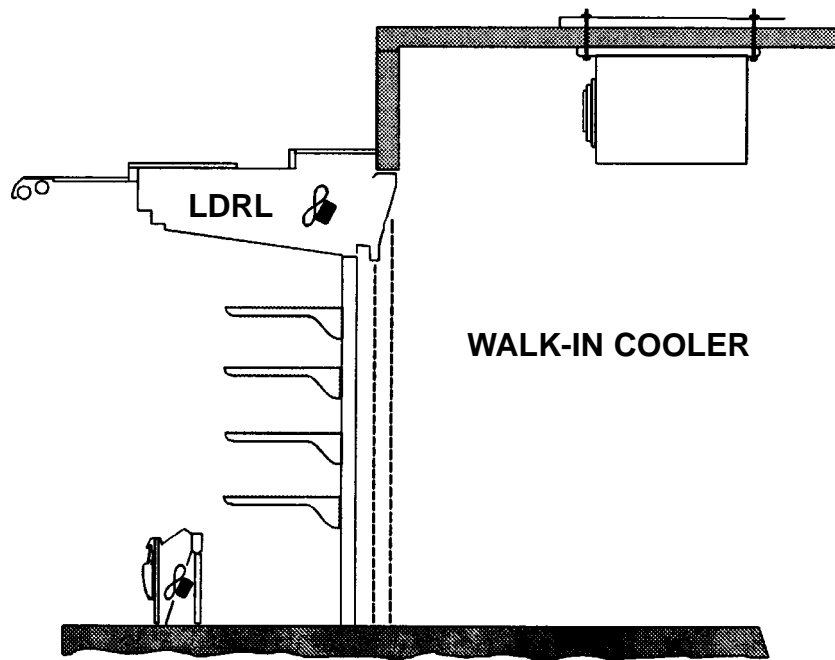


TYLER

series
Advantage



Installation & Service Manual



LDRL

REAR LOAD ROLL-IN DAIRY 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	10/96	ISSUE DATE	1/97	PART NO.	9027546	REV.	A
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The following Medium Temperature Rear Load Roll-In Dairy Merchandiser models are covered in this manual:

MODELS	DESCRIPTION
LDRL	8' & 12' REAR LOAD ROLL-IN DAIRY MERCHANDISER

SPECIFICATIONS

LDRL Rear Load Roll-In Dairy Merchandiser Specification Sheets

MODEL	LDFL	LDRL*
USAGE	DAIRY	DAIRY
BTUH/FT	1767	980
SUCTION°	+20F	+15F
ENTER AIR°	+36F	+28F

NOTE: FOR COMPRESSOR SIZING INFORMATION REFER TO THE "GOLD" SECTION & FOR LINE SIZING INFORMATION REFER TO THE "BUFF" SECTION OF THE TYLER SPECIFICATION GUIDE.

THE ABOVE RATINGS ARE FOR COMPRESSOR SELECTION ONLY. FOR ENERGY CALCULATION DATA REFER TO THE ENERGY SECTION.

DEFROST CONTROL			PRESSURE SETTING		EPR SETTINGS	
PER DAY	MODE	TIME	CUT IN	CUT OUT	R22	R404A
4	TIME OFF	45 MIN.	50-54# @ R22	25-32# @ R22	43	---
			64-67# @ R404A	33-42# @ R404A	---	55

CASE-TO-CASE SUCTION LINE SUB-FEED BRANCH LINE SIZING											
	8'	12'	16'	20'	24'	28'	32'	36'	40'	44'	48'
R22 FRONT LOAD	7/8"	7/8"	7/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 3/8"	1 3/8"	1 3/8"	1 3/8"
R22 REAR LOAD	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"

STANDARD CASE LIGHTING: Two rows of T-8 electronic fluorescent lights in the canopy plus one row of lighting in the top of the case. Optional lighted shelves are available. Light amps shown in the chart do not include nose lights.

CASE FANS: Standard with shaded pole motors.

CASE CIRCUITS: LDFL case requires three separate 120v circuits: 1) a 120v Case Fan Circuit, 2) a 120v Case Anti-Sweat Heater Circuit, and 3) a 120v Shelf & Canopy Light Circuit. LDRL case requires four separate 120v circuits: 1) a 120v Upper Case Fan Circuit, 2) a 120v Lower Case Fan Circuit, 3) a 120v Anti-Sweat Heater Circuit, 4) a 120v Shelf & Canopy Light Circuit.

*** NOTE: ADD 800 BTUH/FT OF CASE OPENING TO THE NORMAL WALK-IN COOLER LOAD. USE LOW VELOCITY COILS TO BACK UP THE REAR LOAD ROLL-IN CASE FOR CEILING HEIGHTS UNDER 9'. FOR CEILING HEIGHTS OVER 9' USE FORCED AIR STYLE COILS.**

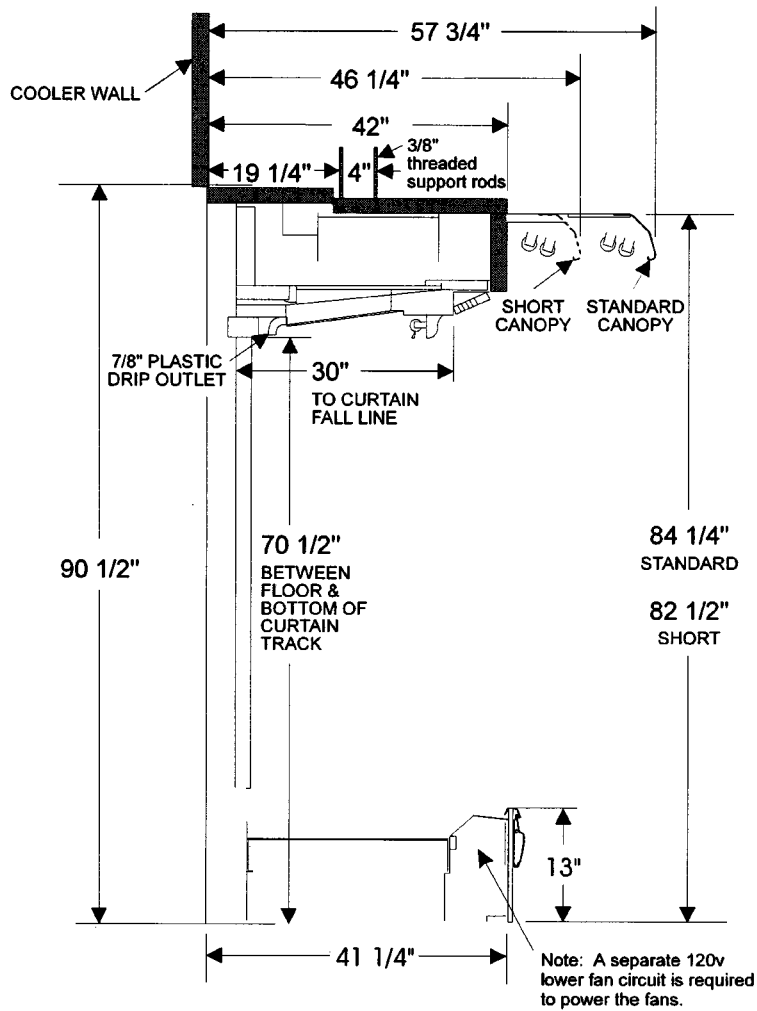
The minimum size coils required behind the Roll-In case are; 8' case use a Model EFA - 130M and for a 12' case use a Model EFA - 190M. Upsize the coils as necessary based on the revised total load. Size at a 9°F temperature differential. The case coils and the cooler unit coils can be run on separate refrigeration circuits, but both must be defrosted at the same time.

NOTE: The cooler and case should be controlled by a Thermostat & Solenoid or EPR. Defrost needs to be at the same time.

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.

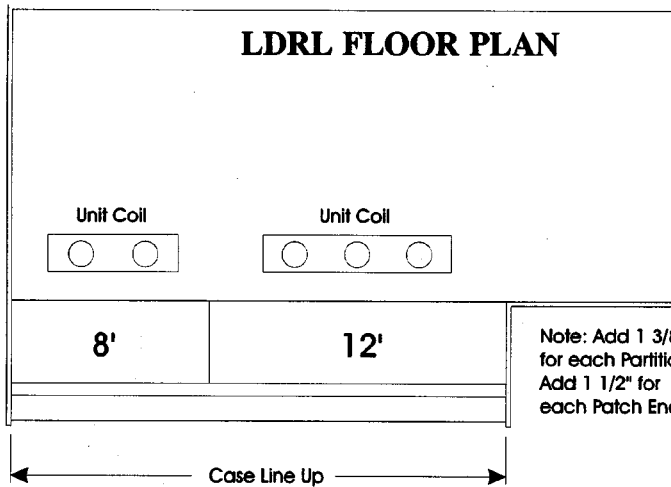
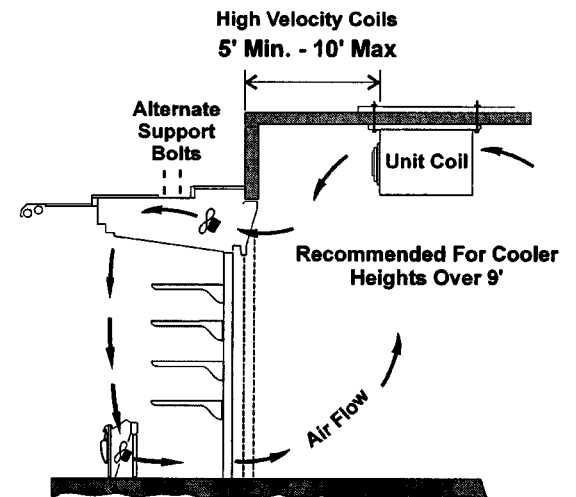
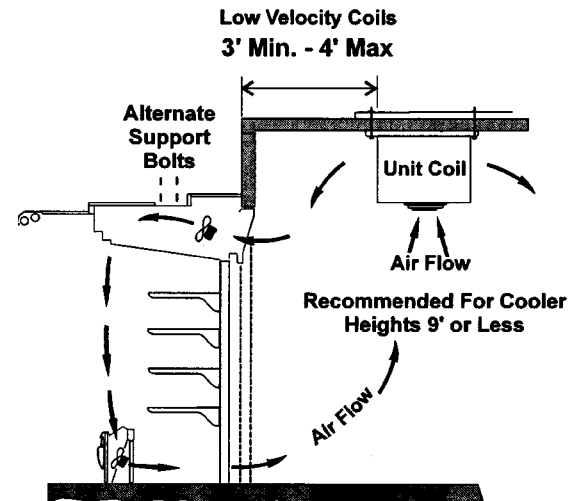
LDRL Rear Load Roll-In Dairy Merchandiser



120 VOLT ELECTRICAL DATA (AMPS)		
LENGTH	STD. FANS	ANTI-SWT
8' LDFL	1.8	.9
8' LDRL	3.8	1.0
12' LDFL	2.4	1.2
12' LDRL	5.4	1.3

STANDARD 120 VOLT LIGHTING (AMPS) T-8/ ELECTRONIC BALLASTS (CANOPY)		
ROW	8'	12'
3	1.7	1.8

COOLER COIL MOUNTING LOCATIONS



INSTALLATION PROCEDURES

Carpentry Procedures

Planning

The cooler will need to be erected prior to installing the cases. The cases can then be raised and butted into the existing cooler.

The case is attached to the cooler and can be supported by either structural suspension supports or partitions.

Patch ends can be used on either a single 8' or 12' line-up to support the case. If you have more than a single case you will need to use either a one inch structural partition or a hanging support to provide the needed structural support. Alternative hanging support methods are described below.

Method #1 - Structural Partitions

The one inch structural partition can be used between every case, real load or front load, so that the entire line-up will be self-supporting. This method of supporting cases at every joint satisfies structural requirements. The problem with this method is that later alterations may be difficult or not even possible. There is also the added difficulty of alignment, as you will have to depend much more on having a level floor.

Rods tied into the ceiling joists and the top of the case at each case joint can also be used to support the case.

If structural partitions are to be used, make sure to add 1 3/8" for each partition to the total cut opening of the cooler.

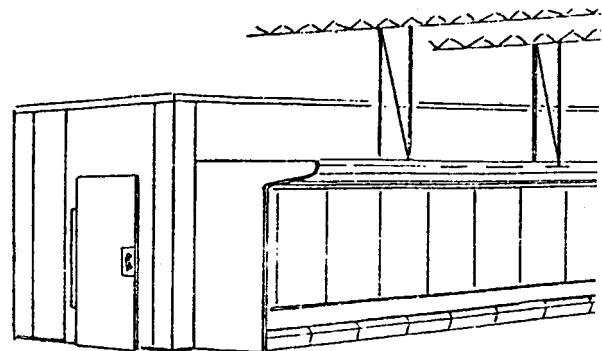
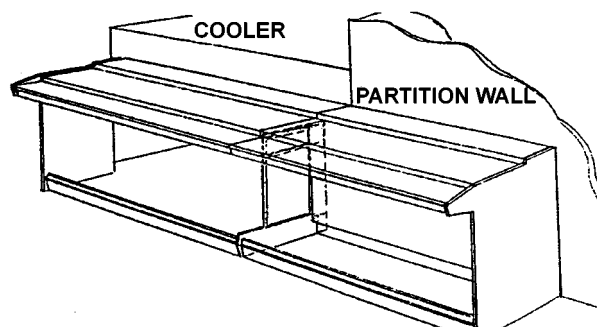
Method #2 - Cantilever

Cantilever beam systems project over the case tops and are supported by two threaded rods in each case end. A column is also to support the case sections. The beams are to be anchored at the rear to a suitable supporting structure. **Every joint must be supported.**

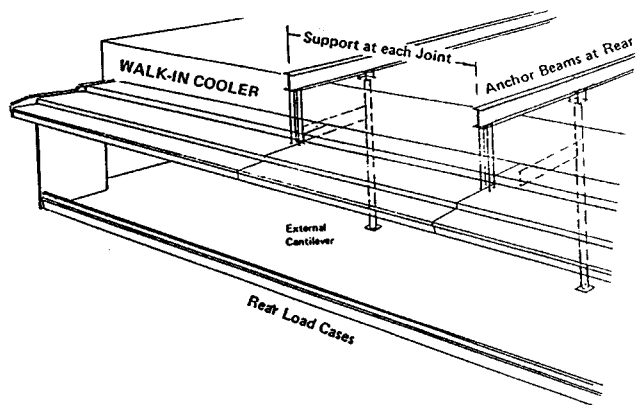
To assist in the structural planning, the LDRL case weights are as follows:

LDRL-8	1250 lb
LDRL-12	1450 lb

Method #1



Method #2



Unpacking and Placement

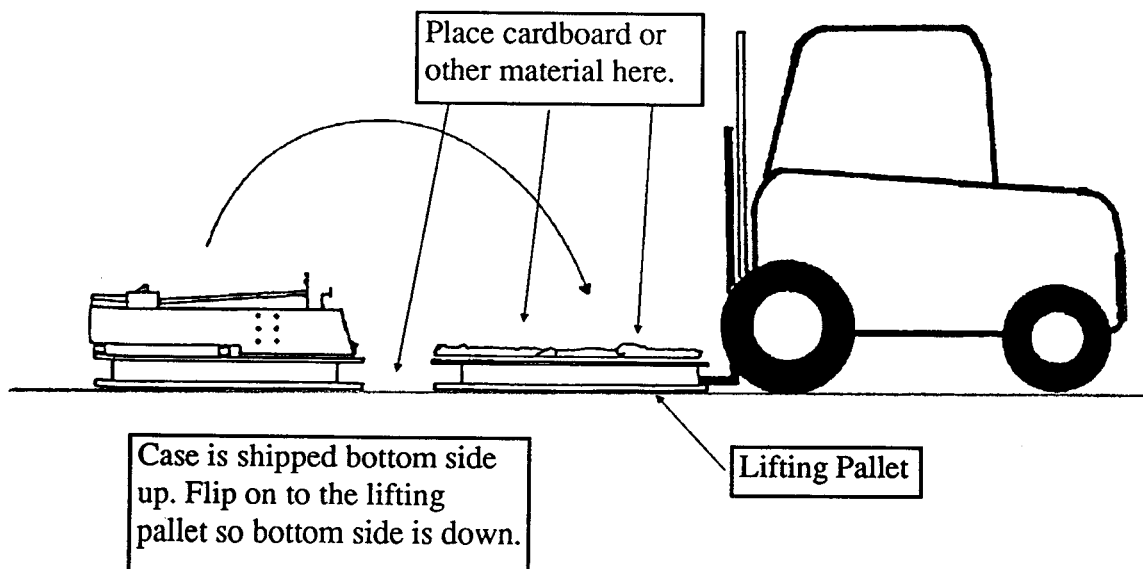
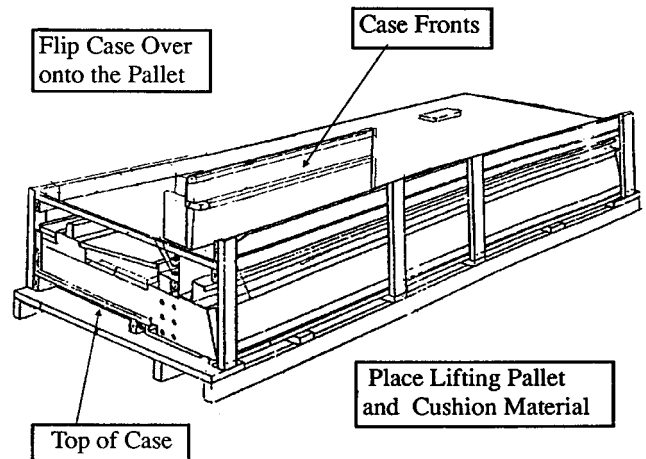
WARNING

Cases are heavy and require a lifting device and two or more people to position and support during installation. Improper handling of cases could result in personal injury.

Place pallet in the general area where the case is going to be assembled. Remove all the hold down and shipping braces from the pallet. You will need a fork lift to raise and support the case during installation.

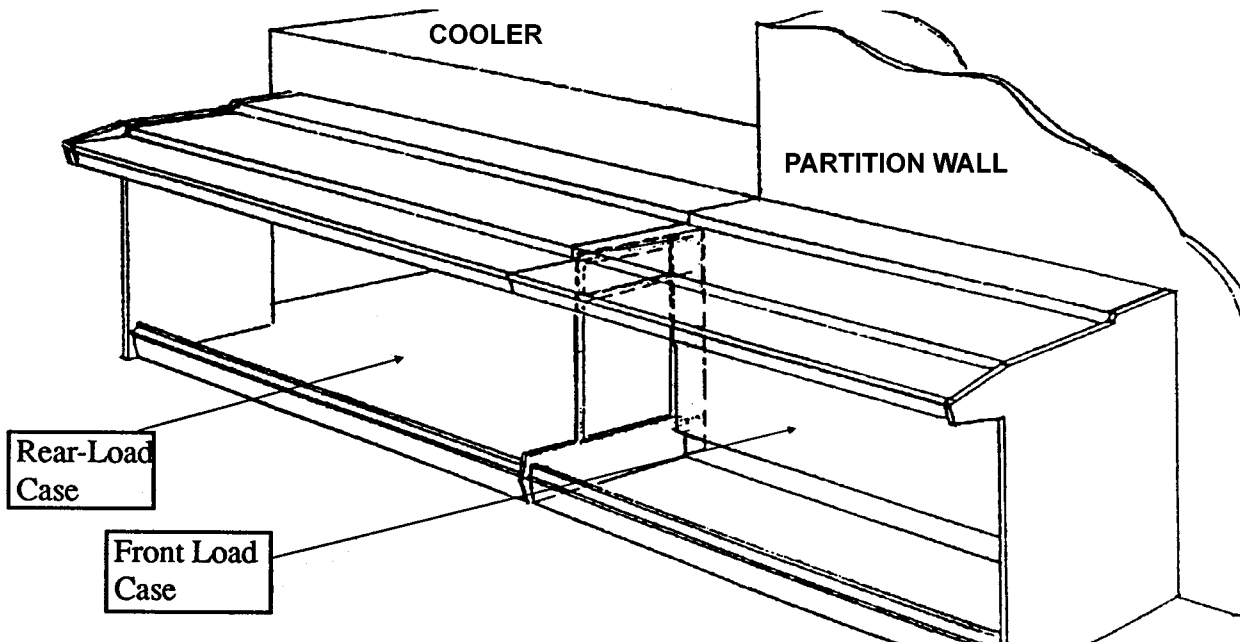
Since the case is shipped inverted, it will need to be flipped over before it can be moved into place.

1. Remove the case end panels and inspection plates from the case.
2. Place a standard 4 foot pallet with cardboard on top of it on the floor behind the shipping pallet. This pallet will be used to raise and support the case during installation. The cardboard prevents the curtain track from being damaged.
3. Place material on the floor to prevent damage to the case cladding during the flipping and positioning of the case onto the lifting pallet.
4. Using the fork lift and atleast two addition people, flip the case over onto the lifting pallet.



Locating and Installing

Start installing cases at either end of the line-up where the patch end is to be located. If the case is to be supported from the ceiling joists, lift the case into place and prepare to attach the patch end to the case.



Attaching Patch End Supports

1. Prepare the patch end by inserting the ethofoam gasket into place.
2. Thoroughly caulk both sides of the masonite spacer.
3. Attach the patch end with four 1/2" bolts and one 3/8" bolt. Snug, but do not tighten bolts until the case is completely assembled.

Ceiling Support

1. Prop the case up in position with boards.
2. Prepare the case for adjoining by inserting the ethofoam gaskets in place and prepare the masonite spacers with caulk.

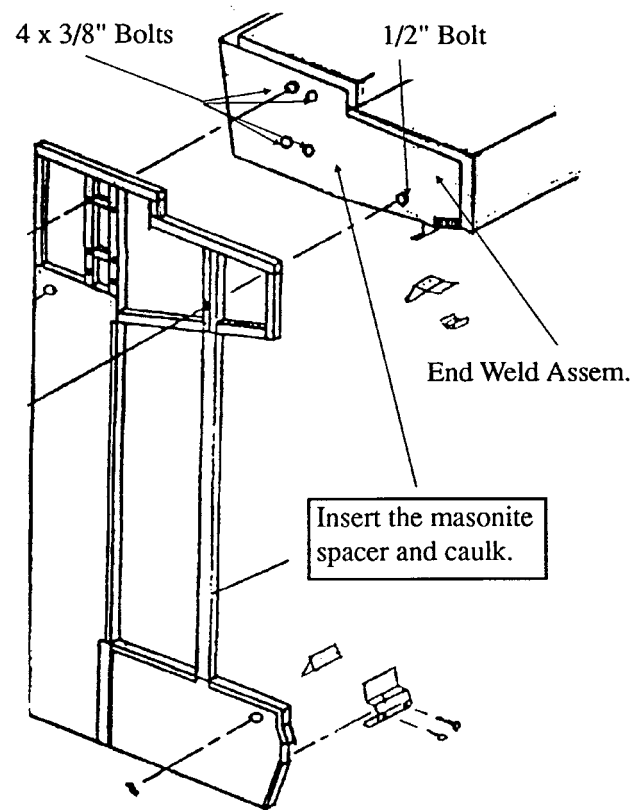
NOTE

Adjoining sections of case must be next to the each other before the center brace can be inserted.

3. Place the center support in between the two case sections and fasten with bolts. The center support can now be attached to the ceiling joists with the threaded rod.
4. Continue this process until all sections of the case are in place.

Center Partitioning

1. Prepare the patch end for attachment by inserting the ethofoam gaskets in place and prepare the masonite spacers with caulk.
2. Attach the patch end with four 1/2" bolts and one 3/8" bolt. Snug, but do not tighten bolts until the case is completely assembled.
3. Prepare the other end of the case for the center partition. Prop the end of the case into position and prep the case end in the same manner as you did for the patch end. Make sure that the prop is holding the case into place.



4. Place the center partition into position and ready the adjacent case to be placed in the line-up.
5. Lower pallet being held by the fork lift and place the next case on the pallet as you did the first case. Lift this case into the line-up as you did the first.
6. Align the cases at the center joint and join the cases with the attaching bolts found in the filler kit.

NOTE

The five bolts shown are used to join one case to the next through the center partition.

7. Continue this procedure for all cases in the line-up. When all cases have been placed, remove the top cover of the case and secure cases to the wall of walk-in cooler with self-tapping screws. The screws should be spaced at approximately one foot intervals to assure good attachment.

Installing the Front Fan Panels

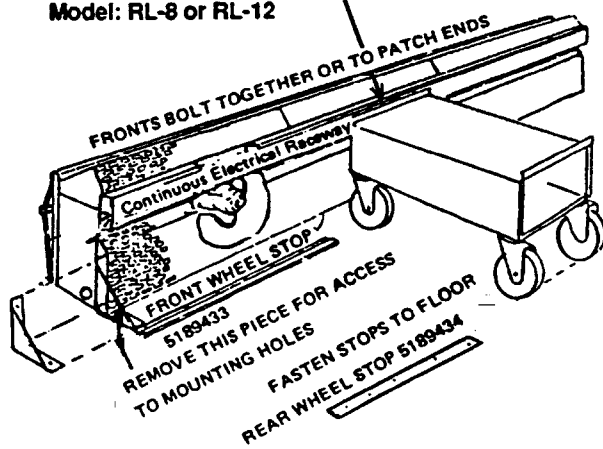
NOTE

Floor anchors and mounting hardware are not provided. The installer must provide the required mounting hardware.

Install the 8' and/or 12' front fan panels with floor anchors. All front fan panel braces are located on the underside of the front panel. The braces are located every four feet and at the ends of the front fan panels. The front fan panels may also be attached to the patch ends, if desired. Floor stops are also provided to keep the carts in position near the front of the case. Install these after the carts have been positioned in the case.

Floor Mounted Fan Unit
Model: RL-8 or RL-12

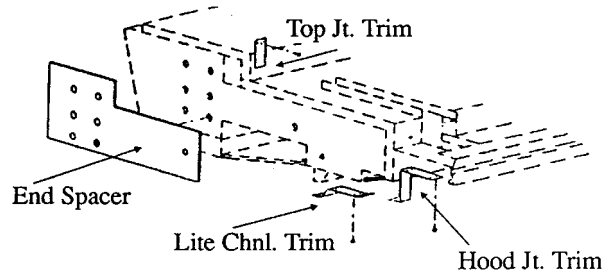
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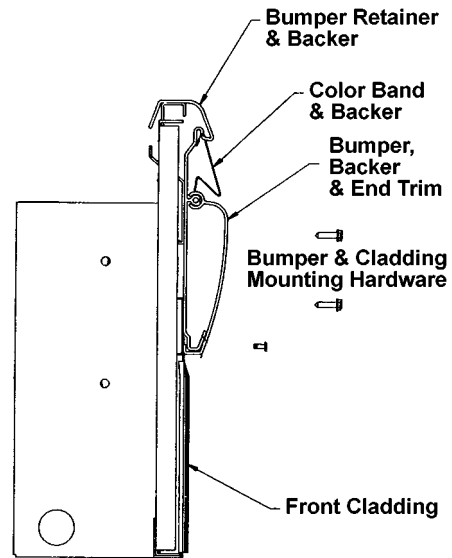
IMPORTANT NOTE

Make sure the cart wheels are straight and the wheel stops keep the carts tight against the front of the case. This will prevent short circuiting of air flow and maintain the proper air flows within the case.

Finishing the Case



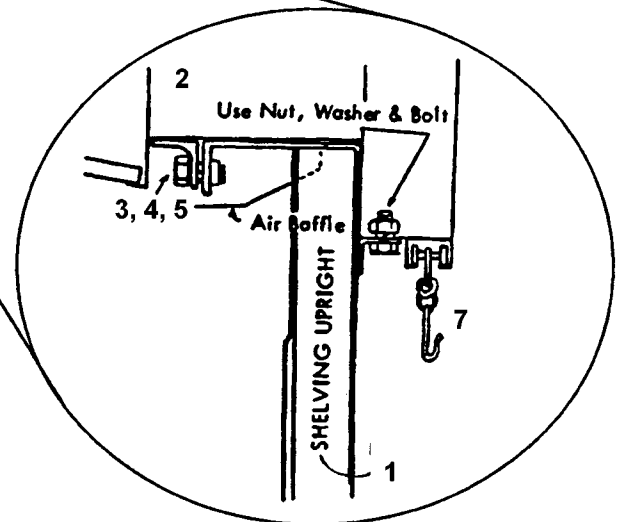
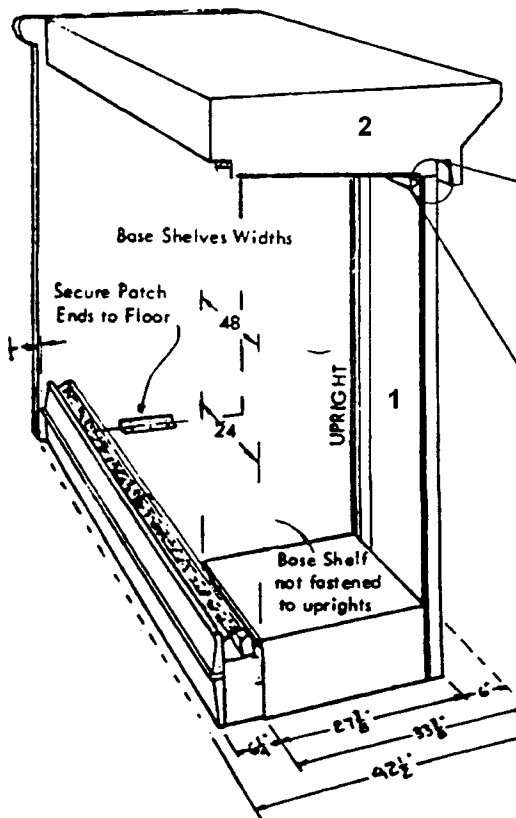
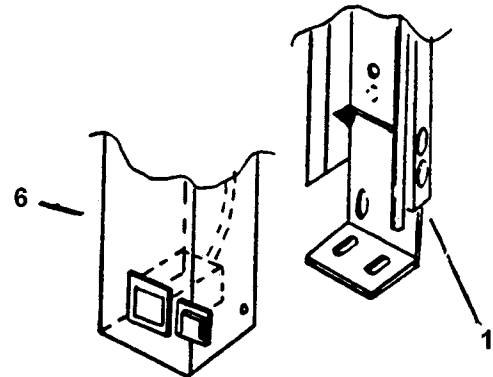
Attach the inside cooler end joints trim and align the cases at the joints. Make sure to thoroughly caulk at every case joint and where the case meets the top of the cooler.



Shelving

IMPORTANT

- Shelves must be fixed, not flip up type, to maintain proper air flow.
- Product stacking in walk-in cooler must be a minimum of 3' away from the back of the case.
- Service doors in the walk-in cooler must have a positive gasket seal.



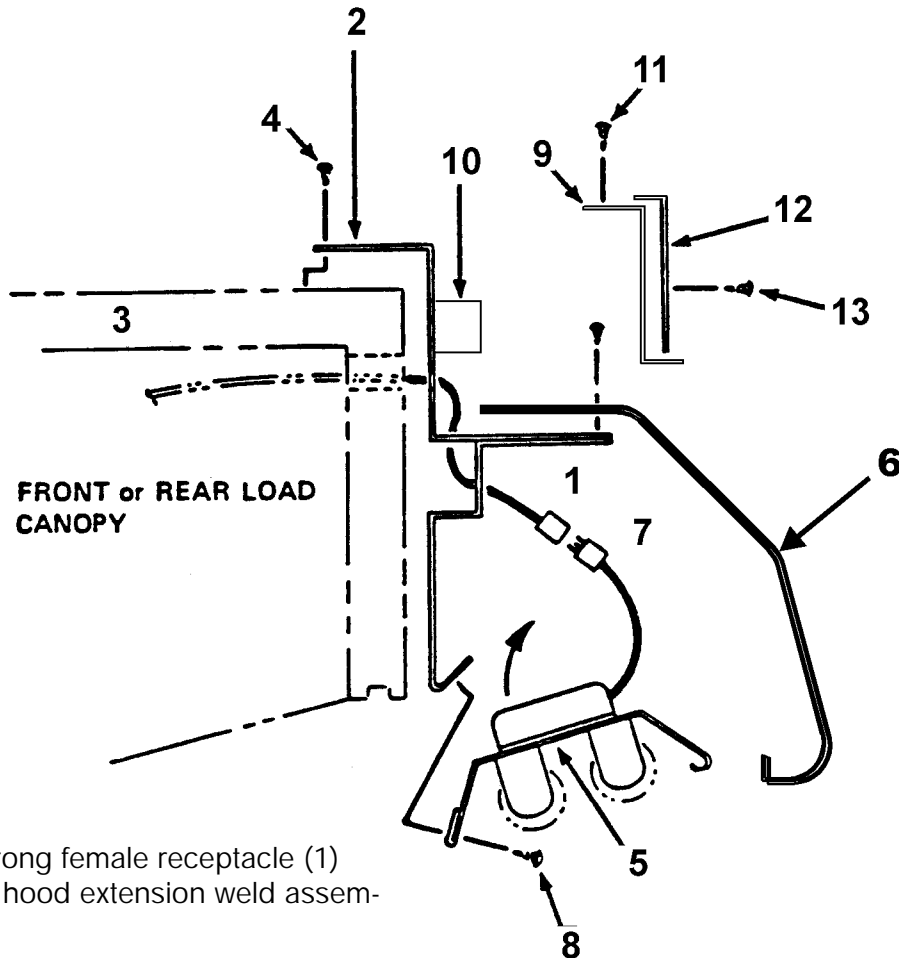
Shelving uprights (1) fasten to the overhead structure (2) with 3/8" bolts (3), lockwashers (4) and nuts (5) (when weldnuts are not provided). The baffle needs only be removed when uprights for 24" shelves are installed. Holes into the supporting angles will have to be drilled as well. When the shelving uprights are full length, they must be secured to the floor. Remove the wiring cover (6) to secure

bottom of shelving upright (1) to the floor, then replace the wiring cover (6). Mount the curtain carriers (7) to the back of the case uprights (1) as shown. The curtains may be mounted before or after the case is in place. The curtains are weighted at the bottom to help keep them closed. It is important to keep the curtains closed to provide a good seal and proper case operation.

Hood Assembly

WARNING

Make sure all power is off to the case. Electrical servicing should always be done by a qualified electrician. Improper servicing could result in product damage and/or personal injury.

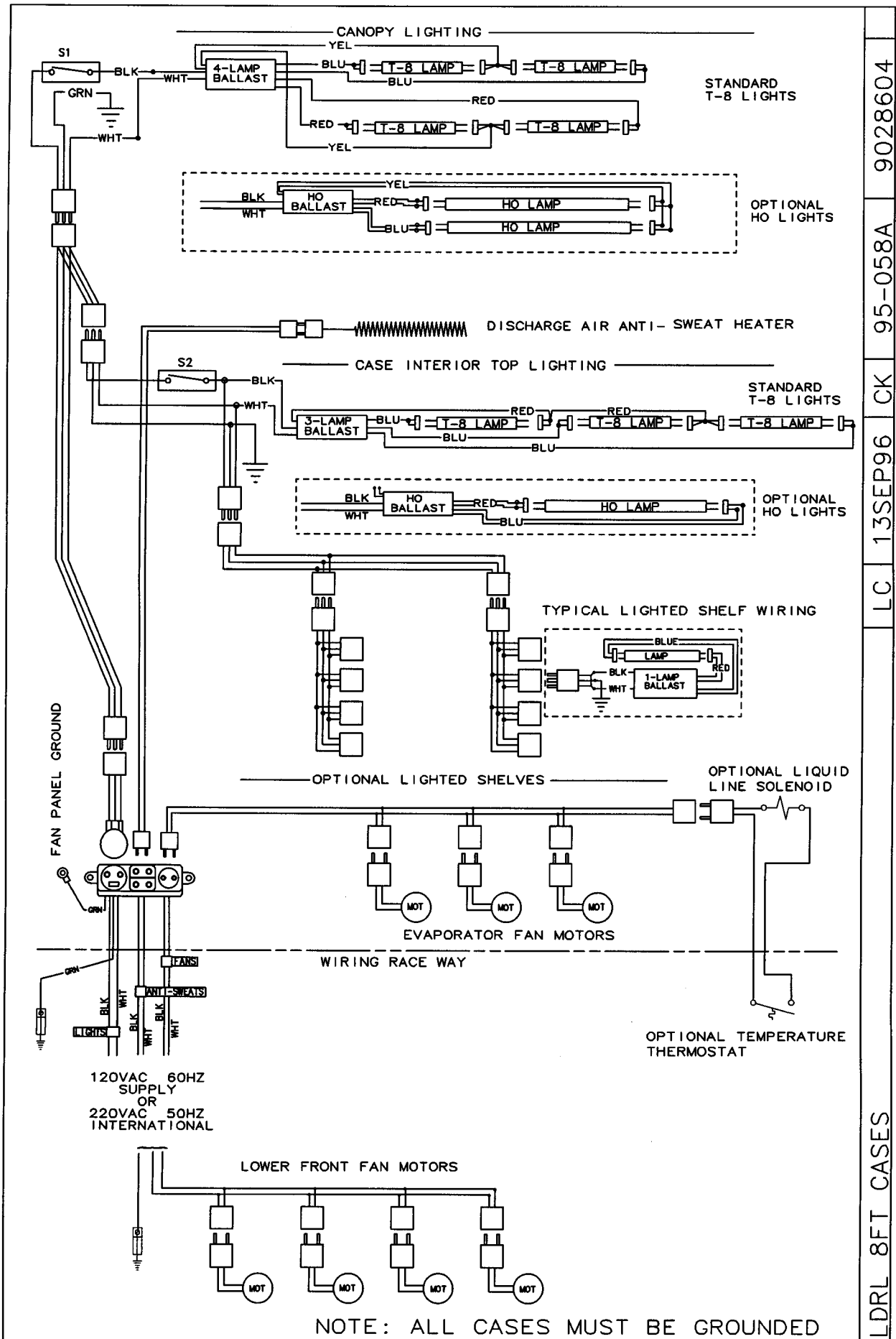


1. Pull the 3-prong female receptacle (1) through the hood extension weld assembly (2).
2. Fasten hood extension weld assembly (2) to the canopy (3) with tappit screws (4).
3. Hook the light channel assembly (5) into the front lip of the front hood (6).
4. Plug the light channel wire (7) into the female receptacle (1).
5. Swing the light channel assembly (5) up into place and secure with truss head screws (8).
6. Install top front cladding (9) over ballast (10) with screws (11).
7. Complete the assembly by installing the hood extension joint trim (12) with truss head screws (13).

WIRING DIAGRAM**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 wiring diagrams on the following pages 13 thru 15 will cover the LDRL case circuits, lighting circuits and anti-sweat circuits. The lighting and anti-sweat circuits are shown in the case circuit diagrams.



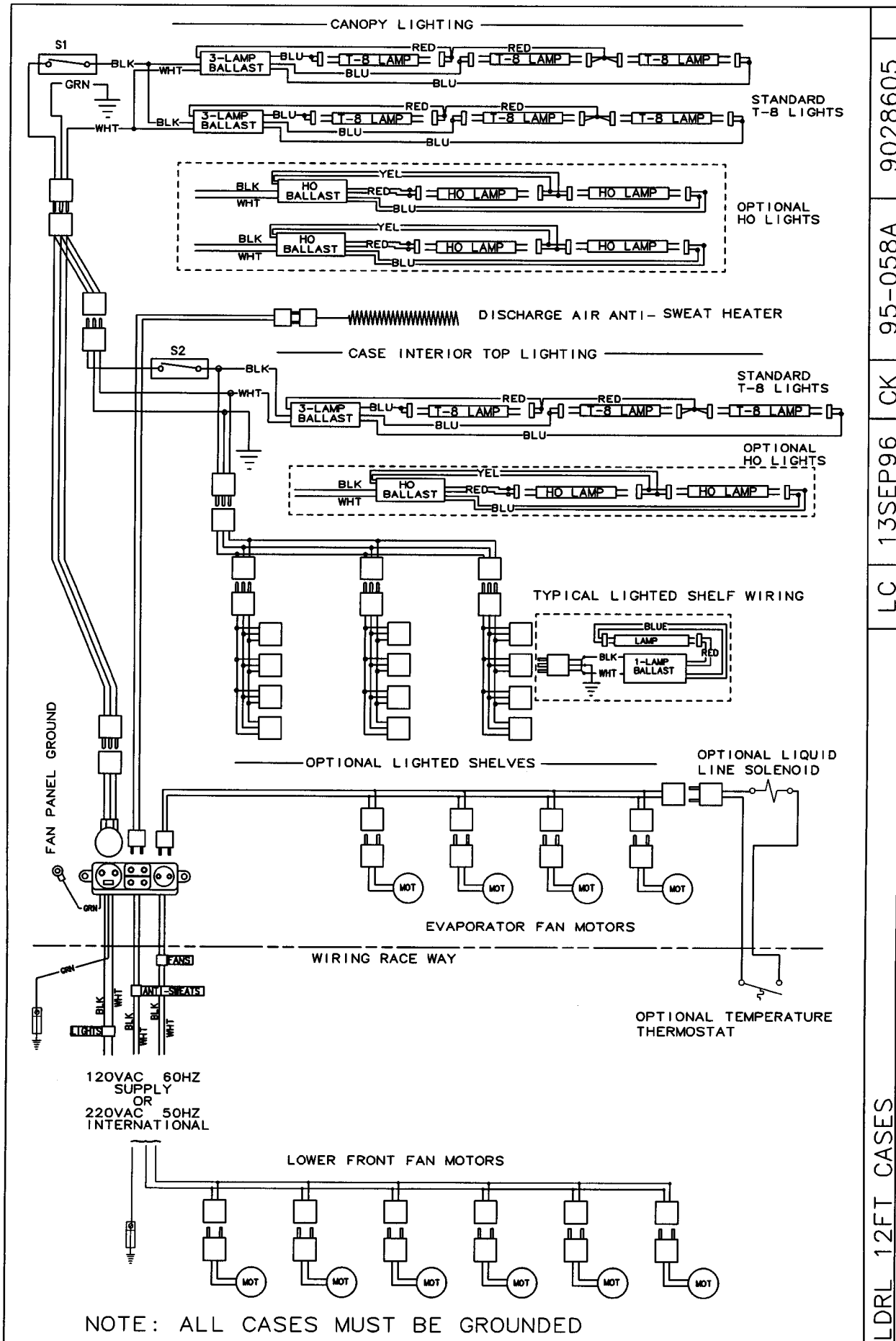
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LDRL 8FT CASES



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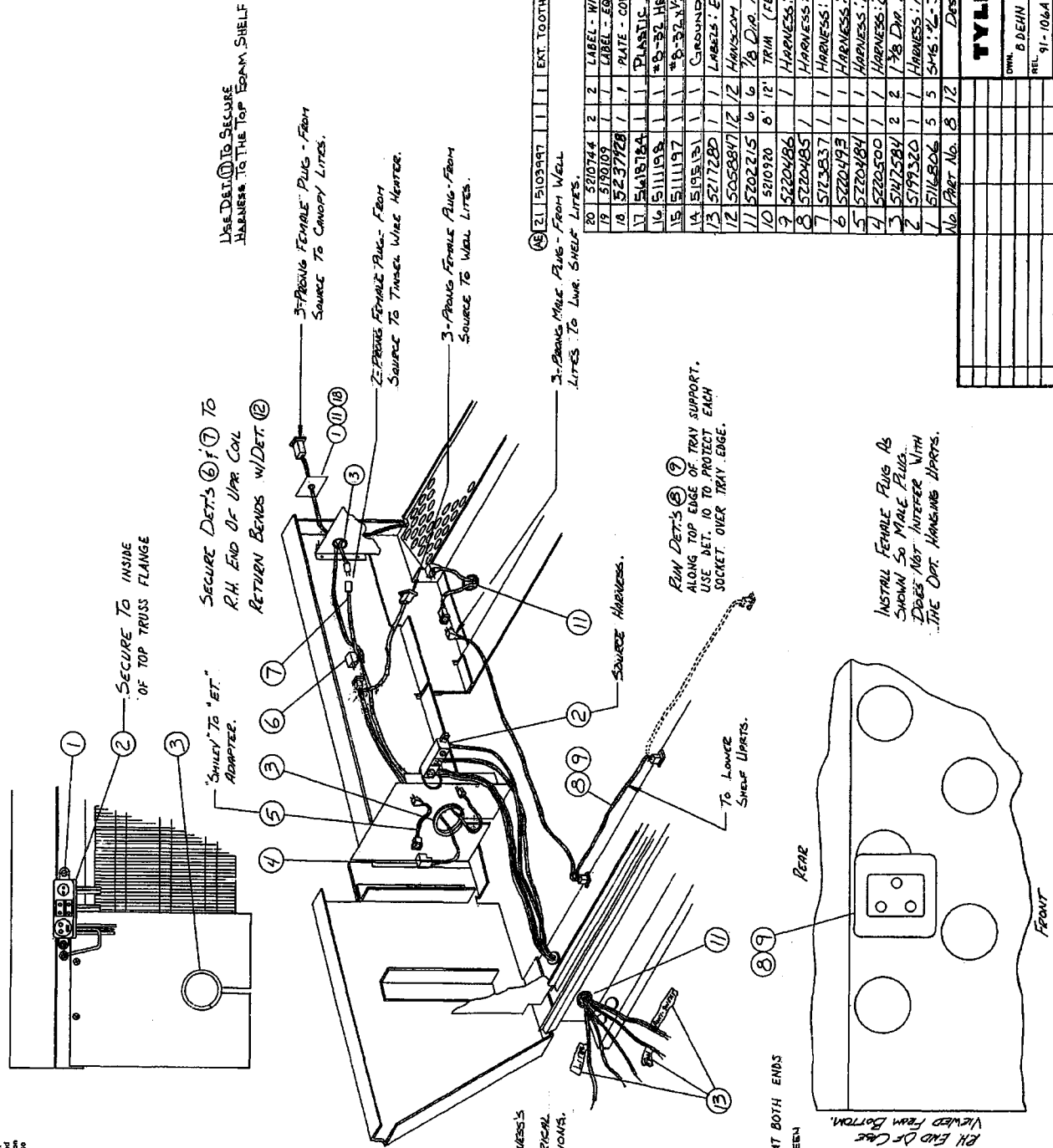
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LDRL 12FT CASES

Raceway Wiring

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QTY	DESCRIPTION	UNIT	EXT. TOOTH	SHARPE	P
20	3210744	2			P
19	5190109	1			P
18	3237728	1			P
17	5141874	1			P
16	5111195	1			P
15	5111197	1			P
14	5195151	1			P
13	5217280	1			P
12	5058847	1/2			P
11	5202215	6			P
10	5210920	8' 12"			P
9	5220486	1			P
8	5220485	1			P
7	5173537	1			P
6	5220493	1			P
5	5220484	1			P
4	5220500	1			P
3	5142584	2			P
2	5179320	1			P
1	5114806	5			P
16	Part No. 8	1/2			P

TYLER REFRIGERATION CORPORATION
WILLYS • MICHIGAN • 48110

OWN. B. DEAN DATE 16 JAN 82 CHG 18/MAR

REL. 91-106A MATL.

NAME ASSY: HARNESS LINE

LDRL

DATE 8/12

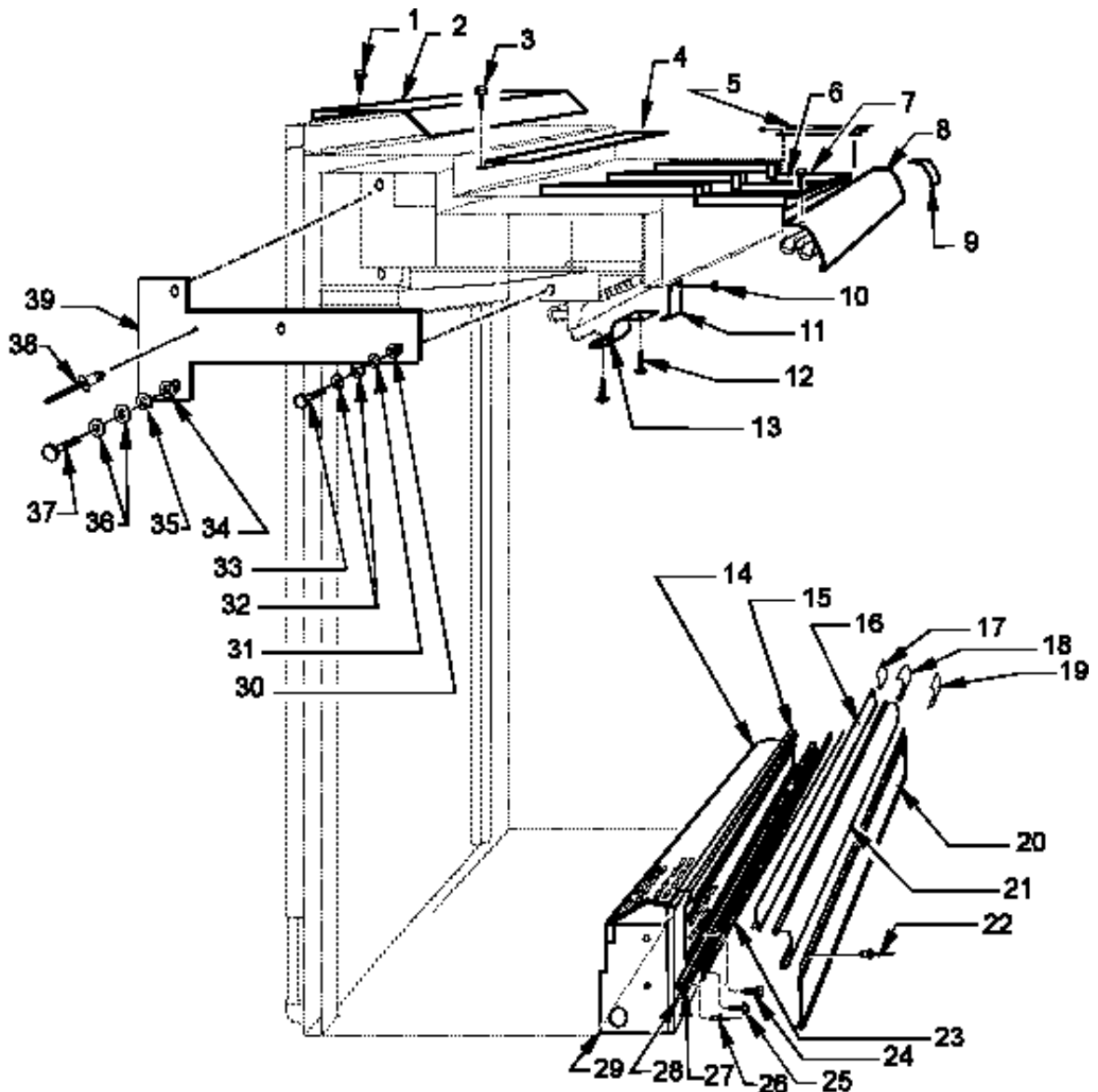
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REV. 5089313

PARTS INFORMATION**Cladding and Trim Parts List**

Item Description	LDRL	
	8'	12'
1 Screw (per close-off panel assy)	1309067 (9)	1309067 (12)
2 Close-off Panel Assembly	9026544	9026546
3 Screw (per top cover)	5183536 (5)	5183536 (10)
4 Top Cover	5186277	5186278
5 Lower Close-off Panel	9026548	9026548
Screw (per lower close-off)	5183536 (2)	5183536 (2)
6 Close-off Panel Assembly	9026544	9026546
Screw (per close-off panel assy)	1309067 (9)	1309067 (12)
7 Screw (per canopy)	5183536 (4)	5183536 (6)
8 Front Canopy Hood, Painted	9025223	9025224
9 Canopy Hood Backer, Painted	9025983	9025983
10 Screw (per backer)	5205439 (2)	5205439 (2)
11 Standard Hood Joint Trim	5222015	5222015
Short Hood Joint Trim	5222048	5222048
12 Screw (per hood joint trim)	5205439 (6)	5205439 (6)
13 Light Channel Joint Trim	5222014	5222014
14 Front Duct	5244407 (2)	5244407 (3)
15 Bumper Retainer	---- color by order ----	
16 Color Band, Painted	9020981	9020982
17 Color Band Backer, Painted	9025982	9025982
18 Bumper Backer	---- color by order ----	
19 Bumper End Trim	---- color by order ----	
20 Front Lower Cladding, Painted	9027663	9027664
21 Bumper	---- color by order ----	
22 Rivet (per front lower cladding)	5104702 (6)	5104702 (8)
Raceway Assembly	5237088	5237089
23 Raceway Cover	5237090	5237091
24 Shoulder Screw (per bumper retainer)	9025833 (16)	9025833 (24)
25 Screw (per raceway cover)	5183536 (3)	5183536 (5)
26 Rivet (per raceway)	5105037 (5)	5105037 (7)
27 Raceway	5237086	5237087
28 Mounting Angle	5196097	5196098
29 LH End Close-off	5629805	5629805
RH End Close-off	5629804	5629804

Item	Description	8'	12'
30	Nut (per end spacers)	5100634 (2)	5100634 (2)
31	Lock Washer (per end spacers)	5101006 (2)	5101006 (2)
32	Flat Washer (per end spacers)	5100979 (4)	5100979 (4)
33	Machine Screw (per end spacers)	5107443 (2)	5107443 (2)
34	Nut (per end spacers)	5100643 (6)	5100643 (6)
35	Lock Washer (per end spacers)	5628631 (6)	5628631 (6)
36	Flat Washer (per end spacers)	5100982 (12)	5100982 (12)
37	Machine Screw (per end spacers)	5120913 (6)	5120913 (6)
38	Rivet (per end spacers)	5105037 (8)	5105037 (8)
39	End Spacer	5184602 (2)	5184602 (2)



Operational Parts List

Case Usage	Domestic		Export	
	8'	12'	8'	12'
Electrical Circuit	115 Volt 60 Hertz		220 Volt 50 Hertz	
Case Size	8'	12'	8'	12'
Upper Fan Motor	5243498 9 Watt	5243498 9 Watt	5223696 18.3 Watt	5223696 18.3 Watt
Upper Fan Motor Brackets	5205112	5205112	5205112	5205112
Upper Fan Blades (8.75" 31° 3B)	5104858	5104858	----	----
(8.75" 26° 3B)	----	----	5054140	5154140
Lower Fan Motor	5125532 5 Watt	5125532 5 Watt	5205538 5 Watt	5202538 5 Watt
Lower Fan Motor Brackets	5120098	5120098	5120098	5120098
Lower Fan Blades (7.75" 32° 3B)	5104738	5104738	5104738	5104738
T-8 Lamp Ballast (canopy) (1st & 2nd row)	5966635	5991030	9028439	9028438
(3rd row)	5991029	5991030	9028437	9028438
Opt. 800MA Lamp Ballast (canopy)(1st & 2nd row)	5204769	5049140	5204859	5204859
(3rd row)	5049140	5049140	5989796	5989796
T-8 Lampholder (canopy)	5232279	5232279	5232279	5232279
800MA Lampholder (canopy) (telescoping)	5614628	5614628	5614628	5614628
(stationary)	5614629	5614629	5614629	5614629
Light Switch (SPST)	5100565	5100565	5100565	5100565
Anti-Sweat Heater (air grid retainer)	5124818	5124819	5081149	5081150

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