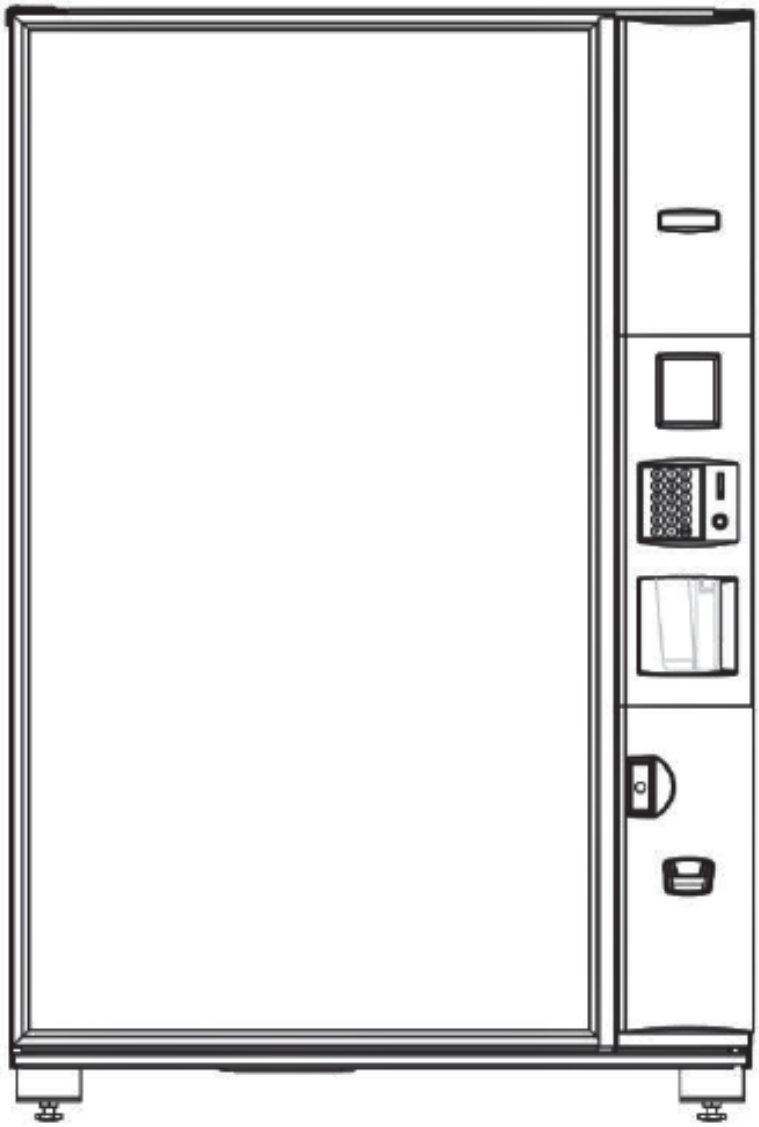
CRANE MERCHANDISING SYSTEMS

BevMAX Refresh 4

Operations Guide

Models 5800-4 / 3800-4
Models 5800-4HC / 3800-4HC



Coca-Cola
Operations/Service
Troubleshooting
Guide

402690 REV 01

CRANE

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Cautions & Warnings

High Voltage Warning / Electrical Warning Danger electricity, electric shock.

A Generic Warning.

Hazard Warning: Beware of moving machinery – Entanglement hazard.
Keep hands, loose clothing, and long hair away from moving parts.

If the vender is equipped with a refrigeration unit containing R290 refrigerant, the following warnings and procedures apply:

DANGER: Propane gas (R290) is flammable, odorless gas. While working on a machine, no smoking and no open flames should be permitted.

The charge amount in this machine is 114 grams of R290 refrigerant. The lower flammability limit (LFL) of R290 is 38 grams. At three times the LFL (3 x 38g = 114g), this machine meets all applicable UL and ASHRAE placement conditions

Use caution when handling, moving, and use of the vender to avoid either damaging the refrigerant tubing, or increasing the risk of a leak. Do Not Puncture Refrigerant Tubing or use any tools in the vicinity of the exposed tubing.

CAUTION: Propane gas (R290) is heavier than air and odorless. It may displace oxygen and cause rapid suffocation. In the event of an accidental release, evacuate, then ventilate the area. Do not permit any ignition sources to approach until the area has been safely ventilated.

Servicing shall be done by factory authorized service personnel who have been properly trained so as to minimize the risk of possible ignition due to incorrect parts or improper service, including the use of proper parts.

GENERAL INFORMATION

VENDER SAFETY PRECAUTIONS

Please read this manual in its entirety. This service 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 Crane Merchandising Systems vendor components. A qualified service technician, who is equipped with the proper tools and replacement components, using genuine Crane Merchandising Systems factory parts, should perform all repairs. Those individuals that have a clear understanding of how to operate a vending machine in a safe manner should only use this Vendor.

REPAIRS AND/OR SERVICING ATTEMPTED BY UNQUALIFIED PERSONS CAN RESULT IN HAZARDS DEVELOPING DUE TO IMPROPER ASSEMBLY OR ADJUSTMENTS WHILE PERFORMING SUCH REPAIRS. PERSONS NOT HAVING A PROPER BACKGROUND MAY SUBJECT THEMSELVES TO THE RISK OF INJURY OR ELECTRICAL SHOCK WHICH CAN BE SERIOUS OR EVEN FATAL.

PRODUCT IDENTIFICATION

First production of BevMax 4 5800-4/3800-4 Domestic and BevMax 4 5800-E4/3800-E4 Export Venders with new electronics platform was August 2020. The production date of Crane Merchandising Systems products is now determined by the date code incorporated in the serial number.
The Machine serial number incorporates the build date, in the format:

11yymmddxxxx

11 indicates the BevMax model, yymmdd is the year, month, & date of production, and xxxx is a sequential build number.

CE Mark & IIA DECLARATION

An updated CE Mark or IIA Declaration document can be provided upon request: If needed please contact Technical Support Manager in Williston, SC. By email service@cranems.com.

PHYSICAL CHARACTERISTICS

	5800-4 5800-E4 5800-4HC	**3800-4 3800-E4 3800-4HC**
HEIGHT	72” (182.88 cm)	72” (182.88 cm)
WIDTH	47” (119.38 cm)	39” (99.06 cm)
DEPTH CABINET	32” (81.28 cm)	32” (81.28 cm)
DEPTH WITH SERVICE DOOR	33.5” (85.09 cm)	33.5” (85.09 cm)
BASE	3.5” (8.89 cm)	3.5” (8.89 cm)
SHIPPING WEIGHT	764 lbs. (346.54 kg)	675 lbs. (306.17 kg)
Noise Level	Operates at < 70db.	
Glass door width is 37.5” (95.25 cm) 5800’s, 28.1” (71.37 cm) 3800’s, height is 68” (172.72 cm) both.		

INSTALLATION & SETUP

RECEIVING INSPECTION

DO NOT STORE THE VENDER OUTSIDE.
Upon receipt, inspect the Vender for any shipping damage. If there is any damage, have the delivery driver note the damage on the bill of lading and notify Crane Merchandising Systems Customer Service. Although the terms of sale are FOB shipping point, which requires the consignee to originate shipping damage claims, Crane Merchandising Systems will gladly help if you must file a claim.

UNPACKING THE VENDER

Remove the stretch wrap, fiberboard edge protectors and corrugated front protector from the outside of Vender.

Do not store the Vender with stretch wrap on. Stretch wrap could bond to the Vender's surface, which could damage the finish.

Remove the shipping boards from the bottom of the Vender. The shipping boards are attached by the leveling legs. To avoid unnecessary damage to the leveling legs or base, remove the shipping boards by using a 1-1/2 inch or 38 mm socket type wrench to unscrew the leveling legs. Be sure to replace the legs after removing the shipping boards. Once the skid boards have been removed, there is 3" (7.62 cm) from base flange to the floor with the leveling legs screwed all the way in.
Once the Vender is unpacked, check the "B" Tray area for any additional parts, labels, or other information concerning factory-equipped accessories such as Coin Mechanism, Bill Acceptor and Cashless Devices.
It is recommended the Vender be vend tested before shipping to the location. See INITIAL PROGRAMMING section of this guide, "Test Mode", "Test Vend".

WARNING: TO AVOID THE POSSIBILITY OF A FIRE HAZARD, DO NOT STORE ANYTHING OR ALLOW DEBRIS OF ANY KIND TO ACCUMULATE IN THE BOTTOM OF THE SERVICE AREA, IN AND AROUND THE REFRIGERATION COMPARTMENT OF THE CABINET, OR IN FRONT OF THE EVAPORATOR AND CONDENSER COILS.

WARNING: ENSURE THAT POWER IS DISCONNECTED FROM THE VENDER BEFORE INSPECTING OR REPLACING LAMPS, OTHER ELECTRICAL COMPONENTS, OR WORKING WITH OR ADJUSTING THE VENDING MECHANISM. FAILURE TO COMPLY WITH THESE INSTRUCTIONS MAY SUBJECT THE USER TO THE RISK OF ELECTRICAL SHOCK OR MECHANICAL INJURY, WHICH CAN BE SERIOUS OR FATAL.

ELECTRICAL POWER NEEDED

Refer to the Machine serial number plate to determine the correct voltage and frequency. In the US and Canada this is 120Vac, 60Hz, 1P. In Europe, Australia, and other export countries, this is 220/230/240Vac, 50Hz, 1P depending upon your country voltage. The serial plate also specifies the ampere rating of the Machine. This Machine must be plugged into a properly rated receptacle with its own circuit protection (fuse or circuit breaker).

Equipment Nominal Power Requirements -
120V / 10.2 A = *1224W (1.224kw)
220V / 5.8 A = *1276W (1.276kw)
240V / 5.8 A = *1392W (1.392kw)
*Note: Watts = V x A

POWER SUPPLY CORD and GROUNDING REQUIREMENTS

In accordance with the National Electrical Code and Underwriters Laboratories Inc., domestic Vending Machines are equipped with a three-wire power supply cord and Ground Fault Circuit Interrupter (GFCI). The GFCI device is provided as part of the power supply cord and is either incorporated directly into the plug or mounted on the cord adjacent to the plug.

WARNING

- The **GFCI** protects against current leakage caused by ground faults. The GFCI is not designed to protect against over current or short circuits.
- **DO NOT** use the TEST and RESET buttons on the GFCI as an ON/OFF switch.

- The Vending Machine supply cord **MUST** be plugged directly into a properly grounded, 3 wire receptacle that is properly protected by a fuse or circuit breaker. If the receptacle will not accept the power cord plug, it must be replaced with a properly grounded, 3 wire receptacle in accordance with the National Electrical Code and Local Codes and Ordinances. The work should be done by a qualified electrician.
- **DO NOT USE A 3 WIRE TO 2 WIRE ADAPTOR.**

DO NOT REMOVE THE GROUND PIN ON THE PLUG OR IN ANY WAY BYPASS, MODIFY, DEFEAT, OR DESTROY THE GROUNDING SYSTEM OF THE VENDING MACHINE.

DO NOT USE WITH AN EXTENSION CORD!

DO NOT REMOVE THE WARNING TAG ATTACHED TO THE POWER SUPPLY CORD.
The GFCI must be tested frequently and before each use in accordance with the instructions provided on the GFCI device. **IF THE GFCI DOES NOT PASS THE TEST, DO NOT USE THE MACHINE**. Unplug the supply cord from the receptacle and call the Crane Merchandising Systems Technical Support Group for assistance at 1-803-266-5001.
It is recommended that the Machine be located so that the GFCI device will be accessible after the Machine is installed. 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. Periodically inspect the power supply cord for damage. If the cord or plug is worn or damaged, it must be replaced with a power supply cord of the same type, size and specification as originally provided with the Machine.
DO NOT USE THE VENDING MACHINE UNTIL THE WORN OR DAMAGED CORD IS REPLACED.

FAILURE TO COMPLY WITH THESE INSTRUCTIONS MAY SUBJECT THE USER TO THE RISK OF INJURY OR ELECTRICAL SHOCK WHICH CAN BE SERIOUS OR FATAL. PERIODICALLY INSPECT THE POWER SUPPLY CORD FOR DAMAGE. IF THE CORD BECOMES DAMAGED IT MUST BE REPLACED WITH THE SAME SIZE AND TYPE CORD. CONTACT CRANE MERCHANDISING SYSTEMS FOR ASSISTANCE.

Prior to Initial Power Up

Open the Service Door on the right side using the Key provided in the coin return cup, or if shipped with a locking clip, remove the clip and install the lock. Ensure there is no power to the AC Distribution Box. On Venders with a main power switch on the AC Distribution Box the switch needs to be in the OFF position. On Venders with a main power quick disconnect plug on the AC Distribution Box the quick disconnect plug needs to be unplugged. Check that all connectors are firmly seated on the Vending Machine Control Board (VMC) and at the various Cabinet Control Board Peripherals:

- Cabinet Control Environmental Board
  - Refrigeration control
  - Lighting control
- Cabinet Control Port Board
  - Port motor
  - Port product sensor
- Cabinet Control Cup Board
  - Cup motor
  - Cup product sensor
- Cabinet Control X Motor Board
- Cabinet Control Y Motor Board

Retrieve the main power plug from the hole in the rear of the Vender and plug the cord in a properly grounded 120VAC, 15 Amp receptacle (U.S. and Canada).
Open the Service Door and apply power to the AC Distribution Box (if equipped with a Bill Acceptor, the Acceptor should cycle twice). The Display on the Service Door will briefly show the software version in use as “Software ###.## (i.e. 006rxx) followed by the model number followed by No Errors. When the Service Door is closed the Display will show “Ice Cold COCA-COLA”, the current price followed by the current temperature being reported to the VMC the LED Light Assemblies should be lit and the cooling unit should start. If the Display shows “No sales available”, or the cooling unit fails to start, refer to the TROUBLESHOOTING SECTION beginning on page 30 of this guide.

SERVICE NOTE

Battery Backup

The battery backup is used to maintain the date and time in case of power interruptions or any time the main power is off.

PLACING THE VENDER ON LOCATION

!! CAUTION !!

DO NOT TRANSPORT THE VENDER TO OR FROM THE LOCATION LOADED WITH PRODUCT OR DAMAGE TO THE VENDER MAY RESULT.

The Vender is intended for **INDOOR USE ONLY.** It should be kept out of direct sunlight and away from any heat source. This Machine is not suitable for installation in an area where a water jet or hose and nozzle may be used.

The Vender must be on a solid, flat and level surface. Ensure the flooring can bear the weight load of a fully loaded Vender (approximately 1109 lbs. or 503 kg). The Vender must be positioned close enough to an electrical outlet so that an extension cord is not required. If the Machine will be subject to user misuse or vandalism, it is recommended that the Vender be secured to the floor or wall as described in Crane Merchandising Systems Technical Bulletin 344. Due to the large size and weight of the Vender, never attempt to move the Vender with a Hand Truck or Stair Climber. Use a pallet jack or Vender/Cooler Dollies at all times when moving the Vender. The Vender should never be slid or pushed in place. Never side load the leveling legs; doing so will cause damage to the legs. Do not transport the Vender to or from customer locations loaded with product, as damage may result due to excessive weight. Be sure to test Vender for proper operation before putting in to service on location. Call the Crane Merchandising Systems Technical Service Department or your Crane Merchandising Systems Representative for assistance.

ACCEPTABLE AMBIENT OPERATING TEMPERATURE RANGE

Coca-Cola BevMax Refresh 4 equipment manufactured by Crane Merchandising Systems is designed to work properly in a temperature range of 75°F to 90°F (23°C to 32°C) in 65% R.H.

LEVEL THE VENDER

Adjust the front leveling legs, ensuring that an even gap exists between the glass door and the top security angle and receiver box, and then level the Machine front to rear. A carpenter's level will help verify that the Vender is level. Leveling legs are adjusted using a wrench or socket 1 ½" or 38 mm in size. If the Vender is to be used in a bank of equipment, check the top and sides for proper alignment. If you are unable to properly level the Vender, select an alternate location. NEVER PLACE OBJECTS UNDER THE LEVELING LEGS OF THE VENDER.

DANGER

THE VENDER MUST BE PROPERLY LOCATED AND LEVELED. IF THE MACHINE WILL BE SUBJECT TO USER MISUSE OR VANDALISM IT IS RECOMMENDED THAT THE VENDER BE SECURED TO THE FLOOR OR WALL AS DESCRIBED IN CRANE MERCHANDISING SYSTEMS TECHNICAL BULLETIN 344 TO MINIMIZE THE RISK OF INJURY OR DEATH FROM TIPPING. CALL THE CRANE MERCHANDISING SYSTEMS TECHNICAL SERVICE DEPARTMENT OR YOUR CRANE MERCHANDISING SYSTEMS REPRESENTATIVE FOR ASSISTANCE.

LOCATE THE VENDER

Do not block the rear of the Vender. Maintain a minimum of 4 inches (10 cm) from the wall to ensure adequate airflow through the condenser and compressor. At the rear of the Vender, make sure nothing obstructs the air exhaust at the back of the Machine.

WARNING

TO AVOID THE POSSIBILITY OF A FIRE HAZARD, DO NOT STORE ANYTHING OR ALLOW DEBRIS OF ANY KIND TO ACCUMULATE IN THE BOTTOM OF THE DOOR, IN THE BOTTOM OF THE SERVICE AREA, IN AND AROUND THE REFRIGERATION COMPARTMENT OF THE CABINET, OR IN FRONT OF THE EVAPORATOR AND CONDENSER COILS.

INSTALLING PRICE LABELS

Pricing labels when ordered will be included with additional parts, labels, and information placed in Tray "B" during shipment. Remove the pricing label sheets from the Tray and gently remove the label corresponding to the vend price of each selection by tearing at the perforation. The label is installed at the top of the front knuckle. Once installed, push the label firmly against the front of the knuckle. This will insure the label is locked in place.

INSTALLING PRODUCT ID CARDS

To assist with consistent loading, product ID cards can be installed in the product pusher to designate to the route driver which product the column is set for. To install the flavor card, simply detach it from the sheet at the perforation and slide it into the slots in the product pusher. Contact your graphics supplier to purchase as needed.

COIN CHANGERS & OTHER ACCESSORIES

The Vender can have an MDB Coin Changer installed and can have an MDB Bill Acceptor installed as well. Note: BevMax 4 5800-4/3800-4 will work with an MDB Bill Acceptor only. If the MDB Coin Changer and other MDB accessories are not factory installed, refer to the instructions received from the manufacturer of the MDB Coin Changer and other MDB accessories for proper set-up and installation.

The Vender will support the following Domestic MDB Coin Changers:

- All available CPI/MEI MDB
- All available Conlux MDB
- All available NRI MDB
- All available Coinco MDB

The Vender will support the following domestic MDB Bill Acceptors:
All available CPI/MEI/Mars MDB
All available Conlux MDB
All available Cashcode MDB
All available Coinco MDB

The Vender will support MDB Card Readers.

The Vender supports Swipe/Tap for Cashless Vending.

"Select then Pay" workflow for purchasing product is also implemented for both Cash and Cashless operations.

SETTING THE TEMPERATURE CONTROL

This Vender is equipped with an electronic Encapsulated Temperature Sensor. Defrost is controlled both electronically based on run time of the compressor and with a manual Defrost Thermostat. The Temp Sensor is factory pre-set to maintain a cabinet temperature of 35º Fahrenheit (1.7ºC). It is also a good practice to ensure the proper operating temperature prior to installing the Vender on location. To check the temperature, apply power to the Vender and allow it to run for several hours with the glass door closed or until the minimum cabinet temperature is achieved. The Display will show the temperature being reported by the temperature sensor.

The manual Defrost Thermostat is located in the bottom left of the service area. The Defrost Thermostat is preset and is not adjustable.

LOADING THE VENDER

CAN/BOTTLE DRINK TRAYS
The BevMax 4 5800-4/3800-4 Vender does not require spacers or shims to vend most packages. Load product in each column one package at a time insuring that the package being loaded is in front of the product pusher. Insure that the package is stable within the column (doesn't move excessively from side to side). After loading the Vender, test vend each column to insure proper operation. Please contact a Service Representative or refer to the proper Technical Publication for any special settings you may need.

LOADING COIN CHANGER TUBES

The Coin Changer tubes can be loaded using one of the following methods:

1. Load the Coin Changer with coins to the desired level by inserting coins in the loading slots on the coin tube front.
   Minimum coin tube levels are:
   6-8 nickels
   7-8 dimes
   5-6 quarters
   Note: A low coin level in the coin tubes will interfere with operation of the Bill Acceptor.
2. For exact cash accountability and to insure maximum dollar bill acceptance, load the Coin Changer utilizing the coin insert slot on the front of the Vender while in the Tube Fill routine. Refer to the INITIAL PROGRAMMING section of this guide for more information.

For additional information about Coin Mechanism, refer to the manufacturer's instructions.

R290 SERVICE NOTES

• The serial tag on an R290 machine will identify it as containing R290 refrigerant.
• Multiple warning labels describing **Cautions** and **Warnings** have been placed on various locations on and within the machine.
• The process tubes on the refrigeration deck are **red** indicating it contains R290.
• The drain pan on R290 refrigeration decks are **green** identifying it as using a Green refrigerant.
• All motors within the refrigerated space are brushless motors and are **not** interchangeable with motors from BevMax machines using alternate refrigerants.

TECHNICIAN WORK PROCESS IN THE EVENT OF A REFRIGERANT LEAK IN AN R290 UNIT

If a complaint is received that a refrigerated unit containing R290 (Propane) is not chilling (drinks aren't cold, drinks don't get cold within x hours, etc.), any service work requires the proper precautionary steps in advance of approaching or servicing the machine.
Servicing shall be done by factory authorized service personnel who have been properly trained so as to minimize the risk of possible ignition due to incorrect parts or improper service, including the use of proper parts.

These steps should be followed in the order in which they are provided here. No steps should be skipped.
1) Advise the location owner/operator that you will be on site performing service on the machine.
2) Scan the area for any potential sources of ignition and disable or eliminate them.
3) A plainly visible placard advising "No Smoking or Open Flame" should be positioned to be readily seen and obeyed by any local foot or vehicle traffic, including forklifts.
4) A properly rated fire extinguisher should be present, and available.
5) Turn on an appropriate leak detection unit for use w/ flammable gases. The detection device should remain functional for entire duration of the service event. If the service event requires removal of the refrigeration unit, the leak detector should remain operational until the refrigeration unit has been removed from the building.
6) As you approach the machine, sweep the lowest level of the floor, as propane is heavier than air, and will sink. Be aware of depressed pockets or spaces that might have collected residual gas after it has escaped.
7) If no gas is detected, the leak detector must remain operational, while the machine and/or unit is subjected to the troubleshooting process.
8) If minimal refrigerant gas is detected, a properly rated, ignition proof fan to circulate the air should be placed to provide ventilation or exchange of the air in the area around the machine, or bank of machines.
9) Using extreme caution, open the doors on the machine, one at a time, while continuing to hold the leak detector close to the floor. If a leak has occurred in the evaporator portion of the refrigeration units, any gas that has escaped, would be circulating in the chilled compartment. Exercise caution when opening the glass door as any gas will rapidly drop to the level of the floor.

THE REFRIGERATION UNIT IN THIS MACHINE DOES NOT CONTAIN ANY USER SERVICEABLE PARTS.

In the event of any failure the entire unit must be returned complete to Crane Merchandising Systems. Due to the presence of flammable refrigerant, ground shipment must be used for transportation only. Onsite repair of the sealed system, including evacuation of the unit, recharging, brazing, soldering or any other heat producing method, is **strictly prohibited**. These tasks must only occur in a facility specifically equipped to handle flammable refrigerants.

COMPONENTS

POWER SUPPLY 24V 150W

The New 24V 150W Power Supply is located inside the service area, mounted to the back wall below the AC Distribution Box. It has 3 outputs with each one being capable of 150W. Two of the outputs are wired into the AC Distribution Box. Each of the outputs are fused at 75W by the circuit breakers in the AC Distribution Box Assembly. It contains a Board with Green status light that illuminates when power is present. This 24V 150W Power Supply is common across all New Electronics BevMax Platform Domestic, Export, Classic (BevMax 4), and Media (BevMax 6) models. The Power Supply receives AC voltage via the AC Distribution Box. The Power Supply converts the AC voltage to the main operating DC voltages of the Vender (24VDC). This Power Supply is common across all New Electronics Platform BevMax Domestic, Export, Classic (BevMax 4), and Media (BevMax 6) models.

POWER AC DISTRIBUTION BOX

The AC Distribution Box is located inside the service area, mounted to the back wall above the Power Supply. It is where the 120VAC or 220VAC input voltage is sent to the Refrigeration Unit & Condenser Fan, Evaporator Fan, and Power Supply which converts the AC voltage to the main operating voltages of the Vender (24VDC). Those voltages are sent to the VMC via the P1 (4 pin) connector. It contains an independent Cabinet Control Environmental Board for improved troubleshooting and to distribute AC power to the Compressor, Evaporator/Condenser Fans, and DC power to the LED Lighting and Encapsulated Temperature Sensor. The Compressor, two vertical side LED Light Strips, and the Encapsulated Temperature Sensor are not powered up when the Machine turns on. The Compressor turns on 2 minutes after the Machine is powered on. The two side LED Light Strips, Evaporator Fan, and Encapsulated Temperature Sensor turn on when the Envionmental Cabinet Control Board begins to communicate to the VMC (Vending Machine Controller). Two 3 Amp circuit breakers protect the 24VDC supply. One is for the Cabinet and the other is for the Door electronics. This AC Distribution Box is common across all New Electronics Platform BevMax Domestic, Export, Classic (BevMax 4), and Media (BevMax 6) models.

VENDING MACHINE CONTROLLER & 5 PERIPHERAL CABINET CONTROLLERS

VMC (Vending Machine Controller) is the heart of the Vender and is located on the Service Door just above the Port Assembly behind the Keypad. It is USB flash programmable and updates all peripheral Cabinet Control Boards which control all aspects of the Vender (includes AC Distribution Box Cabinet Control Environmental Board, Cabinet Control X Motor Board, Cabinet Control Y Motor Board, Cabinet Control Port Board, & Cabinet Control Cup Board). The VMC includes 7 Diagnostics lights providing information on operational status and where to focus problem solving efforts. All voltage in the VMC and Cabinet Control Boards is 24VDC or 5VDC.

Cabinet Control Environmental Board – controls the Refrigeration Unit & Condenser Fan, Evaporator Fan, LED Lighting, Encapsulated Temp Sensor, and 24VDC & 5VDC power distribution.

Cabinet Control X Motor Board – controls X Motor movement and sense the X Home Switch Signal.
Cabinet Control Y Motor Board – controls Y Motor movement and senses the Y Home Switch signal.
Note: The Cabinet Control X & Y Motor Board are the same Board but with their own specific software.

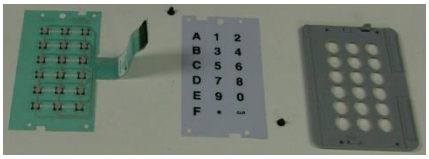
Cabinet Control Port Board – controls the Port Vend Sensor, Port Open & Close Sensors, & the Port Motor.

Cabinet Control Cup Board – controls the Delivery Cup Sensor, Picker/Plunger Home & Out Switches, and the Cup Motor. The Y Home Switch plugs into the Cup Motor Board and sends the switch signal on to the Cabinet Control Y Motor Board.

Each of the 5 Cabinet Control peripheral Boards have a Green status light. Various lighting patters are used to indicate the status of the individual Cabinet Control Boards. They include:
Power on / Reset – a slow brightening and then slow diming of the Green status light that takes 3 to 5 seconds to complete. This happens once each time the Board is powered on and/or reset. If the Green status light slowly brightens and dims continuously indicates the software was not loaded properly.

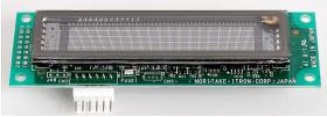
Heartbeat – a heartbeat of the Green status light starts right after the "power on / reset" indication and continues until the peripheral first receives a message from the VMC. Once a message is received from the VMC the heartbeat will not be shown again. Note: on a BevMax 4 Classic Machine, the heartbeat is almost never actually seen because the VMC starts talking to the Cabinet Control Boards within a few seconds of powering on.
Fast blinking – a fast blinking Green status light (on and off 7 times per second) indicates that the Cabinet Control Board is receiving communication from the VMC and sending a response. Note: Just because a response is being sent to the VMC doesn't necessarily mean the VMC is receiving it. There could be some defect that prevents the Cabinet Control Board response from reaching the VMC.

KEYPAD



The Keypad is located on the front of the Service Door and plugs directly in to the VMC. It consists of a 6" X 3" (15.2 cm X 7.6 cm) matrix, tactile feel membrane switch pad and an overlay assembly. The Keypad utilizes the letters A thru F on the left side and numbers 1 thru 0 along with the "✵" symbol and "CLR" to the right. The Keypad is where the Vender programming is accomplished and where the customers make their selections.

DIGITAL DISPLAY

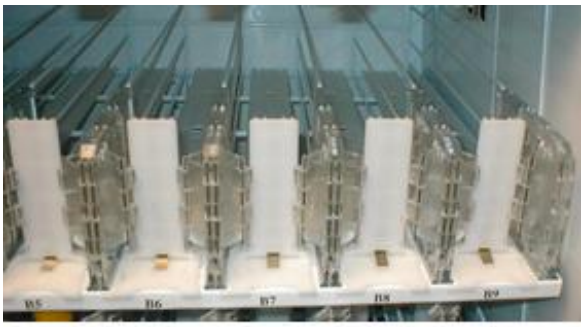


The Digital Display is located directly above the Keypad on the front of the Service Door. It is used to convey information to the consumer as well as to the person programming or servicing the Vender.

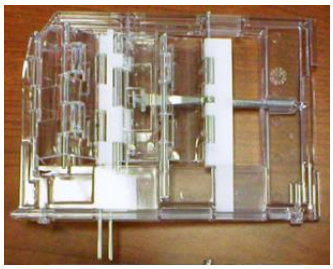
DELIVERY PORT ASSEMBLY

The Delivery Port assembly is located on the Service Door. Its purpose is to position the product in the assembly for the consumer to retrieve and to cancel the vend. The Port Open and Closed Hall Effect Sensors located on the top of the Delivery Port have been implemented to eliminate moving parts that exist on mechanical switches to improve performance. The Brushed Port Motor, Hall Effect Open/Close Sensors, and Product Detection Sensor are driven by the independent Cabinet Control Port Board.

SHELF / TRAY ASSEMBLY



Typically, there are 5 Shelf assemblies in every Vender; however, this can vary depending upon the configuration specified at the time of ordering. Each can/bottle Shelf consists of 9 or 7 columns. Each Shelf is capable of holding a variety of packages. The Shelf assembly consists of the Tray, where all of the following parts are mounted: Double Gate assembly and the Slide/Pusher assembly. These items are discussed in detail below.



DOUBLE GATE ASSEMBLY (Can/Bottle Trays)

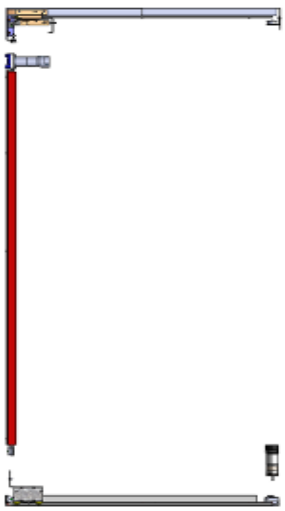
The Double Gate assembly is mounted on the front portion of the Tray assembly and contains the Vending Mechanism. Incorporated in the Gate assembly are the front and rear knuckle assemblies as well as the product kicker. In standby operation, the front knuckle is in the blocking position, which holds the front Displayed product in position to be vended. The rear knuckle assembly is in a flat position, which allows product to enter the Gate area, and the kicker is flush to the rear knuckle assembly. A stainless steel pin is inserted through the rear most portion of the front knuckle assembly and connects to a gear box below the Tray. When a selection is made, the plunger pushes the lever toward the back of the Tray. At the same time the front knuckle is opened into a flat position, the rear knuckle is closed to a blocking position, holding the remaining product out of the Gate area, and the kicker is extended to firmly push the front Displayed product off of the Tray. The plunger is energized for approximately 1-½ seconds to allow ample time for the Displayed product to be ejected from the Shelf. The plunger is then released and the front knuckle returns to the blocking position, the rear knuckle and kicker return to their standby position and the next product slides into the vend Display position.

SLIDE/PUSHER ASSEMBLY *(Can/Bottle Trays)*

The Slide/Pusher assembly is located on the bottom of each product column. Its purpose is to provide a slick, friction resistant surface for the product to rest on. A tall Product Pusher is mounted on the top of the Slide and incorporates a coil spring in the body that attaches to the bottom of the Slide through a slit. This spring adds needed tension to insure that all products in the column remain tight against each other and are allowed to progress into the Gate area. Periodic cleaning and lubrication of the slides is recommended. **DO NOT USE SOLVENTS OR ABRASIVE MATERIALS TO CLEAN ANY PORTION OF THE TRAY.**

DELIVERY (PICKER) CUP ASSEMBLY

The Delivery (Picker) Cup assembly is located on the XY Vend Mechanism. Its purpose is to pick the product from the column and deliver the product to the Delivery Port assembly. The Delivery (Picker) Cup assembly is mounted on the Y Axis Assembly of the XY assembly and bolts in position. The New Y Home Magnetic Switch located on the bottom of the Delivery Cup has been implemented to eliminate moving parts that exist on mechanical switch to improve performance. It eliminates the previous mechanical Switch and the Home Switch Errors caused by syrup and/or dirt build up in/on the mechanical Switch and Switch arm. The Delivery Cup Brushless Motor, Picker/Plunger Home & Out Switches, and product detection Sensor are driven by the independent Cabinet Control Cup Board.

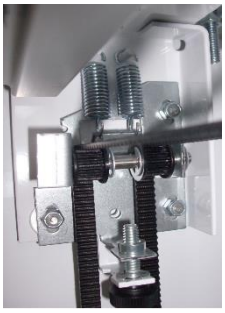


X AXIS

The X Axis runs left to right. The X Axis assembly is Cabinet mounted to prevent any Cabinet torque and has one belt to synchronize the top and bottom when the XY Assembly moves left or right. A top channel is used to contain and hide the e chain and wiring. The X Brushless Motor has an encoder for positioning and is driven by an independent Cabinet Control X Motor Board.

Y AXIS

The Y Axis runs up and down and has the Delivery (Picker) Cup assembly attached. A Y Belt Cover is used to contain and hide the e chain and wiring. The Y Brushless Motor has an encoder for positioning and is driven by independent Cabinet Control Y Motor Board.



BELT TENSION ADJUSTMENT COMPONENTS

The Belt Tensioning Adjustment components have been revised to ease adjusting belts when needed. The X Belt Idler Tensioning Assembly in the upper left hand corner of cabinet now includes a thumb screw. Adjustments should only be needed if a belt is replaced. The Bottom X Drive Tensioner Assembly in the lower right hand corner of cabinet has a plastic spring loaded tensioning wheel to keep the belt against the pulley when moving and does not require any adjustments.

REFRIGERATION SYSTEM

The Refrigeration System is a single piece unit and is hermetically sealed. The Model BevMax 4 5800-4/3800-4 Refrigeration Units are charged with R134a refrigerant and consist of a Super 1/3 horsepower Compressor, with a single fin and tube style condensing unit with one Condenser Fan, Condensation overflow Pan with Soakers, Evaporator, and Evaporator Fan. **The Model BevMax Refresh 4 5800-4HC/3800-4HC are charged with R290 refrigerant**. Both units will be clearly labeled to assist in identifying the refrigerant used. The refrigeration unit is located behind the Refrigeration Unit cover panels, mounted in the bottom of the Machine. This unit is designed for easy removal and replacement from the front of the Vender as a complete assembly. An electronic Encapsulated Temperature Sensor regulates the Machine temperature. The probe of the Temp. Sensor is attached to the Evaporator Coils and reads the temperature of air being pulled in to the Evaporator Coil.

REFRIGERATION DECK CLAMP ASSEMBLY

The Refrigeration Deck Clamp assembly is located on the left side of the Cabinet base plate. Its purpose is to secure the Refrigeration assembly tight against the vertical base plate for refrigerated air flow in to the Cabinet. A 7/16” wrench or socket is needed to adjust the bolt. The Refrigeration Unit also has a locating pin on the bottom of the Refrigeration Unit base plate to ensure alignment for Refrigeration gasket seal to the vertical base plate.

WIRING notes: The Vender wiring harnessing has been reduced and is less complex. This improves wire routing on the Service Door and the Service and Refrigerated Compartments of the Machine.

Simplified Harnessing to all peripheral Cabinet Control Boards with easily identified color coding.

- RS 485 Communication Harness A common signal line – white wire
- RS 485 Communication Harness B common signal line – blue wire
- 24VDC Harness – red/green wire
- 5VDC Harness – yellow wire
- Ground Harness – black wire
- Dongle Harness will be used to set programming methods.

COCA-COLA PROGRAMMING

GENERAL INFORMATION

In order to fully utilize the many features of your Vender it is important that you first understand the options available and procedures for programming the VMC (Vending Machine Controller).
All programming, testing, and service functions are accomplished by using the Keypad in an easy to follow, Display prompted format. In standalone operation there are three modes of operation for Normal Mode for operating Vender, Service Mode for servicing, testing, and setting up your Vender, and External Menu Mode to access available information with the Service Door closed.

NORMAL MODE

At initial power-up with Service Door closed, the program will start and the Display will briefly show the VMC software version in use as "Software ###.,r## CRC OK" (i.e. 006r00), followed by Model 5800-4 (or model that is set) followed by the POS idle message, "Ice Cold COCA-COLA". Note: With Service Door closed, if the VMC has certain errors, the display will show "**No Sales available"**. With the Service Door Open, the display will show Error Codes or a List of Error Codes. "Unavailable" is a Comms error issue with one or more of the following Cabinet Control Boards; X Motor Board, Y Motor Board, Cup Board, and/or Port Board.

SERVICE MODE:

In programming if Configuration Switch 4 is set to "Config 4 0", when the Service Door is opened, "Error Codes" or a list of Error Codes will show on the Display. If Configuration Switch 4 is set to "Config 4 1", when the Service Door is opened, "Cash - ####-##.##", "Card - ######.##", "Sale - ####-####", " Error Codes", or "No Errors" will show on the Display. NOTE: Card is only shown if a Card Reader is present. The Service Mode is entered when the Service Door is open and the Service Switch on the VMC is pressed. The operator can now use the Keypad to move through the Main Routine Menu.

Key number 1: **Abort/Cancel** - will return to previous Menu prompt.
Key number 2: **Scroll Up** - forward in Menu.
Key number 3: **Scroll Down** - backward in Menu.
Key number 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 Entry" prompt.

EXTERNAL MENU MODE:

The information available in this Mode is obtainable with the Service Door closed or open as long as the Vender is in Normal Mode, by entering the password which is set at 4, 2, 3, 1. Note: 4231 is the factory default and can be programmed to any four digit combination. Information available is Historical Cash counted, Interval Cash counted for each selection, Historical Sale (total number of vends), Interval Vends counted for each selection, Error Codes, and Return to Sales. Refer to the "Cash Counters", "Sales Counters", and "Error Codes" routines for instructions to move through the Menus.

INITIAL PROGRAMMING

This section is a overview of the initial programming of the vender. Please refer to the Programming Guide for detailed information of the service menues.

SERVICE MODE

Enter SERVICE MODE by opening the Service Door and pressing the Service Button once. The Display will read "**Error Codes".** The following choices are now available:

"Error Codes" - ERROR ROUTINE

This function allows you to enter the error readout routine. "Error Codes" will appear when you press the service button on the control board. Press key number 4, 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", "Vend Mechanism", "Control System", "Selection Switch", "Changer", "Bill Validator", "Card Reader", "Remote Vend Mech", "Selection/Display", "Refrigeration", "Health Timer".

Press key number 2 or 3 to scroll through any error codes that are present.
Important: If there is only one problem, it will be the only error code shown when you enter the error code submenus.

With an error code showing on the display, press key number 4 to access detailed information.
After making repairs with an error code showing on the display, press and hold key number 4 for 2 seconds will clear the error. Press key number 1 to return to "Error Codes".

"Vend Mechanism" - Vend Mechanism Summary Error Codes

Press key number 4 and the display will show the following:

- "HORIZ", X (horizontal) motor issue.
- "VERT", Y (vertical) motor issue.
- "PICKI", picker home switch issue.
- "PICKO", picker out switch issue.
- "PICKRS", picker return spring issue.
- "PORT", port door switch/board issue.
- "VS", port vend sensor board issue.
- "XHOME", X (horizontal) motor home switch issue.
- "YHOME", Y (vertical) motor home switch issue.
- "MOTOR", port/delivery cup motor issue.
- "XLOST" – X needs to go home.

- "YLOST" – Y needs to go home.
- "XSWITCH" – possible problem with home switch.
- "YSWITCH" – possible problem with home switch.

Press key number 1 will return to "Vend Mechanism" if all vend mech Error Codes have not been cleared. If all vend mech Error Codes have been cleared the next error mode will be displayed, or "No Error Codes" if there are no Error Codes. Press key number 1 will return to "Error Codes".

"Control System" - Control System Summary Error Codes

Press key number 4 and the display will show one of the following:

- "Door Switch", indicating a door switch in the open position for more than 1 hour.
- "RAM Checksum", indicating the check sum for service mode settings memory has been corrupted.
- "Scale Factor", indicating a peripheral has introduced a scaling factor that is incompatible with current setting.
- "FRAM", memory module read/write error.
- "RTC", RTC read/write error, real time clock issue.
- 'Low Battery", low battery issue.
- "PWROUT", power lost.

- "FCTRY TST", VMC was not tested at the manufacturer.

Press key number 1 will return to "Control System" if all control system Error Codes have not been cleared. If all control system Error Codes have been cleared the next error code will be displayed, or "No Error Codes" if there are no Error Codes. Press key number 1 will return to "Error Codes".

"CHANGER" - Changer Summary Error Codes

Press key number 4 and the display will show one of the following:

- "Changer Comm", indicating a changer communication error (No communication for more than 2 seconds).
- "Tube Sense", indicating a tube sensor error.
- "Changer Inlet", indicating an inlet chute blocked error (no coins sensed in acceptor for 96 hours).
- "Tube Jam #", indicating a tube jam error.
- "Changer ROM", indicating a changer ROM check sum error (failed changer).
- "Excessive Escrow", indicating excessive escrow attempts (more than 255 since last coin sensed).
- "Coin Jam", indicating a coin jam reported by coin mech.
- "Low Acceptance", indicating a low coin acceptance rate (less than 80%).
- "Acceptor Disconnected", indicating an acceptor is unplugged.
- "Coin Routing Err", indicating a coin was miss-routed.

Press key number 1 will return to "CHANGER" if all changer Error Codes have not been cleared.
If all changer Error Codes have been cleared the next error code will be displayed or "No Error Codes" if there are no Error Codes. Press key number 1 will return to "Error Codes".

"Bill Validator" - Bill Validator Summary Error Codes

Press key number 4 and the display will show one of the following:

- "Bill Val Comm" indicating a bill validator communication error (No communication for more than 5 seconds).
- "Bill Stack Full" indicating the bill stacker is full.
- "Bill Motor Error" indicating a defective motor in the validator.
- "Bill Jam " indicating a bill jam in the validator.
- "Bill Val ROM" indicating a check sum error.
- "Bill Stack Open" indicating an open stacker.
- "Bill Sense Err" indicating a bill validator sensor error.

Press key number 1 will return to “Bill Validator” if all changer Error Codes have not been cleared.
If all validator Error Codes have been cleared the next error code will be displayed or “No Error Codes” if there are no Error Codes.
Press key number 1 will return to “Error Codes”.

“Card Reader” - Card Reader Summary Error Codes

Press key number 4 and the display will show one of the following:

- “Card Reader Comm”, indicating no card reader communication for 5 seconds.
- “Card Reader #”, indicating the most recent “non-transient error” from the card reader (failed card reader).

Press key number 1 will return to “Card Reader” if all changer Error have not been cleared. If all card reader Error Codes have been cleared the next error code will be displayed or “No Error Codes” if there are no Error Codes. Press key number 1 will return to “Error Codes”. Press key number 2 will scroll to the next routine.

“Select/Display” - Selection / Display Device (ASD) Error

Press key number 4 and the display shows:

- “Select/Display Comm”, indicating no communication to selection / display device for five seconds.

Press key number 1 will return to “Select/Display” if all selection / display device Error Codes have not been cleared. If all selection / display device error have been cleared the next error code will be displayed or “No Error Codes” if there are no Error Codes.
Press key number 1 will return to “Error Codes”.
Press key number 2 will scroll to the next routine.

“Refrigeration” - Refrigeration Summary Error Codes

Press key number 4 and the display shows one of the following:

- “Temp Sense Err”, indicating the temperature sensor is defective or unplugged.
- “Temp Too Cold”, indicating the cabinet temperature is 3^0 F below lower limit.
- “Temp Too Hot”, indicating the cabinet temperature is 3^0 F above upper limit.
- “Not Cooling”, indicating the cooling system has failed to decrease temperature 1^0 F per hour while the compressor is running.
- “Health Timer” – Health Timer Error
  The initial pull down time has not met the health timer constraints. Refer to “Health Timer” section for details. Press and hold key number 4 for 2 seconds will clear the error and the display will show “No Error Codes”.
- “Health Code” – Health Code Error
  The health code cooling constraints have not been met. Refer to “Health Timer” section for details. Press and hold key number 4 for 2 seconds will clear the error and the display will show “No Error Codes”.

Press key number 1 will return to “Refrigeration” if all refrigeration summary errors have not been cleared. If all refrigeration summary Error Codes have been cleared the next error code will be displayed, or “No Error Codes” if there are no Error Codes. Press key number 1 will return to “Error Codes”. Press key number 2 will scroll to the next routine.

"CABINET CONTROL" Error

CC POWER – Power ERROR.
C Test – Cup Board factory test not completed.
E Test – Environmental Board factory test not completed.
P Test – Port Board factory test not completed.
X Test – X Motor Board factory test not completed.
Y Test – Y Motor Board factory test not completed.
C Comms – Cup Board Communication issue.
E Comms – Environmental Board Communication issue.
P Comms – Port Board Communication issue.
X Comms – X Motor Board Communication issue.
Y Comms – Y Motor Board Communication issue.
C Reset – Cup Board reset unexpectedly.
E Reset – Environmental Board reset unexpectedly.
P Reset – Port Board reset unexpectedly.
X Reset – X Motor Board reset unexpectedly.
Y Reset – Y Motor Board reset unexpectedly.

"Tube Fill" - TUBE FILL ROUTINE

This function allows you to count the coins loaded in the top (separator) of the coin mech that will be routed to an inventory tube. Note: If a coin mech is not installed, you will not be able to enter the program to display information. Press key number 4 to enter mode and the total number of the coin type being loaded will be displayed and counted in the vender controller as they are accepted. The controller 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. When you finish loading all coins press key number 1 to return to "Tube Fill". Press key number 2 to scroll to the next routine.

"Test Modes" - TEST ROUTINE

This function allows you to diagnose different functions of the vender. Press key number 4 and the display will show "Test vend". For additional Dixie-Narco Factory Diagnostics refer to page 27. Press key number 2 or 3 to scroll through the test routines available. Press key number 1 to return to "Test Modes".

"Test Vend" - Vend Testing

This function allows you to test vend each column.
Press key number 4 and the display will show "Column A1". Press key numbers 2 or 3 to scroll through the columns available to run in motor test. Press and hold the Power Interrupt (PI) switch. Press key number 4 to vend from the column displayed. Press key number 1 will return to "Test Vend". Press key number 2 to scroll to next test mode.

"Test Sel Switch" - Select Switch Test

This function allows you to test each selection.
Press key number 4 and the display will show "Selection 4". Then press any key and the display will show the last key number pressed.
Press and hold key number 1 for approximately 5 seconds will return to "Test Sel Switch". Press key number 2 to scroll to the next test mode.

"Test Display" - Display Test

This function allows you to test all segments in the display. Press key number 4 and a lower case alphabet will display, then turn off , then an upper case alphabet will display alternating until key number 1 has been pressed to return to "Test Display". Press key number 2 to scroll to next test mode.

"Test Relays" - RELAY TEST

This function allows you to test the relay electronic control of the compressor ("Compressor #"), the evaporator fan(s) ("Fan #"), and the sign front light ("Light#").

CAUTION: Disconnect power to the compressor before testing the compressor relay. Failure to disconnect power to the compressor before testing the relay could result in damaging the compressor.

Press key number 4 and the display will show "Compressor #", where # is the state of the relay - 0 = not activated or off; 1 = activated or on. Press key number 4 to toggle the relay on and off. Press key number 2 to scroll to "Fan #", where # is the state of the relay - 0 = not activated or off, 1 = activated or on. Press key number 4 to toggle the fan(s) on and off. Press key number 2 to scroll to "Light #", where # is the state of the relay - 0 = not activated or off; 1 = activated or on. Press key number 4 to toggle the lights on and off. Press key number 1 to return to "Test Modes". Press key number 2 to scroll to "Password Entry".

* "Password Entry" - PASSWORD ROUTINE

This function allows you to enter the following routines which are not accessible until the operator enters a password, which is set as 4-2-3-1. To enter the password, press key number 4 until the display goes blank. Then press key number 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 Entry" after approximately 16 seconds. If entered correctly, the display will go to the next function "Cash".

"Price Program" - PRICE SETTING ROUTINE

This function allows the user to set pricing. When Configuration Code 1 is programmed to "Config 1 0" the vender is set for single price vending. When Configure Code 1 is set to "Config 1 1", the vender is set for multi-pricing (or a price for each selection needs to be set). Note: This routine is lockable when using a data collection device.

Single Price price setting:

Press key number 4 "Single Price" will show on display. Press the "4" key and "Price Sel #.## will show on display. Press key "2" to increase the vend price or key "3" to decrease the vend price. With the display showing the vend price you require, press key "4" to save. All selections will be set to vend at the saved vend price.

Multiprice price setting:

Press key 4 and display will show "All Selections". Press key 2 to scroll from "All Selections" to individual tray selections "A, B, C, D, E". With the display showing the All settings of the tray you wish to set price in press the key 4 to enter. At "All Selections" when you press 4 and enter the display will show "#.##" or current price set. Press key "2" to increase the vend price or key "3" to decrease the vend price. With the display showing the vend price you require, press key "4" to save. If you select an individual tray letter to set price in, when you press 4 and enter the display will show "All Selections (for tray A only)". Press key 2 to scroll to A1 thru A9 then back to All Selections (for A tray only)". At the position you wish to set price when you press 4 and enter the display will show "#.##" or current price set. Press key "2" to increase the vend price or key "3" to decrease the vend price. With the display showing the vend price you require, press key "4" to save.

Factory default setting is "Single Price". Press key number 1 to return to "Price Program". Press key number 2 to scroll to the next routine.

Price line setting:

This function will only display if Price Holding: On" is set. It will operate the same as setting prices except the user will be prompted to set a price line rather than a price.

* “Config Switches” - MACHINE CONFIGURATION

This function allows the user to access and change the programming of the following machine configuration settings. Note: This routine is lockable when using a data collection device. If you press key number 4 and the display shows “Locked Menu”, this means configuration setting changes will not be allowed. If “Config 1” is displayed, then configuration setting changes will be allowed. “Locked Menu” can only be enabled or disabled through DEX interrogation. If “Config 1” is displayed, the listed settings are available. Note: You must press key number 4 with the configuration code displayed if you wish to enter the edit mode. The “0” or “1” will be flashing to acknowledge you are in the edit mode. *Please refer to the Programming Guide for detailed information.*

IMPORTANT: All machine configuration codes are disabled coming from the factory (Config # 0).

Config 1 - Configuration Switch 1 - Multi-Price Setting Mode

This code is used to enable the single price mode “Config 1 0” or multi-price mode “Config 1 1”. Press key number 4 and “Config 1 #” will be displayed, with the “#” flashing. Press key numbers 2 or 3 to scroll between “Config 1 0” and “Config 1 1”. Press key number 4 with the display flashing the setting you wish to use. Press key number 1 to return to “Config 1”. Press key number 2 to scroll to “Config 2”.

Config 3 - Configuration Switch 3 - POS Message

This code is used to disable the point of sale message. Config 3 0 = enabled, Config 3 1 = disabled. Press key number 4 and “Config 3 #” will be displayed, with the “#” flashing. Press key numbers 2 or 3 to scroll between “Config 3 0” and “Config 3 1”. Press key number 4 with the display flashing the setting you wish to use. Press key number 1 to return to “Config 3”. Press key number 2 to scroll to “Config 4”.

Config 4 - Configuration Switch 4 - Automatic Viewing of Historical Sales and Cash Accounting, Error Codes or No Error Codes

This code is used to enable viewing of historical sales, historical cash, Error Codes or No Errors automatically when the door is opened. To enable automatic viewing option enter “Config 1”; to disable enter “Config 4 At “Config 4 0” Error Codes or No Errors automatically displays when the door is open. Press key number 4 and “Config 4 #” will be displayed, with the “#” flashing. Press key number 2 or 3 to scroll between “Config 4 0” and “Config 4 1”. Press key number 4 with the display flashing the setting you wish to use. Press key number 1 to return to “Config 4”. Press key number 2 to scroll to “Config 5”.

*”Preview Password” - PREVIEW DATA PASSWORD ROUTINE

This function is used to enable viewing of cash collected, product sales, and error codes without opening the door. To view the data the 4 digit password (4-2-3-1) must be entered. Once entered the “Cash Counters”, “Sales Counters”, “Error Codes”, and “Return to Sales” menus are available from the front of the vender. To view, follow instructions for cash counter routine, sales counter routines, error routine and return.

To change “Preview Password” password:

At “Preview Password” press key number 4, “####” (representing current four digit password) will show on display with the far left digit blinking. Press key number 2 to scroll to number desired for password. Press key number 4. The next digit will start blinking, press key number 2 to scroll to number desired for password. Press key number 4. Continue this process until all 4 digits are set. Then press key number 4 and the display will return to “Preview Password” and the new password has been saved. Pressing key number 1 at anytime during this routine will return to “Preview Password” with no changes to password occurring. Press key number 2 to scroll to next routine.

*”Time Programming” – TIME AND DATE ROUTINE

This function is used to set the year, month, date, and hour (military 24 hour clock). Press key number 4 and “Enable #” will show on display.

“Enable #” - Time and Date Enable Routine

Press key number 4 and Enable 0 = disabled or Enable1 = enabled will show on display. Press key number 2 to scroll between Enable 0 and Enable 1. Press key number 4 with the display showing the setting you wish to use and display will return to “Enable #”. Press key number 2 to scroll to “Year”.

“Year” - Year Setting (00 to 99)

Press key number 4 and the current year setting will show on display. Press key number 2 or 3 to change the last 2 digits of the year (00 to 99). Press key number 4 with the display showing the year you wish to use and display will return to "Year". Press key number 2 to scroll to "Month".

"Month" - Month Setting (01 to 12)

Press key number 4 and the current 2 digit month setting will show on display. Press key number 2 or 3 to change the month (01 to 12).

Press key number 4 with the display showing the month you wish to use and display will return to "Month". Press key number 2 to scroll to "Day".

"Day" - Day of Month Setting (1 to 31)

Press key number 4 and the current 2 digit day of month setting will show on display. Press key number 2 or 3 to change the day of month (1 to 31). Press key number 4 with the display showing the day you wish to use and display will return to "Day". Press key number 2 to scroll to "Hour".

"Hour" - Hour and Minute Setting (0000 to 2359)

Press key number 4 and the current 4 digit hour and minute setting will be displayed (24 hour). The hour setting will be blinking to indicate it can be changed. Press key number 2 or 3 to change the hour setting. Press key number 4 to save and the minute setting will start blinking to indicate it can be changed. Press key number 2 or 3 to change the minute setting. Press key number 4 will save and return display to "Hour". Press key number 2 to scroll to "Daylight Savings".

"Daylight Savings" - Daylight Saving Time Setting

This function is used to set the preferred daylight savings time setting. Press key number 4 will display the current setting. Press key number 2 or 3 to scroll through the "Daylight savings" options listed:

- "OFF", no daylight savings time changes made.
- "Australia", Australian rules - 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", European rules - 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", North American rules - 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.

Press key number 4 with the display showing the setting you wish to use and display will return to "Daylight Savings". Press key number 1 to return to "Time Programming". Press key number 2 to scroll to next routine.

*"Refrigeration " - REFRIGERATION ROUTINE

This function is used to electronically control the refrigeration operations of the vender. Press key number 4 will enter "Enable #". *Please refer to the Programming Guide for detailed information.*

"Setpoint" - Set Point Control Routine (Default Temperature 35.0^0 F)

This function is used to set the average product temperature for initial pull down and reload recovery. Press key number 4 and "tt.tx" will show on the display where x is F (Fahrenheit) or C (Celsius) and tt.t is the degrees.

Press key number 2 to increase or 3 to decrease the number by 1^0 F or 0.5^0 C. With the display showing the set point temperature you wish to use, press key number 4.

Press key number 2 to scroll to "Storage".

"Display #" - POS Temperature Display Enable Routine

This function is used to enable the POS Temperature to be displayed following the "Ice Cold COCA-COLA" POS message.

Press key number 4 and " Display X" will show on the display where x is the current setting. With "X" blinking, press key number 2 or 3 to scroll between "Display 0" disabled or not displayed and " Display 1" enabled or displayed. With the display showing the setting you wish to use, press key number 4. Press key number 1 to return to "Refrigeration". Press key number 2 to scroll to next routine.

*"Select Block 1" - BLOCK SELECTION BANK 1 ROUTINE (Config 2 must be enabled – Config 2 1)

This function is used to set selections which will be blocked during certain periods of the day. Press key number 4 will enter "Enable X".

"Enable X" - Blocking Enable Routine

This function is used to disable blocking "Enable 0" or enable blocking "Enable 1". When enabled, active selections will not be allowed to vend on the days and times programmed. Press key number 4 and the current "Enable" setting will be displayed. Press key number 2 or 3 to scroll between "Enable 0" and "Enable 1". Press key number 4 with the display blinking the setting you wish to use. Display will return to "Enable X". Press key number 2 to scroll to "Start Time".

"Start Time" - Start Selection Blocking Routine

This function is used to set the day(s) and time to start selection blocking. Press key number 4 and "Start Day" will show on the display.

"Start Day" - Day of Week Start Setting

This function is used to set the day(s) of the week to start selection blocking. Press key number 4 and "XXXXXX#" will show on the display, where XXXXXX will be the day of the week (i.e. Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday, Every day) and # is 0 = disable, 1 = enable. With the display showing the day you wish to set press key number 4. The # will start blinking. Press key number 2 or 3 to scroll between "XXXXXX0" and "XXXXXX1." Press key number 4 with the display showing the setting you wish to use. Display will return to "XXXXXX#'. Press key number 2 to scroll to the next day to set or press key number 1 to return to "Start Day". Press key number 2 to scroll to "Start Hour".

"Start Hour" - Start Hour and Minute Setting

This function is used to set the hours and minutes to start selection blocking. Press key number 4 and "hhmm" will show on the display, where hh is the hour (military time) and mm is the minute. "hh" will be blinking, indicating the hour setting may be changed. Press key number 2 to scroll from 00 to 23. With the display showing the hour you wish to start selection blocking, press key number 4. "mm" will then start blinking, indicating the minute setting may be changed. Press key number 2 to scroll from 00 to 59. With the display showing the minute you wish to start selection blocking, press key number 4. The display will return to "Hour". Press key number 1 to return to "Start Time". Press key number 2 to scroll to "Stop Time".

"Stop Time" - Stop Selection Blocking Routine

This function is used to set the day(s) and times to stop selection blocking. Press key number 4 and "Stop Day" will show on the display.

"Stop Day" - Day of Week Stop Setting

This function is used to set the days of the week to stop selection blocking and can be set in the same manner as Day of Week Start Setting.

"Stop Hour" - Stop Hour and Minute Setting

This function is used to set the hours and minutes to stop selection blocking and can be set in the same manner as Start Hour and Minute Setting.

Press key number 1 to return to "Stop Time".

Press key number 2 to scroll to "Selection".

"Selection" - Selection to Be Affected By Blocking

This function is used to set selection(s) which will be blocked during certain periods of the day. Press key number 4 and "Select A1 #" will be displayed, where # is the current setting for the selection number displayed. 0 = disabled; 1 = enabled. Press key number 2 to scroll to the key number setting you desire to change. Press key number 4 with the key number showing you wish to change (i.e. Select A1 #) and the # will start blinking. Press key number 2 or 3 to scroll between Select A1 0 and Select A1 1. Press key number 4 with the display showing the setting you wish to use. Display will return to Select A1 #. Press key number 1 to return to "Selection". Press key number 2 to scroll to "Lighting #".

“Lighting #” - Lighting / P.O.S. Display Control
This function is used to turn the lights (if supported) and P.O.S. Display Message off during selection blocking period 1. 0 = disable or on; 1 = enable or off.
Press key number 4 and the “#” will start flashing.
Press key number 2 or 3 to scroll between “Lighting 0” and “Lighting 1”. Press key number 4 with the display showing the setting you wish to use. Display will return to “Lighting X”. Press key number 1 to return to “Select Block 1”. Press key number 2 to scroll to “Select Block 2”.

*”Select Block 2" - BLOCK SELECTION BANK 2 ROUTINE

Please refer to the Programming Guide for detailed information.

Coca-Cola BevMax 4 Programming Method Quick Reference Prompts

Select Button 1: Abort/Cancel (will return to previous menu prompt or to normal door open mode).

Select Button 2: Scroll Up (forward in menu).

Select Button 3: Scroll down (backward in menu).

Select Button 4: Enter/Save/Clear (allows you to enter a specific prompt, save what you have programmed, or clear the error).

Basic Programming

Error Codes	Vend Mechanism	HORZ
		VERT
		PICKI
		PICKO
		PORT
		VS
		XHOME
		YHOME
		MOTOR
		PICKRS
		X LOST
		Y LOST
		X SWITCH
		Y SWITCH
	Control System	Door Switch
		RAM Checksum
		Scale Factor
		FRAM
		RTC
		Low Battery
		PWROUT
		FCTRY TST
	Cab Control	C Test
		E Test
		P Test
		X Test
		Y Test
		C Comms
		E Comms
		P comms
		X Comms
		Y Comms
		C Reset
		E Reset

Errors con't.	Cab Control Cont.	P Reset
		X Reset
		Y Reset
		CC Power
	Changer	Changer Comm
		Tube Sense
		Changer Inlet
		Tube Jam
		Changer ROM
		Excessive Escrow
		Coin Jam
		Low Acceptance
		Acceptor Disconnected
		Coin Routing Err
	Bill Validator	Bill Val Comm
		Bill Stack Full
		Bill Motor Error
		Bill Jam
		Bill Stack Open
		Bill Sense Err
	Card Reader	Card Reader Comm
		Card Reader #
	OLM (On line module)	On line network
		On line internal
	Remote Vend Mech	Remote Vend Comm #
		Remote Vend #
	Select/Display	Select/Display Comm
	Refrigeration	Temp Sense Err
		Temp Too Cold
		Temp Too Hot
		Not Cooling
		Health Code
		Recheck Failed

Coin Payout	5¢, 10 ¢, 25¢, etc	
Tube Fill	5¢, 10 ¢, 25¢, etc	
Test Modes	Test Vend	Colums A1,etc.
	Test Sel Switch	Selections 4, etc.
	Test Display	a thru t & A thru T
	Test Relays	Compressor #
		Fan #
		Light #
Password Entry	4,2,3,1,4	
Cash Counters	Cash Tot/###.##	
	Card Tot/###.##	
	Cash Sel A1 ###.##	
Sales Counters	Sales Tot/###	
	Drink Sales #	(if Snack Vender used)
	Snack Sales #	(if Snack Vender used)
***Price Program**	All Selections	##.##

Continued on next Page

Coca-Cola BevMax 4 Programming Method Quick Reference Prompts Continued			
Select Button 1: Abort/Cancel (will return to previous menu prompt or to normal door open mode).			
Select Button 2: Scroll Up (forward in menu).			
Select Button 3: Scroll down (backward in menu).			
Select Button 4: Enter/Save/Clear (allows you to enter a specific prompt, save what you have programmed, or clear the error).			
Basic Programming			
Sts Programming	Option 1	1 to 1	**NOTES:**
	Option 2	Tray	
	Option 3	Half Tray	
	Option 4	Groups of 3	
	Option 5	1,2; 3,4; 5,6; 7,8,9	
	Option 6	1,2,3; 4,5; 6,7; 8,9	
	Custom StS		
***Config Switches**	Config 1	Multi Price	
	Config 2	Optional features	
	Config 3	POS Message	
	Config 4	Auto View Counts	
	Config 5	Dr Sw Reset	
	Config 6	Not Used	
	Config 7	Save Credit	
	Config 8	Force Vend	
	Config 9	Multi Vend	
	Config 10	Bill Escrow	
***Correct Change**	Consumer Overpay #		
	Corr Chg Value	##.##	
	Uncond Accept	##.##	
***Preview Password**			
***Language Select**			
***Time Programming**			
***Lighting Control**			
***Refrigeration**			
***Select Block 1**			
***Select Block 2**			
***Select Discount**			
Health Safety			
Over-ride Switch			
Remote Vend Mech			
Return to Sales			
*** require password to enter**			

Major Component Description

AC DISTRIBUTION BOX

BevMax Refresh 4 5800-4/3800-4

120 VAC and 230VAC Machines

Main Power Switch or Power Supply Cord (A)

- Interrupts hot and neutral side of incoming AC Power to all components in Machine from the electrical outlet.

8 Pin JST Connector (B)

- Provides AC power in to the Power Supply, Evaporator Fan, and Refrigeration Unit (includes Condenser Fan and Defrost Control) from the AC Distribution Box.

4 Pin Molex Connector (C)

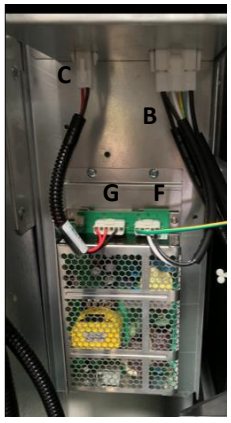
- Provides 24VDC in to AC Distribution Box Cabinet Control Environmental Board from the Power Supply.

24 Pin Molex Connector (D)

- Provides 24VDC out to the VMC, it distributes 24VDC to the Cabinet Control Port Board, 24VDC and 5VDC to the Cabinet Control Cup Board, Cabinet Control X Motor Board, Cabinet Control Y Motor Board, and 3.3VDC to the Encapsulated Temp Sensor.

3 Amp 24VDC Circuit Breakers (2) (E)

- Protect the 24VDC from the Power Supply. One is for the Cabinet and the other is for the Door electronics.



Power Supply 24V 150W

BevMax Refresh 4 5800-4/3800-4

120 VAC and 230VAC Machines

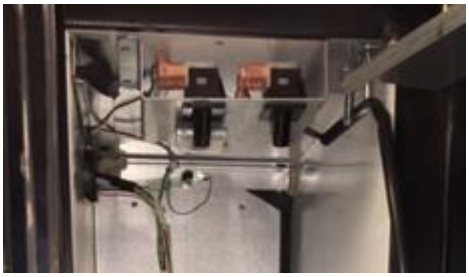
5 Pin JST Connector (F)

- Provides AC power in to the Power Supply from the AC Distribution Box.

6 Pin JST Connector (G)

- Provides 24VDC out to AC Distribution Box Cabinet Control Environmental Board from the Power Supply.

Service Door Switches



BevMax Refresh 4 5800-4/3800-4

120 VAC and 230VAC Machines

Left Switch (Motor Power Interrupt Switch)
3 Amp/24VDC – in XY Motor Circuits, Port Door Motor Circuit, and Picker Motor Circuit.

Right Switch (Door Service Switch)
.1 Amp/5VDC – in the VMC Service Switch input Circuit.

General Maintenance

The most important facets of proper care and maintenance of your Machine are the electrical power supplied, leveling, and cleanliness of the Machine.

POWER

Domestically the Machine must be connected to a dedicated 120 VAC, 15 Amp circuit (U.S. and Canada). Refer to the cabinet serial number plate to determine the correct voltage and frequency for the Machine.

CAUTION:
REMOVE POWER TO THE AC DISTRIBUTION BOX BEFORE CLEANING OR WHEN ANY ELECTRICAL COMPONENTS ARE CONNECTED / DISCONNECTED FOR TESTING OR REPLACEMENT.

Periodically inspect the Power Supply Cord for damage. If the Cord or Cord Plug is worn or damaged, it must be replaced with a Power Supply Cord of the same type, size and specification as originally provided with the Machine.

DO NOT USE THE VENDING MACHINE UNTIL THE WORN OR DAMAGED POWER SUPPLY CORD IS REPLACED.

The Ground Fault Circuit Interrupter (GFCI) for Domestic Venders must be tested frequently and before each use in accordance with the instructions provided on the GFCI device. **IF THE GFCI DOES NOT PASS THE TEST, DO NOT USE THE MACHINE.** Unplug the Power Supply Cord from the receptacle and call the Crane Merchandising Systems Technical Support Group for assistance at 1-803-266-5001.

CAUTION:
REMOVE POWER TO THE AC DISTRIBUTION BOX BEFORE CLEANING OR WHEN ANY ELECTRICAL COMPONENTS ARE CONNECTED / DISCONNECTED FOR TESTING OR REPLACEMENT.

CLEANING

DO NOT USE A WATER JET OR NOZZLE TO CLEAN THE VENDER.

GLASS DOOR

The Display glass should be cleaned inside and out with paper towels and glass or non-abrasive all-purpose cleaner. The gasket around the product door should be wiped down using warm water, any mild general purpose, non-abrasive cleaner and a soft towel. Never lubricate the gasket and always check for cracking or deformities which may cause leaks. Replace if necessary.

TRAYS / TRAY INSERTS

The Trays and Tray inserts should be cleaned periodically using warm water and a mild general purpose, non-abrasive cleaner. Care should be taken to ensure debris does not enter the gear box assemblies. **DO NOT USE SOLVENTS OR ABRASIVE MATERIALS TO CLEAN ANY PORTION OF THE TRAY.**

DOOR LIGHTING

The Machine is designed with an energy efficient LED Lighting System. To ensure continued reliable operation, replace only with factory OEM replacement LED light assemblies.

SLIDE/PUSHER ASSEMBLY

The Slide/Pusher assembly should be cleaned periodically using warm water and any mild general-purpose non-abrasive cleaner. After drying, the Slide assembly needs to have a coat of approved Food Grade Silicone based Release Agent from ECO-Lab/Kay Chemicals applied. Care should be taken to ensure debris does not enter the gear box assemblies. **DO NOT USE SOLVENTS OR ABRASIVE MATERIALS TO CLEAN ANY PORTION OF THE TRAY.**

CABINET

Wash the Cabinet with a good detergent or soap mixed in warm water. Wax the Vender often with a good grade of automobile wax. Any corrosion inside the Vender should be removed with fine steel wool and the area should be painted with white paint. Repair any scratches on painted surfaces to prevent corrosion.

DRAIN PAN, DRAIN TUBE, AND DRAIN PAN SOAKERS

To prevent mold and mildew growth, and to avoid personal injury or property damage, the Drain Pan and Drain Tube must be properly aligned and clear of debris. Ensure nothing obstructs the Drain Tube to prevent the flow of condensate to the Drain Pan and Drain Pan Soakers. Periodically inspect the Drain Pan, Drain Tube, and Drain Pan Soakers for alignment and the presence of dirt, debris, mold, and mildew. Clean as needed. Replace Drain Pan Soakers as needed.

WARNING

THE COMPRESSOR ELECTRICAL CIRCUIT IS ALWAYS LIVE WHEN THE PLUG IS CONNECTED TO AN ELECTRICAL OUTLET.

REFRIGERATION CONDENSER

Clean the Condenser periodically of dirt or lint build-up. Remove the Condenser clean-out cover by turning counter-clockwise, this provides access to the Condenser surface. Remove build up with a brush or vacuum, or blow the dirt out of the Condenser with compressed air and approved safety nozzle. Replace the Condenser cover by turning clockwise until it stops. Confirm the sealing gasket on the cover is properly seated to prevent air infiltration. Ensure nothing obstructs air intake at the bottom of the main door and nothing obstructs air exhaust at the rear of the Cabinet.

COIN ACCEPTOR, BILL ACCEPTOR AND CASHLESS DEVICES

Follow the Coin Acceptor, Bill Acceptor and Cashless Device Manufacturer's instructions.

LUBRICATING THE VENDER

The Vender Refrigeration System does not require any field lubrication. The hermetic Refrigeration System and Fan Motors are manufactured with lifetime lubrication.

NEW VMC INSTALLATION

Disconnect power to the Vender when replacing the VMC. Once all connectors are positioned on the new VMC apply power to the Vender. To Set Model Number. On power up the Display will show

NO MODEL SET
A=select *=save

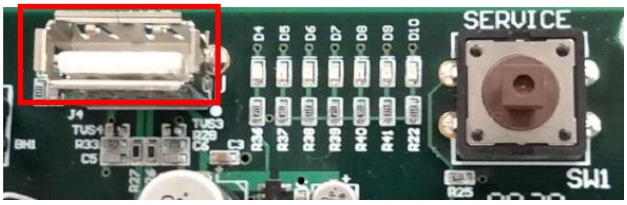
Press Key A to scroll through available model numbers 5800-4, 3800-4, 5800-E4 (export), 3800-E4 (export). With the model number of the vender in the Display you are installing the VMC in, press the "✵" Key to save.

VMC SOFTWARE UPDATE PROCEDURE

The VMC is flash programmable. Note: Updating the VMC is done with a USB flash drive. There is no menu to update the VMC Board software. The following information describes how to update the VMC software. All new software revisions to the peripheral Cabinet Control Boards (AC Distribution Box Cabinet Control Environmental Board, Cabinet Control X Motor Board, Cabinet Control Y Motor Board, Cabinet Control Port Board, & Cabinet Control Cup Board) will automatically update via the VMC. **Important**: USB's containing software are sensitive to Electrostatic Discharge (ESD). Failure to handle the USB carefully could cause damage, which may result in a Vender being put out of service.

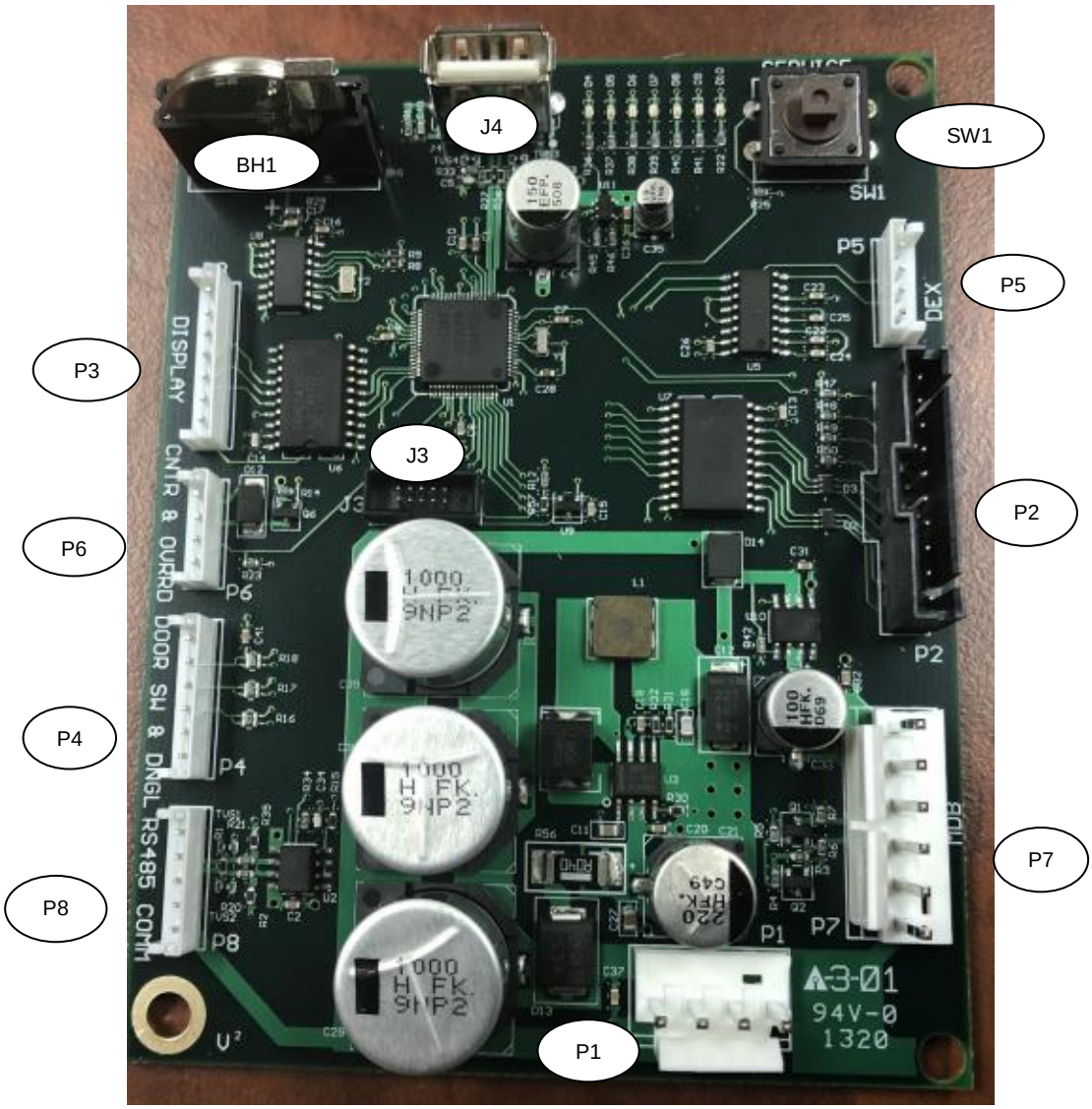
ALWAYS GROUND YOURSELF ON THE VENDER CABINET BEFORE INSTALLING OR REMOVING THE USB FROM THE VMC. A USB CAN BE USED TO PROGRAM MANY VENDERS. ALWAYS TURN POWER OFF BEFORE INSTALLING USB IN THE VMC. Important Notes: Use the programming section of the manual to program the Vender.

The VMC includes 7 Diagnostics lights providing information on operational status and where to focus problem solving efforts.



1. USB Software Installation:
    a. Power down the Vender. Ground yourself on the Vender Cabinet.
    b. Install the USB in the VMC USB Port.
    c. Press and hold the VMC Service Switch (SW1). While holding the Service Switch turn the power on to Vender.
    d. Once the Machine powers on, release the Service Switch.
    e. During software updating the VMC 7 Diagnostic lights (D4 to D10) will flash on and off for approximately 15 seconds.
    f. Once install is complete all 7 VMC Diagnostic lights will be flashing on and off.
    g. Remove the USB flash drive from the VMC. Note: power does not need to be off to remove the USB.
    h. If only D4 and D10 Diagnostic lights are on at this time, the install was not completed. Repeat steps a. through h.

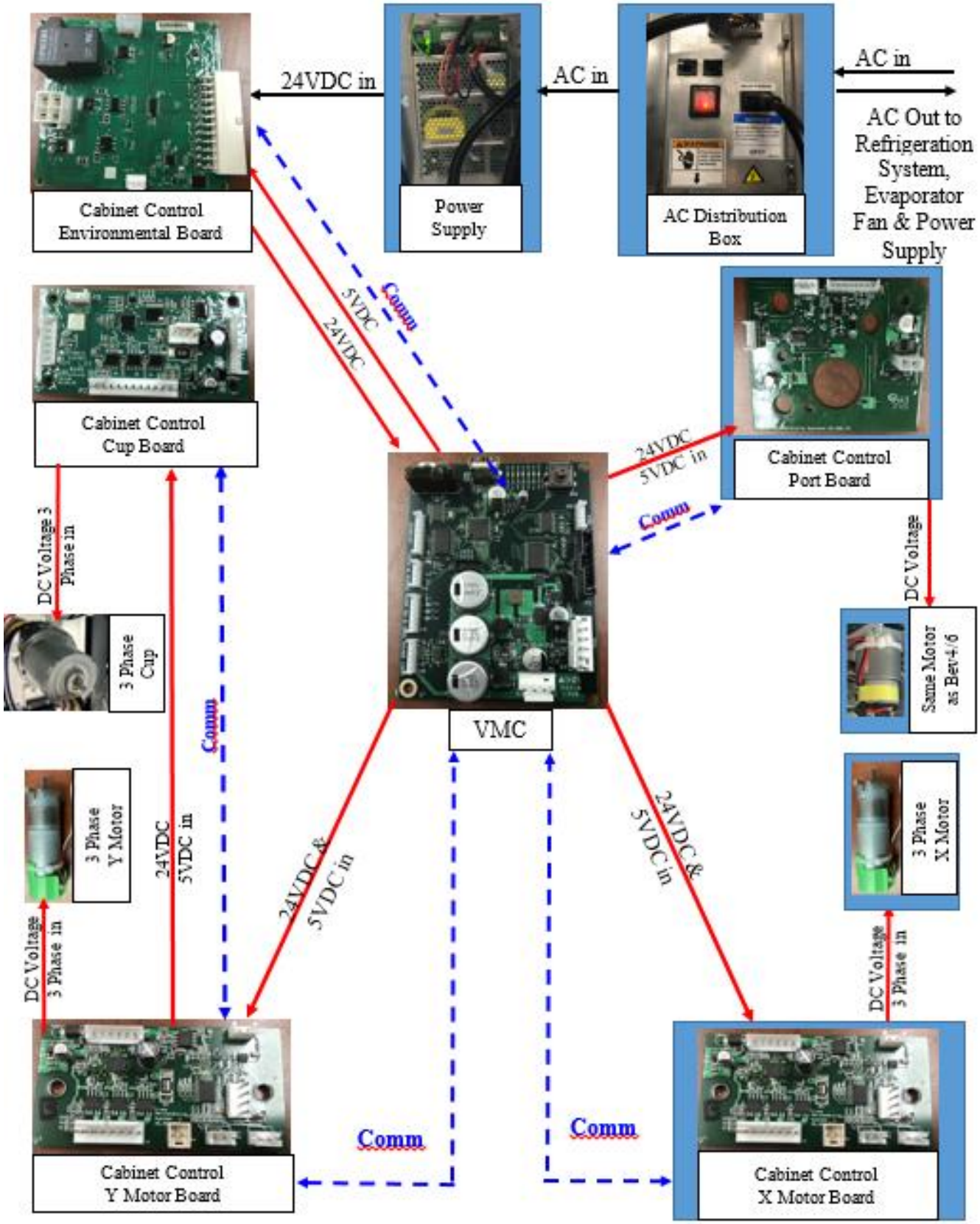
2020 New Electronics Platform VMC
BevMax 4 Classic 5800-4/3800-4
BevMax 4 Classic 5800-E4/3800-E4
Part # 400069



2020 New Electronics Platform BevMax 4 Classic VMC (400069) Connections

CONNECTION BevMax 4	# of Pins	DESCRIPTION	CONNECTION BevMax 4	# of Pins	DESCRIPTION
J4	-	USB Port	SW1	-	Service Switch
BH1	-	Battery	P5	4	DEX
P3	7	Display	P2	10	Keypad
P6	4	Electronic Counter & Override Switch	P7	6	MDB
P4	6	Door Switch & Dongle Harness	P1	4	Power from AC Distribution Box
P8	5	RS 485 Comm	J3	10	Supplier Programming Connector

New Electronics Platform BevMax 4 Power/Communication Flow



NEW ELECTRONICS PLATFORM BEVMAX 4 TROUBLESHOOTING
TROUBLESHOOTING DIAGNOSTIC LIGHTS

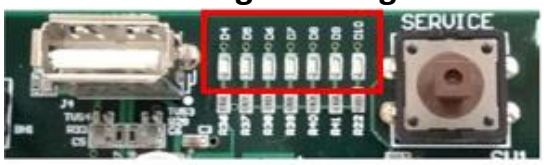
With the New Electronics Platform BevMax 4, troubleshooting is simpler, but it is important to know how to follow the clues the Vending Machine is presenting. Utilizing error codes while focusing on the Cabinet Control Boards controlling each motor or main component will lead you to a conclusion quickly.

The inner workings of the New Electronics Platform BevMax 4 are greatly simplified. The AC Distribution Box sends AC Voltage through a Cabinet Control Environmental Board contained within the AC Distribution Box to the Refrigeration Unit, Evaporator Fan Motor, and the Power Supply.
In turn, the Power Supply returns 24VDC to the Cabinet Control Environmental Board within the AC Distribution Box, which sends both 24VDC and 5VDC to the Vending Machine Controller (VMC). The VMC then sends both 24VDC and 5VDC to the X, Y, Cup, and Port Cabinet Control Boards. These Cabinet Control Boards run on 5VDC while allowing 24VDC to pass through to power the Motor or main component each controls.

RS 485 Communication Harness A – White wire
RS 485 Communication Harness B – Blue wire
24VDC Harness – Red/Green wire
5VDC Harness – Yellow wire
Ground Harness – Black wire

There are 7 Diagnostic Lights across the top of the VMC. These inform the technician of the state of components when in Normal Mode, Port Test Mode, Cup Test Mode, and Position Test Mode. Use the key to decipher the meaning of the lights to point you in the right direction immediately.

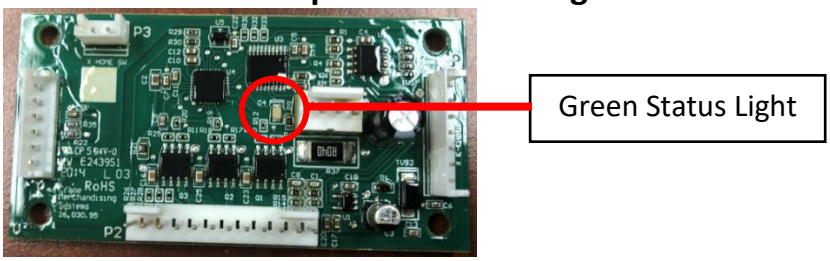
VMC Diagnostic Lights



Mode	VMC Diagnostic Indicator Lights						
	D4	D5	D6	D7	D8	D9	D10
Normal Door Open	USB Power	**Heartbeat**	MDB	*Keypad	**Picker Home**	X Home	Y Home
Position Test	USB Power	**Picker Home**	X Home	Y Home			
Cup Test	USB Power	**Picker Home**	Cup Sensor	Picker Out			
Port Test	USB Power	**Port Sensor**	Port Open	Port Closed			

* Green light is off until a key on the Keypad is pressed.

Cabinet Control Boards Green Status Light
Example - Cabinet Control Cup Board Status Light



Each of the 5 Cabinet Control Boards has a Green Status Light. A fast blinking Green status light (on and off 7 times per second) indicates that the Cabinet Control Board is receiving communication from the VMC and sending a response. Note: Just because a response is being sent to the VMC doesn't necessarily mean the VMC is receiving it. There could be some defect that prevents the Cabinet Control Board response from reaching the VMC. A Green Status Light On solid indicates the Cabinet Control Board has power but is not receiving communication from the VMC, indicating there is a Cabinet Control Board, VMC, or harness connection problem. No status light indicates the peripheral Cabinet Control Board is not receiving 5VDC or Communication. Refer to troubleshooting for steps to determine possible cause.

Peripheral Cabinet Control Boards Green Status Light provide additional various lighting patters used to indicate the status of the individual peripheral Cabinet Control Boards. They include:

Power on / Reset – a slow brightening and then slow diming of the Green status light that takes 3 to 5 seconds to complete. This happens once each time the Board is powered on and/or reset. If the Green status light slowly brightens and dims continuously indicates the software was not loaded properly.

Heartbeat – a heartbeat of the Green status light starts right after the "Power on / reset" indication and continues until the peripheral first receives a message from the VMC. Once a message is received from the VMC the heartbeat will not be shown again. Note: on a New Electronics Platform BevMax 4 Classic Machine, the heartbeat is almost never actually seen because the VMC starts talking to the peripheral Cabinet Control Boards within a few seconds of powering on.

Fast blinking – a fast blinking Green status light (on and off approximately 7 times per second) indicates that the peripheral Cabinet Control Board is receiving communication from the VMC and sending a response. Note: Just because a response is being sent to the VMC doesn't necessarily mean the VMC is receiving it. There could be some defect that prevents the peripheral Cabinet Control Board response from reaching the VMC.

The following are some failure modes you may experience with the New Electronics Platform BevMax 4 Classic Machine and the troubleshooting steps to identify and resolve the issue using the VMC Diagnostic Lights.

No Power to the Vender

1. If the Vending Machine does not have power, check the following:
   a. The Vender Power Supply Cord is plugged into the electrical outlet.
   b. The Power Supply Cord GFCI is not tripped (Domestic Venders).
   c. The Power Supply Cord is plugged into the AC Distribution Box.
   d. The AC Distribution Box Lighted On/Off Switch is in the On position.
   e. The AC Distribution Box Lighted On/Off switch is illuminated green.
2. Upon completing A through D, if the AC Distribution Box Lighted On/Off Switch is not illuminated green, check the outlet voltage for required AC voltage.
   a. If outlet voltage is good, change the AC Distribution Box.

Electrical Outlet.

GFCI.
(Domestic Machines)

AC Distribution Box.

No Vertical (Y) and No Horizontal (X) Movement

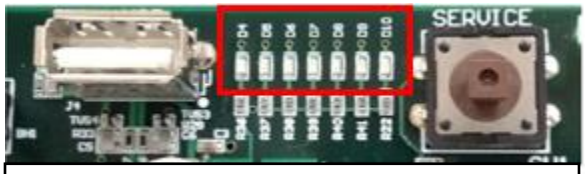
There are only a few reasons the peripheral Cabinet Control Boards will not send power to both the X and Y Motors deliberately.

1. A left Motor Power Interrupt Door Switch issue.
    a. Check its wiring from the Door Switch to the VMC. Replace wiring as necessary.
    b. If wiring is connected and not damaged Ohm the Switch. Replace as necessary.
    c. If the Door Switch tests good check for 24VDC to the Switch from the VMC.
    d. Replace VMC if necessary.

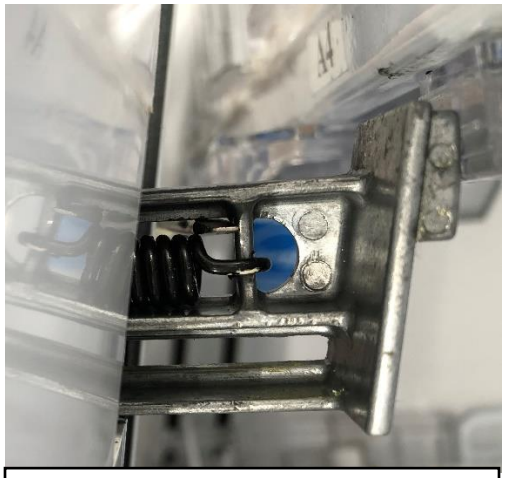
View of Left (Motor Power Interrupt) Door Switch.

2. **A Picker error.**
    a. Before replacing any Control Boards:
        1)Check that the Cabinet Control Cup Board is getting 5VDC from the VMC.
        2)Ohm the Communication wire from the Cabinet Control Cup Board to the VMC.
        3)Check for Cabinet Control Errors “C Comms” Error in programming Test Mode, List Errors.
        4)Replace the Cabinet Control Cup Board.
    b. Remove the Cup cover and ensure the Cabinet Control Cup Board Green status light is flashing rapidly. If not, check the wire harness from the Cabinet Control Cup Board to the Y E-Chain. If there is no problem then check the harness from the Y E-Chain where it plugs into the Y Motor Board. If there is no problem replace the Cabinet Control Cup Board.
    c. Ensure Cup Picker is not stuck in the out position.

d. If the Cup Picker is stuck in the out position, go to Position Test and press “0” to cycle it back to the home position. Once back at the home position ensure the VMC D5 Picker Home Switch Diagnostic Red Light is On.



VMC Diagnostic Lights.



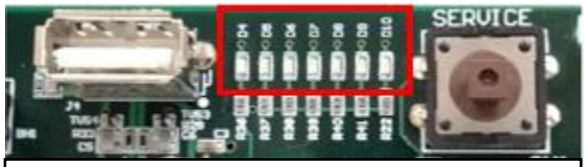
Cup Picker/Plunger.

Cabinet Control Cup Board, Brushless Cup Motor, Cup Sensor.

e. If the Picker is not (or no longer) stuck in the out position and the VMC D5 Picker Home Switch Diagnostic Red Light is not On while in Position Test, verify the Plunger Home Spring is in the cavity of the Plunger Assembly. Replace as necessary.
f. If the Picker Home Spring is present and the VMC D5 Picker Home Switch Diagnostic Red Light is not On while in Position Test, the Picker Home Switch is not working. Replace as necessary.
g. Replace the Cup Assembly.

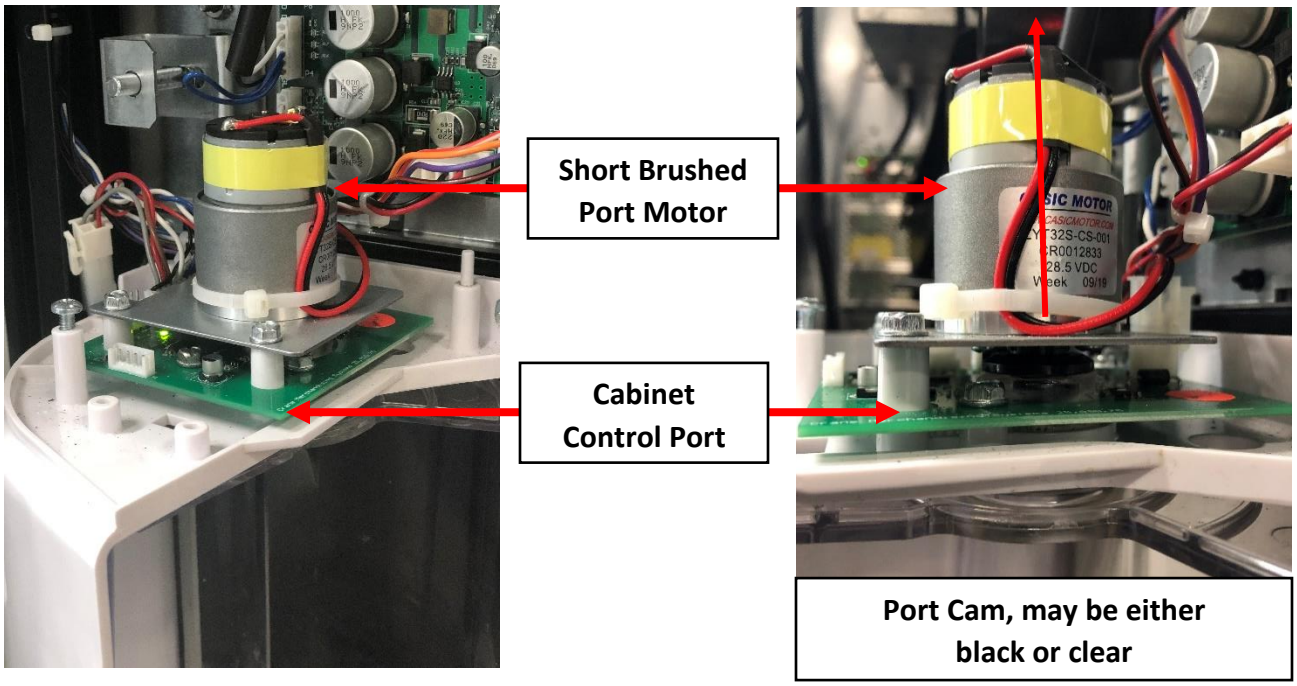
3. A Port Error.

a. Before replacing any Control Boards:
   1)Check that the Cabinet Control Port Board is getting 5VDC from the VMC.
   2)Ohm the Communication wire from the Cabinet Control Port Board to the VMC.
   3)Check for Cabinet Control Errors “P Comms” Error in programming Test Mode, List Errors.
   4)Replace the Cabinet Control Port Board.
b. Remove top Port Motor cover and ensure the Cabinet Control Port Board Green status light is flashing rapidly. If not, replace the Cabinet Control Port Board.
c. Go to Port Test and ensure the VMC D7 Port Closed Switch Diagnostic Green Light is On.
d. If the VMC D7 Port Closed Switch Diagnostic Green Light is not On, ensure the clear Port Door if fully closed.
e. If the Port Door is fully closed and the VMC D7 Port Closed Switch Diagnostic Green Light is not On, change the Cabinet Control Port Board.



VMC Diagnostic Lights.

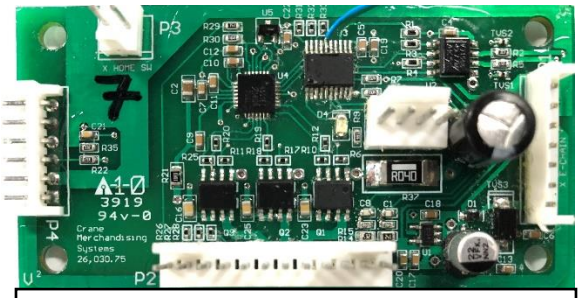
f. If the Port Door is not fully closing, check for an obstruction.
g. If no obstruction, go to Port Test and try to open and close the Port Door. In Port Test, the Port Door should open and close quickly with no bounce back.
h. If there is bounce back, slow response, or just the sound of the Port Motor turning, check the Port Cam on the Port Motor shaft for breakage. Replace as necessary.



No Vertical (Y) Movement

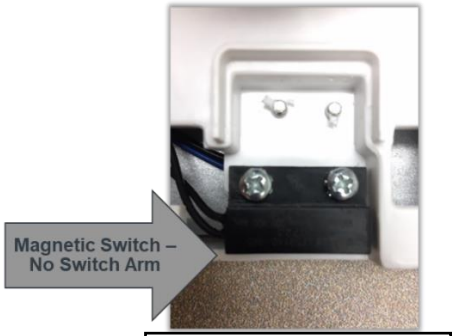
1. A left Motor Power Interrupt Door Switch issue.
   a. Check its wiring from the Door Switch to the Cabinet Control Environmental Board. Replace wiring as necessary.
   b. If wiring is connected and not damaged Ohm the Switch. Replace as necessary.
   c. If the Door Switch tests good check for 24VDC to the Switch from the Cabinet Control Environmental Board.
      1)Replace the Door Switch if necessary.
2. Insure the Y Belt Cover is installed and secured.
3. Try to raise the Delivery Cup with your hands to the top then back down to the bottom. If you feel an obstruction, remove the Y Belt Cover and check for a blockage or damaged rollers.
4. Before replacing any Control Boards:
   a. Check that the Cabinet Control Y Motor Board is getting 5VDC from the VMC.
   b. Ohm the Communication wire from the Cabinet Control Y Motor Board to the VMC.
   c. Check for Cabinet Control Errors “Y Comms” Error in programming Test Mode, List Errors.
   d. Replace the Cabinet Control Y Motor Board.

5. Remove the Cabinet Control Y Motor Board Cover and see if the Cabinet Control Y Motor Board Green status light is rapidly flashing.
   a. If light is rapidly flashing, the Cabinet Control Y Motor Board is good.
   b. If the Green status light is On solid, check the other Cabinet Control Boards, if their Green status light is also On check the VMC harnesses. If the other Cabinet Control Board Green status lights are rapidly flashing, check the harness to the Cabinet Control Y Motor Board. If the harness is OK and the Cabinet Control Cup Board Green status light is flashing rapidly replace the Cabinet Control Y Motor Board.
   c. If there is no Green status light, check another Cabinet Control Board, if it's Green status light is rapidly flashing, check the harness to the Cabinet Control Y Motor Board. If the harness is OK change the Cabinet Control Y Motor Board.



Cabinet Control Y Motor Board.

6. Still no Y movement? In Normal Mode, is the VMC D7 Y Home Magnetic Switch Diagnostic Green Light on?
   a. If yes, the Y Home Magnetic Switch on the bottom of the Cup Assembly is activated and communicating.
   b. If no, ensure the Cup Assembly is on the floor (check for blockage preventing it from reaching home position). Hold a magnet against the bottom of the Cup Assembly to test if the Y Home Magnetic Switch activates and the VMC D7 Diagnostic Green Light turns On.
      1) If the VMC D7 Diagnostic Green Light does not turn on ensure the magnet is in place on the X Bottom Carriage, if magnet is in place replace the Y Home Magnetic Switch in the Cup Assembly.
7. Still no Y movement? Check the Y Home switch connector is plugged in. Check if the Y Motor is plugged in correctly. Replace the Y Motor.



Y Home Switch.

Y or X Brushless Motor.

No Horizontal (X) Movement

1. A left Motor Power Interrupt Door Switch issue.
    a. Check its wiring from the Door Switch to the Cabinet Control Environmental Board. Replace wiring or Door Switch as necessary.
    b. If wiring is connected and not damaged Ohm the Switch. Replace as necessary.
    c. If the Door Switch tests good check for 24VDC to the Switch from the Cabinet Control Environmental Board.
        1) Check the power supply with a volt meter and verify 24VDC .
2. Try to move the Vend Mechanism with your hands to the right wall then back to the left wall. If you feel an obstruction, remove the bottom plate and check for a blockage (i.e. syrup, screw, debris, etc.) or damaged rollers.
3. Before replacing any Control Boards:
    a. Check that the Cabinet Control X Motor Board is getting 5VDC from the Cabinet Control Environmental Board.
    b. Ohm the Communication wire from the Cabinet Control X Motor Board to the VMC.
    c. Check for Cabinet Control Errors “X Comms” Error in programming Test Mode, List Errors.
    d. Check the harness to the X Cabinet Control X Motor Board.
4. Remove the Cabinet Control X Motor Board Cover and see if the Green status light is rapidly flashing.
    a. If light is rapidly flashing, the Cabinet Control X Motor Board is good.
    b. If the Green status light is On solid, check the other Cabinet Control Boards, if their Green status light is also On replace the VMC. If the other Cabinet Control Board Green status lights are rapidly flashing, replace the Cabinet Control X Motor Board.
    c. If there is no Green status light, check another Cabinet Control Board, if it’s Green status light is rapidly flashing, change the Cabinet Control X Motor Board.

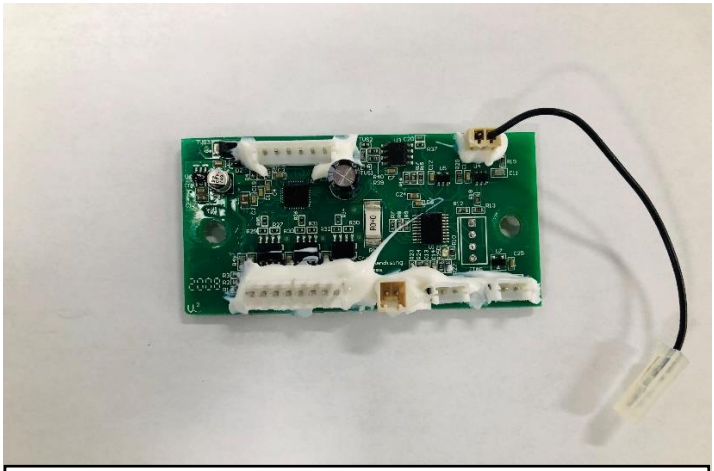
Cabinet Control X Motor Board.

5. Still no X movement? In Normal Mode, is the VMC D9 X Home Switch Diagnostic Yellow Light on?
    a. If yes, the X Home Switch at the top left of XY Assembly behind the Y Motor is activated against the left wall and communicating.
    b. If no, ensure the Vend Mechanism is all the way left (check for blockage preventing it from reaching home position). Press the X Home Switch with your finger to test if the Switch activates and the VMC D9 Diagnostic Yellow Light turns On.
        1) If the VMC D6 Diagnostic Yellow Light does not turn On replace the X Home Switch.
6. Still no X movement? Replace the X Motor.

X or Y Brushless Motor.

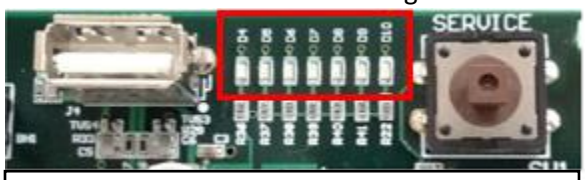
The Cup Picker/Plunger will not Cycle to Eject an Item from the Gate

1. A left Motor Power Interrupt Door Switch issue.
   a. Check its wiring from the Door Switch to the VMC. Replace wiring as necessary.
   b. If wiring is connected and not damaged Ohm the Switch. Replace as necessary.
   c. If the Door Switch tests good check for 24VDC to the Switch from the VMC.
      1)Replace VMC if necessary.
2. Before replacing any Control Boards:
   a. Check that the Cabinet Control Cup Board is getting 5VDC from the Cabinet Control Environmental Board through the Y-Motor Control Board.
   b. Ohm the Communication wire from the Cabinet Control Cup Board through the Y E-Chain.
   c. Check for Cabinet Control Errors “C Comms” Error in programming Test Mode, List Errors.
   d. Check the harness connections between Cabinet Control Y Motor Board to the Y E-Chain and the Cabinet Control Cup Board. Also check the harness connection between the Y E-Chain and the Cabinet Control Y Motor Board. Replace the Cabinet Control Cup Board.
3. Remove Cup Base Cover and ensure the Cabinet Control Cup Board Green status light is flashing rapidly.
   a. If light is rapidly flashing, the Cabinet Control Cup Board is good.
   b. If the Green status light is On solid, check the other Cabinet Control Boards, if their Green status light is also On check the X/Y E-Chain harness, look for pinched or damaged wire. Check the 5VDC (Yellow) wire and verify it has 5VDC in respect to Ground. If the other Cabinet Control Board Green status lights are rapidly flashing, replace the Cabinet Control Cup Board.
   c. If there is no Green status light, check another Cabinet Control Board, if their Green status light is rapidly flashing, change the Cabinet Control Cup Board.



Cabinet Control Cup Board.

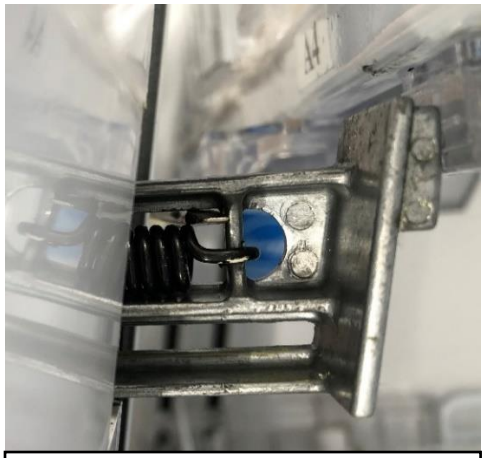
4. Picker still will not cycle, with the left Motor Power Interrupt Door Switch activated and the Picker at home position inside the Cup, go to Cup Test and ensure the VMC D5 Picker Home Switch Diagnostic Red Light is On, and that the VMC D7 Picker Out Switch Diagnostic Green Light is Off.



VMC Diagnostic Lights.

5. With the left Motor Power Interrupt Door Switch activated the Picker at home position inside the Cup, if the VMC D5 Picker Home Switch Diagnostic Red Light is Off, and/or the VMC D7 Picker Out Switch Diagnostic Green Light is On, check the Switch wiring inside the Cup. Make sure the Switches are plugged into the Cabinet Control Cup Board and that they are not reversed. Ohm the Switches to verify operation. If the Switches are OK and plugged in correctly replace the Cup Assembly.
6. If the VMC Diagnostic Lights are correct, with the left Motor Power Interrupt Door Switch activated stay in Position Test and see if the Picker will cycle and return to the home position when pressing "0" Key on Keypad.
   a. If the picker will not cycle in Position Test, check to see if the Motor is plugged in correctly. Check for Motor power to the Cabinet Control Cup Board, the Red/Green wire should have 24VDC. If OK, replace the Cup Assembly.

   b. If the Picker does cycle in Position Test, go to Cup Test.
      1) Test the Cup Sensor to see if it can detect an item by illuminating VMC D6 Cup Sensor Diagnostic Yellow Light. If the Cup Sensor cannot detect an item in this test, turn the Cup Sensor Off in Cup Sensor On/Off menu.
      2) If the Picker now cycles at the gate through a Test Vend or normal purchase, verify the electrode wire is plugged in. If OK replace the Cabinet Control Cup Board and turn the Cup Sensor back On in Cup Sensor On/Off menu.
      3) If the Picker still will not cycle, replace the Cup Assembly.



Cup Picker/Plunger.

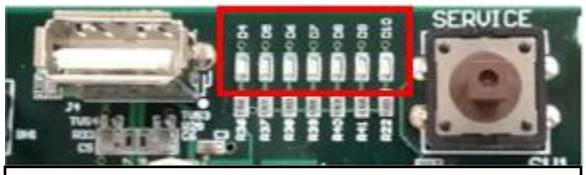
Cabinet Control Cup Board, Brushless Cup Motor, Cup Sensor.

The Port Door will not Open/Close

1. A left Motor Power Interrupt Door Switch issue.
   a. Check its wiring from the Door Switch to the Cabinet Control Environmental Board. Replace wiring as necessary.
   b. If wiring is connected and not damaged Ohm the Switch. Replace as necessary.
   c. If the Door Switch tests good check for 24VDC to the Switch from the Cabinet Control Environmental Board.
      1)Check wiring from the Power Supply to the Cabinet Control Environmental Board. Verify the Circuit Breakers are reset.

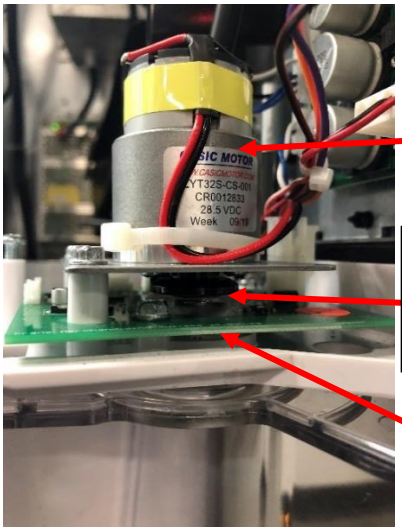
2)Check Motor power wiring to the Cabinet Control Port Board.
3)Verify the Port Motor is plugged in.
4)Replace Cabinet Control Port Board.

2. Before replacing any Control Boards:
    a. Check that the Cabinet Control Port Board is getting 5VDC from the VMC.
    b. Ohm the Communication wire from the Cabinet Control Port Board to the VMC.
    c. Check for Cabinet Control Errors “P Comms” Error in programming Error Codes.
3. Remove Port Motor Cover and ensure the Cabinet Control Port Board Green status light is flashing rapidly.
    a. If light is rapidly flashing, the Cabinet Control Port Board is good.
    b. If the Green status light is On solid, check the other Cabinet Control Boards, if their Green status light is also On solid check the Communication (Blue/White) wires. If the other Cabinet Control Board Green status lights are rapidly flashing, replace the Cabinet Control Port Board.
    c. If there is no Green status light, check another Cabinet Control Board, if it’s Green status light is rapidly flashing, change the Cabinet Control Port Board.
4. Port Door still will not Open/Close, go to Port Test and ensure the VMC D7 Port Closed Diagnostic Green Light is On.
    a. If the VMC D7 Port Closed Switch Diagnostic Green Light is Off, ensure the clear Port Door if fully closed.
    b. Before replacing the Cabinet Control Port Board check that the Port Cam is installed, not damaged, and the magnet is in position in end of the Port Cam.
    c. If the Port Door is fully closed and the VMC D7 Port Closed Switch Diagnostic Green Light is Off, change the Cabinet Control Port Board.



VMC Diagnostic Lights.

Cabinet Control Port Board.



Brushed Short Port Motor.

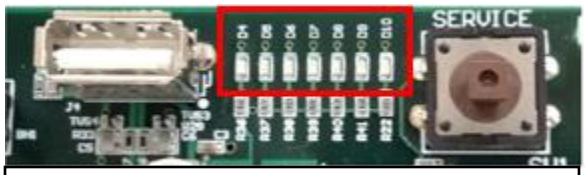
Port Cam, may be either Black or Clear.

Cabinet Control Port Board.

5. If the Port Door is not fully closing, check for an obstruction.
    a. If no obstruction, go to Port Test and try to open and close the Port Door. In Port Test, the Port Door should open and close with no bounce back.
    b. If there is bounce back, slow response, or just the sound of the Port Motor turning, check the Port Cam on the Port Motor shaft for breakage.
6. If there is still no Port Door movement, change the Port Assembly.

The Port Door Stays Open, Display says "Please Remove Product"

1. Before replacing any Control Boards:
    a. Check that the Cabinet Control Port Board is getting 5VDC from the VMC.
    b. Ohm the Communication wire from the Cabinet Control Port Board to the VMC.
    c. Check for Cabinet Control Errors "P Comms" in Error Codes.
    d. Replace the Cabinet Control Port Board.
2. Remove Port Motor Cover and ensure the Cabinet Control Port Board Green status light is flashing rapidly.
    a. If light is rapidly flashing, the Cabinet Control Port Board is good.
    b. If the Green status light is On solid, check the other Cabinet Control Boards, if their Green status light is also On solid replace the VMC. If the other Cabinet Control Board Green status lights are rapidly flashing, replace the Cabinet Control Port Board.
    c. If there is no Green status light, check another Cabinet Control Board, if their Green status light are rapidly flashing, change the Cabinet Control Port Board.
3. If Port Door is still open and Display still reads "Please Remove Product", ensure the Port Product Detection Sensor Wire (black wire connected at bottom of Port Assembly) is connected and tight to the FR4 Port Sensor.
4. Go to Port Test and test the Port Sensor. Note: Press C to enable Port Sensor On prior to performing Port Sensor Test.



VMC Diagnostic Lights.

    a. In Port Test, the last number on the Display should be "0" with <u>nothing</u> in the Port. If the last number is "1" with nothing in the Port, change the FR4 Port Sensor.
    b. In Port Test, the last number on the Display should be "1" when an <u>item is placed</u> in the Port. If the last number is "0" with an item in the Port, change the FR4 Port Sensor.
5. Additionally, when in Port Test, the VMC D5 Port Sensor Diagnostic Red Light should illuminate with something in the Port.
    a. If the VMC D5 Port Sensor Diagnostic Red Light is On with nothing in the Port, or is Off with something in the Port, replace the FR4 Port Sensor.

Cabinet Control Port Board.

FR4 Port Sensor.

TROUBLESHOOTING TABLES

COIN ACCEPTANCE ISSUES

PROBLEM	CAUSE	FIX
Coins Returned to Customer With No Credit Issued	• Coin Jam in Mech. • Flight Deck dirty. • No Power to Mech. • Coin Return Lever activated. • Vender in Service Mode. • Select Block Enabled • No Vend# Enabled • Defective Coin Mech	• Clear Jam and Test. • Clean Flight Deck. • Check VMC D6 Yellow Diagnostic Light is On when Service Door is opened. Check Harness from Mech to VMC. • Adjust Coin Return Lever. • Close Service Door. • Disable Select Block. • Disable No Vend# • Replace Mech.
Will Not Payback Coins	• No Power to Mech. • No Coins in Tubes. • Tubes Programmed incorrectly. • Defective Coin Mech.	• Check VMC D6 Yellow Diagnostic Light is On when Service Door is opened. Check Harness from Mech to VMC. • Fill Coin Tubes with Coins. • Reprogram per Manufacturer recommendation. • Replace Coin Mech.

BILL ACCEPTANCE ISSUES

PROBLEM	CAUSE	FIX
Bill Acceptor will not run.	• Prices / tube cash conditions. • No Power to Bill Acceptor. • Vender in Service Mode. • Select Block Enabled • No Vend# Enabled • Defective Bill Acceptor.	• Check Mech Tubes. • Check VMC D6 Yellow Diagnostic Light is On when Service Door is opened. Check Harness from Acceptor to MDB Harness to VMC. • Close Service Door and test bill acceptance. • Disable Select Block. • Disable No Vend# • Replace Bill Acceptor.
	•	•

Takes Bill in then rejects it.	• Acceptor Stacker full. • Defective Acceptor.	• Remove bills from Stacker. • Check Bill Acceptor. Replace Bill Acceptor.
Stacks Bill while in Escrow Mode.	• Max Price Not Yet Reached. • Bill Acceptor not capable of escrowing bills.	• Working as designed. • Replace Bill Acceptor with one that allows escrow of bills.
Bill Error listed in Error Codes.	• Communication Error with Bill Acceptor. • Bill Acceptor Reported Error.	• Check VMC D6 Yellow Diagnostic Light is On when Service Door is opened. • Check Harness from Bill Acceptor to MDB Harness to VMC. • Replace Bill Acceptor.
Takes Bill, gives No Credit.	• Harness. • Acceptor. • VMC.	• Check VMC D6 Yellow Diagnostic Light is On when Service Door is opened. Check Harness from Bill Acceptor to MDB Harness to VMC, replace as needed. • Replace VMC.

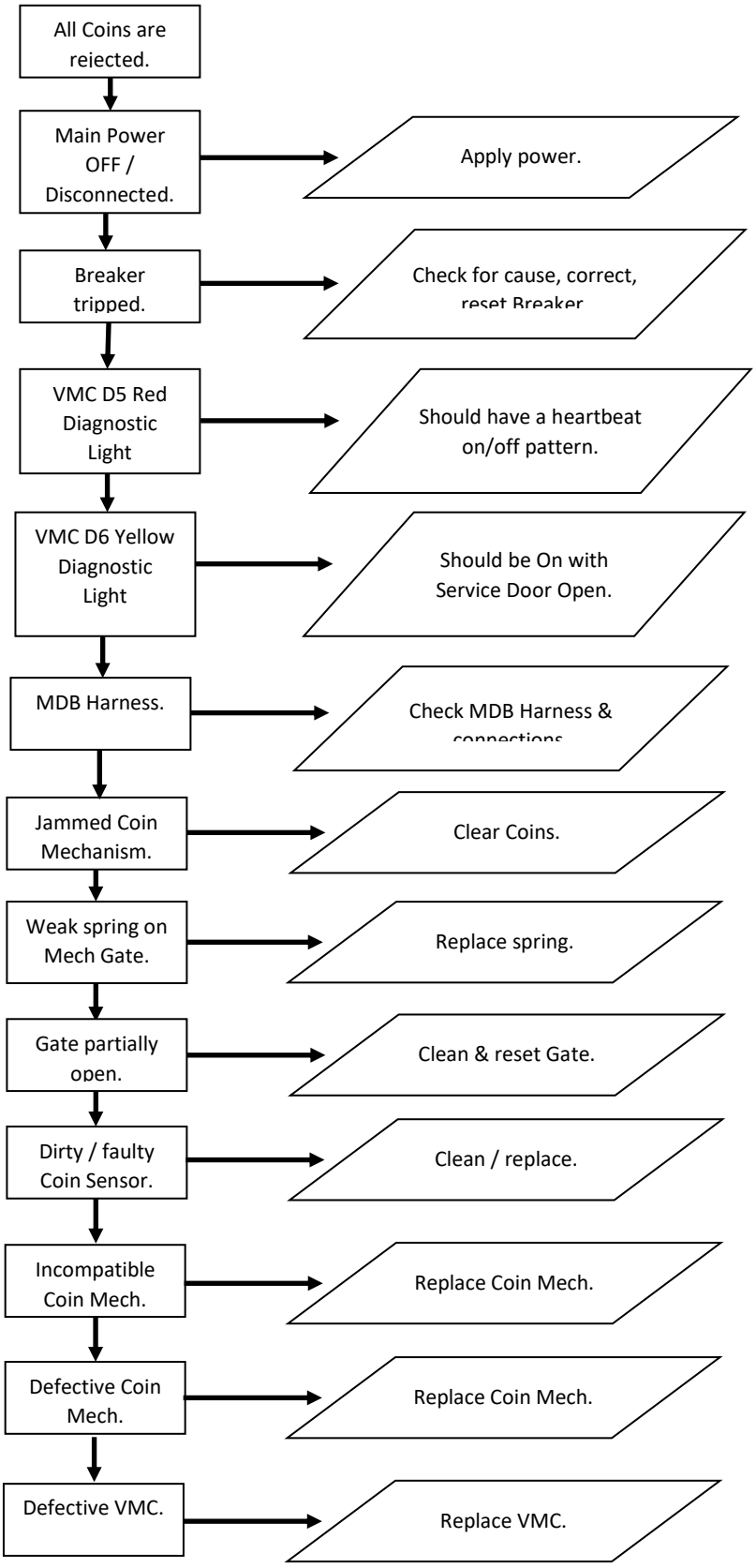
VMC ISSUES

PROBLEM	CAUSE	FIX
No Power to VMC.	• Wall electrical outlet. • Power Supply Cord. • AC Distribution Lighted On/Off Rocker Switch is Off. • AC Distribution Box. • Power Supply	• Check AC Voltage at the wall outlet. • If Power Supply Cord has a GFCI, check it is not tripped. Check AC Voltage going in to the AC Distribution Box. Replace Power Supply Cord as necessary. • Turn Lighted Rocker Switch On. • Check all of the above steps, replace the AC Distribution Box. • Check Power Supply Green status light is On solid. Check AC Voltage going from AC Distribution Box 8 Pin connector to the Power Supply 5 pin connector. Check 24VDC from Power Supply 6 pin connector to the AC Distribution Box 4 pin connector. Check AC Distribution Box Cabinet Control Environmental Board Green status light is rapidly flashing. If Off replace the Cabinet Control Environmental Board.
Out of Order or other Error Codes showing on Display.	• RAM Error.	• Refer to Programming Section, Test Mode, Error Codes for specific Error Codes and troubleshoot issues listed.
Temporarily Out of Service.	• No Vendable Selections.	• Add product, clear Errors, test for proper operation. • Disable Select Block. • Disable No Vend#

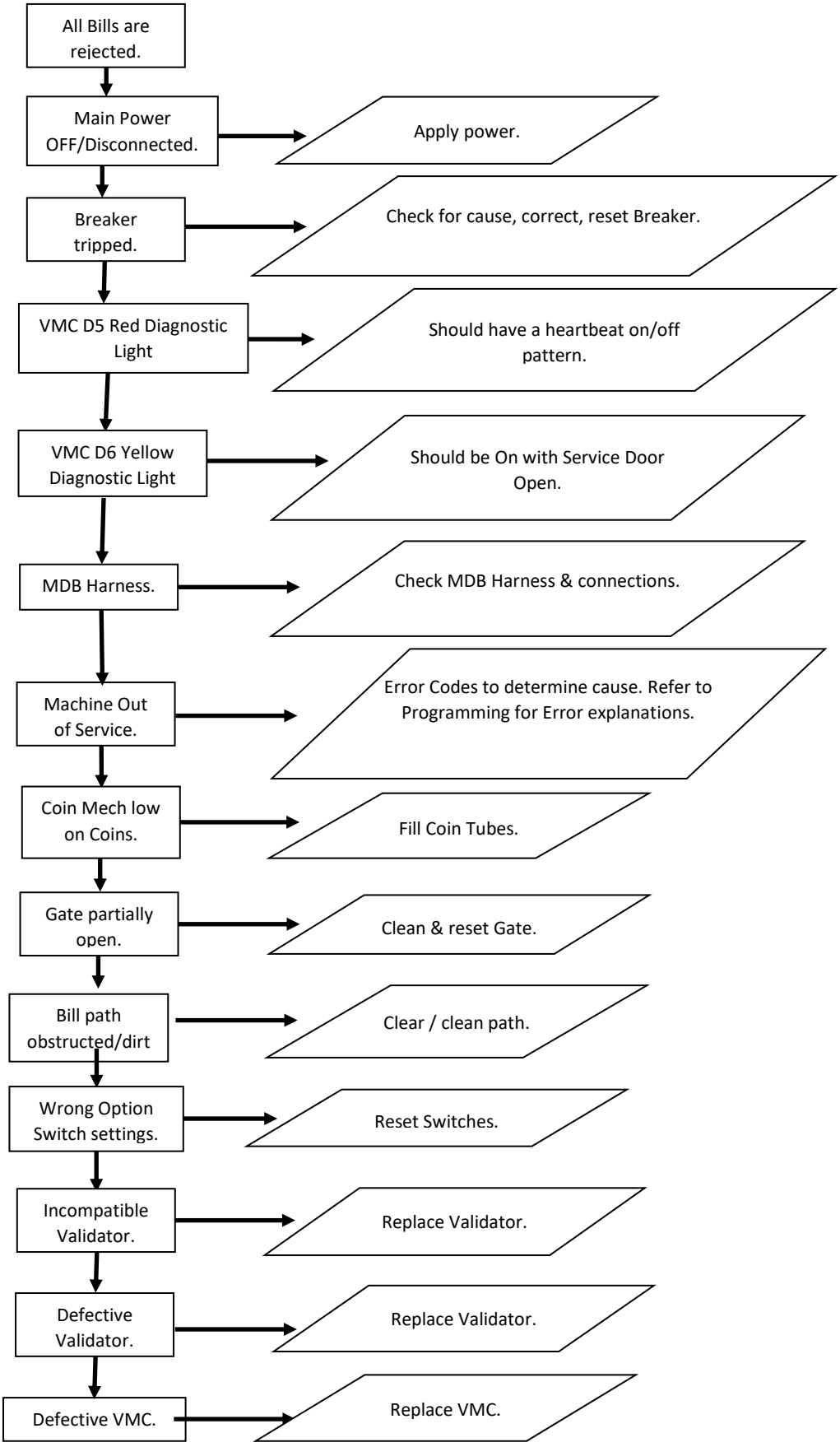
TROUBLESHOOTING FLOW CHARTS

These charts are intended as a guide to help isolate and correct problems you may encounter. Should your Machine show “No sales available”, go to Error Codes and press “4” to view error/s.

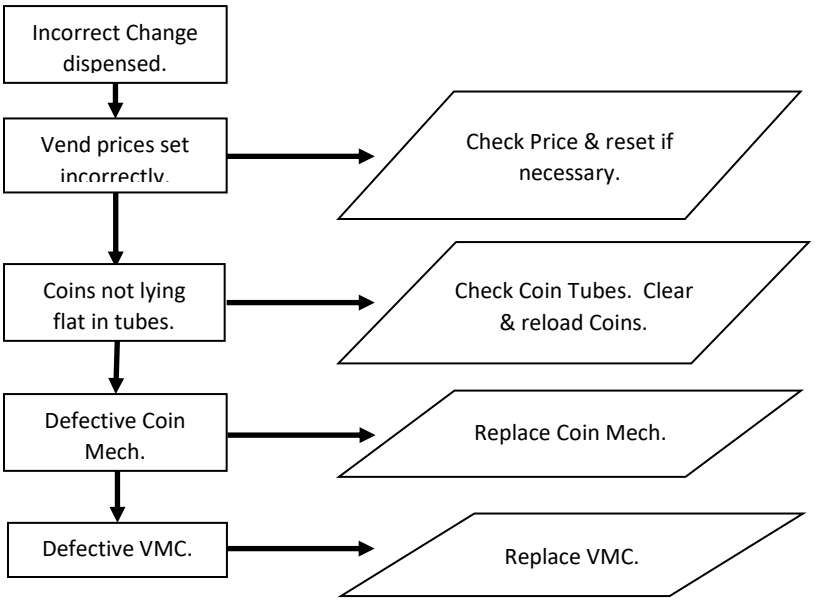
ALL COINS ARE REJECTED



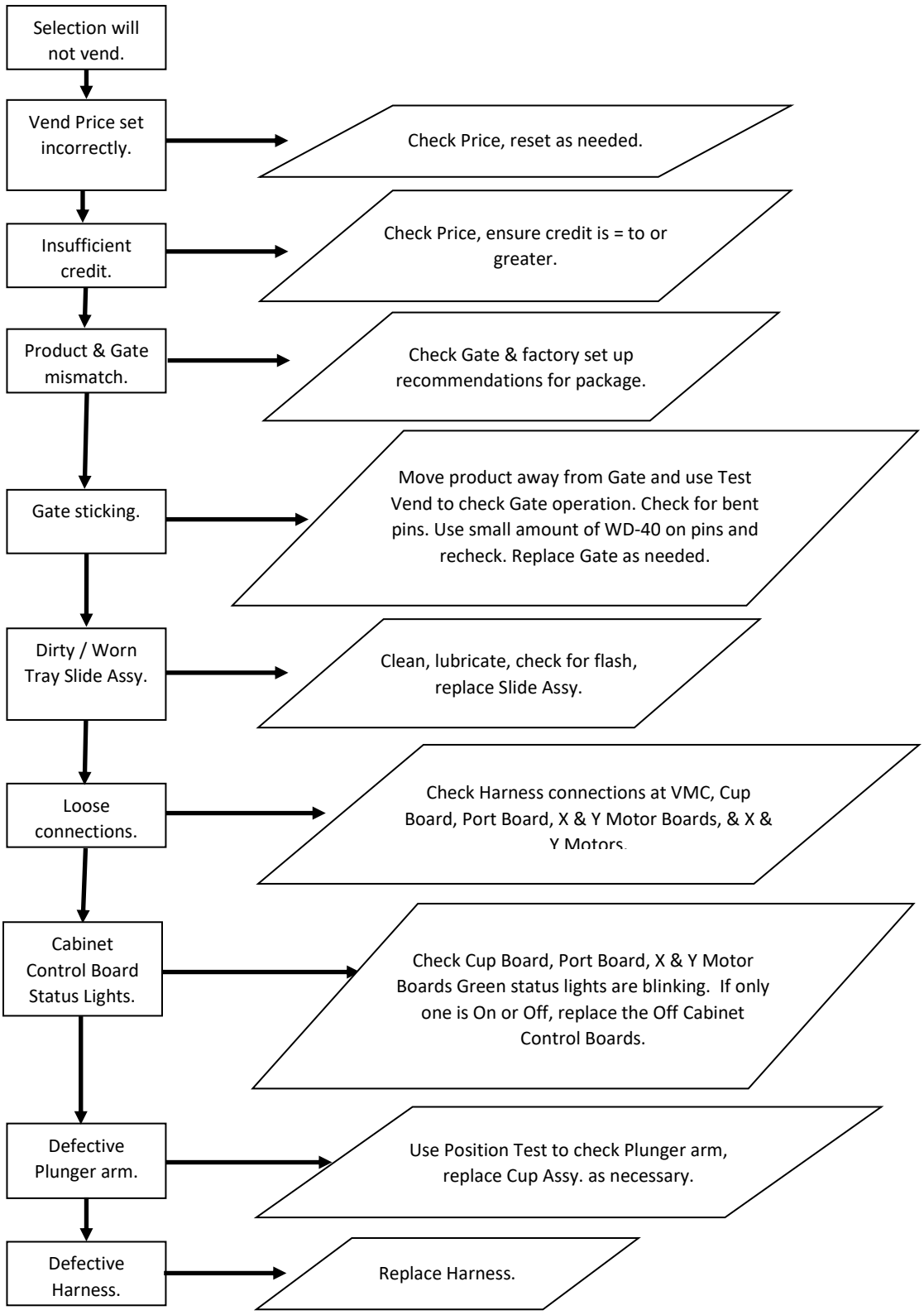
ALL BILLS ARE REJECTED



INCORRECT CHANGE DISPENSED

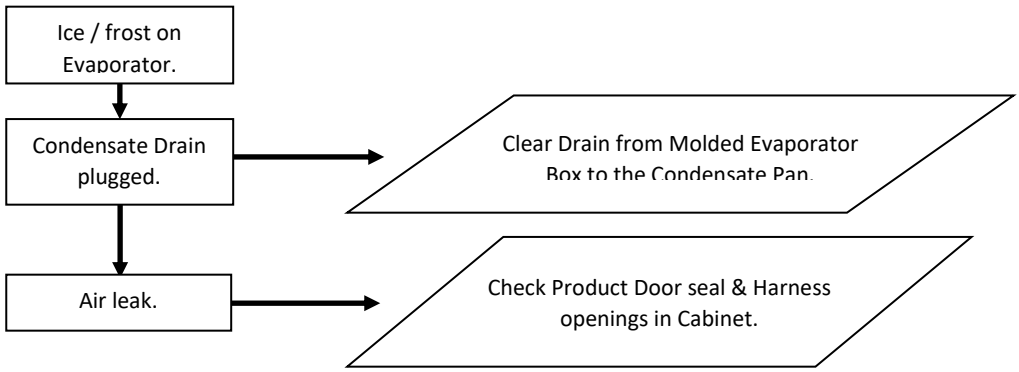


SELECTION WILL NOT VEND

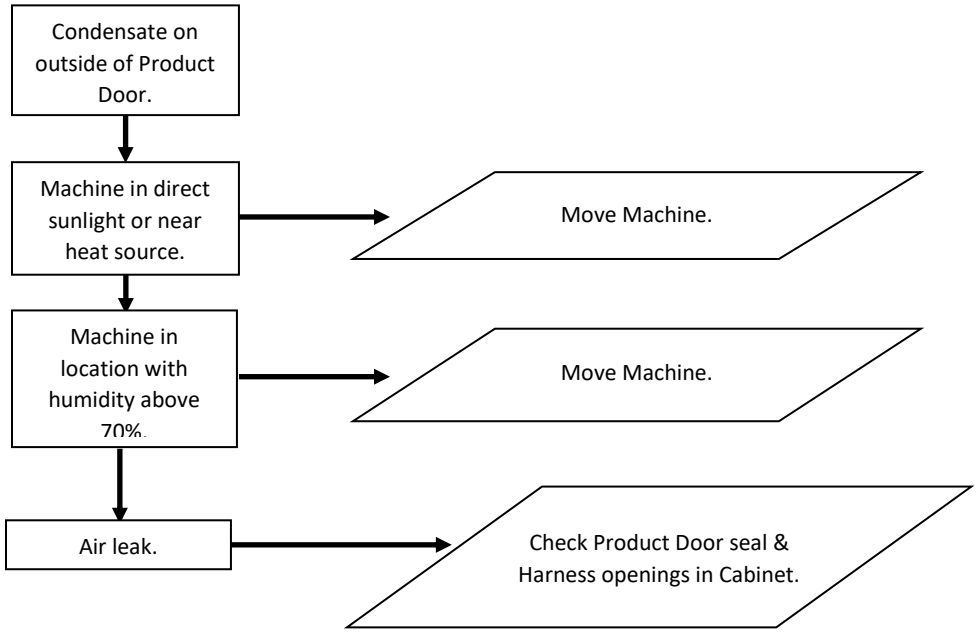


REFRIGERATION SYSTEM TROUBLESHOOTING FLOW CHARTS

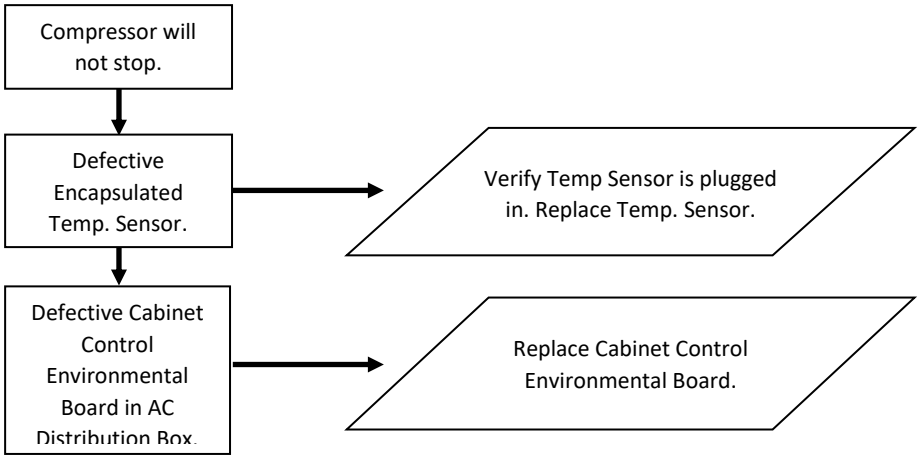
ICE / FROST ON EVAPORATOR



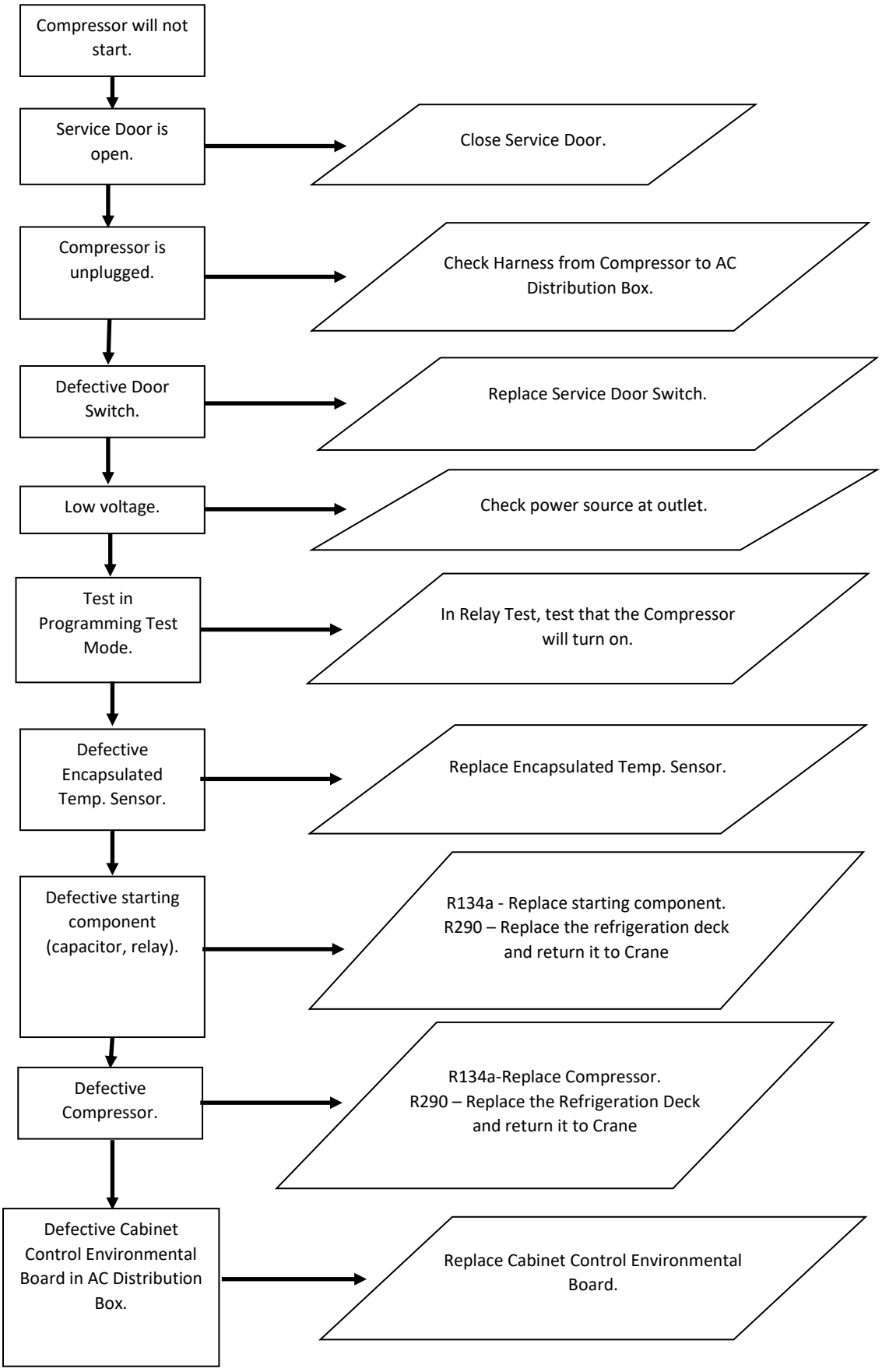
CONDENSATE ON OUTSIDE OF PRODUCT DOOR



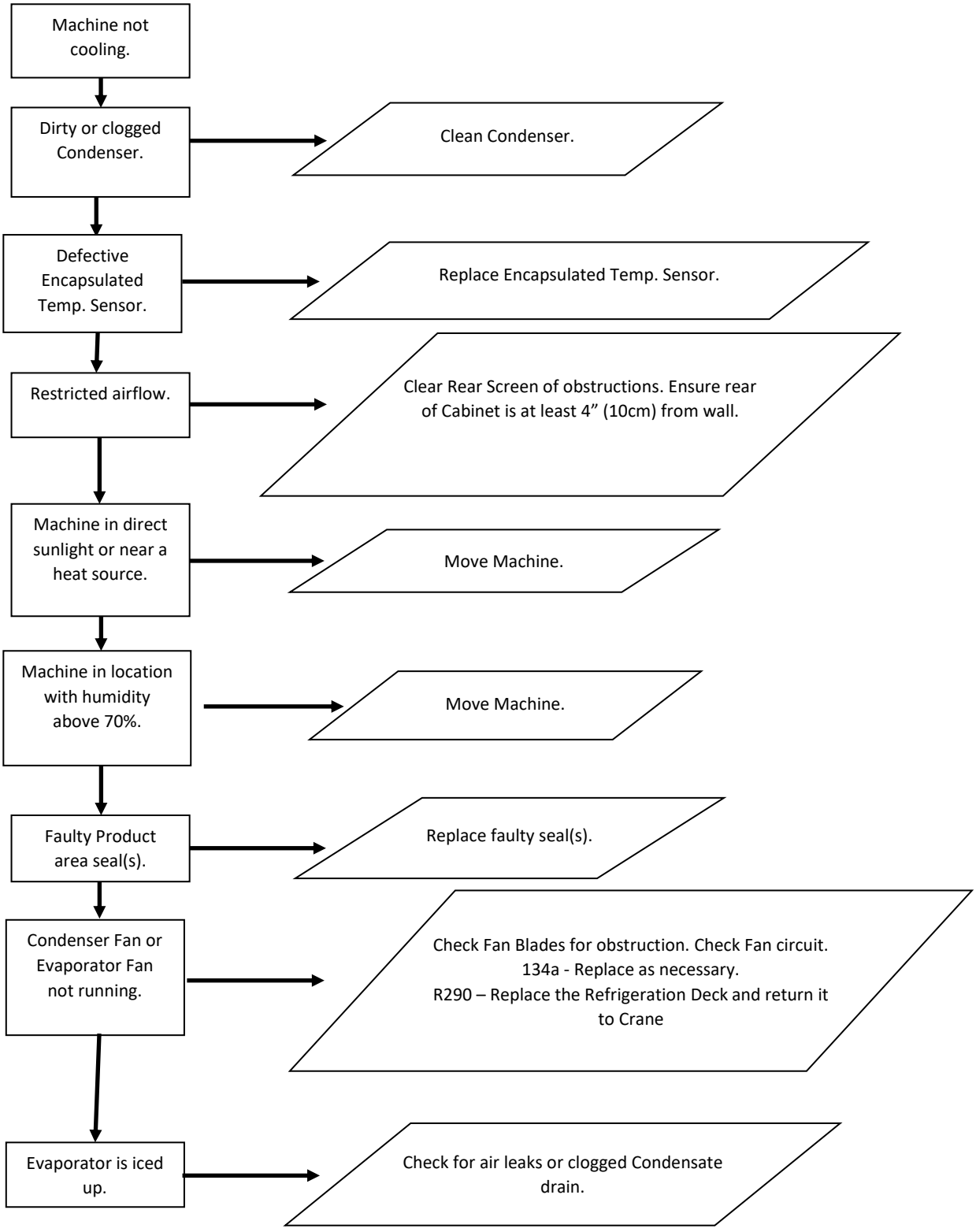
COMPRESSOR WILL NOT STOP



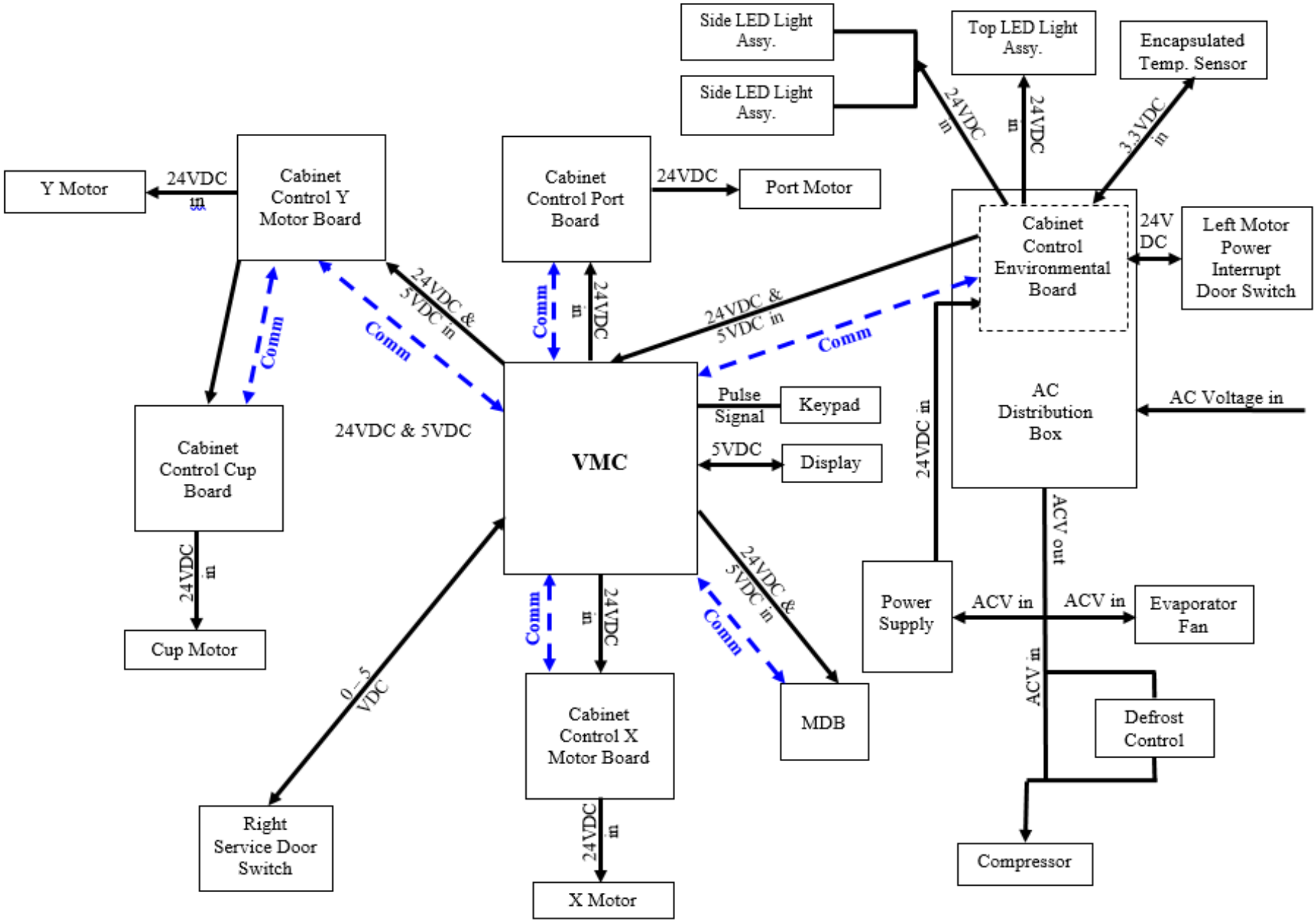
COMPRESSOR WILL NOT START



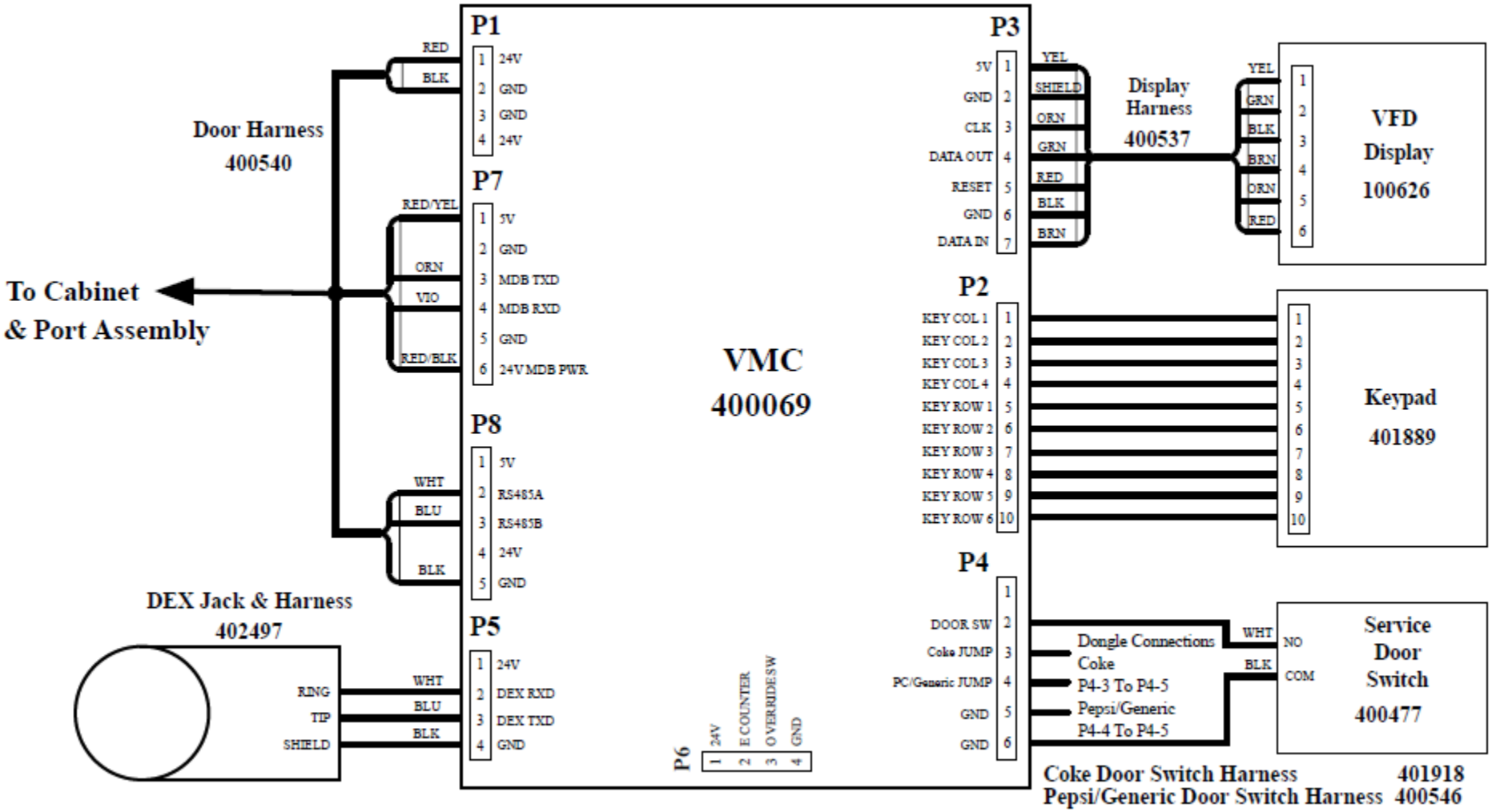
MACHINE NOT COOLING



New Electronics Platform BevMax 4 5800-4 & 3800-4 Block Diagram

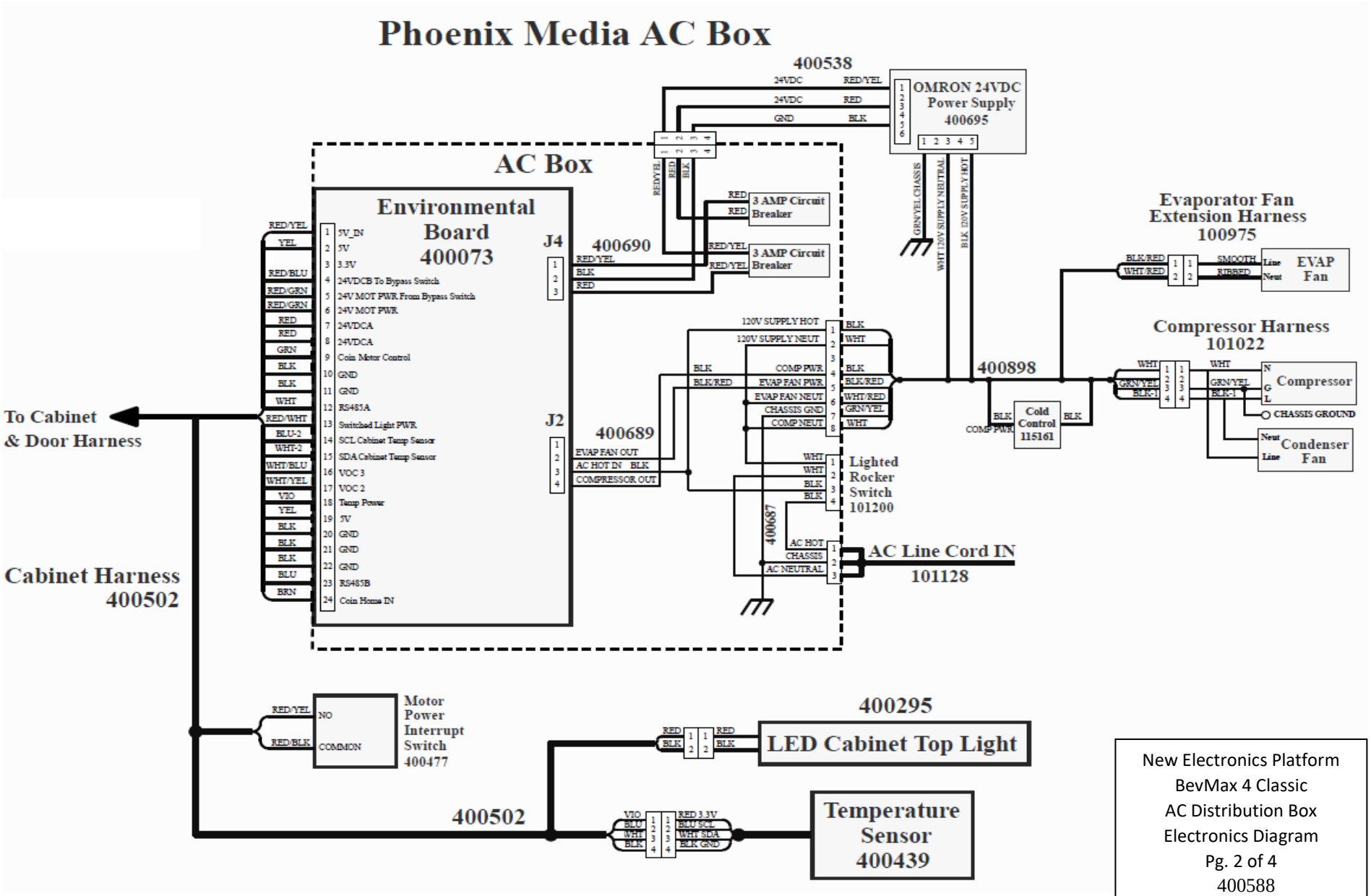


New Electronics Platform BevMax 4 5800-4 & 3800-4 Classic Door Electronics Diagram (Domestic & Export)



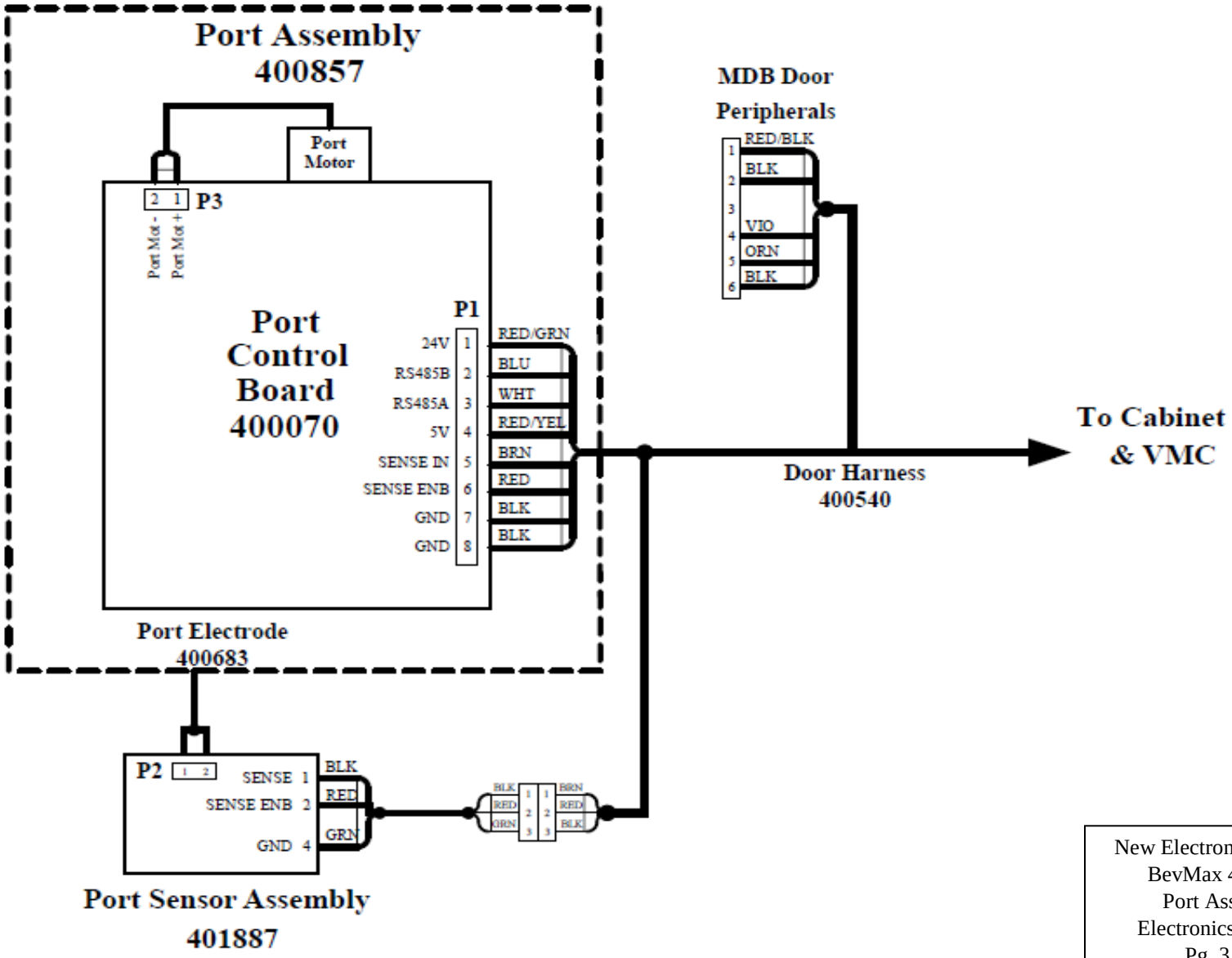
New Electronics Platform
BevMax 4 Classic
Door Electronics Diagram
Pg. 1 of 4
400588

New Electronics Platform BevMax 4 5800-4 & 3800-4 Classic AC Distribution Box Electronics Diagram (Domestic & Export)



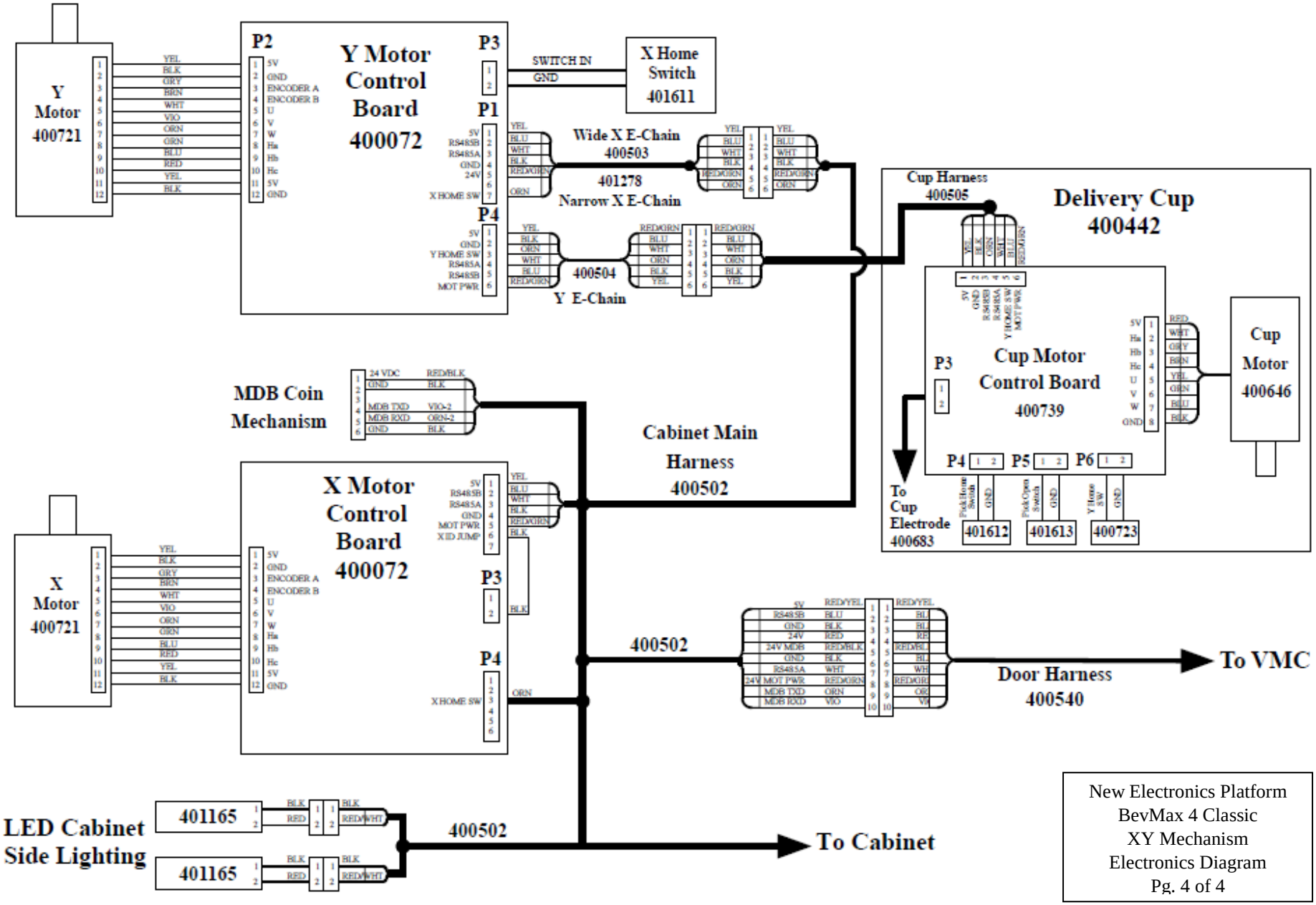
New Electronics Platform
BevMax 4 Classic
AC Distribution Box
Electronics Diagram
Pg. 2 of 4
400588

New Electronics Platform BevMax 4 5800-4 & 3800-4 Classic Port Assembly Electronics Diagram (Domestic & Export)



New Electronics Platform
BevMax 4 Classic
Port Assembly
Electronics Diagram
Pg. 3 of 4

New Electronics Platform BevMax 4 5800-4 & 3800-4 Classic XY Mechanism Electronics Diagram (Domestic & Export)



New Electronics Platform
BevMax 4 Classic
XY Mechanism
Electronics Diagram
Pg. 4 of 4

BEVMAX REFRESH SEQUENCE OF OPERATION

- Machine is sitting powered up and in an idle state (waiting on a consumer)
- A credit is established by the consumer via coins, bill, or cashless device
- As the VMC recognizes the currency, it will instruct the display to show that amount and wait for activity on the keypad
- When a selection is made by the consumer, the VMC will check the amount of credit available against the selection requested to decide if it can vend that product
- If the VMC determines the credit is adequate for that selection, it will then instruct the display to show the word VEND
- The VMC will then communicate with the Y and X Motor Control Boards via the RS45 to get its status, i.e., is its home switch closed, and it will communicate with the Cup Control Board to ensure the picker home switch is closed. ***If the Picker is extended it will not turn on the X or Y motors***
- It will also communicate to the port to determine if the port is opened or closed
- Once the VMC is certain that the all home switches are closed, the VMC will instruct the X and Y motor controllers to run the motors to the position that corresponds with the selection requested.
- Once the cup arrives at the selection the cup stops and both X and Y controllers report to the VMC that they have arrived at the location, and their home switches are open. X and Y controllers will wait for the next command
- The VMC communicates with the Cup controller and instructs it to activate (turn on) its cup sensor
- The VMC will instruct the Cup controller to run its motor
- Once the cup motor runs, the cup controller will communicate to the VMC that it ran it's motor and that it does or doesn't have product in the cup
- If there is product in the cup at this time
- The VMC will then instruct the X and Y boards to run their motors to take the cup to the Hook Swipe position
- If the cup reports back that product is present, the VMC instructs the X and Y boards to swipe
- After the swipe motion the X motor will back off 1" and hold in place
- After all three boards report to the VMC that they have completed their tasks, the VMC will instruct the X and Y boards to return the Cup to the home position
- Once the Cup arrives home, the X and Y boards will report back to the VMC that the cup is home
- The VMC will tell the Port board to open the port and ask if it has product present
- The Port board will open the port
- The consumer removes the product, the VMC instructs the Port board to close the port
- The VMC will instruct the display to show THANK YOU
- The Vender will go back to idle and wait for the next vend.

Notes:_____