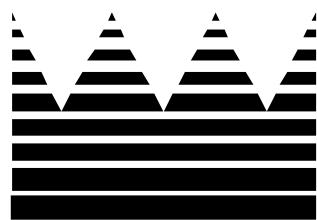


# OPERATOR'S MANUAL



# TAYLOR®

## Model R280 Frozen Food Dispenser

### Original Operating Instructions

089362-M

April 2020 (Original Publication)  
(Updated 7/6/2020)

**Complete this page for quick reference when service is required:**

Taylor distributor: \_\_\_\_\_

Address: \_\_\_\_\_

Phone: \_\_\_\_\_

Service: \_\_\_\_\_

Parts: \_\_\_\_\_

Date of installation: \_\_\_\_\_

## Information found on the data label:

Model Number: \_\_\_\_\_

Serial Number: \_\_\_\_\_

Electrical Specs: Voltage \_\_\_\_\_ Cycle \_\_\_\_\_

## Phase

Maximum Fuse Size: \_\_\_\_\_ A

Minimum Wire Ampacity: \_\_\_\_\_ A

**Note:** Continuing research results in steady improvements; therefore, information in this manual is subject to change without notice.

**Note:** Only instructions originating from the factory or its authorized translation representative(s) are considered to be the original set of instructions.

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089362-M

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Rockton, IL 61072

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## Introduction

This Model R280 Frozen Food Dispenser is a refrigerated unit that dispenses frozen fries.

It is recommended that these operating procedures be followed closely to ensure correct assembly and disassembly of the Dispenser.

## Unpacking and Installation

Remove all packing material from Dispenser. Open cabinet door. Disassemble, clean, sanitize and dry the hopper and accumulator assemblies. Clean, sanitize, and dry fry baskets. See Disassembly, Defrost, and Cleaning on page 8. Reassemble all components, see Dispenser Assembly on page 6.

## Intended Use

The Frozen Food Dispenser is intended to maintain and dispense frozen fries from two independent hoppers. Each is capable of dispensing different volumes of fries.

All product should be removed daily for cleaning and maintenance of the Dispenser. The performance of the system requires that recommended procedures for storage and use of the dispensed product be followed closely.

### HAZARD COMMUNICATION STANDARD (HCS):

The procedure(s) in this manual include the use of chemical products. These chemical products will be highlighted with bold faced letters followed by the abbreviation (HCS) in the text portion of the procedure. See the Hazard Communication Standard (HCS) manual for the appropriate Material Safety Data Sheet(s) (MSDS).

## Specifications

### Electrical Requirements:

Domestic:

- 120V, 60 Hz, 8A, 1 Phase

International:

- 220–240V, 50Hz, 4.6A, 1 Phase
- 220–240V, 60Hz, 4.6A, 1 Phase

Internal Circuit Breaker:

- 15 A

### Dimensions:

- Width 28.5 in. (73 cm)
- Depth 32 in. (81 cm)
- Height 74.75 in. (190 cm)

### Recommended Operating Dimensions:

- Width 30.5 in. (78 cm)
- Depth 32 in. (81 cm)
- Height 74.75 in. (190 cm)

### Weight:

- Net 409 lb. (186 kg)
- Crated 472 lb. (214 kg)

**Note:** For Reference Only

### Hopper Capacity:

- 60 lb. (27 kg)
- 30 lb. (13 kg) per hopper

**Note:** Weight may vary with product.

### Operating Temperature:

- $-2^{\circ}\text{F}$  to  $10^{\circ}\text{F}$  ( $-19^{\circ}\text{C}$  to  $-12^{\circ}\text{C}$ )

**Note:** (Recommended ambient operating temperature of  $75^{\circ}\text{F}$  [ $24^{\circ}\text{C}$ ])

- ST (Subtropical)

### Refrigeration:

Domestic:

- Model R280, R290 (5.15 oz.) (146 g)

International:

- Model R280, R290 (5.15 oz) (146 g)

### Insulation Blowing Gas:

- HFO-1233ZD and HFO-1234ZE

### Maximum Operating Altitude and Safe Tilt:

- Maximum Altitude: 6,561 ft. (2,000 m)  
Maximum Tilt =  $10^{\circ}$

### Noise Emissions:

- $< 70$  dB (A)

### FCC STATEMENT:



**WARNING** This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause interference to radio communications.

## Safety

Always follow these safety precautions when operating the Dispenser:



**NOTICE! DO NOT** operate this machine without reading this entire manual first. Failure to follow all of these operating instructions may result in damage to the machine, poor performance, health hazards, or personal injury.



**IMPORTANT!** *This machine is to be used only by trained personnel. It is not intended for use by children or people with reduced physical, sensory, or mental capabilities or lack of experience and knowledge. Where limited machine operation is allowed for public use, such as a self-serve application, supervision or instruction concerning the use of the machine by a person responsible for their safety is required. Children should be supervised to ensure that they do not play with the machine.*



**IMPORTANT!** *Access to the service area of the machine must be restricted to persons having knowledge and practical experience with the machine, in particular as far as safety and hygiene are concerned.*



**WARNING! DO NOT** use a water jet to clean or rinse the machine. Failure to follow these instructions may result in serious electrical shock.



**WARNING!** Avoid injury.

- **DO NOT** operate the machine unless it is properly grounded.
- **DO NOT** operate the machine with larger fuses than specified on the machine's data label.
- All repairs should be performed by a Taylor service technician.
- The main power supplies to the machine must be disconnected prior to performing installation, repairs, or maintenance.
- Machines that are permanently connected to fixed wiring and for which leakage currents may exceed 10 mA, particularly when disconnected or not used for long periods, or during initial installation, shall have protective devices to protect against the leakage of current, such as a GFI, installed by the authorized personnel to the local codes.
- Stationary machines which are not equipped with a power cord and a plug or another device to disconnect the appliance from the power source must have an all-pole disconnecting device with a contact gap of at least 0.125 in. (3 mm) installed in the external installation.
- Supply cords used with this machine shall be oil-resistant, sheathed flexible cable not lighter than ordinary polychloroprene or other equivalent synthetic elastomer-sheathed cord (code designation 60245 IEC 57) installed with the proper cord anchorage to relieve conductors from strain, including twisting, at the terminals and protect the insulation of the conductors from abrasion.
- If the supply cord is damaged, it must be replaced by a Taylor service technician in order to avoid a hazard.

Failure to follow these instructions may result in electrocution. Contact your local authorized Taylor distributor for service.



**CAUTION!** This machine must be placed on a level surface. Use caution when moving the machine. Failure to comply may cause the machine to tip over and result in personal injury.



**NOTICE!** Cleaning and sanitizing schedules are governed by your federal, state, or local regulatory agencies and must be followed accordingly. Please see the cleaning section of this manual for the proper procedure to clean this machine.

**NOTICE** all warning labels that have been attached to the dispenser to further point out safety precautions to the operator.



**IMPORTANT!** If the crossed-out wheeled-bin symbol is affixed to this machine, it signifies that this machine is compliant with the EU Directives as well as other similar end-of-life legislation in effect after August 13, 2005. Therefore, it must be collected separately after its use is completed and cannot be disposed as unsorted municipal waste.

The user is responsible for delivering the machine to the appropriate collection facility, as specified by your local code.

For additional information regarding applicable local disposal laws, please contact the municipal waste facility and/or local authorized Taylor distributor.



**WARNING!** Only install this machine in a location where its use and maintenance is restricted to trained personnel. Failure to comply may result in personal injury.

## Equipment Safety



### Important:

- Turn the power switch OFF and disconnect the dispenser power cord from the wall outlet before cleaning, moving, or servicing the dispenser.
- Inspect the dispenser on a regular basis to identify potential problems before they occur.
- Keep the Dispenser clean.
- Keep hands away from the accumulator doors and dispenser drums while the Dispenser is operating.
- Fry baskets may be hot. Pick them up by the handles only.
- **Do not** roll the Dispenser to the back sink for cleaning. This will cause unnecessary wear on the Dispenser.
- If the power cord is damaged it must be replaced by the manufacturer, or its service agent, or a similarly qualified person in order to prevent a hazard.
- Use only the power cord that came with the Dispenser. **Do not** use an extension cord.
- **Do not** modify the power cord.
- In a safety emergency, immediately disconnect the power cord from the wall outlet.
- **Do not** obstruct access to the wall outlet or place pressure on the power cord.
- **Do not SPRAY THE DISPENSER WITH LIQUID OR SOLVENTS.** It is not sealed against jetting fluids, and contamination may get into sensitive components. Spraying the Dispenser may void the warranty.
- Use caution when handling heavy parts such as back and top panels.
- Always re-install service panels when maintenance is complete.
- Keep machine upright at all times.
- Keep ventilation openings in the machine enclosure clear of obstruction.
- **Do not** use mechanical devices or other means to accelerate the defrosting process, other than those recommended by the manufacturer. **Do not** drill or otherwise puncture cabinet walls or top.
- **Do not** damage the refrigerant circuit.
- **Do not** use electrical appliances inside the food storage compartments of the machine unless they are of the type recommended by the manufacturer.
- **Do not** store explosive substances such as aerosol cans with a flammable propellant in this machine.

## Equipment Safety Cont.

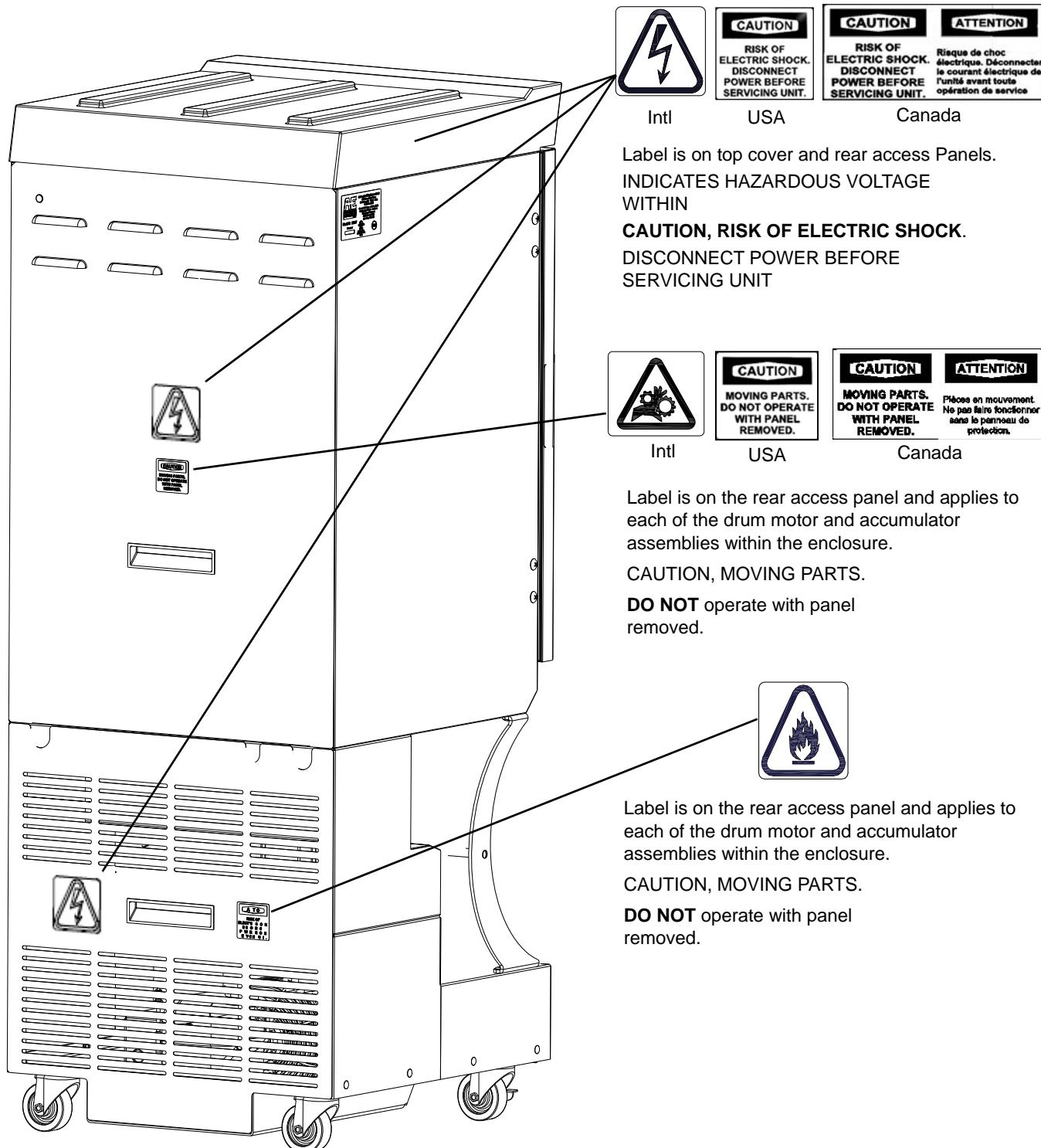
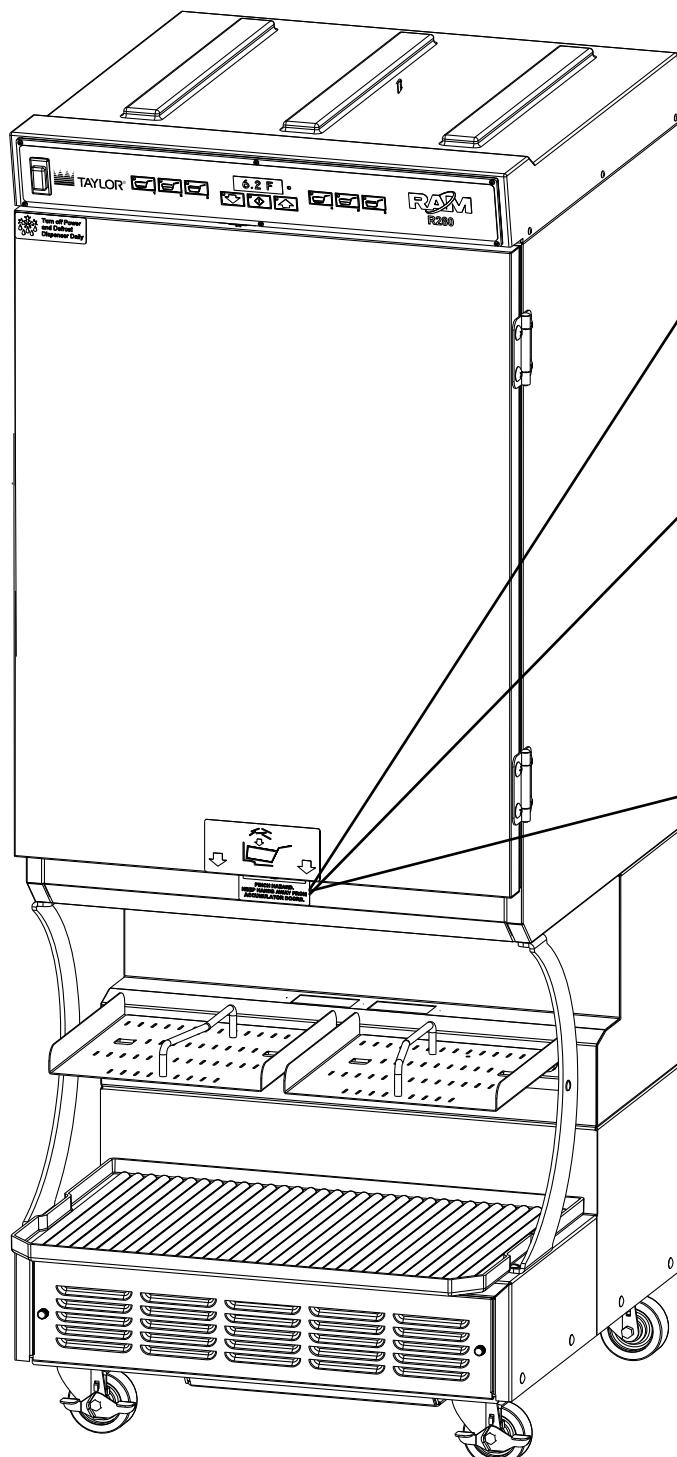


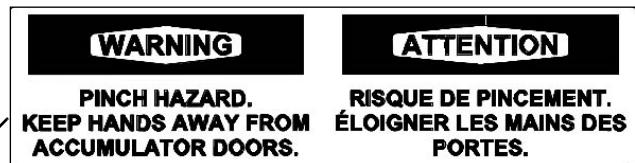
Figure-1

---

## Equipment Safety Cont.



US Only



Canada Only



Label is near the flap door assemblies.

### NO HANDS BELOW

Hands should not be placed near or below the flap door assemblies while the Dispenser is energized.

Figure-2

## Dispenser Assembly

**Note:** Before assembling the Dispenser it is recommended that all parts be cleaned, sanitized, dry, and handled in a sanitary manner. See Disassembly, Defrost, and Cleaning on page 8 for more information.

1. Open the cabinet door. Accumulator doors are pre-installed.
2. Install the left and right flap doors by slipping them under the accumulator doors and seating the pivot pin into the plastic pivot blocks, as shown below. (accumulator doors are hidden for clarity in Figure 4).

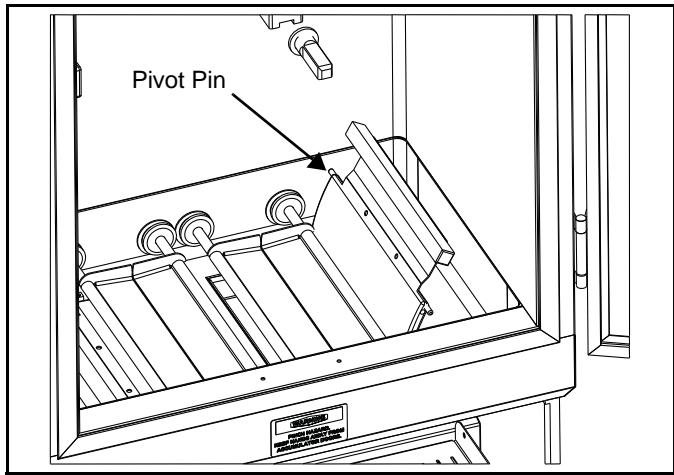


Figure-3

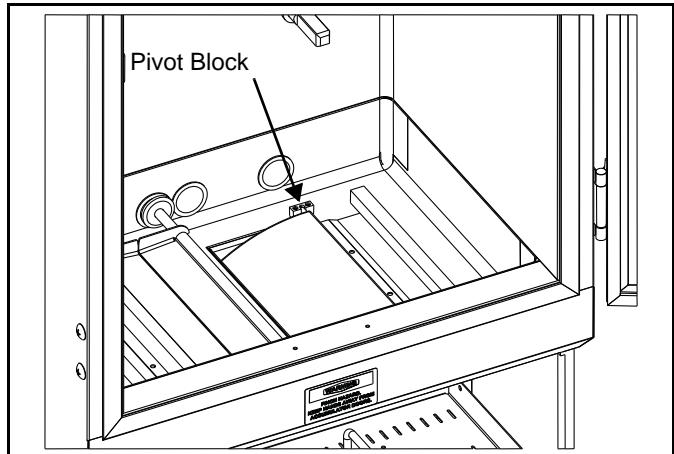


Figure-4

3. Install the left and right accumulator housings over the accumulator doors.

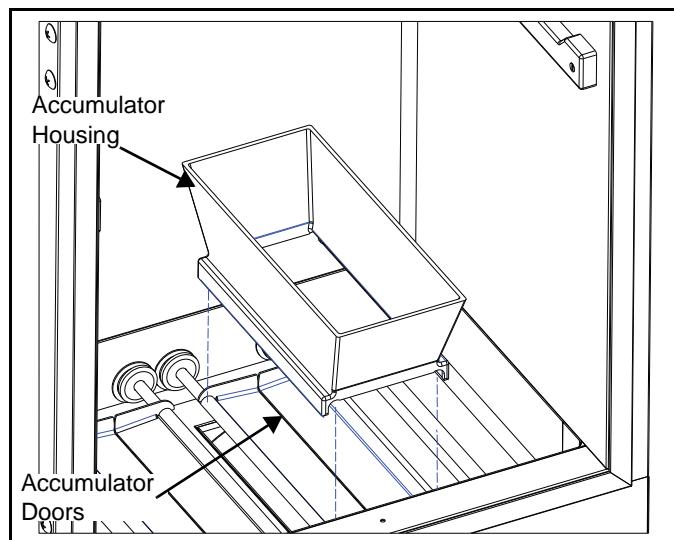


Figure-5 : Accumulator Housing Assembly

**Note:** Accumulator housings, drums, and fry diverters are universal to left and right positions within the cabinet. The hoppers and basket trays are **not** universal to the left and right positions of the cabinet.

4. Install the fry diverters in the hoppers by sliding the fry diverter tabs into the slots located on the inside hopper walls.

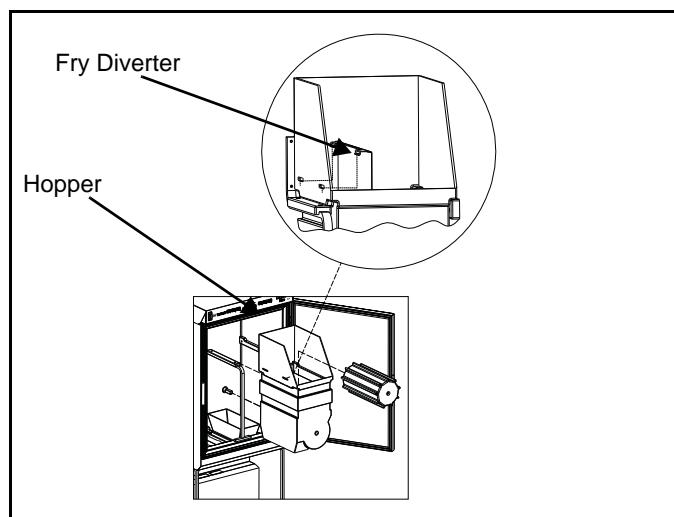


Figure-6 : Fry Diverter Assembly

5. Install drums into the hoppers making sure the square opening in the drum is pointed toward the rear of the hopper. Repeat assembly for left and right hoppers.

6. Install the hopper assemblies into the cabinet by sliding them onto the hopper supports. **Do not** force the drum onto the shaft. Rotate the drum in the hopper until the square opening meshes with the drum motor shaft, then slide the hopper assembly backward until it drops into place.

When the accumulator housings and hopper assemblies are in place, close the cabinet door.

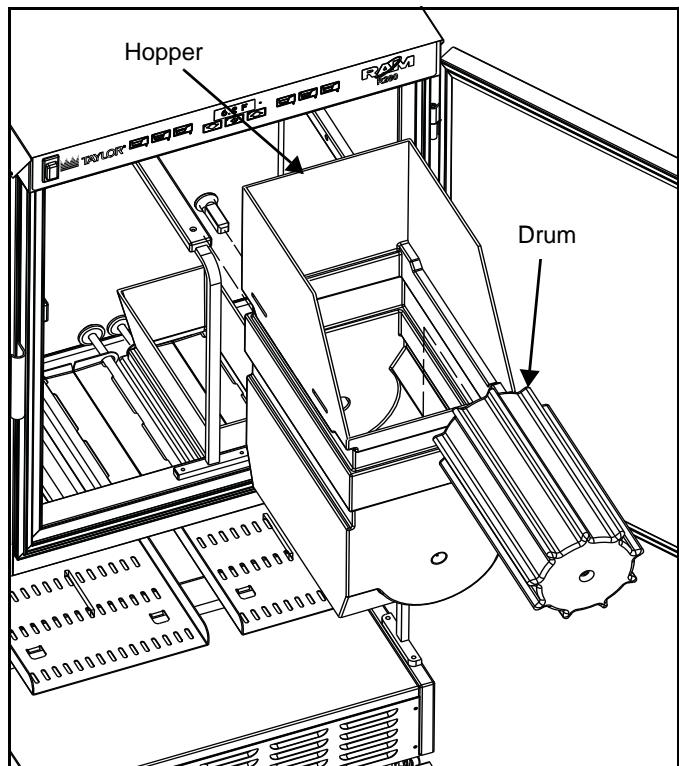


Figure-7 : Drum and Hopper Assembly

7. Assemble basket tray and drip tray to lower dispensing area. Basket trays are not universal to the left and right positions.

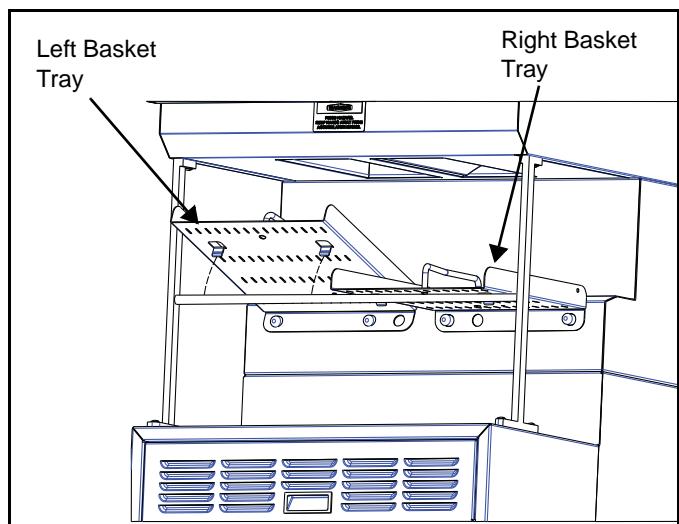


Figure-8 : Basket Tray Assembly

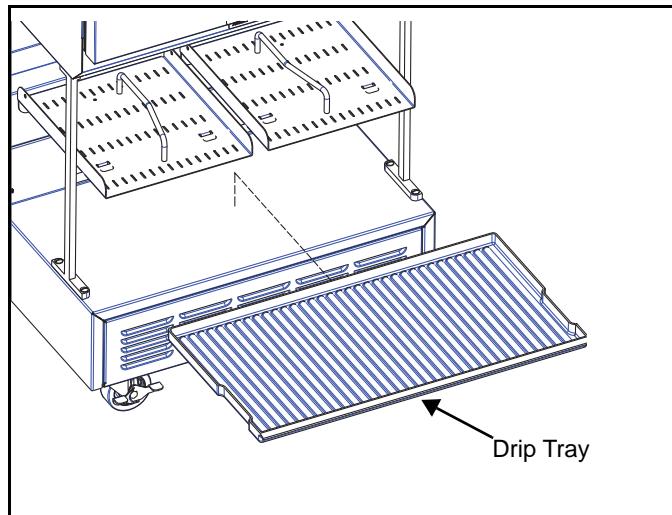


Figure-9 : Drip Tray Assembly

#### Installing the Basket Trays

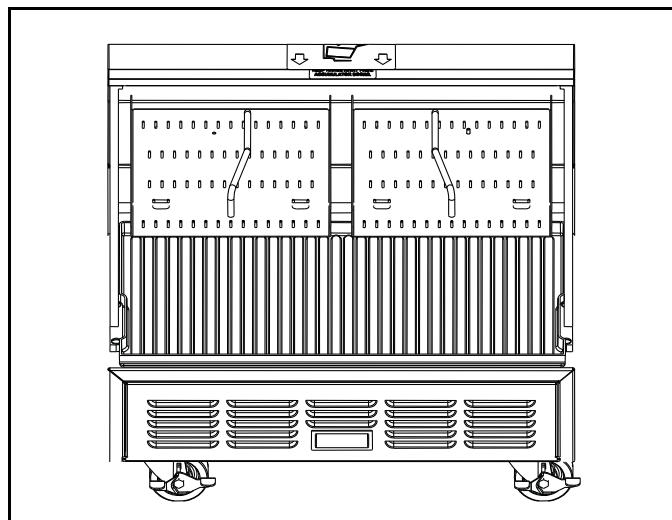


Figure-10

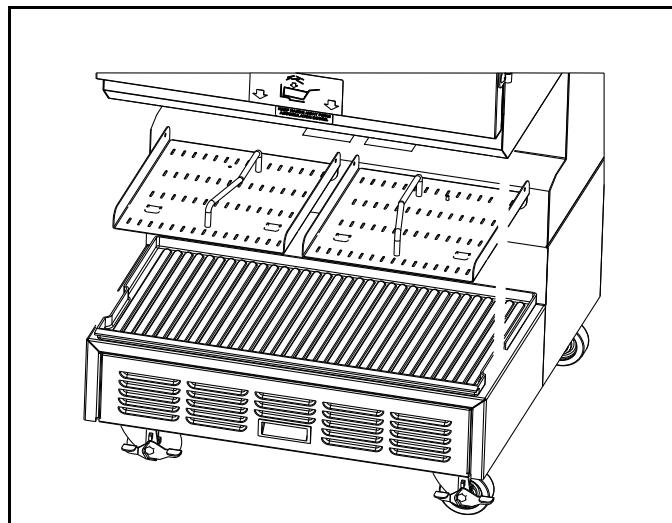


Figure-11

## Using the Optional Hash-Brown Rack

The R280 cabinet can be used to store frozen hash-browns while serving breakfast.

1. To use the cabinet for hash-brown storage, properly assemble the Dispenser (pages 6-8), then install the hash-brown rack accessory as shown in the diagram below.

The rack will serve as a shelf inside the refrigerated cabinet for hash-brown storage.

**Note:** The hash-brown racks should be removed during fry dispensing.



**CAUTION! DO NOT** store hash-browns on the drum below the rack. Failure to follow this instruction may result in damage to the Dispenser.

2. Insert the four rods of the hash-brown rack into the holes in the side of the hopper then, lower the rack onto the fry diverter.

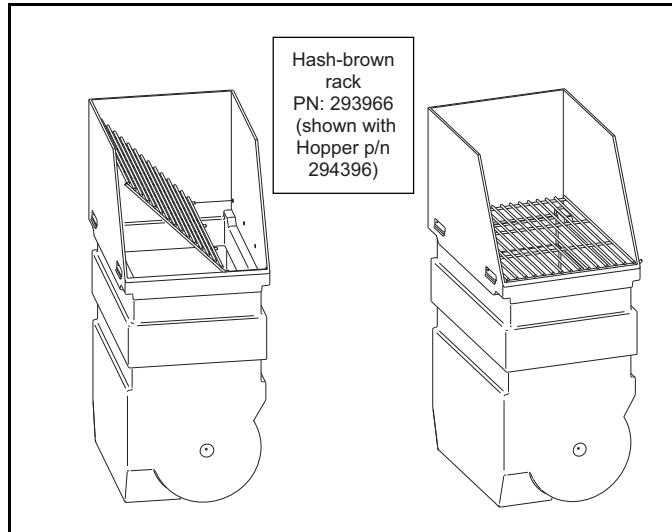


Figure-12

## Disassembly, Defrost, and Cleaning



**IMPORTANT!** These cleaning instructions are intended as a guide. Refer to your local, state, and federal regulations for any additional instructions and for cleaning frequency requirements.

1. Remove all baskets from the dispense area. Open the cabinet door and remove the left and right hopper assemblies by lifting the front of the hopper up slightly and pulling forward on assembly.
2. Remove any unused product from the hoppers and accumulator housings by emptying the product into an approved storage container. Place the storage container immediately into a freezer to maintain frozen product.

**Important! Defrosting:** Because the Dispenser employs a cold wall design, it will be necessary to manually defrost the cabinet daily. After removing the product, turn the ON/OFF switch to OFF and unplug the Dispenser power cord. Open the cabinet door and allow 1 hour to defrost.



**CAUTION!** Never use a sharp object to remove frost buildup. Never drill or otherwise puncture cabinet walls or top. Failure to follow this instruction may result in damage to the Dispenser.

3. Lift and remove the accumulator housings. For Dispensers with removable accumulator doors: remove the accumulator doors by rotating the chucks counterclockwise until unlocked, then pull the accumulator doors forward.
4. Lift and remove left and right flap door assemblies.
5. Remove left and right basket guide assemblies from the Dispenser by lifting up on the front of the guide until it unlatches. Then pull outward and upward. Remove drip tray by lifting, tilting and sliding forward.

---

6. Take the removable components from the Dispenser to the washing area. Wash them with a hot solution of detergent and water. Rinse each component with clear water and sanitize (wash/rinse/sanitize) (HCS). Allow components to air-dry.

**Note:** *The removable components are **not** dishwasher safe.*

7. Move the Dispenser out from the wall to clean behind and underneath it.



**CAUTION! DO NOT** roll the Dispenser to the back sink for cleaning. Failure to follow this instruction will cause unnecessary wear on the Dispenser.

8. When the cabinet is free of frost, wipe down the internal and external cabinet with a hot solution of detergent and water. Rinse with clear water and repeat wipe-down with sanitizing solution (HCS) and allow to air-dry.



**CAUTION! DO NOT** spray the Dispenser with liquid or solvents. The Dispenser does not provide a watertight seal. Failure to follow this instruction may allow contaminants and moisture may get into sensitive components.

9. Dry all components and reassemble the Dispenser. See Dispenser Assembly on page 6. Move the Dispenser back into place.

**Important!** *The Dispenser must be accessible from all sides for routine cleaning and maintenance. A minimum of 0.5 in. (13 mm) clearance on both sides and 2 in. (50 mm) behind the Dispenser is recommended.*

## Dispenser Start-up

Make sure power switch, located on the left portion of the operator panel, is turned off. Assemble the Dispenser, see page 6. Plug the power cord into an approved outlet and turn the Dispenser on.

**Note:** Turn the Dispenser on a minimum of 90 minutes (depending on ambient temperature conditions) before loading frozen product into the Dispenser. Once the temperature display has dropped to 10°F (-12°C), load frozen product into the Dispenser and the Dispenser is ready to use.

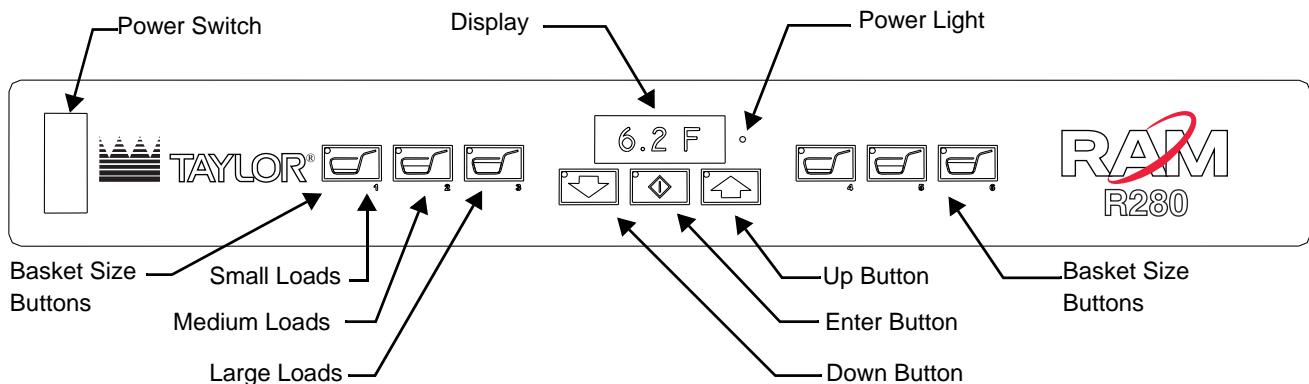


Figure-13

The operator panel consists of a power switch and three groups of controls:

- Left hopper controls,
- Center system controls with data display
- Right hopper controls.

Each hopper is controlled as if it were an independent Dispenser.

On power-up, the display will very briefly show the following:

- Software name
- Software version
- Copyright notice, and then the main screen (typically the Dispenser temperature).

The Dispenser will **not** respond to keypad selections before the main screen is displayed.

The main screen will appear as shown above. The number displayed in the center represents the interior cabinet temperature.

The operator panel is used to make basket load size selections and to access controller functions.

**Note:** The managers menu and diagnostic menu may require a manager's password to access the Functions. By default, these passwords are disabled.

- Use the Up and Down arrow buttons to access a desired function. (See User Function Menu Structure on page 15 for a complete list of functions and their descriptions.)
- Press the Enter button to select the desired function.
- Basket size buttons also function as numbers:



Left Small=1  
Left Medium=2  
Left Large=3

Right Small=4  
Right Medium=5  
Right Large=6)

## Operation

**Note:** This machine is to be used only for dispensing frozen fries or other approved product. Any other use may cause injury to personnel or damage to the machine.

The Frozen Food Dispenser is intended to maintain and dispense frozen fries on demand from two independent hoppers, eliminating the need for staging full baskets of fries. Dispensing and cooking fries direct from the freezer results in improved fry quality, consistency, and yield.

**Important!** Do not stage full baskets of fries on the bottom tray. The lower tray area should be used for empty fry basket storage only.

### Loading the Hoppers

**Note:** To achieve optimum fry yield and the most consistent basket loads, it is important to use the following technique for loading frozen fries into the hopper.

The Dispenser will accept 60 lb. (27.3 kg) of French fries, 30 lb. (13.6 kg) per hopper (approximately 5 bags per hopper). Hopper capacity may vary depending on the product.



**WARNING! Pinch Hazard. DO NOT** place hands or fingers near the drum inside the hoppers while this machine is in operation. Hands or fingers could be pinched between the drum and the hopper as the drum turns. Failure to comply may result in personal injury from moving parts or damage to the machine.

**Note:** Do not shake or drop fries from the bag or box into the hopper. This will result in unnecessary fry breakage.

For each bag or box of fries:

1. Remove the bag of fries from the case. Be careful not to crush the fries.
2. Open the top of the bag or box completely. (A partially open bag may retain fries.)
3. Hold the opened end of the bag closed with your hand and lay it in the hopper with the opening toward the side opposite of the diverter.
4. Release the opened end of the bag or box.

5. Empty the bag into the hopper by pulling it evenly toward the diverter. When adding multiple bags of fries, alternate the placement of the bag in the hopper opposite of the previous bag. The second bag of fries should be emptied into the hopper with the opening toward the diverter, pulling it evenly toward the hopper wall opposite the diverter.
6. This crisscross loading method ensures an even distribution of fry lengths in the hopper and the baskets.
7. Repeat until each hopper is full.

## Daily Opening and Closing

### Setup and Operation

1. Fill one or both hoppers with product.

**Note:** Do not shake or drop the fries into the hopper(s). (See Loading the Hoppers on page 11.)

2. Select a Basket Size button for left and/or right hopper to dispense desired load.



3. Default settings are:

- **Small** load = 0.50 lb. (225 g)
- **Medium** load = 1.0 lb. (450 g)
- **Large** load = 1.5 lb. (700 g)

An LED light will illuminate next to the basket load size that is currently selected.

4. The drum motor for one/both sides will turn until the selected target weights are achieved. If there is insufficient product in the hopper, a low fry warning will flash for the affected side (blinking 'o').
5. Place a basket under the accumulator outlet for the selected side(s). Lift the front of the basket slightly and slide the basket forward over the basket sensor. The accumulator doors will open and close, discharging product into the waiting basket.
6. Remove the basket.
7. The Dispenser will repeat step 4, preparing the next basket. The Dispenser will automatically dispense as soon as the next basket is present.

## Automatic Load Size Reduction Feature

(For Dispensers with this feature.) When in the large load size setting, if a basket has not been dispensed within 4 minutes the machine will automatically shift from the large to the medium setting. The weight selection will remain in the medium setting until the operator elects to change it.

## Adjustable Automatic Load Size Reduction (Euro only)

(For Dispensers with this feature.) When operating the Dispenser in the large or medium load size settings, the Dispenser will automatically change the selected load size to the next smaller size if a basket is not dispensed within a preset time period, “1d” (default is 7 minutes). If the Dispenser has changed from the large to the medium load size, it will again change to the small load size if a basket is not dispensed in a second preset time period, “2d” (default is 3 minutes). Preset time periods “1d” and “2d” are set using Manager Function F7 if present.

## Daily Closing

Select Last Basket/Cancel Selections from the operator panel to cancel all currently selected basket loads. Using the operator panel, press the Up arrow  button until “U” is displayed, then press the Enter  button.

Both sides will stop automatically refilling the accumulator housing. Dispense any fries present in the accumulator housing into a basket. The Dispenser will **not** refill the housing.

Empty the Dispenser. Dispose of any unused product or place into an approved storage container. Place container immediately into freezer to maintain frozen product.

Take the removable components from the Dispenser to the washing area. Wash them with a hot solution of detergent and water. Rinse with clear water and sanitize (HCS). Allow to air-dry. See Disassembly, Defrost, and Cleaning on page 8.

## Defrost Cabinet Daily

Turn the power switch OFF, then open the cabinet door to allow the Dispenser to defrost until free of frost.



**CAUTION!** Never use a sharp object to remove frost buildup. Never drill or otherwise puncture cabinet walls or top. Failure to follow this instruction may result in damage to the Dispenser.

Once the cabinet is free of frost, wipe down the internal and external cabinet with a hot solution of detergent and water. Rinse with clear water and repeat wipe-down with sanitizing solution (HCS) and allow to air-dry.

Reassemble the Dispenser. See Dispenser Assembly on page 6. Move Dispenser back into place.

## Last Basket/Cancel Selections

Before cleaning the Dispenser, or if it becomes necessary to stop automatic dispensing, the operator is able to cancel all selected basket loads. Both drums will stop turning, and any currently selected basket load lights will turn off for both sides of the Dispenser. Any fries present in the accumulator housing will dispense automatically if a basket is presented. The Dispenser will not refill the housing.

To cancel currently selected basket loads using the Operator Panel, press the Up arrow  button until “U1” is displayed then press the Enter  button. Both sides will stop automatically refilling the accumulator housing.

To return to normal operation for one or both sides, select a Basket Size  button for the affected side(s).

## Error Conditions

The Dispenser's controller can detect an error or abnormal condition. When an error condition is detected the display will flash and state the error that has occurred. (e.g. "Err 4")

### Resetting Errors:

When an error does occur, it is normally reset by pushing the Enter  button.

In the event the error is only affecting one side of the Dispenser, the unselected basket size lights will also flash for the affected side and this side will be disabled until the error is reset. The unaffected side will continue to function normally.

**Note:** Errors 5, 6 and 7 relating to the refrigeration systems, while requiring corrective action, will not disable the fry dispensing portion of the equipment.

If the error condition persists, turn the power switch OFF and unplug the power cord from the wall outlet. Check the power cord for any obvious defect. Open the cabinet door to make sure the product is loaded properly and the Dispenser is properly assembled. See Dispenser assembly on page 6.

See Error Detection on page 21 for a complete list of errors and for a troubleshooting guide to aid in resolving the error conditions.

## Empty Hopper Warnings

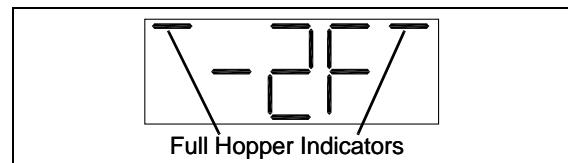
If one or both of the hoppers runs empty, or the Dispenser is otherwise unable to dispense, the Empty

Hopper light for the affected side will flash, ( flashing in the display) and the unselected Basket Size button LED lights for the affected side will flash. The dispense cycle will stop.

The blinking  for the affected side indicates the Dispenser was unable to achieve the target weight on the accumulator doors. It may also indicate a scale obstruction, calibration problem, or bridged fries in the hopper.

If the Empty Hopper lights are flashing, check and/or fill the hopper and press the currently selected Basket Load button to restart the cycle.

**Note:** The Dispenser will also retry the weigh cycle every 90 seconds.



Normal Operation



Empty Hopper Warning

Figure-14

## Door Ajar Warning

In Revision C and later Dispensers equipped with a door switch, the controller can detect an open cabinet door. The temperature on the main display will flash, alerting the operator that the door is ajar. The warning will automatically clear once the door is no longer open. If the door ajar condition persists for more than 15 minutes, the refrigeration compressor will shut off until the door is closed again. Neither condition will affect the operation of the dispensing portion of the machine but will alert the operator to an open door condition and prevent unnecessary wear on the refrigeration system.

## Bypass Mode of Operation

Bypass mode will allow the one or both sides of the Dispenser to remain operational if a basket sensor fails. Bypass mode is intended to be a temporary condition until a replacement basket sensor can be installed.

**Note:** *Bypass mode is a volatile condition and will return to normal operation if the power is turned off and back on again.*

While in Bypass mode the affected side's basket sensor is disabled and will not dispense fries automatically into a basket when presented.

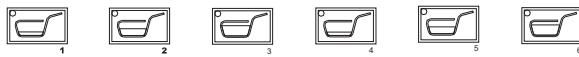
To dispense the fries into a basket, press the selected Basket Size  button after placing an empty basket under the accumulator door opening. The accumulator doors will cycle each time the Basket Size  button is depressed.

While in Bypass mode the Dispenser will otherwise appear to operate normally, refilling the accumulator housings automatically after each dispense cycle with the selected load of fries.

**Note:** *Engaging Bypass mode (D11) is performed from the Diagnostic Functions Menu (pages 17-19) using the Operator Panel on the front of the Dispenser, and may require a manager's password to access the menu.*

To access the Diagnostics Menu on the Operator Panel, press the Up arrow  button until "U4" is displayed then press the Enter  button. The display will change to "----". Enter the manager's password (if set) using the basket size buttons. Then press the Enter  button.

**Note:** *The Basket Size buttons also function as number buttons:*



*(The left Medium Basket button is number 2, and the right Large Basket button is number 6.)*

The display will change to "d01". Press the Up arrow  button until "d11" is displayed, then press the Enter  button to access the Bypass Basket sensor function.

The display will read "[bYP]" with alternating flashing brackets. Use the left or right Basket Size  buttons to select the side to be bypassed.

The display will default to the current sensor condition.

Use the Up arrow  button to select bypass mode for the affected side. The display will read [YES] if the left side is selected, [YES] if the right side is selected. Press the Enter  button to execute Bypass mode and exit to "d01". Press Enter  again to exit the diagnostics menu and enter Bypass mode of operation.

To deselect Bypass mode for the affected side: Press the Down arrow  button. The display will read [no] if the left side is selected [no] if the right side is selected. Press the Enter  button to exit the function and return to "d01." Press the Enter  button again to return to the main screen. Or to return to normal operation, turn the power off for 15 seconds then turn the power back on.

## User Function Menu Structure

- Use the Up  and Down  arrow buttons to find the desired function.
- Press the Enter  button to select the desired function.
- Basket Size buttons also function as numbers:        
(Left Small=1, Left Medium=2, Left Large=3, Right Small=4, Right Medium=5, Right Large=6)

**Note:** If a password has been set, there is a Service Password available to access both the Manager Menu and Diagnostic Menu. The Service Password is 22463†.

User Functions	Function Name	Description
Main Screen	Main Screen	Default condition of the display. Live temperature, error display, and hopper status (full/empty).
U1	Last Basket/Cancel Selections	Halts weighing-in process. Turns off all size button lights. Immediate return to Main screen.
U2	Calibrate Scales  <b>Note:</b> See Calibrations and Adjustments on page 29.	<ol style="list-style-type: none"> <li>1. Request side to calibrate. Display reads: “[CAL]” or “---” when set to metric units, with alternating flashing brackets. Use Basket size button to select side.</li> <li>2. Waits for a basket to be placed for the side to be calibrated then empties the accumulator doors into the basket. The display will read “[ -- “ ( “ -- ]” until a basket is presented.</li> <li>3. Remove hopper for side to be calibrated. NOTE: Leave the housing in place on the accumulator doors.</li> <li>4. Tares automatically. Display reads “[ 0.0 “ ( “ 0.0 ]”</li> <li>5. Waits for 1.0 lb. reference. Display reads “[ 1.0 “ ( “ 1.0 ]”), or “[450” (“450]”) when set to metric units. Place 1.0 lb. (450 g) weight on the accumulator doors.</li> <li>6. Waits for 2.0 lb. reference. Display reads “[ 2.0 “ ( “ 2.0 ]”), or “[900” (“900]”) when set to metric units. Place 2.0 lb. (900 g) weight on the accumulator doors.</li> <li>7. Waits for weight removal. Display will read “ --- “ Remove weight(s) from the accumulator doors.</li> <li>8. Re-install hopper.</li> <li>9. The Dispenser will return to normal operation with no basket size selected on affected side.</li> </ol>

User Functions	Function Name	Description
U3	Enter Manager Functions*	<p>Request password (if set) to enter manager functions. * Display shows dashes only if a password is set.</p> <p>Goes straight to “<b>F1</b>” if no password is set. (See Manager Function Menu Structure (U3) on page 17.)</p> <p>Use Basket Size buttons to enter five-digit password†.</p> <p>Press the Enter button to execute and close function.</p> <p>If the password was successfully entered, “<b>F1</b>” will be displayed. You are now in the Manager Menu. (See Manager Function Menu Structure (U3) on page 17.)</p>
U4	Enter Diagnostic Functions*	<p>Request password, set or not, to enter diagnostic menu. Display shows dashes only.</p> <p>Use Basket Size buttons to enter five-digit password.</p> <p><b>Note:</b> <i>Password can be bypassed if not set. (Press enter.) Enter button executes and closes function.</i></p> <p>If the password was successfully entered, “<b>d01</b>” will be displayed. You are now in the Diagnostics Menu. (See Diagnostic Function Menu Structure (U4) on page 18.)</p>
U5	Software Version	Display shows current software version number. (e.g. “ <b>1.08</b> ”) Enter button closes function.

## Manager Function Menu Structure (U3)

Manager Functions	Function Name	Description
F1	Exit Manager Functions	Immediate return to the Main Screen.
F2	Set Basket Load Target weights	Allows the basket load targets to be customized for each basket load size. 0.25 lb. to 2.0 lb. for U.S. units, 113 g to 907 g for metric settings. Display reads currently selected target load. Size buttons select basket load size to change. Up button increases target in 0.05 lb. steps (22.6 g). Down button decreases target in 0.05 lb. steps (22.6 g). Enter button stores new settings and closes function.
F3	Set Target Temperature	Allows the cabinet target temperature to be changed. The default is 0°F (-18°C). Display reads the current target temperature. Up button will increase the target temperature in 1° increments. Down button will decrease the target temperature in 1° increments. Enter button stores the new setting, closes the function, and exits to F1.
F4	Set Differential	Sets the temperature difference that activates the refrigeration compressor. For example: If the target temperature is 5°F with a 6° differential, the compressor will cycle on at 11°F and off at 5°F. Default is 5°F (3°C) for one probe and 6°F (3°C) for two probe controlled Dispensers. Setting is adjustable from 4°F to 15°F (2°C to 8°C). Display reads “ <b>dF. 5F.</b> ”
F5	Set Metric or English	Changes units to English or Metric units. Display will default to currently selected unit. Up button sets metric units. Display reads “ <b>gr</b> ” Down button sets English units. Display reads “ <b>Lb</b> ” <b>Note:</b> Enter button saves setting and closes function Must Calibrate Scales. See <i>Calibrations and Adjustments</i> on page 29.
F6	Set Password	Allows a password to be set to access both manager and diagnostic functions. (Default is no password.) Display shows dashes: Use Size buttons to enter a five-digit password then press the Enter button to save the password and exit. <b>Note:</b> Password must be entered twice (double entry). Entering “11111” twice will clear any passwords.
F7	Set Load Size Step Down	Allows the load size step down time periods to be changed. Display reads “ <b>1d 7.0</b> ”. 7.0 minutes is the default setting. Up button increases setting in 1 minute increments. Down button decreases setting in 1-minute increments. Enter button advances display to “ <b>2d 3.0</b> .” Display reads “ <b>2d 3.0</b> ”, 3.0 minutes is the default setting. Up button increases setting in 1-minute increments. Down button decreases setting in 1-minute increments. Enter button stores the new settings, closes the function, and exits to F1.

## Diagnostic Function Menu Structure (U4)

- Use the Up  and Down  arrow buttons to find the desired function.
- Press the Enter  button to select the desired function.
- Basket Size buttons also function as numbers:        
(Left Small=1, Left Medium=2, Left Large=3, Right Small=4, Right Medium=5, Right Large=6)

**Note:** If a password has been set, there is a Service Password available to access both the Manager Menu and Diagnostic Menu. The Service Password is 22463†.

Diagnostic Functions	Function Name	Description
d01	Exit Diagnostics	Immediate return to Main screen.
d02	Display Last Error	Displays the last 10 recorded errors in reverse order, starting with the last error recorded. Up button shows next error. Down button shows previous error. Enter button closes function.
d03	Error Log (Displays Error Log)	Displays the number of occurrences of each error. Display shows Error number and Number of Occurrences. (e.g. "05 02" means Error 5 has occurred two times since the error log was last cleared.) Up button shows next error. Down button shows previous error. Enter button closes function and returns to d01.
d04	Clear Errors (Clears Error Log)	Clears the error log. Display will read "Cl Err." Press enter to continue. Display will Read "Cl. No." Up arrow will select "clear errors." Display will read "Cl.YES." Press enter to clear error log, exit the function, and return to D1. Down arrow will deselect "clear errors." Display will read "Cl. No." Press the Enter button to execute selected option, exit the function, and return to d01.
d05	Display and Calibrate Temperature Probe. <b>Note:</b> See Temperature Probe Calibration on page 30.	Caution: Read Temperature Probe Calibration on page 30 before continuing. Displays the cabinet temperature probe reading in tenths of a degree e.g. "-1.5°F." Allows the cabinet temperature probe to be corrected. Up arrow will increase temperature in 0.1° increments. Down arrow will decrease the temperature in 0.1° increments. Enter button will save the new setting and exit to d01.
d06	Not Used	Displays "---" on single probe Dispensers. Enter button will exit to d01.
d07	Not Used	Displays "---" on single probe Dispensers. Enter button will exit to d01.
d08	Reset Refrigeration Errors #6 and #7	Clears and resets any active refrigeration errors (errors 6 and 7). Display defaults to "Er. no" Press Up arrow, to display "Er.YES" and to reset error. Down button will return to "Er. no." Press enter button to execute and return to d01.

Diagnostic Functions	Function Name	Description
d09	<p>Actuate Outputs</p> <p>Basket Size buttons also function as numbers</p> <p>The refrigeration circuit contains anti-short-cycle protection.</p>	<p>Allows outputs to be turned on and off to aid in diagnosing problems.</p> <p>Display shows selected motor and command (e.g. “<b>d2 on</b>” indicates the right drum motor’s output is on.)</p> <p>Use Basket Size buttons to select an output:</p> <ol style="list-style-type: none"> <li>1. Left drum motor (<b>d1</b>)--Left Small Basket</li> <li>2. Left accumulator motor (<b>A1</b>)--Left Medium Basket</li> <li>3. Right drum motor (<b>d2</b>)--Right Small Basket</li> <li>4. Right accumulator motor (<b>A2</b>)--Right Medium Basket</li> <li>5. Refrigeration compressor (<b>rF</b>)--right large basket Up arrow turns output on. Down arrow turns output off. Enter button closes function.</li> </ol> <p>The display flashing “<b>rF OFF</b>” indicates the refrigeration compressor cannot be restarted until the 2-minute short cycle delay is met.</p> <p>All outputs will turn off and return to normal operation when exiting the function.</p>
d10	<p>Diagnostics Display</p> <p><b>Note:</b> See <i>Using the Diagnostic Display (D10) on page 24.</i></p>	<p>Shows status of all controller Inputs and outputs while the Dispenser continues normal operation.</p> <p>Display shows all activated Inputs and outputs. (See <i>Using the Diagnostic Display (D10) on page 24.</i>)</p> <p>Size and Enter buttons function just as in Main screen during normal operation.</p> <p>Up arrow button does nothing.</p> <p>Down arrow button will exit the function</p>
d11	<p>Bypass Basket Sensors</p> <p><b>Note:</b> <i>Volatile setting (will reset each time power is cycled).</i></p>	<p>Allows the Dispenser to be used when a basket sensor has failed.</p> <p>Display will read “[<b>bYP</b>]” with alternating flashing brackets.</p> <p>Use Basket Size buttons to select the side to be bypassed.</p> <p>Display will default to the current sensor condition.</p> <p>Up arrow sets bypass mode. “[<b>YES</b>]” (“<b>YES</b>”)</p> <p>Down arrow clears it. “[<b>no</b>]” (“<b>no</b>”)</p> <p>Enter button executes selection, exits function, and returns to d01.</p>
d12	<p>Bypass Weighing</p> <p><b>Note:</b> <i>Volatile setting.</i></p>	<p>Disable the scale to allow other diagnostics to be performed without wasting product.</p> <p>Display will read “[<b>SCL</b>]” with alternating flashing brackets.</p> <p>Use Size keys to select the side to be bypassed.</p> <p>Display will default to current scale status.</p> <p>Up arrow turns the scale on for selected side “[<b>on</b>]” (“<b>on</b>”).</p> <p>Down arrow turns off the scale or selected side. “[<b>OFF</b>]” (“<b>OFF</b>”).</p> <p>Enter button executes selection, exits function, and returns to d01.</p>

Diagnostic Functions	Function Name	Description
d13	Bypass Refrigeration <b>Note:</b> <i>Volatile setting.</i>	Allows the refrigeration system to be disabled. Display will read the current status of the refrigeration system ( <b>rF on</b> or <b>rF OFF</b> ). Up arrow enables the refrigeration system. Down arrow disables the refrigeration system. Enter button saves the setting, exits the function, returns to d01. <b>Note:</b> <i>The refrigeration circuit contains anti-short-cycle protection. The refrigeration compressor cannot be restarted until the 2-minute short cycle delay is met.</i>
d14	Display Scale Weight	Displays the current calibrated weight on the scale. Display will read <b>[SCL]</b> with alternating flashing brackets. Use Size buttons to select the side to be displayed. Enter button exits function and returns to d01.
d15	Display Scale Volts	Displays the current uncalibrated input from the scale. Display will read <b>[SCL]</b> with alternating flashing brackets. Use Size buttons to select the side to be displayed. Enter button exits function and returns to d01.
d16	Exercise Mode <b>Note:</b> <i>Volatile setting.</i> <b>Caution:</b> Ensure the hopper is empty before using Exercise mode.	Exercise mode is designed to "break in" a replaced component. When the Dispenser is in exercise mode, the selected side(s) will continuously cycle. Display will read <b>[E]</b> with alternating flashing brackets. Use Size buttons to select the side to be exercised. Up arrow selects exercise mode: Display reads <b>[ on ]</b> (" on "). Down arrow clears exercise mode. Display reads <b>[ OFF ]</b> (" OFF "). Enter button executes selection and exits to d01.
d17	Restore Defaults	Restores all settings to factory defaults. Display defaults to <b>"rd. no."</b> Up arrow will select restore defaults: display reads <b>"rd.YES."</b> Down arrow will deselect restore defaults: display will read <b>"rd. no."</b> Enter button will execute selection and exit to d01. <b>Caution:</b> This function will erase scale calibrations, temperature probe calibrations, changes to target weights, temperature set point, alarm set point, and will reset passwords to defaults.
d18	Power Volts	Displays the current power supply voltage. Enter button exits the function and returns to d01.

- Use the Up  and Down  arrow buttons to find the desired function.
- Press the Enter  button to select the desired function.
- Basket Size buttons also function as numbers:        
(Left Small=1, Left Medium=2, Left Large=3, Right Small=4, Right Medium=5, Right Large=6)

**Note:** If a password has been set, there is a Service Password available to access both the Manager Menu and Diagnostic Menu. The Service Password is 22463†.

## Error Detection

The main display and Basket Size button LED lights will flash with the detection of an error condition for the affected side. The display will state the error that has occurred (e.g. “**Err 4**”).

If an error does occur, it is normally reset by pushing the Enter  button. If the failure continues, turn the power switch off and unplug the power cord from the wall outlet. Check the power cord for any obvious defect. Open the cabinet door to make sure the Dispenser is loaded properly and is properly assembled (see Dispenser Assembly on page 6).

See Troubleshooting on page 22 for troubleshooting an error condition.

Error Codes	
Error	Description
01	Timeout error on left accumulator.
02	Timeout error on right accumulator.
03	Left tare weight has shifted excessively.
04	Right tare weight has shifted excessively.
05	Refrigeration progress too slow. (>25°F for 1.75 Hr)
06	Refrigeration high-pressure switch has tripped.
07	Error on refrigeration relay drive.
08	Temperature probe input out of range.
09	Invalid data in configuration (normal first time).
10	Internal system error

**Note: Errors 5, 6 and 7 are refrigeration errors.** These errors, while requiring corrective action, will not disable the fry dispensing portions of the equipment. In order to safeguard the refrigeration system, errors 6 and 7 will not reset by pushing the Enter  button. These errors are reset from the Diagnostic Menu using Diagnostic Function **D08**. Contact a service technician for assistance with these errors.

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## Troubleshooting

The following is a list of errors that may occur, probable causes, and corrective action that may eliminate the problem. If, after performing the corrective action, the problem persists, contact a service technician for assistance with these errors.

Our Technical Support is available for assistance, providing product technical support, parts and parts information, and service agent referral.

### Error 1

The controller has detected a TIMEOUT ERROR FOR THE LEFT ACCUMULATOR MOTOR HOME SENSOR. The accumulator home sensor sends an input to the controller each time the accumulator doors cycle. It lets the controller know that the doors opened and closed in an acceptable time.

A Timeout Error could be caused by a disconnected or faulty accumulator encoder, a damaged encoder vane, broken accumulator linkage, an accumulator motor fault, or a controller fault. Verify the accumulator encoder wiring at the controller board is secure and the vane is in place and undamaged. Check accumulator linkage to ensure it is undamaged.

### Error 2

The controller has detected a TIMEOUT ERROR FOR THE RIGHT ACCUMULATOR MOTOR HOME SENSOR. The accumulator home encoder sensor sends an input to the controller each time the accumulator doors cycle. It lets the controller know that the doors opened and closed in an acceptable time.

A Timeout Error could be caused by a disconnected or faulty accumulator encoder, a damaged encoder vane, broken accumulator linkage, an accumulator motor fault, or a controller fault. Verify the accumulator encoder wiring at the controller board is secure and the vane is in place and undamaged. Check accumulator linkage to ensure it is undamaged.

### Error 3

The controller has detected a LARGE SHIFT IN THE TARE (EMPTY) READING FOR THE LEFT SIDE'S SCALE INPUT. Could be caused by an obstruction of the scale or loss of calibration. Verify the accumulator housings and flap doors are properly assembled. Check accumulator doors to ensure there are no obstructions (e.g. fries jammed underneath). Verify the shaft collars are pushed back to the e-clips near the back wall. If no obstruction is found, calibrate the scale. See Calibrations and Adjustments on page 29.

### Error 4

The controller has detected a LARGE SHIFT IN THE TARE (EMPTY) READING FOR THE RIGHT SIDE'S SCALE INPUT. Could be caused by an obstruction of the scale or loss of calibration. Verify the accumulator housings and flap doors are properly assembled. Check accumulator doors to ensure there are no obstructions (e.g. fries jammed underneath). Verify the shaft collars are pushed back to the e-clips near the back wall. If no obstruction is found, calibrate the scale. See Calibrations and Adjustments on page 29.

### Error 5

The controller has detected the CABINET TEMPERATURE IS NOT COOLING AS EXPECTED. Likely causes are leaving the cabinet door open for extended periods of time during operation or the power was left on while defrosting the cabinet. Other possible causes are a restriction to the airflow across the condensing unit such as might occur with a dirty or plugged condenser filter and/or coil, a faulty temperature probe, or a malfunction of the refrigeration compressor. Check for obstructions near the condensing unit inlet grill and inspect and clean the condenser filter and/or coil if needed. See Cleaning the Condenser Filter and Coil on page 50. Call a service technician for assistance **t** (see note below to reset error).

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## Error 6

The HIGH-PRESSURE SWITCH FOR THE REFRIGERATION SYSTEM HAS TRIPPED. Possible causes include a restriction to the airflow across the condensing unit such as might occur with a dirty or plugged condenser filter and/or coil. Check for obstructions near the condensing unit inlet grill. Inspect and clean the condenser filter and/or coil if needed. See Cleaning the Condenser Filter and Coil on page 50. A faulty condenser fan, a failed feedback relay or refrigeration relay, or a loose wire to a relay can cause this error. Also, a loose wire in the refrigeration circuit could cause the error. Finally, a power outage may also cause this error. **This error will need to be reset using Diagnostic function d08.** Call a service technician for assistance. **(WARNING: HIGH VOLTAGE. Unplug the Dispenser before attempting to repair any wiring.)** † (See note below.)

## Error 7

The controller has detected an ERROR ON THE REFRIGERATION RELAY DRIVE indicating the compressor feedback relay did not turn off when the controller turned off refrigeration. This could be caused by a stuck refrigeration relay or feedback relay, a short circuit, or controller output failure. Verify there is no foreign material or loose connections around the relay output. **This error will need to be reset using Diagnostic function d08.**

† (See note below to reset error.)

## Error 8

The controller has determined an INPUT FROM THE CABINET OR REFRIGERATION CONTROL TEMPERATURE PROBE IS OUT OF RANGE, HIGH OR LOW. The most likely cause is a failed or disconnected temperature probe. Verify the temperature probes wires are properly secured at the controller board.

## Error 9

NVRAM CHECKSUM ERROR. The controller has detected invalid or corrupt data. **It is normal to get this error the first time a Dispenser is powered on after a new processor has been installed or replaced.** The data may be invalid for several reasons. The processor writes the permanent data (error logs, configuration, and operating parameters) along with extra data that it uses to verify the data is valid. Verify the processor is firmly mounted to the controller. If the error persists it likely indicates a failure of the NVRAM. Call a service technician for assistance.

## Error 10

An INTERNAL SYSTEM ERROR HAS OCCURRED. This error could occur for various reasons including electrical interference, an error in the Dispensers software, or a fault in the processor. Call a service technician for assistance.

**Note:** † **Errors 5, 6 and 7 are refrigeration errors.** These errors, while requiring corrective action, will not disable the fry dispensing portions of the equipment. In order to safeguard the refrigeration system, errors 6 and 7 will not reset by pushing the Enter [Φ] button. These errors are reset from the Diagnostic Menu using Diagnostic Function D08.

## Directions

1. Press the Up arrow button to read U4, then press enter [Φ]. (If a password has been set, enter the password then press [Φ].)
2. Display reads "d01."
3. Press the UP arrow button to "d08," press enter [Φ].
4. Display reads "ER NO."
5. Press the Up arrow button to change "ER NO" to "ER YES." Press enter [Φ] to clear the error.

## Display Is Blank

If the DCV power indicator light is off but the ON/OFF switch is illuminated, try resetting the DCV circuit breaker (CB1) in the upper left corner of the upper back panel.

If the DCV power indicator is illuminated but the display is blank, check the display cable connections and verify the processor is fully seated. If the connections are good, replace the display PCB.

## Using the Diagnostic Display (D10)

Function D10 allows the user to see the status of all controller inputs and outputs on the main screen while continuing to use the Dispenser. As inputs and outputs turn on and off, their corresponding segment will also turn on and off. The diagram below identifies which segment on the display will light for each input and output.

The user can continue to use both sides of the Dispenser while in this function. If an error condition occurs while in the function it can still be reset by pressing the Enter  button on the operator panel.

This function is especially useful for checking basket sensor and accumulator home switch status. It will also allow a technician to determine when the Dispenser is calling for each side's drum and accumulator motors to run and when the refrigeration compressor should be running.

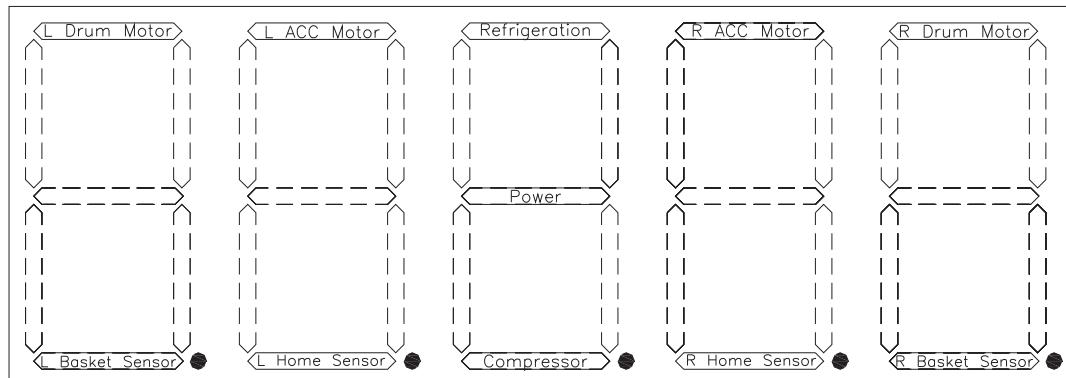


Figure-15

L Drum Motor lit	The controller is calling for the left drum motor to run.
L Basket Sensor lit	The left basket sensor has detected a basket.
L Acc Motor lit	The controller is calling for the left accumulator motor to run.
L Home Sensor lit	The left accumulator encoder sensor has detected the home position.
Refrigeration lit	The controller is calling for the refrigeration compressor to run
Power lit	The controller is turned on. Mainly used as a reference light.
Compressor lit	The refrigeration compressor is running.
R Acc Motor lit	The controller is calling for the right accumulator motor to run.
R Home Sensor lit	The right accumulator encoder sensor has detected the home position.
R Drum Motor lit	The controller is calling for the right drum motor to run.
R Basket Sensor lit	The right basket sensor has detected a basket.

### Example

The example displayed in Figure 16 indicates the following inputs/outputs are on.

- Left Drum Motor,
- Left Home Sensor
- Refrigeration
- Power
- Compressor
- Right Acc Motor
- Right Basket Sensor

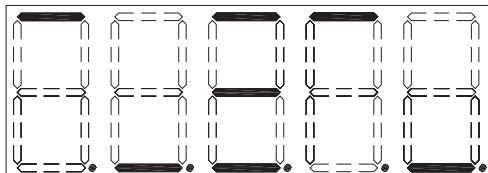


Figure-16

**Note:** Only trained and/or qualified personnel should perform service on this machine.

Problem	Probable Cause	Corrective Action
<b>Error 1 or 2</b> <b>After corrective action, press  to reset error.</b>	Accumulator door operation is being restricted.	Check for anything which would interfere with the accumulator door movement. Verify hopper and flap doors are installed correctly.
	Flap doors installed incorrectly.	Verify the green arrows are visible on the flap doors inside the cabinet and they open and close easily.
	Accumulator motor not operating.	Use Diagnostic Function d09 to manually operate the accumulator motors. Refer to the diagnostic function section of the equipment manual.
	Accumulator home switch not reading properly.	Verify operation using Diagnostic Function d10. If faulty, replace home switch.
<b>Error 3 or 4</b> <b>After corrective action, press  to reset error.</b>	Dispenser units have been changed.	Use function F5 to verify or change units (lb. = pounds, g = metric). After verifying units of measure, calibrate both sides.
	Hopper or accumulator not assembled correctly.	Verify proper installation of accumulator housings, hoppers, and flap doors.
	Accumulator doors not opening to dispense the fries.	Use function d09 to operate the doors on the affected side. If neither door operates or the doors move only slightly, check the drive wheel assembly. Visually inspect the accumulator assembly inside the upper back panel.
	Accumulator doors are open, not dispensing fries.	Use function d09 to operate doors on the affected side. If neither door operates or if the doors move only slightly, suspect the drive wheel assembly. If the doors operate, home the doors and calibrate. May require restoring defaults. (d17).
	Restrictions to weighing system movement inside cabinet.	Verify the accumulator door shaft collars are pushed all the way to the back of the cabinet.
		Check for fries interfering with the accumulator doors.
		Check for frost build up. Defrost Dispenser daily.
	Calibration changed or lost.	Restore defaults and calibrate both sides.
	Restrictions to weighing system movement in the back of the Dispenser.	Verify there is nothing interfering with the movement of the weighing system.
		Verify accumulator magnet block is secure and no foreign object is attached to the magnet.
<b>Error 5</b> <b>After corrective action, press  to reset error.</b> <b>*Error may need to be reset using diagnostic function d08 on Dispenser with revision letters A and B. (See below).</b>	Reset error to verify temperature and probe operation.	If temperature is outside expected range replace the probe. On early two probe models, verify second probe reading using Diagnostic Function d06.
	Dirty condenser and/or filter.	Clean the condenser and filter. Press the reset button to reset the error.
	Cabinet component missing or damaged.	Verify the flap doors are installed. Check cabinet door for proper alignment. Check the door gasket. Replace missing or damaged items.
	Cabinet door not closed.	Close door.
	Refrigeration system issue.	Check refrigerant level. Verify the compressor and condenser fan are operating.

Problem	Probable Cause	Corrective Action
<b>Error 6</b> <b>Instructions for Diagnostic Function d08</b> <b>Press Up arrow to U4.</b> <b>Press  twice.</b> <b>Up arrow from d01 to d08.</b> <b>Press  once.</b> <b>Press up arrow to change "ER NO" to "ER YES".</b> <b>Press  twice.</b> <b>Temperature should be displayed.</b>	Dirty condenser and/or filter.  Power outage.  Faulty power cord.  High ambient temperature.  Faulty feedback or refrigeration relay.	Clean the condenser and filter. Use function d08 to reset the error.  A power outage disrupts the feedback loop causing an error 6.  A faulty power cord may cause a disruption in the feedback loop. Replace a damaged power cord.  Room temperatures should be kept below 90°F (31°C).  An intermittent or unexplained error 6 may be caused by a faulty refrigeration (SW2) or feedback relay (SW3). This can be difficult to diagnose. Verify the refrigeration relay is receiving a signal from the controller.  <b>Note:</b> <i>There is a short cycle delay of about 2 minutes after the Dispenser is turned on.</i>
	Faulty condenser fan.	The condenser fan and compressor should be running at the same time. If the compressor starts to run but the condenser fan does not, the condenser fan motor is faulty.
	Faulty compressor or compressor start components.	Verify if compressor will run if power is applied to it. Check start components and wiring.
	Faulty controller (rare).	Verify the controller is sending voltage to the refrigeration relay (SW2). Note: There is a short cycle delay of about 2 minutes after the Dispenser is turned on.
<b>Error 7</b> <b>*Error must be reset using diagnostic function d08</b>	Power interruption.  Faulty refrigeration or feedback relay.	Rare but should be eliminated first. Use diagnostic function d08 to reset error.  Verify there are no wiring problems first, then replace the relays (SW2 and SW3).
<b>Error 8</b>	Faulty temperature probe.	Function d05 is used to verify the cabinet temperature probe input (d06 should also be used to check the second control probe on Dispensers using two probes, revision letters A, B and C). Replace the faulty temperature probe.
<b>Error 9</b>	Checksum error.	Press the diamond, Enter button, or cycle power. This error is normally only seen when a new controller and/or processor is installed.  If the error persists, verify the processor is securely mounted to the controller. Cycle power.  If above actions do not eliminate error, the controller and processor will need to be replaced.
<b>No display</b>	ON/OFF switch off or tripped.  24V circuit breaker tripped.  Display board connector is not attached to the board or the processor is not properly seated.  Faulty display PCB.	Verify ON/OFF switch is on and illuminated. If not, check switch, switch harness, power cord, and check for short.  Verify Dispenser is assembled properly, particularly the flap doors. Reset circuit breaker in the back, labeled CB1.  Detach and reconnect the white six-wire harness at the display PCB and the main controller.  Verify processor is fully seated on the controller.  If the items listed above are correct and the 24V power indicator is lit, replace the display PCB.

Problem	Probable Cause	Corrective Action
<b>Unable to make a basket load size selection on one or more sides (drum does not turn)</b>	Calibration has been lost (load size indicator lights do not remain lit after being pressed).	Calibrate (User Function U2) the affected side(s).
<b>Accumulator doors not closing</b>	Positioning information has been lost.	Use diagnostic function d09 (see manual) to manually operate and close doors. If doors return to open: restore defaults (d17) then use function d09 to close the doors. Calibrate (U2) both sides.
	Broken accumulator spring.	Use function d09 to operate the accumulator doors on the affected side. If the right-hand door opens and closes normally but the left-hand door does not move, suspect the accumulator door spring is broken. Visually inspect the mechanism inside back panel.
	Drive wheel shoulder screw has broken or detached.	Use function d09 to operate the doors on the affected side. If neither door operates or if the doors move only slightly, suspect the drive wheel assembly. Visually inspect the assembly inside the top back panel.
	Accumulator door retaining screw is missing.	A door will be hanging loose; it can be a right- or left-hand door. Visually inspect the assembly inside the top back panel.
<b>Fry loads are incorrect</b>	Hopper parts are not correctly assembled.	Verify hopper assembly and placement.
	Calibration has changed or been lost.	Calibrate (User function U2) the affected side(s).
<b>Does not dispense fries into basket (accumulator doors are not opening)</b>	The fry load target weight has not been met (low fry indicator).	Verify there are fries on the accumulator doors waiting to be dispensed. Check the hopper for bridging of the fries. Verify the drum turns, verify it is not broken.
	Basket is not lined up with the basket sensor window.	The front end of the basket must be raised slightly and slid forward onto the basket sensor window. Remove any fries or other debris which may be interfering with the basket reaching the sensor.
	Basket sensor is not reading the basket or sending a signal to the controller.	Basket is not lined up with the basket sensor window. Replace the basket sensor if reconnecting the sensor connections do not solve the problem.
	Hopper not installed correctly.	Inspect hopper for proper assembly and placement.
	Damaged drum.	Inspect the drum and drum socket for damage, replace drum.
	Unable to make a load size selection, calibration lost.	Calibrate (user function U2) the affected side(s).
<b>Drum not turning</b>	Faulty drum motor.	Use function d09 to operate the drum motor on the affected side.

Problem	Probable Cause	Corrective Action
<b>Unable to calibrate one side or both sides</b>	Error message has not been cleared.	Press the up arrow to U1 then press the diamond twice.
	Accumulator door assembly movement is being restricted.	Verify the accumulator door shaft collars are pushed all the way to the back of the cabinet.
		Check for fries interfering with the accumulator door shafts.
		Check for frost buildup. Defrost daily.
		Verify magnet block is secure to the mechanism and no foreign object is attached to the magnet.
		Check for anything restricting movement of the assembly.
	Weighing system fault. (Use functions D14 and D15 to diagnose weighing system.	d14 shows calibrated scale weight readings in grams or pounds. With the accumulator housing in place this reading should reflect the actual calibrated weight on the accumulator doors.
		d15 shows actual scale volts. With the accumulator housing in place, readings between 2.5V and 3.5V are considered normal with about a volt increase for each 1 lb. (450 g) of weight added to the accumulator doors. These numbers are approximate.
		d15 - If 0V or no change in voltage when weight is added. Check and clean the connection at the NCWS weighing board. Check the connection on the main board and check for restrictions in accumulator assembly movement. If all is correct suspect the NCWS board.
		The main controller or the cabling may be at fault. Try switching the NCWS connectors on the main controller, then use d15 to verify voltages.
<b>Not cooling, no error code</b>	Temperature number is flashing on the display while the door is closed. Door switch issue.	Check door alignment to verify door switch is being activated. Verify door switch operates.
		Verify connector is in the correct socket on the controller, P27.
	Faulty temperature probe.	Verify temperature probe is reading correctly.
	Refrigeration system is running but not cooling.	Call a certified refrigeration technician.

# Calibrations and Adjustments

## Scale Calibration

The R280 Frozen Food Dispenser will maintain and dispense fries from two hoppers. Each side has a scale that weighs and dispenses frozen fries independent of one another. These scales may require calibration periodically.

1. Open the cabinet door and remove the hopper from the Dispenser for the side to be calibrated.

**Note:** *The accumulator housing(s) must remain in place on the accumulator doors.*

Calibration of the scales is performed using the operator panel on the front of the Dispenser.

2. Press the Up arrow button  until "U2" is displayed then press the Enter  button. The display will change to "[CAL]" ([---] for metric) with flashing brackets alternating from left to right.
3. Select the side to be calibrated by pressing a Basket Size  button on the side to be calibrated. The display will change to "[--]" if the left side's scale is selected or "--]" if the right side's scale is selected.
4. Place an empty fry basket under the accumulator doors for the side to be calibrated. Lift the front of the basket slightly and slide the basket forward over the window for the basket sensor. The accumulator doors will open and close to dispense any contents into the basket, ensuring the accumulator housing is empty before zeroing the scale.
5. The display will change to "0.0." The scale now tares (zeros) itself automatically.
6. After it achieves a stable tare the display will change to "1.0" or "450" if set to metric units. Place a 1 lb. (450 g) reference weight on the accumulator doors for the side to be calibrated. (Note: Four frozen ¼ lb. patties can be used in place of a 1 lb. reference weight.)
7. Once the scale stabilizes the display will change to "2.0" or "900" if set to metric units. Place an additional 1 lb. (450 g) reference weight (for a total of 2 lb. (900 g) on the accumulator doors for the side to be calibrated.

8. After the scale stabilizes the display will change to "---". Remove the reference weight(s) from the accumulator doors and re-install the hopper for the side that was calibrated.

The Dispenser will return to normal operation with no basket size selected for the side that was calibrated.

9. Repeat for the opposite side's scale if required.

## Set Manager Password

A password can be set to restrict unauthorized access to both the Manager and Diagnostic function menus. Once set, the password will need to be entered to gain access to restricted menus. Take care to remember your password or write it down and keep it in a safe location.

A manager password is set and/or changed from the Manager function menu (see Manager Function Menu Structure (U3) on page 17) using the operator panel on the front of the Dispenser and requires the current manager's password (if set) to access the menu.

To access the Manager function menu and set or change the manager password, press the Up arrow  button until "U3" is displayed, then press the Enter  button.

If a password is required the display will change to "\_\_\_\_" Enter the manager's password (if set) using the Basket Size buttons. Then press the Enter  button.

**Note:** *The Basket Size buttons also function as number buttons:*



*(e.g. the left Medium Basket button is number 2, and the right Large Basket button is number 6.)*

The display will change to "F1." Press the Up arrow  button until "F6" is displayed, then press the Enter  button. The display will change to "\_\_\_\_". Enter a manager password using the Basket Size buttons. As the password is entered the dashes in the display will move from the bottom segments to the middle segments, e.g.

"\_\_\_\_". Press the Enter  button to save the password.

**Note:** *The password must be entered twice (double entry).*

If successful the display will change to "F1." Press the Enter  button to exit to the Main screen and return to normal operation.

## Target Weight Adjustment

Each Basket Size button's target weight can be individually customized.



Default settings are:

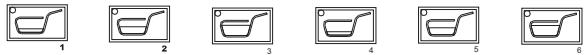
- Small load = 0.50 lb. (225 g)
- Medium load = 1.0 lb. (450 g)
- Large load = 1.5 lb. (700 g)

**Note:** Adjustments to the target weight for Basket Size buttons are performed from the Manager function menu (see the Manager Function Menu Structure (U3) on page 17) using the operator panel on the front of the Dispenser and may require a manager's password to access the menu.

To access the Manager function menu and customize the target weights for the Basket Size buttons press the Up arrow button until "U3" is displayed, then press the Enter button.

If a password is required the display will change to "----". Enter the managers password (if set) using the Basket Size buttons. Then press the Enter button.

**Note:** The Basket Size buttons also function as number buttons:

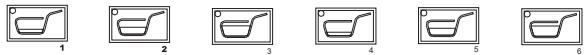


(e.g. the left Medium Basket button is number 2, and the right Large Basket button is number 6.)

The display will change to "F1." Press the Up arrow button until "F2" is displayed, then press the Enter button.

The display will default to the left Small Basket button's current target weight. 0.5 lb (225 g).

Select and press the Basket Size button to be customized.



An LED light will illuminate next to the currently selected Basket Size button and the display will read the current target weight assigned for the button.

To change the target weight for the currently selected Basket Size button, press the Up arrow button to increase the target weight in 0.05 lb. increments (25 g),

or the Down arrow button to decrease the target weight.

Repeat until all adjustments have been made. Press the Enter button to store the new settings and close the function.

The display will read "d01". To exit to the Main screen and return to normal operation, press the Enter button.

## Temperature Probe Calibration

The R280 Frozen Food Dispenser uses a single temperature probe mounted to an insulated spacer on the top wall of the cabinet compartment in the upper right. It is the temperature displayed on the control panel and is used to control the refrigeration system.

The temperature control is factory set. Unless the controller or the temperature probe are replaced, it will not be necessary to change these values. In addition, raising or lowering the set point temperature can compensate for small discrepancies between the probe temperature and actual temperature. However, differences greater than 2° should be corrected. The method for adjusting the temperature probe is simple, but requires an accurate thermometer (preferably certified) to measure the probe's deviation from the actual temperature.

Place the thermometer into the freezer compartment as close to the cabinet temperature probe as practical. The machine should be operating at or near normal operating temperature, -2°F to 10°F (-19°C to -12°C). If the thermometer has a sensing probe, make certain that it is not touching any metal in the compartment. Otherwise it may give a false reading.

Wait 5 minutes with the Dispenser operating normally and the door closed.

Check the thermometer reading and compare it with the temperature displayed on the operator panel. The best time to check is just after the compressor shuts off.

If the difference between the display and the thermometer is greater than 2°, an adjustment should be made.

**Note:** Calibration of the temperature probe is performed from the Diagnostic functions menu using the operator panel on the front of the Dispenser, and may require a manager's password to access the menu.

---

To access the Diagnostics menu, on the operator panel, press the Up arrow  button until "U4" is displayed, then press the Enter  button.

**Note:** The Basket Size buttons also function as number buttons:



(E.g. the left Medium Basket button is number 2, and the right Large Basket button is number 6.)

The display will change to "d01." Press the Up arrow  button until "d05" is displayed, then press the Enter  button to access the Probe Calibration function.

The display will read the current cabinet temperature the probe is detecting.

Adjust the probe temperature to match the correct temperature using the Up arrow  button to raise the displayed temperature, or the Down arrow  button to lower the displayed temperature.

**Note:** Each press of an arrow button will change the temperature 0.1°.

Once the displayed temperature matches the thermometer temperature, press the Enter  button to save the calibration and exit the function.

The display will read "d01." To return to the Main screen, press the Enter  button.

## Parts Identification

### Front View

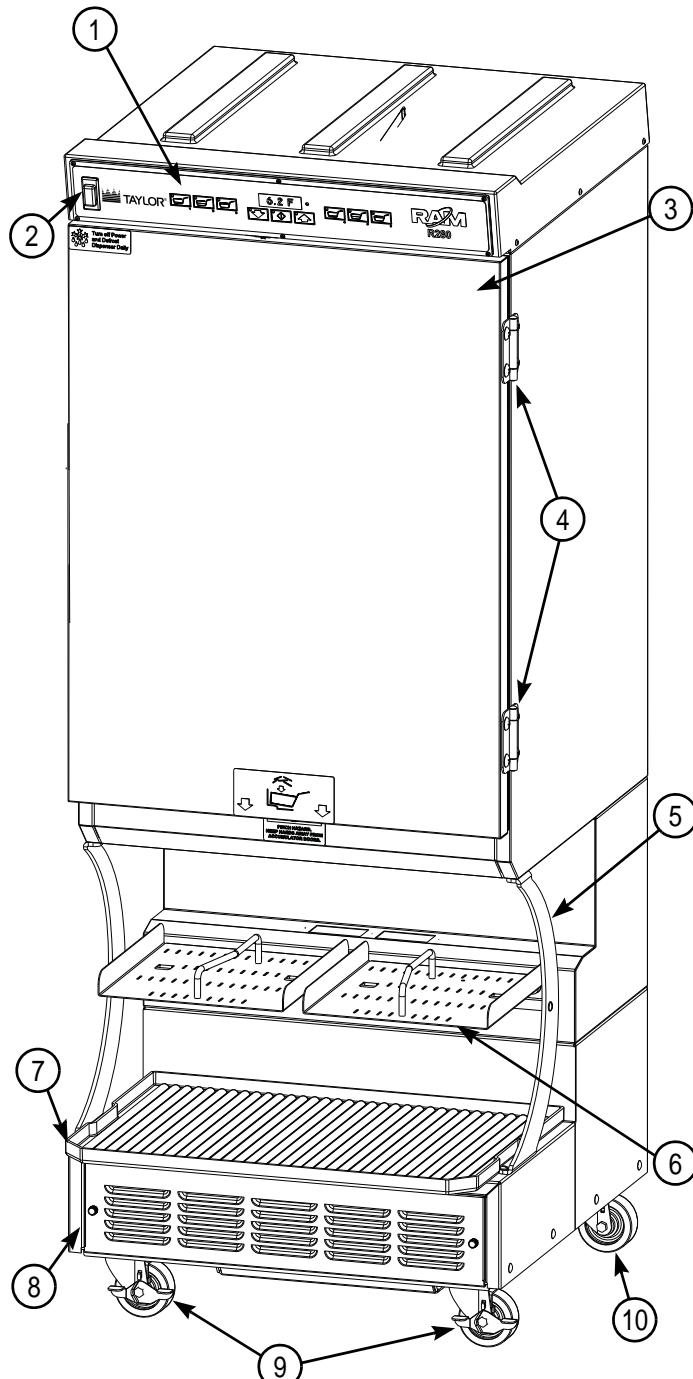


Figure-17

Item	Part No.	Description	Qty.
1	089350 600132	Keypad-Membrane Screw-6-32x1/2 PHL Pan 18-8 SS	1 6
2	292246	ON/OFF Switch (15A Circuit Breaker)	1
3	295964 293189	Door Assembly w/ gasket Door Gasket	1 1
4	293706 293855	Hinge, Door Screw Truss Head Phillips 3/8-16x1/2"	2 4
5	295499 295578 295639 078521	Support Bar RH Support Bar LH Tray Support Bar Screw Truss Head Machine Slotted 18-8 Stainless Steel 1/4-20 x 3/4 In.	1 1 1 10
6	295674 295675 294022 294147 290687 294021 058317	Right Basket Tray Left Basket Tray Right Basket Tray (used before Serial # LONR1302E04090) Left Basket Tray (used before Serial # LONR1302E04090) Locator Pin Guide Bar Screw-10-32x3/8 SLTD Truss	1 1 1 1 4 2 4
7	294821 293590	Drip Tray (with extended front) Drip Tray	1
8	294749 291158 294803 294800 077865 293512	Panel, Filter Access, Louvered Screw, Thumb Retainer, Thumb Screw Nut, Nylon, Spacer Nut, Hex Nylon Insert 18-8 SS 5/16-18 Filter, Condenser	1 2 2 2 4 1
9	216596 200766 200774	Caster, Front Locking Screw, Hex-Head 5/16-18x 1" Screw, Hex-Head 5/16-18x3/4"	2 4 4
10	216595 200774	Caster, Rear Screw, Hex-Head 5/16-18x3/4"	2 8
*	291050 294008	Basket, Fry, Black Handle Case of 8 Fry Baskets	
*	294410	Label Kit	1

\*Not Shown

## Rear View

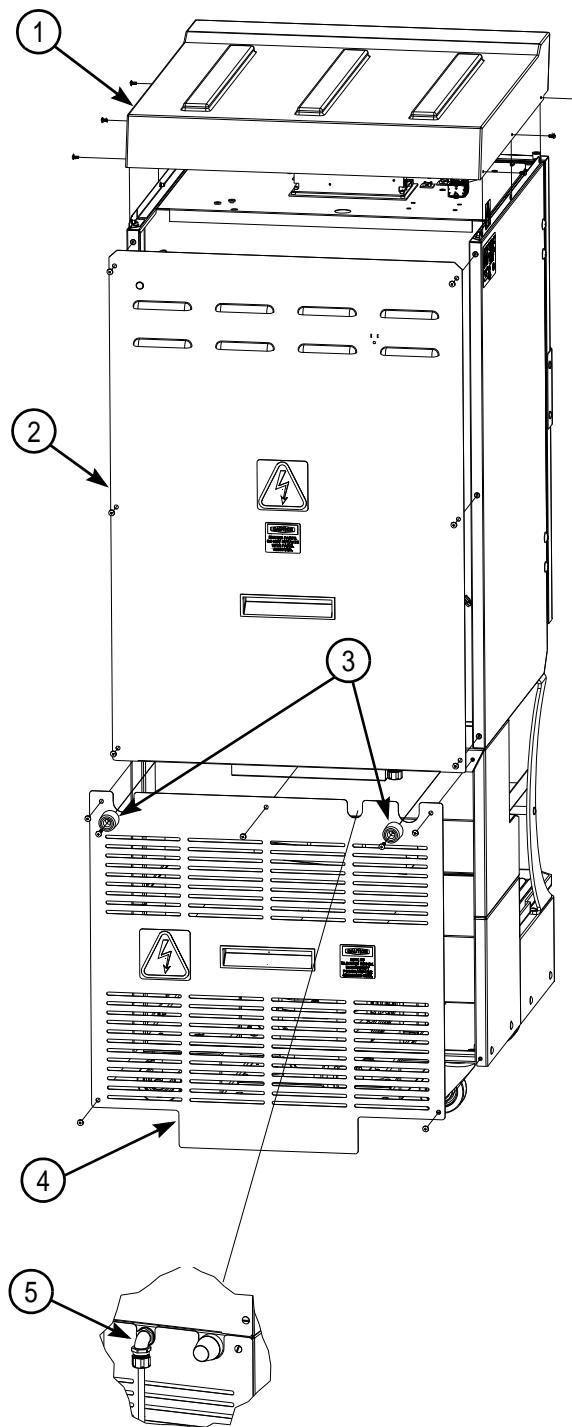


Figure-18

Item	Part No.	Description	Qty.
1	293899 294092 293795 213262	Top Cover Screw, pan head, Phillips 8-18x3/8" Rail, cover mounting Screw, socket head 10-32x3/8"	1 6 2 4
2	293272 295653 070695	Upper Back Panel Handle, Plastic Screw, Truss Head Machine, Phillips, 18-8 SS, 10-32 UNF x 1/2 In.	1 1 6
3	295681	Kit, Bumper, Wall (set of 2)	1
4	293225 295653 294824	Lower Back Panel Handle, Plastic Screw, Truss Head, Phillips, Pelleted, 18-8 SS, 10/32x 3/8"	1 1 5
5	294098 294129 216692 213942 202586	Domestic U.S. Power Cord International (Euro) Power Cord Strain Relief w/ Elbow Nut, lock, 1/2" conduit Washer, Flat, Nylon, 7/8"x1 1/8"x1/16"	1 1 1 1 1
*	294410	Label Kit	1

\*Not Shown

## Hopper Components

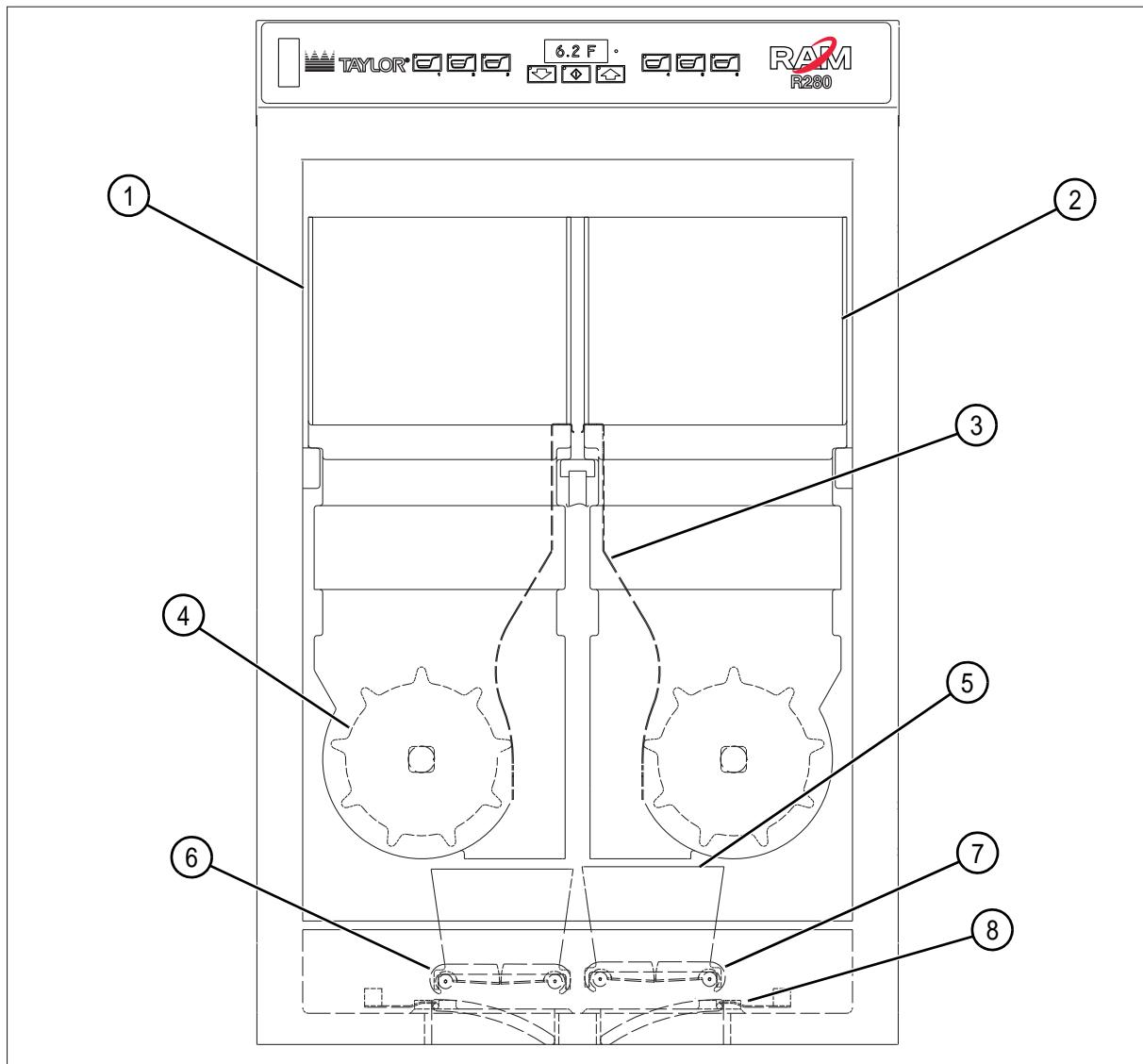


Figure-19

Item	Part No.	Description	Qty.
1	294397	Hopper, 30 lb, Left (replaces pn 293140)	1
2	294396	Hopper, 30 lb, Right (replaces pn 293139)	1
3	293329	Divertor, Fry	2
4	202366	Drum, High Tolerance	2
5	294416	Housing, Accumulator (Units after serial # 28FR0802B00249 and including all serial #'s starting with LONR)	2

Item	Part No.	Description	Qty.
6	294409	Door Accumulator, LH (Units after serial # 28FR0802B00249 and including all serial #'s starting with LONR)	2
7	294391	Door Accumulator, RH (Units after serial # 28FR0802B00249 and including all serial #'s starting with LONR)	2
8	293376	Door, Flap	2
*	295538	Kit. Mounting Blocks, Flap Door	1

\*Not Shown

## Temperature Probes and Hopper Supports

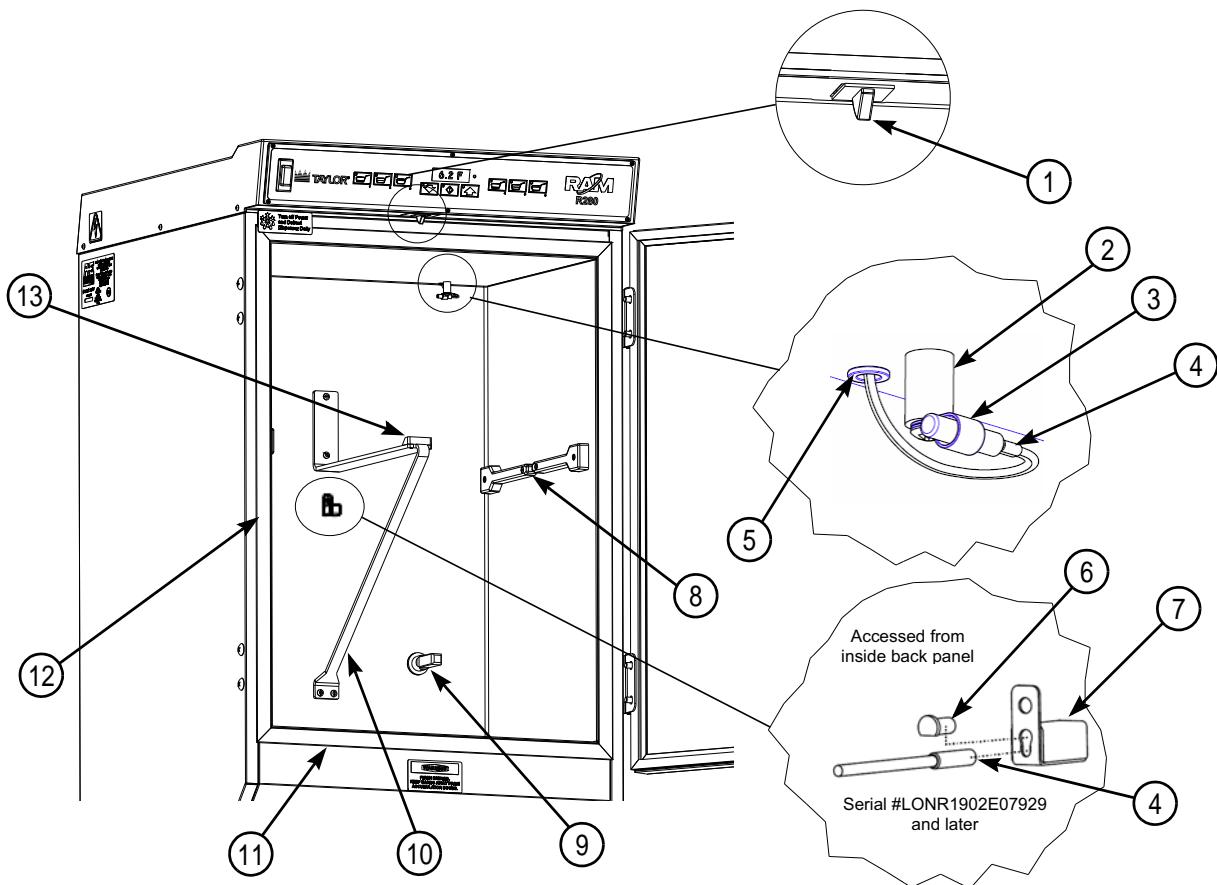


Figure-20

Item	Part No.	Description	Qty.
1	294407	Door Switch	1
	294408	Door Switch Harness	1
2	295234	Spacer, Temperature Probe	1
	291308	Screw Truss-head SS #8-32x1 1/4"	1
3	295824	P-clip Cabinet Temperature Probe	1
4	295853	Kit, Probe, Cabinet Temperature	1
5	295239	Bushing, Cable Protector	2
6	310149	Plug, Temperature Probe Housing	1
7	310115	Temperature Probe Housing	1
	037734	Screw Truss Head Machine Slotted	1
		18-8 Stainless Steel 10-32 x 1/2 In.	

Item	Part No.	Description	Qty.
8	295699 044573	Hopper Support side wall Screw Flat Head Machine Slotted 18-8 SS 10-32 x1	4 8
9	202895	Bearing, Drum Shaft	2
10	295698 033944	Hopper Support Bar, Center Screw Truss Head Machine Slotted 18-8 Stainless Steel 10-32 x 3/4 In.	1 4
11	293336	Breaker Strip, Top and Bottom	2
12	293335	Breaker Strip, Left and Right	2
13	295700 028641	Hopper Stop- Center Screw, Flat Head Machine, Slotted, 18-8 Stainless Steel, 10-32 x 3/4 In.	1 2

## Drum Motor Assembly

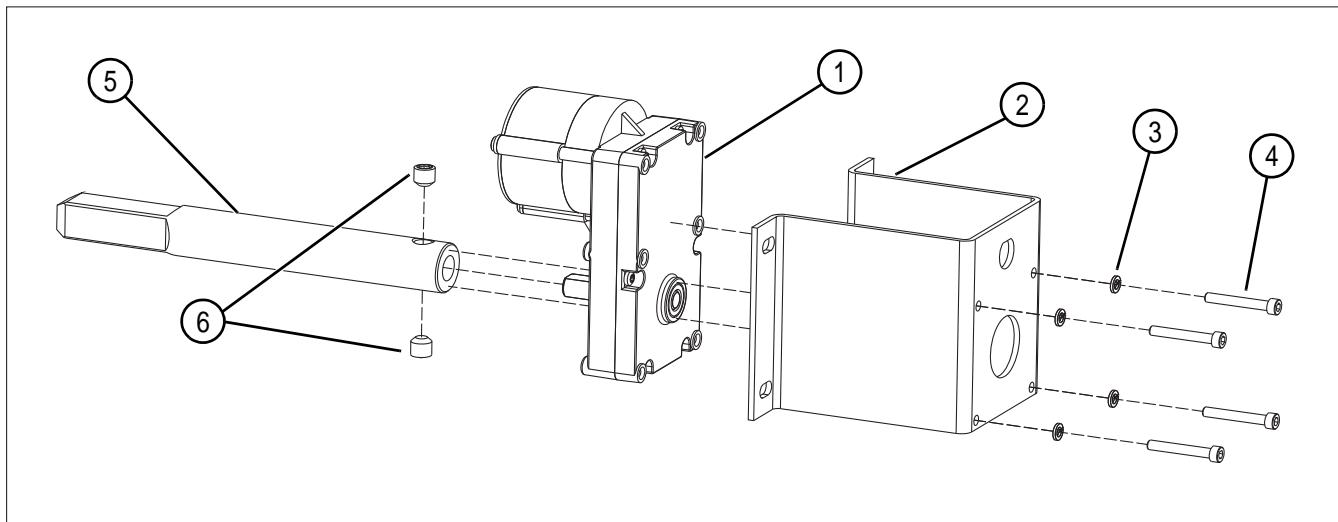


Figure-21

Item	Part No.	Description	Qty.
1	292250	Motor-Drum-Brushless-24V DC	1
2	202797	Bracket, Mount, Drum motor	1
3	213140	Washer, Lock, #10	4

Item	Part No.	Description	Qty.
4	213136	Cap Screw Socket HD #10-32x1-1/4"	4
5	293318	Drum Shaft, R280	1
6	290653	Set Screw, 3/8"-24 x 3/8"	2

## Basket Sensor Assembly

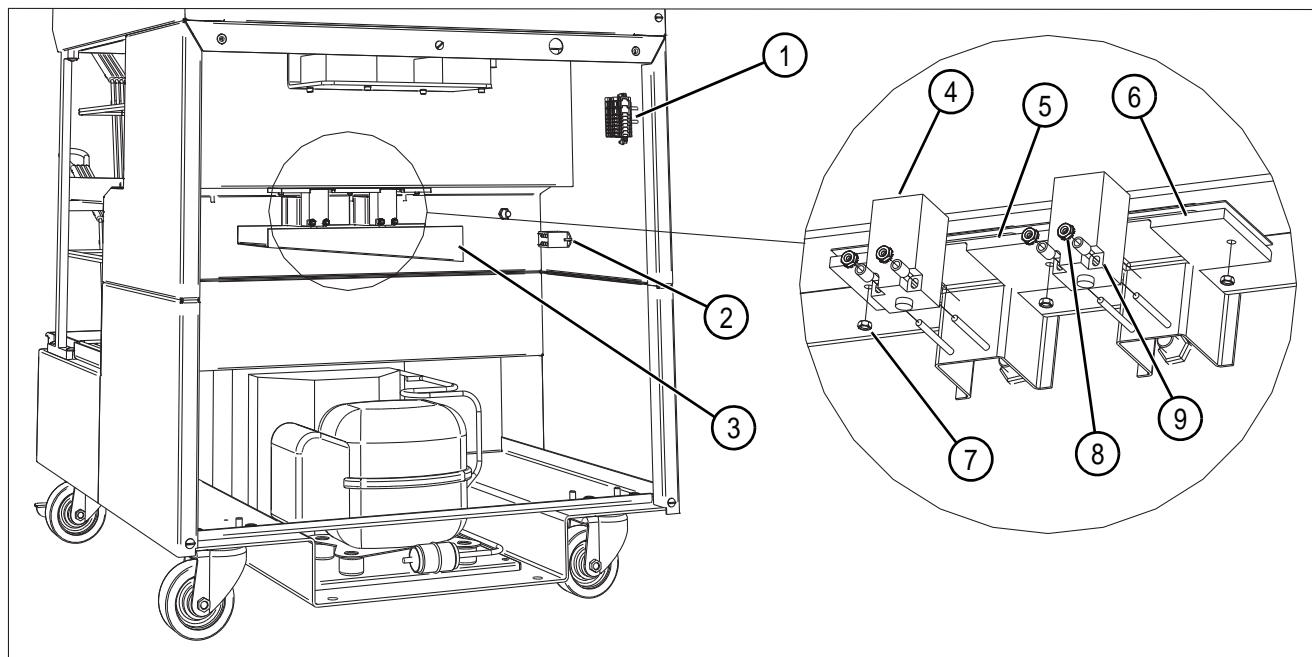


Figure-22

Item	Part No.	Description	Qty.
1	293404	Terminal Block (lower)	1
2	089287-12 293974	Relay-SPDT-15A-120V (Domestic) Feedback Relay (International)	1
3	294018	Drip Pan Assembly w/ tape	1
4	293934	Basket Sensor	2
5	293707	Gasket, Sensor Window	1
6	294593	Sensor Window Kit	1

Item	Part No.	Description	Qty.
7	205219	Nut, Hex #8-32 SS.	3
8	202874	Nut Hex #6-32w/ Ext lock washer	4
9	293731	Spacer, Nylon, $1/4''$ x#8x3/8"	4
*	293415 294261-27	Accumulator Heater Wire Domestic Wire-Heater-Door-Accum*R280* INTL (not pictured)	1

\*Not Shown

## Weighing System Assembly

(Before Serial Numbers LONR and 28PR)

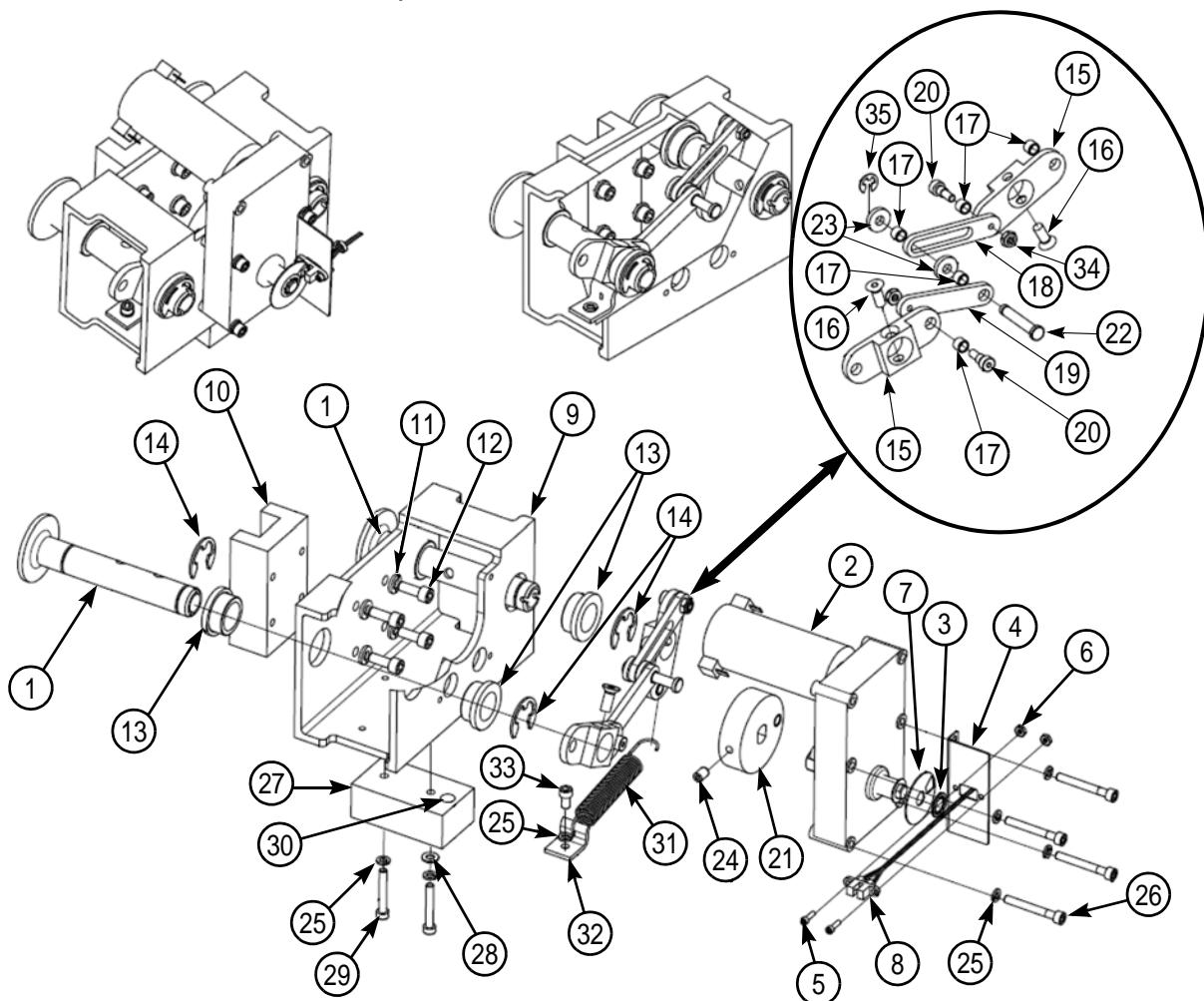


Figure-23

Item	Part No.	Description	Qty.
1	293322	Weldment, Arm Support	2
2	294009	Kit Acc Motor Includes item 3 and 7	1
3	290525	Retaining Ring, Self-Locking, 3/8"	1
4	290504	Bracket Mount, Home Sensor	1
5	058317	Screw, Socket Head Cap, Black Oxide, 4-40 x 3/8 In	2
6	038623	Nut Hex Zinc Plated 18-8 SS, 4-40	2
7	293328	Encoder Disk	1
8	293876	Accumulator Home Sensor	1
9	293146	Extrusion, Accumulator Housing	1
10	202068	Assembly, Linear Bearing 180mm	1
11	018954	Washer-1/4 Med Split Lock 18-8 SS	4

Item	Part No.	Description	Qty.
12	203097	Screw, Socket HD, M6x1x16mm	4
13	290517	Flange Bearing 3/4" ID x 1" OD x 1/2"	4
14	290531	Retaining Ring, E-Style, 1/2"	4
15	293154	Accumulator Toggle	2
16	213549	Screw socket flat-head 1/4"-20x5/8"	2
17	203259	Bearing Sleeve 1/4"ID x5/16"OD x1/4"	5
18	293155	Link, Accumulator	1
19	293323	Link, Accumulator, Push	1
20	290635	Screw, Shoulder, 1/4"x 1/4", #10-24	2
21	294693	Kit, Drive Wheel	1
22		Pin, Clevis (Available in Kit 294693)	1
23	293325	Washer, Spacer, 0.25 ID x 0.12"	2

**Weighing System Assembly (Cont.)**  
**(Before Serial Numbers LONR and 28PR)**

Item	Part No.	Description	Qty.
24	290295	Set Screw, 1/4-20 x 0.375"	1
25	213140	Washer, lock, #10	5
26	213518	Screw Socket-head cap 10-32x1-1/2"	4
27	380049	Kit, Block, Magnet Mount (includes magnet)	1
28	213139	Washer, Flat, #10 (Rev A only)	2
29	213136	Screw Socket-head cap #10-32x 1-1/4"	2

Item	Part No.	Description	Qty.
30		Magnet (Available in kit 380049 only)	1
31	293384	Spring, Extension	1
32	293390	Bracket, Spring Base	1
33	213262	Screw Socket-head cap M6x1x16mm	1
34	204761	Nut, Nylon lock Hex 18-8 SS 5/16-18	2
35	310109	E-Clip, 1/4in, SS Retaining Ring	1

## Weighing System Assembly (Cont.)

(After and Including Serial Numbers LONR and 28PR)

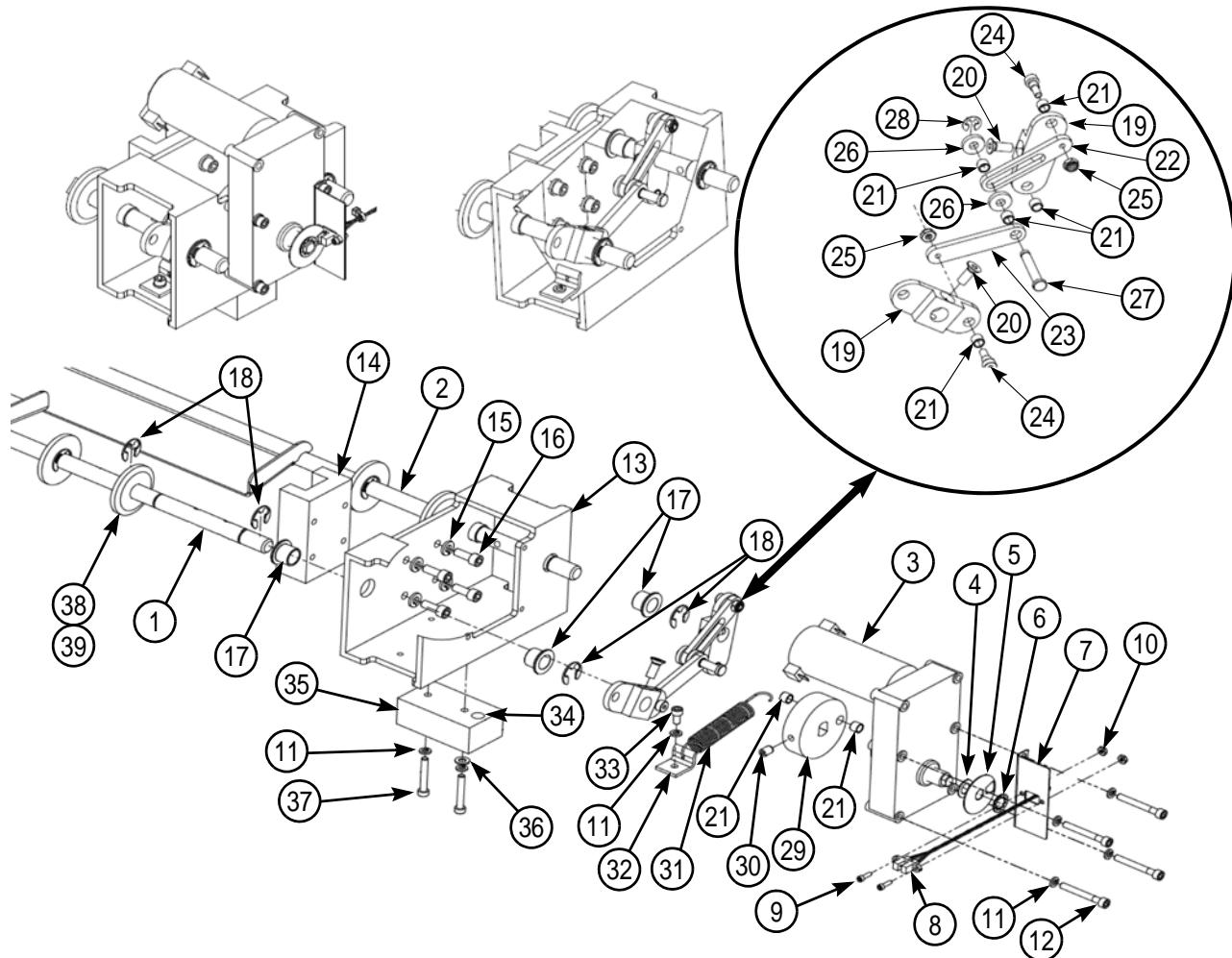


Figure-24

Item	Part No.	Description	Qty.
1	294350	Accumulator Door, RH	1
2	294351	Accumulator Door, LH	1
3	294009	Kit, Acc Motor, Includes item 3 and 7	1
4	293936	Washer-Flat-0.625 in.-OD-0.39 in. ID	1
5	293328	Encoder Disk	1
6	290525	Retaining Ring, Self-Locking 3/8"	1
7	290504	Bracket, Home Sensor Mount	1
8	293876	Kit, Accumulator Home Sensor	1
9	213663	Screw #4-40 x 3/8" Socket Head	2
10	290529	Nut, Hex, #4-40	2
11	213140	Washer, Lock, #10	7

Item	Part No.	Description	Qty.
12	213518	Screw Socket Head Cap #10-32 1-1/2"	4
13	310195	Extrusion, Accumulator Housing	1
14	202068	Assembly, Linear Bearing	1
15	213142	Washer, Split-Lock 1/4"	4
16	203097	Screw, Socket Head, M6 x 16mm	4
17	290517	Flange Bearing-3/4" ID x1" OD x1/2"	4
18	213356	Retaining Ring, E-Style, 1/2"	8
19	310196	Accumulator Toggle, No Guides	2
20	213549	Screw-Socket-Flat-Head 1/4-20 x5/8"	2
21	203259	Bearing Sleeve-1/4"ID x5/16"OD x1/4"	7
22	293155	Link, Accumulator	1

---

## Weighing System Assembly (Cont.)

(After and Including Serial Numbers LONR and 28PR)

Item	Part No.	Description	Qty.
23	293323	Link, Accumulator, Push	1
24	290635	Screw, Shoulder, #10-24, 1/4" x 1/4"	2
25	204761	Nut Nylon Lock Hex 18-8 SS 5/16-18	2
26	293325	Washer, Spacer, 0.25" ID x 0.12"	2
27		Pin, Clevis (Available in kit 294693)	1
28	310139	Retaining Ring, E-Style, 1/4"	1
29	294693	Kit, Drive Wheel	1
30	290295	Set Screw, 1/4-20 x 0.375"	1
31	293384	Spring, Extension	1

Item	Part No.	Description	Qty.
32	293390	Bracket, Spring Base	1
33	213262	Screw-Socket Head Cap #10-32 x 3/8"	1
34		Magnet (Available in Kit 380049 only)	1
35	380049	Kit, Block, Magnet Mount (includes Magnet)	1
36	213139	Washer, Flat, #10	1
37	213136	Screw, Socket Head Cap, #10-32 x 1-1/4"	2
38	293596	Collar, Accumulator Shaft, White	4
39	203257	O-ring 11/16 In OD x 1/2 In ID x 3/32 In.	4

## Dispensing System Assembly

(Before LONR and 28PR)

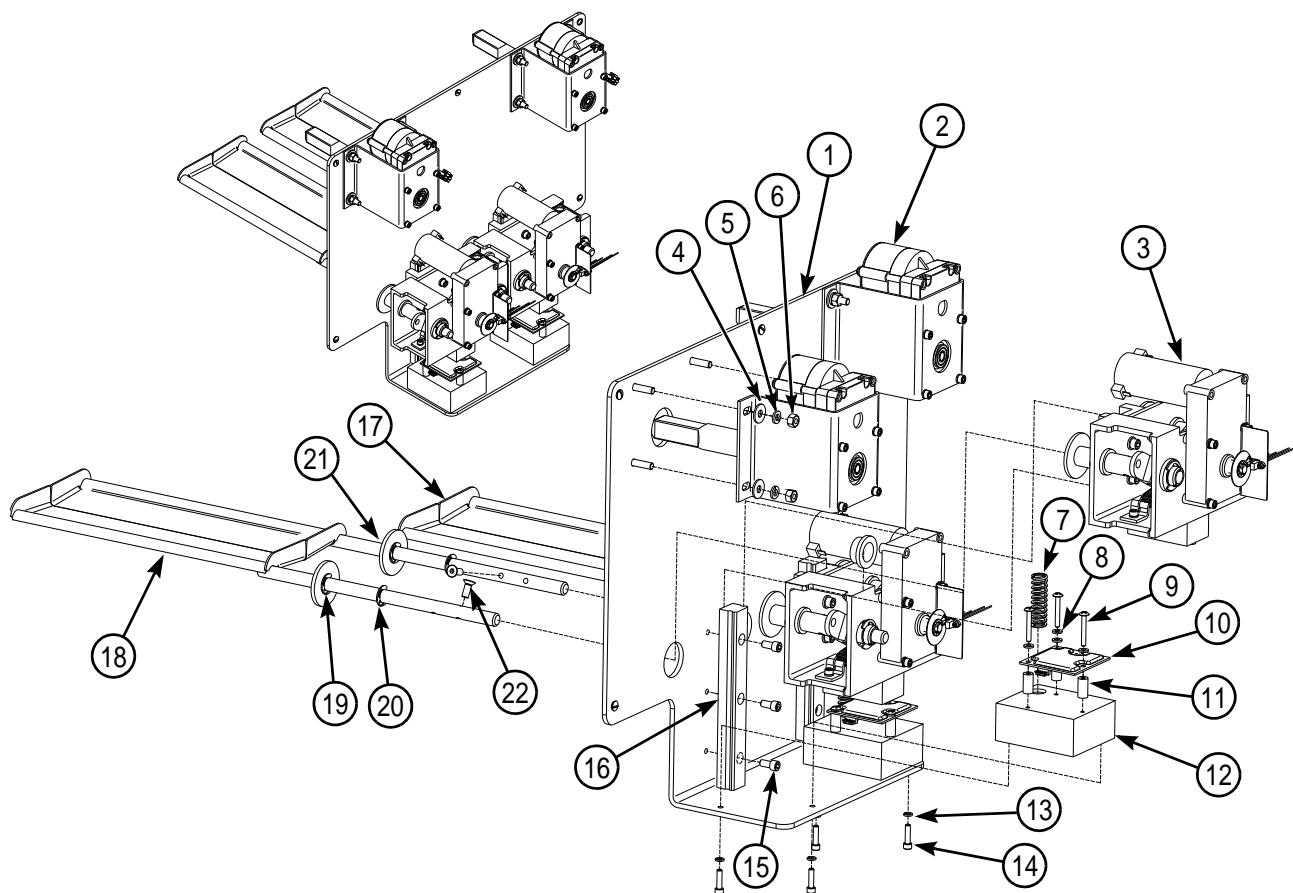


Figure-25

Item	Part No.	Description	Qty.
1	293152	Mechanical Panel, 280F/Fp	1
	213559	Screw, Truss HD, 10-32x1/2" SST	5
2		Assembly, Drum Motor w/ Mount	2
3		Assembly, Weighing System	2
4	213141	Flat washer, 1/4"	8
5	213142	Washer, split lock, 1/4"	8
6	213260	Hex nut, 1/4-20	8
7	290656	Spring, compression, NCWS	2
8	293566	Washer, Nylon, 0.173x0.375x0.054"	2
9	291308	Screw Trusshead Phillips #8-32x1-1/4	6
10	290519	Circuit Board, NCWS	2
11	292252	Standoff, Nylon, Unthreaded, 0.75" L	6
12	294775	Kit, NCWS Base w/screws	2

Item	Part No.	Description	Qty.
13	213140	Washer, Lock ,Reg Spr, ZP #10.ipt	4
14		Screw SH Cap two included w/294775	4
15	051455	Screw Socket Head Cap Zinc Plated 1/4-20 x 1/2 In.	6
16	202068	Assembly, Linear Bearing, 180mm	2
17	294409	Assembly, Accumulator Door, LH (includes Items 19-21)	4
18	294391	Assembly, Accumulator Door, RH (includes Items 19-21)	2
19	203257	O-ring Buna-N 11/16"ODx1/2"IDx3/32"	4
20	213356	Ring, retaining, E-style, ZP, 1/2"	8
21	293596	Collar, Accumulator shaft, UHMW	4
22	213549	FH Cap Screw Socket ZP 1/4-20x5/8" L	4

## Dispensing System Assembly

(After and including LONR and 28PR)

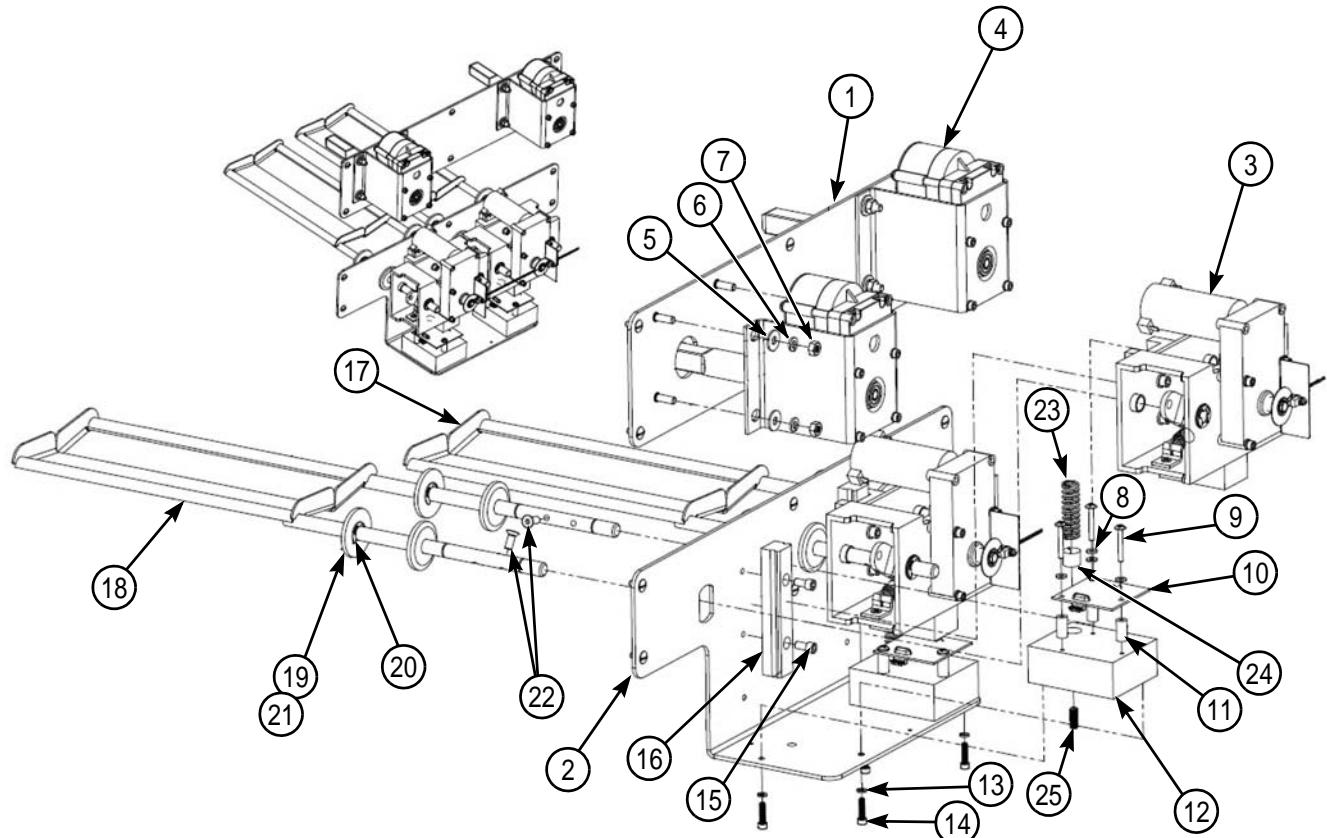


Figure-26

Item	Part No.	Description	Qty.
1	295670 213559	Panel Drum Motor Support, 280-Screw Truss HD 10-32x1/2" SST	1 6
2	295669 216559	Panel Weighin-System Support 280-F Screw, Truss HD, 10-32x1/2" SST	1 6
3		Assembly, Weighing System	2
4		Assembly, Drum Motor w/ Mount	2
5	213141	Flat washer, 1/4"	8
6	213142	Washer, split lock, 1/4"	8
7	000707	Hex Nut, 1/4-20, Zinc Plated, Grade 5	8
8	293566	Washer, Nylon, 0.173x0.375x0.054"	2
9	291308	Screw Trusshead Phillips #8-32x1-1/4	6
10	290519	Circuit Board, NCWS	2
11	292252	Standoff, Nylon Unthreaded, 0.75" L	6
12	294775	Kit, NCWS Base w/screws	2
13	213140	Washer, Lock, Reg Spr, ZP #10.ipt	4

Item	Part No.	Description	Qty.
14		Screw SH Cap two included w/294775	4
15	051455	Screw Socket Head Cap Zinc Plated 1/4-20 x 1/2 In.	6
16	202068	Assembly, Linear Bearing, 180mm	2
17	294409	Assembly, Accumulator Door, LH (includes Items 19-21)	4
18	294391	Assembly, Accumulator Door, RH (includes Items 19-21)	2
19	203257	O-ring Buna-N 11/16"ODx1/2"IDx3/32"	4
20	213356	Ring, retaining, E-style, ZP, 1/2"	8
21	293596	Collar, Accumulator Shaft UHMW	4
22	213549	FH Cap Screw Socket ZP 1/4-20x5/8" L	4
23	290656	Spring, Compression, NCWS	2
24	294919	Plug, NCWS Spring	2
25	294913	Screw Hex Socket ZP 1/4-20x3/4" L	2

## Electrical Cabinet (Rear View) Revision F

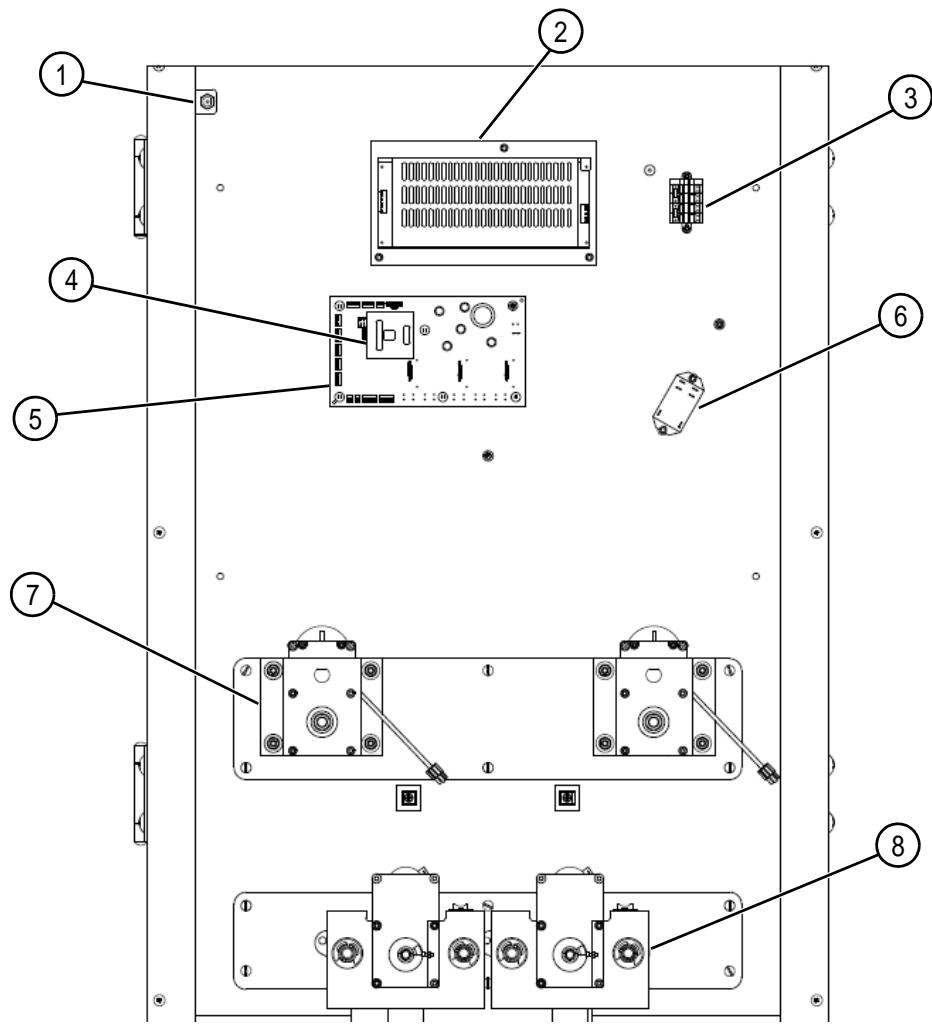


Figure-27

Item	Part No.	Description	Qty.
1	293941	Circuit Breaker, 4 amp	1
	293944	Bracket	1
	293949	Nut, Breaker support	1
	293990	Screw Pan-head Phillips 4-40x1/4"	1
2	380050	Power Supply, Universal, Single Output, 5.0Amp, 24VDC	1
	213262	Screw Socket HD Cap ZP 10-32x3/8"	3
3	293401	Terminal Block	1
	213144	Screw Socket HD Cap ZP 6-32x1/2"	2
4		Processor PCB (Domestic) w/ Automatic Load Size Reduction Processor PCB (European) w/ Automatic Load Size Reduction Processor PCB No Automatic Load Size Reduction	1

Item	Part No.	Description	Qty.
5	296664	PCB A. -R280 McD Domestic	1
	296665	PCB A. -R280 McD European	1
	296666	PCB A. -R280 Gen. Market	1
	380026	PCB A. -R280 Japan	1
	202909	Stand-Off Nylon	5
	202977	Stand-Off	1
	202795	Screw Pan HD w/washer ZP 6-32x3/8	1
6	293405-05	Relay-DPST-24VDC-30A@277V	1
	213262	Screw Socket HD Cap ZP 10-32x3/8"	2
7		See Drum Motor Assembly on page 36.	2
8		See Weighing System Assembly on page 38 and page 40.	2

## Electrical Cabinet (Top View) Revision A-E

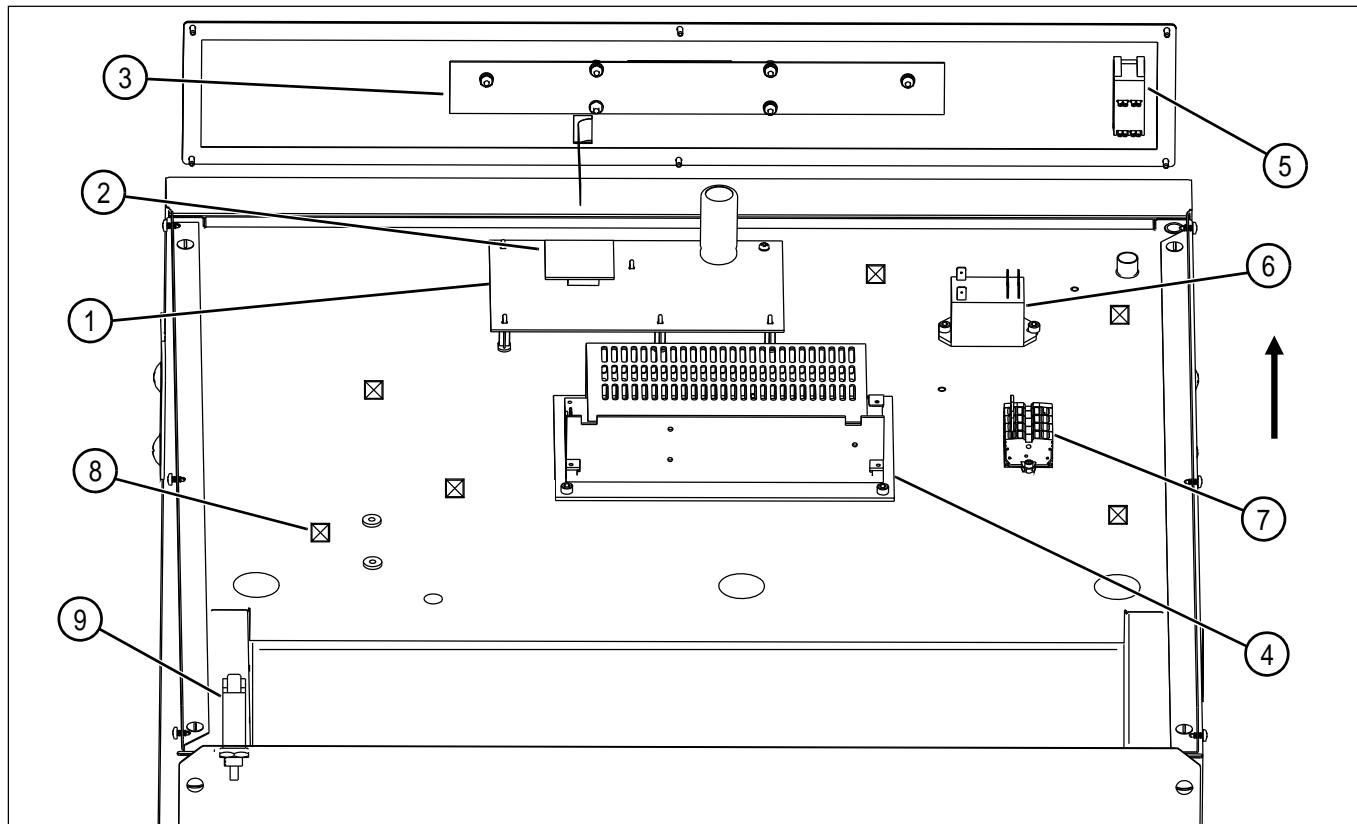


Figure-28

Item	Part No.	Description	Qty.
1	296664	PCB A. -R280 McD Domestic	1
	296665	PCB A. -R280 McD European	1
	296666	PCB A. -R280 Gen. Market	1
	380026	PCB A. -R280 Japan	1
	202909	Stand-Off Nylon	5
	202977	Stand-Off	1
	202795	Screw Pan HD w/washer ZP 6-32x3/8"	1
2		Processor PCB (Domestic) w/ Automatic Load Size Reduction	1
		Processor PCB (European) w/ Automatic Load Size Reduction	
		Processor PCB No Automatic Load Size Reduction	
3	293807	PCB A. -R280 Display	1
	293902	Ribbon Cable	1
	290876	Spacer, Round, Nylon, 3/8" x #8 x 1/8"	6
	202874	Nut Hex w/ External Lock Washer ZP #6-32	6
	293566	Flat Washer, Nylon	6

Item	Part No.	Description	Qty.
4	380050	Power Supply, Universal, Single Output, 5.0Amp, 24VDC	1
	213262	Screw Socket HD Cap ZP 10-32x3/8"	3
5	292246	ON/OFF Switch	1
6	293405	Relay	1
	213262	Screw Socket HD Cap ZP 10-32x3/8"	2
7	293401	Terminal Block	1
	213144	Screw Socket HD Cap ZP 6-32x1/2"	2
8	213321	Cable Tie Adhesive Back, Nylon, 1"	8
9	293941	Circuit Breaker, 4 Amp	1
	293944	Bracket	1
	293949	Nut, Breaker support	1
	293990	Screw Pan-head Phillips 4-40x1/4"	1

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## Wiring Harnesses (Not Pictured)

**Note:** Contact Taylor to verify lengths.

Item	Part No.	Description	Qty.
*	293406	120/220 VAC Harness (Rev F and later)	1
*	380052	120/220 VAC Harness (Rev A through E)	1
*	293408	DC Power Harness (Power supply to Control Board)	1
*	294011	Motor Control Harness (Rev F and later)	1
*	380053	Motor Control Harness (Rev A through E)	1
*	294108	Harness, ON/OFF Switch	1
*	293407	Relay Control Harness	1
*	293409	AC Power Harness (Power Supply to Terminal Block)	1
*	293333-12	Wire-Heater-Door-Cab *R280*	1
*	294262-27	Wire-Heater-Door-Cab*R280* INTL	1

\* Not shown.

## Controller Board

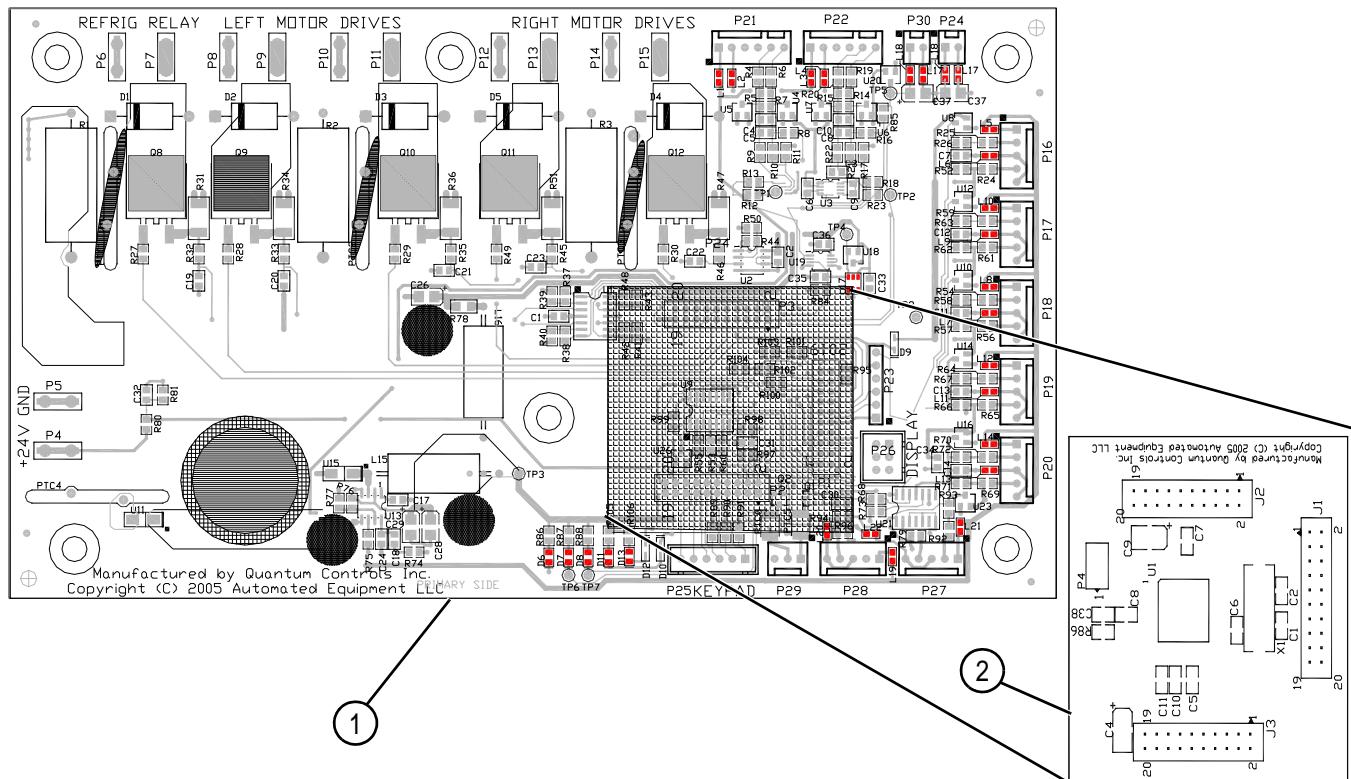


Figure-29

Item	Part No.	Description	Qty.
1	296664	PCB A. -R280 McD Domestic	1
	296665	PCB A. -R280 McD European	1
	296666	PCB A. -R280 Gen. Market	1
	380026	PCB A. -R280 Japan	1
2		Processor PCB (Domestic) w/ Automatic Load Size Reduction Processor PCB (European) w/ Automatic Load Size Reduction Processor PCB No Automatic Load Size Reduction	1
P4		Power Input +24VDC (D3)	
P5		Power Input (Ground) (D2)	
P6		Ref. Relay +24VDC (R1)	
P7		Ref. Relay (Ground) (R2)	
P8		Left Drum Motor +24VDC (A1)	
P9		Left Drum Motor (Ground) (A2)	
P10		Left Accum Motor +24VDC (A3)	
P11		Left Accum Motor (Ground) (A4)	

P12	Right Drum Motor +24VDC (A5)
P13	Right Drum Motor (Ground) (A6)
P14	Right Accum Motor +24VDC (A7)
P15	Right Accum Motor (Ground) (A8)
P16	Right Basket Sensor (S1)
P17	Right Accum Home Encoder (S2)
P18	Left Basket Sensor (S3)
P19	Left Accum Home Encoder (S4)
P20	High Pressure Switch Relay (P5)
P21	Right NCWS Board (W1)
P22	Left NCWS Board (W2)
P24	Cabinet Temp. Probe (2 probe units only, Rev A, B and C)
P25	Key Pad (operator panel)
P26	Display Board
P27	Door Switch (Rev C units and later)
P28	Not used
P29	Not used
P30	Refrigeration Control Probe

## Display Board

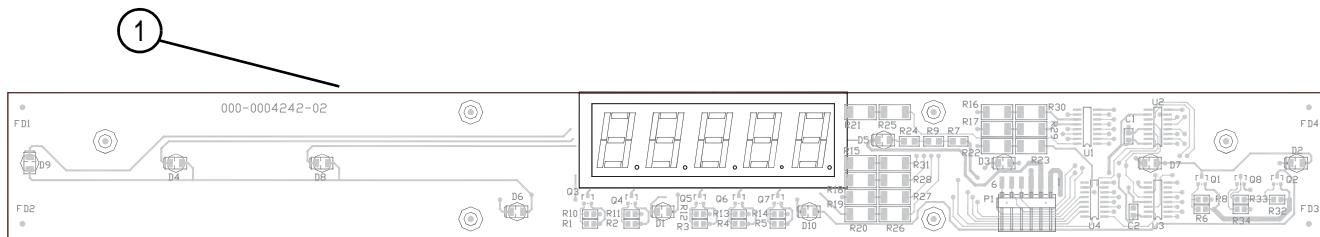


Figure-30

Item	Part No.	Description	Qty.
1	293807	PCB A. - R280 Display	1
*	295414	Cable, Display Board	1

\*Not Shown

# Refrigeration System

## General Operation

The R280 employs a cold wall system. Through the refrigeration process, heat is transferred to the condensing unit at the bottom of the cabinet, where it is expelled to the surrounding outside air. It is extremely important to allow unrestricted airflow for the refrigeration process to function properly.

A minimum of 0.5 in. (13 mm) clearance on both sides and 2 in. (50 mm) behind the Dispenser is recommended.

The temperature control for the R280 is capable of detecting conditions that fall outside of normal operation. In such cases, the controller will generate and display an error to warn the operator that an abnormal condition exists and corrective action may need to be taken. Some error conditions are easily fixed, while others may require the attention of a qualified service technician.

See Error Detection on page 21 for a complete list of error codes and a troubleshooting guide.



**CAUTION!** Only trained and/or qualified personnel, licensed in refrigeration, should perform service to the refrigeration systems of this equipment. Failure to comply may result in personal injury from moving parts or damage to the machine.

The set point temperature is the temperature the refrigeration system will attempt to maintain inside the cabinet. The default set point temperature is 0°F (-18°C), and has a range of -5°F to 5°F (-20°C to -15°C). The set point can be changed using the Manager Menu. See Manager Function Menu Structure (U3) on page 17. Cabinet temperature is displayed on the operator panel during normal operation

## Defrost

Because the Dispenser employs a cold wall design, it will be necessary to manually defrost the cabinet daily. First, remove the product. Turn the ON/OFF switch off. Open the cabinet door and allow 1 hour to defrost.



**CAUTION!** Never use a sharp object to remove frost buildup. Never drill or otherwise puncture cabinet walls or top. Failure to follow this instruction may result in damage to the Dispenser.

Wipe the cabinet dry when defrosting is complete.

## Required Maintenance

### Daily:

Shut off, clean, defrost and inspect cabinet. (See Disassembly, Defrost, and Cleaning on page 8.)

### Monthly:

Clean and inspect the condenser filter. Replace as necessary.

### Every 3 Months:

Or as needed as determined by environmental conditions.

Inspect the door gasket for proper sealing. Adjust door hinges and/or replace gasket if needed.

Clean the condenser coils, located behind the condenser filter.



**CAUTION!** Failure to keep the condenser filter and coil clean and clear of obstructions could result in temperature loss and damage to the compressor and may void the warranty.

## Cleaning the Condenser Filter and Coil

Monthly cleaning of the condensing unit filter will aid the heat transfer characteristics of the refrigeration system, increase its efficiency, and extend the life of the compressor. To accomplish this, remove the lower louvered panel and lift out the condenser filter. The filter can be cleaned in warm soapy water (**HCS**). Rinse and shake off the excess water. Replace the filter and louvered panel.

Every 3 months, clean the condenser coils. The coils are located behind the condenser filter. The condenser coils should be cleaned with a vacuum or a stiff brush.

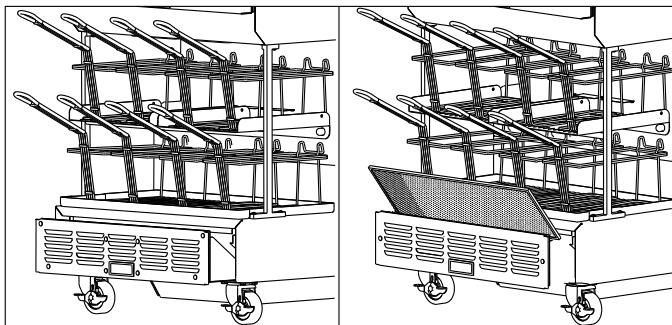


Figure-31

## Refrigeration System Components

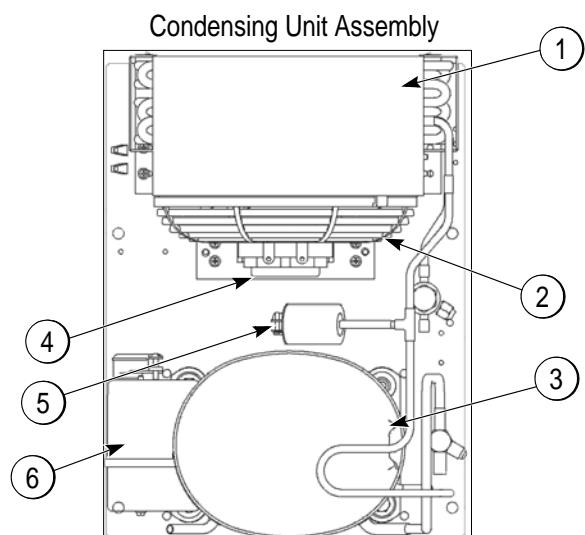
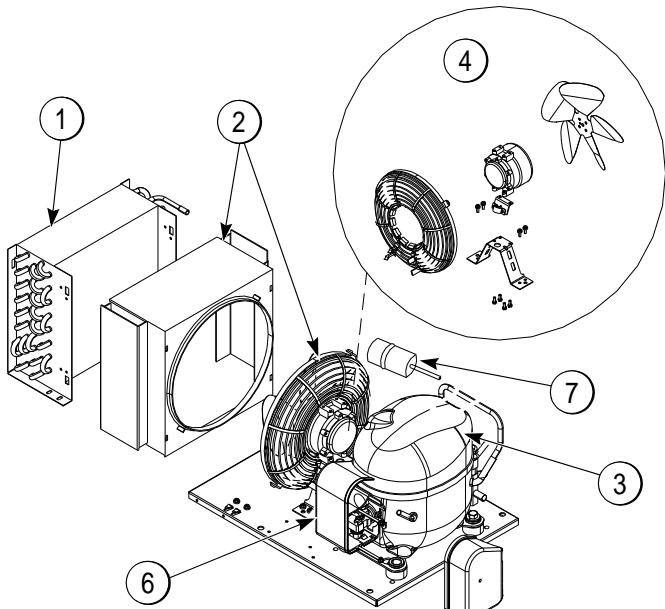


Figure-32

Item	Qty.	Part No.	Description
1	1	295596	Condenser
2	1	295603	Fan Shroud
	1	293979	Guard, Fan
3	1	089285-12	Compressor-Embraco NEK2150GK
		089285-40	Compressor-Embraco NEK2150GK
		089286-40	Compressor -Embraco NEK2150U International R290 only (240V 1/2HP)
4	1	012768-12	Motor-Fan 9 Watt
		012768-27	Motor-Fan 9 Watt
	1	295601	Blade, Condenser Fan
	1	293982	Bracket, Fan Mounting
5	1	292740	High Pressure Switch
6	1	294739	Overload Switch (1/2hp Dom. 120V)
		294781	Overload Switch (1/2hp Int. 240V)
		295666	Overload Switch, (Model R280, R290 only) (1/2hp Int. 240V)
	1	294738	Start Relay (1/2hp Dom. 120V)
		294780	Start Relay (1/2hp Int. 240V)
		295667	Start Relay, (Model R280, R290 only) (1/2hp Int. 240V)
7	1	293985	Start Capacitor (1/2hp Dom. 120V)
		294779	Start Capacitor (1/2hp Int. 240V)
		295665	Start Capacitor (Model R280, R290 only) (1/2hp Int. 240V)
7	1	292501	Filter Drier
*	1	089317-77	Capillary Tube 77" (196cm) 0.093" O.D., 0.040" I.D. (Domestic 120V 60HZ, 1/2 HP Comp)
		294725	Capillary Tube 108" (274cm) 0.093" O.D., 0.040" I.D. (International 240V 50HZ, 1/2 HP Comp.)
		089317-114	Capillary Tube (Model R280, R290 only) 114" (290cm) 0.093" O.D., 0.040" I.D. (International 240V 50HZ, 1/2 HP Comp.)
*	1	293404	Terminal Block, Lower
	2	290529	Nut ZP 4-40
*	1	293415-12	Wire-Heater-Door-Accum*R280*
		294261	Heater Wire, Accum. (Int. 220V)
	1	293734	Feedback Relay (Dom.120V)
		089287-27	Relay-SPDT-15A-240V (Int. 240V)

\*Not Shown

## Compressor Identification

- Model R280, R404A Compressor, Domestic 294339 - 120V 60HZ 1/2HR
- Model R280, R290 Compressor, Domestic 089286-12 - 120V 60HZ
- Model R280, R404A, Compressor, International 294723 - 240V 50HZ 1/2HR
- Model R280, R290, Compressor, International 295258 - 240V 50HZ 1/2HR

## Refrigeration Specifications

### Refrigerant:

- Model R280, R404A (425 g) (15.0 oz.)
- Model R280, R290 (146 g) (5.15 oz.)

### Suction Pressure:

- Model R280, 8 to 10 psi (55 kPa to 68 kPa) at 0°F to 3°F (-18°C to -16°C)
- Model R280, 4.8 to 5.8 psi (33 kPa to 40 kPa) at 0°F to 3°F (-18°C to -16°C)

### Operating Temperature:

- -2°F to 10°F (-19°C to -12°C)

### Factory Temperature Set Point

- 0°F (-18°C)

### Differential Set Point:

- 5°F (3°C)

### High-Pressure Switch:

- Trips 425 psi (2,890 kPa)
- Resets 325 psi (2,210 kPa)

## Compressor Start Component Wiring

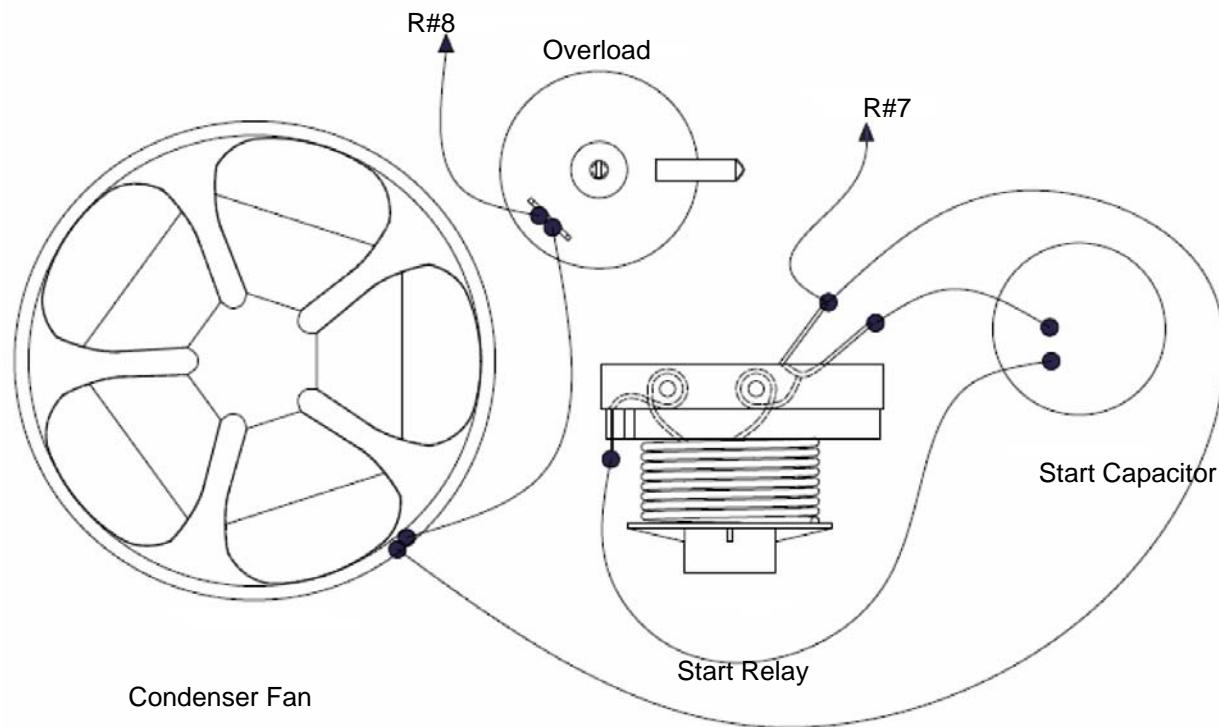


Figure-33

## Refrigeration Circuit Schematics

### Refrigeration Circuit R280 (R404A)

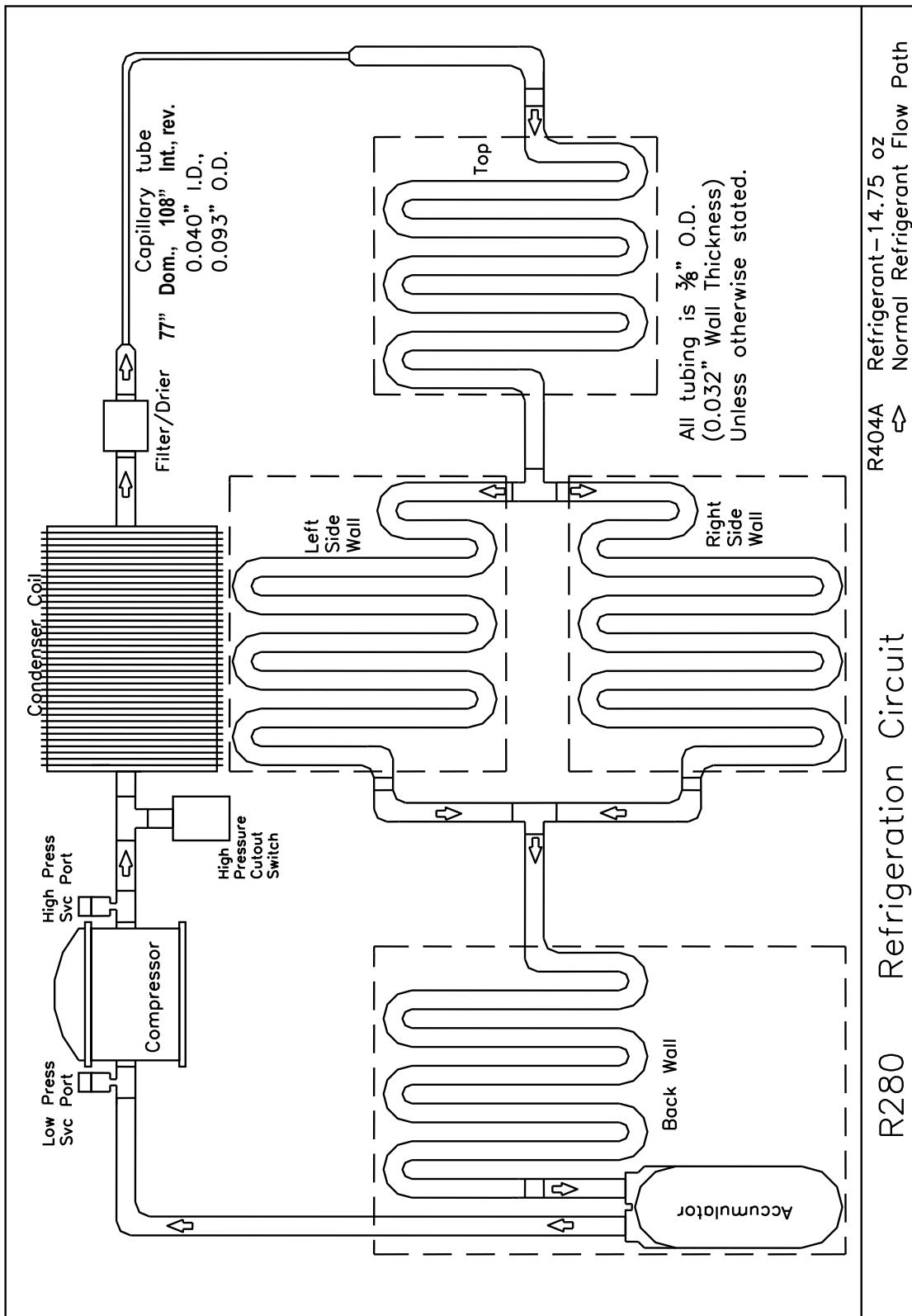


Figure-34

## Refrigeration Circuit R280 (R290)

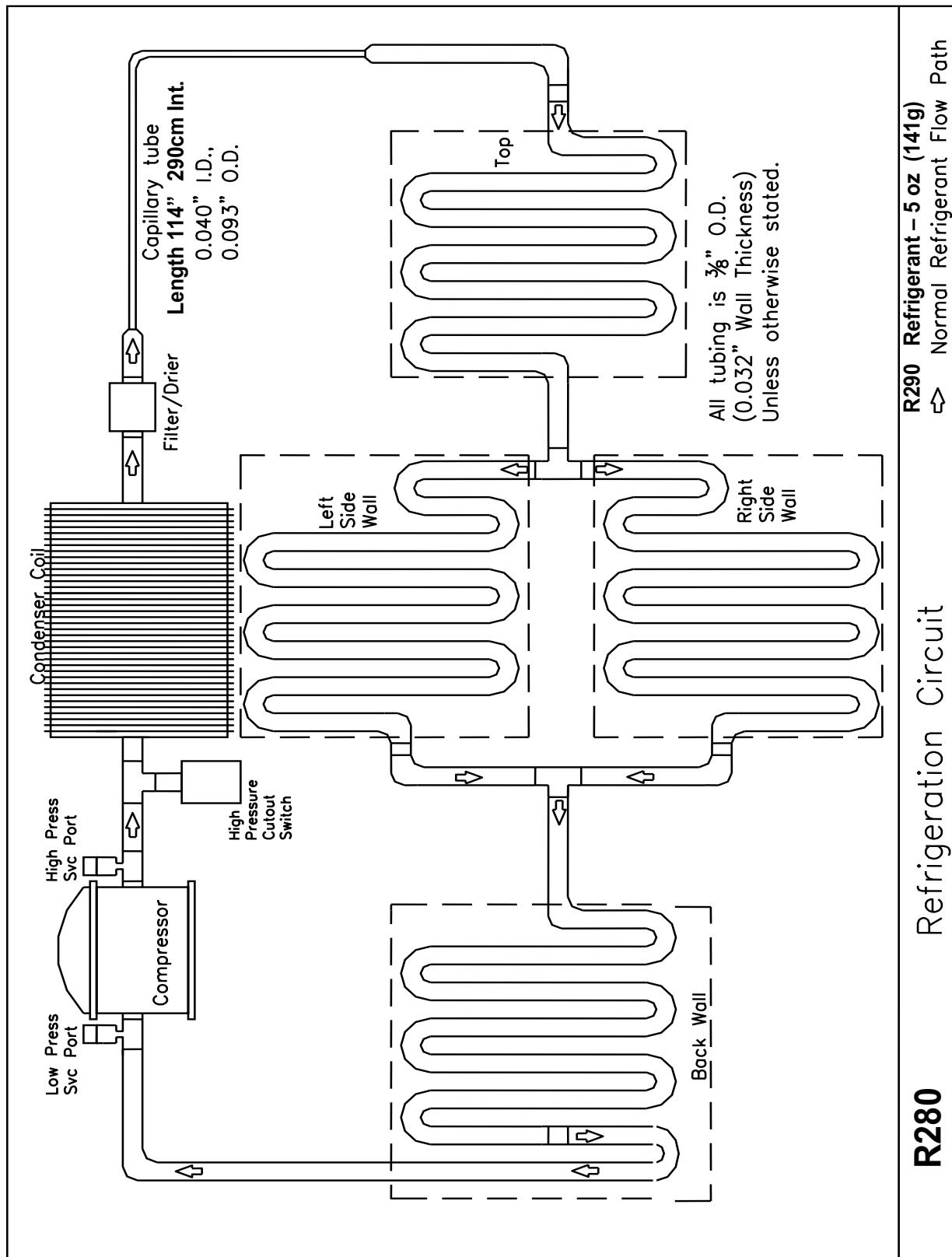


Figure-35

## Electrical Diagram

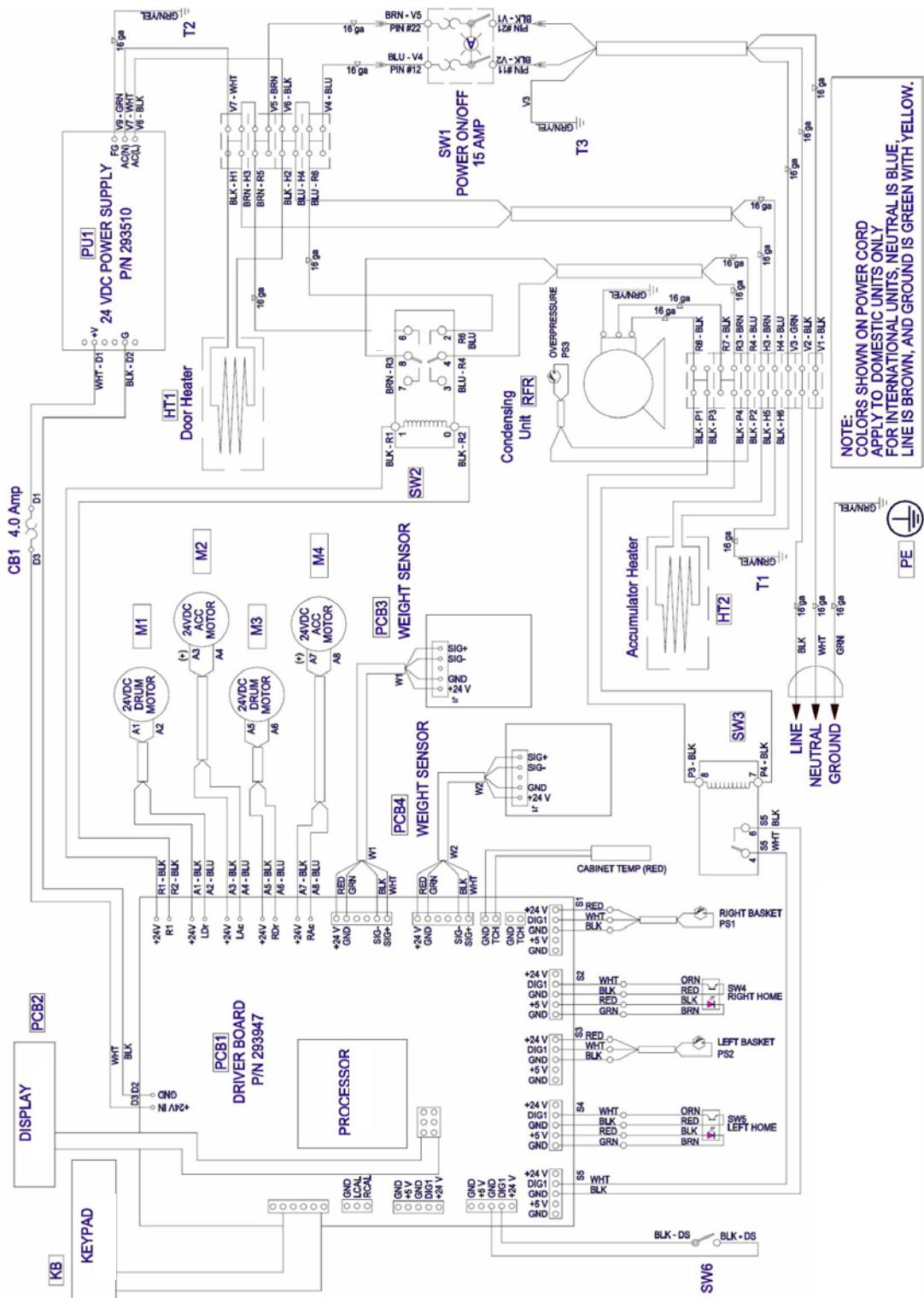


Figure-36

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## **Limited Warranty on Equipment**

### **TAYLOR COMPANY LIMITED WARRANTY ON FREEZERS**

Taylor Company is pleased to provide this limited warranty on new Taylor-branded freezer equipment available from Taylor to the market generally (the "Product") to the original purchaser only.

#### **LIMITED WARRANTY**

Taylor warrants the Product against failure due to defect in materials or workmanship under normal use and service as follows. All warranty periods begin on the date of original Product installation. If a part fails due to defect during the applicable warranty period, Taylor, through an authorized Taylor distributor or service agency, will provide a new or remanufactured part, at Taylor's option, to replace the failed defective part at no charge for the part. Except as otherwise stated herein, these are Taylor's exclusive obligations under this limited warranty for a Product failure. This limited warranty is subject to all provisions, conditions, limitations, and exclusions listed below and on the reverse (if any) of this document.

<b>Product</b>	<b>Part</b>	<b>Limited Warranty Period</b>
R280	Refrigeration compressor (except service valve) Parts not otherwise listed in this table or excluded below	Five (5) years Two (2) years

#### **LIMITED WARRANTY CONDITIONS**

1. If the date of original installation of the Product cannot be verified, then the limited warranty period begins thirty (30) days from the date of Product Shipment (as indicated by the Product serial number). Proof of purchase may be required at time of service.
2. This limited warranty is valid only if the Product is installed and all required service work on the Product is performed by an authorized Taylor distributor or service agency, and only if genuine, new Taylor parts are used.
3. Installation, use, care, and maintenance must be normal and in accordance with all instructions contained in the Equipment Manual.
4. Defective parts must be returned to the authorized Taylor distributor or service agency for credit.
5. The use of any refrigerant other than that specified on the Product's data label will void this limited warranty.

#### **LIMITED WARRANTY EXCEPTIONS**

This limited warranty does not cover:

1. Except as otherwise specifically set forth in this limited warranty, labor or other costs incurred for diagnosing, repairing, removing, installing, shipping, servicing, or handling of defective parts, replacement parts, or new Products.
2. Normal maintenance, cleaning, and lubrication as outlined in the Equipment Manual, including cleaning of condensers.
3. Replacement of wear items designated as Class "000" parts in the Equipment Manual.
4. External hoses, electrical power supplies, and machine grounding.
5. Parts not supplied or designated by Taylor, or damages resulting from their use.
6. Return trips or waiting time required because a service technician is prevented from beginning warranty service work promptly upon arrival.
7. Failure, damage, or repairs due to faulty installation, misapplication, abuse, no or improper servicing, unauthorized alteration, or improper operation or use as indicated in the Equipment Manual, including but not limited to the failure to use proper assembly and cleaning techniques, tools, or approved cleaning supplies.

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8. Failure, damage, or repairs due to theft, vandalism, wind, rain, flood, high water, water, lightning, earthquake, or any other natural disaster, fire, corrosive environments, insect or rodent infestation, or other casualty, accident or condition beyond the reasonable control of Taylor; operation above or below the electrical or water supply specification of the Product; or components repaired or altered in any way so as, in the judgment of the Manufacturer, to adversely affect performance, or normal wear or deterioration.
9. Failure to start due to voltage conditions, blown fuses, open circuit breakers, or damages due to the inadequacy or interruption of electrical service.
10. Electricity or fuel costs, or increases in electricity or fuel costs from any reason whatsoever.
11. Damages resulting from the use of any refrigerant other than that specified on the Product's data label will void this limited warranty.
12. **ANY SPECIAL, INDIRECT, OR CONSEQUENTIAL PROPERTY OR COMMERCIAL DAMAGE OF ANY NATURE WHATSOEVER.** Some jurisdictions do not allow the exclusion of incidental or consequential damages, so this limitation may not apply to you.

This limited warranty gives you specific legal rights, and you may also have other rights which vary from jurisdiction to jurisdiction.

#### **LIMITATION OF WARRANTY**

**THIS LIMITED WARRANTY IS EXCLUSIVE AND IS IN LIEU OF ALL OTHER WARRANTIES, CONDITIONS, AND/OR REMEDIES UNDER THE LAW, INCLUDING ANY IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. THE ORIGINAL OWNER'S SOLE REMEDY WITH RESPECT TO ANY PRODUCTS SHALL BE REPAIR OR REPLACEMENT OF DEFECTIVE COMPONENTS UNDER THE TERMS OF THIS LIMITED WARRANTY. ALL RIGHTS TO CONSEQUENTIAL OR INCIDENTAL DAMAGES (INCLUDING CLAIMS FOR LOST SALES, LOST PROFITS, PRODUCT LOSS, PROPERTY DAMAGES, OR SERVICE EXPENSES) ARE EXPRESSLY EXCLUDED. THE EXPRESS WARRANTIES MADE IN THIS LIMITED WARRANTY MAY NOT BE ALTERED, ENLARGED, OR CHANGED BY ANY DISTRIBUTOR, DEALER, OR OTHER PERSON, WHATSOEVER.**

#### **LEGAL REMEDIES**

The owner **must** notify Taylor in writing, by certified or registered letter to the following address, of any defect or complaint with the Product, stating the defect or complaint and a specific request for repair, replacement, or other correction of the Product under warranty, mailed at least thirty (30) days before pursuing any legal rights or remedies.

Taylor Company  
750 N. Blackhawk Blvd.  
Rockton, IL 61072, U.S.A.

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## **Limited Warranty on Parts**

### **TAYLOR COMPANY LIMITED WARRANTY ON TAYLOR GENUINE PARTS**

Taylor Company is pleased to provide this limited warranty on new Taylor genuine replacement components and parts available from Taylor to the market (the "Parts").

#### **LIMITED WARRANTY**

Taylor warrants the Parts against failure due to defect in materials or workmanship under normal use and service as follows. All warranty periods begin on the date of original installation of the Part in the Taylor unit. If a Part fails due to defect during the applicable warranty period, Taylor, through an authorized Taylor distributor or service agency, will provide a new or remanufactured Part, at Taylor's option, to replace the failed defective Part at no charge for the Part. Except as otherwise stated herein, these are Taylor's exclusive obligations under this limited warranty for a Part failure. This limited warranty is subject to all provisions, conditions, limitations, and exclusions listed below and on the reverse (if any) of this document.

<b>Parts Warranty Class Code or Part</b>	<b>Limited Warranty Period</b>
Class 103 Parts	Three (3) months
Class 212 Parts	Twelve (12) months
Class 512 Parts	Twelve (12) months
Class 000 Parts	No warranty

#### **LIMITED WARRANTY CONDITIONS**

1. If the date of original installation of the Part cannot be otherwise verified, proof of purchase may be required at time of service.
2. This limited warranty is valid only if the Part is installed and all required service work in connection with the Part is performed by an authorized Taylor distributor or service agency.
3. The limited warranty applies only to Parts remaining in use by their original owner at their original installation location in the unit of original installation.
4. Installation, use, care, and maintenance must be normal and in accordance with all instructions contained in the Taylor Operator's Manual.
5. Defective Parts must be returned to the authorized Taylor distributor or service agency for credit.
6. This warranty is not intended to shorten the length of any warranty coverage provided pursuant to a separate Taylor Limited Warranty on freezer or grill equipment.
7. The use of any refrigerant other than that specified for the unit in which the Part is installed will void this limited warranty.

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## LIMITED WARRANTY EXCEPTIONS

This limited warranty does **not** cover:

1. Labor or other costs incurred for diagnosing, repairing, removing, installing, shipping, servicing, or handling of defective Parts, replacement Parts, or new Parts.
2. Normal maintenance, cleaning, and lubrication as outlined in the Taylor Operator's Manual, including cleaning of condensers or carbon and grease buildup.
3. Required service, whether cleaning or general repairs, to return the cooking surface assemblies, including the upper platen and lower plate, to an operational condition to achieve proper cooking or allow proper assembly of release sheets and clips as a result of grease buildup on the cooking surfaces, including but not limited to the platen and plate, sides of the shroud or top of the shroud.
4. Replacement of cooking surfaces, including the upper platen and lower plate, due to pitting or corrosion (or in the case of the upper platen, due to loss of plating) as a result of damage due to the impact of spatulas or other small wares used during the cooking process or as a result of the use of cleaners, cleaning materials, or cleaning processes not approved for use by Taylor.
5. Replacement of wear items designated as Class "000" Parts in the Taylor Operator's Manual, as well as any release sheets and clips for the Product's upper platen assembly.
6. External hoses, electrical power supplies, and machine grounding.
7. Parts not supplied or designated by Taylor, or damages resulting from their use.
8. Return trips or waiting time required because a service technician is prevented from beginning warranty service work promptly upon arrival.
9. Failure, damage, or repairs due to faulty installation, misapplication, abuse, no or improper servicing, unauthorized alteration, or improper operation or use as indicated in the Taylor Operator's Manual, including but not limited to the failure to use proper assembly and cleaning techniques, tools, or approved cleaning supplies.
10. Failure, damage, or repairs due to theft, vandalism, wind, rain, flood, high water, water, lightning, earthquake, or any other natural disaster, fire, corrosive environments, insect or rodent infestation, or other casualty, accident or condition beyond the reasonable control of Taylor; operation above or below the gas, electrical, or water supply specification of the unit in which a part is installed; or Parts or the units in which they are installed repaired or altered in any way so as, in the judgment of Taylor, to adversely affect performance, or normal wear or deterioration.
11. Failure to start due to voltage conditions, blown fuses, open circuit breakers, or damages due to the inadequacy or interruption of electrical service.
12. Electricity, gas, or other fuel costs, or increases in electricity or fuel costs from any reason whatsoever.
13. Damages resulting from the use of any refrigerant other than that specified for the unit in which the Part is installed will void this limited warranty.
14. Any cost to replace, refill, or dispose of refrigerant, including the cost of refrigerant.
15. **ANY SPECIAL, INDIRECT, OR CONSEQUENTIAL PROPERTY OR COMMERCIAL DAMAGE OF ANY NATURE WHATSOEVER.** Some jurisdictions do not allow the exclusion of incidental or consequential damages, so this limitation may not apply to you.

This limited warranty gives you specific legal rights, and you may also have other rights which vary from jurisdiction to jurisdiction.

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#### LIMITATION OF WARRANTY

THIS LIMITED WARRANTY IS EXCLUSIVE AND IS IN LIEU OF ALL OTHER WARRANTIES, CONDITIONS, AND/OR REMEDIES UNDER THE LAW, INCLUDING ANY IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. THE ORIGINAL OWNER'S SOLE REMEDY WITH RESPECT TO ANY PRODUCTS SHALL BE REPAIR OR REPLACEMENT OF DEFECTIVE PARTS UNDER THE TERMS OF THIS LIMITED WARRANTY. ALL RIGHTS TO CONSEQUENTIAL OR INCIDENTAL DAMAGES (INCLUDING CLAIMS FOR LOST SALES, LOST PROFITS, PRODUCT LOSS, PROPERTY DAMAGES, OR SERVICE EXPENSES) ARE EXPRESSLY EXCLUDED. THE EXPRESS WARRANTIES MADE IN THIS LIMITED WARRANTY MAY NOT BE ALTERED, ENLARGED, OR CHANGED BY ANY DISTRIBUTOR, DEALER, OR OTHER PERSON, WHATSOEVER.

#### LEGAL REMEDIES

The owner **must** notify Taylor in writing, by certified or registered letter to the following address, of any defect or complaint with the Part, stating the defect or complaint and a specific request for repair, replacement, or other correction of the Part under warranty, mailed at least thirty (30) days before pursuing any legal rights or remedies.

Taylor Company  
750 N. Blackhawk Blvd.  
Rockton, IL 61072, U.S.A.

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## Ordering/Service Information

Taylor distributor: \_\_\_\_\_  
Address: \_\_\_\_\_  
Phone: \_\_\_\_\_  
Date of installation: \_\_\_\_\_

### Data Label

The data label provides necessary information that the operator should record and refer to when calling for parts or service. The data label is located on the rear or left side panel of the freezer.

Complete for quick reference when this information is requested.

1. Model Number: R280
2. Serial Number \_\_\_\_\_
3. Electrical Specs:  
Voltage \_\_\_\_\_ Cycle \_\_\_\_\_ Phase \_\_\_\_\_
4. Maximum Fuse Size: \_\_\_\_\_ Amps
5. Minimum Wire Ampacity: \_\_\_\_\_ Amps
6. Part Number: \_\_\_\_\_

### Parts Warranty

See the Limited Warranty on Parts section starting on page 58.

**Note:** Constant research results in steady improvements; therefore, information in this manual is subject to change without notice.

### Compressor Warranty Disclaimer

The refrigeration compressor(s) on this unit are warranted for the term stated in the Limited Warranty section in this manual. However, due to the Montreal Protocol and the U.S. Clean Air Act Amendments of 1990, many new refrigerants are being tested and developed, thus seeking their way into the service industry. Some of these new refrigerants are being advertised as drop-in replacements for numerous applications. It should be noted that in the event of ordinary service to this unit's refrigeration system, **only the refrigerant specified on the affixed data label should be used.** The unauthorized use of alternate refrigerants will void your Taylor compressor warranty. It is the unit owner's responsibility to make this fact known to any technician he/she employs.

It should also be noted that Taylor does not warrant the refrigerant used in its equipment. For example, if the refrigerant is lost during the course of ordinary service to this unit, Taylor has no obligation to either supply or provide replacement refrigerant either at billable or unbillable terms. Taylor will recommend a suitable replacement if the original refrigerant is banned, obsoleted, or no longer available during the five-year Taylor warranty of the compressor.

From time-to-time Taylor may test new refrigerant alternates. Should a new refrigerant alternate prove, through Taylor's testing, that it would be accepted as a drop-in replacement for this unit, then the disclaimer in this "Compressor Warranty Disclaimer" section will not apply to the use of the alternate refrigerant approved by Taylor.

To find out the current status of an alternate refrigerant as it relates to your compressor warranty, call Taylor or your local authorized Taylor distributor. Be prepared to provide the model/serial number of the machine in question.

**Note:** Continuing research results in steady improvements; therefore, information in this Operator's Manual is subject to change without notice.

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## Service Information

### Warranty Service

Our Distributor will determine the cause of failure and provide appropriate resolution. Any required replacement parts will be provided by us or by an authorized Service Support Center/Parts Distributor.

Our Distributor will make all reasonable efforts to perform such repairs during normal business hours, and will not be responsible for any after-hours or holiday charges.

### Non-Warranty Service

Service is normally conducted by customer appointed personnel, or by contracting a local service technician. The service technician must be licensed in refrigeration to troubleshoot, open, or repair refrigeration and related systems.

Service fees are in accordance with industry standards.

Replacement parts are available through an authorized Taylor distributor or service agency.

Our authorized Taylor distributor or service agency is available for assistance providing product technical support, parts and parts information, and service agent referral.

Record the following information for your records:

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Date of Installation

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Service Agency Telephone

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Serial Number

When repairing this machine, use only replacement parts supplied by us or supplied by our factory-authorized parts distributor. Use of replacement parts other than those supplied by us or by our factory-authorized parts distributor will void the warranty.

All shipping charges are F.O.B. factory, and are subject to change without notice. Prices will be those in affect at the time of shipment.

Taylor Company reserves the right to make suitable substitutions in materials, depending upon their availability.

**CAUTION!**

Only trained and/or qualified personnel should perform service on this equipment.

Only trained and/or qualified personnel, licensed in refrigeration, should perform service on the refrigeration systems of this equipment.

Service functions described in this manual could cause irreversible damage to the equipment and/or injury to personnel if performed improperly.

If the power cord is damaged, it must be replaced by the manufacturer, or its service agent, or a similarly qualified person to prevent a hazard.

Use of non-OEM parts may create a hazard.