

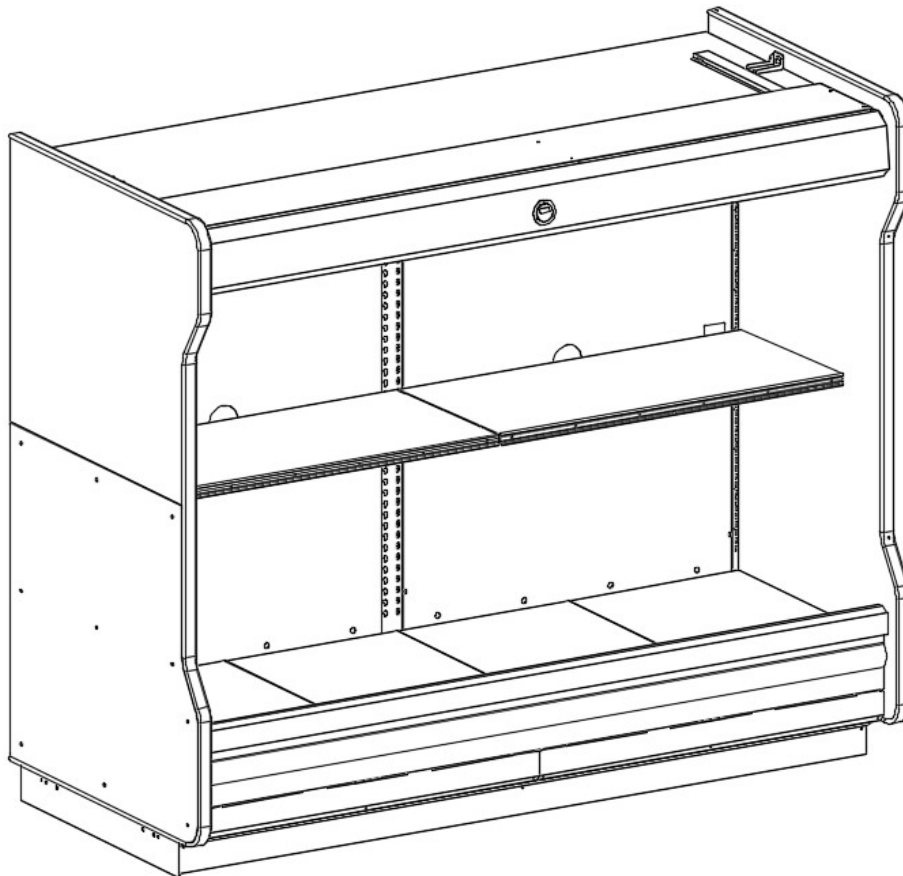


MULTI-DECK DAIRY-DELI/BEVERAGE CASES

CPS-EXA384 / CPS-EXA324

(H: 82", W: 42 5/8", L: 96 3/8") / (H: 82", W: 42 5/8", L: 144 5/8")

INSTALLATION & SERVICE MANUAL REMOTE TYPE MERCHANDISER CASE



Merchandise for display purposes only!



Activity Safety Precautions

In order to prevent any injuries to person, equipment and/or damage to the Hussmann Merchandiser Cases, sections requiring additional care to be undertaken will have one or all of the following safety reminders:



Red Safety Mark (Safety Mark A)

Extreme caution and care must be exercised when conducting this operation to ensure personal and equipment safety, and to prevent product damage.

Failure to exercise extreme caution may result in severe personal injury and/or equipment and/or product damage.



Yellow Safety Mark (Safety Mark B)

Caution and care should be exercised when conducting this operation to ensure personal and equipment safety, and to prevent product damage.

Failure to exercise caution may result in personal injury and/or equipment and/or product damage.



Hand Protection Required

Activities to be undertaken require finger and palm protection equipment to prevent personal injuries.

General Safety Precautions



Safety Equipment Required

Any installation where there is overhead work being conducted simultaneously where a Hussmann Case is being unloaded and/or set/aligned, proper safety equipment including headgear is required to ensure personal safety.

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1 Specifications

1.1 CPS-EXA384 / CPS-EXA324

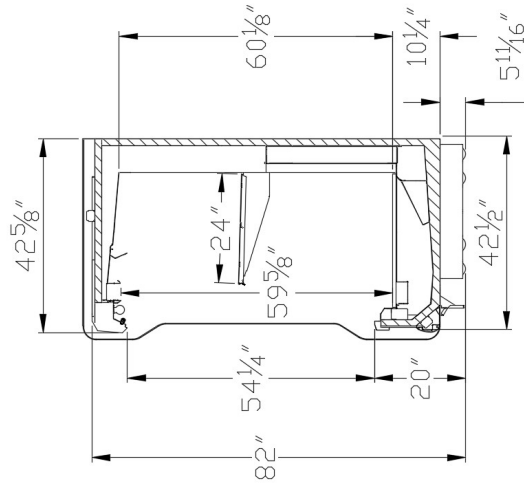
Model Name		CPS-EXA384			CPS-EXA324		
General							
Application:		Medium Temperature (Dairy-Deli / Beverage)			Medium Temperature (Dairy-Deli / Beverage)		
Capacity (BTU/h/ft):		Parallel: 1,160; Conventional: 1.207			Parallel: 1,160; Conventional: 1.207		
DX	Discharge Air:	35.0°F (1.7°C)			35.0°F (1.7°C)		
	Evaporator Temp.:	25.0°F (-3.9°C)			25.0°F (-3.9°C)		
Glycol	Discharge Air:	29.0°F (-1.6°C)			29.0°F (-1.6°C)		
	Supply Temp.:	20.0°F (-6.6°C) @ 3.0 GPM			20.0°F (-6.6°C) @ 4.5 GPM		
CO2	Discharge Air:	29.0°F (-1.6°C)			29.0°F (-1.6°C)		
	Evaporator Temp.:	25.0°F (-3.9°C)			25.0°F (-3.9°C)		
Defrost (Off-cycle)		Medium Temperature			Medium Temperature		
Frequency (times per day):		4, once every 6 hours			4, once every 6 hours		
Termination Temperature:		50.0°F (10.00°C)			50.0°F (10.00°C)		
Failsafe/Duration:		30 minutes (DX, Glycol, CO2)			30 minutes (DX, Glycol, CO2)		
Electrical			1-phase 120V			1-phase 120V	
Anti-condensation Heater:			-	-		-	-
Fan Motor:	Standard:		130W	1.52A		195W	2.28A
	High Efficiency:		56W	0.86A		84W	1.29A
Lights:	Exterior:	1 Row of Lamps	121W	1.0A	1 Row of Lamps	182W	2.0A
	Interior:	Top Panel	-	-	Top Panel	-	-
		Handrail	-	-	Handrail	-	-
		Shelves 4	-	-	Shelves 4	-	-
	Total:	Standard	121W	1.0A	Standard	168W	1.4A
Components							
Anti-condensation Heater:		-			-		
Fan Motor:	Standard:	-			-		
	High Efficiency:	SSC2B12CNHVB1 x 2			SSC2B12CNHVB1 x 3		
Fan Blade Pitch:		#128 x 2			#128 x 3		
Illumination:		929000868213			929000868213		
Pipe Diameter:	DX:	Liquid 3/8", Suction 3/4"			Liquid 3/8", Suction 3/4"		
	Glycol:	Supply 1-1/8", Return 1-1/8"			Supply 1-1/8", Return 1-1/8"		
	CO2:	Liquid 3/8", Suction 3/8"			Liquid 3/8", Suction 3/8"		

Model Name		CPS-EXA384	CPS-EXA324
Measurements			
Outer Dimensions:		47 1/8" (H) × 42 3/8" (W) × 96 3/8" (L)	47 1/8" (H) × 42 3/8" (W) × 144 5/8" (L)
Open Space:		26 5/8"	26 5/8"
Display Area:		22.16 sq.ft.	33.24 sq.ft.
Effective Capacity:		32.3 cu.ft.	50.3 cu.ft.
Shelf Dimensions:	1 Shelf	2 Shelf (18" Depth)	3 Shelf (20" Depth)
Weight:		515.0 lbs. (234.09.65k)	715.0 lbs. (317.50k)
Waste Outlet Dimensions:		1 1/2"	1 1/2"

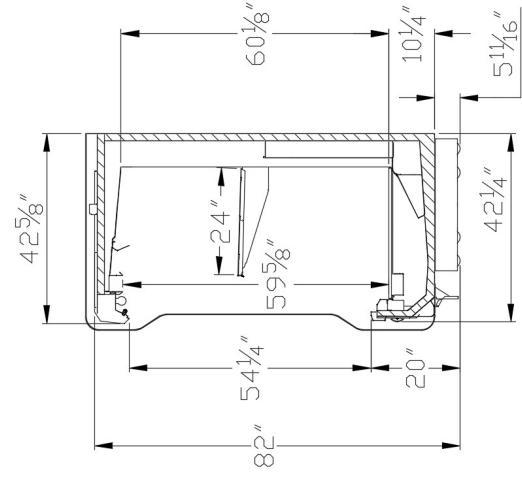
- Standard Ambient Conditions: Indoor temperature 75°F (23.9°C), relative humidity 55%, wind speed under 39.4 fpm. All specifications are based upon temperature, humidity, and wind speed values equal to or less than Standard Ambient Conditions.
- Hussmann Merchandiser Cases described in this manual are designed for indoor use only. Hussmann Merchandiser Cases should not be exposed to direct sunlight.
- Fan Motors are available in Standard-type (AC Fan Motors) or High Efficiency-type (DC Fan Motors).
- Single Air Curtain Unit's Fan Motors must be replaced as soon as possible upon development of an issue in order to maintain optimum cooling performance and ensure merchandise quality.
- Display Area Effective Capacity data specifications based on 4 (four) 24" shelves set at 0° (flat). Any variations from this specification will affect overall data.
- Performance Values based on Conventional System, not Parallel System.
- Performance Data based on NSF7.

2 Dimensions

2.1 External Dimensions



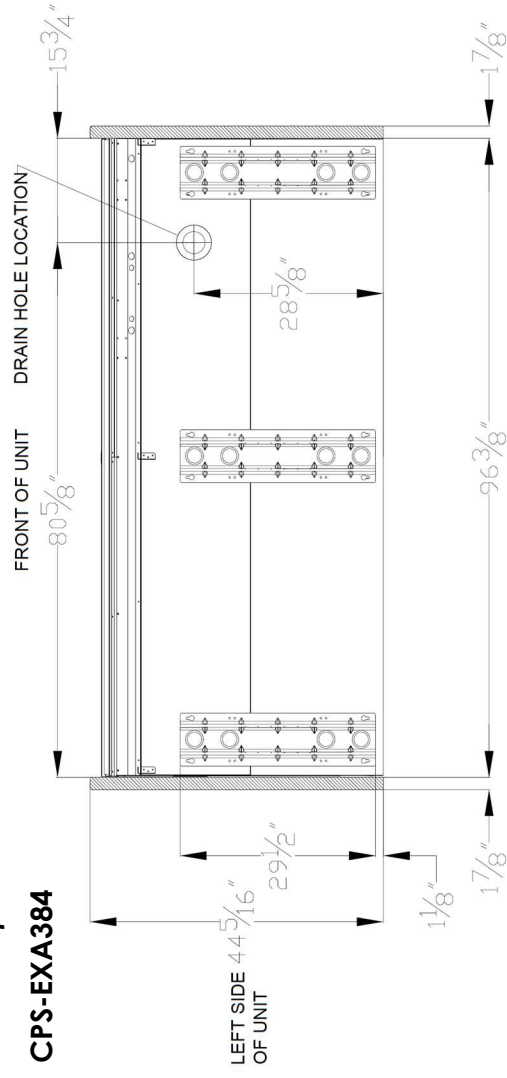
Serie B Shown



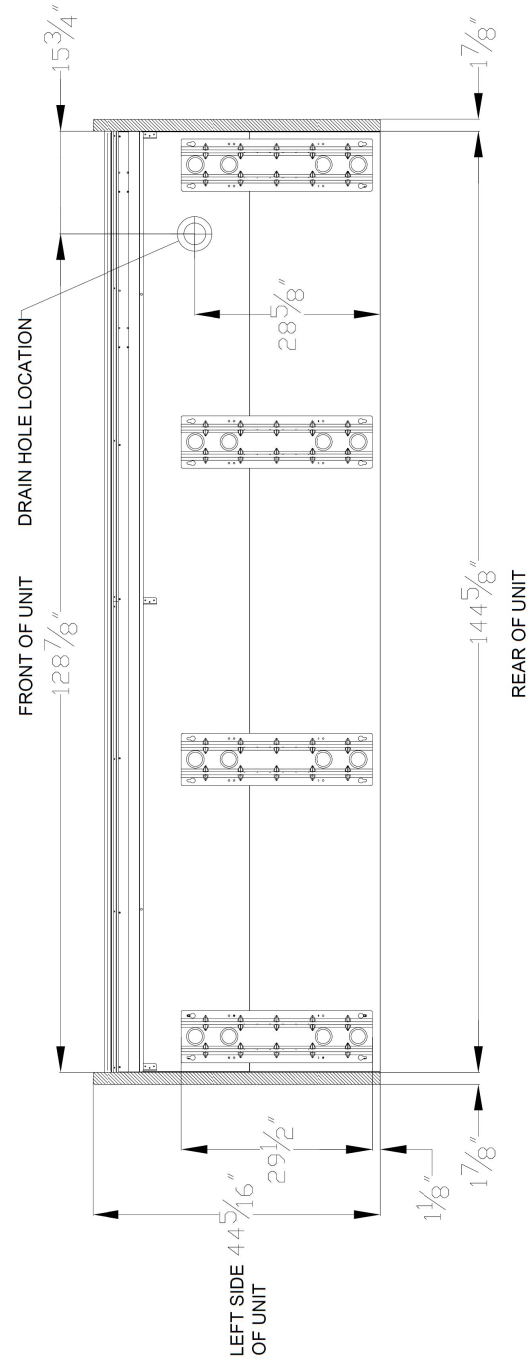
Serie C/E/H Shown

2.2 Footprint

CPS-EXA384



CPS-EXA324



3 Unloading and Lining-up Procedures

3.1 NSF Certification

The Hussmann Merchandiser Cases described in this manual are built to meet the requirements of American National Standard/NSF International Standard 7. Each Hussmann Merchandiser Case bears a nameplate identifying the type of application for which it was certified:

Type I Display Refrigerator/Freezer: Intended for use in an area where the environmental conditions are controlled and maintained so that the ambient temperature typically does not exceed 75°F.

3.2 Location

As noted above, the Hussmann Merchandiser Cases described in this manual are design for the display of products in interior spaces with climate control, with ambient conditions typically maintained below 75°F and 55% relative humidity. Proper Hussmann Merchandiser Case performance cannot be guaranteed when ambient temperature and/or humidity exceed this level.

Hussmann Merchandiser Cases should not be exposed to direct sunlight or other sources of heat.

Hussmann Merchandiser Cases should not be exposed to strong air currents, as these may disrupt the dual air curtains used to maintain proper temperature inside the merchandiser display area.

3.3 Shipping Damage

All Hussmann Merchandiser Cases and peripheral equipment should be examined for shipping damage prior to and during offloading. All Hussmann Merchandiser Cases and peripheral equipment are given a through outgoing inspection upon leaving our warehouse, and the carrier assumes responsibility for the safe arrival of our cases.

APPARENT DAMAGE: Any obvious loss or damage should be noted immediately at the time of receipt on the BOL (Bill of Lading) and signed by the carrier's agent (driver). Failure to do so may lead to rejection of the claim by the carrier.

CONCEALED DAMAGE: If damage that is not apparent during unloading is found after unpacking, retain all packing materials and submit a written request to the carrier for inspection within 15 days.

LOST ITEMS: Any claims related to lost or missing items must be made to Hussmann within 48 hours of receipt of equipment.

3.4 Unloading Instructions & Precautions



WARNING!

Hussmann Merchandiser Cases are heavy and bulky, and require at least 2 (**two**) people for unloading, moving, and installation.

Do not remove either of the 2 (two) Packing Plates from each Hussmann Merchandiser Case until the cases have been moved into place in the store lineup.

Do not walk on the top of the Hussmann Merchandiser Cases. Walking on the top of the Hussmann Merchandiser Case may lead to serious injury to yourself and others and/or damage to the case.

Do not place anything on the top of the Hussmann Merchandiser Case or use the top of any Hussmann Merchandiser Case for short- or long-term storage.

Recommended Practices for Unloading Hussmann Merchandiser Cases:

1. Do **NOT** use a Forklift to lift-up the Hussmann Merchandiser Case or remove from the trailer.
2. Use an appropriately rated J-Bar (Johnson Bar) to lift one end of the merchandiser.
3. Place an appropriately rated dolly under the base leg, lift the other side with the appropriately rated J-Bar.
4. Insert another appropriately rated dolly under that side.
5. Remove the Hussmann Merchandiser Case on the appropriately rated dollies out of the trailer and move to lineup location.
6. If moving the Hussmann Merchandiser Case to the lineup location via Forklift, exercise extreme caution so as to not incur any damages that may result from movement via Forklift (e.g. vibration due to excessive speed or hitting objects).

3.5 Aligning Cases



WARNING!

Husmann Merchandiser Cases are heavy and bulky, and require at least **2 (two)** people for unloading, moving, and installation.

Do not walk on the top of the Husmann Merchandiser Cases. Walking on the top of the Husmann Merchandiser Case may lead to serious injury to yourself and others and/or damage to the case.

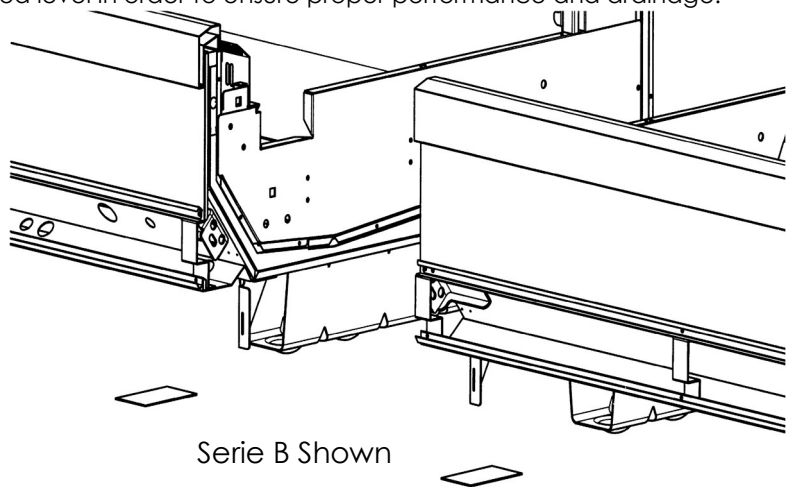
Do not place anything on the top of the Husmann Merchandiser Case or use the top of any Husmann Merchandiser Case for short- or long-term storage.

1. Review layout drawings for spaces where Husmann Merchandiser Cases are to be installed.
2. Based on the layout drawings and the Husmann Merchandiser Case footprint drawings, mark the floor to indicate the exact locations of the base legs (back edge and front edge) on each case. Multiple Husmann Merchandiser Cases should be aligned based upon the position of the base legs.
3. Snap chalk lines for the front and rear positions of the legs on each row of Husmann Merchandiser Case.
4. Mark the location showing the outside edge of each base leg on each Husmann Merchandiser Case.

3.6 Case Leveling

Husmann Merchandiser Cases must be installed level in order to ensure proper performance and drainage.

1. For each lineup of Husmann Merchandiser Cases to be properly joined, use a level (preferably a laser level) to find the highest point on the front and rear chalk lines marked in step 3 above (during Case Alignment).
2. Determine which of the two points marked on the line is higher. This is the highest point in the case lineup.
3. Estimate the number of shims needed for the four corners of each case position, in order to bring all positions to the same height as the highest point found in step 2.
4. For each row, place the first Husmann Merchandiser Case where it will sit over the highest point in the lineup. Ensure that the case is level, using shims as needed.
5. Continue placing cases in the lineup, working outward to both sides from the position of the first case placed. Use shims to ensure that all cases in the lineup are level.



NOTE: Each base leg must rest on solid supports. Insert shims as needed if there are any gaps between the floor and each base leg.

NOTE: Failure to completely level each Case in the line-up prior to connection will result in Case-to-Case tolerance loss and exterior fit and finish to be subpar, resulting in gaps to occur between Cases.

3.7 Joining Instructions

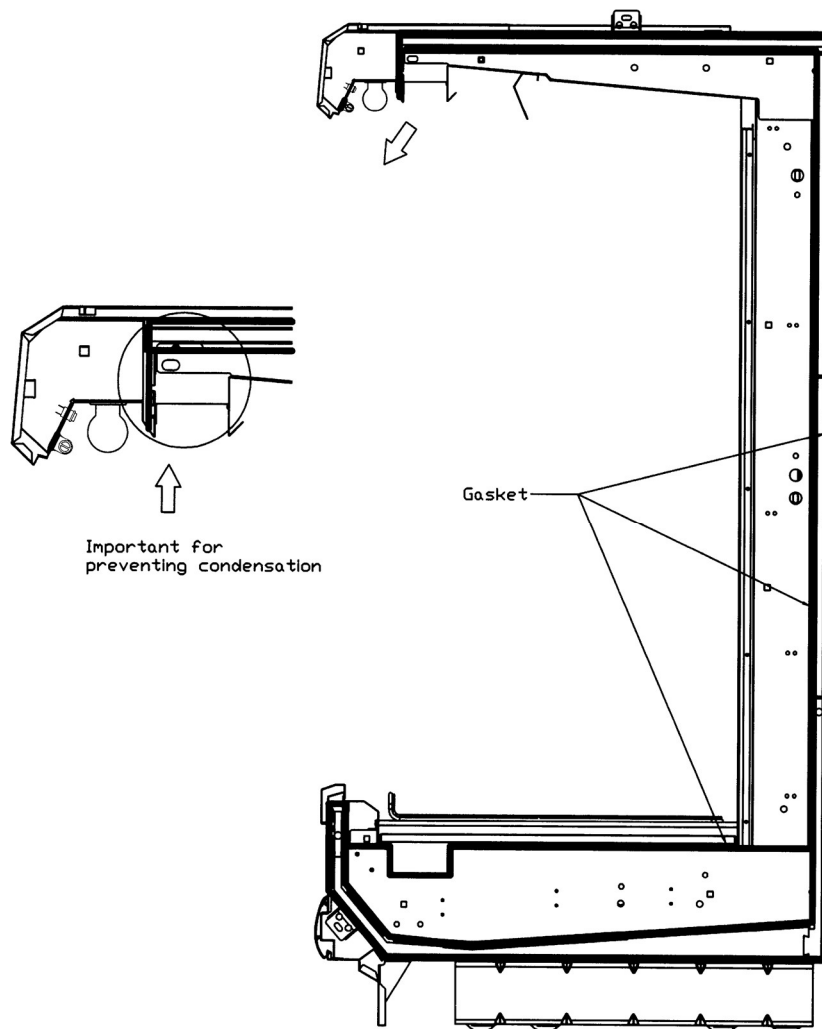
3.7.1 Applying Gasket (for connecting cases or installing side panels).

- ① Make sure that all Hussmann Merchandiser Cases are resting level (verify using level).
- ② Make sure that all required parts for joining are present (gasket, bolts, joint covers, nuts, etc.).
- ③ Remove all Shelves, Rear Interior Panels, Wire Racks, Deck Pans, and Front Air Grilles from the far right and left ends of each case being joined.
- ④ Thoroughly clean all surfaces where the gasket will be placed to remove anything that might affect adhesion.
- ⑤ Place gasket along the areas shown in bold in the drawing at bottom. When connecting 2 (two) cases, apply gasket to 1 (one) case only.

CAUTION!

- **Perimeter gasket is required by NSF.**
- Do not stretch or twist gasket when applying.
- Do not leave gaps. Always overlap gasket rather than leaving gaps.
- Gasket ends that are open must be sealed off by applying silicone at the installation site.

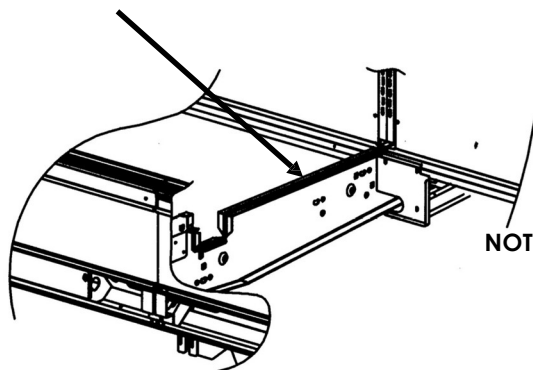
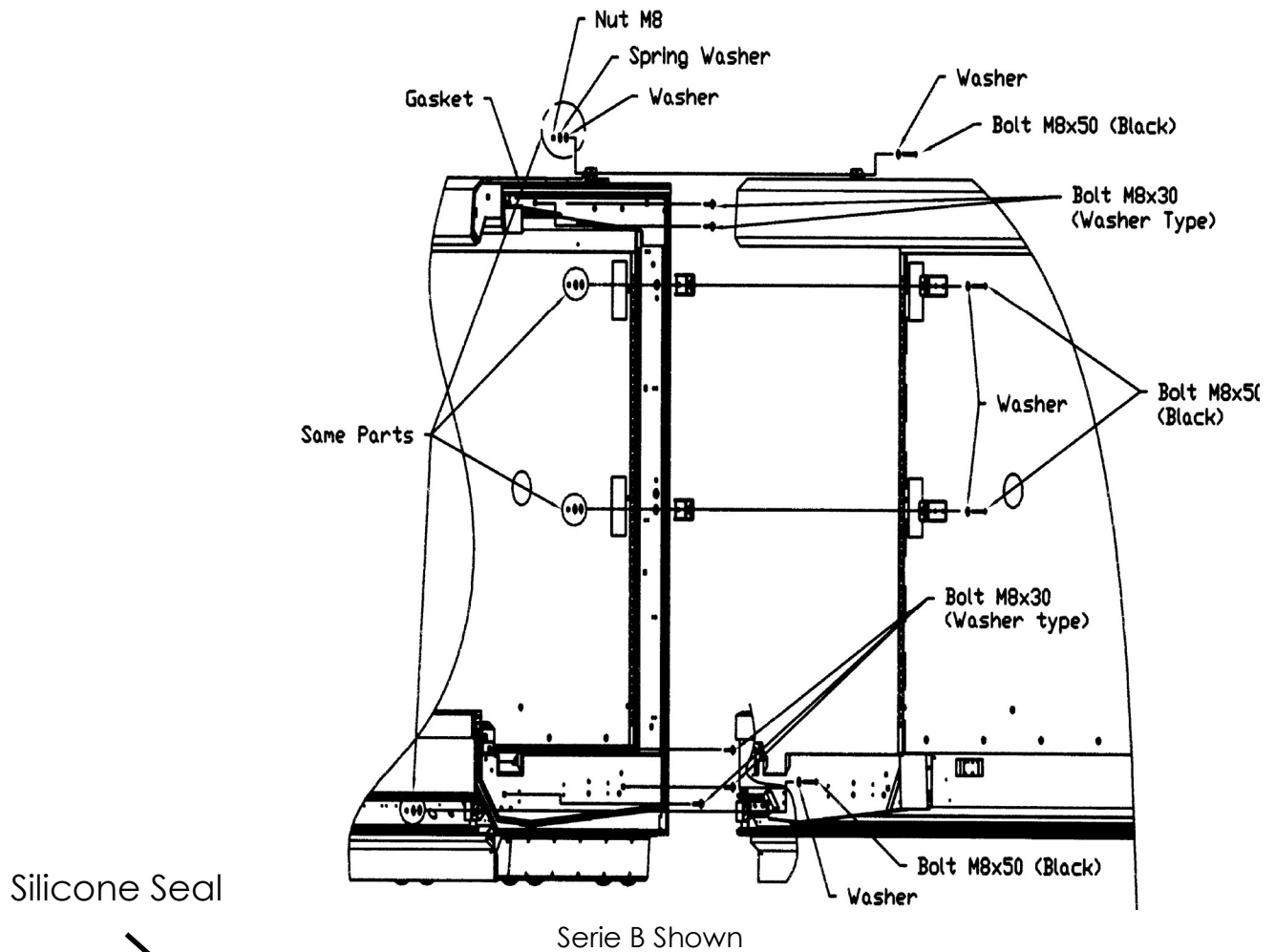
Insufficient or improper sealing may lead to insufficient cooling and condensation.



Serie B Shown

3.7.2 Connecting Cases.

- ① Apply gasket as described above.
- ② Connect cases by using the attached bolts and nuts.



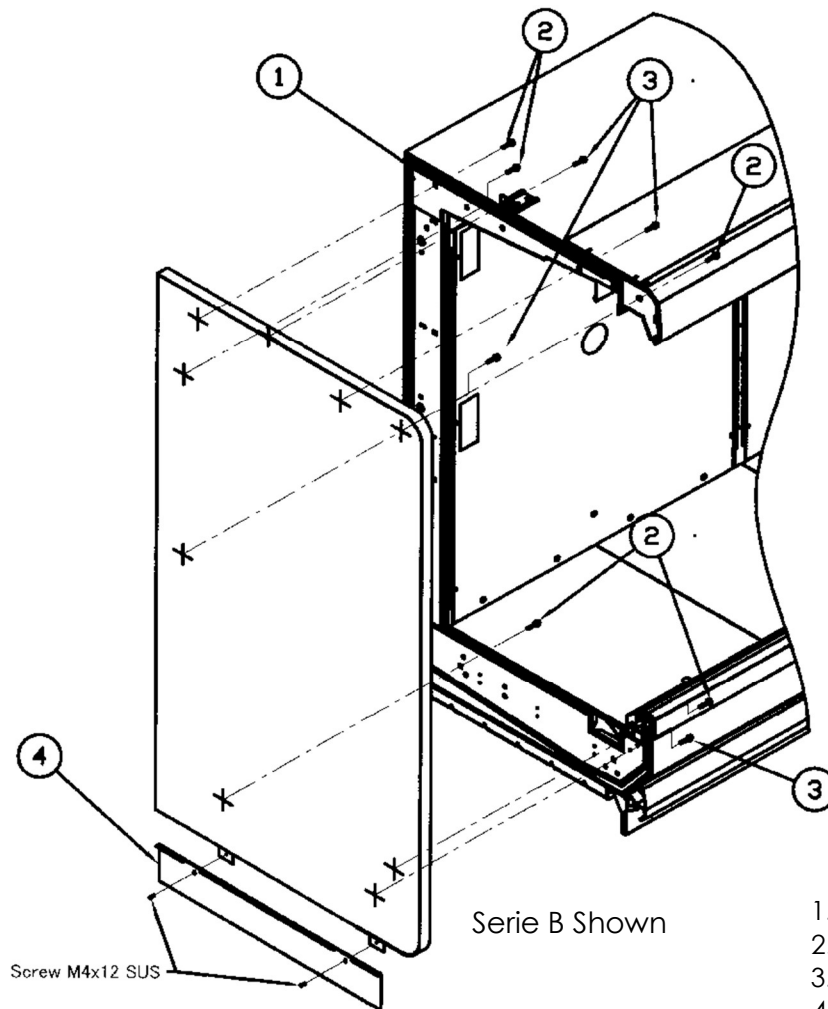
Serie B Shown

NOTE: Connection point must be silicone sealed.

NOTE: Gasket ends that are open must be sealed off by applying silicone at the installation site.

3.8 Installing Patch Ends, Standard

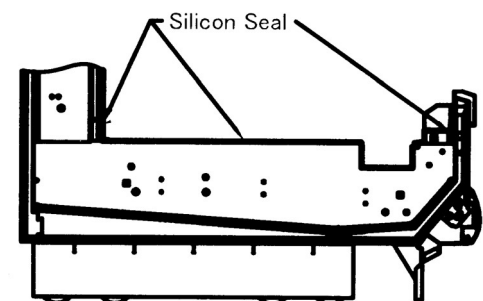
1. Apply gasket to Case Body (per previous instructions).
2. If present, remove protective film from inside wall of Patch End.
3. Place patch end to line-up with bolt holes.
4. From inside unit, ratchet in M8 & optional M5 bolt into Patch End until secure.
5. Apply Silicone Sealant between inside of Patch End and lower frame (see drawing to the left for details).
6. Attach Patch End Side Kickplate (Item 3 in above drawing).



1. Gasket
2. M8 x 30 Bolts and Washer
3. 3 M8 x 50 Bolts
4. Side Cover (Kickplate)

1. Apply gasket to Case Body (per previous instructions).
2. If present, remove protective film from inside wall of the Patch End.
3. Place Patch End to line-up with bolt holes.
4. From inside unit, ratchet in M8 & optional M5 bolt into Patch End until secure.
5. Apply Silicone Seal between inside of Patch End and lower frame (see drawing to the right for details).
6. Attach Patch End Side Kickplate (Item 3 in above drawing).

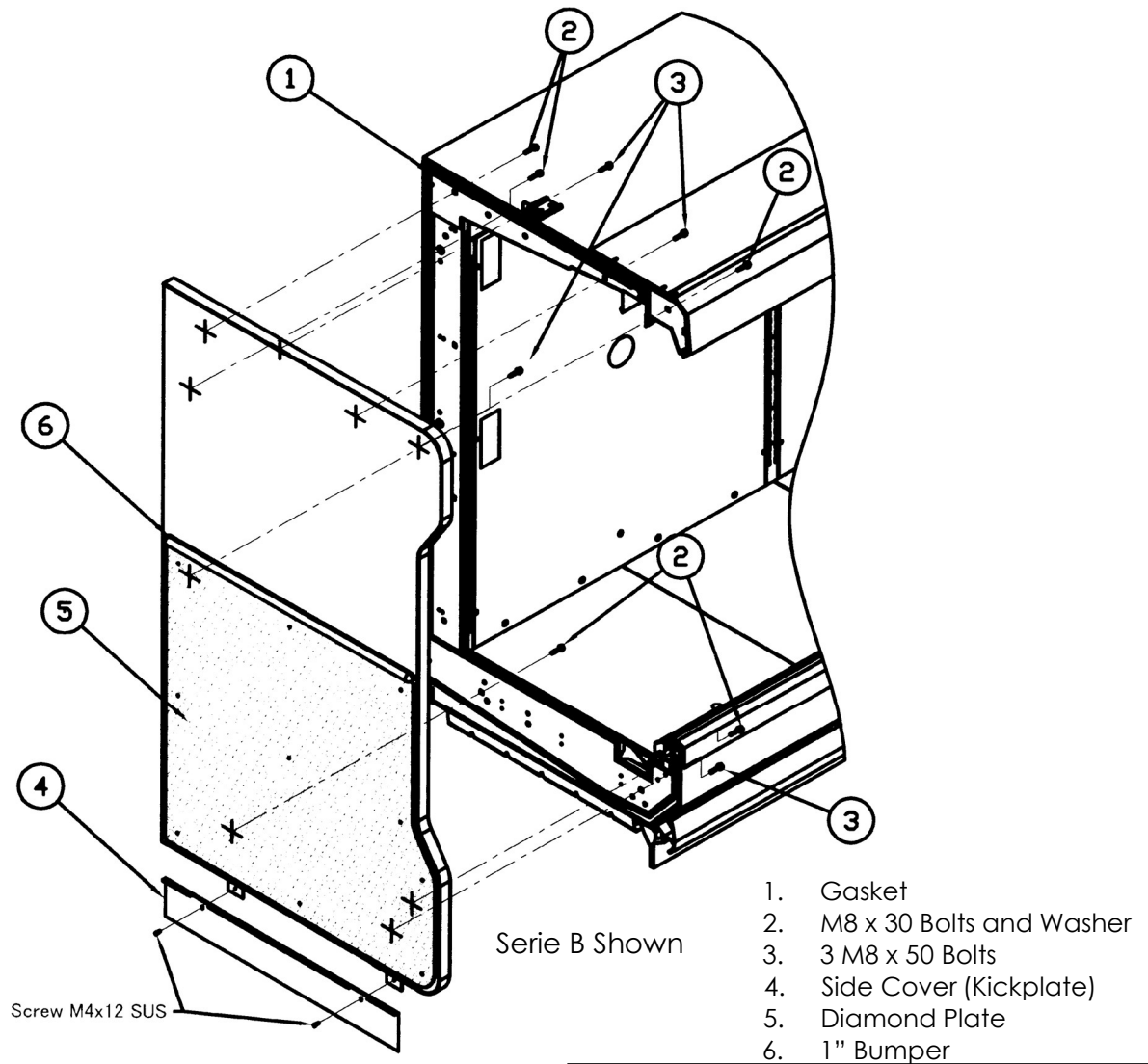
NOTE: Apply silicone sealant inside after installing the patch end.



Serie B Shown

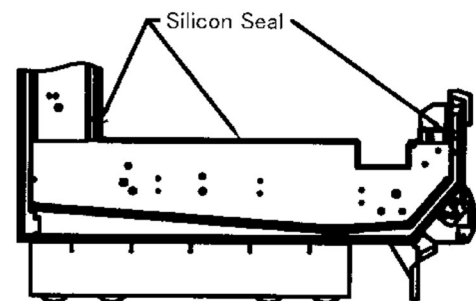
3.9 Installing Patch Ends, Contoured

1. Apply gasket to Case Body (per previous instructions).
2. If present, remove protective film from inside wall of Patch End.
3. Place patch end to line-up with bolt holes.
4. From inside unit, ratchet in M8 & optional M5 bolt into Patch End until secure.
5. Apply Silicone Sealant between inside of Patch End and lower frame (see drawing to the left for details).
6. Attach Patch End Side Kickplate (Item 3 in above drawing).

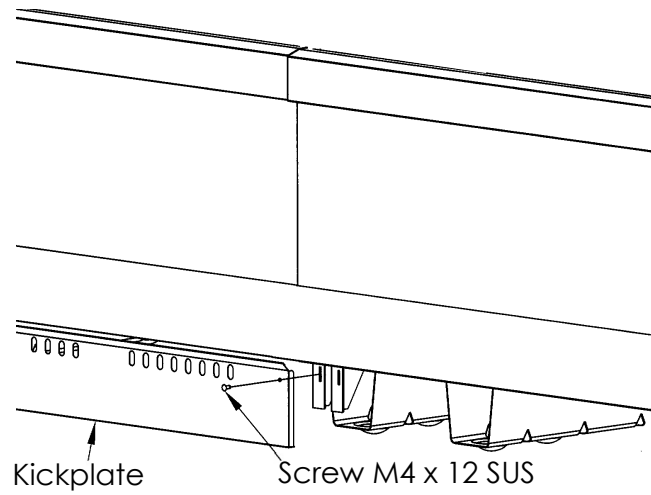


1. Apply gasket to Case Body (per previous instructions).
2. If present, remove protective film from inside wall of the Patch End.
3. Place Patch End to line-up with bolt holes.
4. From inside unit, ratchet in M8 & optional M5 bolt into Patch End until secure.
5. Apply Silicone Seal between inside of Patch End and lower frame (see drawing to the right for details).
6. Attach Patch End Side Kickplate (Item 3 in above drawing).

Apply silicone sealant inside after installing the patch end.

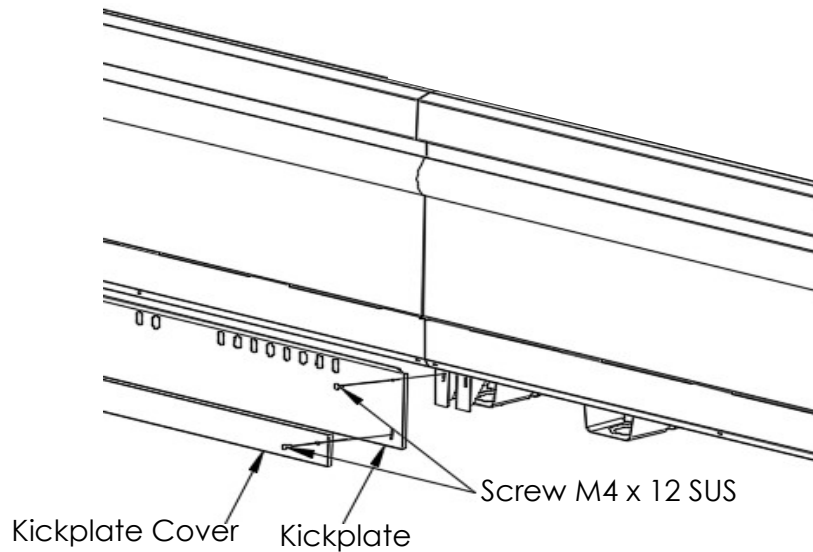


3.10 Installing Kickplate Serie B



Serie B Shown

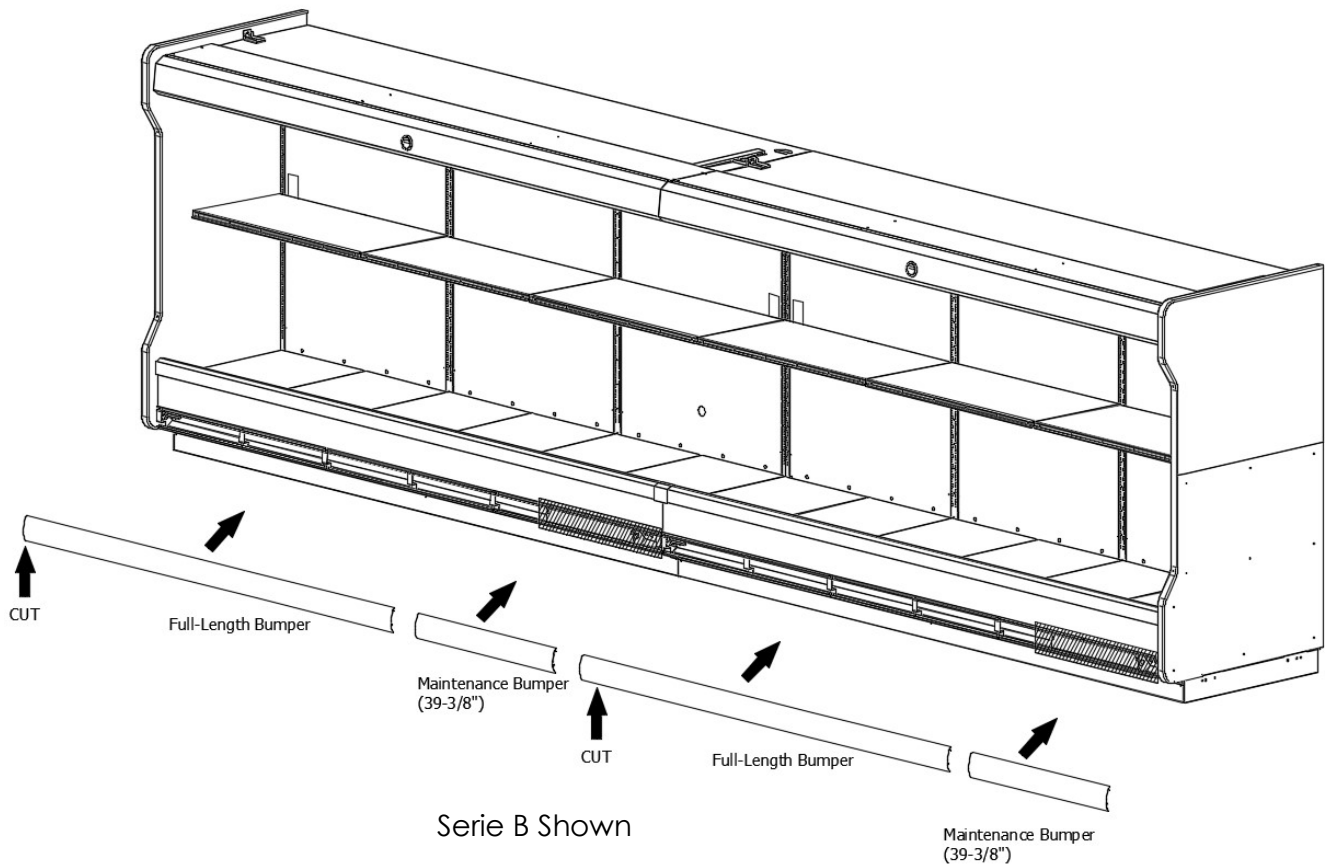
1. Align the mounting hole in the Kickplate with the slot in the Kickplate Mounting Bracket on the Hussmann Merchandiser Case and tighten accordingly.



Serie C/E/H Shown

1. Align the mounting hole in the Kickplate with the slot in the Kickplate Mounting Bracket on the Hussmann Merchandiser Case and tighten accordingly.
2. Align the mounting hole in the Kickplate Cover with the slot in the Kickplate on the Hussmann Merchandiser Case and tighten accordingly.

3.11 Installing Bumper Serie B



Attaching the Bumper

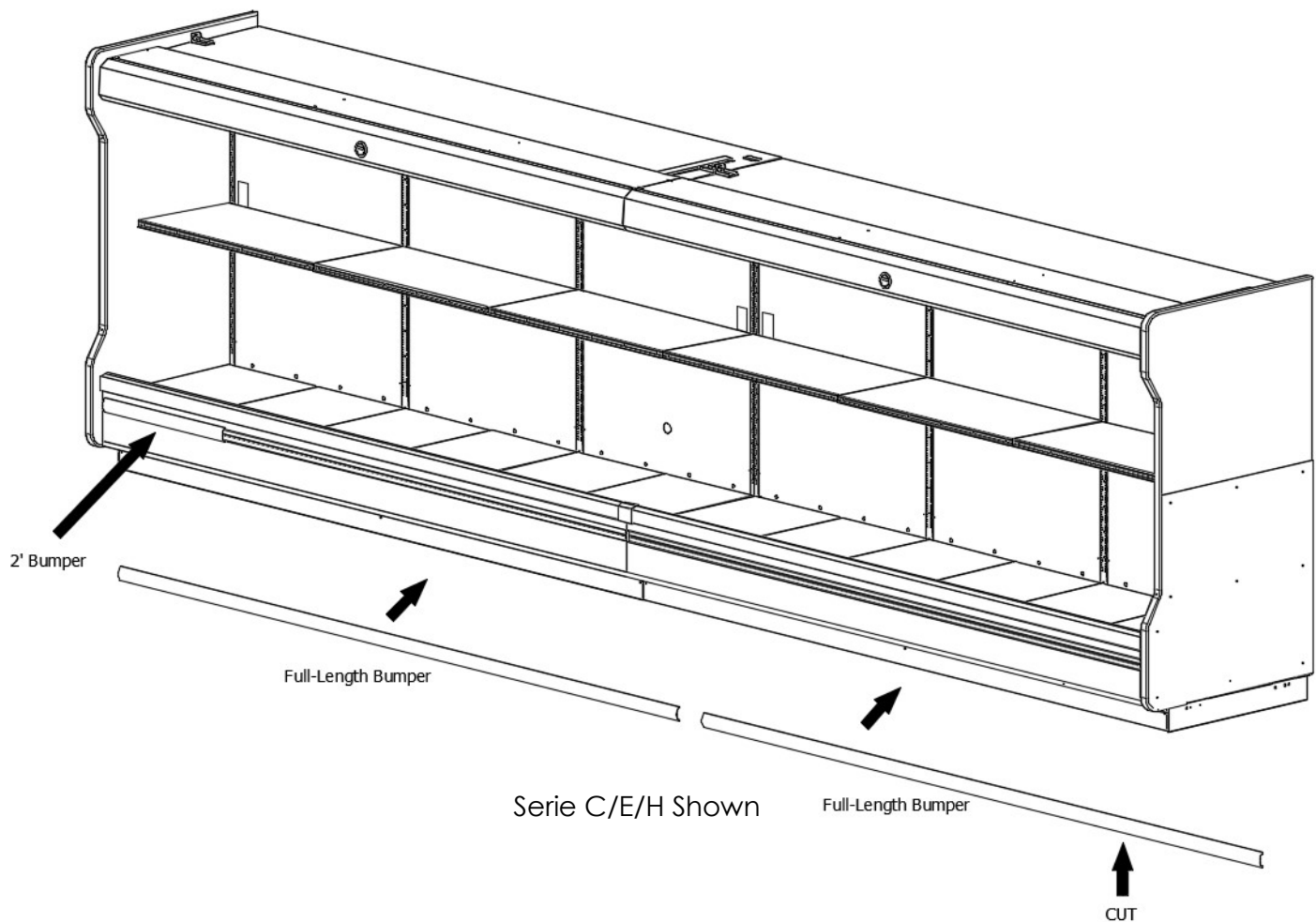
1. Attach Maintenance Bumper (length 39-3/8 inches) to bumper brackets over the electrical connection box ("raceway") on each Hussmann Merchandiser Case. The Raceway is located on the right end of each Hussmann Merchandiser Case.
2. Attach Full-Length Bumpers between Maintenance Bumpers on separate Hussmann Merchandiser Cases, and also between Maintenance Bumpers and Patch Ends.
3. Cut Full-Length Bumpers to size on-site. Cut to correct size so that no gaps remain between pieces.



WARNING!

Wear appropriate eye and hand protection and exercise care when using power tools to prevent personal injuries and damage to the case.

3.12 Installing Bumper Serie C/E/H



Attaching the Bumper

1. Attach End Bumper (length 2 foot) to bumper base on the front of the case on each Hussmann Merchandiser Case.
2. Attach Full-Length Bumpers after and overlap all separate Hussmann Merchandiser Cases.
3. Cut Full-Length Bumpers to size on-site. Cut to correct size so that no gaps remain between pieces.
 - Tip: drop the final Bumper inside the unit 20 to 30 min until it contracts, then measure, cut to correct size and install.



WARNING!

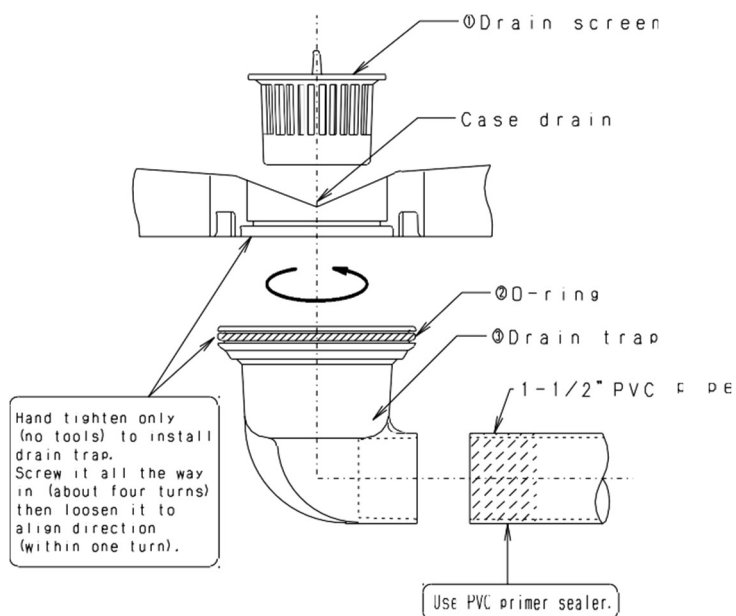
Wear appropriate eye and hand protection and exercise care when using power tools to prevent personal injuries and damage to the case.

4 Refrigeration, Plumbing & Electrical Procedures

4.1 Piping (Plumbing, Refrigeration)

- U-trap installation

Install U-Trap referring to the drawing below.

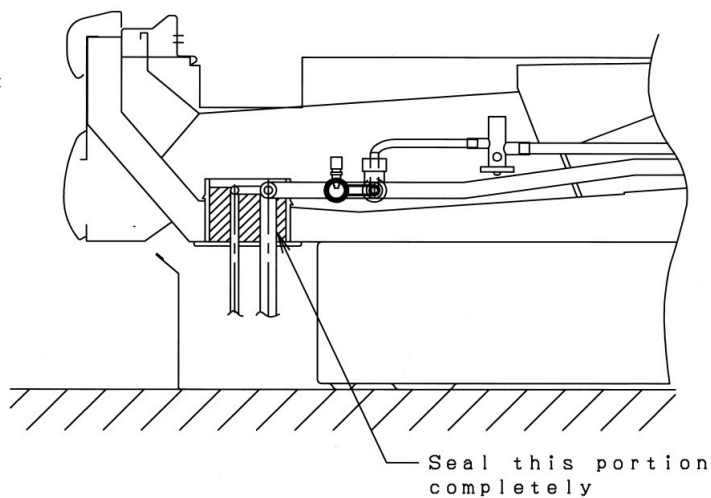


	Part Name	Part Number
	Drain Screen	8FL2162000500
	O-ring	8FL2646000100
	Drain Trap	8FL2658000200

- Sealing the refrigerant pipe opening Seal pipe completely.

Insufficient sealing may cause the following problems:

- Insufficient cooling
- Excessive frost
- Icing over
- Condensation on the bottom of c



4.2 Electrical Data

Please refer to Specifications section and nameplate attached to the Hussmann Case for electrical information.

4.3 Electrical – Guidelines & Precautions

All wiring and electrical field work must comply with the National Electrical Code ("NEC") and other applicable local codes. All electrical connections must be made inside the raceway area.

4.4 Wiring

4.4.1 Wiring Color Code

WIRING COLOR CODE

Leads for all electric circuits are identified by a colored plastic band; neutral wire for each circuit has either white insulation or a white plastic sleeve in addition to the color band.

BLUE.....FAN MOTORS

ORANGE.....LIGHTS

YELLOW.....CONDENSATE HEATERS

RED.....DEFOST HEATERS, 208V

GRAY.....DEFOST TERMINATION THERM.

GREEN.....GROUND

ELECTRICIAN NOTE: Use copper conductor wire only.
Case must be grounded.

CORD DE COULEUR DE CABLAGE

Les câbles de tous les circuits électriques sont identifiés par une bande de plastique de couleur; le fil neutre de chaque circuit comporte une isolation blanche ou un manchon de plastique blanc en plus de la bande de couleur.

BLEU.....MOTEURS DU VENTILATEUR

ORANGE.....ECLAIRAGE

JAUNE.....CHAUFFAGE ANTI-CONDENSATION

ROUGE.....CHAUFFAGE DE DEGIVRAGE, 208V

GRIS.....THERM. D'ARRET DE DEGIVRAGE

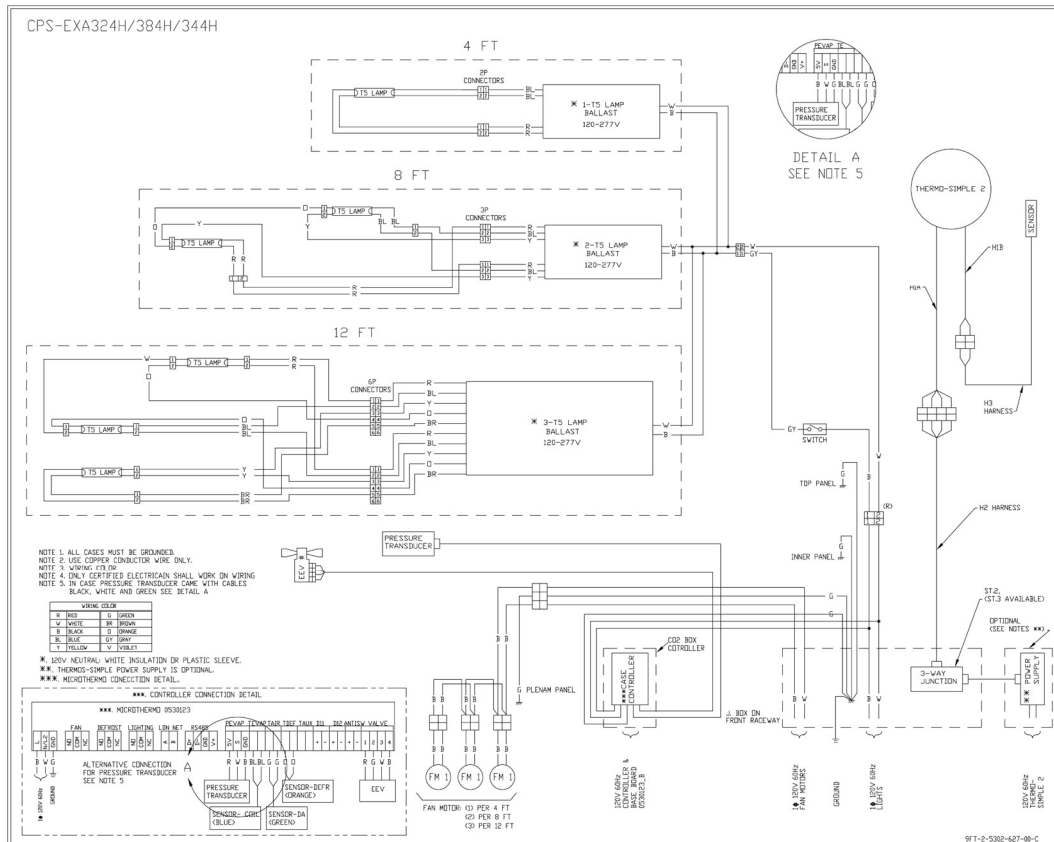
VERT.....MISE A LA TERRE

REMARQUE A L'ELECTRICIEN: Utilisez uniquement du fil électrique avec des conducteurs de cuivre. Le réfrigérateur doit être mis à la terre.



WARNING!

While undertaking any electrical work, ensure that the case is not plugged-in and/or the power has been turned off at the source and that the source has been flagged appropriately to indicate that work is being conducted to prevent personal injuries and damage to the case.



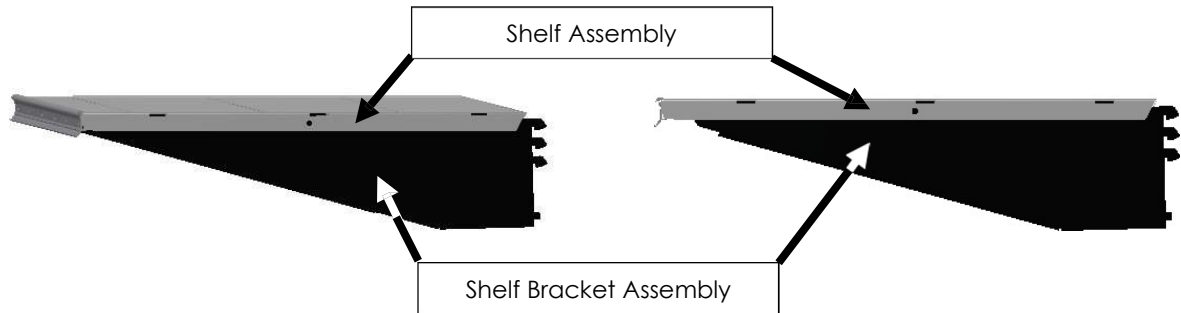
5 Operation

5.1 Shelf Load Limits

Husmann Multi-Deck Dairy-Deli/Beverage Cases are shipped from the factory, if so ordered, with Shelf Bracket and Shelf Assembly which are designed and engineered to be at 0 (zero) degrees and to maintain a Maximum Distributed Load Capacity of 500lbs (227kgs) per shelf.

Unitized Shelf Bracket and Shelf, 3/4 View

Unitized Shelf Bracket and Shelf, Side View



- Ensure that all Shelf Brackets of the Shelf Bracket Assemblies and Shelf Assembly are installed on the same horizontal plane, do not have one Shelf Bracket Higher, or lower, than the other, as this will cause exaggerated stress to develop.
- Exaggerated stress will contribute to the Shelf Bracket Assemblies and Shelf Assembly failure, especially during Merchandise replenishment when the load capacity is no longer equally distributed along the shelf.
- It is strongly recommended that periodic checks of the Shelf Bracket Assemblies and Shelf Assembly be conducted to ensure that neither has been affected by any instances of having exceeded the Maximum Distributed Load Capacity of 500lbs (227kgs) per shelf.
- Replace any and all damaged Shelf Bracket Assemblies and Shelf Assembly immediately to maintain the performance integrity of the Husmann Merchandiser Case.

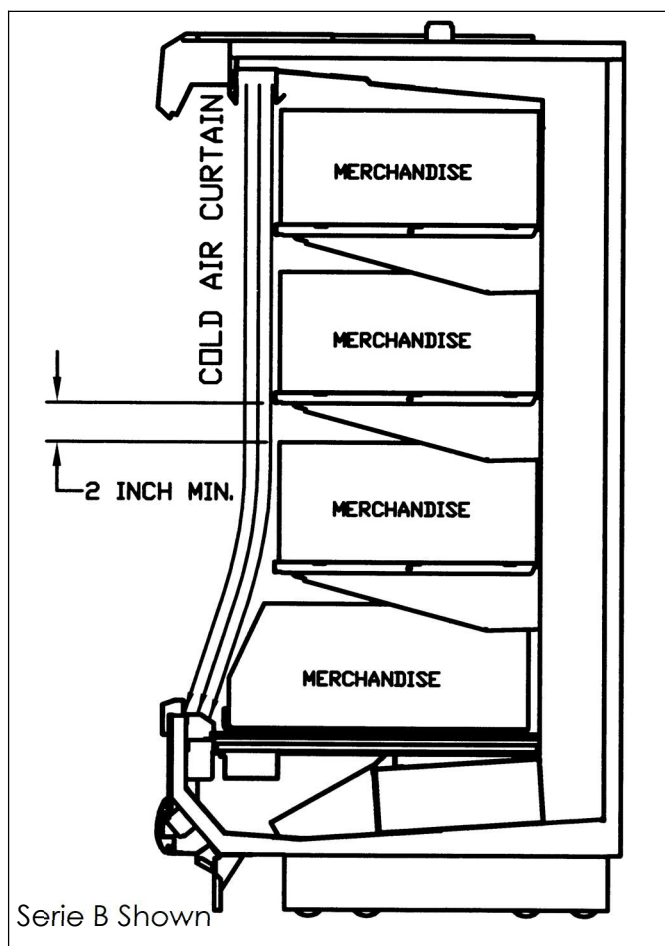
5.2 Refrigeration Load Limits

In order to maintain proper temperature and unit performance, the air curtain in each Hussmann Merchandiser Case must remain unobstructed:

- Do not stock shelves beyond the marked load limits.
- Do not block Honeycombs or Return Air Grilles.
- Do not block airflow in any other way (with signs, tools, packages, etc.)

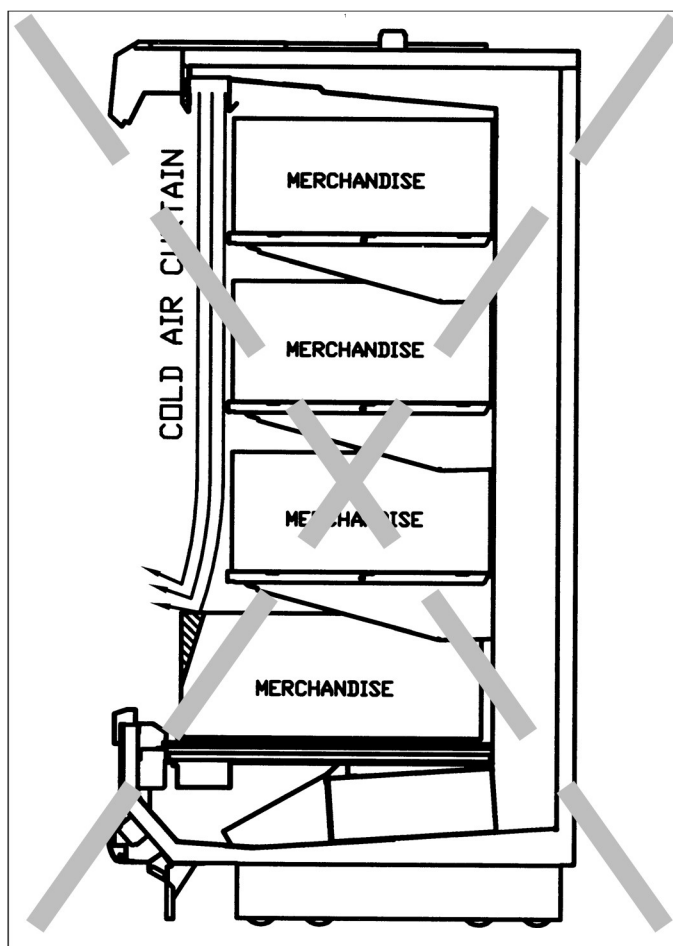
Failure to follow these precautions will lead to insufficient temperature control, spoilage of stored merchandise, and excessive frost.

CORRECT

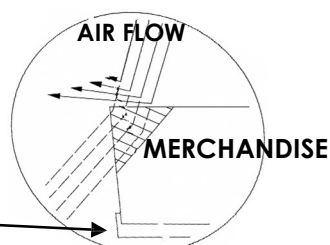
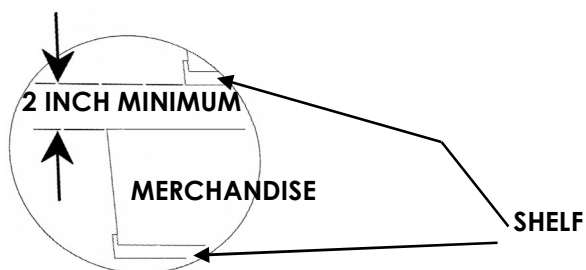


A minimum spacing of 2 inches must be maintained between the top of merchandise and the bottom of the shelf above it.

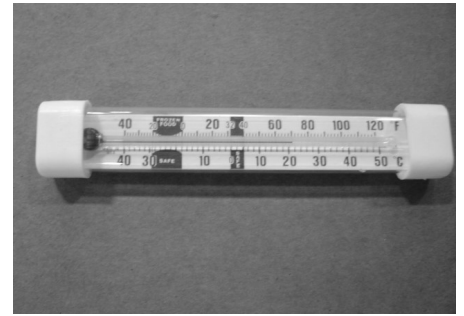
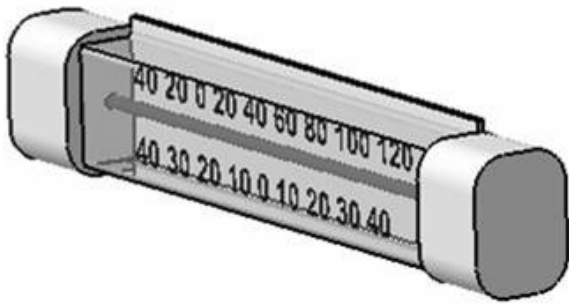
INCORRECT



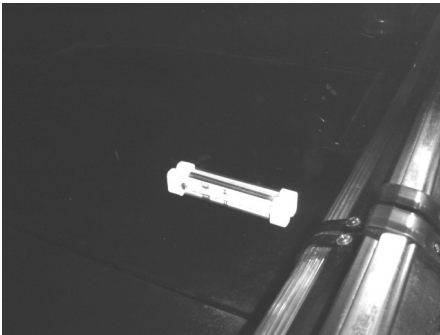
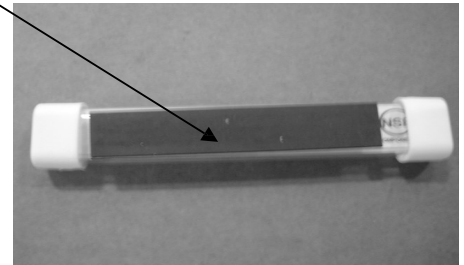
Loading merchandise beyond the maximum level will result in merchandise touching or entering the cold air curtain.



5.3 Installing FDA/NSF Thermometer



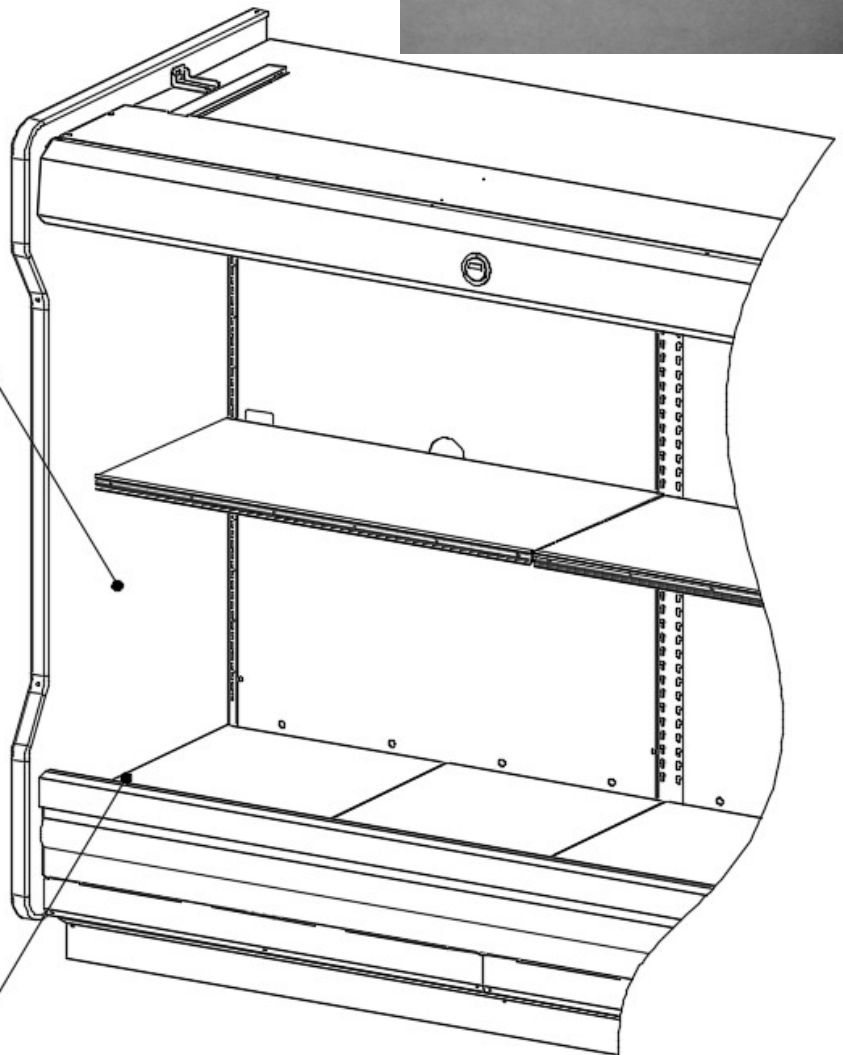
Magnet



Inside Patch-End



Return Air Grill



Serie C/E/H Shown

Suggested locations for the thermometer required by NSF/ANSI 7 and the FDA Food Code are indicated above.

It is the responsibility of the purchaser/end user of this product to determine the location within the food storage area that best meets these code requirements.

6 Care and Cleaning Guidelines

In order to keep Hussmann Merchandiser Cases sanitary and in good working order, we recommend thorough periodic cleaning as follows:

6.1 Exterior Panels (Daily Cleaning)



- a. Exterior panels should be cleaned with water only. Wet a soft cloth and wring it out to wipe down panels.
- b. If required, you may use a mild detergent and warm water to remove stains. You should follow by wiping down with water only in order to prevent discoloration.
- c. Take particular care to clean areas that may be exposed to salt or saline solutions.
- d. DO NOT use scrapers, blades or other sharp objects to remove adhesive, as you may damage panels. You may use rubbing alcohol to remove adhesive if water and mild detergents alone are insufficient.

6.2 Price Tag Molding [PTM] (Daily Cleaning)



If your Price Tag Molding (PTM) on the Hussmann Dairy-Deli/Beverage Cases are attached (riveted) to the Shelf Assembly, these cannot be removed for cleaning, however, please follow these procedures to maintain Price Tag Molding (PTM) cleanliness.

- a. Wipe down the entire Price Tag Molding, taking care to remove food particles, drips, garbage, dust and any other foreign substances.
- b. If required, you may use a mild detergent and warm water to remove stains. You should follow by wiping down with water only in order to prevent discoloration.
- c. Take particular care to clean areas that may be exposed to salt or saline solutions.
- d. DO NOT use scrapers, blades or other sharp objects to remove adhesive, as you may damage the PTM. You may use rubbing alcohol to remove adhesive if water and mild detergents alone are insufficient.

6.3 Shelf Surfaces (Daily Cleaning)



- a. Clean the entire shelf surface, preferably with water only. If required, you may use a mild detergent and warm water to remove stains. You should follow by wiping down with water only in order to prevent discoloration.
- b. Make sure to clean under mats or objects resting on the shelf surfaces.

Shelf Assemblies (Weekly Cleaning)

- a. Start shelf assembly cleaning by turning all fluorescent lamps off, if so equipped.
- b. Disconnect all fluorescent lamp plugs, if so equipped, pulling by the terminals. **DO NOT PULL ON CORDS.**
- c. Remove shelves.
- d. Thoroughly check the underside of each shelf for drips or other foreign substances and clean.
- e. Clean the entire shelf surface, preferably with water only. If required, you may use a mild detergent and warm water to remove stains. You should follow by wiping down with water only in order to prevent discoloration.
- f. Reset shelves.



WARNING

Make sure that all fluorescent lamp plugs, if so equipped, are not wet to prevent shock and/or damage, and are placed firmly in their sockets to prevent damage to the fluorescent lamp and/or the case.

6.4 Mirrors (if so equipped), Fluorescent Lamps, Drain Trap (Monthly Cleaning)

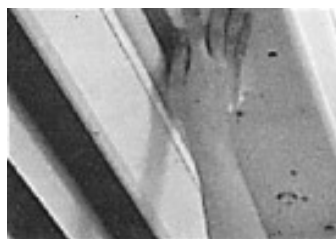
When cleaning mirrors, if so equipped, and fluorescent lamps,

1. Turn off the fluorescent lamps prior to cleaning.
2. DO NOT place your weight on the shelves to reach mirrors, if so equipped, or lamps if they are difficult to reach, use a stepladder or other means to reach them.

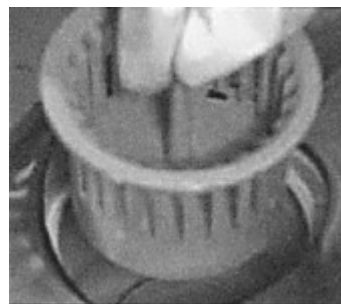
Clean mirrors, if so equipped, with a mild detergent and water, then dry with a non-abrasive cloth.



Wipe fluorescent lamps with a soft, dry cloth. If required, you may use a water-dampened cloth that has been squeezed well to remove most moisture. At this time, you may also wish to check for lamps needing replacing.



Please make sure to check and clean the drain trap at least once a month. Remove any material that has gathered in the drain trap and dispose of it. Clean the drain trap and put it back in its original position.



6.5 Honeycomb Assemblies (at least every 3 months)

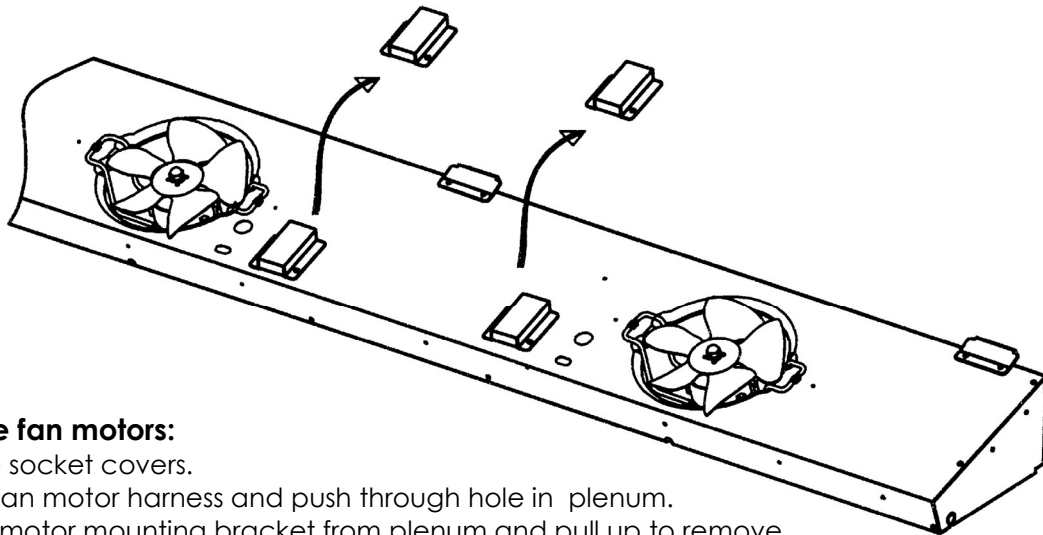
Because Honeycomb Assemblies may deform under pressure, DO NOT use vacuum cleaners to clean them.

- a. When Merchandise is in place under the Honeycomb Assemblies, first cover the Merchandise with a cloth or other material to keep dust from falling.
- b. Remove Honeycomb Assemblies by pulling down on the wire clips attached to the assemblies.
- c. Rinse Honeycombs in running water in order to flush out dust, etc. Dust is best removed by spraying/flushing from the cleaner side toward the dirtier side.
- d. After thoroughly shaking and drying rinsed Honeycomb Assemblies, replace them in their original positions in the Hussmann Merchandiser Cases.



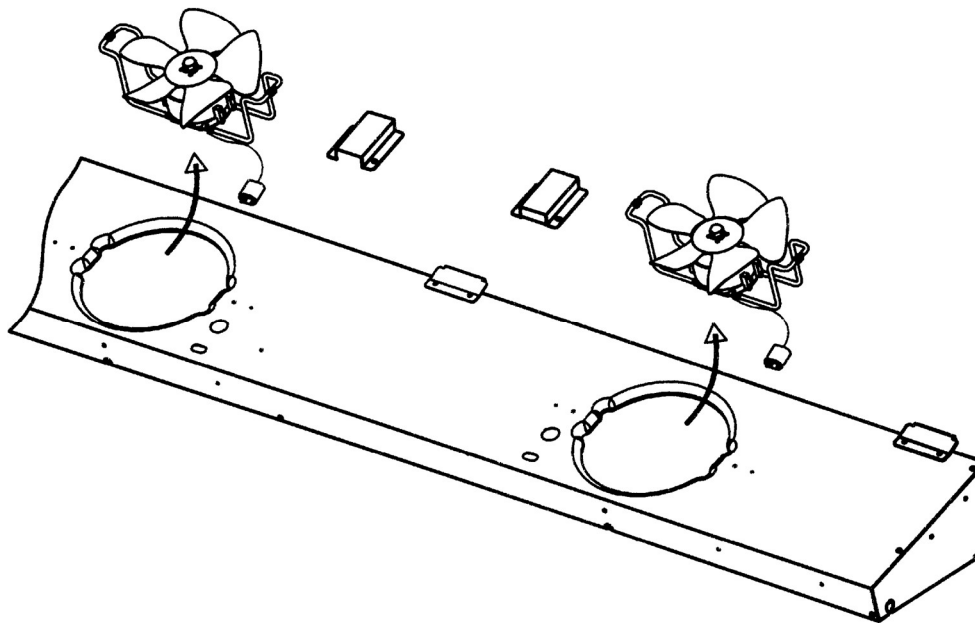
7 Service

7.1 Replacing Fan Motors and Blades



To replace the fan motors:

- ① Remove the socket covers.
- ② Unplug the fan motor harness and push through hole in plenum.
- ③ Detach fan motor mounting bracket from plenum and pull up to remove.



CAUTION!

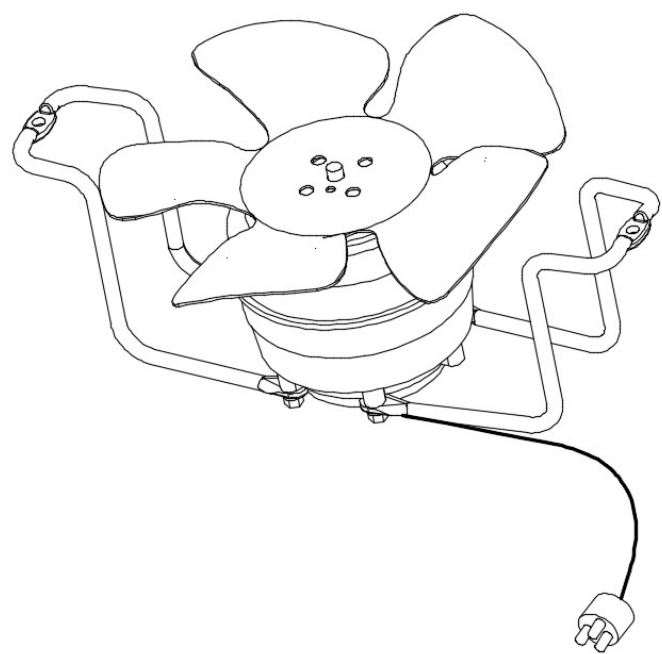
In the instance where the Fan Motor Assembly nearest the TXV (Thermal Expansion Valve), located to the left facing, should cease functioning, the overall cooling performance of the Case will be affected, therefore, replacement must be conducted in a timely manner so as to not cause Merchandise to be compromised.



HAND PROTECTION REQUIRED!

Activities to be undertaken require finger and palm protection to prevent personal injuries.

Fan Motor Assembly Part Numbers (High Efficiency-Type Fan Motors)

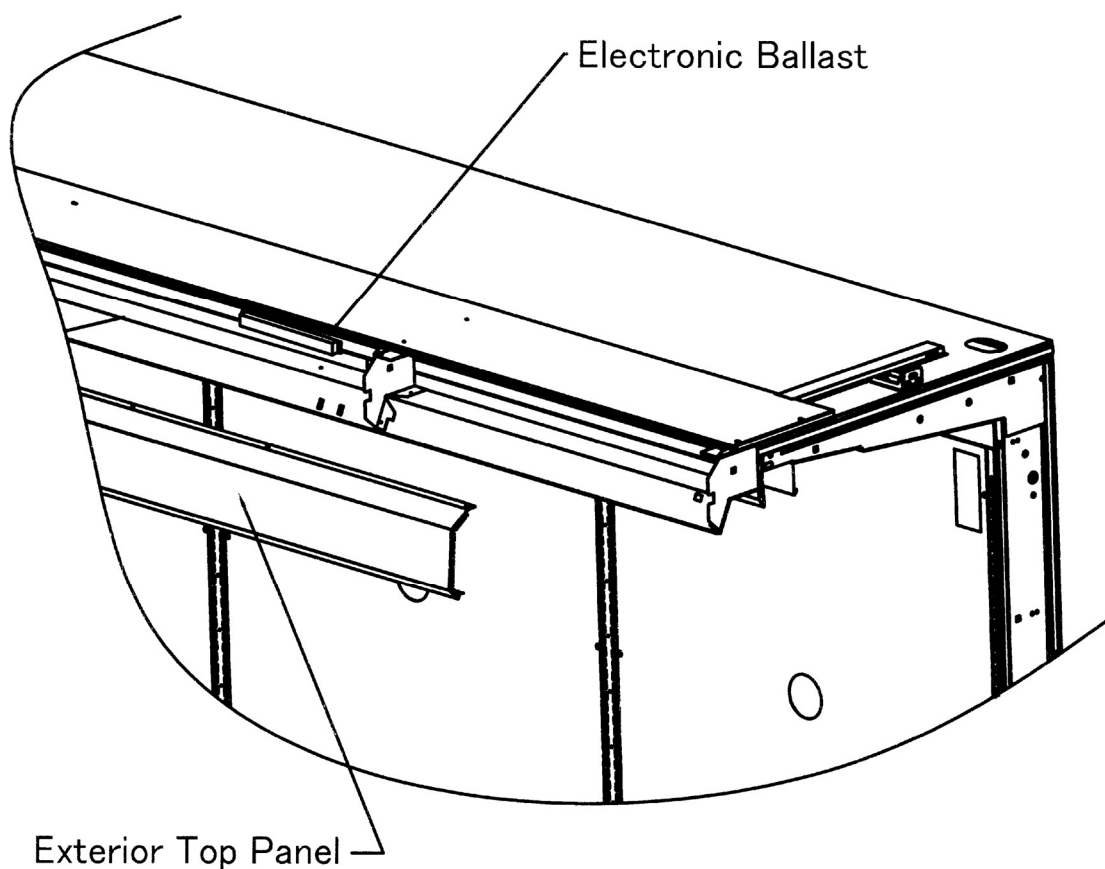


For models with High Efficiency-type (DC) Fan Motors

Fan Motor Assemblies:

Speed	Part Number	CPS-EXA384	CPS-EXA324
		Quantity used	Quantity used
1450RPM	9FT0000000200	2	3

7.2 Replacing Electronic Ballasts



To replace Electronic Ballasts:

- ① Remove the Exterior Top Panel.
- ② Unplug the Electronic Ballast Harness.
- ③ Remove the Electronic Ballast.

Electronic Ballast Part Numbers:

Type	Model	Part Number	CPS-EXA384	CPS-EXA324
			Quantity Used	Quantity Used
3-lamp	QTP4X54T5HO/UNVPSNHTW	9FT0540015700	-	1
2-lamp	QTP2X54T5HO/UNVPSNHTW	9FT0540018000	1	-

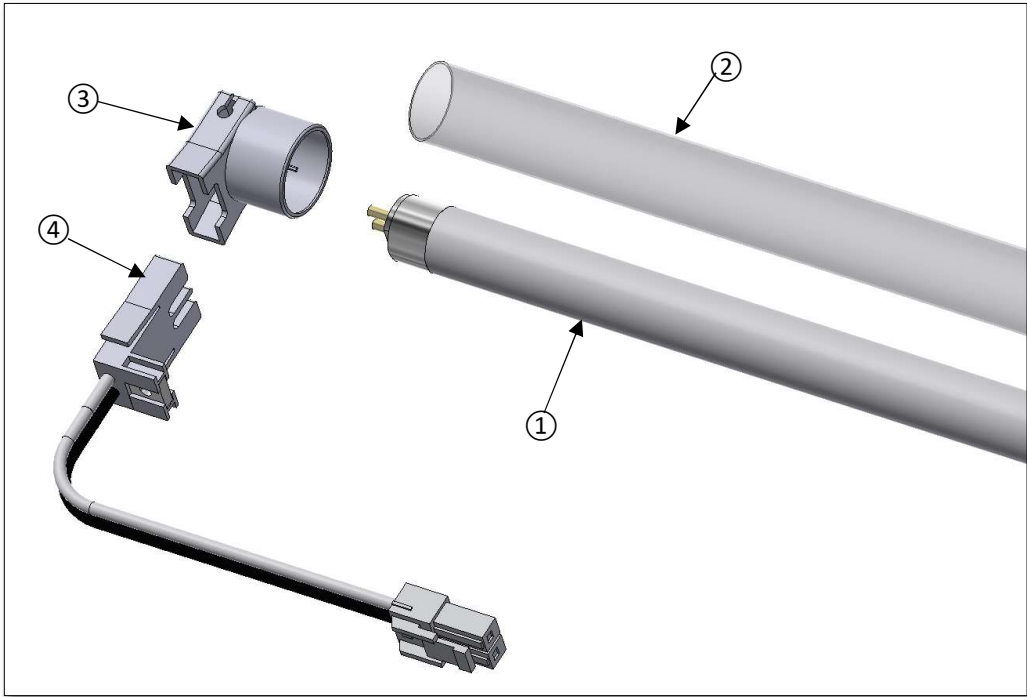


WARNING!

Make sure that all Electronic Ballasts Harness plugs are placed firmly in their sockets to prevent damage to the ballast and/or the case and to prevent any electrical shock hazard potential.

7.3 Replacing Fluorescent Lamps

The unit comes with covers placed over each fluorescent lamp. Ensure that these covers are placed over the new lamps before reinstallation.



CAUTION!

Always use Hussmann Lamp Covers and End Caps when replacing Lamp Covers and End Caps. Using non-Hussmann brand replacement parts can result in decreased performance and/or part lifetime.

T5 Lamps (54W)

Part Number	Part Description	CPS-EXA384	CPS-EXA324
		Quantity Used	Quantity Used
① 9FT4T310011700	Fluorescent T5 Lamp, 54W	2	3
② 9FT2813057400	T5 Lamp Cover	2	3
③ 9FT2014172710A	Lamp Holder Cap T5	4	6
④ 9FT0561048610A	T5 Lamp Socket	4	6



Contains Mercury,
Dispose of Properly.

7.4 Expansion Valves (TXV)

Sporlan

Model	Refrigerant	Valve Body	Body Type
CPS-EXA384	R404A	9FT0000018100	SQ 3/8 X 1/2 QC-4KT-43-SC-5
	R407A	9FT0000018000	SQ 3/8 X 1/2 QC-3KT-43-VC-5
	R507	9FT0000018200	SQ 3/8 X 1/2 QC-4KT-43-PC-5
CPS-EXA324	R404A	9FT0000018110	SQE 3/8 X 1/2 QC-6KT-43-SC-5
	R407A	9FT0000018010	SQ 3/8 X 1/2 X 1/4 SAE QC-4KT-43-VC-5
	R507	9FT0000018210	SQ 3/8 X 1/2 X 1/4 SAE QC-6KT-43-PC-5

7.5 Balancing Valves (Glycol)

Hays

Model	GPM	Auto-Balancing Valve
		Hussmann P/N
CPS-EXA384	3	9FT-2-4501-690-02
CPS-EXA324	4.5	9FT-2-4501-690-03

PROPOSITION 65 WARNING:

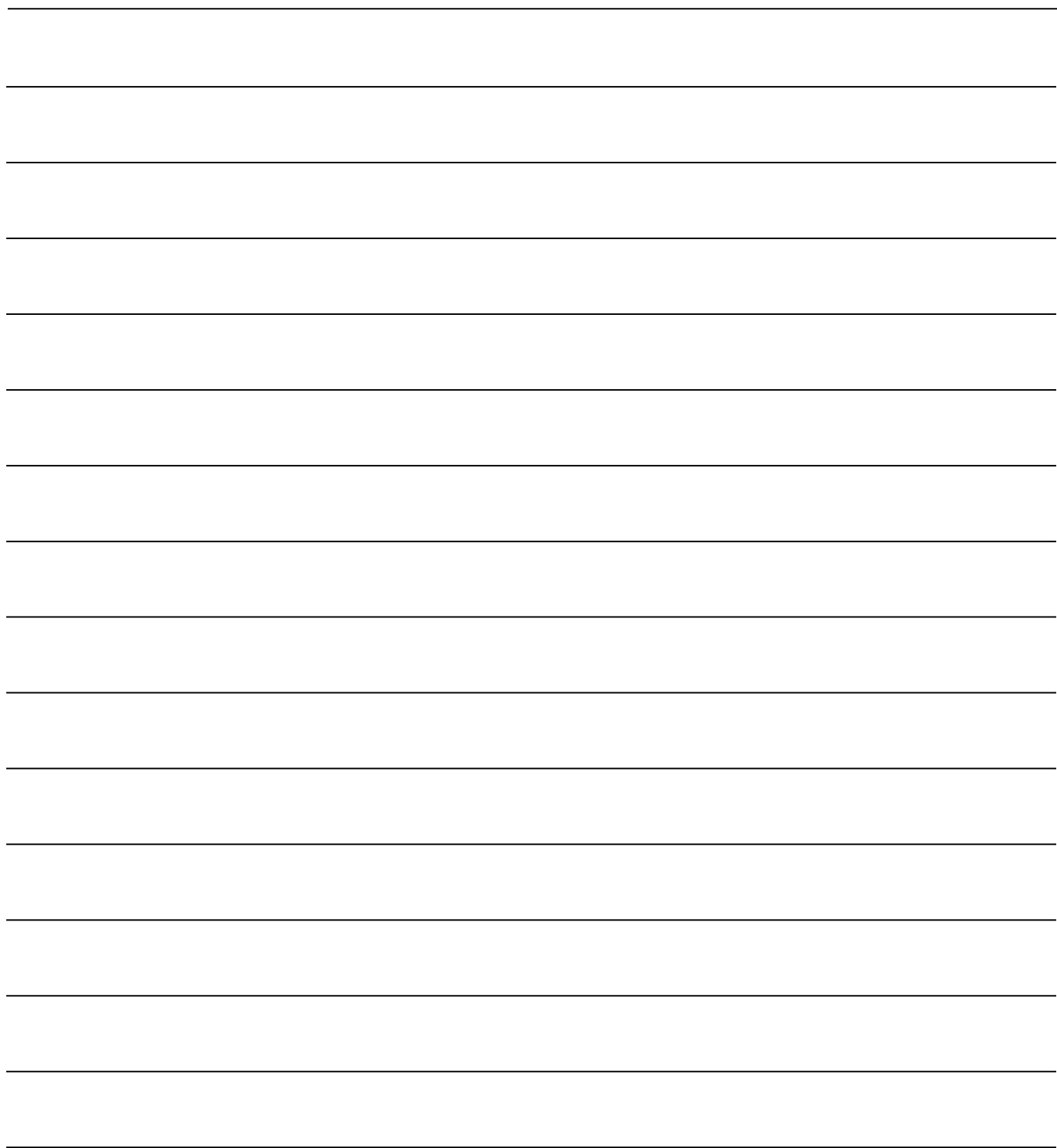
This product contains chemicals known to the State of California to cause cancer and/or birth defects or other reproductive harm.

7.6 CO2 Parts

Model	EEV Valve	Transducer	Case Controller	Description
CPS-EXA384	0551715A	0527069	0530123	SER-A
CPS-EXA324	0529776B	0527069	0530123	SER-B

7.7 Nightshade

Part Number	Quantity Required	
	CPS-EXA384	CPS-EXA324
9FT0033037200	2	3





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