

V-MAX

Vendo V-Max

Manual

for

Dr Pepper®

Identified Equipment



The Vendo Company

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V-MAX

PARTS AND SERVICE MANUAL

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V-MAX

SAFETY SECTION



A COMMITMENT TO SAFETY

The Vendo Company is committed to safety in every aspect of our product design. Vendo is committed to alerting every user to the possible dangers involved in improper handling or maintenance of our equipment. The servicing of any electrical or mechanical device involves **potential hazards**, both to those servicing the equipment and to users of the equipment. These hazards can arise because of improper maintenance techniques. The purpose of this manual is to alert everyone servicing Vendo equipment of potentially hazardous areas, and to provide **basic safety guidelines** for proper maintenance.

This manual contains various **warnings** that should be carefully read to minimize the risk of personal injury to service personnel. This manual also contains service information to insure that proper methods are followed to avoid damaging the vendor or making it unsafe. It is also important to understand these **warnings** are not exhaustive. Vendo could not possibly know, evaluate, or advise of all of the conceivable ways in which service might be done. Nor can Vendo predict all of the possible hazardous results. The safety precautions outlined in this manual provide the basis for an effective safety program. Use these precautions, along with the service manual, when installing or servicing the vendor.

We strongly recommend a similar commitment to safety by every servicing organization. **Only properly-trained personnel should have access to the interior of the machine.** This will minimize the potential hazards that are inherent in electrical and mechanical devices. Vendo has no control over the machine once it leaves the premises. It is the owner or lessor's responsibility to maintain the vendor in a safe condition. See Section I of this manual for proper installation procedures and refer to the appropriate service manual for recommended maintenance procedures. If you have any questions, please contact the Technical Services Department of the Vendo office nearest you.

SAFETY RULES

- Read the Safety Manual before installation or service.
- Test for proper grounding before installing to reduce the risk of electrical shock and fire.
- Turn off power switch or disconnect power cord from wall outlet before servicing or clearing product jams. The vending mechanism can trap and pinch hands.
- Use only fully-trained service technicians for Power-On servicing.
- Remove any product prior to moving a vendor.
- Use adequate equipment when moving a vendor.
- Always wear eye protection, and protect your hands, face, and body when working near the refrigeration system.
- Use only authorized replacement parts.
- Be aware of inherent dangers in rocking or tipping a vending machine.
- Always turn power off before plugging or unplugging vendor to wall outlet.



SECTION I: VENDOR INSTALLATION

- A. Vendors are large, bulky machines of significant size and weight. Improper handling can result in injury. When moving a vendor, carefully plan the route to be taken and the people and equipment required to accomplish the task safely.
- B. Remove all tape, shipping sealant, and Styrofoam from the vendor. Loosen any shipping devices used to secure interior parts during shipping. Remove the wooden shipping base attached to the vendor base by the vendor leveling screws. Make certain the leveling screws are in place and functional.
- C. Position the vendor three to four inches (7.6 cm to 10.2 cm) from a well-constructed wall (of a building or otherwise) on a flat, smooth surface.

IMPORTANT: *The vendor requires three inches (7.6 cm) of air space from the wall to ensure proper air circulation to cool the refrigeration unit.*

- D. Adjust the leveling screws to compensate for any irregularities on the floor surface. Ideally, no adjustment will be necessary and the leveling legs will be flush with the bottom of the vendor. A spirit level is a useful aid to level the vendor. When the vendor is properly leveled the outer door, when opened, will remain stationary. Vendors must be level to ensure proper operation and to maintain stability characteristics. Do not add legs to the vendor.
- E. Check the manufacturer's nameplate on the left or right side of the vendor's outer door to verify the main power supply requirements of the vendor. Be sure the main power supply matches the requirements of the vendor. To ensure safe operation, plug the vendor only into a properly grounded outlet.
DO NOT USE EXTENSION CORDS.
- F. Recommended voltage specs = volts required + amps of circuit.
- G. Dedicated 15A service required for 1 machine.

NOTE: Any power supply variance more than $\pm 10\%$ may cause the vendor to malfunction.

- * Power outlets must be properly **grounded**.
- * Power outlets must be properly **polarized**, where applicable.

Test the outlets using the following information.
(Refer to Figure 1 on Page S-4.)

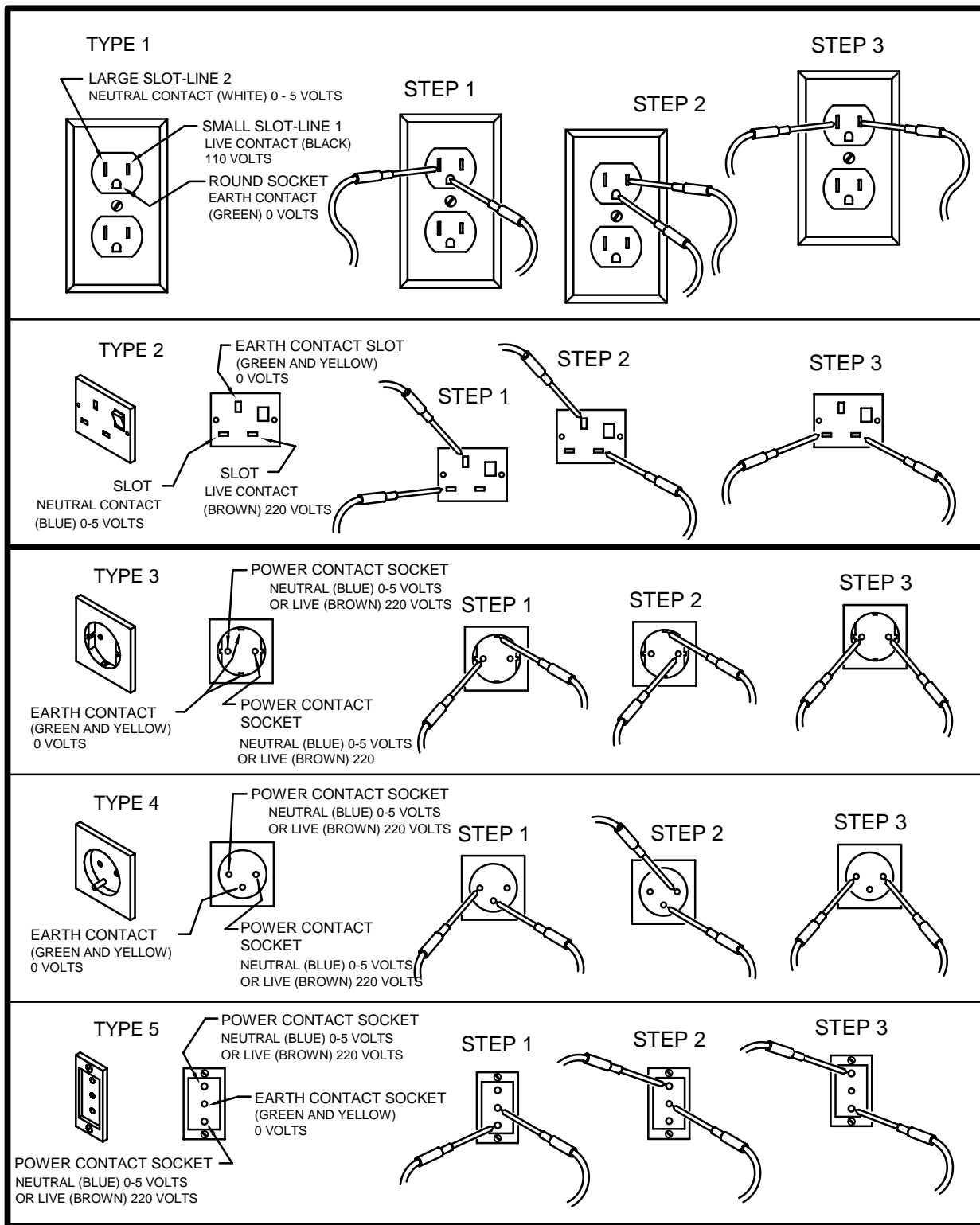


FIGURE 1 CHECKING FOR PROPER GROUNDING AND POLARIZATION



SECTION I: VENDOR INSTALLATION (CONTINUED)

For Type 1 and Type 2 outlets, test for Grounding and Polarization as follows:

1. With a test device (volt meter or test light), connect one probe to the receptacle's neutral contact and the other to the live contact. The test device should show a reaction.
2. Connect one probe to the receptacle's earth contact and the other to the live contact. The test device should show a reaction.

For Type 3 through Type 5 outlets, test for Grounding as follows:

1. With a test device (volt meter or test light), determine which of the receptacle's power contacts is the live contact.
 - A. Connect one probe to the receptacle's earth contact.
 - B. Connect the second probe to the left (or upper) power contact. If a reaction occurs, this is the live power contact. If a reaction does not occur, move the second probe to the right (or lower) contact. A reaction should occur, indicating that this is the live power contact.
2. Connect one probe to the receptacle's live power contact (as determined in step 1). Connect the second probe to the other power contact (neutral). The test device should show a reaction.

IF THE ABOVE CONDITIONS ARE NOT MET FOR THE GIVEN OUTLET TYPE, CONTACT A LICENSED ELECTRICIAN AND HAVE THE NECESSARY CORRECTIONS MADE.



SECTION I: VENDOR INSTALLATION (CONTINUED)

H. Door Support (Figure 2)

The door support is to ensure that the outer door closes squarely to the cabinet. Raising the door can also ensure proper alignment of the door latch.

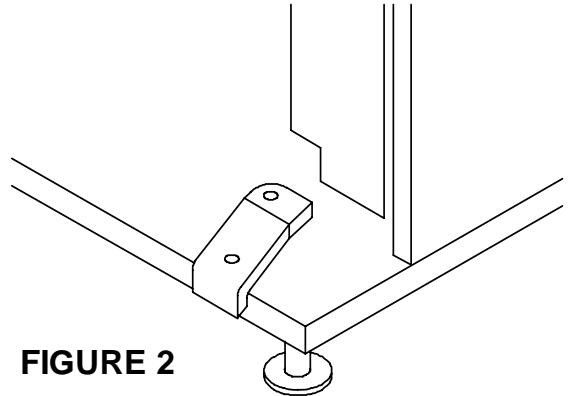


FIGURE 2

I. Door Latch Alignment (Figure 3)

After any door adjustment, the floating quicker lock assembly should align itself automatically. The latch assembly is adjustable. To adjust, loosen the latch bracket mounting screws, raise or lower the latch assembly into position, then tighten the mounting screws.

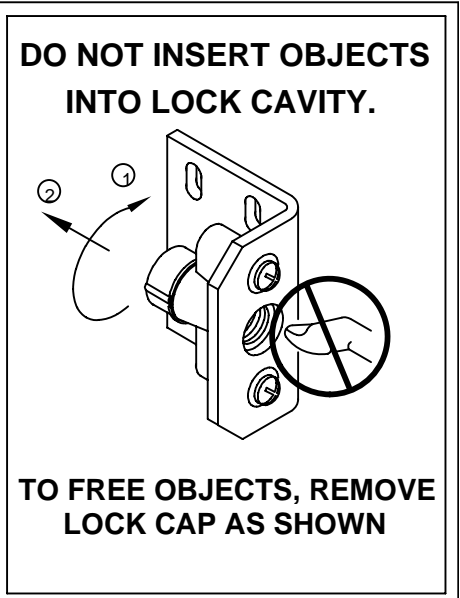
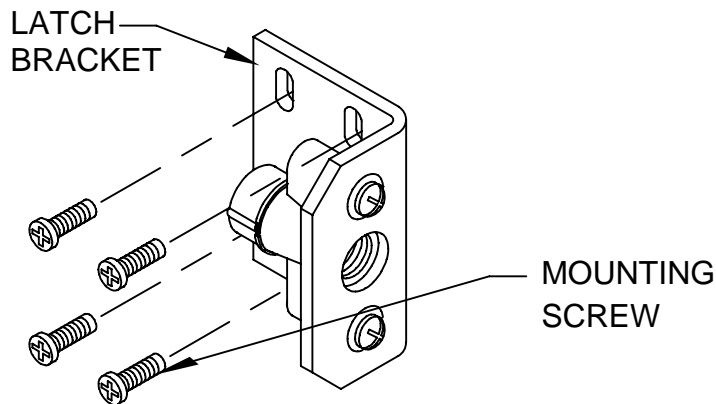


FIGURE 3

WARNING:
KEEP FINGERS AND OTHER OBJECTS OUT OF LOCK CAVITY

NOTE: Refer to the appropriate parts and service manual for detailed instructions, operating principles, and recommended maintenance intervals and procedures.



SECTION II: ELECTRICAL HAZARDS

GENERAL

Vendo vending machines are provided with the appropriate power supply setting for your area. Some models are equipped with step-down transformers, as required. This enables the vending machine to operate on different main voltages. Refer to Section I. E. for information to determine the main power requirements. Refer to the appropriate service manual for details of step-down transformer operations.

The power sources just mentioned are standard for both household and commercial lighting and appliances. However, careless or improper handling of electrical circuits can result in injury or death. Anyone installing, repairing, loading, opening, or otherwise servicing a vending machine should be alerted to this point. Apply all of the normal precautions observed in handling electrical circuits, such as:

- Refrigeration servicing to be performed by qualified personnel only.
- Unplug the vendor or move power switch to off position before servicing or clearing product jams.
- Replace electrical cords if there is any evidence of fraying or other damage.
- Keep all protective covers and ground wires in place.
- Plug equipment into outlets that are properly grounded and polarized (where applicable), and protected with fuses or circuit breakers.
- All electrical connections must be dry and free of moisture before applying power.

A. Grounding Systems

Vendo vending machines are provided with the appropriate service cord for the power supply in your area. The service cord will connect to the matching electrical outlet. Always ensure that the outlet to be used is properly grounded before plugging in the vendor. (See pages S-3 through S-5.)

WARNING:
**ALWAYS TEST TO VERIFY PROPER GROUNDING PRIOR TO
INSTALLATION TO REDUCE THE RISK OF ELECTRICAL
SHOCK AND FIRE**

The electrical grounding system also includes the bonding of all metal components within the vendor. This involves a system of bonding wires identified by green or green and yellow marking. The system uses serrated head screws, lock washers, and star washers to ensure the electrical connection between parts. Maintenance of vending equipment may involve disassembly. Include the above items when reassembling, even if the vending machine may appear to function normally without them. Omitting any of these items can compromise a link in the grounding system. See the appropriate service manual or kit instructions for components and assembly instructions.



SECTION II: ELECTRICAL HAZARDS (CONTINUED)

B. Servicing with “Power Off”

For maximum safety, unplug the service cord from the wall outlet before opening the vendor door. This will remove power from the equipment and avoid electrical and mechanical hazards. Service personnel should remain aware of possible hazards from hot components even though electrical power is off. See the appropriate sections of this manual for further information.

C. Servicing with “Power On”

Some service situations may require access with the power on. Power on servicing should be performed **only by fully-qualified service technicians**. Particular caution is required in servicing assemblies that combine electrical power and mechanical movement. Sudden movement (to escape mechanical action) can result in contact with live circuits and vice versa. It is therefore doubly important to maintain maximum clearances from both moving parts and live circuits when servicing.

WARNING:
**“POWER-ON” SERVICING SHOULD BE ACCOMPLISHED ONLY BY
FULLY-TRAINED PERSONNEL. SUCH SERVICE BY UNQUALIFIED
INDIVIDUALS CAN BE DANGEROUS.**

Power to lighting and refrigeration system is shut off automatically by the electronic controller when the outer door is opened. **Applies to V-Max only.**

NOTE: For power-on servicing of the vendor’s lighting system, turn lighting power on by accessing the “LIT” test function of the electronic controller (see programming on inner door). **Applies to V-Max only.**

For power-on servicing of the vendor’s refrigeration system, turn refrigeration power on by accessing the “CNPR” test function of the electronic controller (see programming on inner door). **Applies to V-Max only.**



SECTION III: MECHANICAL

HAZARDS

A. Servicing of Moving Parts and Assemblies

When servicing assemblies involving moving parts, **use extreme caution!!** Keep fingers, hands, loose clothing, hair, tools, or any foreign material clear of entrapment.

As noted before under the electrical hazards section, Power On servicing should **only** be performed by qualified personnel. Refer to and heed the warnings noted in the electrical hazards section. These warnings refer to the potential hazards associated with electrical power and moving parts. Always maintain maximum clearances from electrical and moving parts.

Always install protective covers and guards when reassembling equipment.

WARNING:
THIS VENDING MACHINE INCLUDES MECHANICAL EQUIPMENT WHICH CAN BE HAZARDOUS IF IMPROPERLY HANDLED OR SERVICED. USE CAUTION AND CONSULT THE VENDO SAFETY MANUAL AND THE VENDO SERVICE MANUAL FOR ADDITIONAL SAFETY INFORMATION.





SECTION IV: REFRIGERATION HAZARDS

GENERAL

Refrigeration systems involve both electrical power and mechanical action. These systems may present any of the potential dangers shown in the sections on electrical and mechanical hazards contained in this manual. See Sections II and III for further information.

A. **Compressed Refrigerant**

Refrigeration systems involve the compression and evaporation of gases. The pressures contained represent a potential hazard if suddenly released in confined areas. Caution is required when performing maintenance tests or repairs. All testing of sealed refrigeration systems must be done by trained personnel who are familiar with the systems and pressures involved.

B. **Physical Protection**

The accidental release of refrigerant gases can result in physical injuries. Always wear protective glasses and protect your hands, face, and body when working near the refrigeration system.

WARNING:
**ALWAYS WEAR EYE PROTECTION AND PROTECT YOUR HANDS,
FACE, AND BODY WHEN WORKING NEAR THE REFRIGERATION
SYSTEM.**

SECTION V: TEMPERATURE HAZARDS

GENERAL

Maintenance personnel should be alerted to the potential hazards from hot metal surfaces. High temperatures may be present throughout the refrigeration system even though electrical power has been removed.



SECTION VI: SUBSTITUTIONS AND MODIFICATIONS

GENERAL

Unauthorized changes or the substitution of unauthorized parts can compromise the equipment designs. This can result in unsafe conditions for either the service personnel or the equipment users. Always refer to the appropriate parts and service manual for replacement parts and maintenance instructions. If questions arise, contact the Technical Services Department of the Vendo office in your area.

When servicing the vending machine, always reassemble all components to their original location and position. Maintain the correct routing for tubing, electrical wiring, etc. Replace all clamps, brackets, and guides to their original locations. Replace all tubing, sleeving, insulating material, and protective covers to their original condition.

WARNING:

VENDO EQUIPMENT HAS BEEN PROVIDED WITH APPROPRIATE PROTECTIVE DEVICES TO PROTECT AGAINST THE POSSIBILITY OF OVERHEATING AND FIRE AS A RESULT OF EQUIPMENT OR COMPONENT FAILURES. SUBSTITUTION, MODIFICATION, OR BYPASSING OF SUCH PROTECTIVE DEVICES CAN CREATE DANGEROUS CONDITIONS. PROTECTIVE CIRCUITS SHOULD NEVER BE BYPASSED, AND FAILED PROTECTIVE DEVICES MUST BE REPLACED ONLY WITH FACTORY-AUTHORIZED PARTS.

A. **Service Cord Replacement**

Vendo vending machines are furnished with unique power supply cords. If replacement becomes necessary, consult the appropriate parts and service manual and order the correct replacement cord for the model of vending machine in question. Do not use substitute replacement cords. Only authorized service personnel with appropriate training should replace the vending machine service cord. If a question should arise concerning which service cord to order, contact the Technical Services Department of the Vendo office in your area.



SECTION VI: SUBSTITUTIONS AND MODIFICATIONS (CONTINUED)

WARNING:
THIS APPLIANCE MUST BE EARTHED.
IMPORTANT!

The wires in the main leads are colored in accordance with the following code:

110v/120v	220v/240v	
Green	Green and Yellow	Earth
White	Blue.....	Neutral
Black	Brown	Live



SECTION VII: CONSUMER

SAFETY WARNING

WARNING:
VENDOR CAN BE OVERTURNED IF SUFFICIENT FORCE IS APPLIED, AND MAY RESULT IN SERIOUS INJURY OR DEATH.

GENERAL

There have been incidents, including fatalities, when vending machines have been vandalized by being pulled over in an attempt to obtain free product or money.

To warn of the danger involved in tipping, shaking, or rocking the vending machine, a decal has been designed to be affixed to vending machines. (One such decal is supplied with the vending machine.) Vendo will supply sufficient decals to be placed on all machines, on request. If you have any questions, contact the Technical Services Department of the Vendo office in your area.

THE FOLLOWING DECAL SHOULD BE PLACED IN A POSITION ON THE VENDOR CONTROL PANEL AT EYE LEVEL.


WARNING



Never rock or tilt. Machine can fall over and cause serious injury or death.

Vending machine will not dispense free product.

389611

ENGLISH



MISE EN GARDE




Ne jamais secouer ou incliner. Le distributeur peut se renverser et causer des blessures graves ou la mort. Cette machine ne distribue pas de produits gratuitement.

389611-1

FRENCH


AVISO



Nunca inclinar o balancear la máquina. La máquina puede caer y causar serios daños, incluso muerte. Esta máquina no dispensa producto gratis.

389611-2

SPANISH



GAS ISLAND VENDOR INSTALLATION PROTOCOL

Vendo Gas Island Vending Machines have been evaluated by UL (Underwriters Laboratories Inc.®) for placement at service stations which the NFPA (National Fire Protection Association) considers a hazardous location. These vendors must be correctly installed and inspected per the following protocol before they are put into service.

- A. Vendor is to be installed in accordance with the National Electrical Code, NFPA 70, Article 514 - Gasoline Dispensing and Service Stations, NFPA 30A - Automotive and Marine Service Station Code, and the Local Authority Having Jurisdiction.
IMPORTANT - Compliance includes direct wiring of the vendor to the voltage source utilizing proper metal conduit and circuit protection.

- B. When installed on support base, the vendor can be installed in an 18-inch high Class I, Group D, Division 2 Hazardous Location. Additionally, the vendor must be installed at least 18 inches from any flammable liquid dispensing device.
Vendor support base is to be attached to vendor as shown by view on page S-15. Vendor should be securely bolted in place using ½-inch nominal diameter hardware as a minimum.

- C. IMPORTANT: FOR ANY INSTALLATION REQUIRING LEVELING OF THE VENDOR, IT IS MANDATORY TO OBTAIN APPROVAL OF THE LOCAL AUTHORITY HAVING JURISDICTION. THERE ARE **NO EXCEPTIONS**.

To level more than 1/8 inch, it is suggested to follow these guidelines:

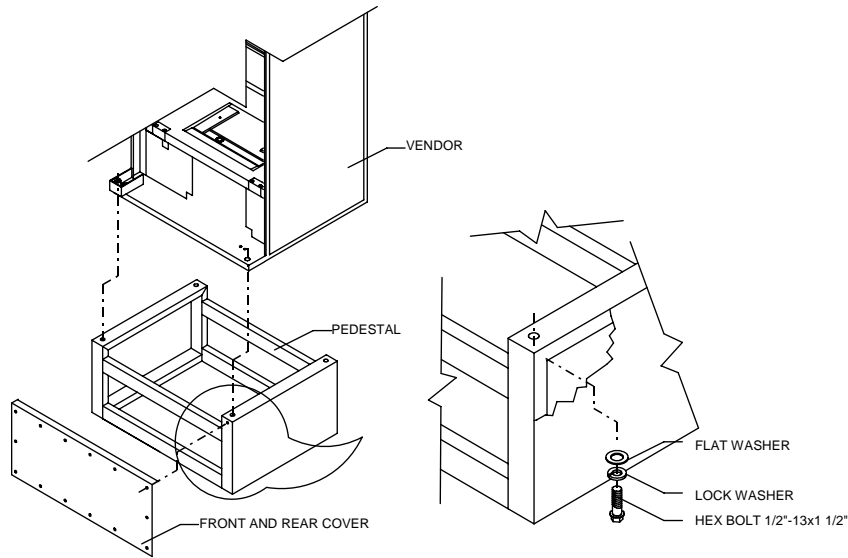
1. Shimming of one or more mounting points should be done with solid steel, minimum thickness of 1/8 inch. Solid aluminum is acceptable.
2. It is not acceptable to place shims under all (4) mounting points.
3. Shims should be a minimum of 2 ½ inch x 2 ½ inch square or 2 ½ inch diameter.
4. Shim should have a hole, (approximately ½ inch diameter), through the center in the same manner as the GIV pedestal foot.
5. Shim should be protected against corrosion by painting, plating, etc.
6. IMPORTANT: Hold down bolt should be a solid, continuous bolt.

It is MANDATORY that all installations requiring leveling be approved by the LOCAL AUTHORITY HAVING JURISDICTION.

- D. **Warning - Power tools with arcing and sparking parts, such as electric drills, should not be used in any hazardous locations during the installation of this vendor.**
- E. The dispensing area shall be in clear view of the attendant at all times, and placing or allowing any obstacle to come between the dispensing area and the attendant control area shall be prohibited.
- F. Upon completion of the installation, the Local Fire Marshall, or Authority Having Jurisdiction, must verify the installation complies with the codes shown in Item A. After authorization, the vendor may be placed into operation.



MOUNTING TO PEDESTAL



IMPORTANT - INSTALLATION REQUIREMENTS

Electrical equipment, such as vending machines, installed within a 20-ft. radius of a gasoline dispensing unit must meet safety specifications of the National Electrical Code, NFPA 70 - Article 514 - Gasoline Dispensing and Service Stations, NFPA 30A - Automobile and Marine Service Station Code, and the Local Authority Having Jurisdiction. Safety Specifications are:

- The vending machine must be UL Listed for installation near gasoline dispensing equipment.
- The vending machine is UL Listed for use in an 18-inch high Class I, Group D, Division 2 Hazardous Location.
- Installation requires **ON-SITE** approval of Local Fire Marshall, or Authority Having Jurisdiction.
- The vending machine should be securely bolted in place using ½" nominal diameter hardware as a minimum. Use template provided on pedestal carton for mounting locations. If vendor requires leveling more than 1/8 inch, refer to Page S-14.
- The vending machine must be direct-wired to the voltage source utilizing proper metal conduit and circuit protection.

Note: There are unique safety and approval considerations required for placement of a vendor at the gasoline island which will require a non-standard vending machine. A standard vending machine located at or near the gasoline dispensing area will create unacceptable risks and will not meet safety agency requirements.



PARTS, SALES, & SERVICE CENTERS OF VENDO/SANDEN COMPANY

AREA	ADDRESS	PHONE NUMBERS
United States, Canada	The Vendo Company 7209 N. Ingram Fresno, CA 93650 U.S.A.	Tel: (559) 439-1770 Fax: (559) 439-2083
Japan	Sanden International Corporation 31-7 Taito 1-Chome Taito-ku Tokyo 110, Japan	Tel: (81) 3-3835-1321 Fax: (81) 3-3833-7096
Europe, Mid-East, Africa, Mid-Asia	Vendo GMBH Spangerstr. 22, P.O. Box 130940 40599 Dusseldorf Germany	Tel: (49) 211-74-039-0 Fax: (49) 211-7488541
Australia, New Zealand	Sanden International Pty. Ltd. 54 Allingham St., Condell Park N.S.W. 2200 Australia	Tel: 61-2-9791-0999 Fax: 61-2-9791-9029
Singapore, Hong Kong, Indonesia, Philippines, India	Sanden International (Singapore) Pte., Ltd. Sanden House, 25, Ang Mo Kio St. 65 Singapore 569062 The Republic of Singapore	Tel: 65-482-5500 Fax: 65-482-1697
Taiwan	Sanden International Taiwan Corp. No, 21-6, Sec 1 Tun Hwa S. Rd., Taipei, Taiwan Taiwan, ROC	Tel: 886-2-570-6106 Fax: 886-2-577-1959
Belgium	N.V. Vendo Benelux, S.A. Industrial Research Park N.O.H. 13 Font St. Landry 1120 Brussels Belgium	Tel: 32-2-268-2595 Fax: 32-2-268-2862
England	Vendhall, Ltd. Unit 17, The Basingstoke Enterprise Centre Westham Lane, Worting Rd, Basingstoke, Hants RG22, 6NQ Great Britain	Tel: 44-1256-479309 Fax: 44-1256-844469
Italy	Vendo Italy S.p.A. Casella Postale 9 1-15033 Casale Monferrato Italy	Tel: 39-142-335111 Fax: 39-142-5623-48
Spain	Vendo Iberia, S.A. C/ Sant Ferran No. 92 Poligono Industrial la Almeda, Sector P-1 08940 Cornellà, (Barcelona), Spain	Tel: 343-474-1555 Fax: 343-474-1842



**PARTS, SALES, & SERVICE CENTERS OF VENDO/SANDEN COMPANY
FOR LATIN AMERICA**

AREA	ADDRESS	PHONE NUMBERS
Mexico	Vendo de Mexico Camino Real de Toluca No. 154 Col. Bellavista 01140 Mexico D.F. Mexico	Tel: (525) 515-9745 Fax: (525) 277-0111
Central America	The Vendo Company 7209 N. Ingram Fresno, CA 93650 U.S.A.	Tel: (559) 439-1770 Fax: (559) 439-2083
Chile	Pelp Internacional, S.A. 4560 El Rosal Huechuraba, Santiago, Chile	Tel: (562) 243-9710 Fax: (562) 740-0504
Brazil	Cimaq Industria e Comercio de Maq, Ltda. Estrada Uniao e Industria, 9.120 Itaipava 25730-730 Petropolis Rio de Janeiro, Brazil	Tel: (55242) 22-2666 Fax: (55242) 22-3244
South America	The Vendo Company 7209 N. Ingram Ave. Fresno, CA 93650 U.S.A.	Tel: (559) 439-1770 Fax: (559) 439-2083



NOTES



V-MAX

GENERAL INFORMATION



GENERAL INFORMATION

This manual contains programming, operation, and complete parts and electrical wiring diagrams.

The V-Max controller is a microprocessor which will permit pricing per selection from 0.00 to 99.99. This machine also has space-to-sales programming as well as energy savings modes.

Specifications:

MODEL		V-MAX 720	V-MAX 840	V-MAX 576
SELECTIONS		10	10	8
DIMENSIONS (HEIGHT X WIDTH X DEPTH)				
CURVED DOOR		72" x 39 1/2" x 35"	79" x 39 1/2" x 35"	72" x 32 1/2" x 34 3/4"
FLAT DOOR		72" x 39 1/2" x 32 1/2"	79" x 39 1/2" x 32 1/2"	Not Available
SINGLE COLUMNS		10	10	8
CAPACITY PER COLUMN	12 oz. CAN***	72	84	72
	16 oz. GLASS	30	36	30
	20 oz. **	32	38	32
SHIPPING WEIGHT		685 lbs	750 lbs	640 lbs
OPERATION VOLTAGE		115v 60 Hz.	115v 60Hz.	115v 60Hz.
AMP. RATING		10	10	10
REFRIGERATION VOLTAGE		115v 60Hz.	115v 60Hz.	115v 60Hz.

*Dimensions and shipping weight will vary slightly due to manufacturing tolerances, shipping boards and whether or not coinage is installed.

** 20 oz. PET capacity may vary based on the shape and size of the bottle.

***12 oz. can capacities are listed using a 4-deep set up.



INITIAL SET-UP

A. UNPACKING

Remove all plastic film, cardboard and tape from the outside of the vendor. Loosen any shipping devices used to secure interior parts during shipment (backspacer, shims or spacers).

To remove shipping boards from base, raise vendor on a well-stabilized lifting device. Remove the leveling bolts which hold the boards in place and remove the boards. Replace bolts to equal heights in the threaded holes.

Another method to remove shipping boards is to split the boards apart. Using a pinch bar or a heavy screwdriver and hammer, insert tool into the slots and force the boards apart.

B. POSITIONING

IMPORTANT: PLACE THE VENDOR IN DESIRED LOCATION AT LEAST THREE TO FOUR INCHES (7.6CM TO 10.2CM) AWAY FROM ANY REAR OBSTRUCTION. This is for proper air flow through the refrigeration compartment. The refrigeration system requires front to rear air circulation for proper operation.

C. POWER SUPPLY CONNECTION

CAUTION: DO NOT USE AN EXTENSION CORD!

The vendor's power requirements will vary depending upon the country it was purchased for. To verify the power requirements of the vendor, check the serial plate located on the hinged side of the outer door (see Figure 4 on page G-4). The power requirements are listed on the serial plate.

To insure safe operation of the vendor, the vendor's power supply must be a properly grounded and polarized outlet. Before plugging the vendor into the outlet, test the outlet to confirm it will meet the vendor's power requirements. If the power supply of the outlet is different from the power requirements of the vendor, a transformer may be necessary.

If the power requirements are not properly met, contact a licensed electrician and have the necessary correction made.

Should you require additional information, contact the Technical Services Department of the Vendo office in your area.

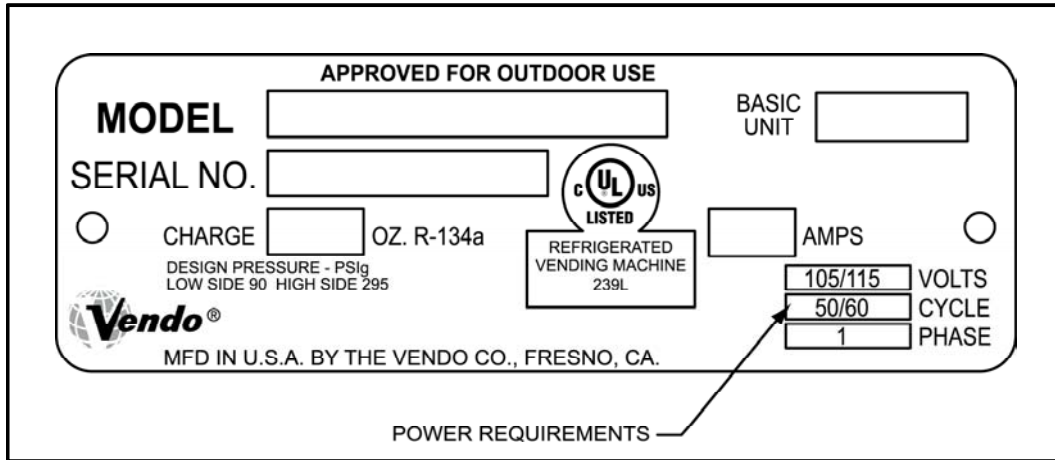


FIGURE 4

NOTE: The **Model** number of the vending machine is located on the top, left hand corner of the serial plate. **Do Not use the “BASIC UNIT” number.** The **BASIC UNIT** number is the cabinet size, which is used on a number of different machines. A typical model number could read “540TDD00029”. The 540 is the model number, TDD represents the product line of the vendor, and the remaining digits tell what options are included.

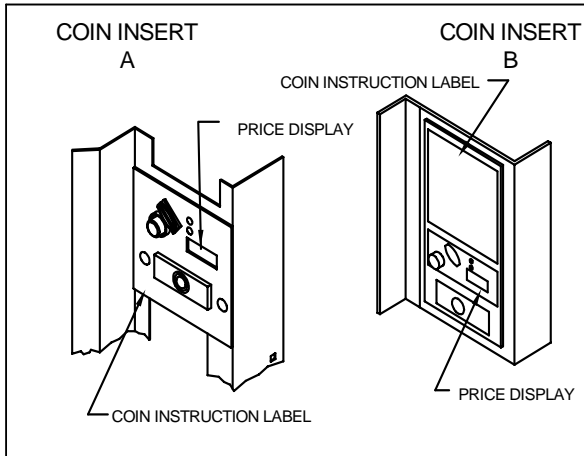


FIGURE 5

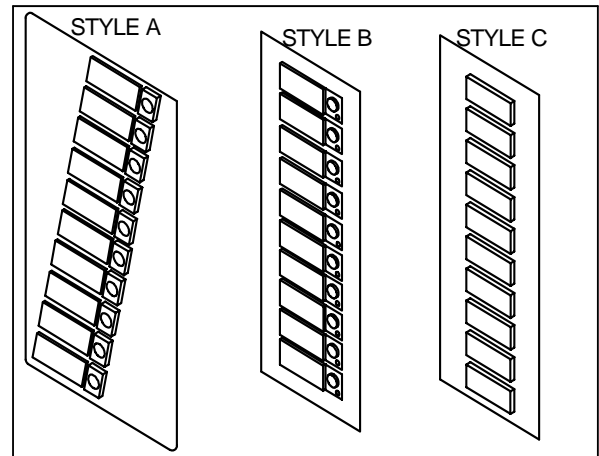


FIGURE 6

LABEL INSTALLATION

COIN INSTRUCTION LABEL & PRICE LABEL APPLICATION:

Apply labels to a clean and dry surface. Peel backing from label and apply with firm, even pressure.

INSTRUCTION LABEL

(Refer to Figure 5 for the following information.)

Coin insert "A" has a separate validator opening, and insert "B" shows the validator opening built into the coin insert. Apply instruction label to area shown (as needed by the vendor).

FLAVOR LABELS INSTALLATION:

In Figures 6 & 7, corresponding styles are indicated by A, B, C, D, or E notations.

Insert flavor labels to the side or top of selection window or button depending on the style. See Figure 6 for selection style. Rear views of windows and buttons are shown in Figure 7. Arrows point the direction to insert labels.

Selection window and selection button labels identify product contained in columns.

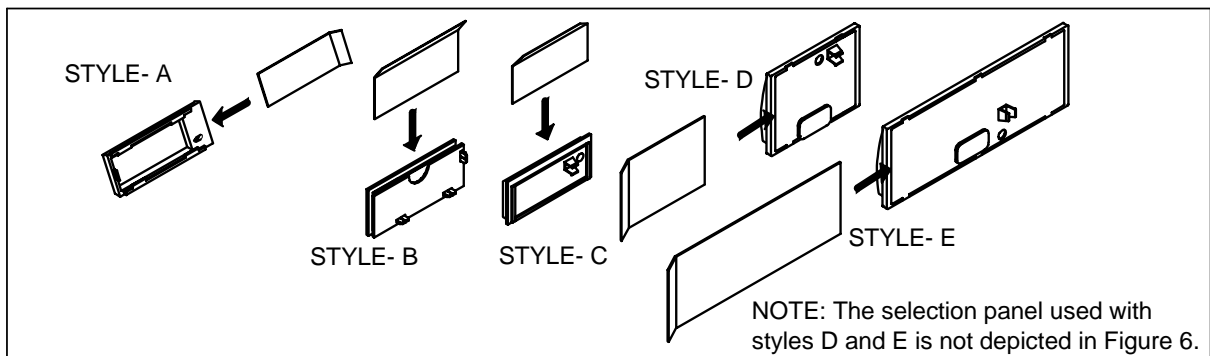


FIGURE 7

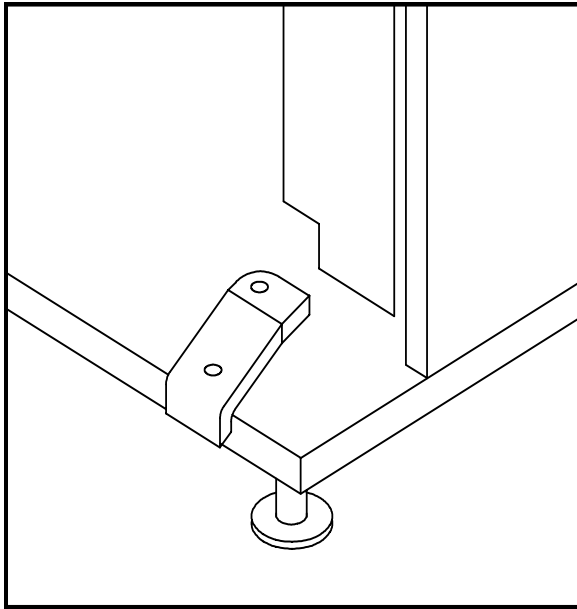
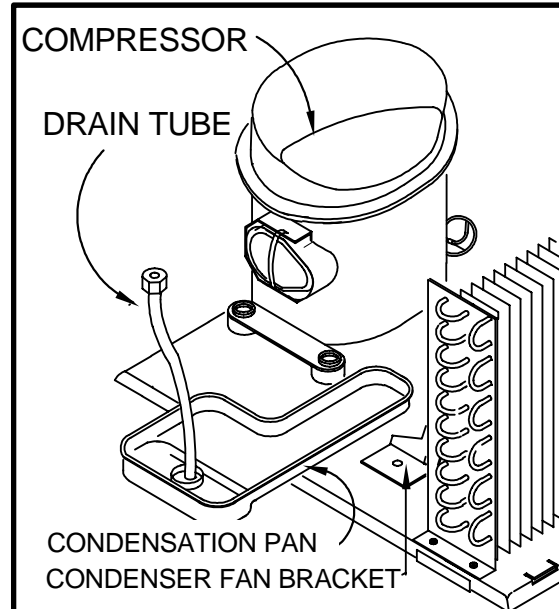


FIGURE 8

FIGURE 9



ALIGNMENT CHECKS

DOOR ROLLER CHECK:

The door support is to insure that the outer door closes squarely to the cabinet. Raising the door can also insure proper alignment of the door latch (see Figure 8).

REFRIGERATION AREA CHECK:

Check the position of the condensation pan (see Figure 9). The correct position of the pan is between the compressor and the condenser fan bracket. Be sure the drain tube is clipped to the pan and is free of kinks. A water trap is installed into the condensation pan and will prevent warm, moist air from reaching the evaporator area.



LOADING INSTRUCTIONS

BASIC LOAD SET-UP:

The V-Max machine is capable of vending a variety of products. For specific information, refer to the product set-up label on the machine inner door or contact the Technical Services Department of the Vendo office in your area.

Load product evenly. Bottles are loaded with crown end placed toward the back of the column. In initial loading, prime the machine by advancing the product into the buckets. To advance product into buckets, use the vend test function of the electronic controller. When the bucket is loaded, the column is ready to vend.

PRIME ALL COLUMNS DURING INITIAL PRODUCT LOADING



VEND MECHANISM PARTS DESCRIPTION

The parts listed below are part of the vend motor mechanism (refer to Figure 10 on page G-9). One mechanism is required per column. The parts are interchangeable. Setting will differ between single, double, triple, and quadruple depth.

VEND MOTOR ASSEMBLY: P/N 1115821

The motor is attached to the mech plate by three screws.

TIMING CAM: P/N 1113236; RETAINER: P/N 1113244

The motor cam assembly consists of two parts, the cam and the cam retainer. The cam controls the vend cycle. The cam is attached to the motor by the cam retainer. The retainer rotates left or right, and provides for single, double, triple, or quadruple depth operation.

SOLD-OUT SWITCH: P/N 368299

There is one sold-out switch above the vend motor. The sold-out switch is actuated by the sold-out flap when the column is empty. It prevents the motor from running when the columns are empty.

VEND BUCKET: P/N 1120146

The vend bucket holds the product(s) in a "ready to vend" position at the base of each column.

MOTOR COUPLING: P/N 1076465

The adapter coupling couples the motor to the bucket. It is located behind the motor, on the motor shaft.

ANTI-THEFT CLIP: P/N 389712

The anti-tilt clip prevents product from dropping out of the bucket if the vendor is tilted. The anti-theft clips are located in the bucket.

GATE: P/N 1121282

The gate holds product above the vend bucket.



GATE LINK: P/N 1120140

The rotation of the vend bucket moves the gate link. This opens the gate, allowing one layer of product to drop into the bucket.

GAGE BAR: P/N 1111651

The gage bar holds the product(s) inside the bucket. It also regulates which product is vended first when double, triple or quadruple depth settings are used. (See page G-10 for motor cam settings.)

GAGE BAR CLIPS: P/N 1066104(white), 1066112(black), 1066112-1(gray), 1121704(gray), 1122103(black)

Gage bar clips are attached to the gage bar to create multiple steps when vending product double, triple, or quadruple depths. (See product set-up label on inner door for details.)

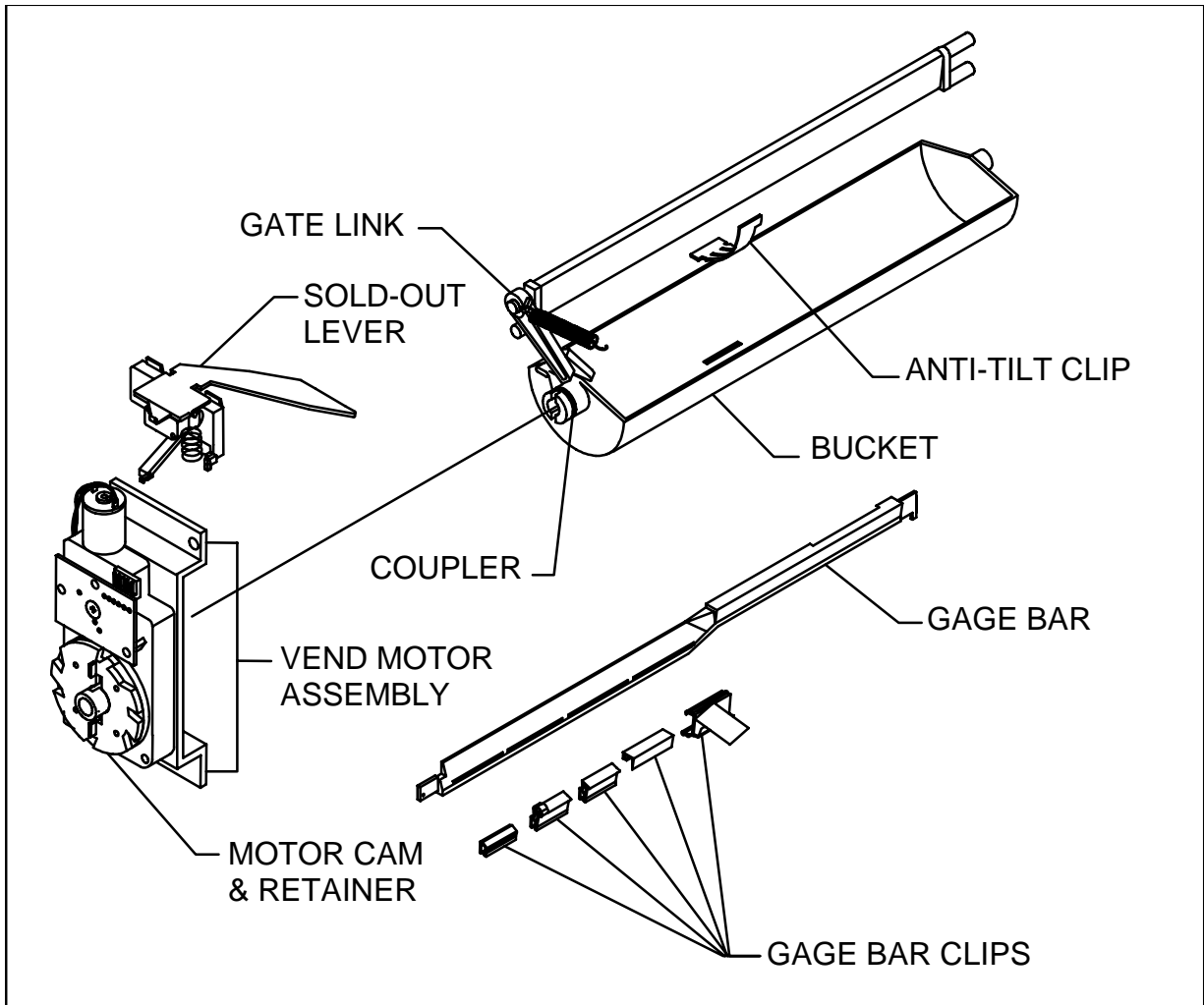


FIGURE 10



VEND CYCLE

Several operations take place during the vend cycle: When a selection is made, the cam and bucket rotate, product is dispensed and the bucket is then reloaded. The sequence of these operations change slightly when the column's depth setting is changed. With the single depth setting, one purchase is made and the bucket is reloaded. The cam sequence occurs one time per bucket revolution. With the double depth setting, two purchases are made before the bucket is reloaded, and the cam sequence occurs twice per bucket revolution. With the triple depth setting, three purchases are made and the cam sequences three times per bucket revolution. With the quadruple depth setting, four purchases are made and the cam sequences four times per bucket revolution.

PURCHASE SEQUENCE: (See Figure 11, quadruple depth setting pictured)

- PS 1. Customer inserts money.
- PS 2. The coinage reports credit to the vending machine electronic controller. Established credit is displayed on the digital display located near the coin insert slot.
- PS 3. Customer presses a selection button.
- PS 4. The controller receives the signal from the selection switch and (if sufficient credit exists) energizes the corresponding vend motor.
- PS 5. The vend motor rotates the bucket and cam. As the cam rotates, the motor position switch actuator raises to the outer surface of the cam. This closes the switch which signals the controller to remove credit.
- PS 6. Product is immediately dispensed. The motor and cam continue to rotate until the motor position switch actuator drops into the low part of the cam.
- PS 7. Motor stops.

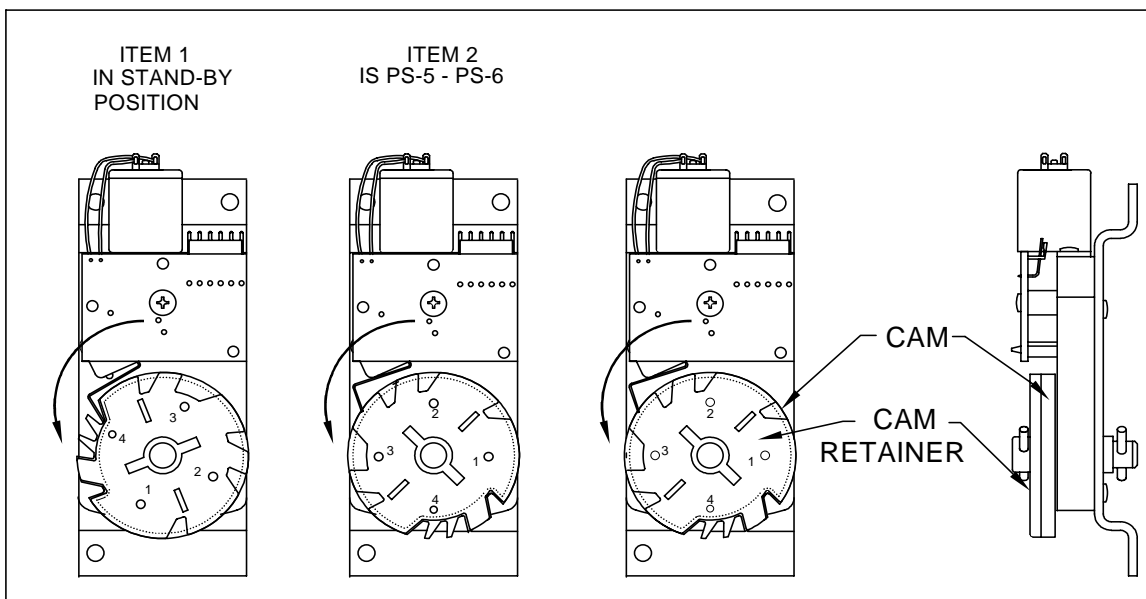


FIGURE 11

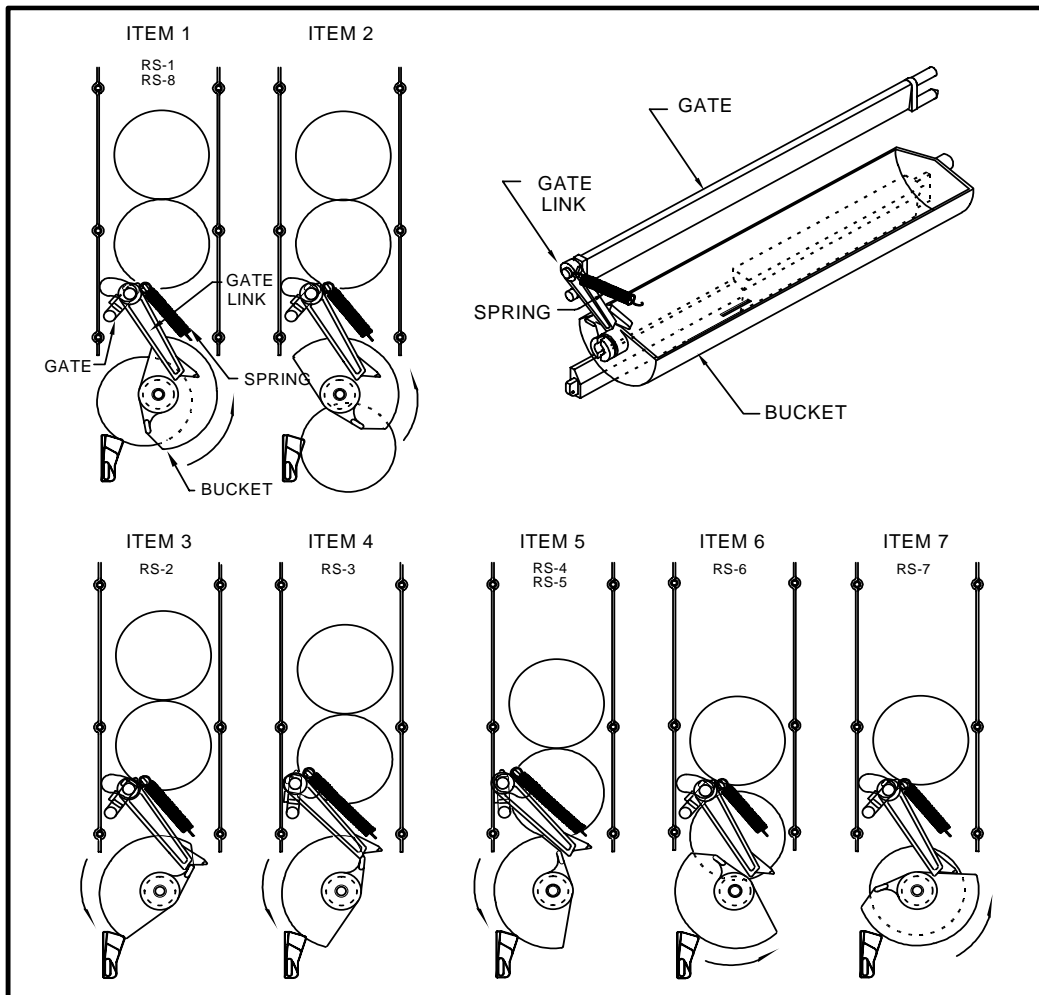
NOTE: The numbers on the cam reflect the number of vends allowed per cycle.

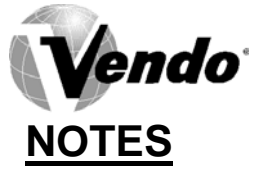


RELOADING SEQUENCE (See Figure 12)

- RS1. The gate link rests at a locked position in a cut out on the mech plate. This locked position prevents the gate from opening out of sequence.
- RS2. The gate link is guided by a slot in the mech plate and is actuated by a ridge on the bucket. As the bucket turns, the gate link is moved out of the locked position.
- RS3. As the gate link rises, the gate is opened. The spring maintains pressure on the gate link and the gate.
- RS4. Product falls into the bucket, the gate link returns to the locked position and the gate is closed.
- RS5. The bucket releases the gate link causing the gate to rest against the product.
- RS6. As the product falls into the bucket, the gate link returns to the locked position and the gate is closed.
- RS7. The product remaining in the column is held by the closed gate, keeping it above the bucket.
- RS8. The bucket stops, loaded with product and is ready to vend.

FIGURE 12







V-MAX

9.1 PROGRAMMING SECTION



All programming of the V-Max is done in the service mode as indicated in the following steps below. The main service modes are indicated in white text and the sub-modes are indicated in black text.

Example:

tIne Time/Date Setting Mode

YeAr Year Setting

nth Month Setting

dATe Date Setting

Hour Hour Setting

Dst Daylight Saving Time



THREE-BUTTON PROGRAMMING

All programming of the V-Max options is done in the service mode. To enter the service mode open the vendor door, find the service mode button located on the control board, then press and release the service mode button which is located on the controller board. (See Figure 1.)

To toggle through all the service modes you will need to use the service mode button or secondary service switch (Live Display models only).

The first three selection buttons are used to navigate through the programming as follows:

Button	Description	Usage
Selection Button 1	Up/Down	Increase/Decrease, Next/Previous
Selection Button 2	Enter	Go to sub-level, activate function
Selection Button 3	Return	Exit, go back to the previous level

Note: Three-button programming is only used for the following:

1. Time function and all it's sub-codes.
2. Open door data retrieval.

The controller will automatically return to the Open-Door Sales Mode if:

1. No information from the selection switches is received within approximately 30 seconds.
2. The service mode button is pressed a second time.
3. The (Return) button is pressed.

When the programming is entered, any established credit is returned. When and if the door is closed, the controller will exit the service mode and return to the sales mode.

MIS Data

As soon as the outer door is opened, the non-resettable MIS data will be displayed if no errors exist. "CAns XXX" will flash for approximately 40 seconds, indicating the total number of units the machine has sold. After 40 seconds, "CAsh XX.XX" will begin to scroll, indicating the total dollar amount the machine has accumulated. **NOTE:** Pressing selection button one will eliminate the 40-second wait time and advance you immediately to the "CAsh XX.XX" scroll.

To access MIS data by individual selection, press selection button two during the "Cans XXXX" or "CAsh XX.XX" scroll. Use selection buttons one and two to advance forward or backward through the selections. Please see page PC-8 to choose between selection by price or selection by sales.

To reset MIS data for individual selections, press selection buttons one and four simultaneously after viewing all desired selections.

NOTE: The MIS data that is displayed when the outer door is opened ("Cans XXXX" and "CAsh XX.XX") is non-resettable. This data is accumulated over the life of the control board and can only be changed by replacing the control board.



V-MAX CONTROLLER

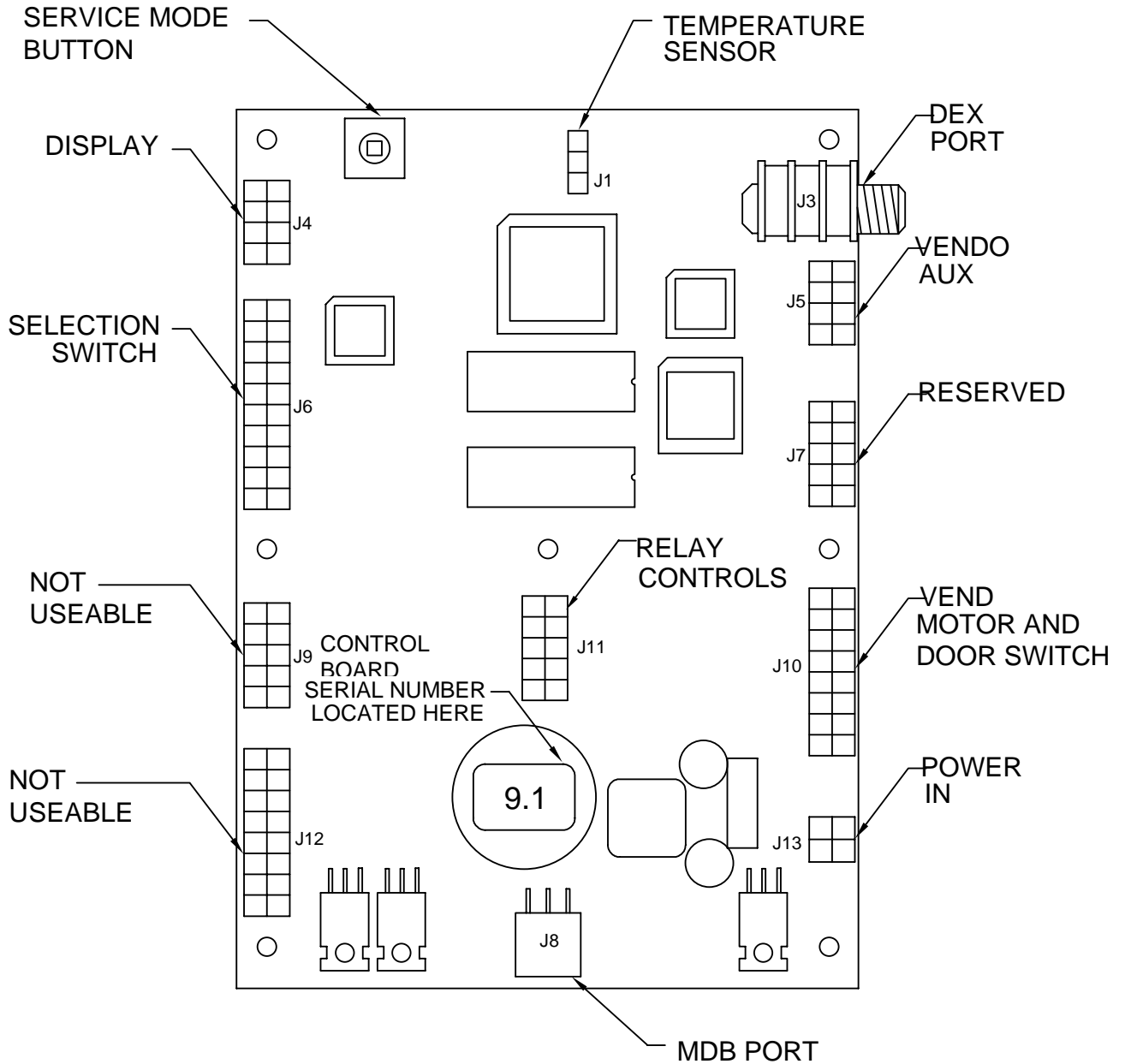


Figure 1



SET-UP AND CODE DESCRIPTION

Error Error Display Mode

If selection button two is pressed at the "Error" prompt, the controller will enter the Error Display Mode. If no errors have occurred, the display will show "nonE". If an error has been detected since the last error reset, the display will show the first error summary code that has occurred. If selection button three is pressed while displaying any summary code, the controller will return to the "Error" prompt.

***Note:** See Figure 2 for Error Code Map located on page PC-6.*

***EXAMPLE:** "COLJ" would indicate a column jam error.*

Clearing an Error

If selection button two is pressed and held for two seconds during the display of the detailed error code, that error will be cleared. If any other detailed errors exist, the next error will now be displayed. If no other errors of this type exist, the next error summary code will now be displayed, or "nonE" if no other errors exist.

COIn Coin Pay Out/Tube Fill Mode

If selection button one is pressed at the "COIN" prompt, the controller will enter the Coin Pay Out Mode. The display will show the lowest coin value that can be paid out (.5, .10, .25 etc). If any of the buttons (e.g.1-3) is pressed, a pay out of the displayed value will be made. Coins will continue to pay out as long as that selection button is held down.

***EXAMPLE:** If selection button one is pressed while 5 cents is displayed it will pay out a nickel.*

***Note:** If using a four-tube coin changer, selection button four will allow you to pay out the displayed value.*

When the controller enters the coin tube fill mode, the operator is allowed to deposit any coin into the coin changer's acceptor when that coin's tube is not full. The tube inventory level will be displayed after each coin is accepted.



ERROR CODES				
Open door error code status (as displayed)			Detailed error codes are cleared by pressing selection button 2 for 2 seconds when displayed or automatically by the following:	
▽	Summary level error codes (as displayed)			
▽	▽	Detail level error codes (as displayed)		
▽	▽	▽	DESCRIPTION	
nonE			No errors exist	
Error			One or more errors exist	
	COLJ		Vend mechanism summary error	
		CJXX	Column jam in column XX	Complete a test for column XX
	SELS		Selection switch summary error	
		SSXX	Selection switch XX is stuck closed	Switch XX opens
	StS		Space-to-sales summary error	
		UCXX	Column XX is not assigned to a selection	Column XX is assigned
		USXX	Selection switch XX is not assigned	Selection XX is assigned
	CHnG		Coin changer summary error	
		CC	Changer communication stopped	Changer communication normal
		tS	Tube sense error reported by changer	Changer corrected
		IC	Changer inlet chute blocked	Coin is sensed
		tJ	Pay out tube jam reported by changer	Changer corrected
		CrCH	Check sum error reported by changer	Changer corrected
		EE	Excessive escrow attempts	Coin is sensed
		nJ	Coin jam reported by changer	Changer corrected
		LA	Coin acceptance rate is low	Coin acceptance rate improves
		dIS	Unconnected acceptor reported by changer	Acceptor properly connected
		rout	Coin routing error reported by changer	Coin is routed properly
	bUAL		Bill validator summary error	
		bC	Validator communications stopped	Validator communications normal
		bFUL	Bill stacker full reported by validator	Bills removed from stacker
		bILL	Defective motor reported by validator	Validator corrected
		bJ	Bill jam reported by validator	Validator corrected
		brCH	Check sum error reported by validator	Validator corrected
		bOPn	Bill stacker open reported by validator	Validator corrected
		bS	Bill sensor error reported by validator	Validator corrected
	Crdr		Card reader summary error	
		CrC	Reader communications stopped	Reader communications normal
		CrXY	Error *code X, sub-code Y reported by reader	Reader corrected
	rFrG		Refrigeration system summary error	
		SEnS	Temperature sensor unplugged/defective	Sensor connected/replaced
		CnPr	Cooling system not cooling	System cooling at least 1°F per hour
		Htr	Heating system not heating	System heating at least 1°F per hour
	OtHr		Other vendor summary errors	
		dS	Door open for 1 hour	Door Closed
		rAn	Check sum error for service mode setting	Any service mode setting changed
		ACLO	AC voltage is low	
		SF	Scale factor incompatibility	Scale factor is located
		IS	Vendor inlet coin chute sensor is blocked	Blockage is removed
		Ib	Vendor inlet coin chute is blocked	Coin is detected by the changer

Figure 2



SET-UP AND CODE DESCRIPTION (CONTINUED)

tESt Test Mode

If selection button one is pressed at the "tESt" prompt, the controller will enter the Test Mode. Upon entry into the test mode the display will show the first summary test, "CO 1". Pressing selection button one or two will toggle through the column selections. Pressing selection button three will test vend the displayed column. In order to exit the setting, press the service mode button or close the outer door.

LiTE Test Lights

If the fifth selection button is pressed at the "tESt" prompt, the "LiTE" mode is displayed. If the fifth button is pressed again at the "LiTE" prompt, the controller will activate the test status of the lights. Pressing the fifth button again de-activates the test status of the lights.

CnPr Compressor Test Mode

If the sixth selection button is pressed at the "tESt" prompt, the "CnPr" mode is displayed. If the sixth button is pressed again at the "CnPr" prompt, the controller will activate the test status of the compressor. Pressing the sixth button again de-activates the test status of the compressor.

COSt Cost Setting Mode (Multi-Price)

The purpose of this mode is to enable the controller to set the vend price for each of the selections. If selection button one through ten is pressed at the "COSt" prompt, the display will toggle "SL X" "00" ("X" will indicate the selection buttons and "00" will indicate the selection price). Pressing the same button again will increase or decrease the price. In order to save the selection price, either press the service mode button or close the outer door.

Cost Setting Mode (Single-Price)

The purpose of this mode is to enable the controller to set the vend price for each of the selections. If selection button one is pressed at the "COSt" prompt, the display will toggle "SPRI" "00" ("00" will indicate the selection price). Pressing the same button again will increase or decrease the price. In order to save the selection price, either press the service mode button or close the outer door.

Note: Make sure 1.4 is set properly in configuration group 1 mode.

Example: 1.4 "y" = Single price enabled / Multi-price disabled.
1.4 "n" = Multi-price enabled / Single price disabled.



SET-UP AND CODE DESCRIPTION (CONTINUED)

OPT1

Option Group 1 Mode

If selection button one is pressed at the “OPT1” prompt, the controller will enter the Option Group 1 Mode. The purpose of this mode is to allow the controller to select the group 1 configuration options desired. Upon entry into this setting the display will show “1.1 y” where “y” is for enable or “n” for disable. Pressing selection buttons 1-5 will display the available options listed below.

EXAMPLE: “1.1 y” = Option group 1 enabled

“1.1 n” = Option group 1 disabled

Selection No.	Display	Description
Button #1	1.1 “y” or “n”	Force vend enabled (y) or disabled (n)
Button #2	1.2 “y” or “n”	Bill Escrow enabled (y) or disabled (n)
Button #3	1.3 “y” or “n”	Error/Sold Out indicator “o” enabled (y) or disabled (n)
Button #4	1.4 “y” or “n”	Single Price enabled (y) Multi-Price enabled (n)
Button #5	1.5 “y” or “n”	Sales count by price is enable/ By selection is disable if “Y” = “Yes” Sales count by selection is enable/ By price is disable if “N” = “No”
Button #6	Toggle software info.	Displays controller and software version

OPT2

Option Group 2 Mode

If selection button one is pressed at the “OPT2” prompt, the controller will enter the Option Group 2 Mode. The purpose of this mode is to allow the controller to select the group 2 configuration options desired.

Selection No.	Display	Description
Button #1	2.1 “y” or “n”	“Y”- Correct change light indicator is disabled. “N”- Correct change light indicator operates as normal.
Button #2	2.2 “y” or “n”	Allow Overpay enabled (y) or disabled (n)
Button #3	2.3 “y” or “n”	“Y” - Save Credit Timer is enabled holds credit for 5 minutes. “N” - Save Credit Timer is disabled in which credit never times out.
Button #4	2.4 “y” or “n”	Multi-vend enabled (y), Single vend enabled (n)
Button #5	2.5 “y” or “n”	Auto MIS-Reset with DEX read



SET-UP AND CODE DESCRIPTION (CONTINUED)

SSSS

Space-to-Sales Setting Mode

If any selection button is pressed at the “SSSS” prompt, the controller will enter the Space-to-Sales option. Upon entry into this setting the display will show the current option setting. Pressing any selection button for 3 seconds will change the space-to-sales configuration as listed below. The display will show “STS nn” where “nn” indicates the desired option.

For proper configuration settings refer to the label located on the inner door shear panel (See figure 3)

SPACE-TO-SALES CONFIGURATIONS

	ST10	STS9	STS8	STS7	STS6	STS5	STS4	STS3	STS2	STS1
SEL#	COL	COL	COL	COL	COL	COL	COL	COL	COL	COL
1	1	1,2	1	1	1,2,3	1,2	~	~	ALL	NONE
2	2	1,2	2	2	1,2,3	1,2	~	~	ALL	NONE
3	3	3	3	3	1,2,3	3	~	~	ALL	NONE
4	4	4	4	4	4	4	~	~	ALL	NONE
5	5	5	5	5	5	5	~	~	ALL	NONE
6	6	6	6	6	6	6	~	~	ALL	NONE
7	7	7	7	7	7	7	~	~	ALL	NONE
8	8	8	8	~	8	8	~	~	ALL	NONE
9	9	9	~	~	9	~	~	~	ALL	NONE
10	10	10	~	~	10	~	~	~	ALL	NONE

FIGURE 3

Note: *If none of the space-to-sales configurations are suitable, the operator can use the Custom Space-to Sales Setting Mode.*

CSSS

Custom Space-to-Sales Setting mode

If any selection button is pressed at the “CSSS” prompt, the controller will enter the Custom Space-to-Sales option. Upon entry into this setting the display will show the current selection setting followed by the columns connected to that selection button.

Programming Connection Option

If any selection button is pressed for more than 3 seconds while at the “CSSS” prompt the controller will enter the Custom Space-to-Sales Programming Option. Pressing selection button one or two will increase or decrease the column number displayed. Pressing selection button three will actuate the changed connection status of the column number displayed. Pressing selection button four will save the connection changes and return the controller to the “CSSS” prompt.



SET-UP AND CODE DESCRIPTION (CONTINUED)

Cddr Closed Door Data Retrieval Mode

If selection buttons 1-4 are pressed at the “Cddr” prompt, the controller will enter the Closed Door Data Retrieval Mode by displaying “XXXX” where “XXXX” is the password. By pressing button number one the controller will display the current password while the first digit is flashing. By pressing the selection button again it will allow you to change the password. By following the above direction you may customize your password by using buttons 1-4. Buttons 1-4 will **only** change the digit from 0 to 6 (**see note below**). In order to save the password, the operator needs to either press the service mode button or close the outer door.

***Note:** If one of the digits in the password is “0” it will be disabled since selection button “0” does not exist.*

***Note:** This feature is not available when the vend price is set to “0.00”.*

rFrG Refrigeration Mode

If selection button one is pressed at the “rFrG” prompt, the controller will enter the Refrigeration Control Mode by displaying “norn”. Pressing selection button one again will toggle the temperature settings from “hhhh”(warmest) to “cccc”(coldest). If selection button two is pressed, the display will show the temperature sensor reading. If selection button three is pressed, the display will toggle from “C” (Celsius) or “F” (Fahrenheit). In order to save the refrigeration setting press the service mode button or close the outer door. **See Figure 4 for proper thermostat setting.**

***Note:** The displayed thermostat setting and the actual temperature sensor reading for refrigeration control are listed below:*

Thermostat Setting Displayed	cccc	ccc	cc	c	norn	h	hh	hhh	hhhh
Cut-in Temperature (F)	34°	35°	36°	37°	38°	39°	40°	41°	42°
Cut-out Temperature (F)	30°	31°	32°	33°	34°	35°	36°	37°	38°
Nominal Temperature (F)	32°	33°	34°	35°	36°	37°	38°	39°	40°
Nominal Temperature (C)	0	0.6	1.1	1.7	2.2	2.8	3.3	3.9	4.4

FIGURE 4



SET-UP AND CODE DESCRIPTION (CONTINUED)

tlne

Time/Date Setting Mode

If selection button two is pressed at the “tlne” (time) prompt, the controller will enter the Time/Date Setting Mode and display “CLOC”. Only the first three selection buttons are used to step through the time/date options. Using selection button one will allow the controller to cycle through all available time selection options. If selection button two is pressed, the controller will enter the sub-mode that is displayed. Pressing selection button three at anytime during this operation will return the controller to the “tlne” prompt.

CLOC SELECTION OPTIONS	
“YEAr”	Current Year (Example: 2002)
“nth”	Current Month
“dAtE”	Current Date (day of month)
“hour”	Current Time (hours, minutes)
“dSt”	Daylight Savings Time
“CtL1”	Control BLC1 option

YeAr

Year Setting Option

If selection button two is pressed at the “YEAr” prompt, the display will show the current year. Pressing selection button one will allow you to increase or decrease the year setting. Pressing selection button three will return the controller to the “YEAr” prompt and save the current setting.

nth

Month Setting Option

If selection button two is pressed at the “nth” prompt, the display will show the current month. Pressing selection button one will allow you to increase or decrease the month setting. Pressing selection button three will return to the “nth” prompt and save the current setting.

dAtE

Date Setting Option

If selection button two is pressed at the “dAtE” prompt, the display will show the current date. Pressing selection button one will allow you to increase or decrease the date setting. Pressing selection button three will return to the “dAtE” prompt and save the current setting.



SET-UP AND CODE DESCRIPTION (CONTINUED)

Hour

Hour Setting Option

If selection button two is pressed at the “Hour” prompt, the display will show the current hour. By pressing selection button one the controller will allow you to increase or decrease the hour setting. Pressing selection button three will return to the “Hour” prompt and save the current setting.

dSt

Daylight Savings Time

If selection button two is pressed at the “dSt” prompt, the display will show the current Daylight Savings Time. Pressing and releasing selection button one will toggle the different countries; AUS (Australian rules), EU (European rules), OFF (No daylight savings) and NA (North American rules). Pressing selection button three will return to the “dSt” prompt and save the current setting.

bLC1

Block Selection Setting

This feature is used to choose a group of selections and the time when those selections will be blocked from vending product. If selection button one is pressed at the “bLC1” or “bLC2” prompt, the controller will enter the Selection Blocking Control Mode. Upon entry into this program, the display will show the first sub-mode “CtL1”.

Using selection button one will also let the operator toggle between the following modes:

BLOCK SELECTION OPTIONS	
“CtL1”	Controls bLC1 option
“SbL1”	Set selection group 1 option
“Str1”	Set start time
“dAY”	Set days to time
“Hour”	Set time to start (24 hours) - see above
“StP1”	Set stop time
“dAY”	Set days to time
“Hour”	Set time to start (24 hours) - see above

Pressing selection button two will save the currently displayed setting and return the user to the “CtL1” prompt. Pressing selection button three will return to the “bLC1” prompt without saving.



SET-UP AND CODE DESCRIPTION (CONTINUED)

CtL1

Control Blocking Option

If selection button one is pressed at the "CtL1" prompt, the controller will enter the Control Blocking Option. Upon entry into this program the display will show the first summary level codes e.g. "OFF", "On", and "LI". In order to save the option press selection button number two to lock in the desired setting and then press selection button number three to return to the "CtL1" prompt.

SbL1

Selection Setting

If selection button two is pressed at the "SbL1" prompt, the controller will enter the Selection Setting Option. Upon entry into this setting the display will show the current setting for selection as "S 1y" for enabled and "S 1n" for disabled. To change current setting, press selection button two. The current setting will flash. Pressing selection button one will change the setting. Pressing selection button two will lock in the desired setting. In order to save the setting, press selection button three to return the controller to the "SbL1" prompt.

Str1

Start Time Setting

If selection button two is pressed at the "Str1" prompt, the controller will enter the Start Time Setting Option. Upon entry into this option the display will show "dAY".

dAY

Day Setting Option

If selection button two is pressed at the "dAY" prompt, the current day of the week is displayed. The days are displayed as follows:

"nnoX"	Monday
"tUEX"	Tuesday
"UUEx"	Wednesday
"tHUX"	Thursday
"FriX"	Friday
"SAtX"	Saturday
"SunX"	Sunday
"ALL"	All Days

"Y" = Setting is enabled.

"N" = Setting is disabled.

Pressing selection button one at this point will toggle through the days of the week. Pressing selection button two when a day (e.g. nnoX) is displayed will start "X" to flash. Pressing selection button one will toggle between "y" for enabled and "n" for disabled. To lock in desired setting, press selection button two. In order to save the day option press selection button three to return the controller to "dAY" prompt.



SET-UP AND CODE DESCRIPTION (CONTINUED)

Hour

Start Time Hour Setting

If selection button one is pressed at “dAY” prompt, the controller will enter the “hour” prompt. Pressing selection button two will enter into the hour setting. Pressing selection button one will increase or decrease the start time. Press selection button three to save the current setting and return to the “hour” prompt.

StP1

Stop Time Setting

If selection button two is pressed at the “StP1” prompt, the controller will enter the Stop Time Setting Option. Upon entry into this option the display will show “dAY”.

nrG1

Low Energy Operation

This feature is used to choose whether the low energy operation, including refrigeration and/or lights, will occur. If selection button two is pressed at the “nrG1” or “nrG2” prompt, the controller will enter the Low Energy Options. Upon entry into this program the display will show the first summary level code “CtL1”. Pressing selection button three will save the currently displayed setting and return the user to the “CtL1” prompt. Using selection button one will also let the operator toggle between the following modes:

LOW ENERGY OPTIONS	
“CtL1”	Controls bLC1 option
“LitX”	Set lighting during “nrG1” status
“rFGX”	Set refrigeration temperature
“Str1”	Set start time
“dAY”	Set days to time
“Hour”	Set time to start (24 hours)
“StP1”	Set stop time - see above
“dAY”	Set days to time
“Hour”	Set time to start (24 hours)

Note: For “CtL1”, “Str1” and “dAY” setting refer to page PC-13. For “Hour” setting refer to page PC-12.



SET-UP AND CODE DESCRIPTION (CONTINUED)

LItx

Light Setting During Low Energy

This feature is an additional sub-mode of nrG1/nrG2. This will let you choose if the lights are included or excluded from the low energy operation. If selection button two is pressed at the "LItX" prompt, the controller will enter the Light Setting Option. Upon entry into this program the display will show the current setting "LItY" for enabled and "LItN" for disabled. If selection button one is pressed and released it will toggle through the valid selections. Pressing selection button three will save the currently displayed setting and return the user to the "CtL1" prompt.

"Y" = Enable low energy option.

"N" = Disable low energy option.

rFGx

Refrigeration Temperature Set Back During Low Energy

This feature is an additional sub-mode of nrG1/nrG2. This will let you choose if the refrigeration system is included or excluded from the low energy operation. If selection button two is pressed at the "rFGy" prompt, the controller will enter the Refrigeration Setting Option. Upon entry into this program the display will show the current setting "rFGy" for enabled and "rFNn" for disabled. If selection button one is pressed and released it will toggle through the valid selections. Pressing selection button three will save the currently displayed setting and return the user to the "CtL1" prompt.

"Y" = Enable temperature set back.

"N" = Disable temperature set back.



SET-UP AND CODE DESCRIPTION (CONTINUED)

dISC

Discount Setting Mode

This feature is used to choose a group of selections that will be discounted, the amount of discount, and the time when the discount will occur. If selection button two is pressed at the “dISC” prompt, the controller will enter the Discount Setting Mode. Upon entry into this program the display will show the “CtL1”. If selection button one is pressed and released it will toggle through the discount setting mode as listed below. In order to save the setting press the service mode button or close the outer door. Pressing selection button three will save the currently displayed setting and return the user to the “dISC” prompt.

DISCOUNT SETTING OPTIONS	
“CtL1”	Enable/Disable discount setting
“SdSC”	Selection Setting
“Strt”	Set start time
“dAY”	Set days to time
“Hour”	Set time to start (24 hours)
“LESS”	Set Discount amount
“StoP”	Set stop time
“dAY”	Set days to time
“Hour”	Set time to start (24 hours)

Note: For “CtL1”, “Strt” and “dAY” setting refer to page PC-13. For “Hour” setting refer to page PC-12.

SdSC

Selection Setting

If selection button two is pressed at the “SdSC” prompt, the controller will enter the Selection Setting Option. Upon entry into this program the display will show the current setting for selection as “S 1y” for enabled and “S 1n” for disabled. If selection button one is pressed it will cycle through the valid selections or “ALL”. Pressing selection button three will save the currently displayed setting and return the user to the “SdSC” prompt.

“Y” = Enable selection setting.

“N” = Disable selection setting.



SET-UP AND CODE DESCRIPTION (CONTINUED)

LESS

Set Discount Amount

If selection button two is pressed at the “LESS” prompt, the controller will enter the Discount Amount Option. Upon entry into this program the display will show the current four-digit discount amount. If selection button one is pressed it will increase or decrease the lowest discount amount. Pressing selection button three will save the currently displayed setting and return the user to the “LESS” prompt.

OUEr

Over-Ride Mode (Units equipped with optional key switch)

This feature is used to allow you to manually over-ride (via a key switch) pricing, blocking, low energy operation and discounting. If selection button two is pressed at the “OUEr” prompt, the controller will enter the Over-Ride Mode. Upon entry into this program the display will show “FrEn”. If selection button one is pressed it will cycle through the over-ride setting options as listed below. Pressing selection button three will save the currently displayed setting and return the operator to the “OVER” prompt.

OVER-RIDE SETTING OPTIONS	
“FrEn”	Enable/Disable free vend (Edit mode Y/N)
“bLCn”	Selection blocking over-ride
“nrGn”	Low energy over-ride
“dSCn”	Discounting over-ride

FrEn

Over-Ride Free Vend

If selection button two is pressed at the “FrEn” prompt, the controller will enter the Free Vend Enable Option. Upon entry into this program the display will show the current setting “FrEn”. Pressing selection button one will toggle between “y” for enabled and “n” for disable. Pressing selection button three will save the currently displayed setting and return the operator to the “OVER” prompt.

“Y” = Enable free vend.

“N” = Disable free vend.



SET-UP AND CODE DESCRIPTION (CONTINUED)

bLCn Over-Ride Selection Blocking

If selection button two is pressed at the "bLCn" prompt, the controller will enter the Selection Blocking Over-Ride Enable Option. Upon entry into this program the display will show the current setting "bLCn". Pressing selection button one will toggle between "Y" for enable and "N" for disable. Pressing selection button three will save the currently displayed setting and return the operator to the "OVER" prompt.

"Y" = Enable selection blocking.

"N" = Disable selection blocking.

nrGn Over-Ride Low Energy Status

If selection button two is pressed at the "nrGn" prompt, the controller will enter the Over-Ride Low Energy Option. Upon entry into this program the display will show the current setting "nrGy" for enable and "nrGn" for disable. Pressing selection button three will save the currently displayed setting and return the operator to the "OVER" prompt.

"Y" = Enable Over-Ride Low Energy blocking.

"N" = Disable Over-Ride Low Energy blocking.

DSCn Over-Ride Discount

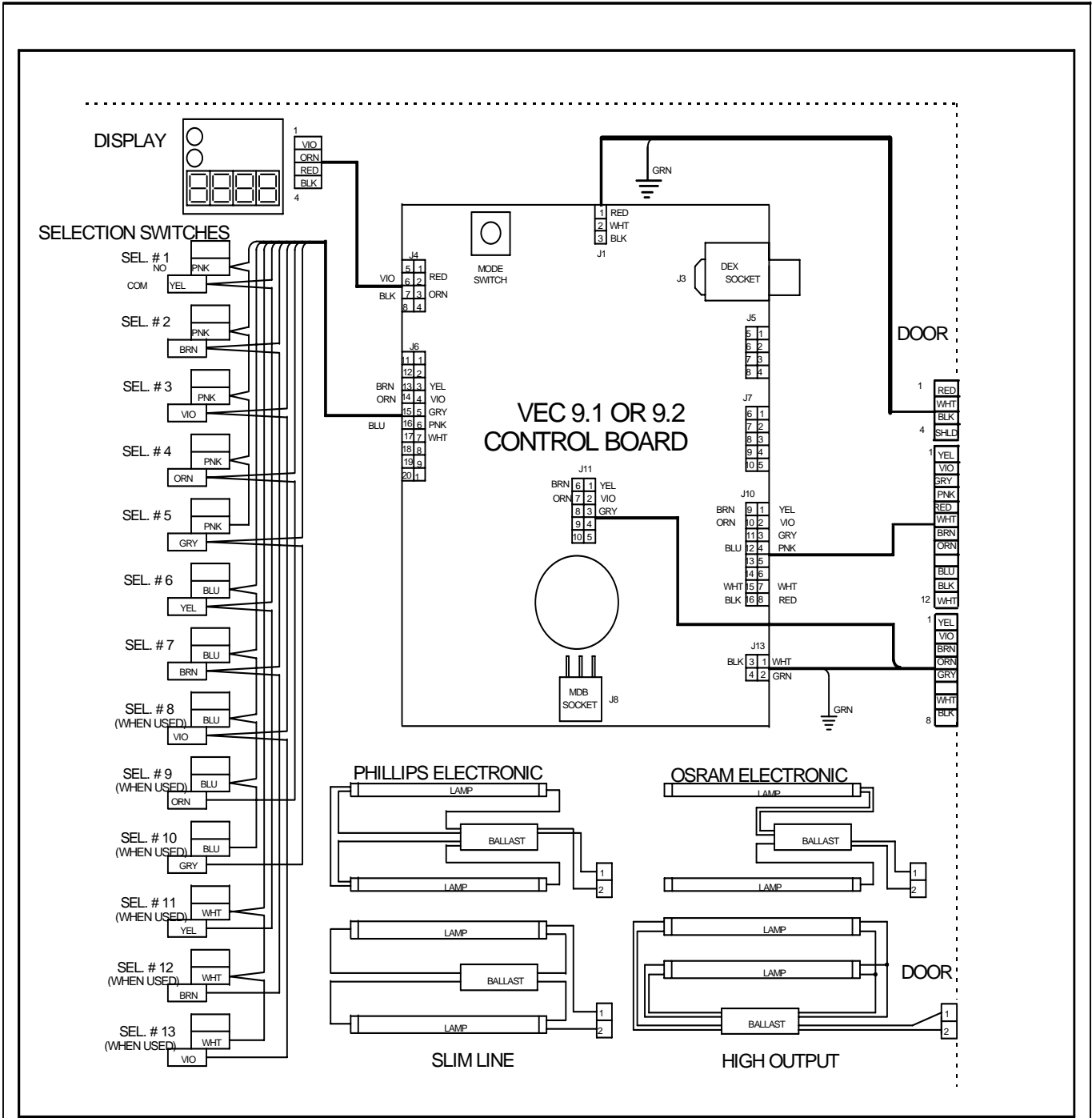
If selection button two is pressed at the "dSCn" prompt, the controller will enter the Discounting Over-Ride Enable Option. Upon entry into this program the display will show the current setting "dSCy" for enable and "dSCn" for disable. Pressing selection button three will save the currently displayed setting and return the operator to the "OVER" prompt.

"Y" = Enable discount over-ride.

"N" = Disable discount over-ride.



9.1 WIRING DIAGRAM

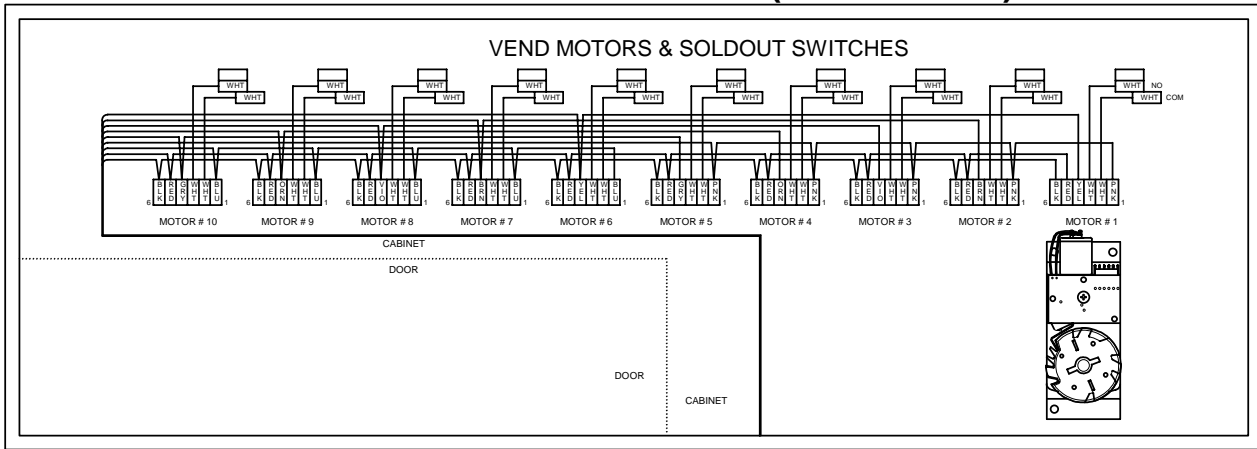


VOLTAGE READINGS

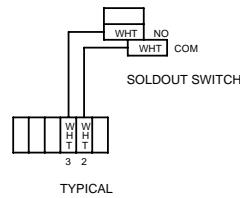
J1 - Temp Sensor 5 Volts DC Pins 1 and at 2	J8 - MDB Port 34 Volts DC at Pin 1 5 Volts DC at Pin 6
J3 - DEX Port only 0 Volts DC	J10 - Vend Motor Port 15 Volts DC Pins 1 and 12, 24 Volts at Pins 8 and 16, and 13 Volts at Pin 3, 4 and 10
J4 - Display Port 5 Volts DC at Pins 6 and at 3	J11 - Environmental Control Port 24 Volts DC Pins 1,2 and 3
J5 - Option Port 5 Volts DC Pin 1, 2, 3, 4, 7	J13 - Main Power Input 24 Volts AC Pin 3
J6 - Selection Port 5 Volts DC Pins 3, 4, 5, 13, 14	All Power readings were off the J13 Pin 2 ground



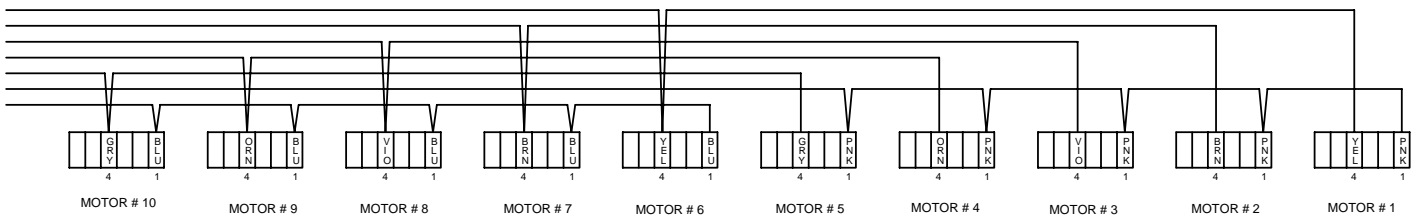
9.1 WIRING DIAGRAM (CONTINUED)



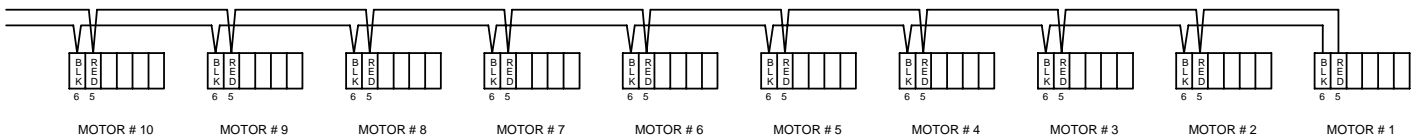
V-MAX MOTOR HARNESS SCHEMATIC BREAKDOWN



PINS 2&3: 0 VDC SOLDOUT SWITCH TO MOTOR BOARD (EXTENSION OF 2X5 MATRIX)



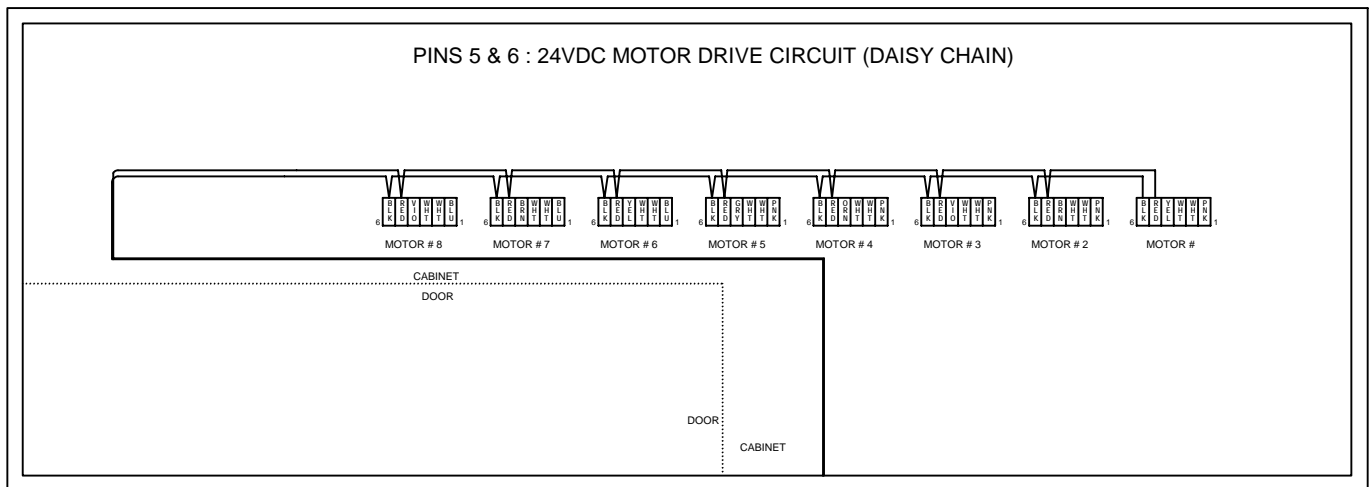
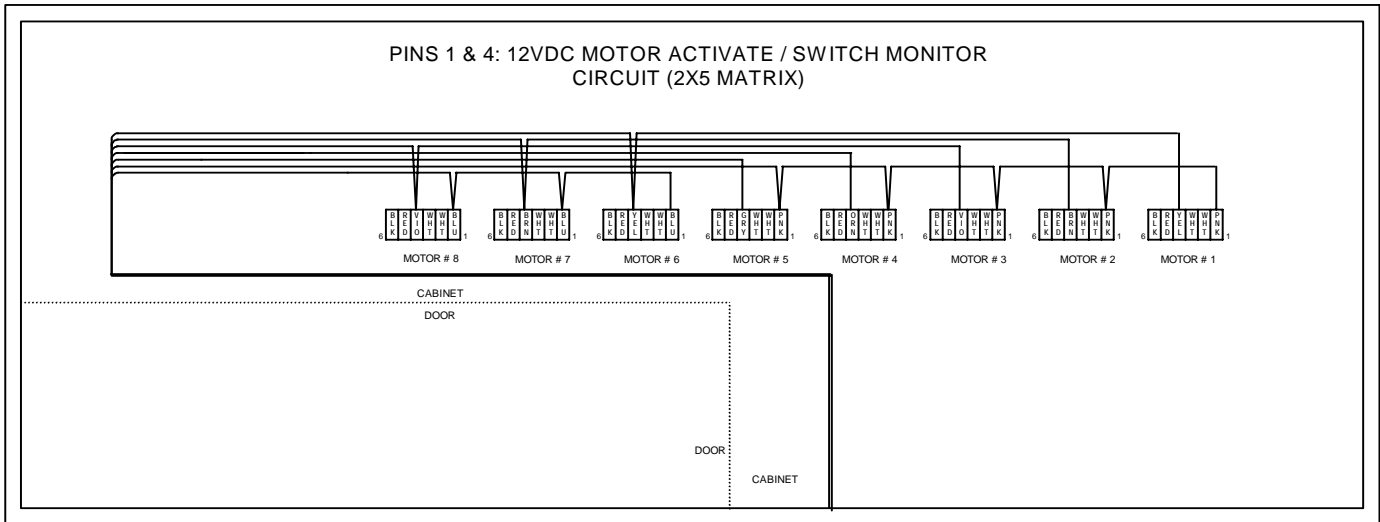
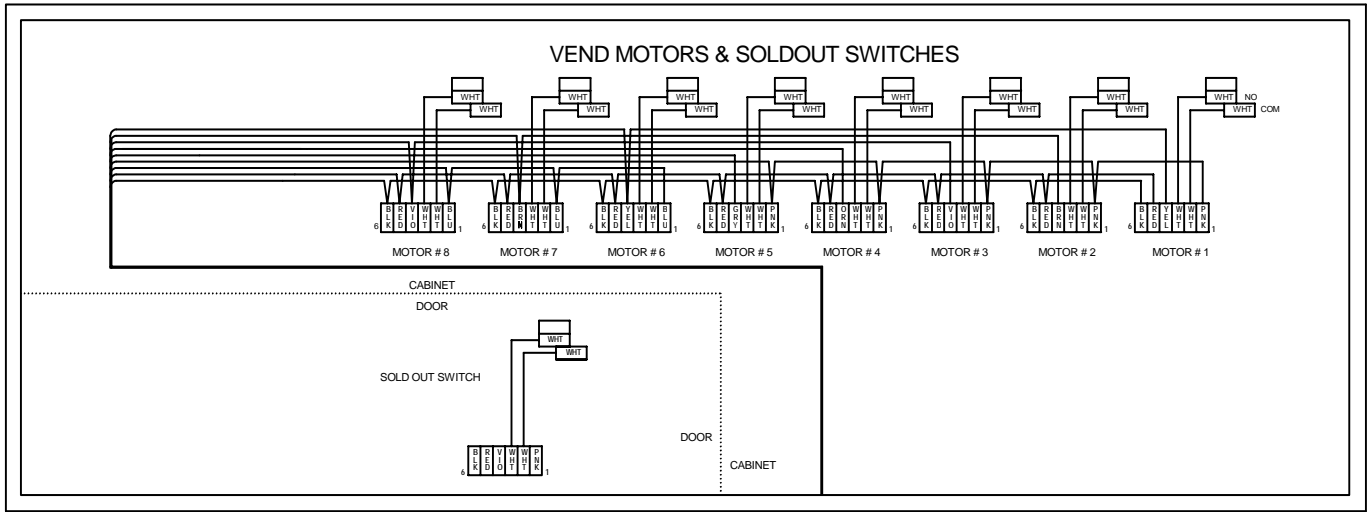
PINS 1&4: 12VDC MOTOR ACTIVATE / SWITCH MONITOR CIRCUIT (2X5 MATRIX)



PINS 5&6: 24VDC MOTOR DRIVE CIRCUIT (DAISY CHAIN)



9.1 WIRING DIAGRAM (MINI V-MAX)





NOTES

1. If the outer door is left open for over an hour, the lights and compressor will become active. In order to over-ride this option, press the door switch one time.



V-MAX

CABINET PARTS SECTION



READING A PARTS LIST

- I **ITEM NUMBER** is found in two locations:
 - A. It is on the drawing plate, and identifies the part and its location;
 - B. The same number is in the parts lists and ties the two together.

 - II **PART NUMBER** is the part number that has been assigned to a specific part by Vendo, for easier identification.

 - III **QUANTITY REQUIRED** relates to the amount required of a part, or will be indicated by "A/R" (as required) to attach it to another part.

 - IV **PART NAME AND DESCRIPTION** is the general description for the part, for easier identification when ordering a like part.

 - V **HARDWARE** is identified by a letter in a hexagon. Refer to hardware list section for description and part numbers. See pages C-4 and C-5.
-

The example below will show how the parts are listed in the parts lists:

- 1. **VEND MOTOR ASSEMBLY:** This is the main assembly name, and any replaceable parts will be indented below the assembly.

- 2. **RETAINER CAM:** This is an individual part, and will be indented. These indented parts can be ordered separately, so you do not need to order the entire assembly.

- 3. Whenever an assembly is ordered, all the parts that are indented will be included in the assembly. Any hardware will be listed next to their corresponding parts.

- 4. Any parts that may be ordered separately will not have any indented parts listed below them.



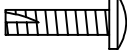



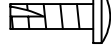











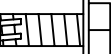

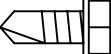

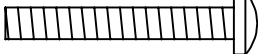

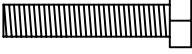



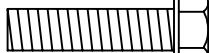



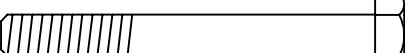





V-MAX VEND MOTOR ASSEMBLY

ITEM NO.	DESCRIPTION	QTY REQ	PART NO.
1	VEND MOTOR ASSEMBLY	-	1115821
2	RETAINER CAM	1	1113244
3	TIMING CAM	1	1113236
4			




















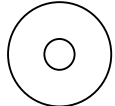

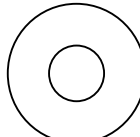
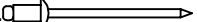
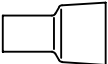

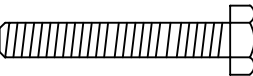





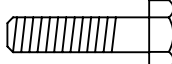

If an asterisk is listed below the parts list, it is an indication that special information is noted. There may be more than one asterisk (*) (**) (***) denoting special notes.



Hardware List

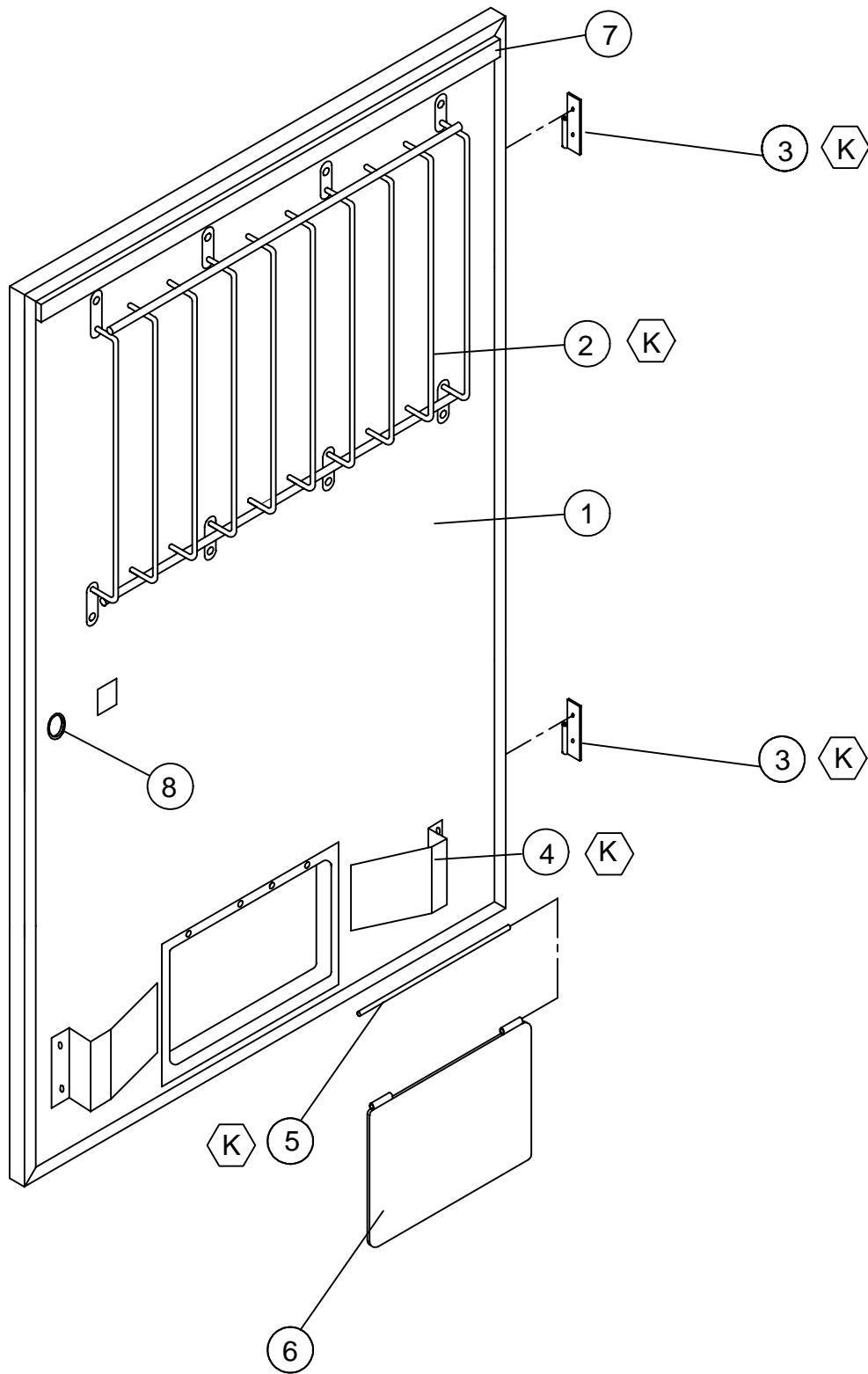
PART NO.	DESCRIPTION	PICTORIAL
A	V800762 #8 X 5/16" TAPPING SCREW	 
B	V802139 #8 X 5/8" TAPPING SCREW	 
C	V800586 #8 X 3/8" TAPPING SCREW W / LOCK WASHER	 
D	V801493 #8 X 1/2" TAPPING SCREW (FOR PLASTIC)	 
E	V801475 #8 X 1/2" TAPPING SCREW	 
F	V801421 #10 X 5/16" TAPPING SCREW	 
G	V800570 #10 X 3/8" TAPPING SCREW	 
H	V802047 #10 X 5/16" TAPPING SCREW W / LOCK WASHER	 
I	V802141 #10 X 1/2" TAPPING SCREW	 
J	V801422 #10 X 1/2" TAPPING SCREW	 
K	V801489 #10 X 1/2" SELF-DRILLING SCREW	 
L	V800512 #10 X 1-3/8" TAPPING SCREW	 
M	V802115 #10 X 1" BOLT	 
N	V801360 1/4" X 1/2" TAPPING SCREW W / LOCK WASHER	 
O	V801343 1/4" X 1" TAPPING	 
P	V801490 1/4" X 1" SELF-DRILLING SCREW	 
Q	V802053 1/4" X 2-1/4" BOLT	 
R	V802069 1/4" X 5/8" CARRIAGE BOLT	 
S	V801434 1/4" X 3/4" CARRIAGE BOLT	 



T	V800267	1/4" X 3/8"	.....	
U	V800956	#8 NUT W / LOCK WASHER	.....	
V	V800952	#10 NUT W / LOCK WASHER	.....	
W	V802111	#10 HEX NUT	.....	
X	V802113	#10 LOCK NUT W / NYLON INSERT	.....	
Y	V800959	1/4" NUT W / LOCK WASHER	.....	
Z	387925	1/4" LOCK NUT W / NYLON INSERT	.....	
AA	V802062	3/8" LOCK NUT W / NYLON INSERT	.....	
AB	V801013	#10 FLAT WASHER	.....	
AC	389026	#10 FLAT WASHER, LARGER	.....	
AD	V801491	3/8" FLAT WASHER	.....	
AE	V801412	1/8" POP RIVET	.....	
AF	43842	CLOSED END CONNECTOR	.....	
AG	V802166	1/2" 13 X 1-1/2" BOLT	.....	
AH	V802165	1/2" LOCK WASHER.....		
AI	V801023	1/2" FLAT WASHER.....		
AJ	V801435	1/4" 20 X 1" CARRIAGE BOLT		



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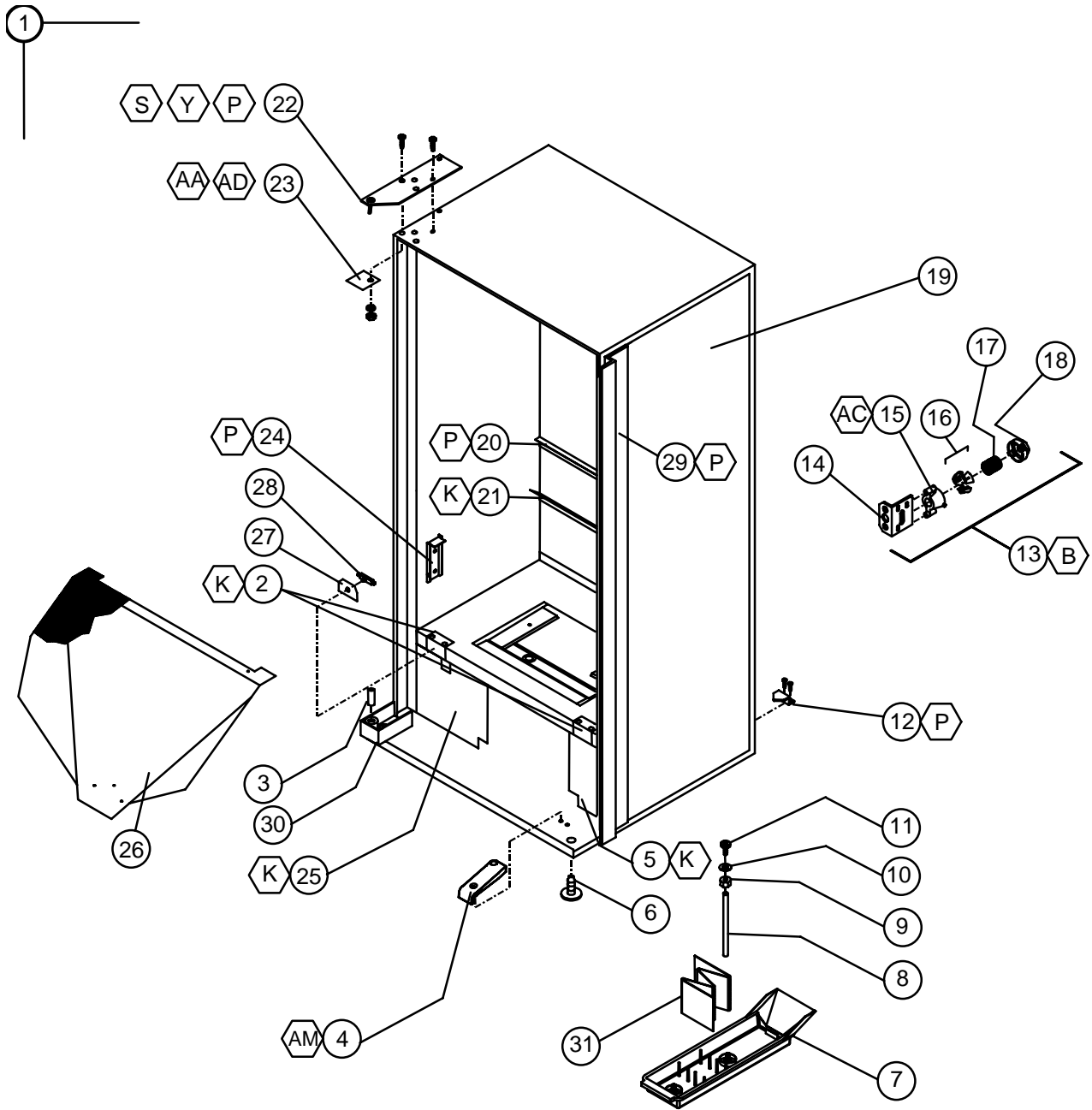


V-MAX INNER DOOR ASSEMBLY

ITEM NO.	MODEL NUMBER		GIV	720	840
	DESCRIPTION	QTY REQ	PART NO.	PART NO.	PART NO.
1	INNER DOOR ASSEMBLY (FOAMED)	1	134302-54	134302-44	134302-47
2	PROD. RETAINER UPPER	1	1120633-4	1120633-4	1120633-5
3	HINGE - FEMALE	2	1121286	1121286	1121286
4	PROD. DEFLECTOR	2	1120129	1120129	1120129
5	PIN - HINGE	1	389985	389985	389985
6	FLAP - DOOR (REVERSIBLE)	1	1013076	1013076	1013076
7	RAIN SEAL - INNER DOOR	1	1111732-2	1111732-2	1111732-2
8	GROMMET	2	388090	388090	388090

THE FOLLOWING LABELS ARE NOT SHOWN

LABEL - PRODUCT SET-UP GUIDE	1	1122196
LABEL - 9.1 ERROR CODE MAP	1	1120141
LABEL - PROGRAMMING VEC 9.1	1	1120142
LABEL - WIRING DIAGRAM VEC 9.1/9.2	1	1123745
LABEL - VEC 9.1 TIME FUNCTION	1	1120145
LABEL - SPACE TO SALES VEC 9.1	1	1125837
LABEL - WARNING/PATENTS	1	1125783-1



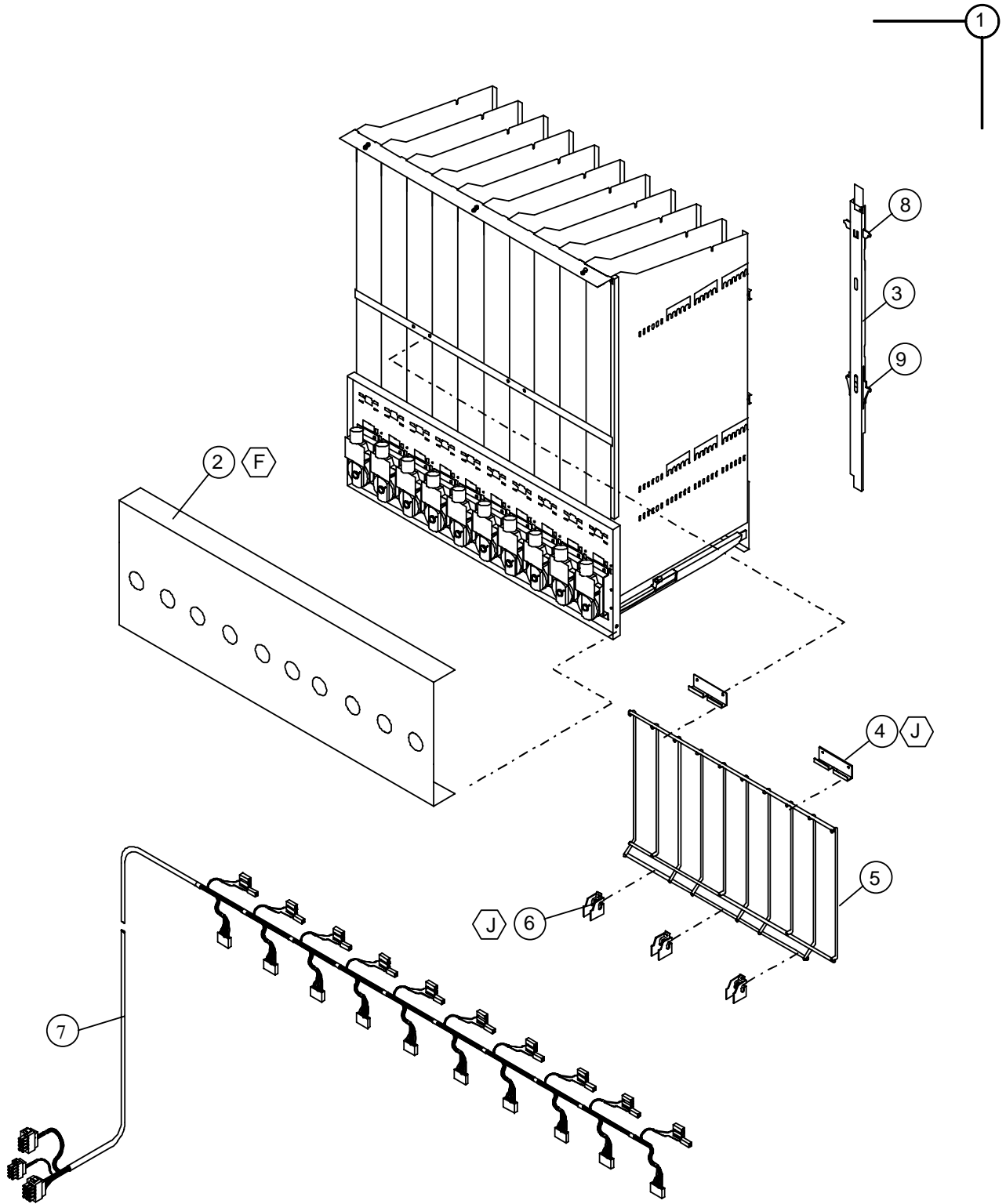


V-MAX CABINET ASSEMBLY

ITEM NO.	DESCRIPTION	QTY REQ	PART NO.
1*	CABINET ASSEMBLY - FOAMED	1	~
2	TUNNEL FILLER BRACKET	2	1078791
3	HINGE PIN	1	389071
4	RAMP	1	1120387
5	AIR DAM - RIGHT	1	1122548
6	LEVELING LEG	4	1059902
7	CONDENSATE PAN	1	1122475
8	DRAIN TUBE	1	1088449
9	NUT - DRAIN TUBE	1	387925
10	DRAIN TUBE GASKET	1	387837
11	DRAIN TUBE FUNNEL	1	1068678
12	BRACKET - REFRIGERATION	2	1123527
13	QUICKER LOCK ASSEMBLY	1	2010085-06
14	LATCH BRACKET	1	1123675
15	NUT RETAINER	1	1123689
16	NUT SEGMENT	3	1033085
17	SPRING	1	389690
18	CAP	1	1111988
19**	SIDE DECAL	2	**
20	STACK SUPPORT PLATE	1	388235-1
21	AIR BAFFLE - CABINET	1	1068023
22	TOP HINGE	1	2000805-03
23	BACKING PLATE – TOP HINGE	1	1120667
24	BRACKET STACK SUPPORT – REAR	2	1079015
~	BRACKET STACK SUPPORT – FRONT	2	1079007
25	AIR DAM ASSEMBLY (SEE PAGE C-15 FOR DETAIL)	1	2008759-01
26	PRODUCT CHUTE ASSEMBLY	1	1121926
27	DOOR SWITCH BRACKET	1	1121043
28	DOOR SWITCH	1	323007
29	OVERLAPPING DOOR GUARD – 72”	1	2001376
~	OVERLAPPING DOOR GUARD – 79”	1	2002325
30	LOWER HINGE BRACKET	1	1121924
31	FIBER GLASS BOARD - EVAPORATION	1	1122728

*NOTE: WHEN ORDERING CABINET ASSEMBLY, PLEASE PROVIDE **9-CODE** OR **11-CODE** AND **MANUFACTURER’S DATE CODE**.

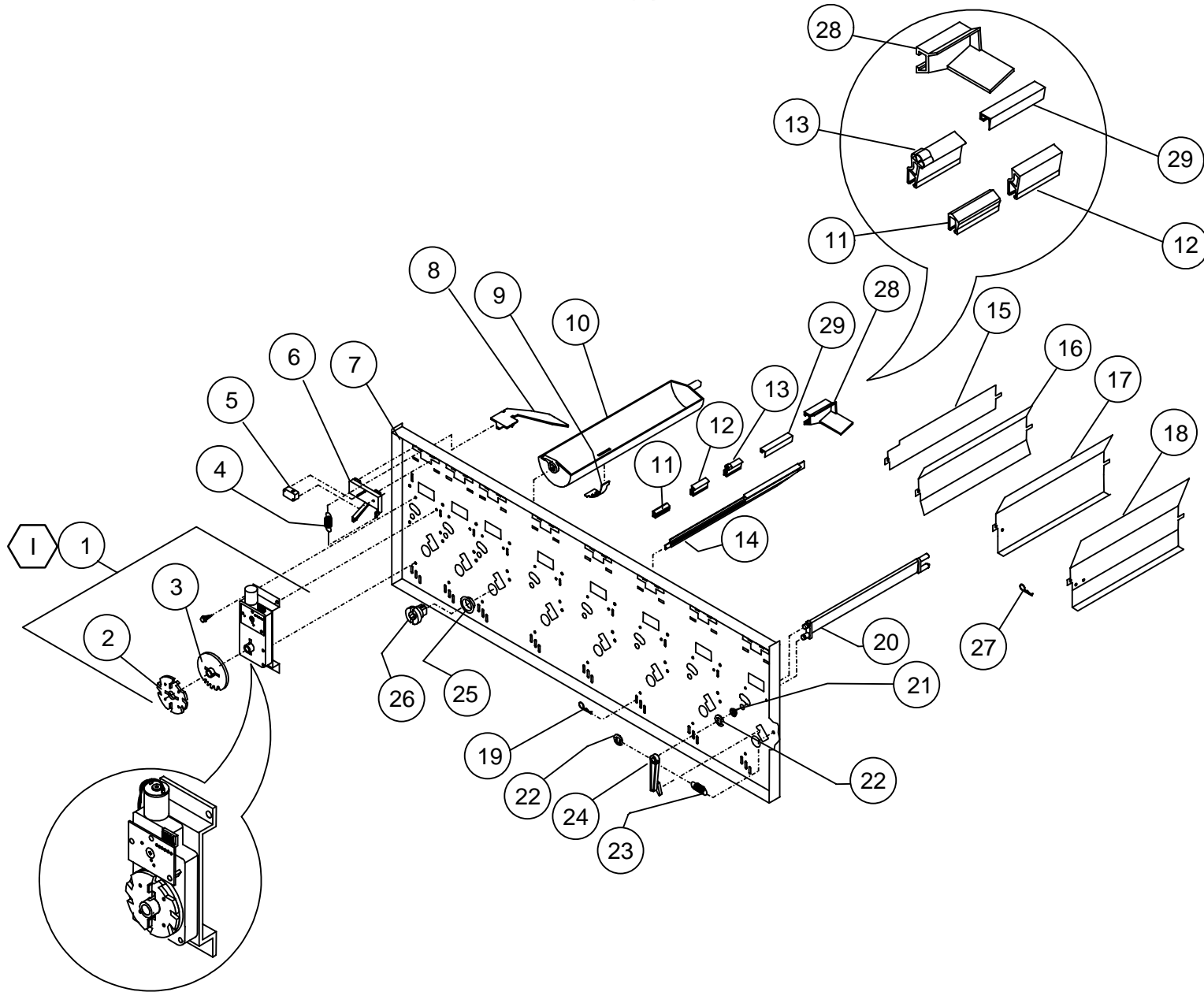
NOTE: WHEN ORDERING DECALS, PLEASE PROVIDE **STYLE.





V-MAX STACK ASSEMBLY

ITEM NO.	DESCRIPTION	MODEL NUMBER	GIV	720	840
		QTY REQ	PART NO.	PART NO.	PART NO.
1	STACK CHASSIS ASSEMBLY	1	1112694-01	1112694-01	1112694-02
2	MECH COVER	1	1076634	1076634	1076634
3	BACK SPACER ASSEMBLY	10	2009473-01	2009473-01	2009473
4	HOOK RACK RETAINER	2	1086813	1086813	1086813
5	LOADING RACK / PRODUCT RETAINER	1	1086805-1	1086805-1	1086805-1
6	BRKT - LOADING RACK	3	1120095	1120095	1120095
7	MOTOR HARNESS	1	1120138	1120138	1120138
8	HANGER -TOP	1	1120489	1120489	1120489
9	HANGER - BOTTOM	1	1120490	1120490	1120490

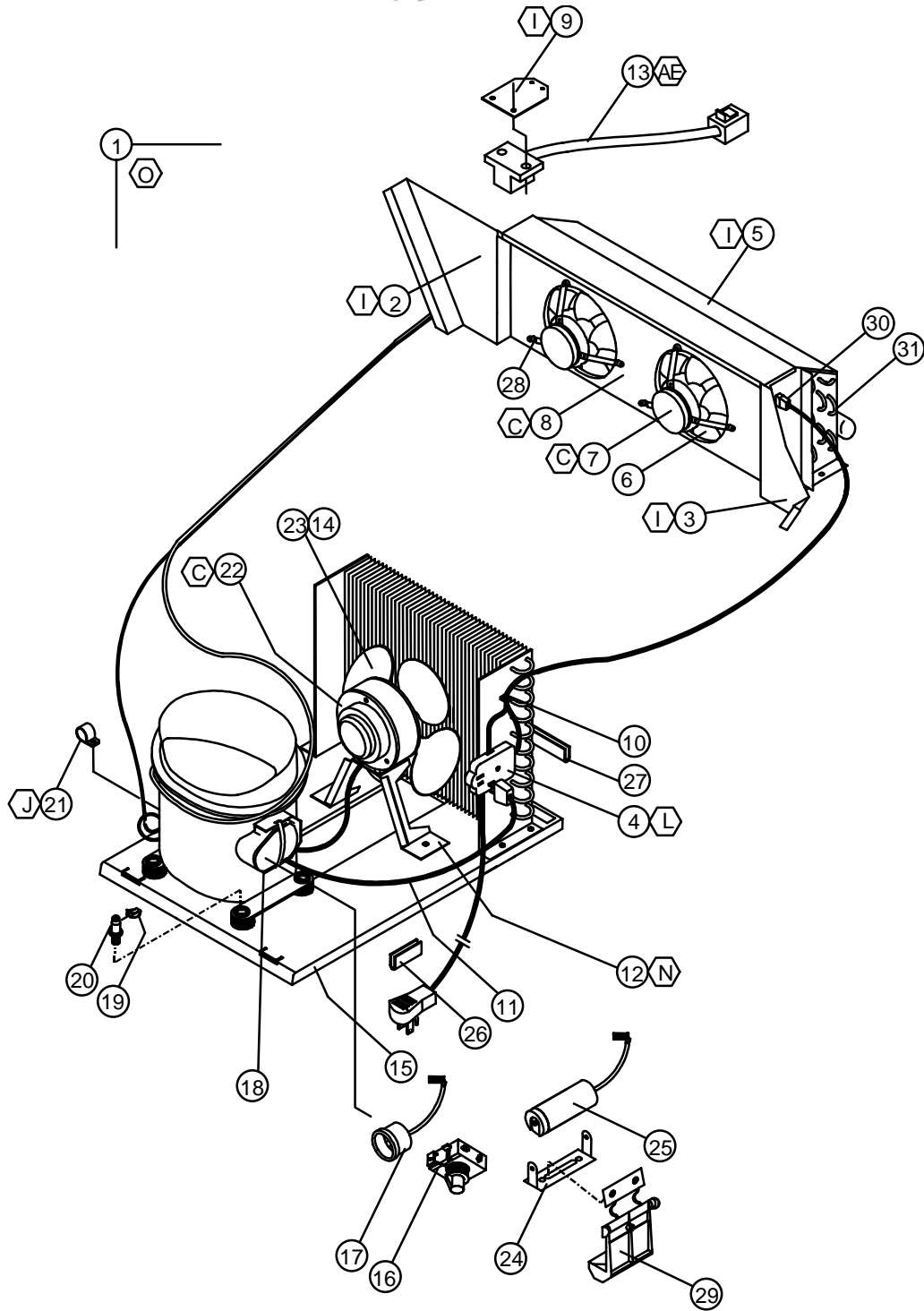




V-MAX STACK ASSEMBLY

ITEM NO.	DESCRIPTION	QTY REQ	PART NO.
1	VEND MOTOR ASSEMBLY	**	1115821
2	RETAINER - CAM	1	1113244
3	TIMING CAM	1	1113236
4	SPRING	**	390326
5	SWITCH - SOLD-OUT	**	368299
6	SWITCH MOUNT - SOLD-OUT	**	1120037
7	FRONT MECH PLATE	1	1079023
8	SOLD-OUT LEVER - LONG	**	1112163
9	ANTI THEFT CLIP	****	389712
10	VEND BUCKET	**	1120146
11	* CLIP - SEE PRODUCT SET-UP GUIDE (SHORT -WHITE)	AR	1066104
12	* CLIP - SEE PRODUCT SET UP GUIDE (MEDIUM - GREY)	AR	1066112-1
13	* CLIP - SEE PRODUCT SET-UP GUIDE (TALL - BLACK)	AR	1066112
14	GAGE BAR	**	1111651
15	* PRODUCT SPACER - FLAT .06	AR	1078848
16	*PRODUCT SPACER - 0.27	AR	1122032
17	* PRODUCT SPACER - 0.37	AR	1078864
18	* PRODUCT SPACER - 0.47	AR	1078872
19	COTTER CLIP - GAGE BAR	**	387450
20	GATE	**	1121282
21	BEARING - GATE (FRONT & REAR)	***	385603-5
22	E-CLIP - GATE	***	V801080
23	SPRING	**	387849
24	GATE LINK	**	1120140
25	BUSHING - VEND BUCKET (FRONT & REAR)	***	1008706
26	MOTOR COUPLING	**	1076465
27	COTTER CLIP - SPACER	1	1032526
28	FOUR-DEEP CLIP	AR	1122103
29	3 RD CAN CLIP	AR	1121704

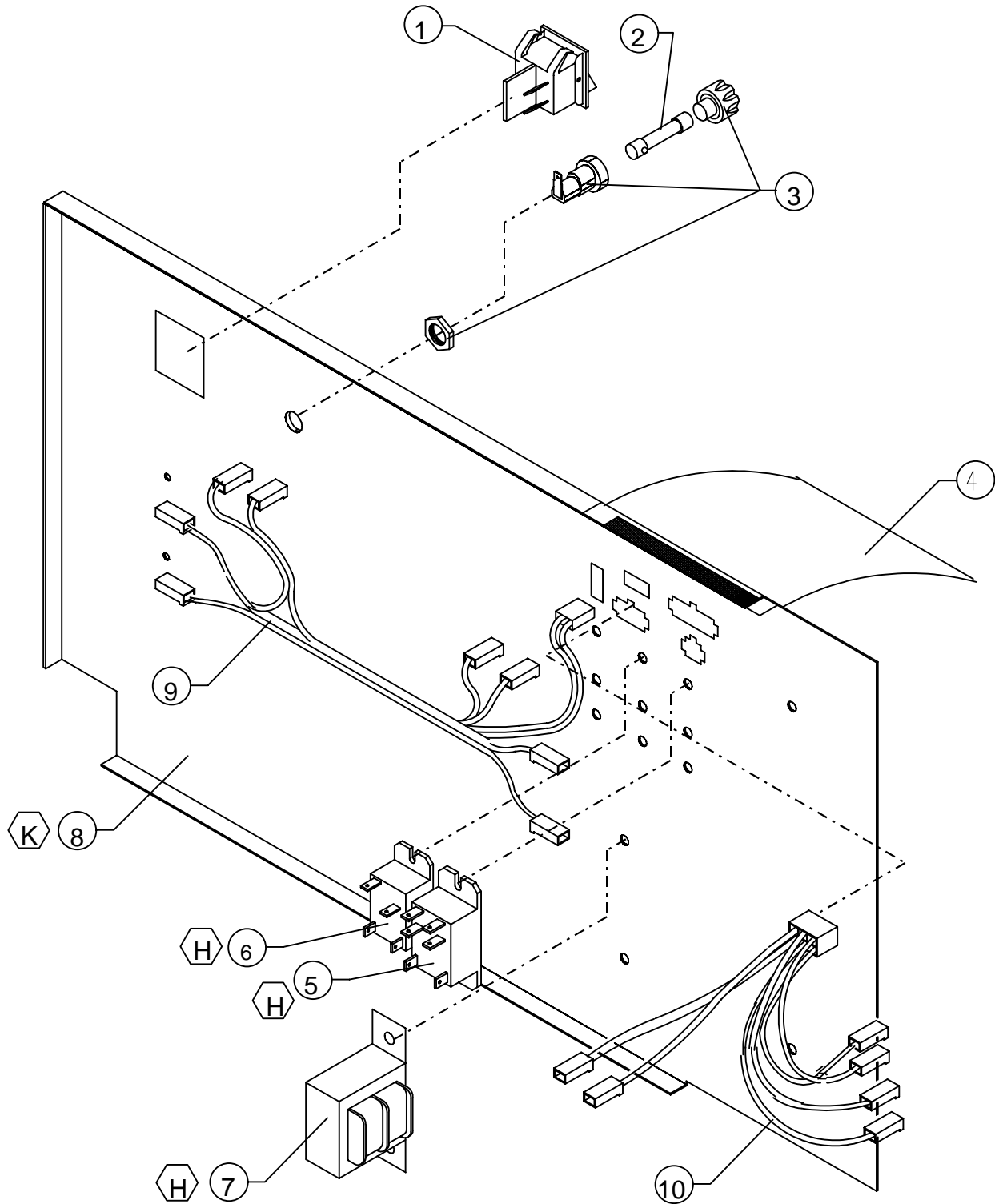
- * NOTE: DEPENDING ON PRODUCT SET-UP
- ** NOTE: USE ONE PER COLUMN
- *** NOTE: USE TWO PER COLUMN
- **** NOTE: USE FOUR PER COLUMN





V-MAX REFRIGERATION ASSEMBLY

ITEM NO.	DESCRIPTION	QTY REQ	110V PART NO.
1	REFRIGERATION ASSEMBLY D90 TE S 1/3 R134a CAP START	1	1120341
2	RIGHT EXTENSION - EVAPORATOR	1	1122351
3	LEFT EXTENSION - EVAPORATOR	1	1122350
4	SERVICE PLUG ASSEMBLY US	1	1120617
5	TOP COVER - EVAPORATOR	1	1121640
6	FAN BLADE	2	1113562
7	EVAPORATOR FAN MOTOR	2	42321-17
8	ORIFICE PLATE - EVAPORATOR FAN	1	1120571
9	BRACKET TEMP SENSOR (AVAILABLE AS ASSEMBLY ONLY)	1	1122883
10	CLAMP PUSH MOUNT	1	384692-3
11	COMPRESSOR MOTOR CORD	1	1121019
12	BRACKET - CONDENSER FAN	2	389797
13	TEMP SENSOR ASSEMBLY (INCLUDES BRACKET)	1	1122883
14	CONDENSER	1	1120437
15	BASE - REFRIGERATION	1	1122470
16	START RELAY – INCLUDED IN ASSEMBLY 513506066	1	~
17	OVERLOAD PROTECTOR – INCLUDED IN ASSEMBLY 513506066	1	~
18	COVER – OVERLOAD – INCLUDED IN ASSEMBLY 513506066	1	~
19	CLIP - COMPRESSOR MOUNT	2	343874
20	STUD COMPRESSOR MOUNT	2	390102
21	CLAMP	1	324099-3
22	FAN MOTOR - CONDENSER	1	1121770
23	FAN BLADE - CONDENSER	1	320766
24	BRACKET - CAPACITOR	1	1112805
25	CAPACITOR	1	1122999
26	EDGE TRIM - SHORT	3	388304-1
27	EDGE TRIM - LONG	1	388304-3
28	EVAPORATOR FAN BRACKET MOUNT, 2 FANS	6	1117966
29	CAPACITOR CLIP	1	1112805
30	EVAPORATOR FAN MOTOR HARNESS	1	1122193
31	EVAPORATOR	1	385470





V-MAX AIR DAM ASSEMBLY

ITEM NO.	DESCRIPTION	QTY REQ	PART NO.
1	POWER SWITCH	1	1084546
2	0.8 AMP FUSE	1	1053864
3	FUSE HOLDER	1	387966
4	RAIN CURTAIN	1	1121660
5	RELAY - REFRIGERATION	1	1079724
6	RELAY - LIGHT	1	1089333
7	TRANSFORMER	1	1111201
8	PANEL - AIR DAM LEFT	1	1121202
9	HARNESS - POWER	1	1110864
10	HARNESS - RELAYS AND TRANSFORMER	1	1078732

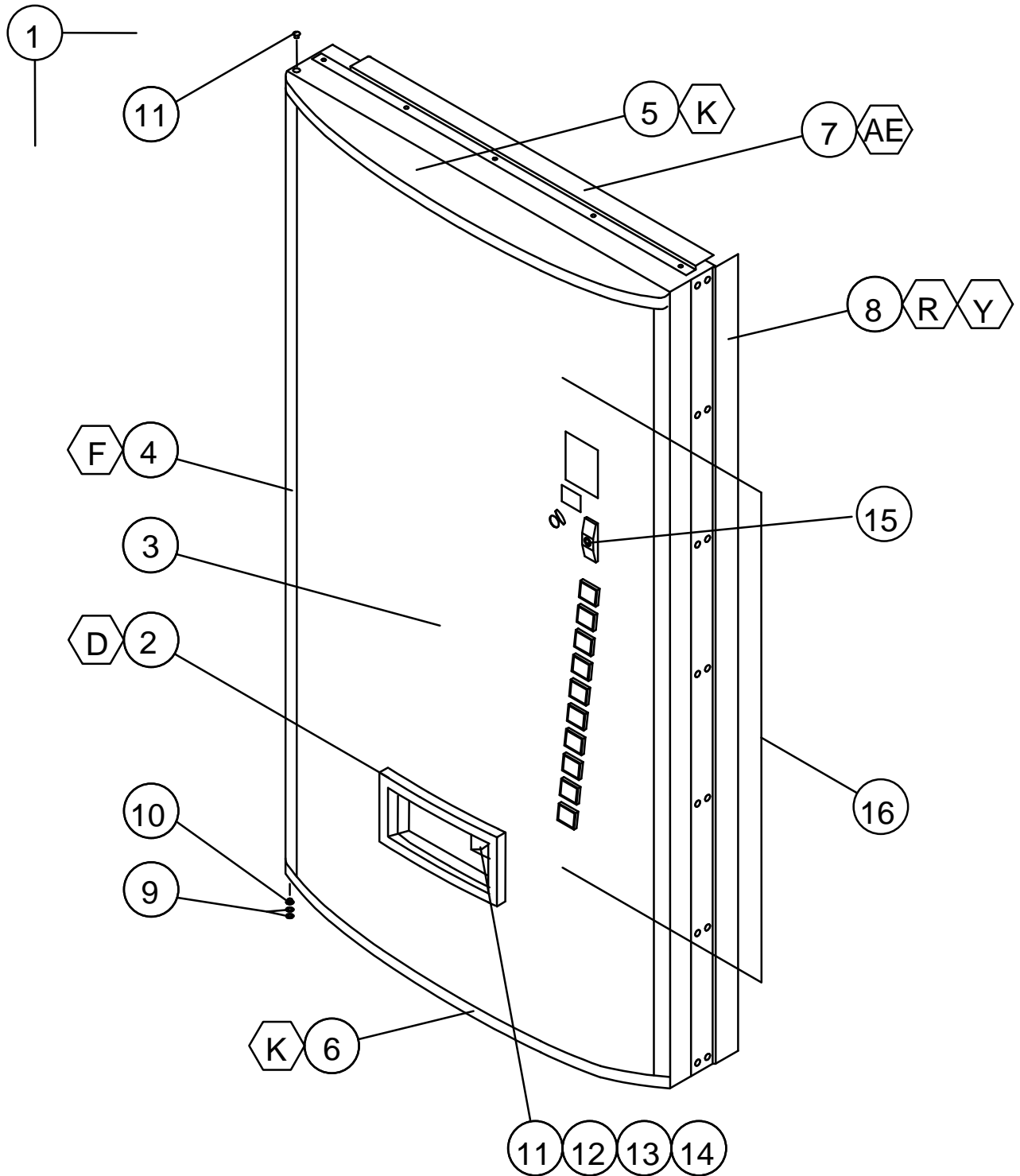


NOTES



V-MAX

PARTS SECTION DR PEPPER



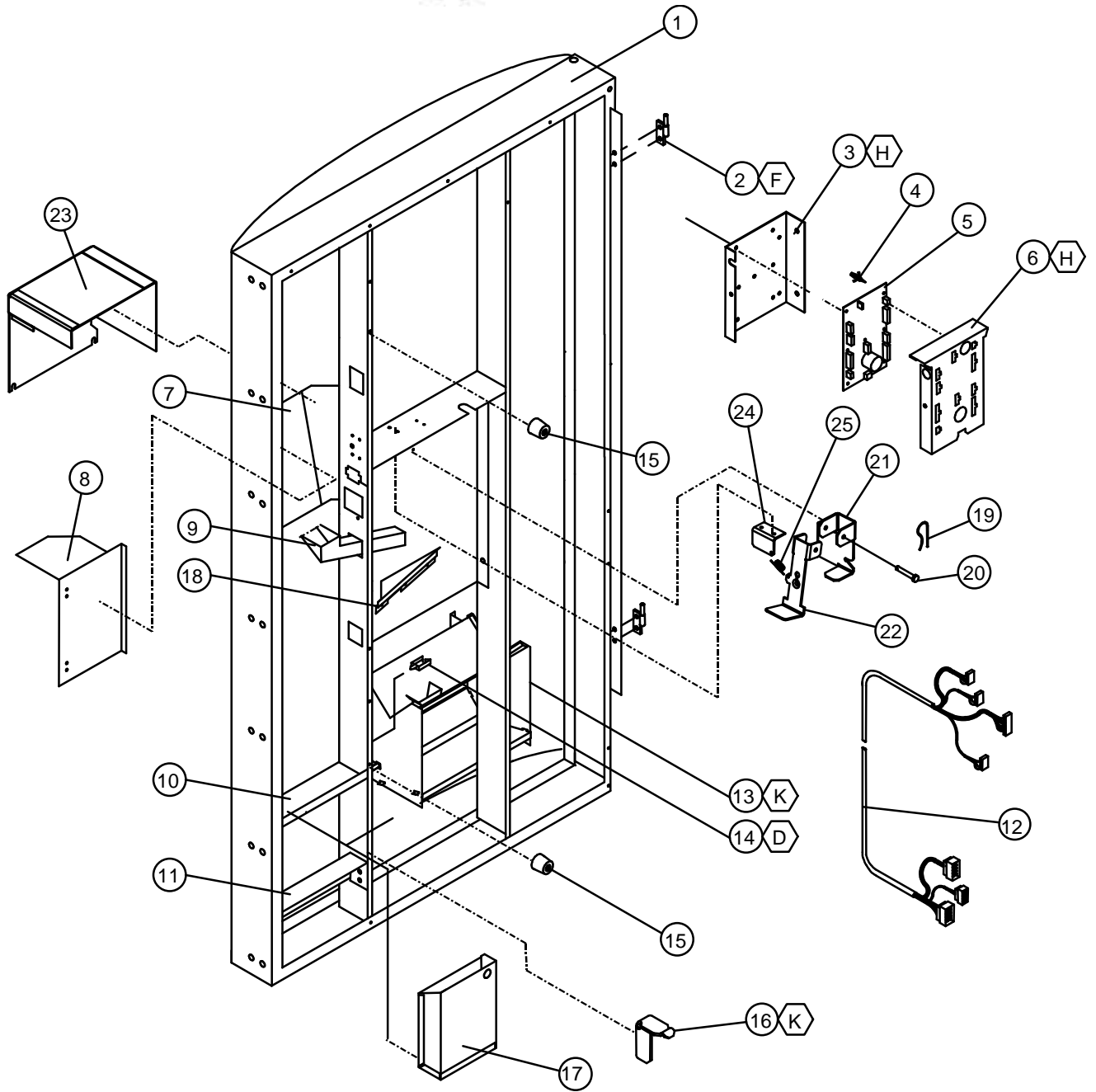


V-MAX DR PEPPER MAIN DOOR

ITEM NO.	DESCRIPTION	MODEL NUMBER	720	840
			PART NO.	PART NO.
		QTY REQ		
1*	OUTER DOOR - 10-SELECT	1	*	*
2	EYELET TRIM	1	388271	388271
3**	SIGN FACE	1	**	**
4	SIGN TRIM - SIDE	2	388125-2B	388125B
5	SIGN CAP - TOP	1	1114341	1114341
6	SIGN CAP - BOTTOM	1	1114341-1	1114341-1
7	RAIN GUARD	1	2000848	2000848
8	DOOR GUARD	1	2009309-02	2009309-03
9	FLAT WASHER	2	V801491	V801491
10	BUSHING HINGE	2	388094	388094
11	COIN CUP	1	1083791	1083791
12	COIN CUP PIN	1	1081086	1081086
13	COIN CUP CLIP	1	1081058	1081058
14	COIN CUP DOOR	1	320934	320934
15	LOCK ASSEMBLY - SEE PAGES DP-12 - DP-13	1	~	~
16	SELECTION PANEL - SEE PAGES DP-10 - DP-11	1	~	~

*NOTE: WHEN ORDERING DOOR ASSEMBLY. PLEASE PROVIDE **9-CODE** OR **11-CODE** AND **MANUFACTURER'S DATE CODE**.

NOTE: WHEN ORDERING SIGN FACE, PLEASE PROVIDE **STYLE.

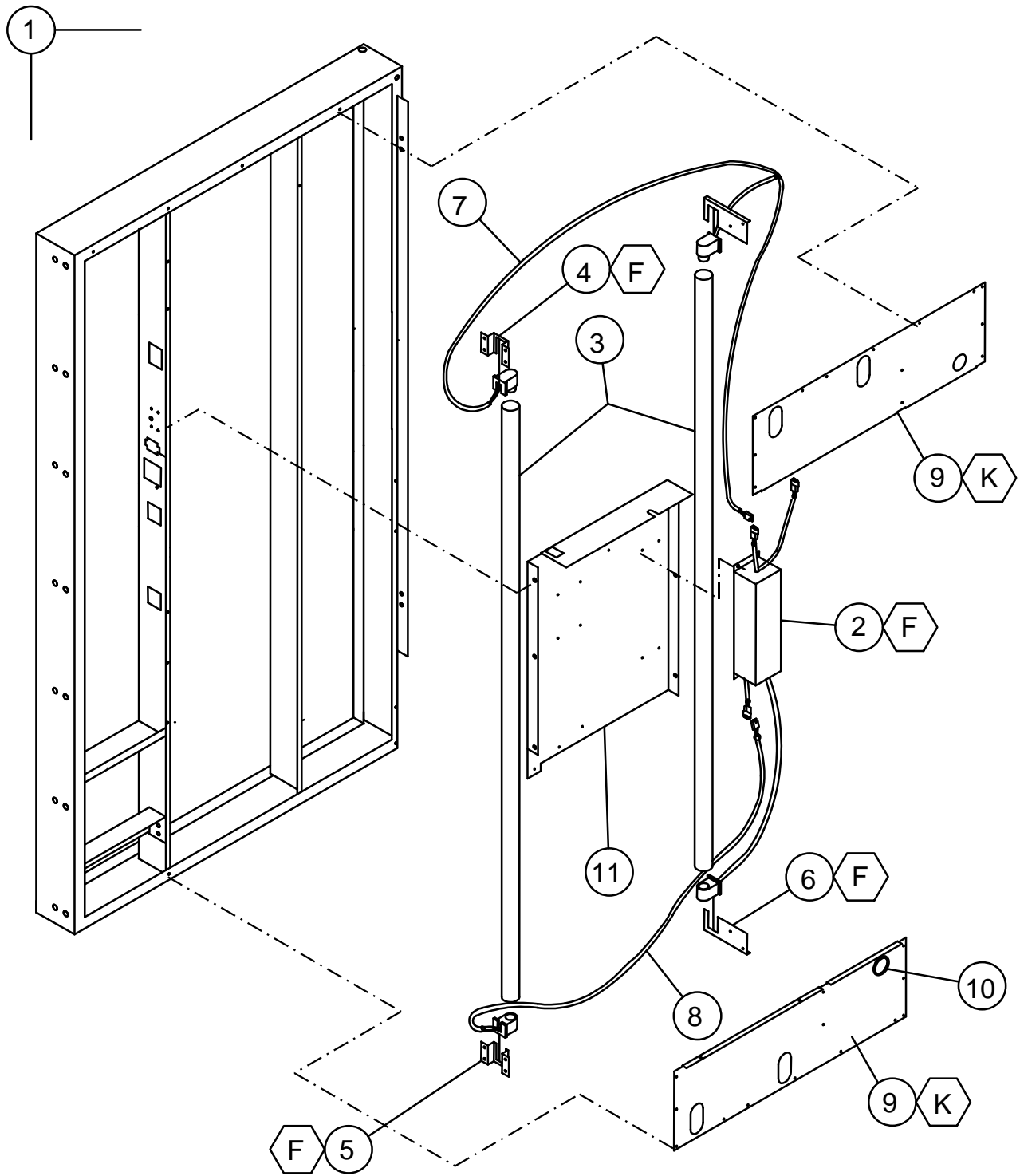




V-MAX DR PEPPER MAIN DOOR

ITEM NO.	DESCRIPTION	MODEL NUMBER	720/840
		QTY REQ	PART NO.
1*	DOOR WELD - 72", T-8 LIGHTING	1	1123806
~*	DOOR WELD - 79", T-8 LIGHTING	1	1123807
~*	DOOR WELD - 72", T-12 LIGHTING	1	1121222
~*	DOOR WELD - 79", T-12 LIGHTING	1	1121223
2	HINGE - INNER DOOR	2	1121287
3	MOUNTING BRACKET - CONTROLLER	1	1124704
4	STAND OFF	7	1121740
5	PCBA VEC 9.1 CONTROLLER	1	1121421-50
6	COVER PANEL	1	1077724
7	SECURITY PANEL	1	2009325-01
8	DBV GUARD (OPTIONAL)	1	2009392-00
9	COIN CHUTE	1	1081406
10	SECURITY PANEL - COIN BOX	1	1120106
11	COIN BOX SHELF	1	1081589
12	DOOR HARNESS	1	1077686
13	DELIVERY HOPPER ASSEMBLY	1	133574-9
14	CLIP - HARNESS	5	384692-2
15	DOOR BUMPER	2	1036912
16	RAMP - INNER DOOR	1	1121714
17	COIN BOX	1	134307-101
18	COIN RETURN CHUTE	1	1121710
19	PIN - CLEVIS	1	1070123
20	COTTER - PIN	1	387450
21	BRACKET - CABLE RETURN	1	1126853
22	COIN RETURN LEVER	1	1126766
23	DBV GUARD (OPTIONAL)	1	1125920
24	BRACKET - COIN RETURN PIVOT	1	1127476
25	SPRING	1	1060023
26	CHANGER HARNESS (NOT SHOWN)	1	1035835

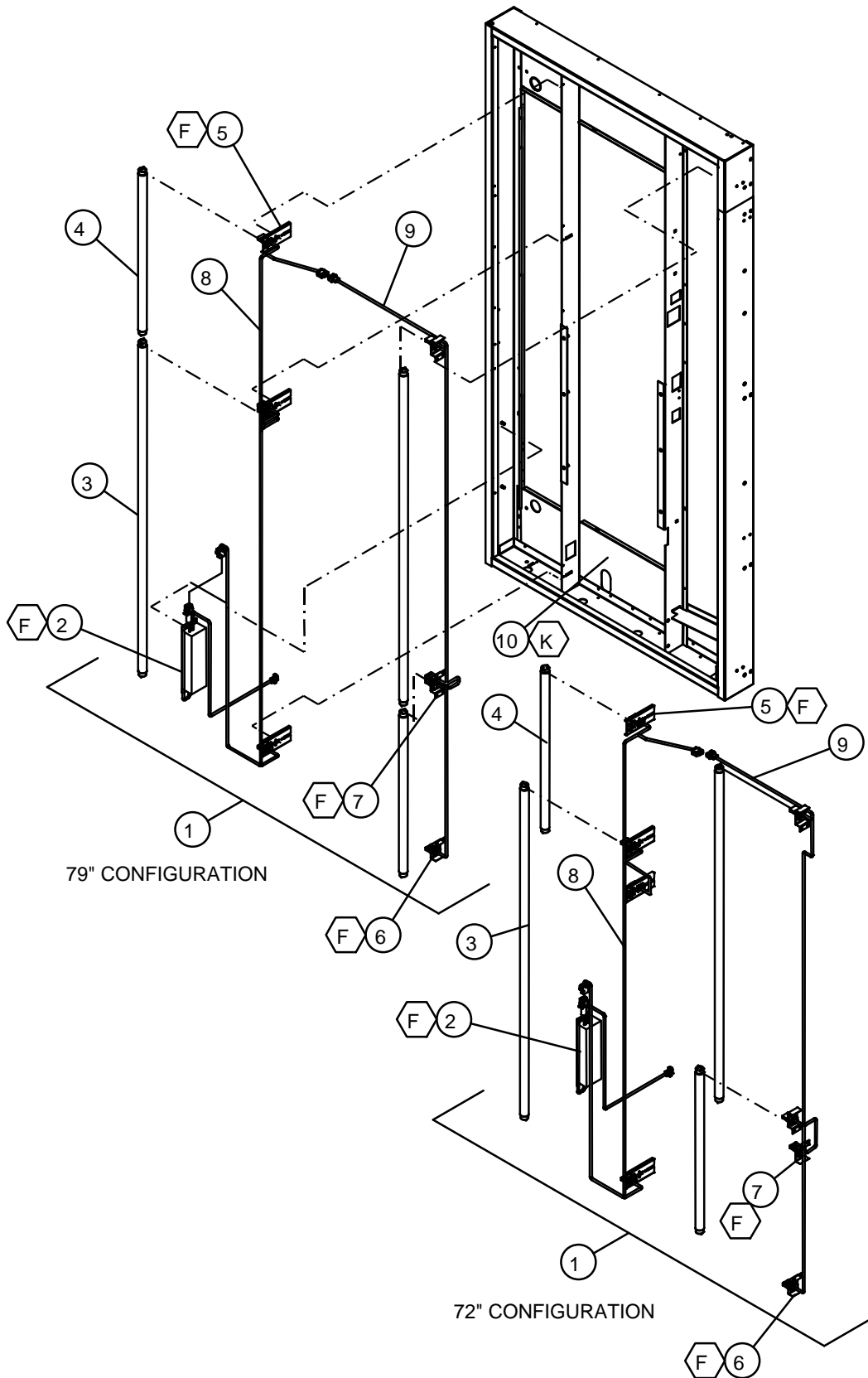
*NOTE: WHEN ORDERING DOOR ASSEMBLY. PLEASE PROVIDE 9-CODE OR 11-CODE AND MANUFACTURER'S DATE CODE.





V-MAX DR PEPPER LIGHTING – T-12

ITEM NO.	DESCRIPTION	MODEL NUMBER		720	840
		QTY REQ	PART NO.	PART NO.	
1	LIGHTING ASSEMBLY	1	134308-119	134308-116	
2	BALLAST	1	1114759	1114759	
3	LAMP	2	388408-1	388408	
4	LAMP HOLDER – TOP	1	1083724	1083724	
5	LAMP HOLDER – BOTTOM	1	1083724-1	1083724-1	
6	LAMP HOLDER BRACKET	2	1070023	1070023	
7	UPPER LIGHTING HARNESS	1	1071988	1074333	
8	LOWER LIGHTING HARNESS	1	1071961	1071961	
9	SHEAR PANEL	2	1075481	1075481	
10	GROMMET	1	327021	327021	
11	MID SECURITY PANEL	1	1121709	1121709	
12	RAIN CURTAIN – LIGHTS (NOT SHOWN)	2	1121838	1121838	



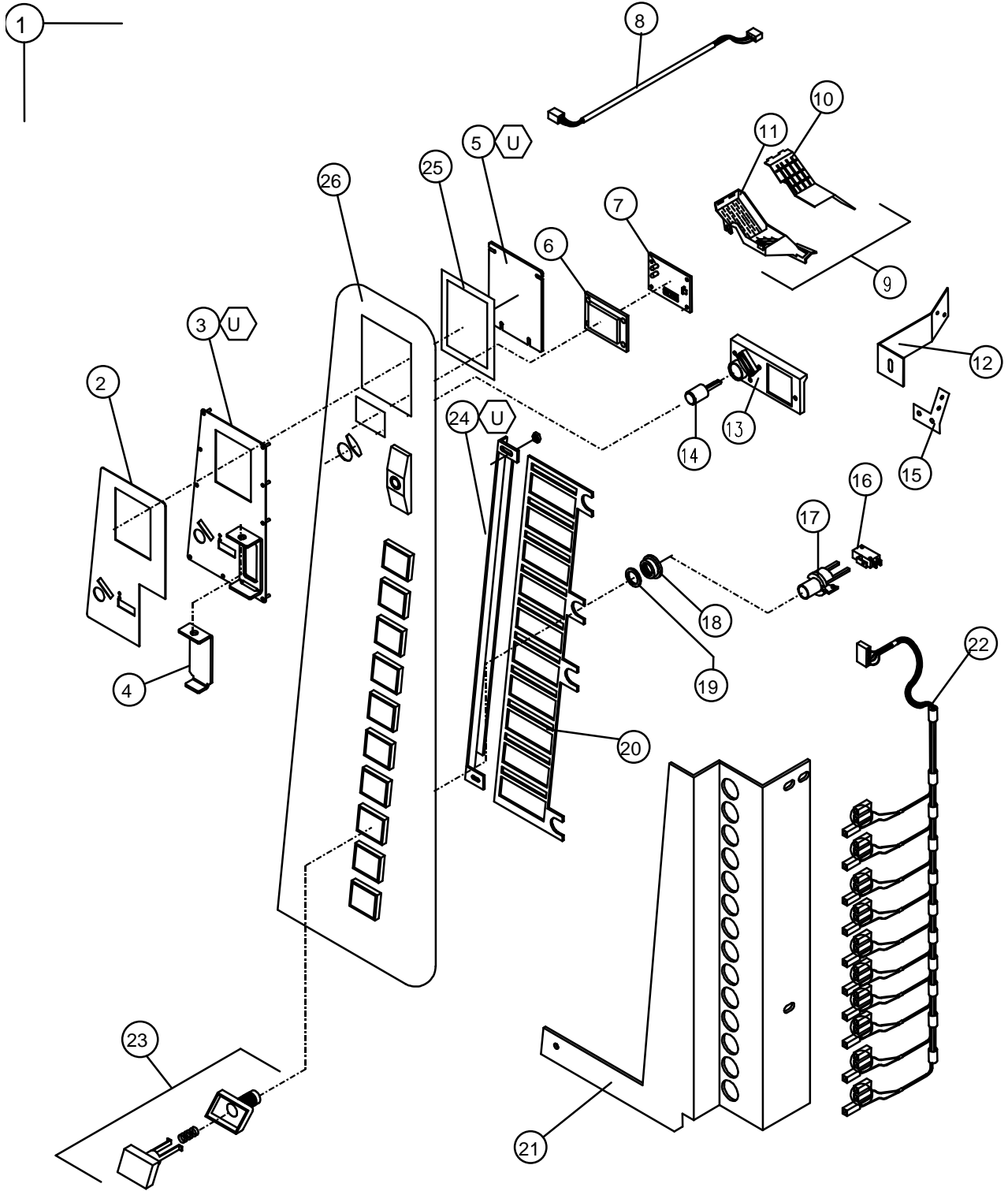


V-MAX DR PEPPER LIGHTING – T-8

ITEM NO.	DESCRIPTION	MODEL NUMBER	720	840
			PART NO.	PART NO.
		QTY REQ		
1	LIGHTING ASSEMBLY	1	134308-185	134308-186
2	BALLAST	1	1127453	1127453
3	LAMP, 4' – T-8	2	1121173-2	1121173-2
4	LAMP, 2' – T-8	2	1121173	1121173
5	LIGHTING BRACKET, HINGE SIDE	*	1123694	1123694
6	LIGHTING BRACKET, LATCH SIDE	**	1123699	1123699
7	LIGHTING BRACKET, MIDDLE, LATCH SIDE	1	1123701	1123701
8	LIGHTING HARNESS, T-8, LEFT	1	1123706	1123706
9	LIGHTING HARNESS, T-8, RIGHT	1	1123707	1123707
10	SHEAR PANEL	2	1123704	1123704
11	RAIN CURTAIN – BALLAST (NOT SHOWN)	1	1125150	1125150
12	RAIN CURTAIN – LIGHTS (NOT SHOWN)	2	1121838-1	1121838-1

*NOTE: QTY OF 3 FOR MODEL 840, QTY OF 4 FOR MODEL 720.

**NOTE: QTY OF 2 FOR MODEL 840, QTY OF 3 FOR MODEL 720.





V-MAX DR PEPPER SELECTION PANEL

ITEM NO.	DESCRIPTION	MODEL NUMBER	720/840 PART NO.
1	CONTROL PANEL ASSEMBLY - 10-SELECT	1	*
2***	COIN INSERT DECAL	1	1122332
3***	COIN INSERT ASSEMBLY	1	2009295-02
4***	LOCK PLATE INSERT	1	~
5	PLUG - DBV	1	2000856
6	DISPLAY LENS	1	1039652
7	DISPLAY BOARD	1	1089678
8	DISPLAY HARNESS	1	1126164
9	COIN CHUTE ASSEMBLY	1	1087961
10	COIN CHUTE	1	1002333
11	COVER CHUTE	1	1002341
12	BRACKET BUTTON PANEL	1	1075414
13	COIN RETURN GUIDE PLATE	1	1125014
14	BUTTON - COIN RETURN	1	1050473
15	BRACKET CHUTE	1	1081414
16	SELECTION SWITCH	10	368299
17	BUTTON SWITCH HOLDER	10	1070996
18	BUTTON NUT	10	1073538
19	BUTTON WASHER	10	1073511
20	FLAVOR STRIP HOLDER	1	1120029
21	STIFFENER - BUTTON PANEL, T-12	1	2009317-00
~	STIFFENER - BUTTON PANEL, T-8	1	1123805
22	SELECTION HARNESS	1	1111287
23	SELECTION BUTTON	10	1070988
24	FLAVOR STRIP HOLDER RETAINER	1	1075406
25	DBV GASKET	1	1086759
26	SIGN FACE	1	**
27	CONTROL PANEL (NOT SHOWN)	1	2009295-02

*NOTE: WHEN ORDERING CONTROL PANEL ASSEMBLY. PLEASE PROVIDE **9-CODE** OR **11-CODE** AND **MANUFACTURER'S DATE CODE**.

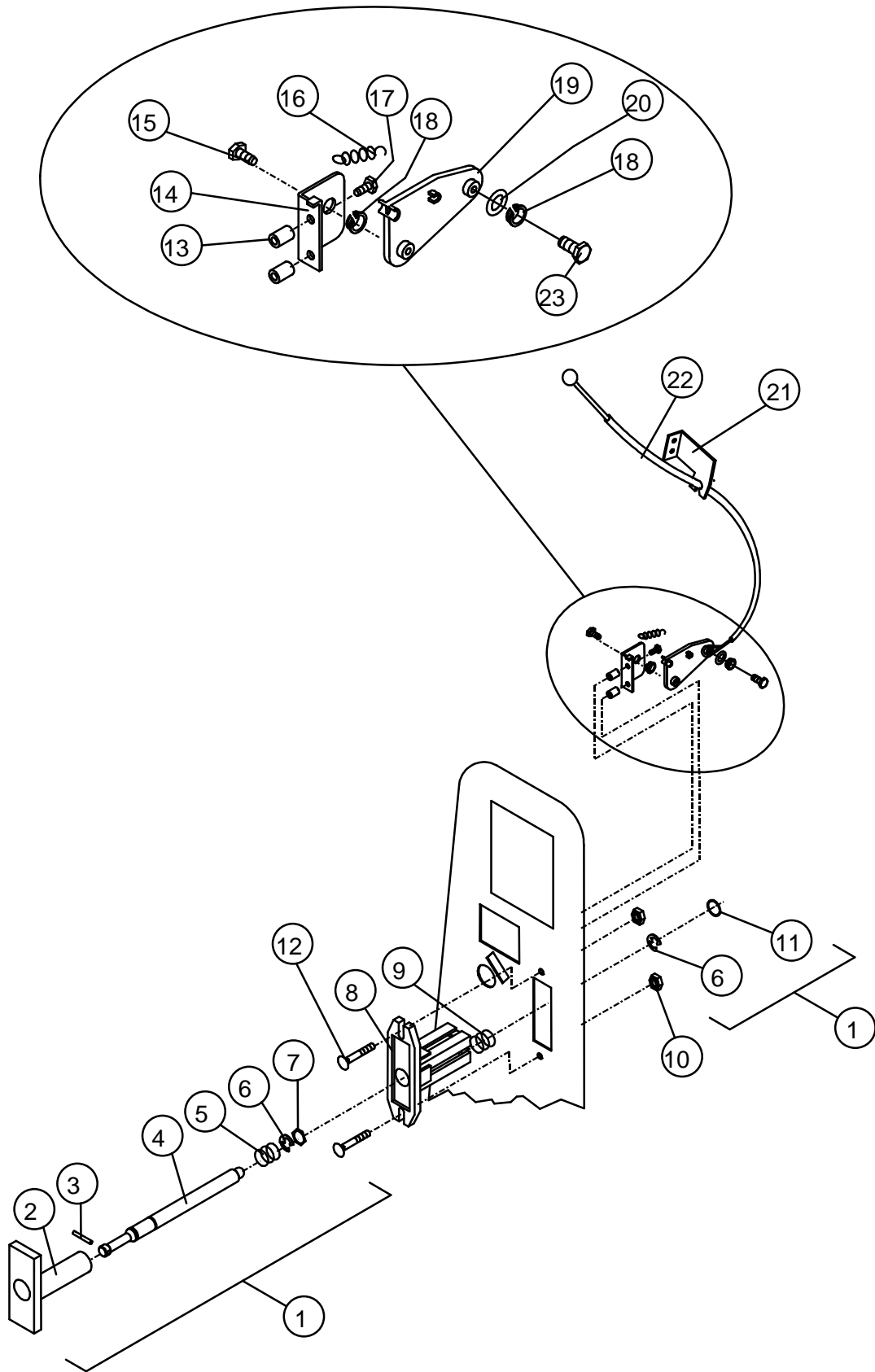
NOTE: WHEN ORDERING SIGN FACE, PLEASE PROVIDE **STYLE.

***NOTE: FOR SECURITY OPTIONS USE THE FOLLOWING PART NUMBER FOR ITEMS 2, 3, & 4.

ITEM #2 1126103

ITEM #3 1126154

ITEM #4 1126127





V-MAX DR PEPPER LOCK ASSEMBLY

ITEM NO.	DESCRIPTION	QTY REQ	PART NO.
1	LOCK ASSEMBLY - QUICKER LOCK	1	1122330
2	T-HANDLE	1	1002392
3	PIN - STUD	1	387601
4	LOCK STUD - QUICKER LOCK	1	1122331
5	SPRING	1	389691
6	E-RING RETAINER	2	388589
7	HEX WASHER	1	387600
8	FLANGE - T-HANDLE	1	387597
9	SPRING HEAVY DUTY	1	389690
10	NUT/LOCK WASHER ASSY. ¼ - 20	1	V800959
11	FLAT WASHER	1	387718
12	SQUARE NECK BOLT ¼-20	2	V801435
13	SPACER	2	1071031
14	PIVOT BRACKET - COIN RETURN	1	1081082
15	TAP SCREW #8-10 X 1/2	2	V802214
16	SPRING - COIN RETURN CRANK	1	390326
17	#10 X 3/8" TAPPING SCREW	2	V801422
18	BUSHING	2	385603-4
19	CRANK - COIN RETURN LEVER	1	1002244
20	WASHER 1" W/.25 DIA.	1	V802128
21	BRACKET - CABLE RETAINER	1	1078503
22	CABLE	1	1069708
23	#10 X 3/8" TAPPING SCREW	1	V801422

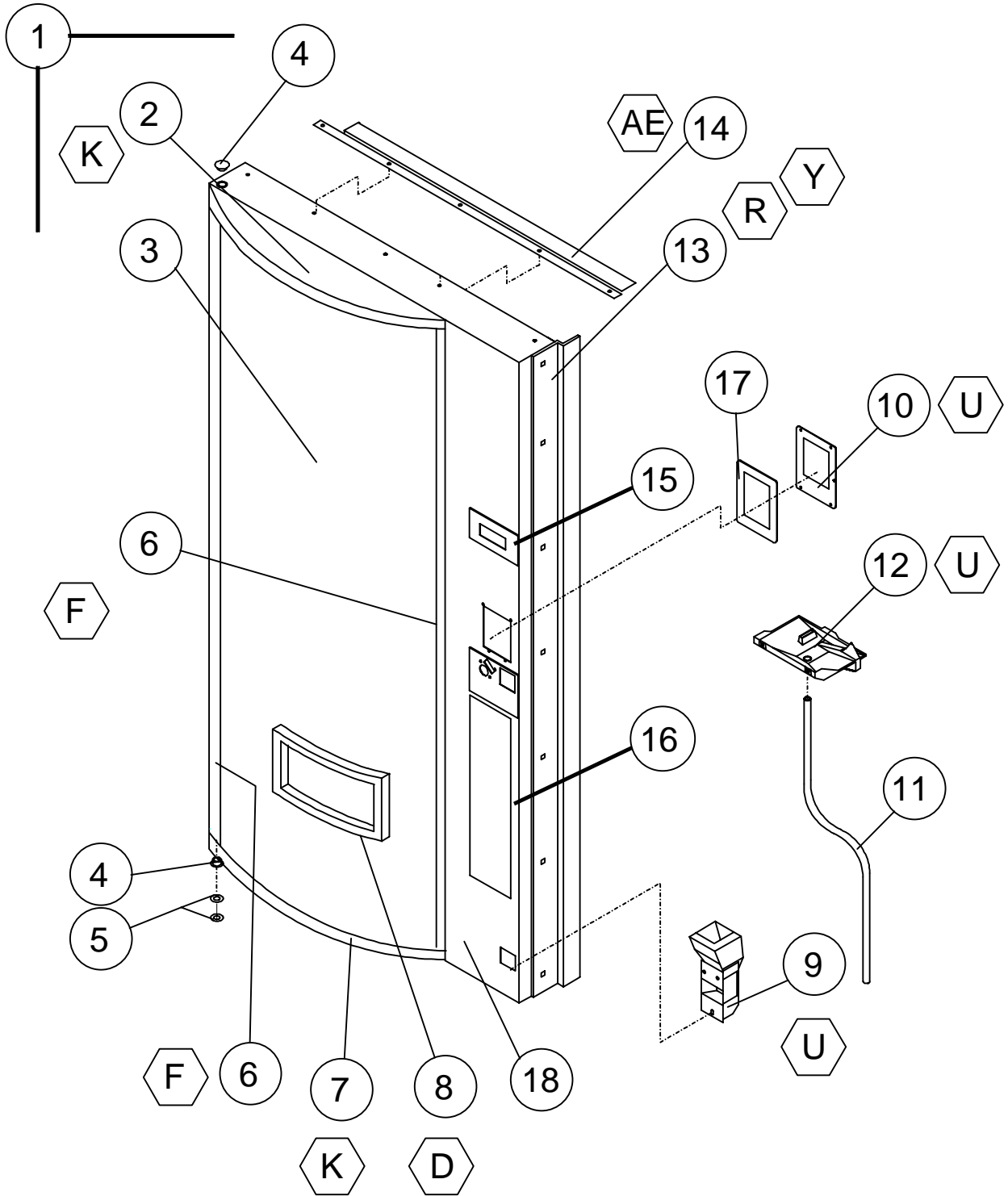


NOTES



V-MAX

PARTS SECTION GAS ISLAND VENDOR



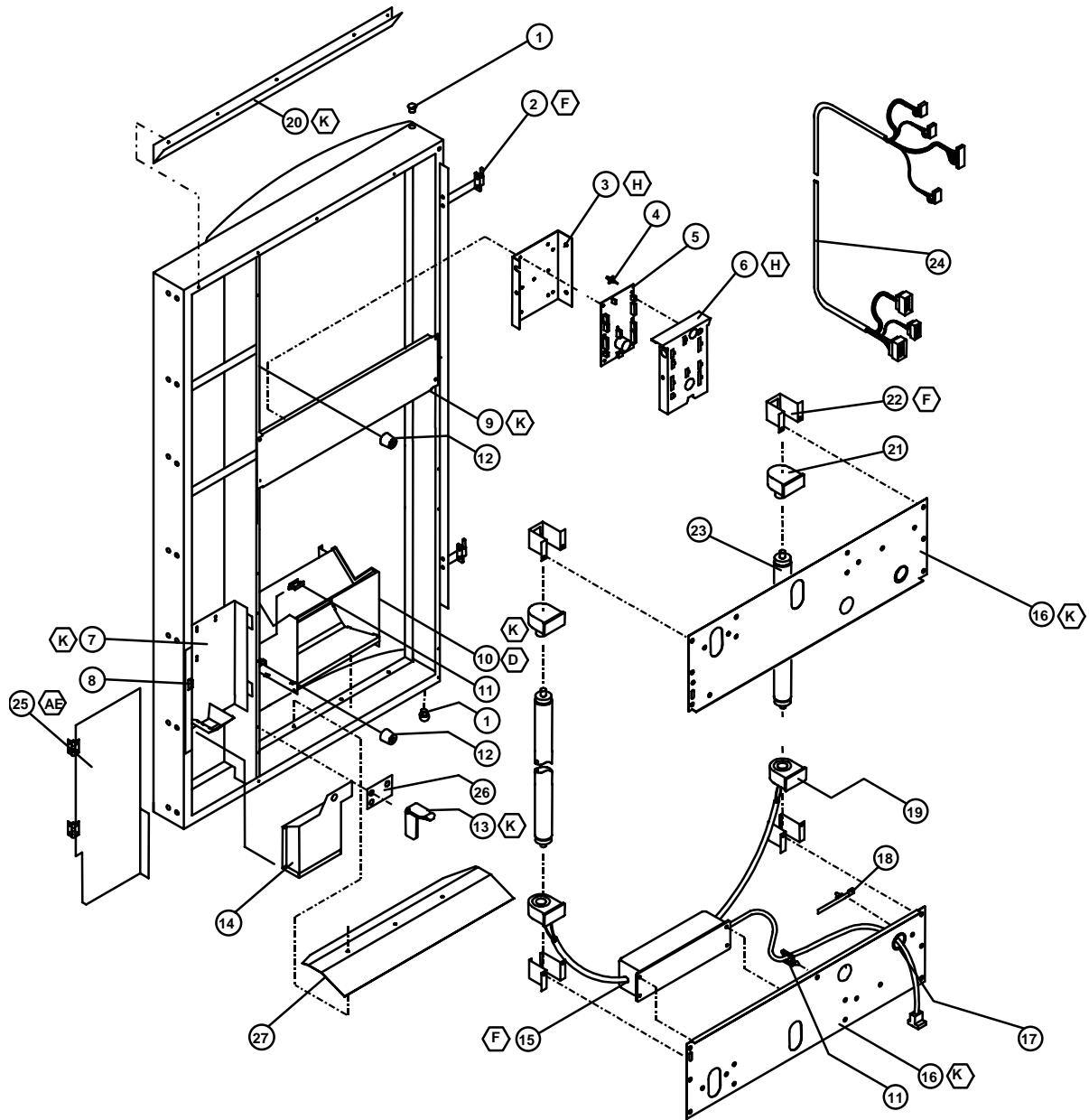


V-MAX GAS ISLAND VENDOR - OUTER DOOR - CURVED

ITEM NO.	DESCRIPTION	MODEL NUMBER	720
NO.		QTY REQ	PART NO.
1	OUTER DOOR ASSEMBLY	1	*
2	SIGN CAP - TOP	1	1014986
3	SIGN FACE	1	**
4	BUSHING HINGE TOP AND BOTTOM	2	388094
5	FLAT WASHER - BOTTOM	2	V801491
6	SIGN TRIM - LEFT/RIGHT	1	388125-2B
7	SIGN CAP - BOTTOM	1	1068988
8	EYELET TRIM	1	388271
9	COIN RETURN CUP	1	1079546
10	DBV PLUG PLATE	1	2000856
11	DRAIN TUBE	1	1110619
12	WATER COLLECTION PLATE	1	1110562
13	DOOR GUARD	1	2010131
14	RAIN GUARD	1	2000848
15	LOCK ASSEMBLY (REFER TO PG. GIV-6 - GIV-7)	1	~
16	SELECTION PANEL (REFER TO PG. GIV-10 - GIV-11)	1	~
17	GASKET - DBV PLUG	1	1086759
18	DOOR WELD	1	1120280

*NOTE: WHEN ORDERING OUTER DOOR ASSEMBLY, PLEASE PROVIDE **9-CODE** AND **MANUFACTURER'S DATE CODE**.

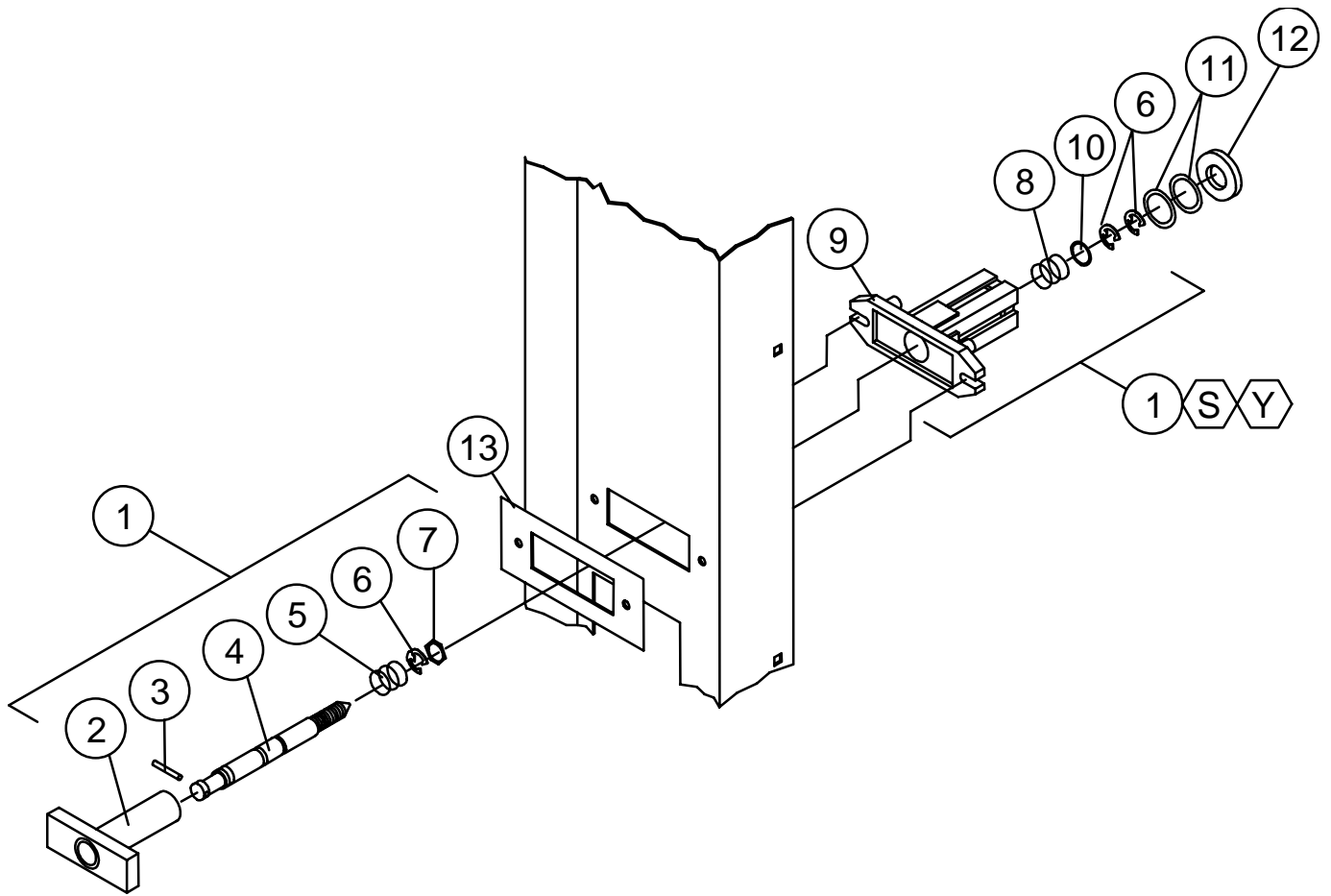
NOTE: WHEN ORDERING SIGN FACE, PLEASE PROVIDE **FRANCHISE AND **STYLE**.





V-MAX GAS ISLAND - OUTER DOOR - CURVED (CONTINUED)

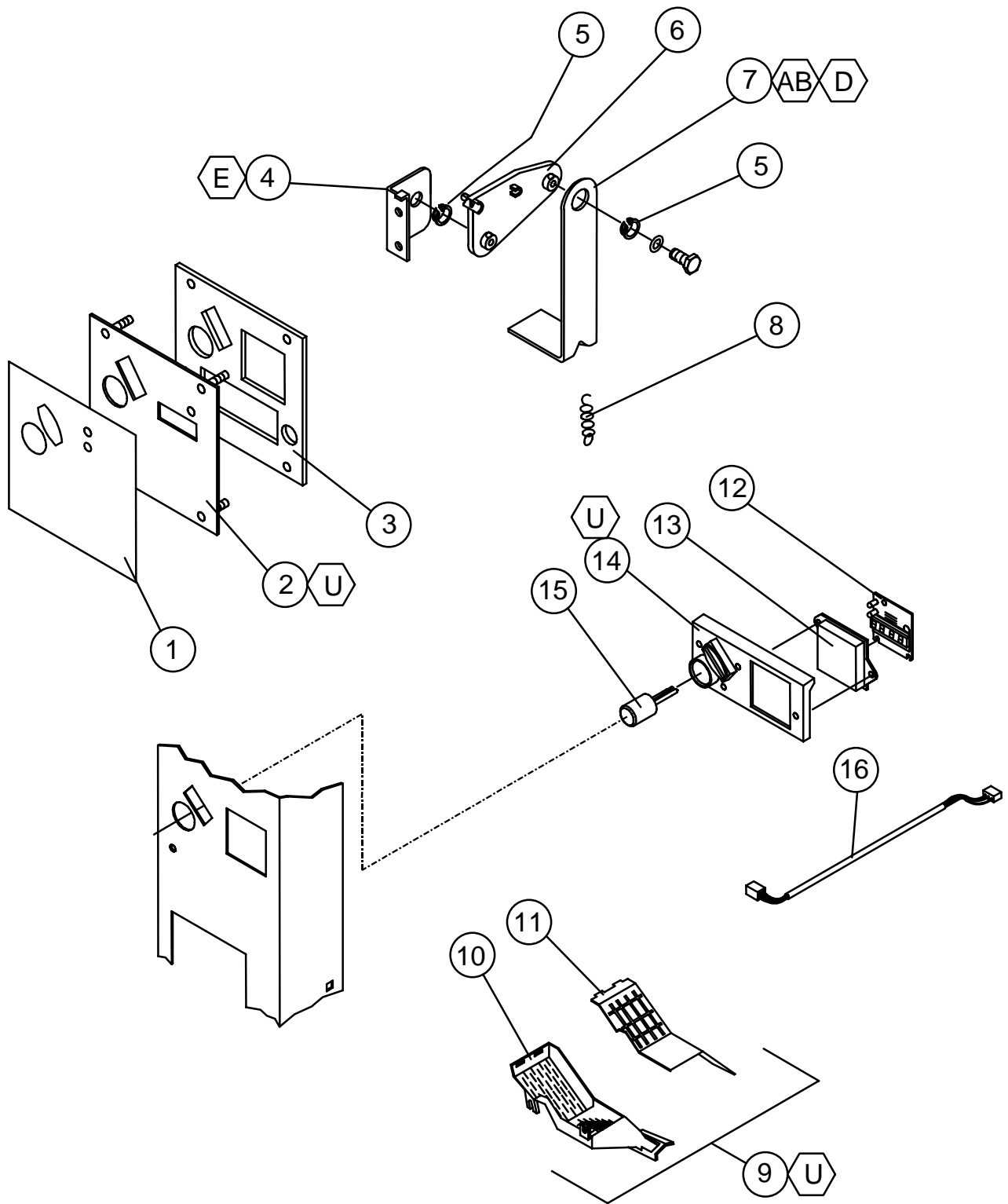
ITEM NO.	DESCRIPTION	MODEL NUMBER	720
		QTY REQ	PART NO.
1	DOOR WELD - 72"	1	1120280
2	HINGE - INNER DOOR, MALE	2	1121287
3	MOUNTING BRACKET - CONTROLLER	1	1124704
4	STAND OFF	7	1121740
5	PCBA VEC 9.1 CONTROLLER	1	1121421-50
6	COVER PANEL	1	1077724
7	COIN DOOR ASSEMBLY	1	1081112
8	LATCH - COINAGE DOOR	1	1085546
9	SHEAR PANEL - MIDDLE	1	1120713
10	DELIVERY HOPPER ASSEMBLY	1	133574-10
11	CLIP - HARNESS	4	384692-2
12	DOOR BUMPER	2	1036912
13	RAMP/CATCH - INNER DOOR	1	1121714
14	COIN BOX	1	1120273
15	BALLAST 115V	1	388259
16	SHEAR PANEL - LOWER / UPPER	2	388117-3
17	GROMMET	1	327021
18	HARNESS TIE	2	1088864
19	LAMP HOLDER - FIXED	2	388261
20	RAIN GUTTER	1	1121204
21	LAMP HOLDER - PLUNGER	2	388260
22	BRACKET - LAMPHOLDER	4	1122305
23	LAMP - 64"	2	388320-1
24	DOOR HARNESS	1	1077686
25	COINAGE GUARD	1	1120375
26	BRACKET - INNER DOOR LATCH	1	1120792
27	MDB HARNESS (NOT PICTURED)	1	1124570
28	RAIN CURTAIN, BALLAST (NOT PICTURED)	1	1121837
29	RAIN CURTAIN, LIGHTS (NOT PICTURED)	2	1121838





V-MAX GAS ISLAND - LOCK ASSEMBLY

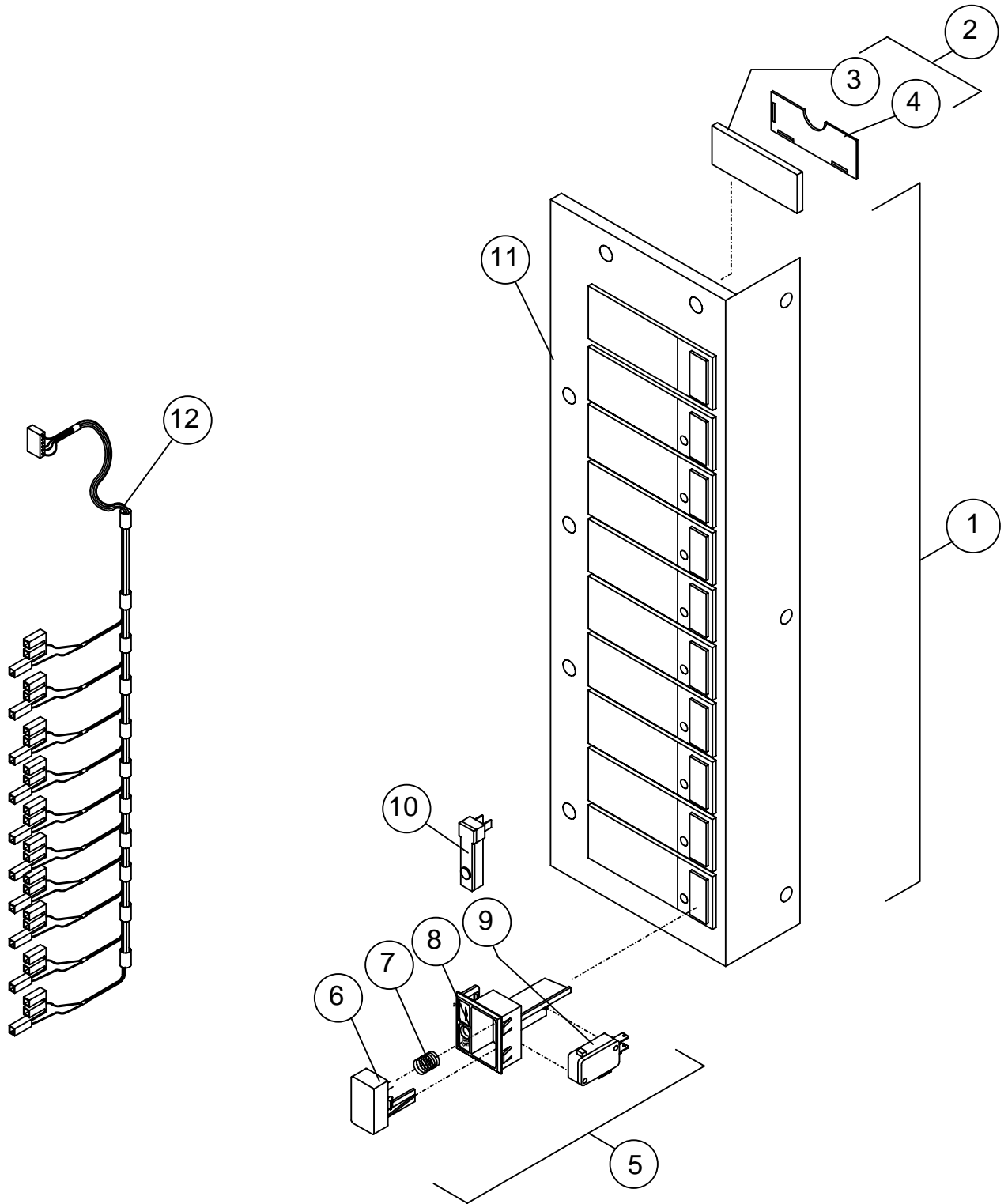
ITEM NO.	DESCRIPTION	QTY REQ	PART NO.
1	LOCK ASSEMBLY - QUICKER LOCK	1	1002635
2	T-HANDLE	1	1002392
3	PIN - STUD	1	387601
4	LOCK STUD - QUICKER LOCK	1	1049724
5	SPRING	1	389691
6	E-RING RETAINER	3	388589
7	HEX WASHER	1	387600
8	SPRING - HEAVY	1	389691
9	FLANGE	1	1002384
10	FLAT WASHER	1	387718
11	FLAT WASHER ½"	2	V801023
12	VAPOR SEAL	1	388132
13	T-HANDLE PLATE	1	1120348





V-MAX GAS ISLAND - COIN INSERT

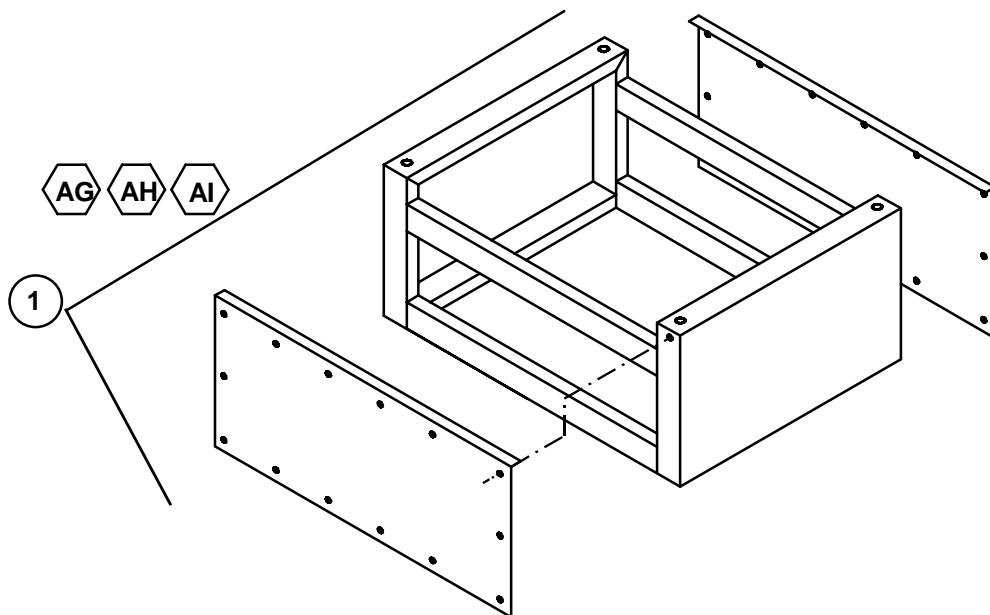
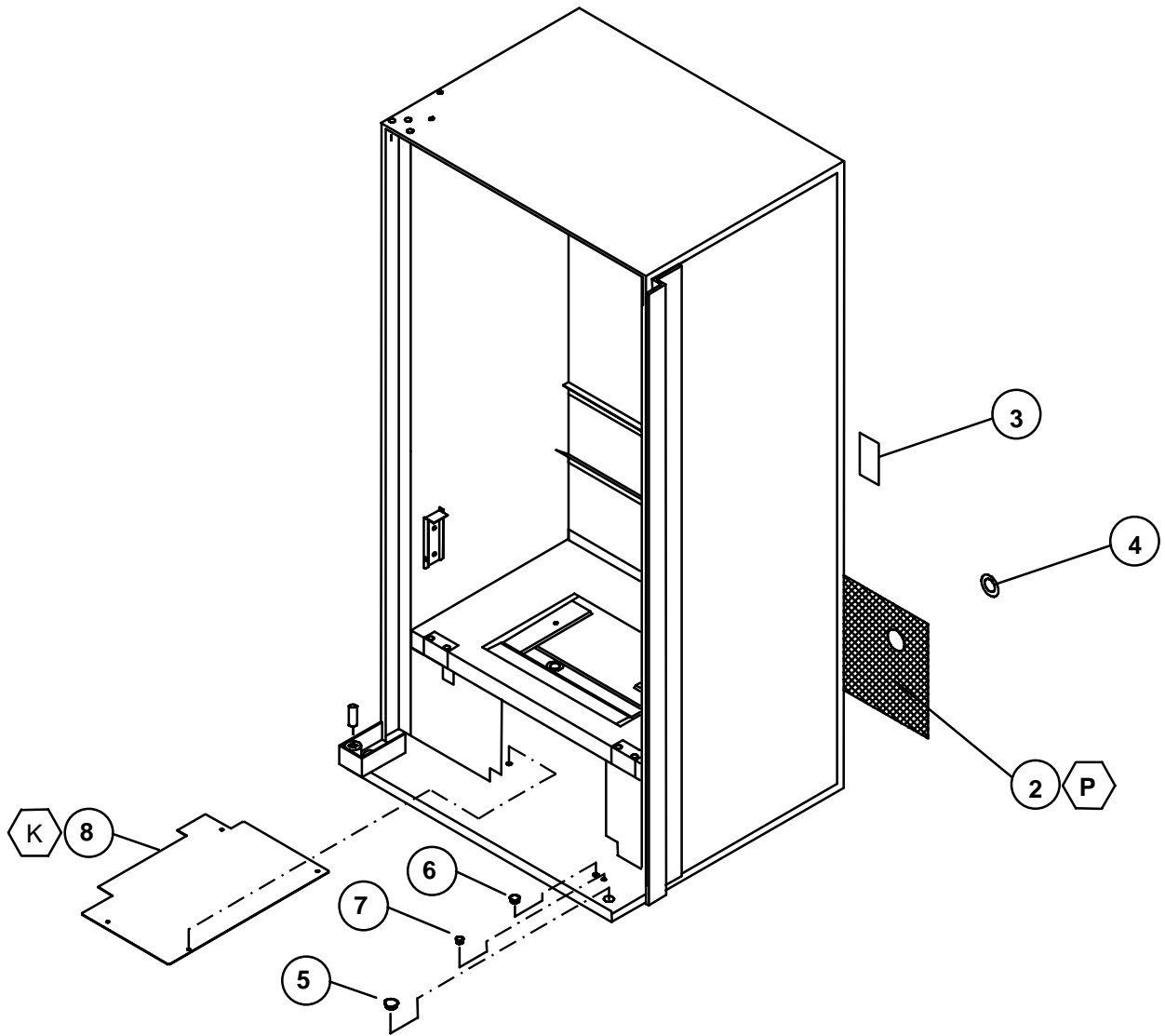
ITEM NO.	DESCRIPTION	QTY REQ	PART NO.
1	DECAL, COIN INSERT, GIV	1	1120346
2	PLATE – COIN INSERT	1	1120350
3	SECURITY PLATE - COIN INSERT	1	1120349
4	PIVOT BRACKET - COIN RETURN	1	1120345
5	BUSHING	2	385603-4
6	CRANK - COIN RETURN LEVER	1	1002244
7	LEVER - COIN RETURN	1	1052619
8	SPRING - COIN RETURN CRANK	1	1060023
9	COIN CHUTE ASSEMBLY	1	1087961
10	COIN CHUTE	1	1002333
11	COVER CHUTE	1	1002341
12	PCB - DIGITAL DISPLAY - ELECTRONIC	1	1089678
13	LENS - DISPLAY	1	1039652
14	GUIDE PLATE - COIN INSERT/RETURN	1	1125014
15	BUTTON - COIN RETURN	1	1050473
16	DISPLAY HARNESS	1	1111252





V-MAX GAS ISLAND - SELECTION PANEL

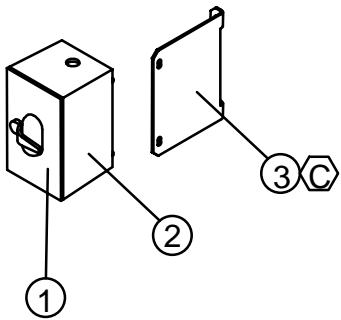
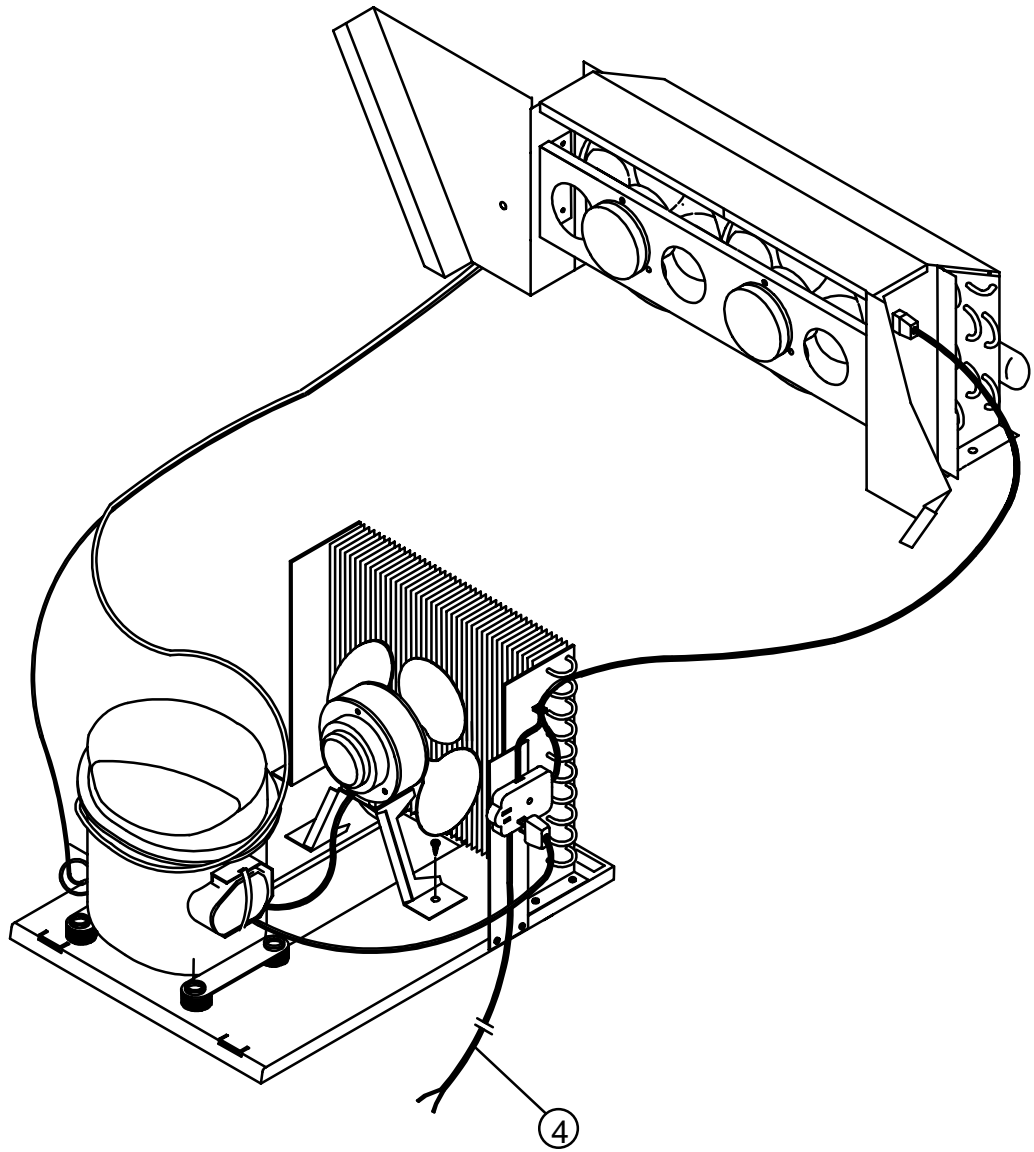
ITEM NO.	DESCRIPTION	QTY REQ	PART NO.
1	SELECTION PANEL ASSEMBLY	1	1011766-47
2	SELECTION WINDOW ASSEMBLY	1	133431
3	SELECTION WINDOW	10	388223
4	SELECTION WINDOW - BACK	10	388116
5	SELECTION BUTTON ASSEMBLY	10	1036203
6	SELECTION BUTTON	10	1116775
7	SPRING - SELECTION	10	388858
8	BUTTON HOUSING	10	1006932
9	SELECTION SWITCH	10	368299
10	SOLD OUT PLUG	10	1006975-1
11	SELECTION PANEL - 10 SELECT	1	1120275
12	SELECTION HARNESS - 10 SELECT	1	1111287





V-MAX GAS ISLAND - MOUNTING PEDESTAL ASSEMBLY

ITEM NO.	DESCRIPTION	QTY REQ	PART NO.
1	PEDESTAL	1	1120439
2	SAFETY SCREEN	1	1120351
3	LABEL - ON/OFF	1	1088287
4	GROMMET	1	1007319
5	PLASTIC PLUG, 1" (NOT ALL PLUGS SHOWN)	3	1121841
6	PLASTIC PLUG, .75"	1	1121841-1
7	PLASTIC PLUG, .56" (NOT ALL PLUGS SHOWN)	3	1121841-2
8	PANEL, GIV BASE	1	1121852





V-MAX GAS ISLAND - SWITCH MOUNT ASSEMBLY

ITEM NO.	DESCRIPTION	QTY REQ	110V PART NO.
1	SWITCH & COVER – SWITCH BOX	1	1122830
2	SWITCH BOX	1	1122828
3	SWITCH BRACKET	1	1120276
4	SERVICE CORD – W/O PLUG	1	1120617-4
5	SERVICE CORD W/PLUG (NOT SHOWN)	1	1070182-1
6	STRAIN RELIEF (NOT SHOWN)	1	1122829



NOTES



V-MAX

MAINTENANCE SECTION



MAINTENANCE

The following section is a basic guide for general maintenance and servicing of the vendor. This section is divided into three parts: (I) Preventative Maintenance, (II) Lubrication Guide, and (III) Care and Cleaning.

I. PREVENTATIVE MAINTENANCE SUGGESTIONS:

Whenever a vendor is visited on its site, the following service should be performed. Preventative maintenance will help prevent future problems with the vendor.

- A. Observe the vendor and its surrounding area for any unusual indications of problems (rear of cabinet, obstructions of the air flow, dark spots on the sign face, etc.).
- B. Open the door and visually check the inside of the vendor (water accumulation, rust marks, moisture around the edges of the inner door, etc.).
- C. Check the fluorescent lamps, replace as necessary. Replace all lamps within 24 to 48 hours of burnout. This will prevent damage to the ballast.
- D. Check the product temperature for proper cooling.
- E. Check evaporator drain for obstruction; water in the evaporator area must drain to the condensation pan.
- F. Empty condensation pan.
- G. Clean the condenser, free vanes of dirt, lint, etc.
- H. Check that evaporator fan(s) run normally.
- I. Check that the compressor and condenser fan run normally.
- J. Investigate any unusual sounds (fan blades hitting something, refrigeration lines rattling, etc.).
- K. Clean coin acceptor.
- L. Deposit all coinage accepted by the vendor to check for proper operation of the coinage mechanism.
- M. Test the vendor and make a report on the problems.

II. LUBRICATION GUIDE:

Lubricate indicated areas as directed on the chart below.

INTERVALS	PARTS	LUBRICANT
Every six months	Top door hinge, hinge pin at the base of cabinet, door latch cam to cabinet strike, T-handle shaft & latch.	Grade two, high low temperature grease
As necessary	Pivot area of bucket and gate	Grade two, high low temperature grease



III. CARE AND CLEANING

DO NOT USE WATER JET FOR CLEANING.

AVOID USING WATER OR ANY OTHER LIQUIDS NEAR ELECTRONIC COMPONENTS

- A. **GENERAL PROCEDURE** (painted metal areas)
Wash vendor with soap and water. The exterior may be waxed with any good automobile wax.
- B. **FRESH PAINT SPLASHES, GREASE, GLAZING COMPOUND REMOVAL**
Before drying, these elements may be removed by rubbing lightly with grade "A" Naptha (or equivalent grade solvent). After removal, use general cleaning procedure (listed above in A).
- C. **LABELS AND STICKER REMOVAL**
Use Kerosene, VM&P grade Naptha or petroleum spirits for removal. When the label material does not allow penetration of solvent (such as vinyl), the application of heat (hair blow dryer) will soften the adhesive and promote removal. **CAUTION:** Excessive heat can cause surface damage. After the label is removed, use the general cleaning procedure (listed above in A).
- D. **SCRATCH REMOVAL**
Remove or minimize hairline scratches and minor abrasions by using any good quality automobile polish. Test product before using.
- E. **LEXAN SIGNS**
To clean Lexan sign faces the following procedure is recommended.
 - 1. Wash sign with mild soap or detergent and lukewarm water.
 - 2. Using soft cloth or sponge, gently wash the sign. **DO NOT SCRUB!**
 - 3. Rinse well with clean lukewarm water.
 - 4. Dry thoroughly with a chamois or cellulose sponge (to prevent water spotting). **DO NOT USE SQUEEGEE!****NOTE:** Most organic solvents, petroleum, spirits, or alcohol are **NOT** compatible cleaning materials for Lexan signs. Usage of those materials could permanently damage the sign.
- F. **REFRIGERATION AREA**
The condenser and evaporator must be kept clean for efficient operation. Be sure all vanes and tubing are clean and clear of obstruction; this allows free passage of air. Clean with a brush, a vacuum cleaner or compressed air. Keep cabinet drain open; clean as necessary.



REFRIGERATION OPERATION

The refrigeration operation section is divided into three areas: Basic Refrigeration Principle, Detailed Vending Machine Refrigeration Cycle, and Parts Description.

BASIC REFRIGERATION PRINCIPLE

What a refrigeration system really accomplishes is the transfer of heat. A refrigeration system removes the excess heat from a refrigerated area and then transfers it to a condenser where it is dissipated. As heat is removed, the refrigerated area cools.

In vending machines, large quantities of the heat must be transferred rapidly, economically and efficiently. This process must be able to withstand continuous repetition, without loss of refrigerant, over an extended period. The most common system used in the vending industry is the vapor compression (or simple compression) cycle system. It consists of four basic elements: An evaporator, a compressor, a condenser, and a pressure-reducing device (all part of a sealed system).

The compression system operates at two pressure levels: The low evaporating pressure and the high condensing pressure. The refrigerant acts as the transport medium, in which heat is moved from the evaporator to the condenser; at the condenser, the heat is dissipated into the surrounding air.

The liquid refrigerant changes from a liquid to a vapor and back to a liquid again. This change of state allows the refrigerant to absorb, and rapidly discharge, large quantities of heat efficiently.

BASIC VAPOR COMPRESSION SYSTEM CYCLE:

In the evaporator the liquid refrigerant vaporizes. This change occurs at a temperature low enough to absorb heat from the refrigerated space. The temperature of vaporization is controlled by the pressure maintained in the evaporator (the higher the pressure, the higher the vaporization point).

The compressor pumps the vapor from the evaporator, through the suction line, and to the condenser. The compressor takes the low pressure vapor and compresses it, increasing both the pressure and the temperature. The compressor pumps the vapor at a rate rapid enough to maintain the ideal pressure. The hot high pressure vapor is forced out of the compressor, into the discharge line and then into the condenser.

Air is blown through the condenser, allowing heat to transfer from the condenser and into the passing air. As the heat is removed, the stored refrigerant is condensed into a liquid. The liquid refrigerant is stored in the lower tube of the condenser. This is where it flows through the capillary tube back into the evaporator, where the refrigeration cycle is repeated.



DETAILED REFRIGERATION CYCLE

The following is a detailed refrigeration cycle as it applies to the refrigeration system installed in Vendo equipment. (Refer to the flow chart in Figure 1.)

As the air temperature in the cabinet rises, the electronic temperature sensor reports the air temperature to the electronic controller. The electronic controller actuates the refrigeration control relay which turns on both the compressor and condenser fan motor.

The evaporator fan pulls air from the front of the refrigerated space of the cabinet. It pulls the air through the evaporator, and blows it up the back of the vend stack. (The evaporator fan runs continuously.) As the air passes through the evaporator, heat is drawn from the air and transferred to the liquid refrigerant. As the cooled air circulates through the vend stack, heat is drawn from the product and transferred to the circulating air. The heated air is again drawn through the evaporator where the heat is removed.

In the evaporator, the liquid refrigerant draws heat from the circulating air. As refrigerant receives heat, it vaporizes.

The compressor pumps the vapor from the evaporator and compresses it, increasing both pressure and temperature. The compressor forces the compressed vapor out, through the discharge line and into the condenser.

The condenser fan pulls air through the condenser. As the hot refrigerant vapor passes through the condenser tubes, heat is drawn from the vapor. This heat is dissipated into the passing air. The air then exits out the back of the vendor. As the refrigerant vapor in the condenser lines is cooled, it returns to a liquid state.

From the condenser the liquid flows to the drier. The drier removes any water and solid particles from the liquid refrigerant.

The cooled liquid refrigerant continues from the drier, through the capillary tube, to the evaporator. The capillary tube steadies the flow rate of the refrigerant. Its small inside diameter allows the pressure in the evaporator to remain low while the pressure in the condenser is high.

The cool refrigerant in the evaporator draws heat from the circulating air in the cabinet. As the temperature in the cabinet drops, the electronic temperature sensor reports the air temperature to the electronic controller. The electronic controller deactivates the refrigeration control relay which turns off the compressor and condenser fan motor.

When the air temperature in the cabinet rises above the electronic controller's cut in setting, the compressor and the condenser fan engage again.

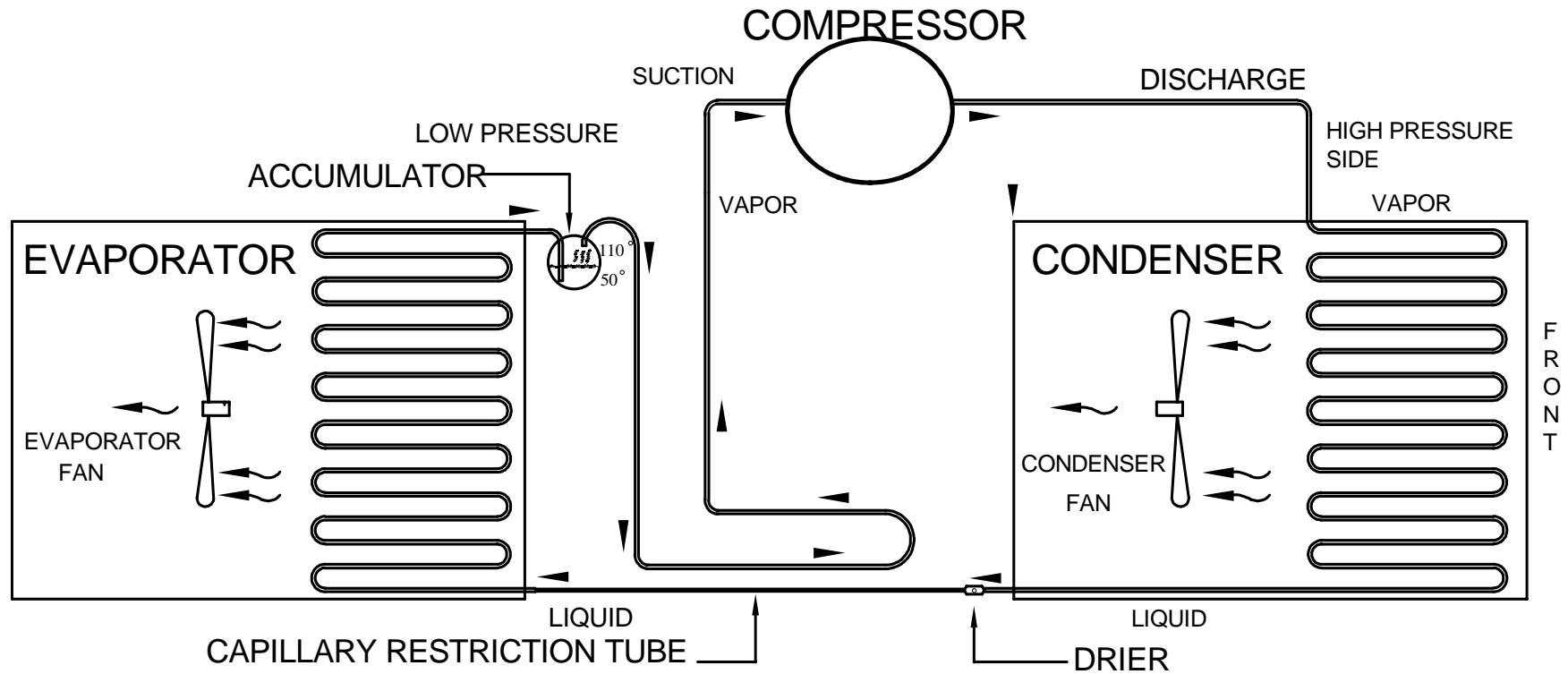


FIGURE 1



REFRIGERATION PARTS DESCRIPTION

The compressor, condenser, drier, capillary tube, evaporator, and accumulator are part of a sealed system (refer to Figure 2). These items are not available separately.

COMPRESSOR

The compressor takes in low pressure vapor and compresses it, increasing both the pressure and the temperature. The hot high pressure gas is forced out to the condenser. The compressor and the motor that drives the compressor are sealed inside a housing. The compressor, as a unit, is mounted on the refrigeration base. The base is mounted in the bottom of the vendor, outside the sealed refrigeration space.

CONDENSER

The condenser takes heat out of the high pressure vapor that it receives from the compressor. As the vapor passes through the condenser it cools and returns to a liquid state. The condenser is mounted to the refrigeration base near the front of the vendor. It is easily accessible for cleaning.

DRIER

The drier is a molecular sieve strainer drier. It removes water and solid particles from refrigerant liquid. One side of the drier is connected to the outlet line of the condenser; the other side is connected to the capillary tube going to the evaporator.

CAPILLARY TUBE

The capillary tube controls, at a steady rate, the flow of refrigerant liquid to the evaporator. It has a very small inside diameter to keep pressure in the evaporator low while the pressure in the condenser is high. It is the connecting link between the condenser and evaporator.

EVAPORATOR

The evaporator is a heat transference device. It removes the heat from the air in a refrigerated space and transfers it to the refrigerant liquid. This liquid evaporates into a vapor and is removed by the compressor. The evaporator is mounted inside the refrigerated space of the cabinet, directly below the delivery chute.

ACCUMULATOR

The accumulator traps any refrigerant liquid which did not boil off into a vapor before reaching the compressor. The accumulator allows the refrigerant liquid to boil off as a vapor (preventing damage to the compressor). It also prevents suction line sweating. The accumulator is mounted in the suction line on the outline side of the evaporator.

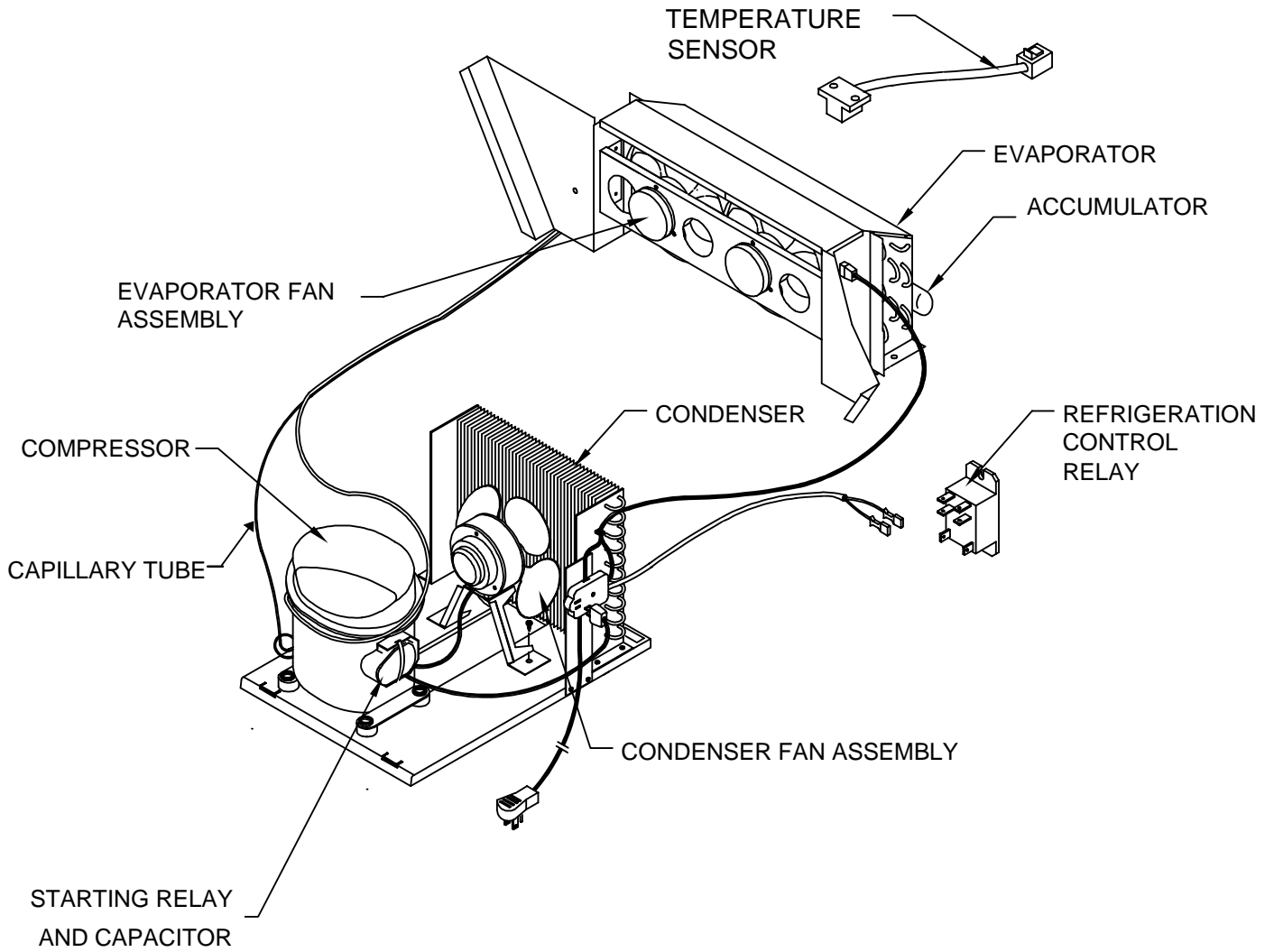


FIGURE 2



The parts listed below are not part of the sealed refrigeration system and are available separately.

START CAPACITOR - P/N: 1112805

The start capacitor is used to increase power during the start. This additional power will help get the compressor running in case there is any back pressure.

STARTING RELAY – INCLUDED IN ASSEMBLY P/N 513506066

The starting relay is mounted in the terminal box on the outside of the compressor under the housing. When the compressor first starts up, the starting relay closes and completes a starting circuit. When the compressor motor reaches operating speed, the starting relay opens and breaks the starting circuit.

THERMAL OVERLOAD SWITCH – INCLUDED IN ASSEMBLY P/N 513506066

The thermal overload switch is mounted in the terminal box on the outside of the compressor under the housing. If the compressor motor gets hot or draws too much current, the thermal overload opens and breaks the starting and running circuit of the motor. As the motor cools, the thermal overload closes, allowing the compressor to resist.

REFRIGERATION CONTROL RELAY - P/N: 1079724

The refrigeration control relay is mounted behind the left side air dam. This relay controls the compressor and condenser fan motor via the electronic controller.

TEMPERATURE SENSOR - P/N: 1079716

The temperature sensor is mounted in the inlet airflow of the evaporator. This sensor monitors the air temperature and reports it to the electronic controller so that the controller can operate the refrigeration system via the refrigeration control relay.



NOTES



V-MAX

TROUBLESHOOTING



VENDO WARRANTY

For V-Max Equipment Purchased prior to 10/1/01

NEW EQUIPMENT

- I. This is a Limited Warranty.
- II. The Vendo Company warrants, to the original purchaser, each part of each new vending machine for a period of fifteen (15) months from the date of shipment, to be free from defects in material and workmanship. This Warranty DOES NOT include light bulbs, fluorescent tubes, fuses, finish, or operating supplies.
- III. In addition to the fifteen (15) month Warranty on each part of each new vending machine, the hermetically-sealed refrigeration system used in machines designed to vend bottles, cans, and aseptic cartons is warranted to be free from defects in materials and workmanship for an additional four (4) years, provided the hermetically-sealed portion of the system has not been opened or damaged. Hermetically-sealed refrigeration systems DO NOT include fan motors, temperature controls, capacitors, overload switches or starting relays which are covered by the fifteen (15) month Warranty.
- IV. Electronic control boards and the LED display are warranted against defects in material and workmanship for an additional two (2) years. The Company, at its option, will either repair or replace products that prove to be defective.
- V. To qualify for Warranty replacement, all requests for returns must be made in writing within the warranty period, accompanied by a record of the cabinet model and serial number. If a return is found to be inoperative due to defects in material and/or workmanship, we will, at our option, make necessary repairs or furnish a reconditioned or new replacement part or refrigeration system at no charge.
- VI. The Vendo Company will pay normal transportation charges on parts and refrigeration system replaced under this Warranty. If special handling or premium transportation is requested, these charges are assumed by the purchaser.
- VII. Any parts and/or refrigeration systems replaced during the warranty period are warranted for the remaining time on the original warranty.
- VIII. This Warranty DOES NOT apply to machines located outside the United States and Canada, reconditioned equipment, equipment sold "as is", or components designed to work on electric currents other than 110v/120v 60hz cycle or 208v/220v 50hz cycle, as specified on the serial tag.
- IX. Title and risk of loss pass to the purchaser on delivery of the vending machine, replacement parts and/or refrigeration system to the common carrier. All loss and damage claims are the responsibility of the purchaser and must be filed with the delivering carrier.
- X. This Warranty DOES NOT include any service guarantee, either explicit or implied, nor will it extend to cover incidental or consequential damages or damages resulting from purchaser or third party negligence, accident, vandalism, or an act of God.
- XI. The Vendo Company reserves the right to make design changes, additions to, and improvements upon any of our product without incurring any obligation to incorporate same on any product previously manufactured.
- XII. This Warranty is in lieu of all other express warranties or other obligations or liabilities on our part, and we neither assume nor authorize any person to assume for us, any other obligation for liability in connection with the sale of said machines or parts thereof. **EXCEPT AS SPECIFICALLY PROVIDED HEREIN, THERE ARE NO WARRANTIES GIVEN, EITHER EXPRESS OR IMPLIED, AND ALL OTHER WARRANTIES, INCLUDING SPECIFICALLY BUT WITHOUT LIMITATION WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSE, ARE HEREBY EXPRESSLY DISCLAIMED.**

THE VENDO COMPANY 2/1996



**THE VENDO COMPANY
NEW EQUIPMENT WARRANTY
V-MAX VENDING MACHINES
United States / Canada**

- I. This warranty benefits only the original purchaser of a new vending machine, and does not benefit any transferee of a new vending machine from the original purchaser.
- II. The Vendo Company warrants each part of each new vending machine for a period of fifteen (15) months from the date of shipment, to be free from defects in material and workmanship. This Warranty DOES NOT include light bulbs, fluorescent tubes, fuses, finish or operating supplies.
- III. The hermetically-sealed refrigeration system used in machines designed to vend bottles, cans, and aseptic cartons is warranted to be free from defects in materials and workmanship for six (6) years, provided the hermetically-sealed portion of the system has not been opened or damaged. This six (6) year warranty DOES NOT include fan motors, temperature controls, capacitors, overload switches or starting relays.
- IV. Electronic control boards, LED displays and Vend motors, are warranted against defects in material and workmanship for five (5) years.
- V. Return authorization is required to qualify for warranty replacement. All requests for returns must be in writing or via phone, within the warranty period, and accompanied by a record of the cabinet model and serial number of the machine. Freight carrier return tickets will only be issued to the machine owner for refrigeration system returns. This warranty is voided when the serial number of a machine is missing. If a return is found to be inoperative due to defects in material and/or workmanship, we will, at our option, make necessary repairs or furnish a reconditioned or new replacement part or refrigeration system at no charge.
- VI. "Return Material Tags" indicating cabinet model, machine serial number and explanation of defect must accompany all returned parts or machines. "Return Material Tags" will be furnished upon request. On-site inspection of defective parts, at The Vendo Company's option, may be used to facilitate credit approval or the replacement of parts.
- VII. The Vendo Company will pay normal transportation charges on refrigeration systems and parts replaced under this warranty. If special handling or premium transportation is requested, those charges will be assumed by the original purchaser.
- VIII. Any parts and/or refrigeration systems replaced during the warranty period are warranted for the remaining time on the original warranty.
- IX. This warranty DOES NOT apply to machines located outside the United States and Canada, reconditioned equipment, equipment sold "as is", or components designed to work on electric currents other than 110v/120hz 60 cycle, as specified on the serial tag.
- X. Title and risk of loss pass to the original purchaser on delivery of the vending machine, replacement parts and/or refrigeration system to the common carrier. All loss and damage claims are the responsibility of the original purchaser and must be filed with the delivering carrier.
- XI. This warranty DOES NOT include any service guarantee, either explicit or implied, nor will it extend to cover incidental or consequential damages resulting from the original purchaser or third party negligence, accident, vandalism, or an act of God.
- XII. The Vendo Company reserves the right to make design changes, additions to, and improvements upon any of our product without incurring any obligation to incorporate same on any product previously manufactured.
- XIII. This warranty is in lieu of all other express warranties or other obligations or liabilities on our part, and we neither assume nor authorize any person to assume for us, any other obligation for liability in connection with the sale of said machines or parts thereof. EXCEPT AS SPECIFICALLY PROVIDED HEREIN, THERE ARE NO WARRANTIES GIVEN, EITHER EXPRESS OR IMPLIED, AND ALL OTHER WARRANTIES, INCLUDING SPECIFICALLY BUT WITHOUT LIMITATION WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSE, ARE HEREBY EXPRESSLY DISCLAIMED.



PARTS RETURN PROCEDURES

1. All parts returned must be accompanied by a material return tags (P/N 1122825) Tag must clearly state the reason for the return and the Return Goods Authorization Number received from your Vendo Customer Service Rep at 1-800-344-7216. (Return tags are available from our parts department upon request).
2. All parts should be properly wrapped and packed securely to avoid further damage.
3. To replace an inoperative part, please use the following instructions
4. Complete the return tag making sure to fill in ALL requested information to ensure prompt processing. Keep top (white) copy for your records. Attach tag to inoperative part and send it by the most inexpensive method of transportation (Federal Express Ground or Overnight Transportation) **To: THE VENDO COMPANY, 4015 EAST RAINES ROAD, MEMPHIS, TENNESSEE 38118.**
5. Be sure to check () the box marked “credit” and to fill in the invoice number covering the part sent to you or check the box marked “replace with like part”.
6. If the box is marked for replace with like part, a like part will be shipped at no charge if our inspection shows that the inoperative part became defective during the warranty period.
7. If the box is marked for credit, a credit will be issued to cancel the invoice on which the replacement part was shipped. This credit will include any applicable prepaid transportation charges. To receive credit the inoperative part must be returned within 30 days from the date the replacement was shipped.
8. Vendo does not issue cash credit for the return of any part or accessory.

REFRIGERATION UNIT RETURN PROCEDURE

1. All refrigeration units returned must be accompanied by a material return tag (P/N 1122826). Tag must clearly state the reason for the return and the Return Goods Authorization Number received from your Vendo Customer Service Rep at 1-800-344-7216. (Return tags are available from our parts department upon request).
2. All refrigeration units should be properly wrapped and packed securely to avoid further damage.
3. To replace an inoperative part, please use the following instructions.
4. Complete the return tag making sure to fill in ALL requested information to ensure prompt processing. Keep top (white) copy for your records. Attach tag to inoperative part and send it by the most inexpensive method of transportation (Federal Express Ground or Overnight Transportation) **To: THE VENDO COMPANY 7209 N. INGRAM AVE. FRESNO, CA. 93650**
5. Be sure to check () the box marked “credit” and to fill in the invoice number covering the part sent to you or check the box marked “replace with like part”.
6. If the box is marked for replace with like part, a like part will be shipped at no charge if our inspection shows that the inoperative part became defective during the warranty period.
7. If the box is marked for credit, a credit will be issued to cancel the invoice on which the replacement part was shipped. This credit will include any applicable prepaid transportation charges. To receive credit the inoperative part must be returned within 30 days from the date the replacement was shipped.
8. Vendo does not issue cash credit for the return of any refrigeration unit.

***Canadian and International customers please contact your Customer Service Representative for return instructions**



TROUBLESHOOTING GUIDE

This guide is a general list of probable problems, causes, and solutions. For problems not listed or additional questions, contact the Technical Services Department at Vendo, 7209 N. Ingram Ave., Fresno, CA 93650 or call 1-800-344-7216, extension 3368. Please have the manufacturer's date code and model number of the vendor when you call.

The troubleshooting guide is divided into three columns: Possible Problem, Possible Cause, and Service Suggestion.

POSSIBLE PROBLEM	POSSIBLE CAUSE	SERVICE SUGGESTION
Returns all good coins	No power to vendor	Check power supply.
	No power to changer	Check coin mechanism plugs. Check for faulty harness wiring (see wiring diagram for circuit).
	Acceptor is out of adjustment or coin gate is not closed	Check coin mechanism.
	Electronic-CREM function: 1.) No power to acceptor 2.) Defective acceptor	1. Check electrical connections of the acceptor. 2. Replace acceptor.
	Coin paths are dirty	Clean acceptor with approved cleaner. <u>DRY VERY THOROUGHLY.</u>



POSSIBLE PROBLEM	POSSIBLE CAUSE	SERVICE SUGGESTION
Money accepted, no product vended	Bad selection switch(es)	Check selection switches, replace as necessary.
	Bad selection switch harness connection	Check harness connection.
	Sold-out switch (of column selected) inoperative	Check switch, replace as necessary.
Vend motor runs until two or three products are vended or vend motors run continuously	Improper cam lobe adjustment	Check cam for proper arrangement of cam lobes (see product set-up guide).
	Motor position switch not making proper contact with cam lobe	Check lever for proper lever positioning and freedom of movement.
Refrigeration unit will not run at all	No power to vendor	Check power supply, also check service cord connections.
	Bad temperature sensor	Check / replace.
	Bad refrigeration relay	Check / replace.
Compressor will not start	Overload Protector inoperative	Check overload (apply insulated jumper across terminal, if compressor starts, replace overload).



POSSIBLE PROBLEM	POSSIBLE CAUSE	SERVICE SUGGESTION
Compressor will not start, condenser fan motor running - unit hot (power to compressor)	Starting relay or capacitor inoperative	Check relay or capacitor, replace.
	Compressor inoperative	Disconnect power to vendor, remove all leads from compressor, check continuity from "common", "start" and "run" to compressor case. If continuity shows, replace compressor. Also check from "common to start" (using continuity or IHMS). If meter fails to show reading replace compressor.
Compressor starts but does not run	Will not cycle	Check overload and contact, replace overload if necessary.
	Starting relay stays closed	Replace relay.
	Compressor motor problem	Check, replace.
Compressor runs but cabinet temperature warm	Loss of refrigerant	Replace refrigeration unit. (Note: Any work of this nature done without express permission from The Vendo Company can void refrigeration unit warranty.)
	Condenser fan not working	Check circuit to run motor. Replace motor. Check for obstruction of fan blade.
	Blocked or dirty condenser (Refer to initial installation in the service manual)	Check condenser vanes for obstruction, lint or dirt. Clean, also check for proper air flow through refrigeration area.
	Evaporator fan not working	Check circuit to fan motor. Replace motor, also check for obstruction of fan blade.
	Bad inner door seal	Check for moisture on seal. Adjust inner door as necessary (See initial set-up of service manual). Replace door seal.



POSSIBLE PROBLEM	POSSIBLE CAUSE	SERVICE SUGGESTION
Evaporator frosted over	Water at base of evaporator unit	Check for proper drainage (such as plugged drain, kinks in drain tube, etc.), check door seal.
Product freezing up too cold	Temperature setting too low	Adjust temperature setting in electronic controller.
Excessive noise	Fan blade bent or hitting shroud	Straighten, relocate shroud position, or remove shroud.
	Fan motor noisy	Replace if necessary.
	Refrigeration base loose or bent	Tighten bolt or replace if necessary.
Both compressor and condenser fan motors will not operate	Bad refrigeration control relay	Test relay using relay test function of the electronic controller. Replace relay if necessary.
	Bad wiring connection at refrigeration control relay	Check wiring connections. Make corrections if necessary.



NOTES