L0269 REV A

ENVISION ULTRA STACK

SEAGA

OPERATION AND SERVICE MANUAL

700 Seaga Drive, Freeport, IL 61032, U.S.A.

Visit: seaga.com/contact-us/ | **Email:** info@seaga.com | **Voice:** 1 815 297 9500

LIMITED WARRANTY

Seaga warrants to the original purchaser that the equipment is free from defects in material and factory workmanship for a period of one (1) year from date of shipment.

This warranty applies only if the equipment has been serviced and maintained in strict accordance with the instructions presented in the Operator's Manual and no unauthorized service, repair, alteration or disassembly has been performed. Any defects caused by improper power source, poor water quality or pressure, an installed water filtration system not fully functioning, abuse of the product, accident, alteration, vandalism, improper service and maintenance schedules, neglecting to de-scale and sanitize on a regular basis, use of products or ingredients not allowed in the machine, corrosion due to use of non-approved detergents or cleaning solutions, or damage incurred during return shipment will not be covered by this warranty. Further, equipment that has had the serial number removed, altered or otherwise defaced will not be covered by this warranty.

Lighting components, refrigerant, glass, paint, decals, fuses, filters or hygiene replacement parts, labor and/or installation are not covered by this warranty.

Follow proper maintenance procedures and use of equipment, as described in the Operator's Manual provided on Seaga's web site at seaga.com, which include but are not limited to:

- Cleaning of equipment including regular maintenance
- Proper installation and location of equipment with respect for the indicated temperature and humidity levels
- Proper use of equipment including loading, programming and setup

THIS WARRANTY IS EXCLUSIVE AND IS GIVEN BY SEAGA AND ACCEPTED BY BUYER IN LIEU OF ANY AND ALL OTHER WARRANTIES, WHETHER EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, ALL WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. ALL SUCH OTHER WARRANTIES ARE HEREBY EXPRESSLY DISCLAIMED BY SEAGA AND WAIVED BY BUYER. Seaga neither assumes nor authorizes any person to assume for it any obligation or liability in connection with the sale of said unit(s) or any part(s) thereof.

Repair or replacement of proven defective parts is limited to manufacturing defects demonstrated under normal use and service during warranty period. Contact Seaga's Customer Care Department to be assigned a Return Authorization (RA) number. Seaga requires complete information including the serial number(s) of the machine(s), date of purchase and description of the part and/or suspected defect. Seaga may also be contacted, with complete information, by phone: 815.297.9500, by fax: 815.297.1700 and also by email: customercare@seaga.com

Send defective part(s), assembly or complete unit, Attention to the RA Number, prepaid or delivered to:

SEAGA®

700 Seaga Drive
Freeport IL 61032

Seaga will repair or replace, at our option, any covered part which meets the provisions herein during the warranty period. It is our discretion to replace defective parts with comparable parts. Seaga reserves the right to make changes or improvements in its products without notice and without obligation, and without being required to make corresponding changes or improvements in equipment already manufactured or sold.

CAUTIONS

DANGER! Risk of fire or explosion. Flammable refrigerant used. To be repaired by trained service personnel. Do not puncture refrigerant tubing.

DANGER! Risque de feu ou d'explosion. Le frigorigene est inflammable. Confir les reparatioins a un technician specialize. Ne pas performer la tubulure contenant le frigorigene.

ATTENTION! Risk of fire or explosion. Flammable refrigerant used. Consult service manual before attempting to install or service this vending machine. All safety precautions must be followed.

ATTENTION! Risque de feu ou d'explosion. Refrigerant inflammable utilize. Consultez le manuel d'entretien et de reparation avant d'essayer d'installer ou de reparer ce produit. Toutes les precautinos de securitie doivent etre suivies.

CAUTION! Risk of fire or explosion. Dispose of properly in accordance with federal or local regulations. Flammable refrigerant used.

ATTENTION! Risque de feu ou d'explosion. Eliminer conformement aux reglements federaux ou locaux. Le frigorigene est inflammable.

CAUTION! It is important that the power supplied to the vendor is the proper voltage. Different countries have different power arrangements. Ensure the machine is properly grounded before operating. If the power cord is damaged, it must be replaced by a qualified person to avoid electrical hazards.

PUBLICATION NOTICE

It is our intent to assist our customers with up-to-date documentation: however, this manual may not contain all updates and is subject to revision without notice. Please contact our Service Department with your requests or comments.

info@seaga.com | customercare@seaga.com

TABLE OF CONTENTS

1
INTRODUCTION

Congratulations on the purchase of your new Seaga EnVision Ultra Stack vendor. Seaga machines are designed, tested, and built to provide years of reliable, low-maintenance service in an indoor environment.

Your vending machine is designed to operate simply and reliably, but to take full advantage of your vendor, **please read this owner's manual thoroughly**. It contains important information regarding installation and operations, as well as a brief trouble- shooting guide.

EQUIPMENT INSPECTION

After you have received your machine and have it out of the box, place it on a secure surface for further inspection. Note: Any damages that may have occurred during shipping must be reported to the delivery carrier immediately. Reporting damages and the seeking of restitution is the responsibility of the equipment owner. The factory is willing to assist you in this process in any way possible. Feel free to contact our Customer Care Department with questions you may have on this process. It is important that you keep the original packaging for your vending machine at least through the warranty period. If your machine needs to be returned for repair, you may have to purchase this packaging if it is not retained. Once your have your vendor located, we suggest that you keep this manual for future reference, or you can view this manual online at www.seaga.com. Should any problems occur, refer to the section entitled "COMMON QUESTIONS AND ANSWERS". It is designed to help you quickly identify a problem and correct it.

MODEL IDENTIFICATION

When requesting service, replacement parts or technical assistance please copy the information found on the vendor Serial Plate (Refer to Figure 1.1 below). It is attached outside on the back of the vendor. The information contained on this plate is necessary to determine what parts, kits, or maintenance should be applied to your specific model.

SERIAL NUMBERING SYSTEM

Please Refer to **Figure 1.1** to below. The serial number is constructed as follows:

Figure 1.1 Sample Serial Label

The first three letters (**EUS**) identifies the model of the vendor, in this case, EUS stands for **E**nVision **U**ltra **S**tack.

The next four digits (**0000**) identify the week and year of manufacture. It follows the WKYR format where the first 2 digits represent what week it was manufactured on (01-52) and the last two digits represent the year (ex. 25 for 2025).

The last five digits (**?????**) identify the number assigned to each vendor during assembly. Numbering starts with 00001 and continues through 99999, whereupon these four digits start over.

An example of the numbering system in use is as follows:

EUS312502081

This vendor is an EnVision Ultra Stack, manufactured in the 31st week of the 2025 year, and was the 2081st vendor manufactured.

GENERAL SPECIFICATIONS

Operating Environment
The EnVision Ultra Stack is designed for either indoor or outdoor use in temperatures between 35°F (1°C) and 110°F (43° C). The vendor can be located in an area where it may be subjected to rain.

Cabinet Dimensions:
39”W x 72.5”H x 33.5”D
(99.1 cm x 184.15 cm x 85.1 cm)

Approximate Shipping Weight:
650 lbs. (295 kg)

Product Capacity:
680 12 oz cans, 300 20 oz PET bottles
10 Selections

Power Requirements:
United States, Canada and Mexico:
115 VAC/60 Hz, 3.8 Amps

Energy Consumption:
Daily energy consumption varies due to input voltage and manufacturer of cash and/or cashless devices but the following nominal value is presented for comparison only.

2.9 KWH/day

Payment Systems:
All of Seaga’s vending machines are capable of integrating a cashless payment system that gives consumers the opportunity of paying for your products using their smartphone.

All of our payment integrations in addition to Google and Apple Wallet usage for credit and debit cards, accept major payment platforms such as Apple Pay, Google Pay as well as Samsung Pay, just to name a few.

AMS vendors will support all Multi-Drop Bus (MDB) coin mechanisms, bill validators and card readers. Where applicable,

MDB Peripheral Levels Supported:
The Insight control electronics are designed to work with MDB Devices at the following Function and Option Levels:

Coin Mechs – Level 3 Mechs are supported:

The Alternate Payout Method is supported, but neither the Extended Diagnostics Command nor the Controlled Manual Fill/Payout features are supported.

Bill Validators – Level 1 Validators are supported

Cashless Devices – Level 2 Devices are supported

Executive Peripherals:
The Insight control electronics will not support coin mechs using the “executive” communications protocol.

Patent Disclosure:
This merchandiser and/or certain of its components are covered by one or more of the following U.S. and International patents:

U.S.

6,145,699	6,384,402
6,520,373	6,708,079
6,794,634	7,191,915
7,343,220	7,742,837
7,446,302	8,003,931

Canada
2,329,314

Mexico
230,714

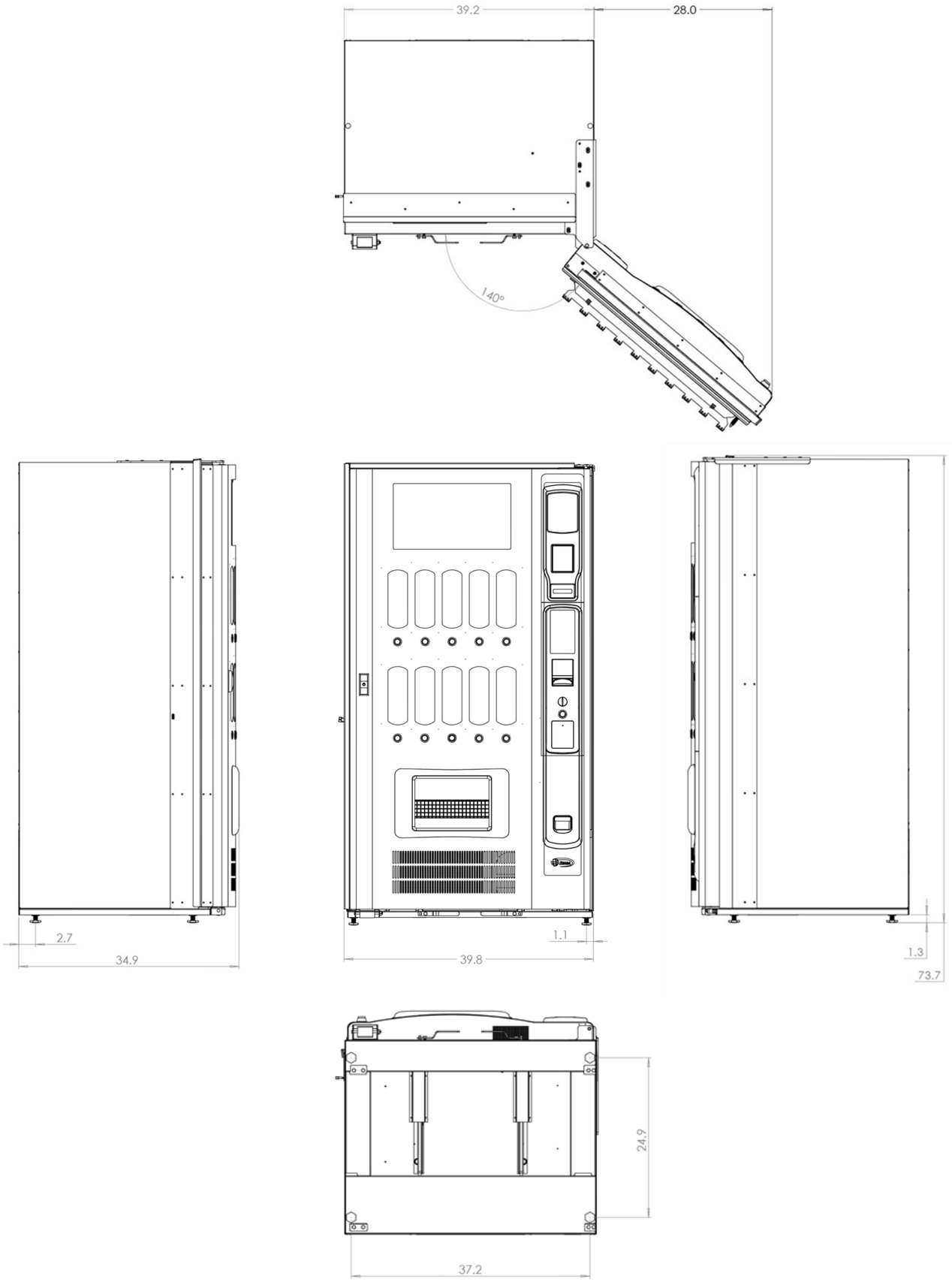


Figure 1.2 Cabinet Dimensions
(For reference only - dimensions in inches)

2
SAFETY

COMMITMENT TO SAFETY

Seaga Manufacturing, Inc. is committed to designing and producing a safe product. As with all electrical or mechanical pieces of equipment, some potential hazards exist. It is the intent of Seaga Manufacturing, Inc., through this manual and service technician training, to alert individuals who will be servicing our equipment to these potential hazards, and to provide basic safety guidelines.

To reduce the risk of serious injury or death, please read and follow all warnings in this manual. It is important that we point out that these warnings are not comprehensive. Seaga Manufacturing, Inc. cannot possibly anticipate all of the ways that service may be conducted, or all of the possible safety hazards that may result from service. Therefore at all times we urge you to beware of hazards such as electrical shock, mechanical entrapment, and tipping a vendor during movement.

Seaga Manufacturing, Inc. strongly recommends a commitment to safety on the part of all servicing personnel or organizations. Only personnel properly trained in vendor servicing should attempt any service to the internal components of the vendor. Seaga Manufacturing, Inc. has no control over the vendor once it leaves our factory.

Maintaining the vendor in a safe condition is the sole responsibility of the owner.

If you have questions concerning safety or service, or would like more information, please contact the Seaga Manufacturing, Inc. Service Department at 1 (815) 297-9500 or e-mail info@seaga.com.

SAFETY PRECAUTIONS

This information is intended for use by a qualified service technician who is familiar with proper and safe procedures to be followed when repairing, replacing or adjusting any Seaga equipment or components. All repairs should performed by a qualified service technician who is equipped with proper tools, has access to genuine Seaga replacement parts and follows proper safety precautions

THINK SAFETY FIRST!

Listed below are safety precautions and safe practices to follow to avoid injury from selected hazards. This list cannot possibly cover all hazards, therefore please remember to:

High Voltage Contact
Refer to the serial label on the cabinet for the correct voltage and frequency for the vending machine. In the USA and Canada, 120 Vac, 60 Hz, 1 Phase is required. In Europe and other countries, 220/230/240 Vac, 50 Hz and 1 Phase are required, depending on your voltage. The serial label also specifies the amperage of the vending machine.

Plug in your vending machine into a properly rated and grounded, 3 wire, receptacle with its own circuit protection (fuse or circuit breaker). **Do not use an extension cord, outlet adapter, or power saving adapter.**

It is recommended that the machine be located so that the GFCI device will be accessible after installation. Visually inspect the GFCI and power supply cord to be sure it is not crushed, pinched or stretched. Protect the power supply cord during transportation and use. Inspect the power supply cord periodically for wear or damage. Never use a worn or damaged power cord. Replacement power supply cords should only be obtained from the manufacturer.

High voltage areas include the electrical panel, and the refrigeration unit and fans. It is important to understand that contact with the high voltage wiring can result in injury or death.

- Always test the outlet for proper voltage, polarity and grounding before plugging in the vendor.
- Always disconnect power to the vendor before servicing. Allow only fully trained service technicians to service the vendor.
- Always keep electrical connections dry. Do not place the vendor in or near standing water.

Grounding
In accordance with the National Electrical Code in the USA and Underwriters Laboratories, Inc., this vending machine is equipped with a three-wire power supply cord and Ground Fault Circuit Interrupter (GFCI) in North America. The GFCI device is incorporated directly into the power cord.

The vending machine supply cord must be plugged directly into a properly grounded, 3 wire receptacle that is properly protected.

Do not use the TEST and RESET buttons on the GFCI as an ON/OFF switch.

Some electrical components have a green or green/yellow ground wire attached to a grounding point in the vendor. If it becomes necessary to remove a ground wire during service, note how the wire is attached, including the locations of any washers. After servicing, make sure that the wires and washers are replaced exactly as they were. Note that the vendor may appear to work normally without the ground wires, but

there will be a potential shock hazard from ungrounded components.

- Always test the outlet for proper grounding before plugging in the vendor.
- Always reconnect ground wires after servicing.
- Test the ground fault circuit interrupter (GFCI) periodically to ensure proper operation. If the GFCI does not pass the test, do not use the machine. Unplug the power cord and call Seaga Customer Care at 1.815.297.9500, Monday through Friday, 8:00 a.m. to 5:00 p.m. Central Time.

Fan Contact

These vendors are equipped with fans which can start automatically. These fans are guarded to prevent accidental contact. However, removal of guards or other components can leave fan blades exposed and create a physical hazard.

- Always disconnect power to the vendor before servicing.
- Always wear hand and eye protection when servicing the vendor.
- Always keep hands, hair, loose clothing and tools away from fan blades.
- Never insert hands or tools into concealed areas.
- Always replace protective covers after service.

Jamming

Energized vend motors can turn with considerable torque, creating a possible entrapment hazard. Also, turning parts may eject tools or other objects. A motor that is jammed or caught can store energy as it binds. Use gloves and caution when freeing a jammed motor or parts.

- Always disconnect power to the vendor or control board before servicing the vend motors.
- Always check for proper fit when loading products in rotors to avoid jamming.
- Always wear hand and eye protection when servicing the vendor.
- Always keep hands, hair, loose clothing and tools away from moving parts.

Vendor Tipping

The empty weight of the vendor is approximately 650 pounds (295 kg). A falling vendor can cause serious injury or death. Caution should always be taken to avoid dropping or tipping a vendor.

- Never rock or tip the vendor. It must be kept horizontal for safe operation.
- Never place the vendor in an inclined position, such as on a ramp or with all the legs not on the same horizontal surface.
- Never place the vendor in a moving environment such as on a ship without properly securing it in place.
- Never place the vendor in a location where it may be struck by a vehicle.
- Never transport an unsecured vendor, or a vendor still containing product.
- Never attempt to lift or move the vendor by hand. Always use equipment with the proper load rating. Note that the Specification weight listed is empty weight.

Safely Moving Machine

If you need to move your Vending Unit, you'll want to use a material handling device, such as a pallet jack, appliance dolly or forklift to position it. Make certain that the door is shut and secured.

Other Improper Conditions

Hazardous conditions can be created by improper use or service of the merchandiser.

1. Always reinstall any parts removed during service to their original locations.
2. Never make unauthorized modifications to any part of the merchandiser.
3. Always replace components that are worn, broken, or otherwise unfit for use.
4. Never use unauthorized parts, or use parts for anything other than their intended use.

TEST STANDARDS

AMS vending machines bearing the UL mark have been tested and comply with the following standard:

ANSI/UL 541

Standard for Refrigerated Vending Machines ANSI/UL 541and the Standard for Refrigeration Equipment, CAN/CSA C22.2 No. 120

Additional Standards

Certain models comply with the following:

2007 Appliance Efficiency Regulations
CEC-400-2007-016-REV1

Natural Resources Canada (NRCan)
Energy Efficiency Regulations, OEE

Americans with Disabilities Act
See **VENDOR PREPARATION** on page 11 and **ON-SITE INSTALLATION** on page 12.

3
VENDOR SYSTEMS AND COMPONENTS

INSIGHT SYSTEM OPERATION

The Insight system is comprised of the VMC, an emitter vend sensor, a detector vend sensor, and control software. The emitter and detector sensors are attached to opposite ends of the hopper, and infrared light is passed between them.

When a selection is made, the vend motor will begin to run. If no product falls in the hopper (or motor returns to home position twice), the motor will be stopped, the credit will be maintained and the customer will be directed to “PLEASE MAKE ANOTHER SELECTION.”

When the VMC measures a variation in the light intensity during the vend cycle, it recognizes that a product has fallen through the light into the hopper. The VMC stops the vend motor (or returns to home position) and removes the credit.

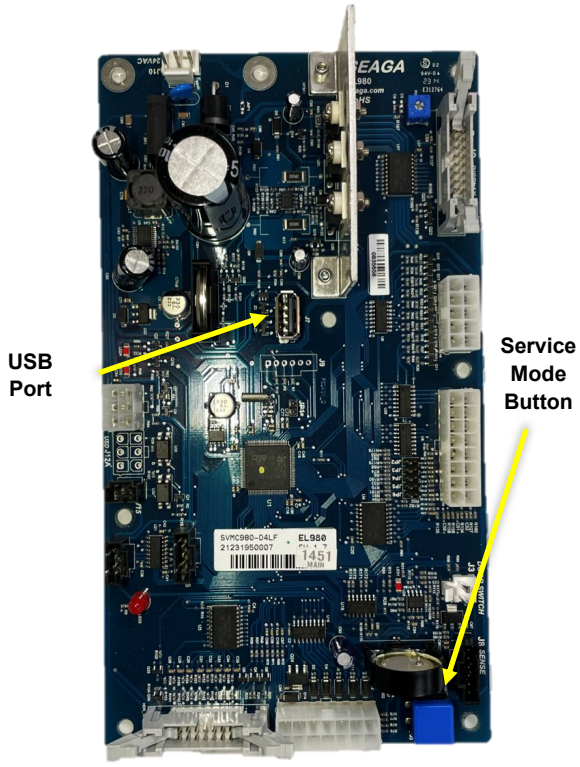


Figure 3.1 Vending Machine Controller

VENDING MACHINE CONTROLLER (VMC)

The VMC controls and monitors the merchandiser, DEX, and MDB systems. The VMC is located in the upper left hand corner of the open merchandiser door, behind an access door.

Upgrading Firmware

The firmware can be upgraded by using a USB drive. The latest firmware is available on the Seaga website.

Mode Switch

Pressing the blue service mode button (See Figure 3.1) allows the user to access the VMC’s service mode to change settings, set prices, access vend data, and check error codes for troubleshooting. Data is displayed on the front display panel, and entered at the front selection panel. Pressing the switch again, or closing the door, will automatically switch the VMC back to vend mode.

DEX Jack

The DEX jack harness is provided for data collection with third party devices. Some telemetry-based devices (which may include cashless devices) have a permanent connection to this port.

IMPACT SENSOR

Four impact sensors are attached to the underside of the product chute.

To replace these sensors, remove the two nuts that fasten the drop chute to the cabinet, lift upward to clear the mounting bracket, and while rotating the chute slightly counterclockwise to clear the inner door seal pull the chute straight out. Be careful not to damage the impact sensor wires. Impact sensors may be fastened in place with p-clamps which can be removed. The wires of the impact sensors run to a terminal block near the right-hand side of the drop chute. The impact sensors are wired in pairs and must be replaced as such. Prior to removing the impact sensors take note of the movement that they are allowed. The replacement sensors are to be loose in the same manner for them to work properly.

Reverse the removal steps to install the product chute. Make sure you do not overtighten the nuts that fasten the drop chute to the cabinet. One to two threads past the nylon of the nuts are enough. The drop chute should be allowed to move freely.

DOOR

Validator & Card Reader Locations

There are two locations that will accept bill validators and/or debit card readers (See VENDOR PREPARATION on page 11). The lower position meets the guidelines of the Americans with Disabilities Act (ADA) for access by handicapped persons.

Coin Changer Location

Three screws are installed in the door below the coin chute. These screws mate to the keyhole slots on the back of the coin changer (See VENDOR PREPARATION on page 09).

Coin Box

The coin box is located below the changer and is used to hold overflow coins when the changer payout magazine is full. It is removed by tilting slightly and lifting out.

Door Switch

The door switch is mounted on the lower shelf of the cabinet below the main vend chute. The control uses the door switch to turn off the refrigeration unit when the door is open, and to switch from service mode to vend mode when the door is closed.

Display

The display is located on the front of the door. It serves as the interface for using and programming the machine. In service mode, it displays the active function and parameter values. In vend mode it can display the selection entered, the price of a selected item and the credit accumulated. When the machine is idle it can display the time and a scrolling message.

Coin Return Button

The coin return button is located under the coin slot. Pressing the coin return button will release bent or irregular coins that are not accepted by the changer. If the machine fails to vend a selection that has been made, pressing the coin return will return the full credit. If the Force Vend option is disabled, it can also return the full credit to the customer before a selection is made. If the Bill Changer option is enabled, the coin return will return change for bills inserted in the bill validator.

REFRIGERATION SYSTEM

Temperature Control

The evaporator fan runs continuously to circulate air within the cabinet. A temperature sensor located near the evaporator measures the temperature of air entering the evaporator. When this temperature is above the temperature setting in the control, the compressor and condenser fan are turned on.

When the temperature falls to 4°F below the temperature setting, the compressor and condenser fan are turned off (See REFRIGERATION on page 26).

Refrigeration Control

The refrigeration system is operated through the control board. A temperature sensor in the cabinet relays the current temperature to the control.

If the temperature is above the setting that has been programmed in by the user, the control sends a 24VDC signal to the refrigeration relay. The energized relay closes to complete the high voltage circuit that powers the compressor and the condenser fan.

If the compressor should overheat, a thermal overload removes power to the compressor until it has cooled.

To protect against evaporator freeze-up, after a cumulative time of 5 hours of running the compressor will be shut off for 15 minutes to allow for defrosting

When the temperature in the cabinet reaches 4°F cooler than the temperature setting, the control de-energizes the relay breaking the circuit powering the compressor.

The control will also shut off the compressor if the door is opened. This is to prevent the fan from drawing in outside air which may freeze up.

After the compressor has shut down, the control will wait until the compressor has been shut down for 2 minutes before restarting the compressor. The delay allows pressure in the system to equalize.

ELECTRICAL COMPARTMENT

The electrical compartment is located in the bottom of the cabinet on the right side, behind an access panel. See Figure 3.5 on page 9.

Vendor Power

The power cord is located on the front of the electrical panel near the fuses. The power cord is used to disconnect 120VAC power to the entire vendor.

The power should be disconnected when MDB devices are being connected or disconnected, when the board or refrigeration system is being serviced, or before any wiring harness is connected to or disconnected from the control board or sensors.

Transformers

The transformers reduce the input voltage to 24 volts AC. There are two transformers, one for the control board and another for the power supply of the vend motors. The vend motor power supply converts the voltage to 24VDC to run the vend motors.

RFI Filter

The filter removes electrical noise from the power supplied to the 24VAC transformer to prevent interference with operation of the control board and software.

Relay

The relay uses a 24 VDC signal from the control board to supply line voltage to the refrigeration unit.

Ground Attachment

The vendor electrical ground is made through the use of grounding studs or screws. Earth ground and individual ground wires from the high voltage components are attached to specific points and should always be replaced if removed for service.

VEND MOTORS

The 10 motors that drive the vend mechanism are designed to deliver consistent, reliable vends for many years. The optical encoder and switch boards are used to signal the Control Board with the position and speed of the vend motor.

THINK SAFETY FIRST!

The motor/rotor turns slowly- but with a lot of force. DO NOT ALLOW FINGERS, HAIR, OR ANYTHING ELSE BECOME TRAPPED IN THE MOVING PARTS. DO NOT ATTEMPT TO CLEAR A JAM OR REPLACE PARTS WITHOUT DISCONNECTING POWER TO THE VENDOR.

Test Product Loading

NOTE: Use only the products as specified when ordering the machine—using products other than those configured could result in jams or other faults. See **SELECTION ADJUSTMENT AND CONFIGURATION** on page 15 if you need to change from the “as shipped” configuration.

1. With the main door open, lift the lower product retainers and load the correct products for that column. Note that with very few exceptions all products are loaded with the caps to the rear.

2. Make sure there is between ¼" to ½" clearance between the rear-most product and the rear retainer. If not, use the adjustment handle at the top of the column to slide the rear retainer into position.
3. Set the control board to Free Vend. Please refer to **Free Vend** on page 25.
4. Close the main door and test vend each column through at least 2 rows of products (this verifies the homing feature). If items do not vend as expected, check depth setting in the service menu and the anti-theft clip locations in the rotor.

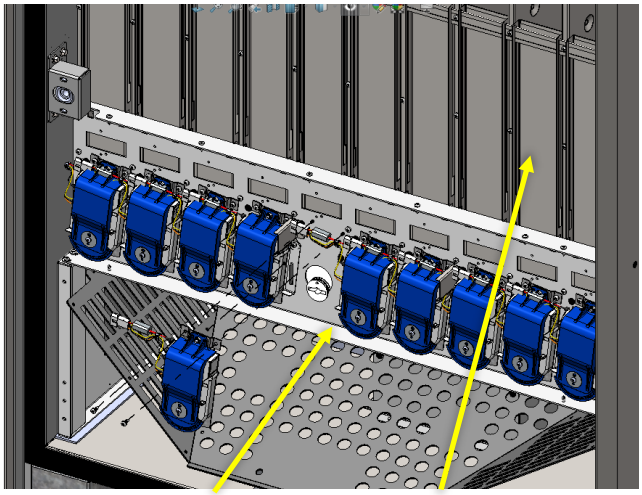


Figure 3.2 Vend Motors and Lower Product Retainers

4
VENDOR PREPARATION AND SET-UP

Setting up the vendor has been divided into three stages. **CONFIRMING POWER AT OUTLET**, below, confirms power and site suitability. **VENDOR PREPARATION**, below, includes preparations accomplished in the shop and **ON-SITE INSTALLATION**, on page 12, where the vendor is to be located.

CONFIRMING POWER AT OUTLET

Checking the Outlet (U.S. and Canada)
Seaga recommends using a dedicated outlet which can supply 10 to 12 amps per vendor.

Using a volt meter set to AC VOLTS, check the voltage between the positive (smaller) lug entry and the ground lug entry (or center screw on two-lug outlets). The reading should be **between 103 volts and 126 volts**. Next, check the voltage between the negative (larger) lug entry and the ground. The reading should be 0 volts. If your results vary, contact a qualified electrician to correct the outlet wiring before plugging in the vendor. **Abnormal voltage, reversed polarity or improper grounding may cause the vendor to malfunction or create hazardous conditions in the vendor, resulting in possible injury, damage to the vendor, or fire.**

The power cord is supplied with a standard NEMA 3-wire plug. If there are no 3-wire outlets available for powering the vendor, a grounding adapter may be used to convert a 2-wire outlet to accept the 3-wire plug. **The adapter must have a ground tab or wire which must be fastened to the center screw of the outlet.**

NEVER USE AN EXTENSION CORD WITH THE VENDOR.

VENDOR PREPARATION

Receiving Inspection
Do not store the vending machine outside. After you have received your machine and have it out of the box, place it on a secure surface for further inspection.

Inspect the vendor carefully for shipping damage prior to signing the carrier's delivery receipt as any damages that may have occurred during shipping must be reported to them.

Check for dents on the top or sides of the vendor, bent legs, or other damage on the exterior of the machine. Check the interior for components that may have been knocked loose or other damage.

Reporting damages and the seeking of restitution is the responsibility of the equipment owner. The factory is willing to assist you in this process in any way possible. Feel free to contact our Customer Care Department with questions you may have on this process.

It is important that you keep the original packaging for your vending machine at least through the warranty period. If your machine needs to be returned for repair, you may have to purchase this packaging if it is not retained.

Unpacking the Vending Machine
Remove the stretch wrap, edge protectors and foam strips from outside the vending machine.

Do not store your vending machine with the stretch wrap in place. The stretch wrap could bond to the vending machine's surface and, over time, damage the finish.

Mounting and Connecting Bill Validators & Card Readers
The Steeley will support any NAMA-approved Multi-Drop Bus (MDB) bill validator or card reader. Please read the device manufacturer's literature before proceeding.

Always disconnect power to the control board before servicing.

1. On the inside of the main door locate the coin chute which leads from the coin slot on the front of the door. Above the coin chute are (2) metal plates, each fastened to a set of (4) threaded mounting studs which correspond to the mounting holes in the bill validator. Either set of mounting studs may be used for a bill validator or card reader. The lower mounting position is ADA approved for consumers with disabilities.
2. Remove the four nuts that retain the steel cover panel. Remove the steel cover panel, then press out the plastic cover panel in the escutcheon.
3. Refer to the manufacturer's literature for instructions on accessing the mounting holes in your device. Place the mounting holes over the threaded studs and reinstall the nuts. Some devices may require spacers, which are available from AMS (Part Number 20258).
4. Connect the wiring harness to the MDB harness from the control board. If two devices are installed, connect the second device to the validator.
5. If a coin mechanism has been previously installed, disconnect it from the control board MDB harness and connect it to the validator or second device if installed.
6. Reconnect power to the control board.

Mounting and Connecting Coin Changer

The Steeley will support any NAMA-approved Multi-Drop Bus (MDB) Coin Mechanism. Please read the coin mechanism manufacturer's literature before proceeding.

Always disconnect power to the control board before servicing.

1. On the inside of the main door locate the coin chute which leads from the coin slot on the front of the door. Below the coin chute are (3) screws which correspond to slots on the back of the changer. Do not adjust these screws.
2. Install the changer by placing the large round opening at the bottom of each slot over a screw head. Be careful to hold the wiring harnesses in this area out of the way. Once each of the round openings are over the screw heads, the changer is lowered to engage the narrow portion of the slot with the shank of each screw.
3. Tighten the mounting screws (reference changer manufacturer's literature).
4. Connect the wiring harness to the bill validator (if applicable) or to the MDB connector from the control board.
5. Adjust the coin chute as required to align the chute with the changer.
6. Reconnect power to the control board.

Test Product Loading

Before putting the vendor on location, it is a good idea to determine the placement of products. Place at least one full row of products in each rotor to check for fit.

1. See **SELECTION ADJUSTMENT AND CONFIGURATION** on page 12 for column rear retainer adjustment, front upper retainer adjustment and retainer clip placement configuration when configuring your vendor to suit your product.
2. With the main door open, lift the lower product retainers and load the correct products for that column. Note that with very few exceptions all products are loaded with the caps to the rear.
3. Make sure the product can slide in and out of the rotor easily. If the product is too snug, it may cause the rotor to jam during vending.
4. Likewise, if the product is too loose in the rotor, it may not vend properly. Use a rotor with the smallest opening that will allow the product to slide in and out freely.
5. Make sure there is between ¼" to ½" clearance between the rear-most product and the rear retainer. If not, use the adjustment handle at the top of the column to slide the rear retainer into position.
6. Make sure there is adequate clearance between the top of the cabinet and the top of the product stack when the product is being vended.
7. Set the control board to 'Free Vend' mode. Refer to Free Vend on page 25.
8. Close the main door and test vend each column through at least 2 rows of products (this verifies the homing feature). If items do not vend as expected, check depth setting in the service menu and the anti-theft clip locations in the rotor.

Setting Prices

After product placement, set the prices into the vendor (Refer to Section 6, page 20).

1. To enter the service mode, press the mode switch on the control board (Refer to Figure 3.1 for the location of the mode switch).
2. Use selection button 2/3 to scroll the display until it shows "Password" and press button 4 to enter. Press **2-3-1-4** and then 4 for enter.
3. Use 2 or 3 to scroll to "Price Program" and then press 4 for enter.
4. Refer to Section 6 Price Program (page 20) to set price.

Flavor Cards

You have the option of displaying either a flavor card or live product. In order to install flavor cards follow the steps below.

First, place your product in the stacks and set their corresponding prices. Then, remove the back live display wall. This is done by first turning the screws near the edges of the wall. Once removed, install the Flavor Cards in the appropriate pocket on the inside of the front door as shown in Figure 4.1.

Refer to Figure 4.3 on page 11, and be sure to match the Flavor Card position to the product's position in the stack.

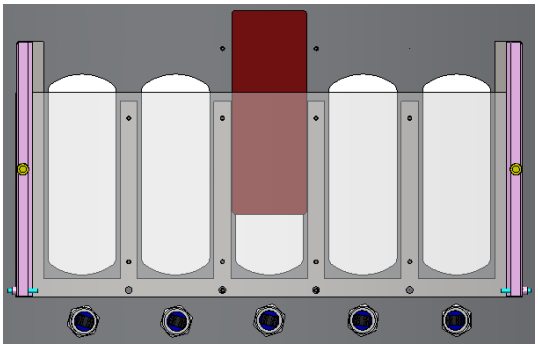


Figure 4.1 Flavor Card Installation

Live Display

Instead of using flavor cards, the EnVision Ultra Stack is designed so that live product can also be displayed.

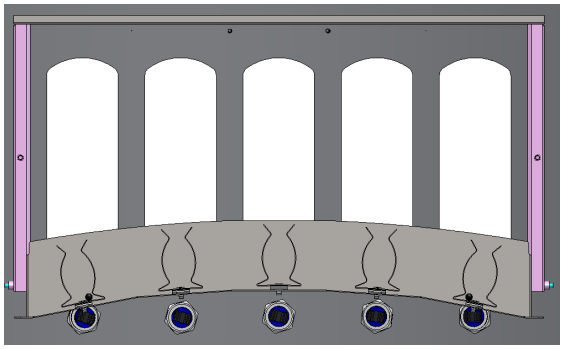


Figure 4.2 Live Display Installation

First, place your product in the stacks and set their corresponding prices. Then, remove the back live display wall. This is done by first turning the screws near the edges of the wall. Once removed, secure your live product into the holders on the live display wall. This will ensure that the displayed product will not shift or move if the vendor is shaken.

Refer to **Figure 4.3** below, and be sure to match the Live Display position to the product's position in the stack.

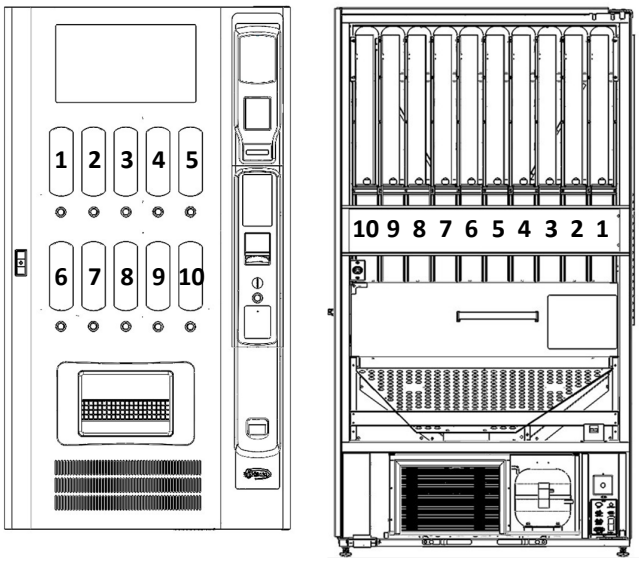


Figure 4.3 Display and Stack Locations

ON-SITE INSTALLATION

Removing Shipping Boards

Your machine arrives on a heavy duty industrial skid with each leg locked into place using j-plates. The j-plates are attached to the skid with 3 Phillips screws. The j-plates will need to be removed before removing the machine from the pallet.

Placing the Vendor in Location

1. The vending machine must be located on a solid, flat and level surface that can bear the weight of a fully loaded vending machine, or approximately >1,100 lbs. (>500 kg).
2. Place the vendor within 5 feet of the designated power outlet. The power outlet should be accessible when the vendor is in position, and the ventilation opening in the back of the vendor must be clear of obstructions.
3. Allow at least 4 inches between the wall and the back of the vendor for air circulation and so the power cord doesn't get crimped and become damaged.
4. Make sure nothing obstructs the flow of air below the front door of the vending machine.
5. Make sure the vendor does not block walkways or exits.
6. Do not place the vendor in a location where it can be struck by vehicles.
7. Leave at least 31 inches between a wall and the hinge side of the vendor.
8. The vendor is designed to meet ADA guidelines for persons in wheelchairs using a parallel approach so make sure there is adequate room to maneuver a wheelchair into this position in front of the vendor.

Leveling the Vendor

For safe operation the vendor must be level.

1. On the bottom of the vendor are four (4) threaded leveling legs located at the corners of the cabinet. Before beginning, be sure that all four leveling legs are screwed in completely.
2. With the door closed and locked, check the four legs and adjust any leg that is not contacting the floor with a wrench that is 1 ½ " in size.
3. Place a level on top of the cabinet and check for horizontal from side-to-side.
4. Adjust the leveling legs on the low side one turn at a time until the cabinet is level.
5. Repeat the last two steps to level the vendor front-to-back.

Initial Power-Up and Cool-Down

When placing the EnVision Ultra Stack on a new location it is important to allow the machine to cool to the operating temperature prior to placing products in the machine. Depending upon the machine's initial temperature and ambient conditions, it will take about 4 to 5 hours to accomplish this. Normal practice is to place a machine on location and come back the next day to load it.

1. Plug in the vendor.
2. Check that the lights come on: the chiller may or may not be running in its cycle at this time.
3. Enter the service mode and check that all settings are correct.
4. Check error codes for problems.
5. Load product after the vendor has cooled.
6. Ensure vendor is operating properly.

5
SELECTION ADJUSTMENT AND CONFIGURATION

The product stack in the EnVision Ultra Stack is highly configurable. Before changing the configuration of the stacks, make sure to order the necessary parts for the desired changes such as new ramps, wall shims or rotors.

CAUTION: For safety, you must disconnect the power to the machine and empty the stack(s) being configured of any product before making any changes.

MOTOR

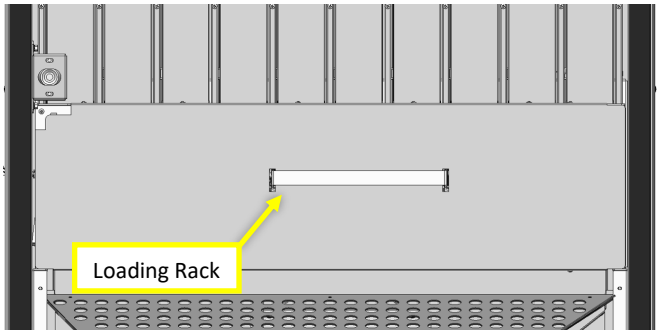


Figure 5.1 Motor Cover Screws and Loading Rack

Removal

1. Remove the motor cover by loosening the mounting screws (two at the top and two at the bottom) See Figure 5.1 below.
2. Once the screws are loose, pull the loading rack and the cover out, see Figure 5.1, until the loading rack hits its stops. Now tilt both pieces upwards and keep pulling to fully release the assembly.
3. Disconnect the motor harness from the motor distribution harness (the large connector above the motor, not the one to the side).
4. Remove the two mounting screws at the top of the motor and remove the motor by pulling straight back until the output shaft of the motor is free from the rotor. See Figure 5.2 to the right.

Installation

1. Slide the output shaft of the motor in the cavity of the rotor. Make sure the “C”-indicator is aligned with the arrow and opening of the rotor. Make sure that the groove in the rotor is fully seated in the mechanical mounting plate.
2. Install the mounting screws of the motor and connect the motor harness to the motor distribution harness.
3. Slide the motor cover back on and push the loading rack back in. Tighten the four mounting screws for the motor cover.

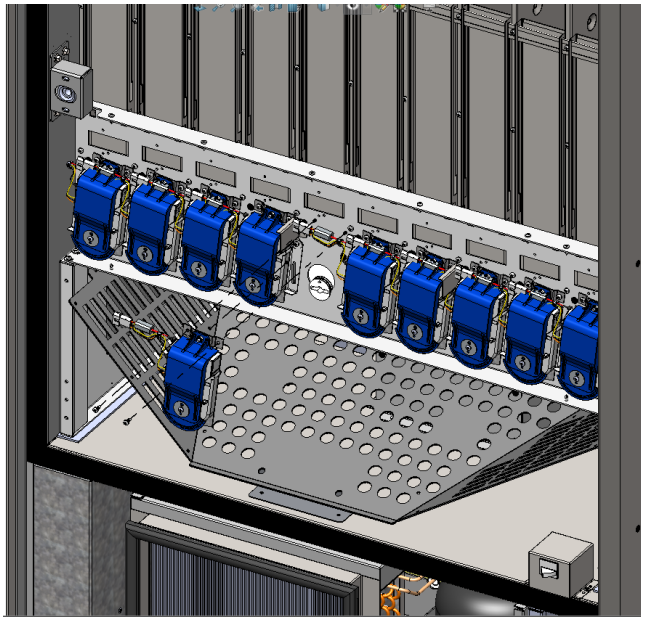


Figure 5.2 Motor Installation/Removal Shown without Motor Cover

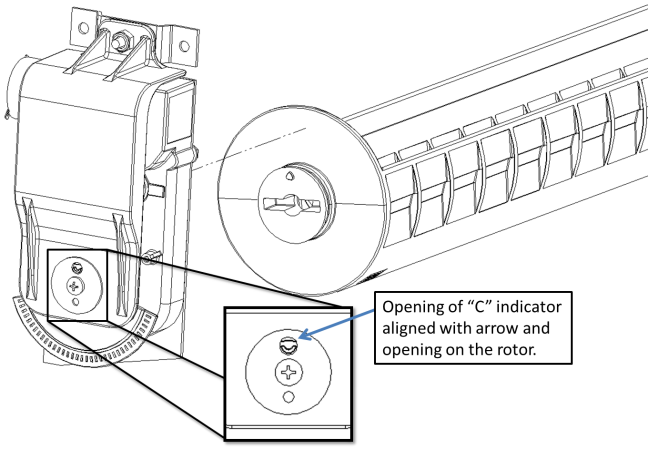


Figure 5.3 Motor Alignment with Motor Output Shaft

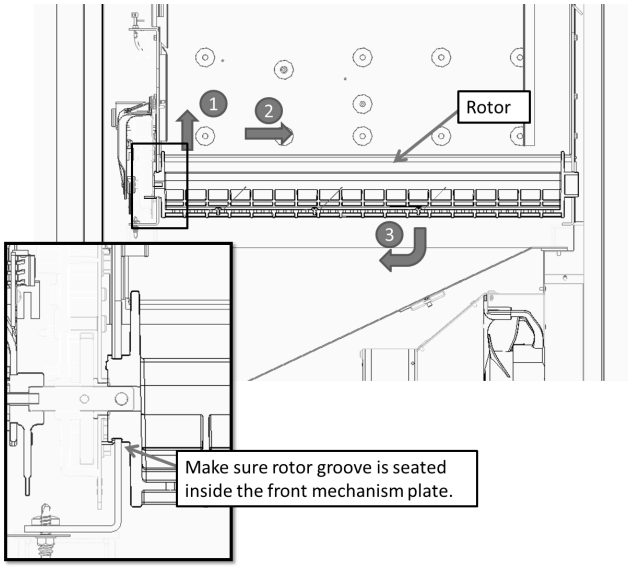


Figure 5.4 Rotor Removal and Reverse Order and Direction for Installation

ROTOR

To choose the proper rotor for your product please see Rotor Selection on page 19.

Removal:

1. First remove the motor - see instructions above.
2. Rotate the rotor so that the cutout in the front is oriented vertically (it is easier to handle rotors from underneath, through the delivery chute area).
3. Lift the front of the rotor up and back from the front edge of the mechanism plate that holds it.
4. Angle the front of the rotor downwards and pull it forward, away from the delivery chute.

Installation:

CAUTION: An incorrectly installed rotor can disengage from the mechanical mounting plate and fall!

1. Hold the rotor so that the front cutout is oriented vertically (it is easier to handle rotors from underneath, through the delivery chute area).
2. Angle the rear of the rotor upwards into the stack and gently move it backwards until it rests on the rear circular cutout.
3. Lift the front of the rotor into the stack and pull it forward so that is sits in the edge designated cutout on the front mechanism plate.
4. Push down on the front of the rotor to ensure it is properly seated.
5. Install the motor to secure the rotor. Be sure to properly align rotor and motor—See Motor Installation on page 15

ANTI-THEFT SPRING CLIP

The anti-theft spring clip prevents products from shifting to an area of the rotor where a previous product had vended in the event of the machine rocking or tipping. A screw holds the clip in the rotor. To install or change the clip:

1. First remove the rotor - see earlier instructions.
2. Identify numbered hole associated with desired position and install the clip.
3. Reinstall the rotor when finished.

ROTOR SPACER

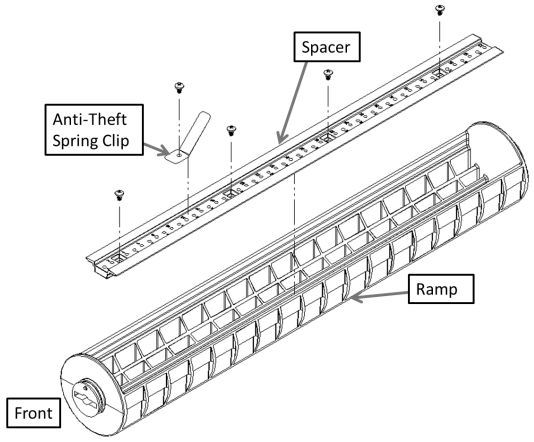


Figure 5.5 Rotor Spacer, and Anti-theft Spring Clip

1. The rotor spacer may be needed for certain products. It is installed in the rotor with four mounting screws. To do so:
2. First, remove any anti-theft clips that might be installed in the rotor and note what hole they were installed in.
3. Align the numbered holes of the rotor to the numbered holes of the rotor spacer.
4. Insert screws into the 4 holes of the rotor spacer to secure, there should be 4 square cutouts indicating were to do so.
5. Reinstall the anti-theft clip, if the hole it was installed in is no longer available, secure it to the next available hole towards the front of the rotor.

ROTOR SELECTION

Use **Figure 5.6** below to determine the correct rotor to use.

If the largest diameter of the product is less than 2.46” use the white rotor, PN 26165. The product should not protrude more than 1/16” beyond the outer diameter of the white rotor when loaded.

If the largest diameter of the product is more than 2.46” or protrudes more than 1/16” beyond the outer diameter of the white rotor use the black rotor, PN 26164. These larger products must fit within the black rotor using the same guideline dimensions as shown in **Figure 5.6** below.

Generally, products with the dimensions shown on the table on page …. (these are at the largest part of the bottle or can) will work in the rotors as shown. Some configurations may require the rotor spacers, PN 27109, to accommodate small products.

Parts Needed	Product's Largest Diameter
26164 - Black Rotor	2.64" to 2.88"
26165 - White Rotor	2.22" to 2.64"
26164 - Black Rotor + 27109 - Rotor Spacer	2.46" to 2.70"
26165 - White Rotor + 27109 - Rotor Spacer	2.04"" to 2.28"

Verify that the correct rotor is used for your product using **Figure 5.6** below.

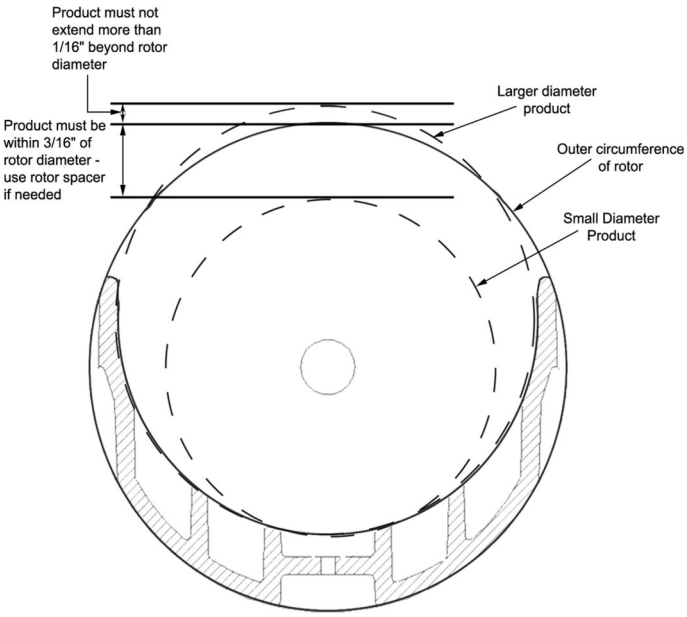


Figure 5.6 Rotor Selection Guide

RAMP

The ramp is the curved sheet metal part that releases the product one at a time as the rotor rotates. Currently there are several different ramps available. The appropriate ramp is dependent on the product being vended.

Ramp Part Number	Product Depth
26883*	4
27271	3
26888	2

* - 26883 will also work in many 2-deep applications.

Removal

Refer to **Figure 5.7**.

1. Remove the motor cover by loosening the mounting screws (two at the top and two at the bottom) See Figure 5.1 below.
2. Once the screws are loose, pull the loading rack and the cover out, see Figure 5.1, until the loading rack hits its stops. Now tilt both pieces upwards and keep pulling to fully release the assembly.
3. Lift on up on the black plastic ramp retainer on the left side of the motor and turn it 90 degrees.
4. Reach the ramp from below, through the chute, then push up and then backwards on the front of the ramp.
5. Lower the front end of the ramp and then pull it forward.

Installation

1. Through the chute, insert the back of the ramp into the vertical slit on the back of the stack, to the left of the rotor.
2. Lift up on the front of ramp and bring it forward into the appropriate slot in the front mechanism plate.
3. Push the ramp down to ensure it snapped into place and is sited on the front mechanism plate.
4. Be sure that the black plastic ramp retainer is in place so that the ramp cannot 'jump' up and be released form its normal position.

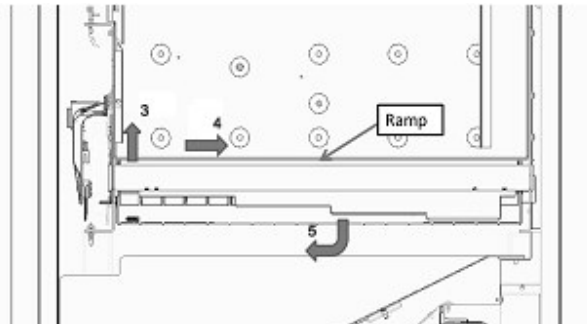


Figure 5.7 Ramp Removal and Reverse Order and Direction for Installation

PRODUCT ORIENTATION

Default orientation of product is for the top of the product to face the back of the machine while laying down. This goes for both 4-deep cans and for 2-deep regular shaped bottles.

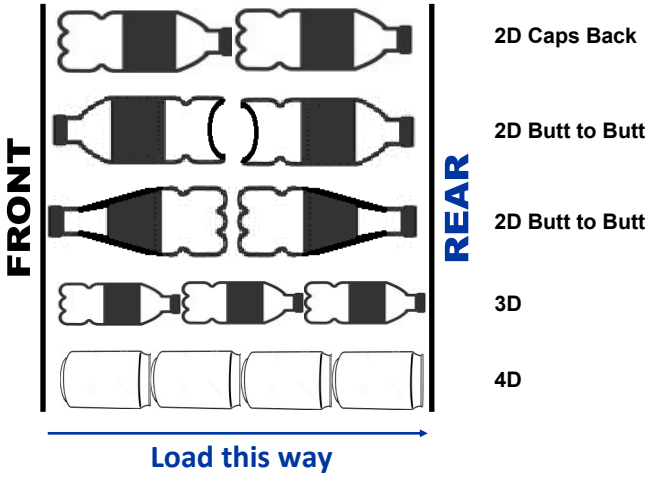


Figure 5.8 Product Orientation Guide

If 2-deep irregular shaped bottles are used, the rearmost column should have the top of the product facing the back while the frontmost column should have the top of the product facing the front. Refer to example 2 and 3 in **Figure 5.8** below.

REAR RETAINER

The rear retainer, at the back of the stack, retains the product from the back. It serves to align the product so that the it enters the rotor reliably. To adjust its position:

1. Push the lever, located at the top of the stack's left wall, to the left to release it from the locating tab.
2. Move the lever forwards or backwards into the desired locating tab associated with the desired rear retainer position.
3. Once the lever is at the appropriate locating tab, release and allow it to relax on to the tab (there are 21 total locating tabs).

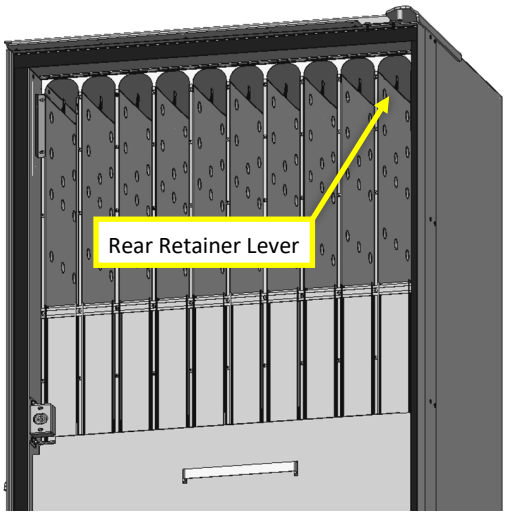


Figure 5.9 Location of the Rear Retainer Lever

UPPER FRONT RETAINER

The Upper Product Retainer prevents the beverages from falling out. It also positions the beverages such that they won't get caught on the lower product retainer or bound between the Upper Product Retainer and the Rear Retainer when adjusted correctly.

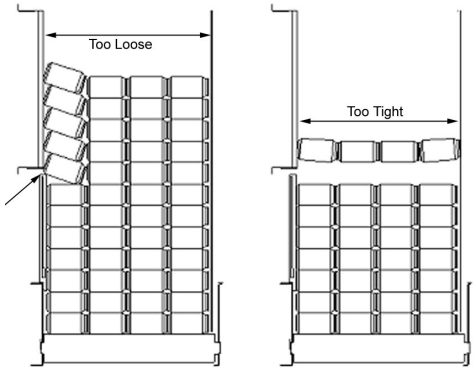


Figure 5.10 Incorrectly Positioned Upper Front Retainer

Adjusting Upper Product Retainer

The Upper Product Retainer is adjusted at the factory and should not be adjusted without previously contacting customer service.

1. Load stacks 1 (rightmost) and 10 (leftmost) with product up to the top edge of the Lower Product Retainer (4-deep if cans, 2-deep if bottles).
2. Load stacks 1 and 10 with product only towards the front of the stack until the top of the vendor (2 -deep if cans, 1-deep if bottles).
3. At this point product should be loaded as shown in **Figure 5.11**.

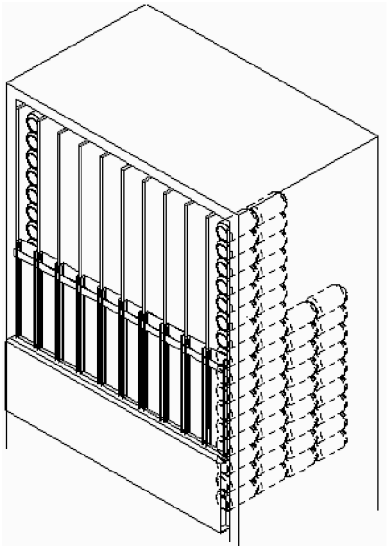


Figure 5.11 Isometric View

4. Pull the first column of beverages above the Lower Product Retainer out just beyond said retainer.
5. Make sure the Upper Product Retainer is installed in it's narrowest (shallowest) position and centered in the slot from left to right.
6. Slowly close the door. Then open it. Observe the position of the cans and repeat the process as necessary, moving the Upper Product Retainer out slightly as you go, until the cans are in the ideal position (cans line up with the cans in the behind the Lower Product Retainer).
7. When the depth adjustment is complete, adjust the Upper Product Retainer left/right so that it just clears the stack wall (See **Fig. 5.12** on page ...) when you open and close the main door. It's easier to see from the t-handle side of the machine. Note: that this adjustment is important. If it's too far to the right, it will contact the stack wall. If it's too far to the left, it won't retain the product.

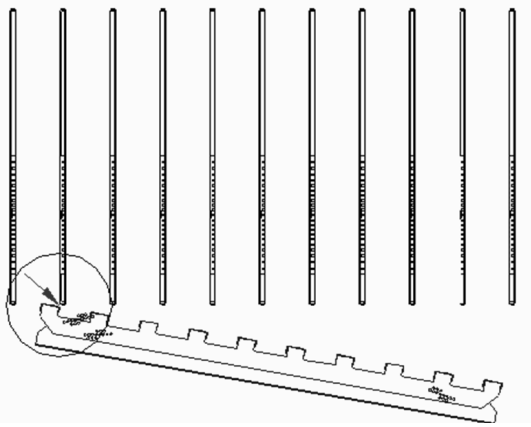


Figure 5.12 Top View

SIDE WALL SHIM

The side wall shim reduces the distance between the two stack walls for skinnier (narrower) product. It is recommended to use these shims for product with a diameter of 2.3" or smaller.

Refer to **Figures 5.13** and **5.14** below.

1. Adjust the rear retainer to the most rear position.
2. Install the rear most shim. The hooks on the shim slide into cutouts in the stack wall.
3. Repeat step 2 for each additional shim. There should be a total of four shims per selection.
4. For the front shim, fasten the front side of the shim with a screw.

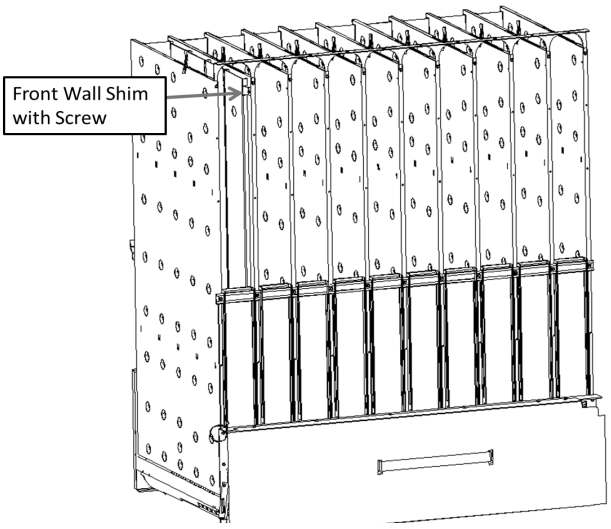


Figure 5.13 Wall shims in Selection 10
Shown with just stack for clarity.

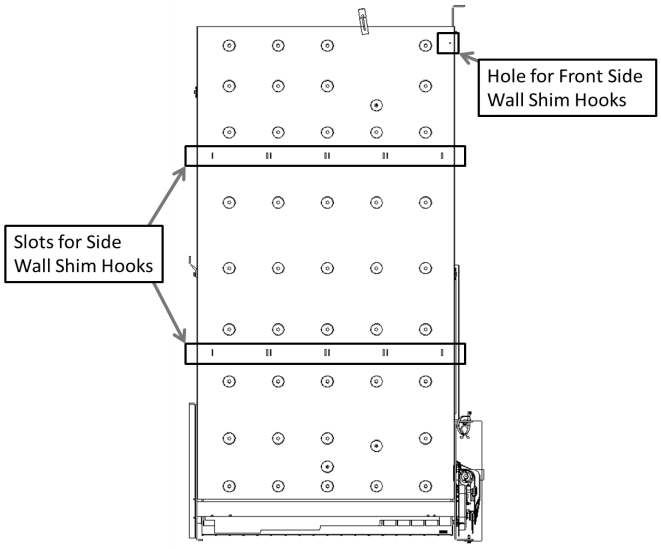


Figure 5.14 Location of Slots and Mounting Hole for Wall Shims

MOTOR WIRE COLOR CODE

SELECTION NUMBER	USE WIRE COLOR
Selection Number 10	Red
Selection Number 9	Blue
Selection Number 8	Gray
Selection Number 7	Violet
Selection Number 6	Brown
Selection Number 5	Yellow
Selection Number 4	Green
Selection Number 3	Orange
Selection Number 2	Pink
Selection Number 1	Gray and Yellow

NOTE: Every colored wire is paired with a red wire having a black stripe to complete the circuit. The connectors on the red wires having a black stripe are narrow and must be connected to the narrow connectors on the motors. The connectors on the colored wires are wide and must be connected to the wide connectors on the motors. Connectors which are not used should be folded up out the way and secured in place with wire ties.

6
SERVICE PROGRAMMING

DISPLAY

The LED display is located on the right side of the door. It is used to communicate with the customer as well as to display to the operator the Service Mode functions for setting the vendor.

Sales Mode Display

On power up the display will show the software version installed in vendor, then briefly show the Date and Time, and finally change to the scrolling POS message. If a selection button is pressed before any credit has been entered, the Price of that selection along with the selection number itself will be displayed. When payment is made, the display indicates the total amount inserted and when a selection is made the progress of the vending cycle is displayed.

Service Mode Display

When the door is opened, the Control Board will 'beep' to acknowledge it but the machine will remain in Sales Mode.

When the Service Mode Button (See Figure 3.1 on page 7.) is pressed, the Control Board enters the Service Mode and the Display will show "Errors". This is the first item in the list of service mode functions. The first 4 selection buttons are used to navigate the service mode:

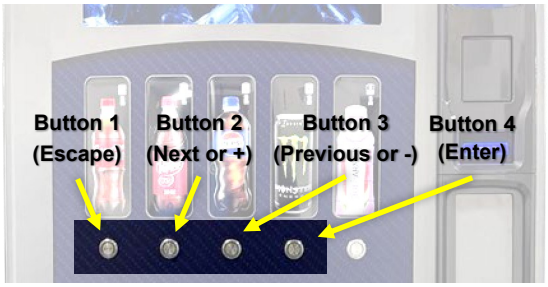


Figure 6.1 Button Identification

Button 1: Escape/Abort/Cancel - will return to previous menu prompt.

Button 2: Scroll Up – next in the menu or +.

Button 3: Scroll Down – previous in menu or -.

Button 4: Enter/Save/Clear – Allows you to enter a specific routine, save what you have programmed, or clear the error prompts.

Note: Routines with * are password protected. They can only be viewed and entered after the password is entered at the "Password" prompt.

Note: To return to Sales Mode, simply close the Main Door when you are finished programming. You may also select Return to Sales, which is the last function on the Menu. **If the Main Door is not closed, the machine will time out after Return to Sales is selected and Out of Service will show on the display. Simply close the Main Door to return to Sales Mode.**

ERRORS

This function allows you to enter the error readout routine. As mentioned above, "Errors" will appear when you press the Service mode button on the VMC.

Pressing Button 4 - enters the ERRORS submenu. If there have been no Error Codes since the last reset, the display will read "No Errors". If one or more Error Codes have occurred, the display will show the first error code that occurred. The following are error codes that may be displayed and detailed information accessed: "No Errors", "Coin Mech", Bill Val", "Card Rdr1", "Card Rdr2", "VMC", "Refrig", "USD1", "USD2", "USD3".
Pressing Button 2/3 - scrolls through any error codes that are present.
Pressing Button 4 - allows you to enter into the submenu associated with the error code currently shown on the display to access detailed information.

> **Important:** If there is only one error, it will be the only error code shown when you enter the error code submenus.

Pressing and Holding Button 4 - allows you to clear the error code being shown on the display.
Pressing Button 1 - escapes back to the main menu, returning you to "Error Codes".
Pressing Button 2 - scrolls to the next routine.

Coin Mech

Pressing Button 4 - displays all Coin Mech error codes.
Pressing Button 1 - escapes back to the ERROR submenu, returning you to "Coin Mech" if all changer error codes have not been cleared. If all selection error codes have been cleared "No Error Codes" will be displayed.

Bill Validator

Pressing Button 4 - displays all Bill Validator error codes.
Pressing Button 1 - escapes back to the ERROR submenu, returning you to "Bill Validator" if all bill validator codes have not been cleared. If all selection error codes have been cleared "No Error Codes" will be displayed.

Bill Validator Summary Error Codes

"Comm Error" indicating a bill validator communication error (No communication for more than 5 seconds).
"Stack Full" indicating the bill stacker is full.
"Motor Error" indicating a defective motor in the validator.
"Jam" indicating a bill jam in the validator.
"ROM" (read only memory) indicating a validator ROM (read only memory) check sum error (failed validator).
"Stacker Open" indicating an open stacker.
"Sensor Error" indicating a bill validator sensor error.
"Decimal Places" indicating a conflict with other payment devices.
"Currency" indicating a conflict with other payment devices.
"Scale Factor" indicating a conflict with other payment devices.

Card RDR1 (or Card RDR2)

Pressing Button 4 - displays all Card Reader error codes.
Pressing Button 1 - escapes back to the ERROR submenu, returning you to "Card RDR1/RDR2" if all card reader codes have not been cleared. If all selection error codes have been cleared "No Error Codes" will be displayed.

Card Reader Summary Error Codes

"Comm Error" indicating no card reader communication for 5 seconds.
"Error" unspecified error reported by the device.
"Jam" indicating a jam in the reader.
"Decimal Places" indicating a conflict with other payment devices.
"Currency" indicating a conflict with other payment devices.
"Scale Factor" indicating a conflict with other payment devices.

VMC

Pressing Button 4 - displays all VMC error codes.
Pressing Button 1 - escapes back to the ERROR submenu, returning you to "VMC" if all control board codes have not been cleared. If all selection error codes have been cleared "No Error Codes" will be displayed.

Control System Summary Error Codes

"Door Switch" indicating a door switch in the open position for more than 5 minutes.
"AC Supply Low" indicating AC supply to the machine has fallen more than 15% below normal line voltage for more than 30 seconds.
"RAM Checksum" indicating the checksum for service mode settings memory has been corrupted.

Refrig

Pressing Button 4 - displays all refrigeration error codes.
Pressing Button 1 - escapes back to the ERROR submenu, returning you to "Refrig" if all refrigeration codes have not been cleared. If all selection error codes have been cleared "No Error Codes" will be displayed.

Refrigeration Summary Error Codes

"Sensor1 Open"
"Sensor1 Short"
"Sensor 2/3/4 Open" reported only if required by current refrigeration mode.
"Sensor 2/3/4 Short" reported only if required by current refrigeration mode.

USD1, USD2 or USD3

Pressing Button 4 - displays all USD 1, 2 or 3 error codes.
Pressing Button 1 - escapes back to the ERROR submenu, returning you to "USD 1, 2 or 3" if all error codes have not been cleared. If all selection error codes have been cleared "No Error Codes" will be displayed.

"Comm Error" indicating the communication has been lost.
"Error" unspecified error reported by device.

COIN PAYOUT

This function allows you to pay out coins from the coin changer. **Note:** If a coin changer is not installed, you will not be able to enter the program to display this information.

Pressing Button 4 - enters mode and the lowest coin value dispensable will show on the display.
Pressing Button 2/3 - scrolls the different coin values available.
Pressing and Holding Button 4 - pay out the coins whose value is shown on the display.
Pressing Button 1 - escapes back to the main menu, returning you to "Coin Payout".

Pressing Button 2 - scrolls to the next routine.

TUBE FILL

This function allows you to count the coins loaded in the top (separator) of the coin changer that will be routed to an inventory tube. Note: If a coin changer is not installed, you will not be able to enter the program to display this information.

Pressing Button 4 - enters mode and the total number of the coin type being loaded will be displayed and counted in the VMC as they are accepted. The VMC will inhibit the acceptance of any coin which does not go to a tube during this procedure. If a tube full status is detected, that coin type will be inhibited.
Pressing Button 1 - escapes back to the main menu, returning you to "Tube Fill".

Pressing Button 2 - scrolls to the next routine.

TEST MODES

This function allows you to diagnose different functions of the vending machine.

Pressing Button 4 - enters Test Modes submenu.
Pressing Button 2/3 - scrolls through test routines.
Pressing Button 1 - escapes back to the main menu, returning you to “Test Modes”.

Pressing Button 2 - scrolls to the next routine.

Test Vend
This function allows you to test vend each column.

Pressing Button 4 - display will show “Selection 01”.
Pressing buttons 2/3 - scrolls through the selections available to run in motor test.
Pressing Button 4 - to vend from the selection displayed.
Pressing Button 1 - escapes back to the Test Modes submenu, returning you to “Test Vend”.
Press Button 2 - to scroll to next routine.

Homing
This function allows you to run the motor or motors one revolution. After this rotation is completed, the motor(s) will continue to their pre-stage position as determined by their product setting.

Pressing Button 4 - display will show “All Items”.
Pressing Button 4 - homes all motors.
Pressing Buttons 2/3 - scrolls through individual motors.
Pressing Button 4 - homes displayed motor.
Pressing Button 1 - escapes back to the Test Modes submenu, returning you to “Homing”.
Press Button 2 - to scroll to next routine.

Log
This function sends log files via serial port. A device connected to the serial port such as a laptop is necessary to view this information.

Product Sensor
...

Test Relays
This function lets you test the relays.

Pressing Button 4 - enters Test Relays submenu.
Pressing Button 2/3 - scrolls through routines.
Pressing Button 1 - escapes back to the Test Modes submenu, returning you to “Test Relays”.

Pressing Button 2 - scrolls to the next routine.

Refrigeration
This setting is used to turn the refrigeration relay on or off. Warning: Do not test with refrigeration unit plugged in. Rapidly turning on and off the refrigeration relay with the refrigeration unit still connected could damage the refrigeration unit.

Pressing Button 4 - displays current setting ON/OFF.
Pressing Button 2/3 - toggles between ON and OFF.
Pressing Button 4 - enters the flashing setting.
Pressing Button 1 - escapes back to the Test Relays submenu, returning you to “Refrigeration”.
Press Button 2 - to scroll to next routine.

Lights
This setting is used to turn the lights’ relay on or off.

Pressing Button 4 - displays current setting ON/OFF.
Pressing Button 2/3 - toggles between ON and OFF.
Pressing Button 4 - enters the flashing setting.
Pressing Button 1 - escapes back to the Test Relays submenu, returning you to “Lights”.
Press Button 2 - to scroll to next routine.

Evaporator Fan
This setting is used to turn the evaporator fan relay on or off.

Pressing Button 4 - displays current setting ON/OFF.
Pressing Button 2/3 - toggles between ON and OFF.
Pressing Button 4 - enters the flashing setting.
Pressing Button 1 - escapes back to the Test Relays submenu, returning you to “Evaporator Fan”.
Press Button 2 - to scroll to next routine.

PASSWORD

This function allows you to enter a sub-menu of routines which are not accessible until the operator enters a password, which is factory set as **2-3-1-4**.

Press Button 4 - to enter the password. Then press 2, then 3, then 1, and then 4, and “Cash Counters” should appear on the display. If not entered properly, the display will return to “Password:” after approximately 16 seconds.

CASH COUNTERS

This function will show the vending machine historical total cash counted for each selection. These numbers are permanent and cannot be cleared or reset.

Note: Leading zeros are not displayed.

Pressing Button 4 - displays “CASH $###.##” where the “#” characters are the historical total cash sales that have been recorded by the entire machine.
Pressing Button 2 - displays “CARD $###.##” where the “#” characters are the historical card sales for the entire machine.
Pressing Button 2 - displays “SEL CASH 01 $###.##” where the “#” characters are the historical cash sales for that selection.
Pressing Button 1 - escapes back to the main menu, returning you to “CASH COUNTERS”.

Pressing Button 2 - scrolls to the next routine.

SALES COUNTERS

This function will show the vending machine Historical total number of Sales counted for each selection. These numbers are permanent and cannot be cleared or reset.

Note: Leading zeros are not displayed.

Pressing Button 4 - displays “Count nnnn” where ’nnnn’ equals the total number of Historical sales for the machine.
Pressing Button 2 - scrolls through the number of sales made be each selection.
Pressing Button 1 - escapes back to the main menu, returning you to “SALES COUNTERS”.

Pressing Button 2 - scrolls to the next routine.

PRICE PROGRAM

This function allows the user to set pricing.

Note: Option 1 Multi-Price Setting Mode ON or OFF affects how this function operates. To set individual selections, Multi-Price Setting must be ON.

If Multi-Price is OFF:

Pressing Button 4 - displays "Single Price" option.

Pressing Button 4 - displays current price for all items, by default "00.00" is shown on the display if no prices are set.

Pressing Buttons 2/3 - increases/decreases price by $0.01 units until you reach the desired price.

Pressing Button 4 - enters and saves displayed price for **ALL** selections.

Pressing Button 1 - escapes back to the main menu, returning you to "PRICE PROGRAM".

If Multi-Price is ON:

Pressing Button 4 - displays "Single Price" option.

Pressing Button 4 - displays current price for all items, by default "00.00" is shown on the display if no prices are set.

Pressing Buttons 2/3 - increases/decreases price by $0.01 units until you reach the desired price.

Pressing Button 4 - enters and saves displayed price for **ALL** selections as if Multi-Price was OFF.

Pressing Button 2/3 - scrolls through individual selections.

Pressing Button 4 - displays current price for displayed individual selection.

Pressing Buttons 2/3 - increases/decreases price by $0.01 units until you reach the desired price.

Pressing Button 4 - enters and saves displayed price **ONLY** for given selections.

Pressing Button 1 - escapes back to the main menu, returning you to "PRICE PROGRAM".

Pressing Button 2 - scrolls to the next routine.

OPTIONS

This function allows the user to access and change the programming of the following machine configuration settings:

Pressing Button 4 - enters Options submenu.
Pressing Button 2/3 - scrolls through options.
Pressing Button 1 - escapes back to the main menu, returning you to "Options".

Pressing Button 2 - scrolls to the next routine.

Multi-Price
This setting is used to turn Multi-Price ON or OFF.

If set to **OFF**, every selection will be priced the same and the price setting function is quicker and easier.

If set to **ON**, every selection can be priced individually.

Pressing Button 4 - displays current setting ON/OFF.
Pressing Button 2/3 - toggles between ON and OFF.
Pressing Button 4 - enters the flashing setting.
Pressing Button 1 - escapes back to the Options submenu, returning you to "Multi-Price".
Press Button 2 - to scroll to next option.

Advanced
This function determines whether certain advanced feature settings will be shown as part of the service menu settings. These Items (described later) are "Select Block 1", "Select Block 2" and "Select Discount".

Pressing Button 4 - displays current setting ON/OFF.
Pressing Button 2/3 - toggles between ON and OFF.

If "**ON**", these settings will be shown—if "**OFF**" they will be hidden.

Pressing Button 4 - enters the flashing setting.
Pressing Button 1 - escapes back to the Options submenu, returning you to "Advanced".
Press Button 2 - to scroll to next option.

POS Message
This setting is used to disable the point of sale message.

Pressing Button 4 - displays current setting ON/OFF.
Pressing Button 2/3 - toggles between ON and OFF.
Pressing Button 4 - enters the flashing setting.
Pressing Button 1 - escapes back to the Options submenu, returning you to "POS Message".
Press Button 2 - to scroll to next option.

Door Clears DEX
This setting is used to reset all interval data when the door switch is cycled and at least one data register is read via the display when set at "ON" or to reset all interval data only when the "RESET" command is received via handheld or portable computer when set at "OFF".

Pressing Button 4 - displays current setting ON/OFF.
Pressing Button 2/3 - toggles between ON and OFF.
Pressing Button 4 - enters the flashing setting.
Pressing Button 1 - escapes back to the Options submenu, returning you to "Doors Clears DEX".
Press Button 2 - to scroll to next option.

Disable PW
This setting turns on/off the requirement for a password to show extra menu items.

Pressing Button 4 - displays current setting ON/OFF.
Pressing Button 2/3 - toggles between ON and OFF.
Pressing Button 4 - enters the flashing setting.
Pressing Button 1 - escapes back to the Options submenu, returning you to "Disable PW".
Press Button 2 - to scroll to next option.

Credit Clear
This setting is used to determine how long a credit will be saved. ON will save the credit for five minutes. OFF will save the credit indefinitely.

Pressing Button 4 - displays current setting ON/OFF.
Pressing Button 2/3 - toggles between ON and OFF.
Pressing Button 4 - enters the flashing setting.
Pressing Button 1 - escapes back to the Options sub-

menu, returning you to “Credit Clear”.
Press Button 2 - to scroll to next option.

Forced Vend
This setting is used to force a customer who deposits money into the machine to make a purchase. If money is inserted, a vend must be made before change is given. The recommended setting for Forced Vend is OFF.

Pressing Button 4 - displays current setting ON/OFF.
Pressing Button 2/3 - toggles between ON and OFF.
Pressing Button 4 - enters the flashing setting.
Pressing Button 1 - escapes back to the Options submenu, returning you to “Forced Vend”.
Press Button 2 - to scroll to next option.

MultiVend
If change is due, prompts the customer to make another selection rather than just returning change automatically. Change is given when the Coin Return Button is pressed. The default setting for MultiVend is OFF.

Pressing Button 4 - displays current setting ON/OFF.
Pressing Button 2/3 - toggles between ON and OFF.
Pressing Button 4 - enters the flashing setting.
Pressing Button 1 - escapes back to the Options submenu, returning you to “MultiVend”.
Press Button 2 - to scroll to next option.

Bill Escrow
This setting is used to allow last bill that meets or exceeds maximum vend price to be held in escrow. ON will escrow bill and OFF will not escrow bill (or stack the bill).

Pressing Button 4 - displays current setting ON/OFF.
Pressing Button 2/3 - toggles between ON and OFF.
Pressing Button 4 - enters the flashing setting.
Pressing Button 1 - escapes back to the Options submenu, returning you to “Bill Escrow”.
Press Button 2 - to scroll to next option.

Free Vend
This setting is used to set all prices to 0.00 and allow free vending.

Pressing Button 4 - displays current setting ON/OFF.
Pressing Button 2/3 - toggles between ON and OFF.
Pressing Button 4 - enters the flashing setting.
Pressing Button 1 - escapes back to the Options submenu, returning you to “Free Vend”.
Press Button 2 - to scroll to next option.

Shock Sensitivity
...

EXACT CHANGE

This function is used to allow consumer overpay, set a correct change value, and set an unconditional acceptance value.

Pressing Button 4 - enters Exact Change submenu.
Pressing Button 2/3 - scrolls through options.
Pressing Button 1 - escapes back to the main menu, returning you to “EXACT CHANGE”.
Pressing Button 2 - scrolls to the next routine.

Consumer Overpay
This function allows the vender to vend with the risk of not being able to return the full amount of change. This function has to be turned on to be able to allow consumer overpay.

Pressing Button 4 - displays current setting “Consumer Overpay ON/OFF”.
Pressing Button 2/3 - toggles between ON and OFF.
Pressing Button 4 - enters the flashing setting and escapes back to the Exact Change submenu, returning you to “Consumer Overpay”.
Press Button 2 - to scroll to next option.

Corr Chg Value
This is the function that the VMC will use to set a value which will turn on the correct change indicator. Note: If “Uncond Accept” is set, the “Corr Chg Value” should be equal to or less than the “Uncond Accept”. Note: If the value set is $0.00, the correct change indicator will never come on. If the controller determines that it cannot return the exact amount of the correct change value or any value less than it, then the indicator will be turned on.

Pressing Button 4 - flashes “$0.00”.
Pressing Buttons 2/3 - increases/decreases price by $0.01 units up to $99.99.
Pressing Button 4 - enters the flashing value.
Pressing Button 1 - escapes back to the Exact Change submenu, returning you to “Corr Chg Value”.
Press Button 2 - to scroll to next option.

Uncond Accept
This is the function that the control board will use to set the largest value of any single form or currency (coin or bill) that can be accepted without having enough change to pay back the full amount.

Pressing Button 4 - flashes “$0.00”.
Pressing Buttons 2/3 - increases/decreases price by $0.01 units up to $99.99.
Pressing Button 4 - enters the flashing value.
Pressing Button 1 - escapes back to the Exact Change submenu, returning you to “Uncond Accept”.
Press Button 2 - to scroll to next option.

LANGUAGE

Pressing Button 4 - displays current setting English/Spanish.
Pressing Button 2/3 - toggles between English and Spanish.
Pressing Button 4 - enters the flashing setting.
Pressing Button 1 - escapes back to the main menu, returning you to “Language”.

Pressing Button 2 - scrolls to the next routine.

PRODUCT DEPTH

This function is used to set the product depth for each selection. The product depth is dependent on the product height and the depth setting controls how the motor behaves.

Pressing Button 4 - displays Selection 01.

Pressing Button 2/3 - scrolls through selections.

Pressing Button 4 - displays product depth of selection.

Pressing Button 2/3 - scrolls through product depth options (2,3 or 4).

Pressing Button 4 - enters the flashing depth and escapes back to the Exact Change submenu, returning you to "Product Depth".

Pressing Button 1 - escapes back to the product depth submenu, displaying the selection that was just modified.

Pressing Button 1 - escapes back to the main menu, returning you to "Product Depth".

Pressing Button 2 - scrolls to the next routine.

TIME PROGRAMMING

Pressing Button 4 - enters Time Programming submenu and displays "Time Display #"

Pressing Button 2/3 - scrolls through options.

Pressing Button 1 - escapes back to the main menu, returning you to "TIME PROGRAMMING".

Pressing Button 2 - scrolls to the next routine.

Enable

Pressing Button 4 - displays current setting ON/OFF.

Pressing Button 2/3 - toggles between ON and OFF.

Pressing Button 4 - enters the flashing setting and escapes back to the Time Programming submenu, returning you to "Time Display #".

Press Button 2 - to scroll to next time setting.

Year

Pressing Button 4 - displays current year setting.

Pressing Button 2/3 - increases/decreases the last two digits of the year by increments of 1 (00-99).

Pressing Button 4 - enters the flashing setting and escapes back to the Time Programming submenu, returning you to "Year".

Press Button 2 - to scroll to next time setting.

Date

Pressing Button 4 - displays current 2 digit day of month.

Pressing Button 2/3 - increases/decreases the last two digits of the year by increments of 1 (1-31).

Pressing Button 4 - enters the flashing setting and escapes back to the Time Programming submenu, returning you to "Date".

Press Button 2 - to scroll to next time setting.

Month

Pressing Button 4 - displays current 2 digit month.

Pressing Button 2/3 - increases/decreases the last two digits of the year by increments of 1 (1-12).

Pressing Button 4 - enters the flashing setting and escapes back to the Time Programming submenu, returning you to "Month".

Press Button 2 - to scroll to next time setting.

Time

Pressing Button 4 - displays current 4 digit hour and minute setting in 24 hour format.

Pressing Button 2/3 - increases/decreases the hour setting by increments of 1.

Pressing Button 4 - enters the hour setting and moves on to the minute setting.

Pressing Button 2/3 - increases/decreases the minute setting by increments of 1.

Pressing Button 4 - enters the flashing setting and escapes back to the Time Programming submenu, returning you to "Time".

Press Button 2 - to scroll to next time setting.

DST

This function is used to set the preferred daylight savings time setting.

Pressing Button 4 - displays current setting.

Pressing Button 2/3 - scrolls through the different daylight savings options:

"OFF" -	No daylight savings time changes made.
"Australia" -	Set forward 1 hour at 1:00 am on the first Sunday in October Set backward 1 hour at 1:00 am on the last Sunday in March.
"Europe" -	Set forward 1 hour at 1:00 am on the last Sunday in March Set backward 1 hour at 1:00 am on the last Sunday in October.
"North America" -	Set forward 1 hour at 2:00 am on the second Sunday in March Set backward 1 hour at 2:00 am on the first Sunday in November.

Pressing Button 4 - enters the flashing setting and escapes back to the Time Programming submenu, returning you to "DST".

Press Button 2 - to scroll to next time setting.

REFRIGERATION

This function is used to electronically control the refrigeration operations of the vending machine.

Pressing Button 4 - enters Refrigeration submenu.

Pressing Button 2/3 - scrolls through refrigeration functions.

Pressing Button 1 - escapes back to the main menu, returning you to "Refrigeration".

Pressing Button 2 - scrolls to next refrigeration setting.

Enable

This function is used to turn the Energy Conservation ON and OFF. When enabled the cabinet temperature will be allowed to rise to the programmed storage level ("Storage") during the following programmed time blocks.

Pressing Button 4 - displays current setting ON/OFF.

Pressing Button 2/3 - toggles between ON and OFF.

Pressing Button 4 - enters the flashing setting and escapes back to the Time Programming submenu, returning you to "Enable".

Press Button 2 - to scroll to next refrigeration setting.

Start

This function is used to set the days and time to start Energy Conservation.

Pressing Button 4 - enters Start submenu.
Pressing Button 2/3 - scrolls through start functions.
Pressing Button 1 - escapes back to the Refrigeration submenu, returning you to “Start”.

Pressing Button 2 - scrolls to next refrigeration setting.

Start Day

This function is used to set the days of the week to start Energy Conservation.

Pressing Button 4 - displays “XXXXXX# where XXXXXX will be the day of the week (i.e. Monday, Tuesday, ..., and Every day) and where # is 0 (Disabled) or 1 (Enabled).
Pressing Button 2/3 - scrolls through days of the week (XXXXXX).
Pressing Button 4 - enters the day of week and # will start blinking.
Pressing Button 2/3 - scrolls through # options: 0 (Disabled) or 1 (Enabled).
Pressing Button 4 - enters # setting and returns you to the day of week that was being edited.
Pressing Button 1 - escapes back to the Start submenu, returning you to “Start Day”.

Pressing Button 2 - scrolls to the next setting.

Start Hour

This function is used to set the hours to start Energy Conservation.

Pressing Button 4 - displays “hhmm” where “hh” are the hours (24h format) and where “mm” are the minutes.
Pressing Button 2/3 - increases/decreases the hour setting by increments of 1.
Pressing Button 4 - enters the hour setting and moves on to the minute setting.
Pressing Button 2/3 - increases/decreases the minute setting by increments of 1.
Pressing Button 4 - enters minute setting and returns you to the Start submenu, returning you to “Start Hour”.

Pressing Button 2 - scrolls to the next setting.

Stop

This function is used to set the days and time to stop energy conservation.

Pressing Button 4 - displays “Stop Day”.
Pressing Button 2/3 - scrolls through stop functions.
Pressing Button 1 - escapes back to the Refrigeration submenu, returning you to “Stop”.

Pressing Button 2 - scrolls to next refrigeration setting.

Stop Day

This function is used to set the days of the week to stop energy conservation and can be set in the same manner as “Start Day” and “Start Hour”.

Stop Hour

This function is used to set the hours and minutes to stop energy conservation and can be set in the same manner as “Start Hour”.

Degrees

This function is used to set the degree reading to Fahrenheit (Degrees F) or Celsius (Degrees C).

Pressing Button 4 - displays “Degrees X”, where the current setting (X) will be blinking.
Pressing Button 2/3 - toggles between degrees F and degrees C.
Pressing Button 4 - enters the flashing setting
Pressing Button 1 - escapes back to the REFRIGERATION submenu, returning you to “Degrees”.
Press Button 2 - to scroll to next refrigeration setting.

Setpoint

This function is used to set the average product temperature for initial pull down and reload recovery.

Pressing Button 4 - displays “tt.tx”, where and tt.t is the temperature in degrees and “x” is the previously set unit of temperature (F or C).
Pressing Button 2/3 - increases/decreases the temperature by 1° F or 0.5° C.
Pressing Button 4 - enters the flashing temperature and escapes back to the REFRIGERATION submenu, returning you to “Setpoint”.
Press Button 2 - to scroll to next refrigeration setting.

Storage

This function is used to set the temperature for product storage and is used when Energy Conservation is enabled.

Pressing Button 4 - displays “tt.tx”, where and tt.t is the temperature in degrees and “x” is the previously set unit of temperature (F or C).
Pressing Button 2/3 - increases/decreases the temperature by 1° F or 0.5° C.
Pressing Button 4 - enters the flashing temperature and escapes back to the REFRIGERATION submenu, returning you to “Storage”.
Press Button 2 - to scroll to next refrigeration setting.

Refrig Log

This function is used to send temperature data via serial port during real time.

Pressing Button 4 - displays current setting “Refrig Log ON/OFF”.
Pressing Button 2/3 - toggles between ON and OFF.
Pressing Button 4 - enters the flashing setting.

Pressing Button 1 - escapes back to the Refrigeration submenu, returning you to “Refrig Log”.
Press Button 2 - to scroll to next refrigeration setting.

Show Temp

This function is used to enable the POS Temperature to be displayed following the POS message.

Pressing Button 4 - displays current setting “Show Temp ON/OFF”.
Pressing Button 2/3 - toggles between ON and OFF.
Pressing Button 4 - enters the flashing setting.
Pressing Button 1 - escapes back to the Refrigeration submenu, returning you to “Refrig Log”.
Press Button 2 - to scroll to next refrigeration setting.

If the “ADVANCED” setting is set to ON as described in the Options menu earlier, you will pass through to the next 4 settings. If the “ADVANCED” setting is set to OFF in the Options menu “Return to Sales” will be showing and pressing 2 or 4 puts the machine back in service.

SELECT BLOCK 1 (or 2)

This feature is used to prevent sales of certain (or all) products during specific times of the day. Two separate groups of items can be specified to have two different periods of blocked sales. This selection is visible when “Advanced” under Options is set to ON.

Pressing Button 4 - enters SELECT BLOCK 1 (or 2) submenu and displays “Enable ON/OFF”
Pressing Button 2/3 - scrolls through options.
Pressing Button 1 - escapes back to the main menu, returning you to “SELECT BLOCK 1 (or 2)”.

Pressing Button 2 - scrolls to the next routine.

Enable

This function is used to turn the Sales Blocking ON and OFF. When enabled the certain selections (or all) will be blocked during certain times depending on their settings.

Pressing Button 4 - displays current setting ON/OFF.
Pressing Button 2/3 - toggles between ON and OFF.
Pressing Button 4 - enters the flashing setting and escapes back to the SELECT BLOCK 1 (or 2) submenu, returning you to “Enable”.
Press Button 2 - to scroll to next SELECT BLOCK 1 (or 2) setting.

Start

This function is used to set the days and time to start Sales Blocking when “Block 1 (or 2)” is enabled.

Pressing Button 4 - enters Start submenu.
Pressing Button 2/3 - scrolls through start functions.
Pressing Button 1 - escapes back to the SELECT BLOCK 1 (or 2) submenu, returning you to “Start”.

Pressing Button 2 - scrolls to the to next SELECT BLOCK 1 (or 2) setting.

Start Day

This function is used to set the days of the week to start Sales Blocking.

Pressing Button 4 - displays “XXXXXX# where XXXXXX will be the day of the week (i.e. Monday, Tuesday, ..., and Every day) and where # is 0 (Disabled) or 1 (Enabled).
Pressing Button 2/3 - scrolls through days of the week (XXXXXX).
Pressing Button 4 - enters the day of week and # will start blinking.
Pressing Button 2/3 - scrolls through # options: 0 (Disabled) or 1 (Enabled).
Pressing Button 4 - enters # setting and returns you to the day of week that was being edited.
Pressing Button 1 - escapes back to the Start sub-menu, returning you to “Start Day”.

Pressing Button 2 - scrolls to the next routine.

Start Hour

This function is used to set the hours to start Sales Blocking.

Pressing Button 4 - displays “hhmm” where “hh” are the hours (24h format) and where “mm” are the minutes.
Pressing Button 2/3 - increases/decreases the hour setting by increments of 1.
Pressing Button 4 - enters the hour setting and moves on to the minute setting.
Pressing Button 2/3 - increases/decreases the minute setting by increments of 1.
Pressing Button 4 - enters minute setting and returns you to the Start submenu, returning you to “Start Hour”.

Pressing Button 2 - scrolls to the next setting.

Stop

This function is used to set the days and time to stop Sales Blocking when “Enable 1 (or 2)” is selected.

Pressing Button 4 - displays “Stop Day”.
Pressing Button 2/3 - scrolls through stop functions.
Pressing Button 1 - escapes back to the SELECT BLOCK 1 (or 2) submenu, returning you to “Stop”.

Pressing Button 2 - scrolls to next SELECT BLOCK 1 (or 2) setting.

Stop Day

This function is used to set the days of the week to stop energy sales blocking and can be set in the same manner as “Start Day” and “Start Hour”.

Stop Hour

This function is used to set the hours and minutes to stop energy conservation and can be set in the same manner as “Start hour”.

Selection

This function is used to set the selections that are blocked when “Enable 1 (or 2)” is selected.

Pressing Button 4 - enters and displays “Selection 01”.
Pressing Button 2/3 - scrolls through individual selections.
Pressing Button 4 - enters the current selection shown.
Pressing Button 2/3 - toggles between ON and OFF.
Pressing Button 4 - enters the ON/OFF setting and escapes back to the enable submenu, returning you to selection you were editing.
Pressing Button 1 - escapes back to the SELECT BLOCK 1 (or 2) submenu, returning you to “Selection”.

Pressing Button 2 - scrolls to next SELECT BLOCK 1 (or 2) setting.

SELECT DISCOUNT

This feature is used to apply a discount to the prices of certain selections (or all) during certain times. This selection is visible when “Advanced” under Options is set to ON.

Pressing Button 4 - enters SELECT DISCOUNT submenu and displays “Enable ON/OFF”
Pressing Button 2/3 - scrolls through options.
Pressing Button 1 - escapes back to the main menu, returning you to “SELECT DISCOUNT”.

Pressing Button 2 - scrolls to the next routine.

Enable

This function is used to turn the Discount ON and OFF. When enabled the certain selections (or all) will be discounted during certain times depending on their settings.

Pressing Button 4 - displays current setting ON/OFF.
Pressing Button 2/3 - toggles between ON and OFF.
Pressing Button 4 - enters the flashing setting and escapes back to the SELECT DISCOUNT submenu, returning you to “Enable”.
Press Button 2 - to scroll to next select discount setting.

Start

This function is used to set the days and time to start Discount when “Discount” is enabled.

Pressing Button 4 - enters Start submenu.
Pressing Button 2/3 - scrolls through start functions.
Pressing Button 1 - escapes back to the SELECT BLOCK 1 (or 2) submenu, returning you to “Start”.

Pressing Button 2 - scrolls to the to next select discount setting.

Start Day

This function is used to set the days of the week to start the Discount.

Pressing Button 4 - displays “XXXXXX# where XXXXXX will be the day of the week (i.e. Monday, Tuesday, ..., and Every day) and where # is 0 (Disabled) or 1 (Enabled).
Pressing Button 2/3 - scrolls through days of the week (XXXXXX).
Pressing Button 4 - enters the day of week and # will start blinking.
Pressing Button 2/3 - scrolls through # options: 0 (Disabled) or 1 (Enabled).
Pressing Button 4 - enters # setting and returns you to the day of week that was being edited.
Pressing Button 1 - escapes back to the Start submenu, returning you to “Start Day”.

Pressing Button 2 - scrolls to the next setting.

Start Hour

This function is used to set the hours to start the Discount.

Pressing Button 4 - displays “hhmm” where “hh” are the hours (24h format) and where “mm” are the minutes.
Pressing Button 2/3 - increases/decreases the hour setting by increments of 1.
Pressing Button 4 - enters the hour setting and moves on to the minute setting.
Pressing Button 2/3 - increases/decreases the minute setting by increments of 1.
Pressing Button 4 - enters minute setting and returns you to the Start submenu, returning you to “Start Hour”.

Pressing Button 2 - scrolls to the next setting.

Stop

This function is used to set the days and time to stop Discount when “Discount” is selected.

Pressing Button 4 - displays “Stop Day”.
Pressing Button 2/3 - scrolls through stop functions.
Pressing Button 1 - escapes back to the SELECT DISCOUNT submenu, returning you to “Stop”.

Pressing Button 2 - scrolls to next SELECT DISCOUNT setting.

Stop Day

This function is used to set the days of the week to stop the discount and can be set in the same manner as “Start Day” and “Start Hour”.

Selection

This function is used to set the selections that the discount is applied to when “Discount” is enabled.

Pressing Button 4 - enters and displays “Selection 01”.
Pressing Button 2/3 - scrolls through individual selections.
Pressing Button 4 - enters the current selection shown.
Pressing Button 2/3 - toggles between ON and OFF.
Pressing Button 4 - enters the ON/OFF setting and escapes back to the enable submenu, returning you to selection you were editing.
Pressing Button 1 - escapes back to the SELECT DIS-

COUNT submenu, returning you to “Selection”.

Pressing Button 2 - scrolls to next SELECT DISCOUNT setting.

Less Amount

This function allows the user to set the discount from the selection original price.

Pressing Button 4 - displays the current discount.
Pressing Buttons 2/3 - increases/decreases price by $0.01 units until you reach the desired price.
Pressing Button 4 - enters and saves displayed price.
Pressing Button 1 - escapes back to the SELECT DISCOUNT submenu, returning you to “Less Amount”.

Pressing Button 2 - scrolls to next SELECT DISCOUNT setting.

RETURN TO SALES

…

PROGRAM QUICK REFERENCE GUIDE

Button 1 - Escape/Abort/Cancel | **Button 2** - Next in menu or + | **Button 3** - Previous in menu or - | **Button 4** - Enter/Save/Clear

SERVICE MODE - Press blue button on control board to enter service mode, close door to exit

ERROR CODES - Lists error codes if any, hold button 4 for 2 seconds to clear errors

COIN PAYOUT - Empties coin mechanism

TUBE FILL - Allows you to fill coin mechanism

TEST MODES - Testing options
- **Test Vend** - Test vends one or all selections
- **Homing** - Homes on or all motors
- **Log** - Exports log files via serial port
- **Product Sensor** - WIP
- **Test Relays** - Relay toggles
  - **Refrigeration** - Toggles relay ON/OFF
  - **Lights** - Toggles relay ON/OFF
  - **Evaporator Fan** - Toggles relay ON/OFF

PASSWORD - Enables password protected menu settings after entering **2-3-1-4**

CASH COUNTERS - Shows hist. total cash count

SALES COUNTERS - Shows hist. total sales count

PRICE PROGRAM - Sets selection pricing
- **Single Price** - Sets the same price for all selections
- **Selection # Price** - Sets individual selection price

OPTIONS - Configuration options
- **Multi-Price** - Toggles individual selection pricing ON/OFF
- **Advanced** - Toggles advanced features ON/OFF
- **POS Message** - Toggles POS Message ON/OFF
- **Door Clears DEX** - Toggles automatic interval ON/OFF
- **Disable PW** - Toggles password requirement ON/OFF
- **Credit Clear** - Determines how long credit is saved
- **Forced Vend** - Toggle forced vend ON/OFF
- **Multi Vend** - Toggle additional selection prompt ON/OFF
- **Bill Escrow** - Toggle bill escrow ON/OFF
- **Free Vend** - Toggle free vending ON/OFF
- **Shock Sensitivity** - WIP

EXACT CHANGE - Change options
- **Consumer Overpay** - Toggles if consumer can overpay
- **Corr Chg Value** - Set value for correct change indicator
- **Uncond Accept** - Set largest value that can be accepted without change available

LANGUAGE - Toggles between English/Spanish

PRODUCT DEPTH - Adjusts selection's product depth

TIME PROGRAMMING - Time & date options
- **Enable** - Toggles time display ON/OFF
- **Year** - Configures Year
- **Date** - Configures Date
- **Month** - Configures Month
- **Time** - Configures Time
- **DST** - Toggles between available DST options

REFRIGERATION - Refrigeration & conservation configuration
- **Enable** - Toggle energy conservation ON/OFF
- **Start** - Configure energy conservation
  - **Start Day** - Set days for energy conservation
  - **Start Hour** - Set time for energy conservation
- **Stop** - Configure energy conservation
  - **Stop Day** - Set days to stop energy conservation
  - **Stop Hour** - Set times to stop energy conservation
- **Degrees** - Toggle temperature unit F/C
- **Setpoint** - Set temperature
- **Storage** - Set energy conservation temperature
- **Refrig Log** - Export live temperature data via serial port
- **Show Temp** - Toggle POS temp. message ON/OFF

SELECT BLOCK 1/2 - Sales blocking configuration
- **Enable** - Toggle sales blocking for selections ON/OFF
- **Start** - Configure sales blocking periods
  - **Start Day** - Set days for sales blocking
  - **Start Hour** - Set time for sales blocking
- **Stop** - Configure sales blocking periods
  - **Start Day** - Set days to stop sales blocking
  - **Start Hour** - Set time to stop sales blocking
- **Selection** - Sets blocked selections

SELECT DISCOUNT - Discount Configuration
- **Enable** - Toggle discount for selections ON/OFF
- **Start** - Configure discount periods
  - **Start Day** - Set days for discount
  - **Start Hour** - Set time for discount
- **Stop** - Configure discount periods
  - **Start Day** - Set days to stop discount
  - **Start Hour** - Set time to stop discount
- **Selection** - Sets discounted selections
- **Less Amount** - Sets discount value

7
TROUBLESHOOTING

ERRORS

This function allows you to enter the error readout routine. As mentioned above, “Errors” will appear when you press the Service mode button on the VMC.

Pressing Button 4 - enters the ERRORS submenu. If there have been no Error Codes since the last reset, the display will read “No Errors”. If one or more Error Codes have occurred, the display will show the first error code that occurred. The following are error codes that may be displayed and detailed information accessed: “No Errors”, “Coin Mech”, Bill Val”, “Card Rdr1”, “Card Rdr2”, “VMC”, “Refrig”, “USD1”, “USD2”, “USD3”.
Pressing Button 2/3 - scrolls through any error codes that are present.
Pressing Button 4 - allows you to enter into the submenu associated with the error code currently shown on the display to access detailed information.

> **Important:** If there is only one error, it will be the only error code shown when you enter the error code submenus.

Pressing and Holding Button 4 - allows you to clear the error code being shown on the display.
Pressing Button 1 - escapes back to the main menu, returning you to “Error Codes”.
Pressing Button 2 - scrolls to the next routine.

Coin Mech
Pressing Button 4 - displays all Coin Mech error codes.
Pressing Button 1 - escapes back to the ERROR submenu, returning you to “Coin Mech” if all changer error codes have not been cleared. If all selection error codes have been cleared “No Error Codes” will be displayed.

Bill Validator
Pressing Button 4 - displays all Bill Validator error codes.
Pressing Button 1 - escapes back to the ERROR submenu, returning you to “Bill Validator” if all bill validator codes have not been cleared. If all selection error codes have been cleared “No Error Codes” will be displayed.

Bill Validator Summary Error Codes

“Comm Error”	indicating a bill validator communication error (No communication for more than 5 seconds).
“Stack Full”	indicating the bill stacker is full.
“Motor Error”	indicating a defective motor in the validator.
“Jam”	indicating a bill jam in the validator.
“ROM”	(read only memory) indicating a validator ROM (read only memory) check sum error (failed validator).
“Stacker Open”	indicating an open stacker.
“Sensor Error”	indicating a bill validator sensor error.
“Decimal Places”	indicating a conflict with other payment devices.
“Currency”	indicating a conflict with other payment devices.
“Scale Factor”	indicating a conflict with other payment devices.

Card RDR1 (or Card RDR2)
Pressing Button 4 - displays all Card Reader error codes.
Pressing Button 1 - escapes back to the ERROR submenu, returning you to “Card RDR1/RDR2” if all card reader codes have not been cleared. If all selection error codes have been cleared “No Error Codes” will be displayed.

Card Reader Summary Error Codes

“Comm Error”	indicating no card reader communication for 5 seconds.
“Error”	unspecified error reported by the device.
“Jam”	indicating a jam in the reader.
“Decimal Places”	indicating a conflict with other payment devices.
“Currency”	indicating a conflict with other payment devices.
“Scale Factor”	indicating a conflict with other payment devices.

VMC
Pressing Button 4 - displays all VMC error codes.
Pressing Button 1 - escapes back to the ERROR submenu, returning you to “VMC” if all control board codes have not been cleared. If all selection error codes have been cleared “No Error Codes” will be displayed.

Control System Summary Error Codes

“Door Switch”	indicating a door switch in the open position for more than 5 minutes.
“AC Supply Low”	indicating AC supply to the machine has fallen more than 15% below normal line voltage for more than 30 seconds.
“RAM Checksum”	indicating the checksum for service mode settings memory has been

corrupted.

Refrig

Pressing Button 4 - displays all refrigeration error codes.
Pressing Button 1 - escapes back to the ERROR submenu, returning you to “Refrig” if all refrigeration codes have not been cleared. If all selection error codes have been cleared “No Error Codes” will be displayed.

Refrigeration Summary Error Codes

“Sensor1 Open”

“Sensor1 Short”

“Sensor 2/3/4 Open” reported only if required by current refrigeration mode.

“Sensor 2/3/4 Short” reported only if required by current refrigeration mode.

USD1, USD2 or USD3

Pressing Button 4 - displays all USD 1, 2 or 3 error codes.
Pressing Button 1 - escapes back to the ERROR submenu, returning you to “USD 1, 2 or 3” if all error codes have not been cleared. If all selection error codes have been cleared “No Error Codes” will be displayed.

“Comm Error” indicating the communication has been lost.

“Error” unspecified error reported by device.

CLEARING JAMMED MOTOR

If one or more rotors become jammed, the display will show “Make Another Selection” when the jammed selection is selected.

Energized vend motors can turn a rotor with considerable torque, creating a possible entrapment hazard. Disconnect power to the vendor or control board before freeing a jammed rotor.

CAUTION: Use caution when freeing jammed product!

Clear any jammed products from the indicated vend columns. To reset the error, first enter service mode and home the motor. See **Homing** on page 19 under **TEST MODES**.

WATER ACCUMULATION IN THE CABINET

Water accumulating in the cabinet is usually caused by one of two things: condensation of moist air or rain water leaking into the cabinet. Excessive condensation indicates an air leak which allows moist outside air to continually enter the cabinet and condense on the evaporator. To minimize condensation on the evaporator:

1. Check the openings where the refrigeration lines and drain tube pass through the bulkhead. These openings should be sealed completely around the lines and tube with duct putty.
2. Make sure the cabinet door is properly tightened when it is closed so that it makes contact with the gasket on all sides.
3. Make sure there are no objects preventing the vend door from closing. The vend door must open and close freely and close completely.

Rain water can enter the cabinet through the rear ventilation opening. Rain entering through this opening is not considered hazardous since all components of the refrigeration unit are sealed. Water will drain out through the ventilation opening in the front of the cabinet.

Some water accumulation on the inside bottom area of the cabinet door is expected and should drain out on its own. Check to make sure the rain guards on the top of the door and cabinet are present and functioning properly to minimize water coming in around the door gasket.

ERROR CODES - CAUSES AND SOLUTIONS			
TOP LEVEL ERROR CODE	**SUB LEVEL CODE**	**CAUSES**	**SOLUTIONS**
CHANGER	A message has been generated by the changer. **Press 1** to see changer sub-level error codes.		
	COMMUN	Communications error	Check MDB harness connections
	SENSOR	Sensor error	Consult changer manual or manufacturer
	JAM TUBE	Jammed coin tube	Clear any obstructions from the coin tube
	CHK SUM	Check sum error	Consult changer manual or manufacturer
	CHUTE	No coins accepted for a period of time	Clear any obstructions from the coin chute
BILL VALIDATOR	A message has been generated by the bill validator. **Press 1** for bill validator sub-level error codes.		
	COMUN	Communications error	Check MDB harness connections
	STK FULL	Stacker is full	Empty stacker
	MOTOR	Bad stacker motor	Consult acceptor manual or manufacturer for repair
	JAM BILL	Bill is jammed	Clear any jammed bills from the acceptor
	CHK SUM	Check sum error	Consult acceptor manual or manufacturer
	OPEN BOX	Open box	Close the bill box
	SENSOR	Sensor error	Consult acceptor manual or manufacturer
CARD READER	A message has been generated by the card reader. **Press 1** for card reader sub-level error codes.		
	CARD ERROR	Card error	Use a different card
	INVALID CARD	Invalid card	Use a different card
	TAMPER	Tamper error	Consult card reader manual or manufacturer
	COMMUNICATIONS 4	Communications error	Check MDB harness connections
	SERVICE	Unit needs service	Consult card reader manual or manufacturer
	READ ERROR	Reader failure	Consult card reader manual or manufacturer
	COMMUNICATIONS 9	Communications error	Check MDB harness connections
	JAMMED CARD	Card is jammed	Clear the jammed card from the card reader

MACHINE TROUBLESHOOTING CHART The following troubleshooting chart may be used to find quick remedies for electrical and mechanical failures in the vendor.		
SYMPTOM	**POSSIBLE CAUSE**	**SOLUTION**
No power at the control board (No beeping sound during power -up or when the service mode button is pushed)	No power from power cord.	Check power cord, outlet or supply.
	3.0 amp fuse is blown.	Replace 3.0 amp fuse.
	Fuse harness is not connected to the back of the fuse holder.	Connect fuse holder harness.
	Power harness is disconnected.	Reconnect power harness.
	Short or cut in the power harness between the transformer and control board.	Check continuity through the power harness. If there is no continuity replace the power harness.
	Transformer does not have power at the 24 VAC secondary side.	Insure primary side of transformer is receiving power. If there is no 24 VAC on secondary side replace transformer.
Vendor displays “Please Make Another Selection”	Selection is empty.	Insert more product in that selection.
	Motor jammed.	Clear jammed motor and clear error code.
	Vend not sensed by sensor.	Clear fault in impact sensors or harness: possible control board error.
Vendor does not accept coins	Options set for “Free Vend”.	Scroll to Free Vend and change to **N.**
	Changer unplugged.	Plug in changer.
	Coins jammed.	Clear jammed coins.
	Defective changer or other MDB device.	Replace changer.
	Credit amount exceeds the highest price. (Prices may be set at $0.00.)	Set prices.
	Control board is in service mode.	Exit service mode.
Vendor will not pay out coins	Changer unplugged.	Plug in changer.
	Defective changer.	Replace changer.
	Coins jammed.	Clear jammed coins.
	No coins in changer.	Add coins to the changer.
Validator will not accept bills	Changer unplugged.	Plug in changer.
	Not enough change in the changer.	Add coins to the changer.
	Validator unplugged.	Plug in the validator.

IF A REPLACMENT PART IS NECESSARY, PLEASE CONTACT YOUR DISTRIBUTOR or BOTTLER

MACHINE TROUBLESHOOTING CHART - Continued		
SYMPTOM	**POSSIBLE CAUSE**	**SOLUTION**
Bill is immediately stacked.	Change feature is enabled.	Disable change feature.
	Highest price is greater than bill value.	Change price.
	Non configured selection has a price greater than bill value.	Set and save all prices, including selection columns not in use.
Selection continues to turn after a vend.	Optical board on the motor is bad.	Replace the vend motor.
	Cam on motor is broken.	Replace the vend motor.
	Drop sensor is bad or wires are disconnected.	Check connections and/or replace drop sensors.
	Daughter board is defective.	Replace daughter board.
Evaporator frozen.	Moist outside air entering cabinet.	Check for air leaks.
		Close door tightly.
		Check all gaskets for leaks.
	Check for evaporator fan motor not working.	Replace failed evaporator fan motor.
		Check evaporator fan switch harness connection.
		Replace evaporator switch.
Refrigeration unit not running.	Door switch is not working.	Adjust switch for positive contact with door.
		Close door tightly.
		Check door switch harness connection.
		Replace defective door switch.
		Replace defective door switch harness.
	Temperature setting in the control board is set too high.	Reset temperature setting.
	Refrigeration relay harness disconnected.	Connect refrigeration relay harness.
	Inoperative Relay.	Check for low voltage and high voltage.
	Defective refrigeration relay.	Replace relay.
	Over-pressure timer.	Allow 3 minutes for system pressure to equalize, then try again.
	Temperature Sensor is disconnected.	Check connections from temperature sensor to daughter board to control board.

8
MAINTENANCE

UPGRADING FIRMWARE

Occasionally Seaga releases new firmware which adds features or functions that you might want to use to enhance your operation. Additionally there may be times you want to replace a control board. In these cases you will have to install new firmware in your board.

To upgrade firmware, you must first obtain the new file from the Seaga website and store it on a USB drive. Then follow the steps below to transfer that new firmware into the VMC's memory.

Note that that settings will be cleared during this process. If necessary, write down the prices or other settings first.

All files on the USB device must be saved in the top level (or 'ROOT') directory. The VMC will not look into other folders for files. Only one version of the file can be on the drive.

1. Open the Front Door and turn the machine OFF.
2. Locate the port for the USB drive (see Figure 3.1 on page ...).
3. Insert the USB drive firmly into the socket (it will only fit one way).
4. Press (hold) the blue Mode button and turn the power to the vendor ON. After a few seconds, a small red LED will begin flashing rapidly. This is located near the blue button.
5. When LED stops flashing, remove finger, then power the machine OFF.
6. Wait 5 seconds for power to fully dissipate from the control board, then remove USB drive.
7. Turn power ON, and verify software version on the display.
8. Check options and set prices as needed.

ADDITIONAL FUNCTIONS

The converter has three other functions. When the converter is not connected to a VMC in programming mode, the button toggles from function to function indicated by the yellow LEDs along the right.

If the intention is to program the VMC, make sure the function has been set to the programming "S/W" function then connect to the VMC. The other functions are used when the converter box is connected to the VMC while it is out of programming mode and running a good application. When other functions ar4e used, the LED will not change to green when connected to the VMC. The LED changed to green when the function (settings upload or des download) has completed.

DEX Download

The second function is for getting a DEX report from the machine and onto the flash drive. To start the DEX download, while DEX Download is selected, press and hold the button for 1 to 2 seconds. The status and USB LEDs will blink indicating the transfer is in progress. If the DEX download contains a customer serial number the download file will be named that name, otherwise it will be named with the serial number of the VMC.

DEX Upload (Upload settings and prices)

The third function is for uploading setting, prices, etc. rom the flash drive to the VMC. To start the upload, press and hold the button for 1 to 2 seconds. If the converter sees a file named "dex_upload.txt" it will be uploaded to the VMC. If no file is found with this name, the LEDs will blink red indicating an upload file could not be found.

Logger (experimental)

The fourth function is a serial logging function. While seeing 9600 serial input at least every 5 seconds, it will record to a file. If the serial stops then restarts ,a new file is created with a higher sequential number than the last log file. If a DEX download is performed before logging is started, the log file names will start with the serial number from the VMC. (Note: the serial logging feature is experimental).

CLEANING THE REFRIGERATION UNIT

Seaga recommends cleaning the condenser coils at least twice a year under normal conditions, more often in dusty environments.

CAUTION: Always wear eye protection and gloves when cleaning vendor! Condenser fins are sharp!

1. Unplug the vendor.
2. Open the door.

   CAUTION: Condenser fins are sharp!

3. Remove dust from the condenser fins and coils with a vacuum or stiff brush.
4. Close the door.
5. Plug in the vendor.

CLEANING THE VENDOR EXTERIOR

Clean the vendor exterior as necessary using mild household cleaners and water. Dampen a cloth or sponge with the clean-

ing solution and gently wipe clean the exterior.

- Do not use chemicals or solvents. These can damage paint, plastic trim and decals.
- Do not use abrasive cleaners.
- Do not use a water jet.
- Do not let water or cleaning solutions contact electrical or electronic components.

CLEANING THE VENDOR INTERIOR

Clean the interior using mild household cleaners and water. Dampen a cloth or sponge with the cleaning solution and gently wipe the interior surfaces clean.

1. Unplug the vendor from the power socket.
2. Do not use chemicals or solvents. These can damage paint, extruded plastic parts and other plastic parts.
3. Do not use abrasive cleaners.
4. Do not use a water jet.
5. Do not let water or cleaning solutions contact electrical or electronic components.
6. Allow to air dry, or place a window fan on the floor in front of the open interior.
7. When dry, plug in the vendor.

LAMP REPLACEMENT

1. Replacing LED Lamps
2. Open the door.
3. Turn off the power to the control board by unplugging cord at the IEC outlet of the electrical box. See Figure 8.4 on page 37.
4. Remove the screws holding the small P-clips, and remove the LED lamps.
5. Install the replacement LED lamps, using the small P-clips and the screws.
6. Plug the cord back in.

DEFROSTING THE EVAPORATOR COIL

Excess moisture accumulating inside the cabinet may freeze in the evaporator coil. As the coil becomes blocked all useful chilled air is also blocked.

1. Unplug the vendor from the power socket.
2. Open the vendor door.
3. Place a fan on the floor in front of the vendor to direct room temperature air into the back of the cabinet.

   Do not use any tools or electrical appliances to chip at, heat up or otherwise 'speed up' the defrosting action around the coil. Do not puncture the coil.

4. Look for the source of excess moisture.
5. Look for broken or leaking product. Dispose of it and clean up the liquid.
6. Inspect the vend chute and clean it of liquids and broken containers.
7. Check to make sure the vend chute door doesn't 'hang open'.
8. Check to ensure the sealing putty is firmly in place around the refrigeration tubing. Use more putty if it is missing or there is not enough.
9. Check the door gasket around the cabinet opening. It should be intact.
10. Check if the door closes squarely on all four sides and the lock draws the door firmly against the gasket.
11. After the evaporator coil has been defrosted, clean up any water inside the cabinet.
12. Close the door and then plug in the vendor.
13. Allow vendor to cool down before loading products.

GFCI TEST

If the power is on in the vendor, test the GFCI as follows:

1. Press the TEST pushbutton on the GFCI for 1 second to trip the GFCI and shut it off. The vendor power should turn off.
2. Press the RESET pushbutton for 1 second to return the GFCI to normal operation. The vendor should turn on.

If the power is not on in the vendor check the GFCI as follows:

1. Even if the GFCI is off, press the TEST pushbutton on the GFCI for 1 second to trip the GFCI and shut it off.
2. Press the RESET pushbutton for 1 second to return the GFCI to normal operation. The vendor should turn on.

If the GFCI can be reset but there is no power, check the power outlet at the wall.

If the GFCI will not stay on after RESET is pressed there is a short circuit in the vendor. Unplug the vendor. Follow the suggestions in Chapter 7 TROUBLESHOOTING beginning on page 31 to determine the cause of the short circuit, and correct it.

REPLACING THE POWER CORD AND GFCI TEST

Use this procedure to remove a power cord that is cut, split open or is otherwise damaged or a hazard. A ¼" nut driver, needle nose pliers, gloves and protective eyewear are required.

Save all hardware and fasteners for re-use.

1. Remove power from the vendor by removing the power plug from the wall outlet. Move the vendor away from wall in order to reach the back.
2. Open main door. Unplug the cord from the IEC outlet on the electrical box.
3. Remove screws and side panel that the electrical cord goes through.
4. Outside of cabinet, remove the four screws attaching back grommet plate to cabinet.
5. Slide grommet plate up and away from slot in

molded-on grommet on power cord.

6. Remove power cord by pulling the cord though the square cutout in the back of the cabinet.
7. Remove the damaged power cord from the cabinet and discard it.
8. Insert the new power cord end with the right angle IEC connector into the power cord hole and run the cord to the front of the machine. Plug the right angle IEC connector into the IEC outlet of the electrical box. Do not plug in the new power cord into the power outlet at this time.
9. Reinstall the side panel with the cord running through the 1/2" grommet. The cord and grommet is inserted in the slot of the side panel.
10. Install the molded on grommet on the cord on the back of the cabinet.
11. Slide the grommet plate up into upper half of molded-on grommet, making sure it slides down behind the cut-out in the cabinet. The power cord should come out of the grommet and be facing down.
12. Fasten the grommet plate with four screws.
13. Plug the power cord into the power outlet. The power should come on in the vendor.
14. Test the GFCI on the power cord (See GFCI TEST on page 38).
15. If everything is operational return the vendor to its position next to the wall.

Figure 8.5 Location of the IEC Outlet and the Side Panel

Figure 8.6 Back Grommet Plate and its Screws

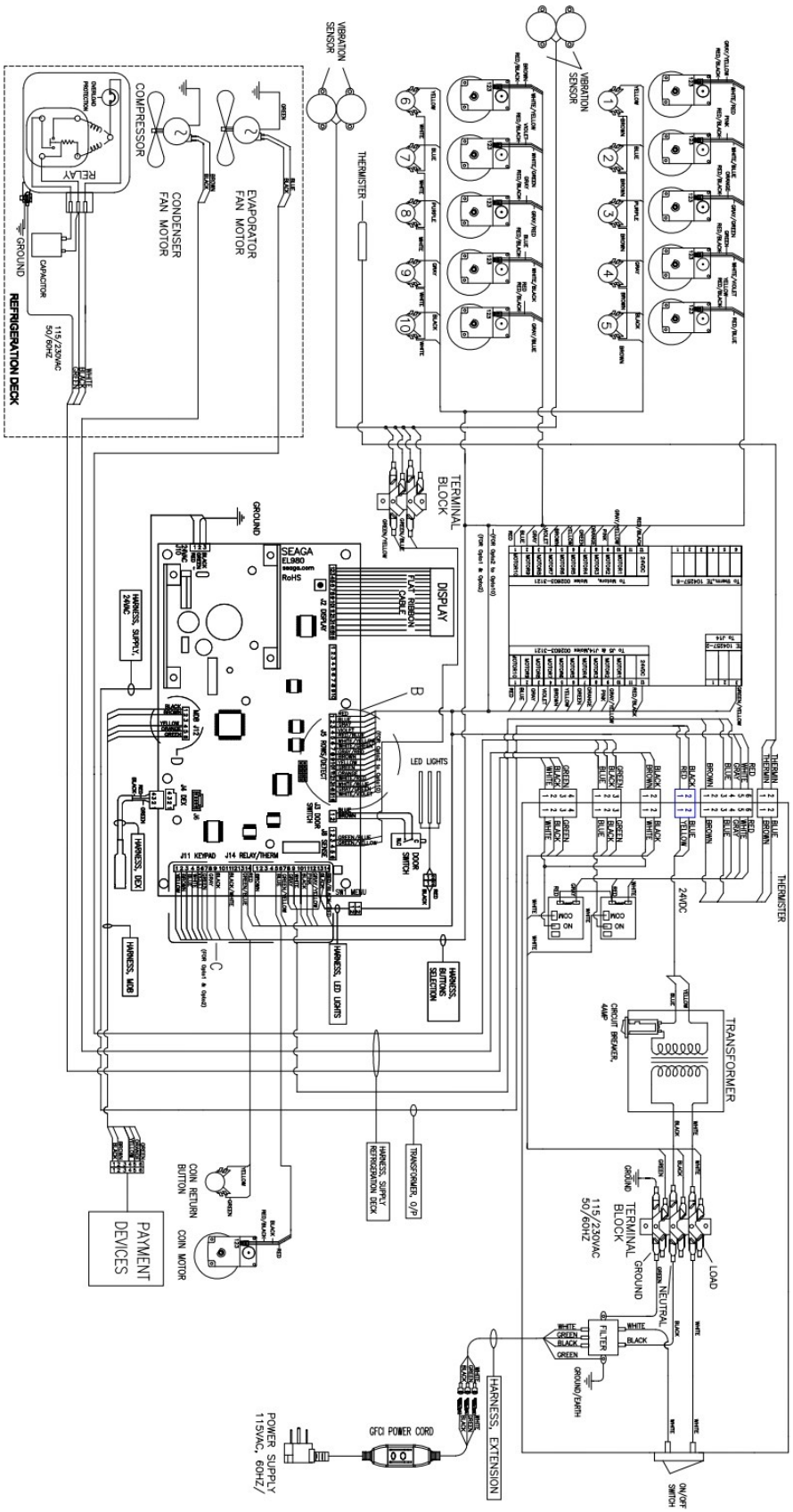
STORING THE VENDOR

If the vendor is to be stored without power for several days or longer, use the following instructions. These instructions are similar to those used to store any refrigerator.

1. Remove any products from the vendor.
2. Unplug the vendor from the power outlet.
3. Clean the inside using the general directions given in CLEANING THE VENDOR INTERIOR on page ....
4. Leave the door open for a day to allow the interior to thoroughly dry.
5. Close the door and lock it to protect the interior.
6. Roll up the power cord and place it in the hopper.
7. If the vendor is being moved follow the handling and setup procedures given in VENDOR PREPARATION AND INSTALLATION on page ....

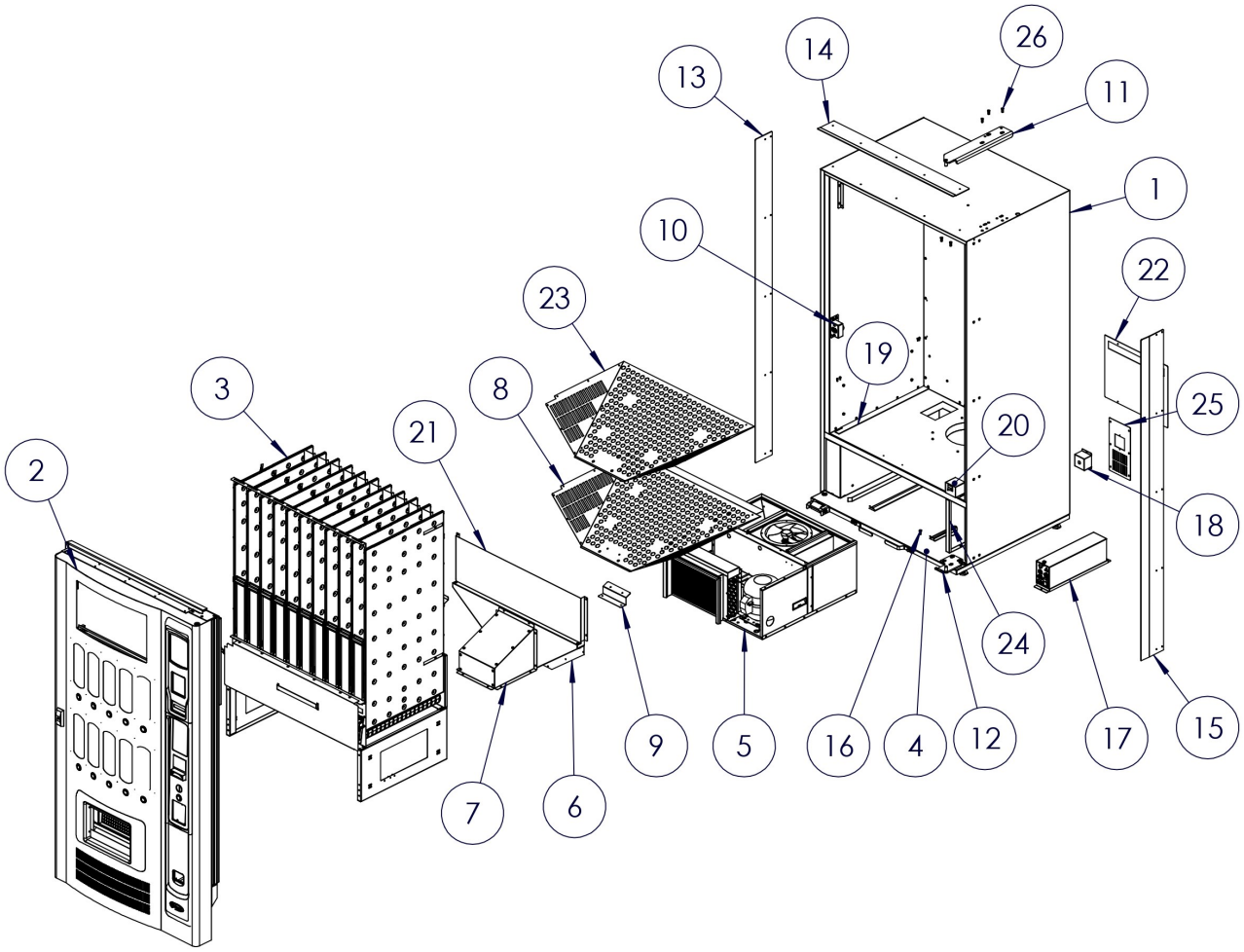
9

WIRING DIAGRAM



10
EXPLODED VIEWS

ENV10U MAIN ASSEMBLY

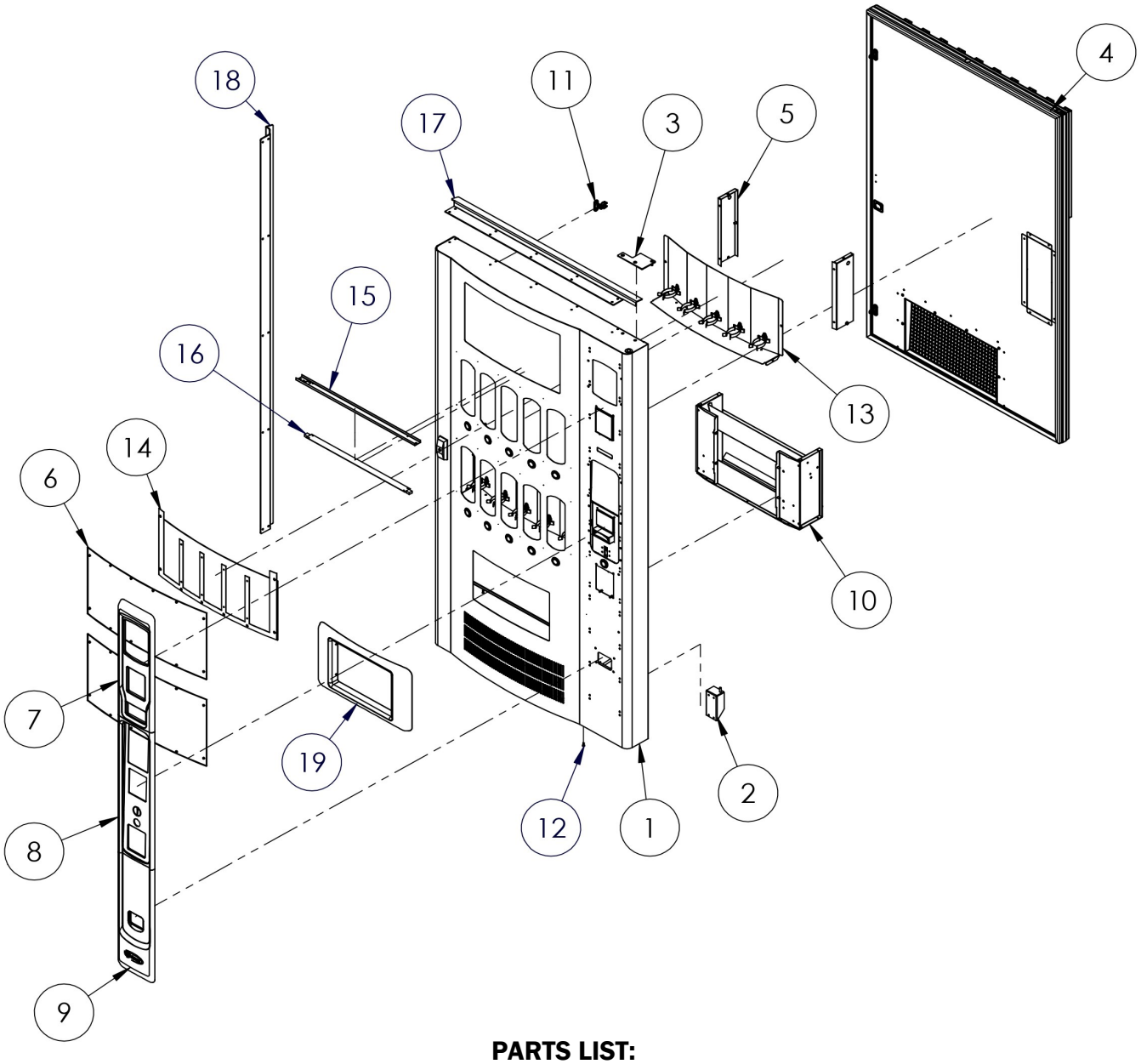


PARTS LIST:

#	PART NO.	DESCRIPTION	QTY.
1	SAI79004	FOAMED CABINET	1
2	SAI79020	ASSEMBLY MAIN DOOR	1
3	SAI79006	STACK ASSEMBLY	1
4	SAI79008	BASE FRAME WELDED	1
5	REI952	REFERIGRATION DECK	1
6	SAI79009	ASSEMBLY PLENUM	1
7	SAI79010	ASSEMBLY DUCT OUTLET	1
8	STI79048	DELIVERY CHUTE	1
9	STI79118	BRACKET DELIVERY CHUTE MOUNTING	1
10	STI79049	LOCK MOUNTING BRACKET	1
11	STI679	HINGE TOP	1
12	STI675	HINGE BOTTOM	1
13	STI79051	SECURITY BRACKET CABINET LH	1

#	PART NO.	DESCRIPTION	QTY.
14	STI79052	SECURITY BRACKET CABINET TOP	1
15	STI79053	SECURITY BRACKET CABINET RH	1
16	HAI2094	PIN, REF DECK GUIDE	1
17	SAI56018	POWER SUPPLY	1
18	STI57029	BRACKET, POWER CORD	1
19	PLI79004	DISPENSER SLIDE PLASTIC STRIP	2
20	STI79112	BRACKET DOOR SWITCH	1
21	STI79073	PLENUM TOP	1
22	STI79113	PANEL BACK, REFRIGERATION AREA	1
23	PLI79001	COVER DELIVERY CHUTE	1
24	STI79056	SHELF SUPPORT RIGHT	1
25	STI79119	BACK PLATE POWER CORD	1
26	FAI935A	BOLT ALLEN CS	7

SAI79020 ASSEMBLY MAIN DOOR

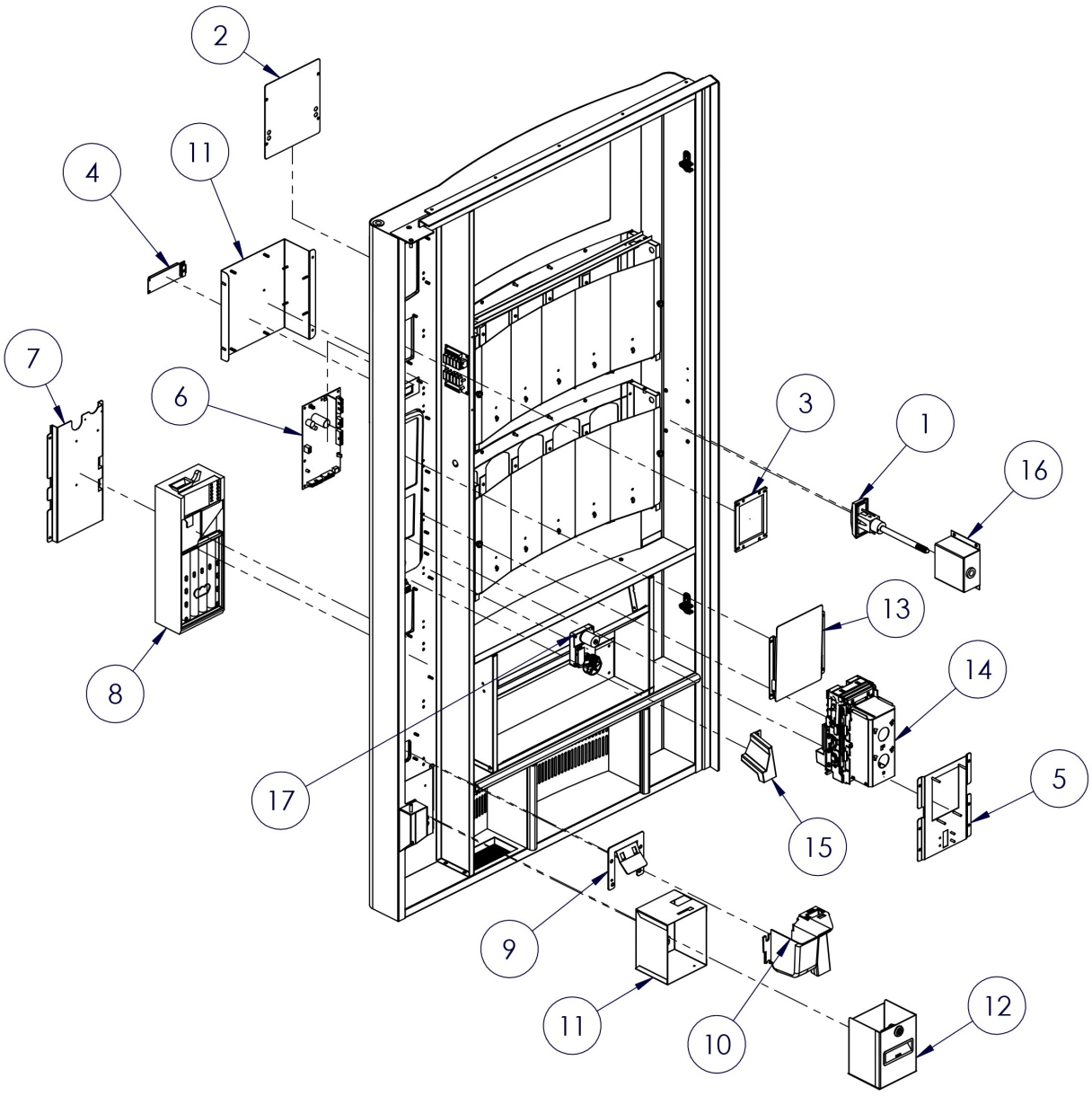


PARTS LIST:

#	PART NO.	DESCRIPTION	QTY.
1	SAI79012	DOOR WELDED	1
2	STI79071	HINGE BOTTOM INNER DOOR	1
3	STI676	TOP HINGE INNER DOOR	1
4	SAI79014	ASSEMBLY INNER DOOR	1
5	STI79074	SIDE RH & LH PRODUCT DISPLAY	4(2 EACH)
6	PLI79001	PC SHEET	2
7	PLI2231	BEZEL TOP	1
8	PLI2232	BEZEL MIDDLE	1
9	PLI2233	BEZEL BOTTOM	1
10	SAI79017	ASSEMBLY HOPPER	1

#	PART NO.	DESCRIPTION	QTY.
11	PLI2242	BALL CATCHER FEMALE	2
12	FAI884	SELF DRILL SCREW	20
13	SAI79016	LIVE DISPLAY	2
14	STI79114	FLAVOR CARD SPACER	2
15	STI79035	LED BRACKET	2
16	ELI2341	LIGHT LED	3
17	STI79054	SECURITY BRACKET DOOR TOP	1
18	STI79055	SECURITY BRACKET DOOR LH	1
19	26587A	VEND FRAME	1

SAI79020 ASSEMBLY MAIN DOOR - Continued

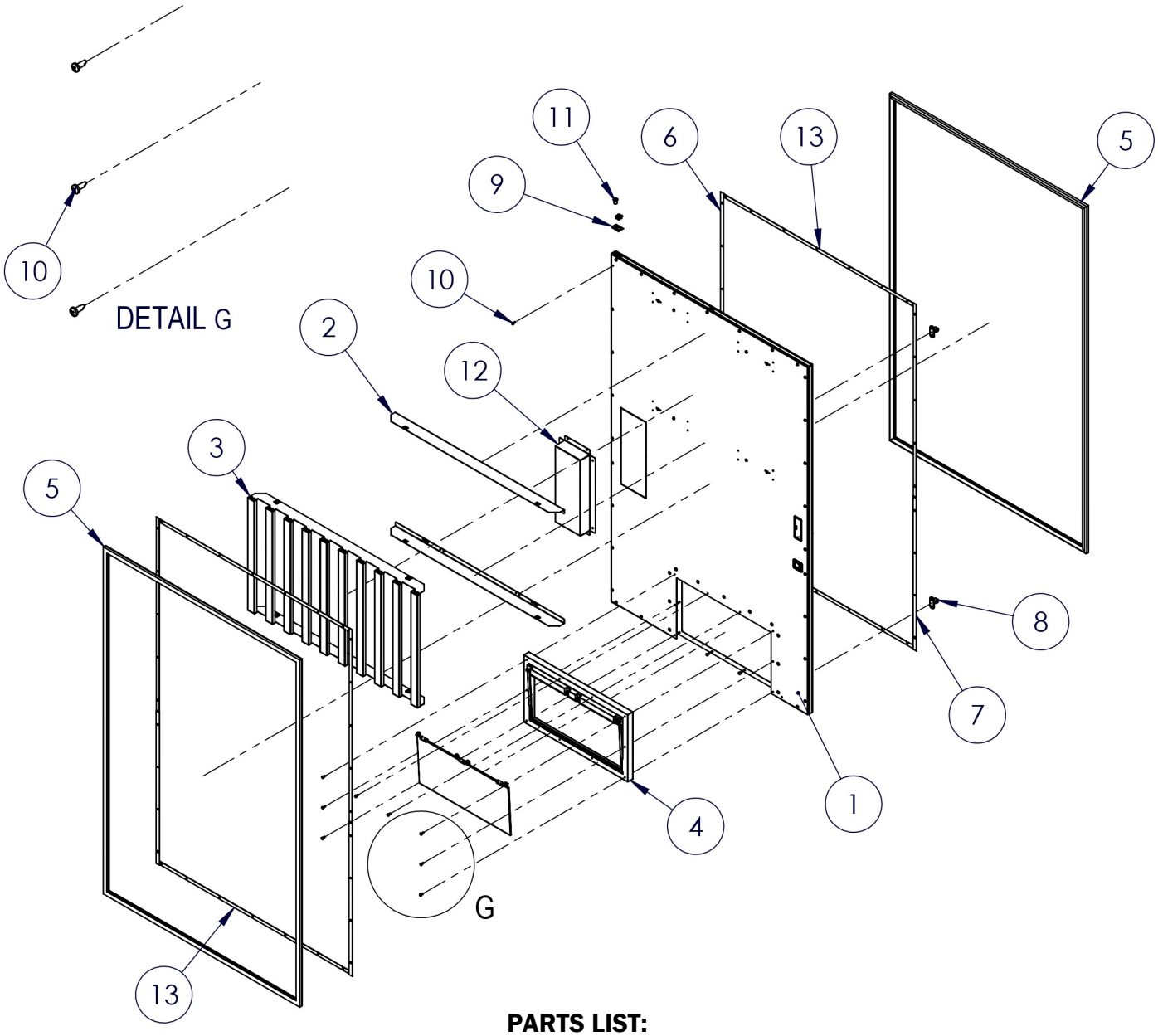


PARTS LIST:

#	PART NO.	DESCRIPTION	QTY.
1	HAI909	T-HANDLE	1
2	STI87163	BACK PLATE TS	1
3	PLI2249	PLUG BV	1
4	ELC909	DISPLAY	1
5	STI87161	BRACKET BV MOUNTING	1
6	EL980	VMC	1
7	STI79102	BRACKET COIN CHANGER	1
8	ELXXXX	COIN CHANGER	1
9	STI87151	SECURITY BRACKET	1

#	PART NO.	DESCRIPTION	QTY.
10	SAI700	ASSEMBLY COIN CUP	1
11	SAI87033	GUIDE COIN BOX	1
12	SAI79021	COIN BOX	1
13	STI79120	PLATE FRONT, KEY PAD	1
14	ELXXXX	BILL ACCEPTOR	1
15	SAI79018	COIN INSERT CHUTE	1
16	STI79104	T-HANDLE GUIDE BRACKET	1
17	ELC925	MOTOR COIN RELEASE	1

SAI79014 ASSEMBLY INNER DOOR

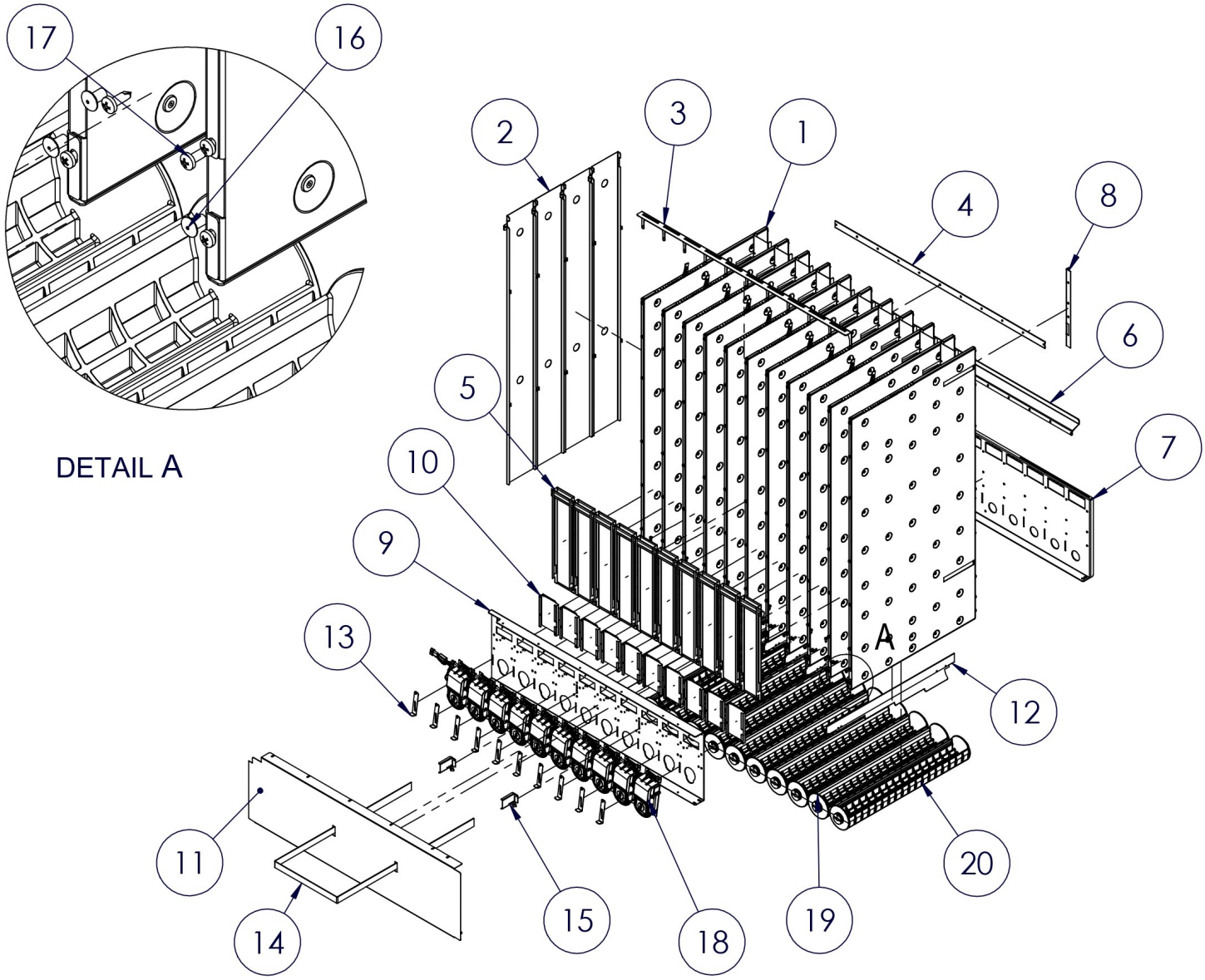


PARTS LIST:

#	PART NO.	DESCRIPTION	QTY.
1	SAI79013	INNER DOOR FOAMED	1
2	STI79081	BRACKET TOP & BOTTOM RETAINER	2
3	SAI79015	ASSEMBLY RETAIBER TOP FRONT	1
4	27168	VEND DOOR	1
5	PLI2275	GASKET, INNER DOOR	2
6	UTI171	STRIP GASKET	4
7	STI59065	STRIP GASKET	4

#	PART NO.	DESCRIPTION	QTY.
8	PLI2241	CATCHER, MALE	3
9	STI79080	BUSHING PLATE INNER DOOR	2
10	FAI941	SCREW SELF DRILL	87
11	HAI952	BUSH PLASTIC	2
12	STI79084	COVER BA INNER DOOR	1
13	STI79152	STRIP GASKET	4

SAI79006 STACK ASSEMBLY

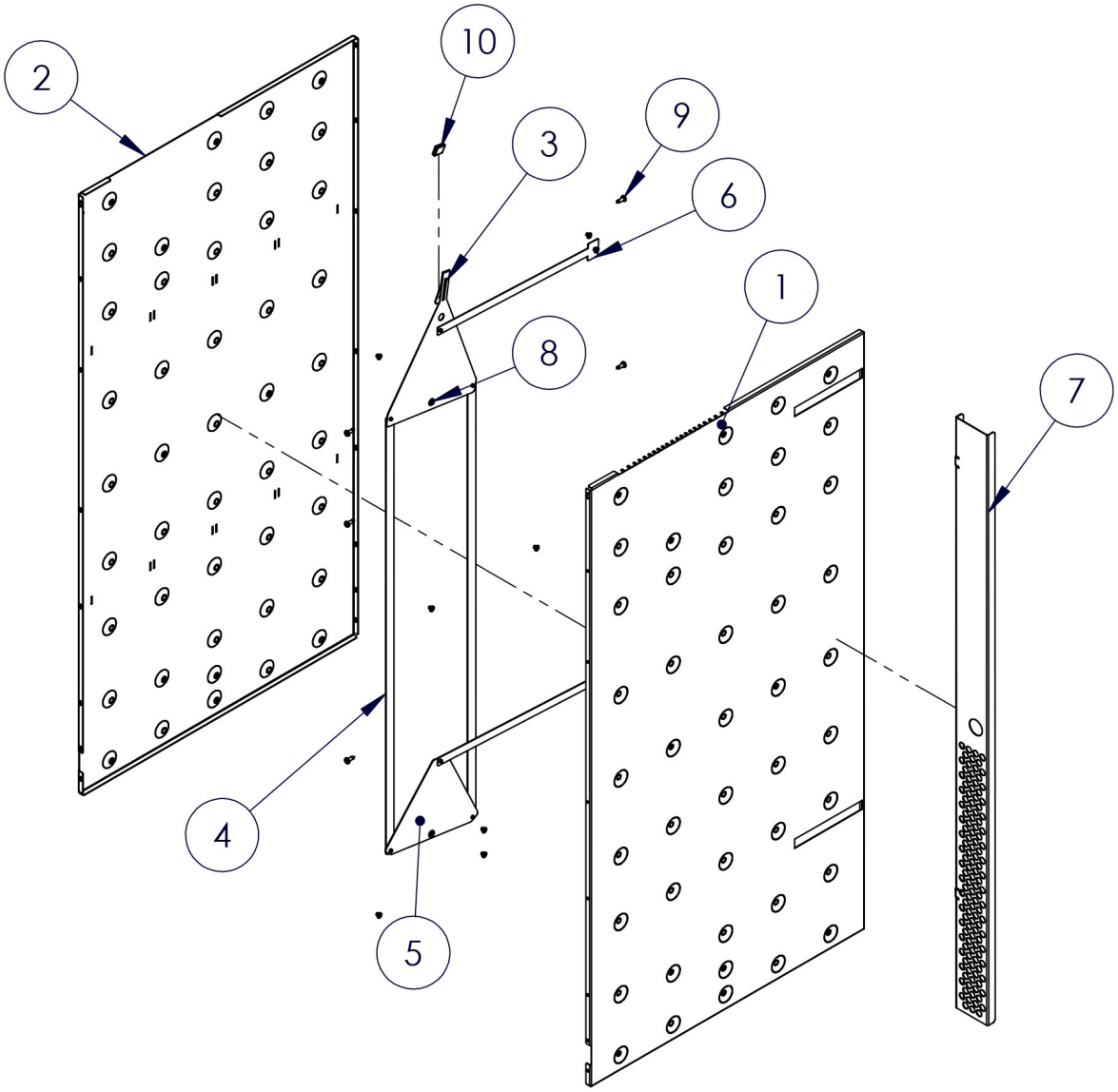


PARTS LIST:

#	PART NO.	DESCRIPTION	QTY.
1	SAI79007	ASSEMBLY STACK WALL	11
2	STI79023	SIDE SPACER	4
3	STI79024	ARC BRACKET	1
4	STI79025	STRIP FRONT SPACER	2
5	STI79026	RETAINER FRONT	10
6	STI79027	STRIP REAR	1
7	STI79028	PLATE REAR MECH	1
8	STI79029	L-BRACKET REAR MECH PLATE	1
9	STI79030	PLATE FRONT MECH	1
10	STI79031	SPACER BOTTOM FRONT	10

#	PART NO.	DESCRIPTION	QTY.
11	STI79032	COVER FRONT MECH	1
12	STI79033	RAMP ROTOR	10
13	PLI79005	RAMP RETENTION TAB	10
14	STI79036	HANDLE RACK LOADING	1
15	STI79037	GUARD RACK LOADING	2
16	FAI937	RIVET	20
17	FAI884	SELF TAPPING SCREW	139
18	27373A	VEND MOTOR	10
19	26164	ROTOR BLACK	8
20	26164	ROTOR WHITE	2

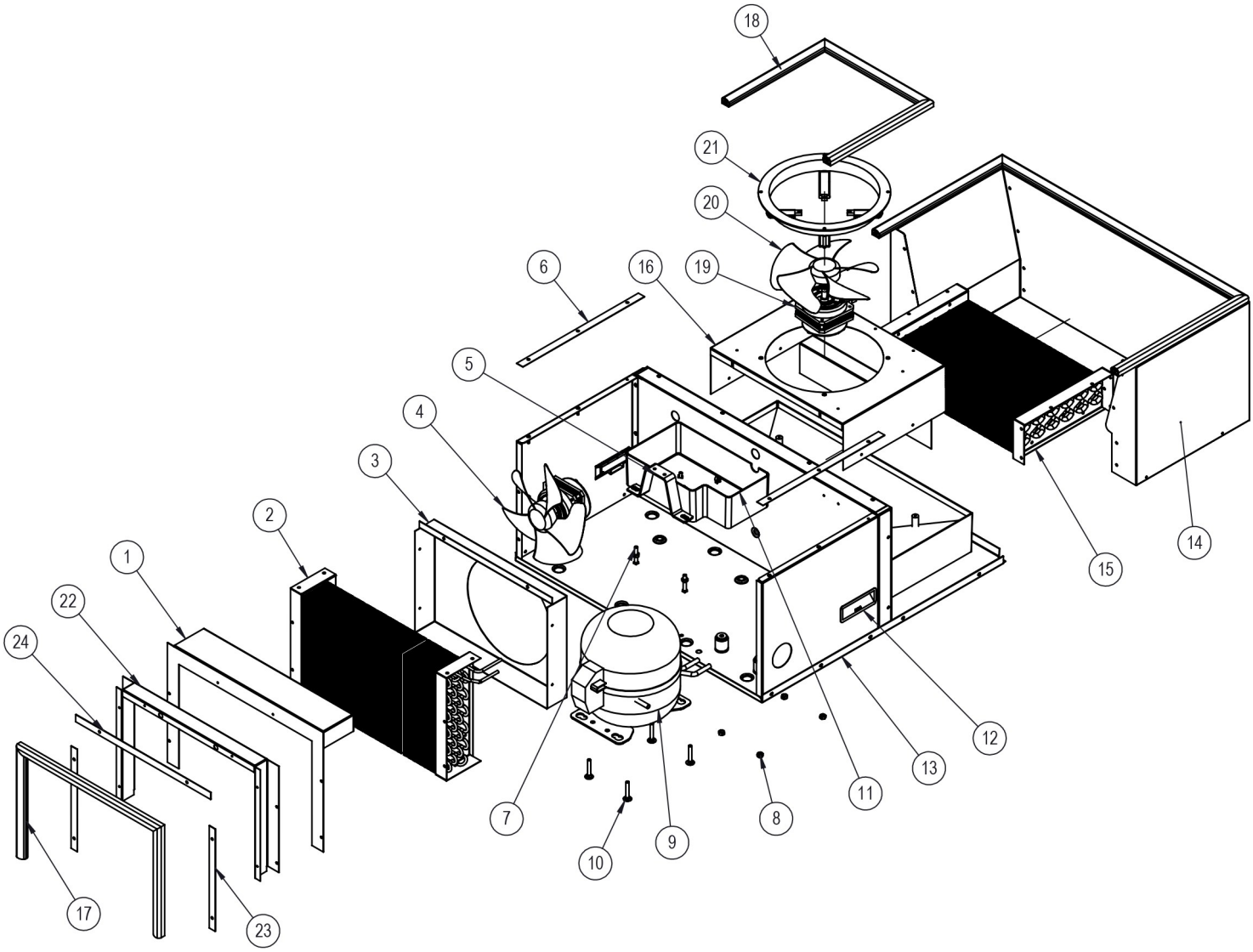
SAI79007 ASSEMBLY STACK WALL



PARTS LIST:

#	PART NO.	DESCRIPTION	QTY.
1	STI79016	WALL RIGHT	1
2	STI79017	WALL LEFT	1
3	STI79019	LEVER RETAINER	1
4	STI79020	CONNECTING ROD	2
5	STI79021	CRANK REAR	1
6	STI79022	SLIDER REAR RETAINER	2
7	STI79018	RETAINER REAR	2
8	FAI961	RIVET	18
9	FAI884	SELF TAPPING SCREW	6
10	PLI2279	CAP	10

REI952 REFRIGERATION DECK



PARTS LIST:

#	PART NO.	DESCRIPTION	QTY.
1	STI97013	CONDENSER FLANGE	1
2	REC926	CONDENSER COIL	1
3	STI97007	SHROUD, CONDENSER	1
4	REI611A	FAN BLADE SUCTION	1
5	STI578	MOTOR MOUNTING BRACKET	1
6	STI97011	GASKET RETAINER SIDE	2
7	FAI972A	CARRIAGE BOLT	2
8	FAI923	NUT NYLOCK	6
9	REI941	COMPRESSOR	1
10	FAI864	CARRIAGE BOLE	4
11	PLI2086	CONDENSTE PAN	1
12	HAI907	HANDLE	2

#	PART NO.	DESCRIPTION	QTY.
13	SAI97007A	DECK FOAMED	1
14	SAI97008	EVAPORATOR HOUSING FOAMED	1
15	REC927	EVAPORATOR COIL	1
16	STI97008	COVER EVAPORATOR	1
17	PLI2276	GASKET REFRIGERATION DECK	1
18	PLI2181	GASKET EVAPORATOR	1
19	REC942	MOTOR	2
20	REI914	FAN BLADE THROW	1
21	PLI955G	MOTOR BRACKET	1
22	STI79090	FRONT BRACKET	1
23	STI59066	STRIP GASKET	2
24	STI59070	STRIP, GASKET TOP	1