMPS) T-8/ ELECTRONIC BALLASTS (SHELVES)			
ROWS	4'	6'	8'
1	.5	1.0	1.0
2	.6	1.5	1.9
3	.75	1.5	1.9
4	1.1	1.8	2.2

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.

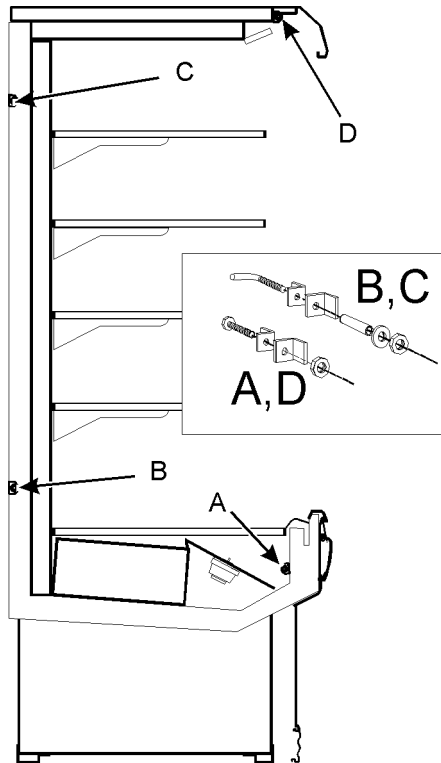
L5DA/L5DHA/L5DSCA Multi-Deck Dairy/Deli Merchandiser



INSTALLATION PROCEDURES

Carpentry Procedures

Case Pull-Up Locations



The L5DA, L5DHA and L5DSCA models have four pull-ups at each end of the case. Pull-ups A, B, C and D are located as shown and should be installed and tightened starting with A and finishing with D.

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.

NOTE

Since the lower front cladding is shipped loose, the wiring 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 during defrost on any of these models.

Fluorescent Lamp Circuit

L5DA/L5DHA/L5DSCA case lighting is supplied by 800MA HO horizontal lights. It is controlled by a light switch in each case. The standard lighting is 1-row of high output 800MA canopy lights. L5DA/L5DHA/L5DSCA also offers up to 4 rows of T-8 shelf lights with remote electronic ballasts.

Self-Contained Circuit

L5DSCA cases are self-contained units. Information pertaining to self-contained units should be obtained directly from TYLER Refrigeration.

Defrost Information

See "General I&S Manual" for operational descriptions for Off Time defrost control.

Defrost Control Chart

Defrost Type	Defrosts Per Day	Defrost Duration (Min)	Term. Temp.
Off Time	4	36	-----

WIRING DIAGRAMS

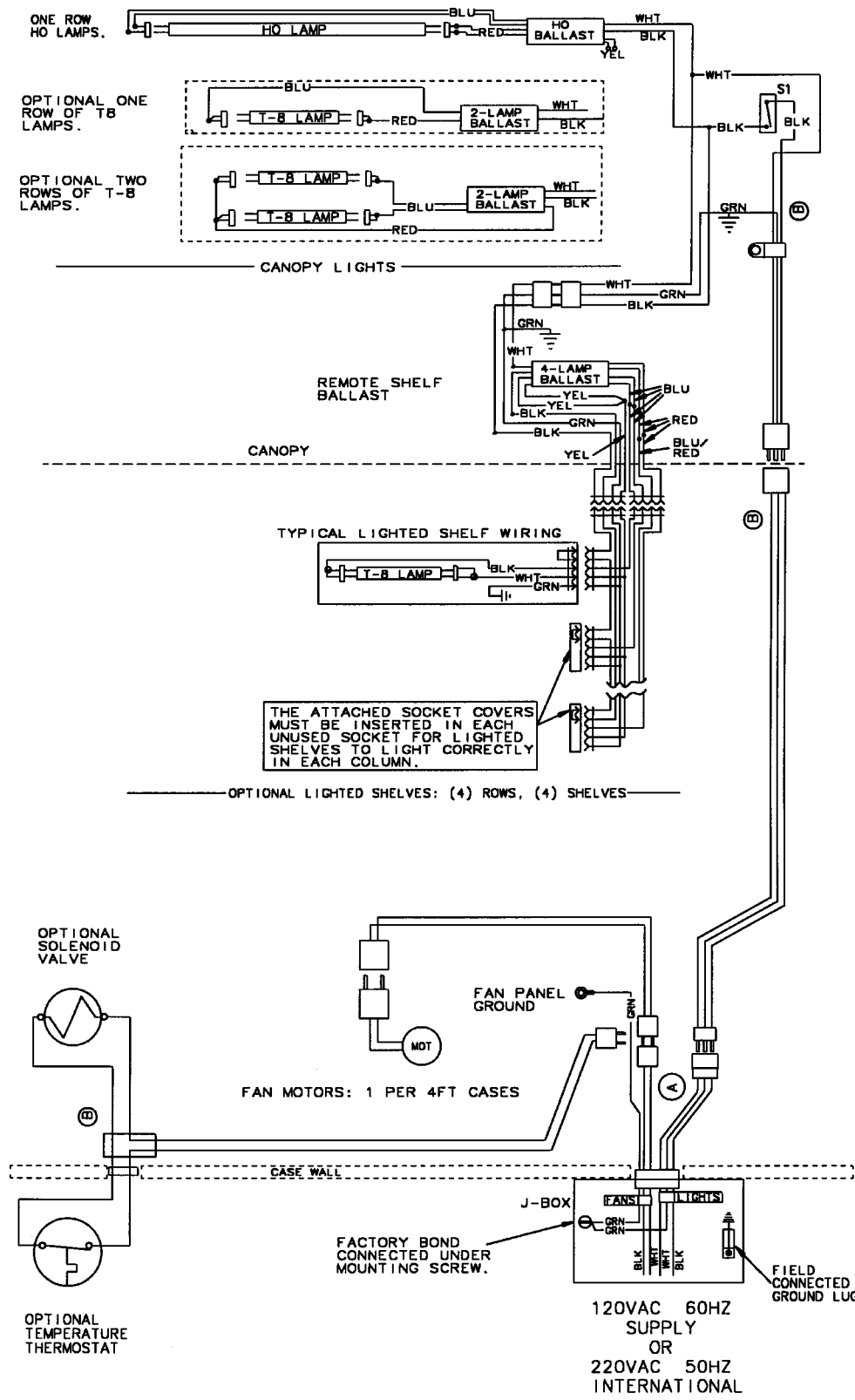
ELECTRICIAN NOTE - OVERCURRENT PROTECTION

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 7 thru 12 will cover the L5DA, L5DHA and L5DSCA case circuits and the lighting circuits.

PART TYPE N T S
 MODEL
 PURCHASED X
 DEPT DC 9

1. TO BE REVISIONED FOR CANOPY LIGHTS
 2. IMPROVED FOR USE FOR DIMENSIONAL USE ONLY
 3. ALL DIMENSIONS ARE IN INCHES UNLESS NOTED
 4. DIMENSIONS APPLY TO FINISHED PART AFTER
 5. NO MANUAL REVISIONS ALLOWED.

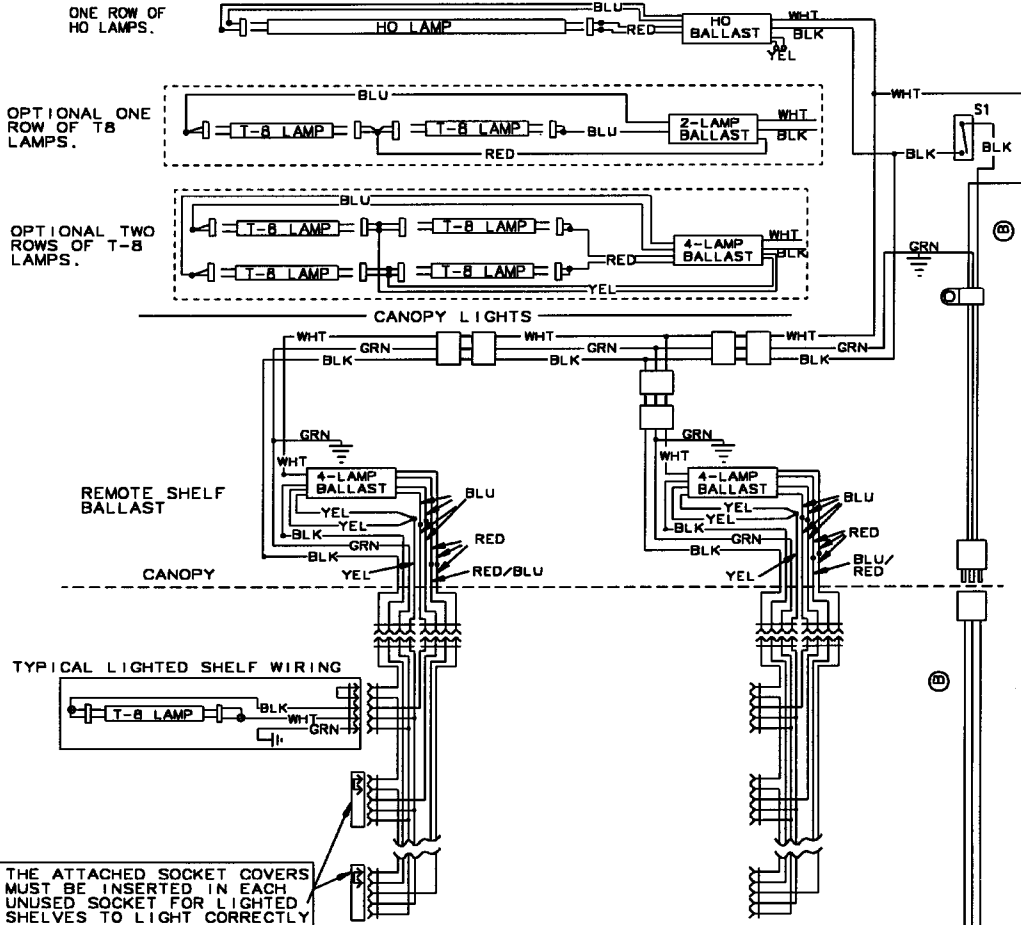


NOTE: ALL CASES MUSTED BE GROUND

REV	DESCRIPTION	DATE	BY	CHK
A	REVISED PWR HARNESS	27MAR97	LC	CK
B	REVISED PER ECN	23164	25MAR99	LC
C	DECIMALS +/- .030 ANGLES +/- 1 DEC			
DATE	23OCT96			
MARK				
REV	DESCRIPTION	DATE	BY	CHK
1	DIA WIRING LSD(H)A 4FT.			
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				
31				
32				
33				
34				
35				
36				
37				
38				
39				
40				
41				
42				
43				
44				
45				
46				
47				
48				
49				
50				
51				
52				
53				
54				
55				
56				
57				
58				
59				
60				
61				
62				
63				
64				
65				
66				
67				
68				
69				
70				
71				
72				
73				
74				
75				
76				
77				
78				
79				
80				
81				
82				
83				
84				
85				
86				
87				
88				
89				
90				
91				
92				
93				
94				
95				
96				
97				
98				
99				
100				

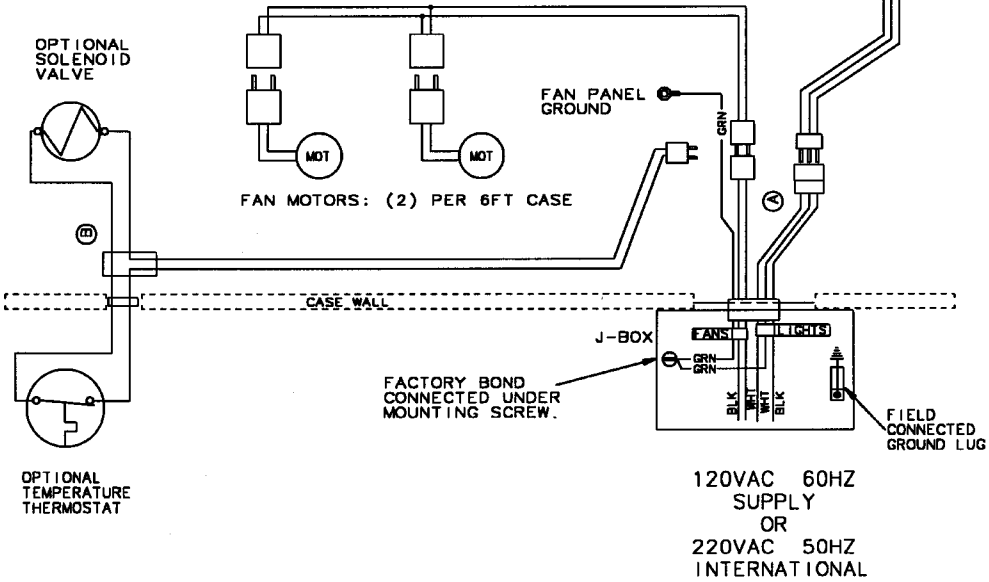


1. TYLER REFERENCE CODE, CLAIM RIGHTS TO THE INFORMATION ON THIS DRAWING. 2. ANY PART NOT SHOWN WITH DIMENSIONS SHALL BE ASSEMBLED TO THE DIMENSIONS OF THE PART PURCHASED. 3. DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED. 4. DIMENSIONS APPLY TO FINISHED PART AFTER FINISHING. 5. NO MANUAL REVISIONS ALLOWED.



THE ATTACHED SOCKET COVERS MUST BE INSERTED IN EACH UNUSED SOCKET FOR LIGHTED SHELVES TO LIGHT CORRECTLY IN EACH COLUMN.

OPTIONAL LIGHTED SHELVES: (4) ROWS, (8) SHELVES



120VAC 60HZ SUPPLY OR 220VAC 50HZ INTERNATIONAL

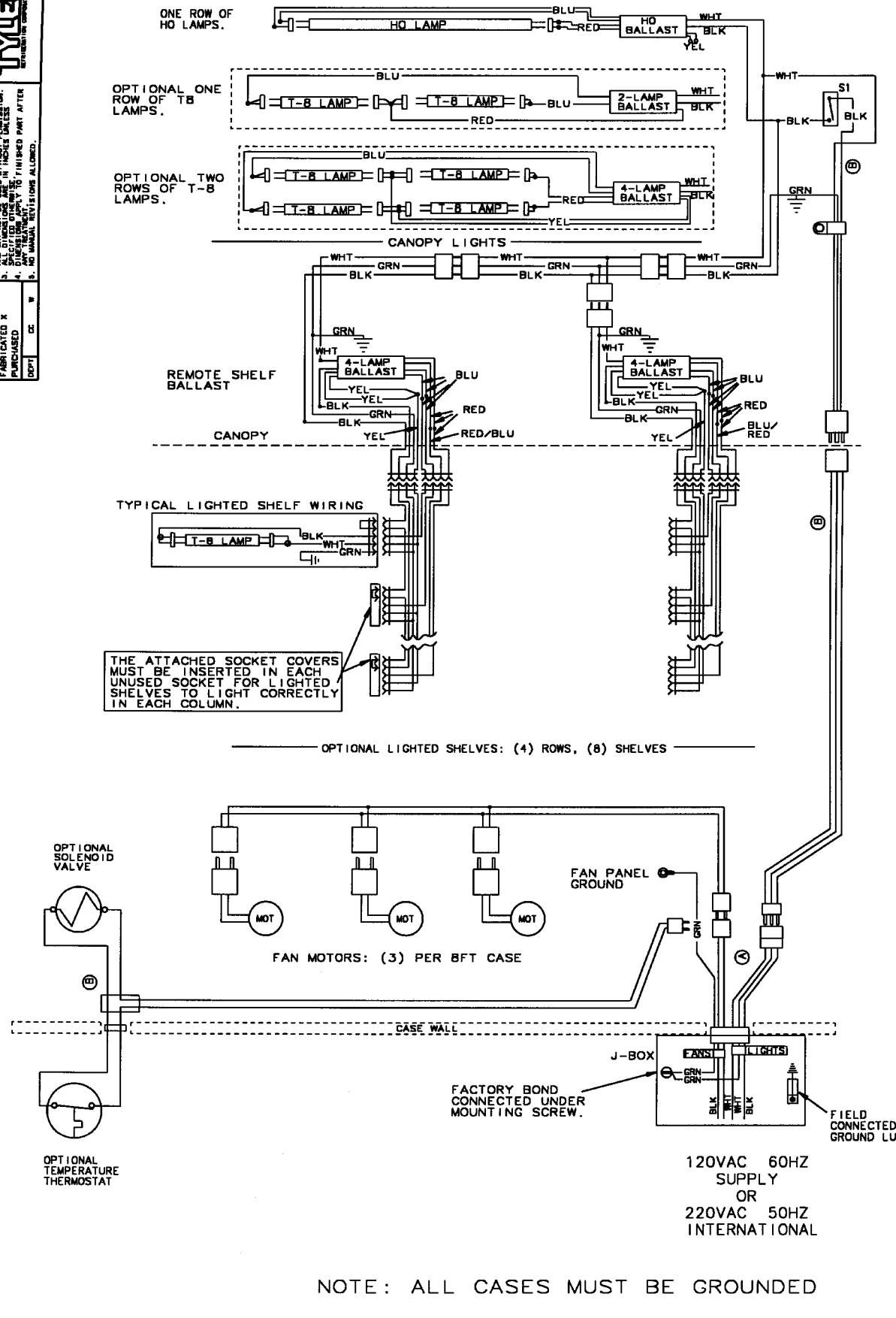
NOTE: ALL CASES MUST BE GROUNDED

REV	DESCRIPTION	DATE	BY	CHK
B	REVISED PER ECN	23184	25MAR89	LC CK
A	REVISED PWR HARNESS	97-018	27MAR87	LC CK

DATE	23OCT198
SCALE	1
DESCRIPTION	DIA WIRING LSD(H)A 6FT
REV	96-104
BY	ASB
CHK	B

1. TOLERANCE PER DRAWING UNLESS OTHERWISE SPECIFIED.
 2. DIMENSIONS ARE TO UNLESS OTHERWISE SPECIFIED.
 3. ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED.
 4. DIMENSIONS APPLY TO FINISHED PART AFTER POLISHING.
 5. ALL MANUAL REVISIONS ALLOWED.

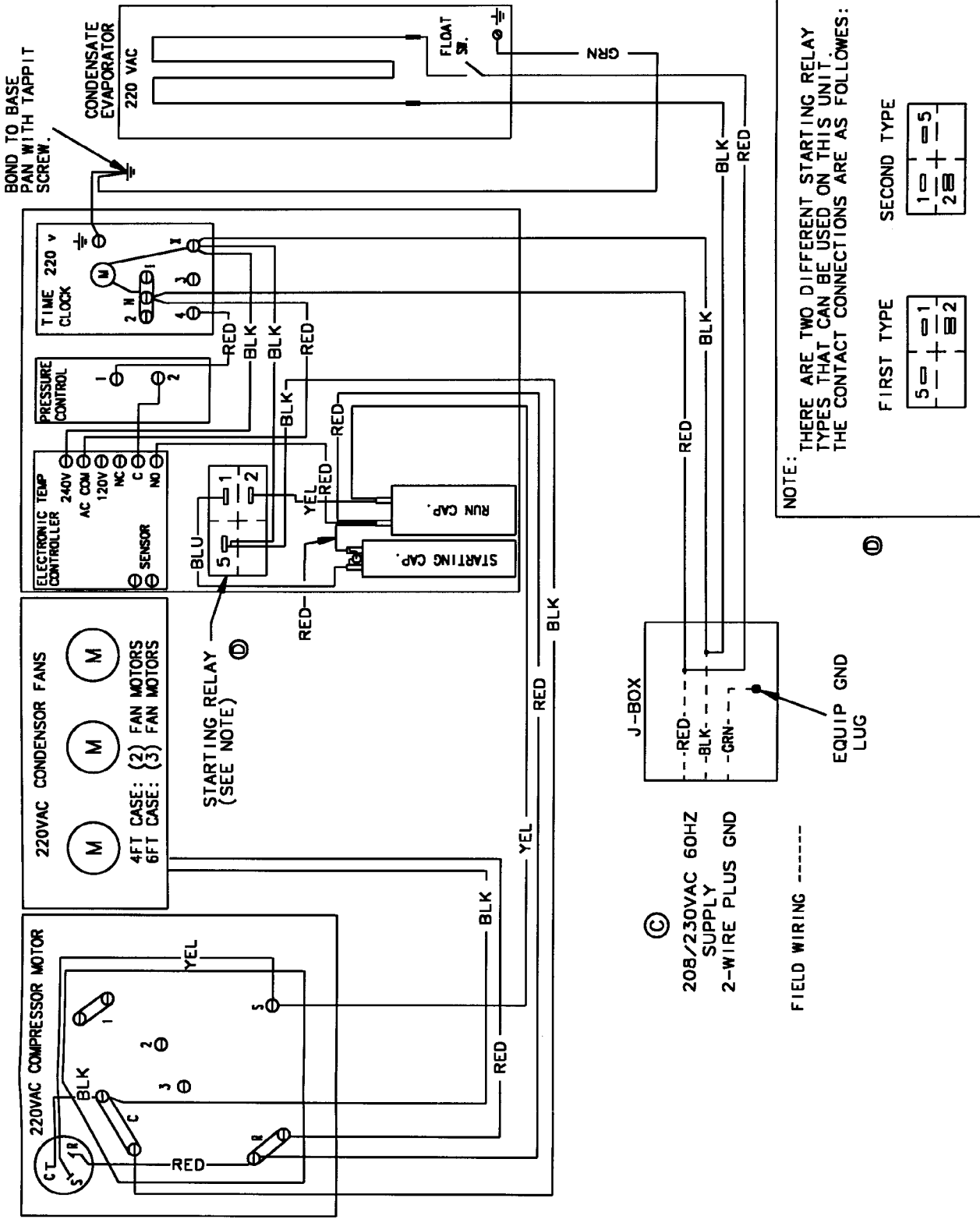
PART TYPE	N	T	S
MODEL			
FABRICATED X			
PURCHASED			
DDPT	CC	W	



REV	DESCRIPTION	DATE	BY	CHK	APP
B	REVISOR PER EON	23184	25MAR89	LC	CK
A	REVISED PWR HARNESS	97-018	27MAR97	LC	CK
	RELEASE				

REV	DESCRIPTION	DATE	BY	CHK	APP
B	DIA. WIRING L5D(H)A BFT				
	230C196				
	LC				
	CK				
	96-104				

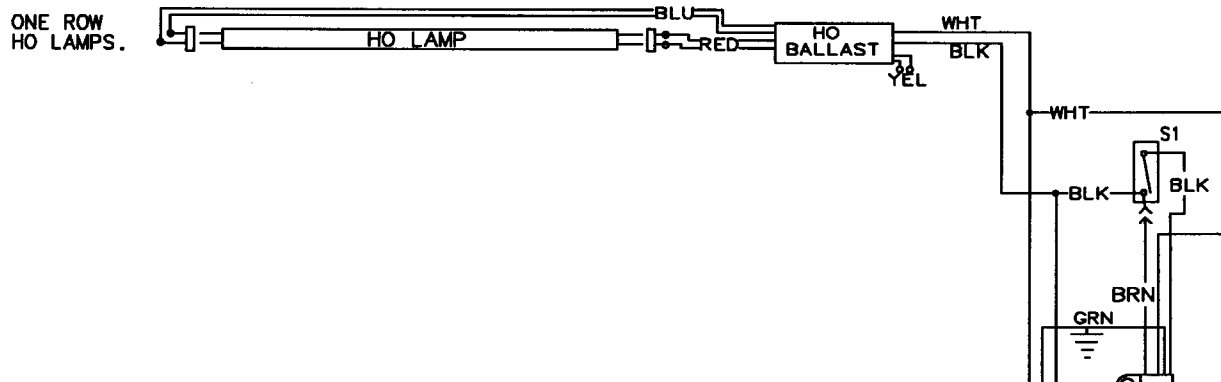
DECIMALS +/- .030 ANGLES +/- 1 DEG



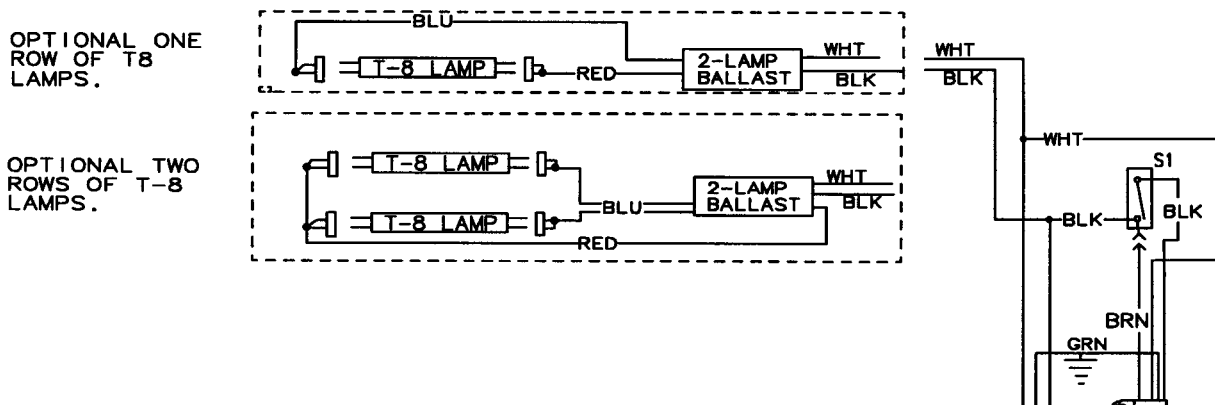
NOTE: THERE ARE TWO DIFFERENT STARTING RELAY TYPES THAT CAN BE USED ON THIS UNIT. THE CONTACT CONNECTIONS ARE AS FOLLOWS:

FIRST TYPE	SECOND TYPE

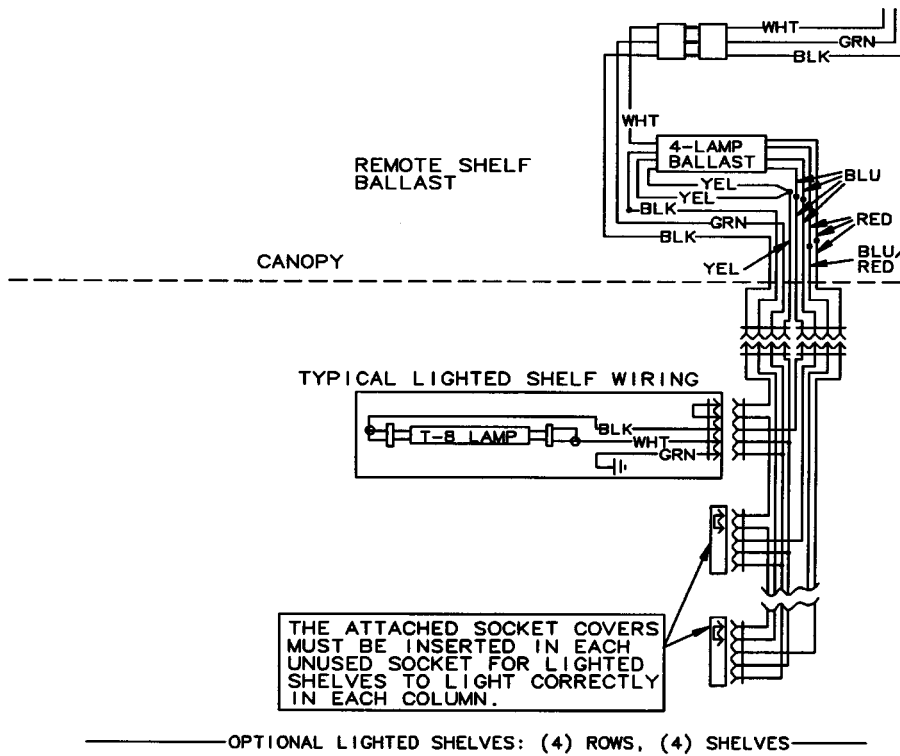
800MA Canopy Lighting Circuit



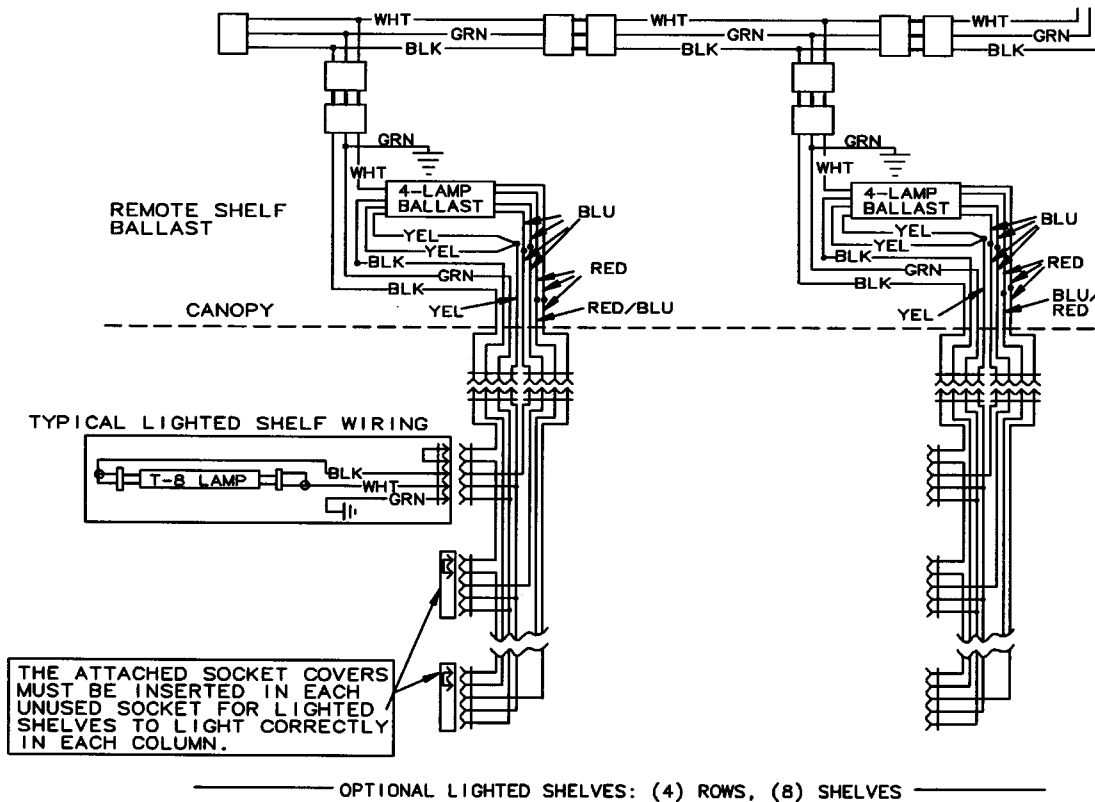
Optional Canopy Lighting Circuit



Optional Shelf Lighting Circuits 4' Cases



6' & 8' Cases



SERVICE INSTRUCTIONS

Troubleshooting Self-Contained Units

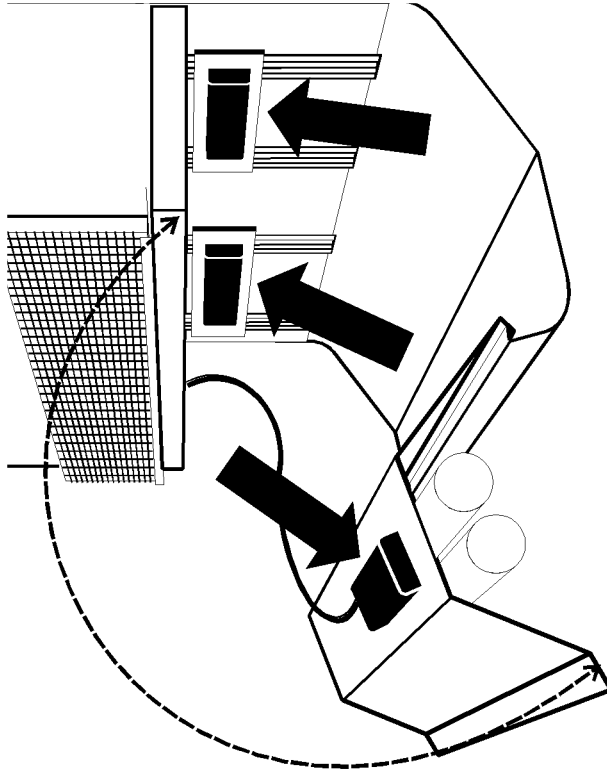
WARNING

Never work on electrically powered equipment while it is energized! Electrical shock could cause personal injury and/or death.

<u>TROUBLE</u>	<u>COMMON CAUSE</u>	<u>REMEDY</u>
1. Unit will not run	Blown fuse	Replace fuse.
	Low voltage	Check outlet with voltmeter. Voltage should be 115V or 220V ($\pm 10\%$).
	Inoperative motor or temperature control	Check connections.
2. Refrigerated section is too warm	Shelves overloaded; blocked air flow	Make sure items do not block the air flow.
	Thermostat set incorrectly	Check setting.
	Pressure control set incorrectly	Check setting.
3. Refrigerated section too cold	Case fans not operating	Check terminal block connections.
	Thermostat set incorrectly	Check setting.
	Pressure control set incorrectly	Check setting.
4. Unit runs all the time	Inadequate air circulation	Relocate cabinet or remove obstruction. Check installation requirements.
	Room temperature too warm	Ventilate room appropriately.
	Thermostat set incorrectly	Reset thermostat.
	Refrigerant charge low	Have unit serviced by a qualified service technician.
5. Noisy operation	Loose baffles	Tighten or brace baffles.
	Tubing contacting cabinet or other tubing	Move tubing.
	Cabinet not level	Level cabinet.
6. Frost or ice on evaporator coil	Defrost clock doesn't work	Check electrical connections. Have unit serviced by a qualified service technician.
7. Water dripping from case drain	Condensate drain clogged	Clear drain.
	Dissipator not functioning	Check electrical supply. Check float assembly.

Light Servicing

Ballast and Lighting Locations



All light ballasts are located under the canopy and mounted on the top of the canopy light channel. 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 channels under the front of each shelf section.

NOTE

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

PARTS INFORMATION

Operational Parts List

Case Usage	Domestic			Export		
	115 Volt 60 Hertz			220 Volt 50 Hertz		
Case Size	4'	6'	8'	4'	6'	8'
Fan Motor (L5DA/L5DHA)	5125532 5 Watt	5125532 5 Watt	5125532 5 Watt	5222975 5 Watt	5222975 5 Watt	5222975 5 Watt
Fan Motor (L5DSCA)	5125532 5 Watt	5125532 5 Watt	----	----	----	----
Fan Motor Brackets	5962269	5962269	5962269	5962269	5962269	5962269
Fan Blades (7" 40° 5B)	5221604	5221604	5221604	5221604	5221604	5221604
800MA Ballast (canopy)	5049140	5049140	5049140	5204859	5204859	5204859
Opt. T-8 Ballast (shelf)	5966635	5966635	5966635	9028439	9028439	9028439
800MA Lampholder (telescoping)	5614628	5614628	5614628	5614628	5614628	5614628
(stationary)	5614629	5614629	5614629	5614629	5614629	5614629
T-8 Lampholder (canopy)	5232279	5232279	5232279	5232279	5232279	5232279
(shelf)	5092414	5092414	5092414	5092414	5092414	5092414
Light Switch (SPST)	5193982	5193982	5193982	5193982	5193982	5193982
Self-Cont. Compressor (L5DSCA)	5965977	5965978	----	----	----	----
Compressor Model No. (L5DSCA)	REK3-0125-PFV	REY3-0175-PFV	----	----	----	----
Condensate Pan (L5DSCA)	5966016	5965984	----	----	----	----

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

Cladding and Optional Trim Parts List

Item Description	L5DA/L5DHA			L5DSCA	
	4'	6'	8'	4'	6'
1 Screw	5183536(3)	5183536(4)	5183536(6)	5183536(3)	5183536(4)
2 Close-off, Hood	9026366	9026367	9026368	9026366	9026367
3 Canopy Backer, Painted	9026364	9026364	9026364	9026364	9026364
4 Canopy Hood, Painted	9025968	9025969	9025970	9025968	9025969
5 Screw	9025833	9025833	9025833	9025833	9025833
6 Bumper Retainer/Hand Rail	-----	-----	color by order	-----	-----
7 Hand Rail Backer, Painted	9025316	9025316	9025316	9025316	9025316
8 Top Band, Painted	9023791	9023796	9023799	9023791	9023796
9 Color Band Backer, Painted	9040223	9040223	9040223	9040223	9040223
10 Bumper	-----	-----	color by order	-----	-----
11 Upr. Frt. Cladding, Painted (L5DA / L5DSCA)	9025462	9025463	9025464	9025462	9025463
(L5DHA)	9026308	9026309	9026310	-----	-----
12 Rivet	5104702(4)	5104702(4)	5104702(5)	5104702(4)	5104702(4)
13 Lwr. Frt. Cladding, Painted (L5DA / L5DSCA)	9025459	9025460	9025461	9026303	9026304
(L5DHA)	9026305	9026306	9026307	-----	-----
14 Screw	5183536(6)	5183536(8)	5183536(10)	5183536(6)	5183536(8)
15 Kickplate	-----	-----	color by order	-----	-----
Kickplate Backer	9023569	9023569	9023569	9023569	9023569
16 Kickplate Support	9023565(3)	9023565(3)	9023565(4)	9023565(3)	9023565(3)
17 Screw	9029131(6)	9029131(6)	9029131(8)	9029131(6)	9029131(6)
18 Screw	5048626(2)	5048626(2)	5048626(2)	5048626(2)	5048626(2)
19 LH End Close-off, Painted	9022469	9022469	9022469	9022469	9022469
RH End Close-off, Painted	9022471	9022471	9022471	9022471	9022471
20 Bumper Backer	-----	-----	color by order	-----	-----
21 Bumper End Trim	-----	-----	color by order	-----	-----

