Parts & Service Manual

For ALL V21 Identified Equipment

FOR TECHNICAL ASSISTANCE, PLEASE CALL:

1-800-344-7216 EXT-1036

TABLE OF CONTENTS

SAFETY

A COMMITMENT TO SAFETY

SandenVendo America, Inc. is committed to safety in every aspect of our product design. SandenVendo America, Inc. 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 SandenVendo America, Inc. 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. SandenVendo America, Inc. could not possibly know, evaluate, or advise of all of the conceivable ways in which service might be done. Nor can SandenVendo America, Inc. 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. SandenVendo America, Inc. 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 SandenVendo America, Inc. 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.
- The appliance is not to be used by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
- Children should be supervised to ensure that they do not play with the appliance.

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 outer door is open, it will remain stationary if the vendor is properly leveled. Vendors must be level to ensure proper operation and to maintain stability characteristics. Do not add legs to the vendor. **The leveling legs shall not raise the vendor more than 1 1/8 inch above the ground.**

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 = 115V ± 10%

G. Dedicated 15A service required for 1 machine.

NOTE: Any power supply variance more than + 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.)

TYPE 1

- LARGE SLOT-LINE 2
  NEUTRAL CONTACT (WHITE) 0-5 VOLTS
- SMALL SLOT-LINE 1
  LIVE CONTACT (BLACK)
  110 VOLTS
- ROUND SOCKET
  EARTH CONTACT
  (GREEN) 0 VOLTS

STEP 1

STEP 2

STEP 3

TYPE 2

- EARTH CONTACT SLOT
  (GREEN AND YELLOW)
  0 VOLTS
- SLOT
  LIVE CONTACT
  (BROWN) 220 VOLTS

SLOT
NEUTRAL CONTACT
(BLUE) 0-5 VOLTS

STEP 1

STEP 2

STEP 3

TYPE 3

- POWER CONTACT SOCKET
  NEUTRAL (BLUE) 0-5 VOLTS
  OR LIVE (BROWN) 220 VOLTS

EARTH CONTACT
(GREEN AND YELLOW)
0 VOLTS

- POWER CONTACT
  SOCKET
  NEUTRAL (BLUE) 0-5 VOLTS
  OR LIVE (BROWN) 220 VOLTS

STEP 1

STEP 2

STEP 3

TYPE 4

- POWER CONTACT SOCKET
  NEUTRAL (BLUE) 0-5 VOLTS
  OR LIVE (BROWN) 220 VOLTS

EARTH CONTACT
(GREEN AND YELLOW)
0 VOLTS

- POWER CONTACT
  SOCKET
  NEUTRAL (BLUE) 0-5 VOLTS
  OR LIVE (BROWN) 220 VOLTS

STEP 1

STEP 2

STEP 3

TYPE 5

- POWER CONTACT SOCKET
  NEUTRAL (BLUE) 0-5 VOLTS
  OR LIVE (BROWN) 220 VOLTS
- EARTH CONTACT SOCKET
  (GREEN AND YELLOW)
  0 VOLTS

POWER CONTACT SOCKET
NEUTRAL (BLUE) 0-5 VOLTS
OR LIVE (BROWN) 220 VOLTS

STEP 1

STEP 2

STEP 3

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.

H. **Electronic Power Lock**
The auxiliary, (back-up battery pack), voltage is specified by the lock manufacturer to be 24-30 Volts DC. This is typically provided by a back-up battery pack with (3) 9-volt commercially available alkaline batteries.

SECTION I: VENDOR INSTALLATION (CONTINUED)

I. 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
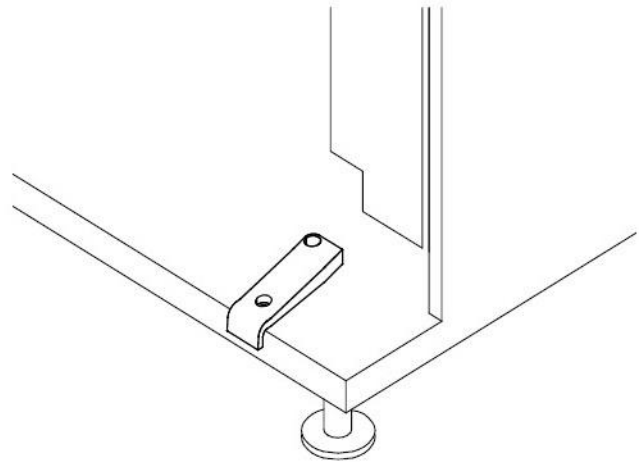
J. Door Latch Alignment (Figure 3)
After any door adjustment, the floating quicker lock assembly should align itself automatically. The latch assembly is adjustable. To adjust, loosen the latch bracket mounting screws, raise or lower the latch assembly into position, then tighten the mounting screws.

FIGURE 3

DO NOT INSERT OBJECTS INTO LOCK CAVITY.

TO FREE OBJECTS, REMOVE LOCK CAP AS SHOWN
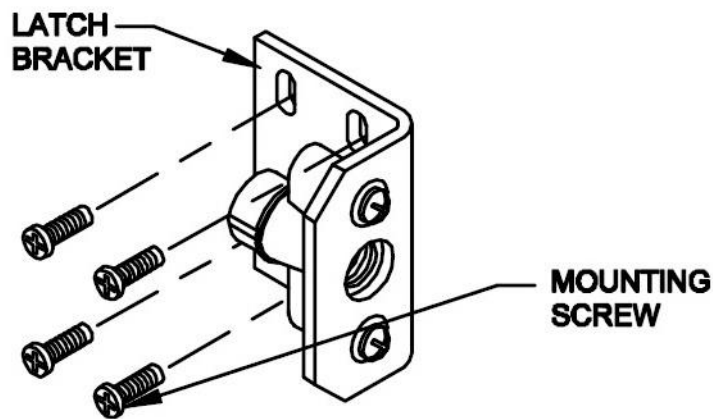
WARNING:
KEEP FINGERS AND OTHER OBJECTS OUT OF LOCK CAVITY

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

SandenVendo America, Inc. 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

SandenVendo America, Inc. 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.)

<div style="border:1px solid black">

WARNING:

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

</div>

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.

<div style="border:2px solid black; padding:1em; color:red; text-align:center; font-weight:bold;">

WARNING:

"POWER ON" SERVICING SHOULD BE ACCOMPLISHED ONLY BY FULLY-TRAINED PERSONNEL. SUCH SERVICE BY UNQUALIFIED INDIVIDUALS CAN BE DANGEROUS.

</div>

Power to lighting and refrigeration system is shut off automatically by the electronic controller when the outer door is opened.

NOTE: For power-on servicing of the vendor's lighting system, turn lighting power on by accessing the Lights test function of the electronic controller (see programming on inner door). For power-on servicing of the vendor's refrigeration system, turn refrigeration power on by accessing the Compressor test function of the electronic controller (see programming on inner door).

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.

<div style="border:2px solid black; text-align:center">

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

</div>

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.

R290 REFRIGERANT (PROPANE)

For units that use R290 refrigerant, please use additional caution as described below.

Not destroy Ozone layer	Low potential of Grobal warming	Very Flammable
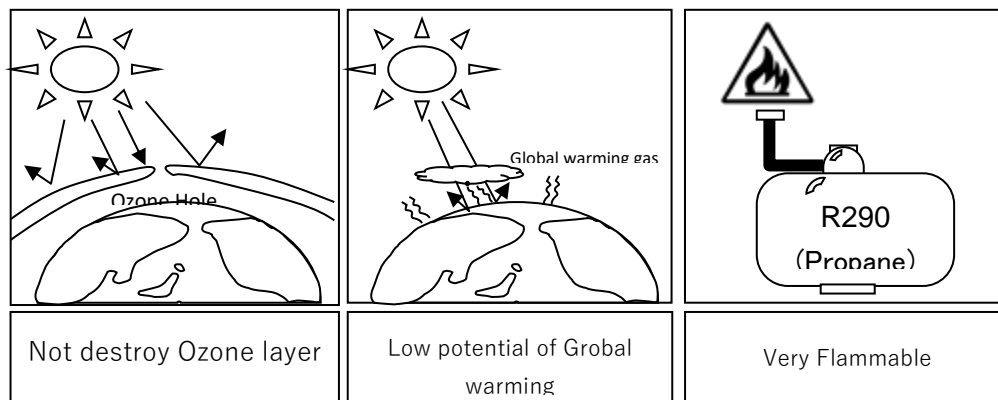
Refrigerant	R290 (Propane)
Ozone Destructive Potential	0
Global Warming Potential	3
Permission Concentration	1,000 ppm
Operating pressure	180 psig (1.2 MPa)

DANGER:

Risk of fire or explosion. Flammable refrigerant used. Use extreme caution when handling, moving unit as to not increase risk of damage to refrigerant tubing or increasing the risk of a leak.

Caution:

The refrigeration unit contains R290 (Propane). Only a service technician that has been trained with the operation of R290 (Propane) should service the refrigeration system, so as to minimize the risk of possible ignition due to incorrect parts or improper service. Components parts shall be replaced with like components.

Notice:

This vending machine uses less than 114 grams (3xLFL) of R290 (A3 Propane) refrigerant. For R290 LFL=38 g/m^3. Therefore, has no special placement restrictions (as compared to A1 refrigerants e.g. R134a) and can be used in lobbies or locations of egress, such as a hallways or public corridors.

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.

WARNING:

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

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 SandenVendo America, Inc. 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:
>
> **SandenVendo America, Inc. 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**

   SandenVendo America, Inc. 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 SandenVendo America, Inc. office in your area.

SECTION VII: SUBSTITUTIONS AND MODIFICATIONS (CONTINUED)

<div style="border:1px solid black; text-align:center">

WARNING:

THIS APPLIANCE MUST BE EARTHED. IMPORTANT!

</div>

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 VIII: 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 applied on the vending machine.) SandenVendo America, Inc. will supply sufficient decals to be placed on all machines, on request. If you have any questions, contact the Technical Services Department of the SandenVendo America, Inc. office in your area.

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

ENGLISH — FRENCH — SPANISH

AREA	ADDRESS	PHONE NUMBERS
United States, Canada	SandenVendo America, Inc. 10710 Sanden Drive Dallas, TX 75238-1335 U.S.A.	Tel: (800) 344-7216 Fax: (800) 541-5684
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	Vendo UK Ltd. Vendo House Kingsclere Road Basingstoke, Hants RG21, 5GU 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 Cornella, (Barcelona), Spain	Tel: 343-474-1555 Fax: 343-474-1842

AREA	ADDRESS	PHONE NUMBERS
Mexico	Vendo de Mexico Carreta Mexico - Tequisquiapan Km 3.2 San Juan del Rio, Queretaro C.P. 76800	Tel: (52) 427 2718096 Fax: (52) 427 2718077
Mexico	IMI Cornelius de Mexico, S.A. de C.V. Manual Dublan No. 35 Col. Tacubaya, Deleg. Miguel Hidalgo C.P. 11870 Mexico	Tel: (52 55) 5272-7904 Fax: (52 55) 5273-5949
Central America	SandenVendo America, Inc. 10710 Sanden Drive Dallas, TX 75238-1335 U.S.A.	Tel: (214) 765-9066 Fax: (214) 221-7010
South America	SandenVendo America, Inc. 10710 Sanden Drive Dallas, TX 75238-1335 U.S.A.	Tel: (214) 765-9066 Fax: (214) 221-7010

GENERAL INFORMATION

GENERAL INFORMATION

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

The V21 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.

MODEL		V21 621	V21 721	V21 821
MAXIMUM SELECTIONS		8	10	10
DIMENSIONS (HEIGHT X WIDTH X DEPTH) *				
SHIPPING DIMENSIONS (H x W x D)		72" X 32.5" X 34.8"	72" X 39.5" X 34.8"	79" X 39.5" X 34.8"
NUMBER OF COLUMNS		8	10	10
CAPACITY PER COLUMN	12oz. CAN 20oz. PET **	68 28 30	68 28 30	80 34 36
SHIPPING WEIGHT*		640 lbs.	685 lbs.	750 lbs.
OPERATION VOLTAGE		115V 60Hz	115V 60Hz	115V 60Hz
AMP. RATING		8	8	8
REFRIGERATION VOLTAGE		115V 60Hz	115V 60Hz	115V 60Hz
OPERATING CONDITIONS		Suitable for outdoor use. Maximum Ambient – 110°F Minimum Ambient = 32°F ***		

* Dimensions and shipping weight will vary slightly due to manufacturing tolerances, and whether or not shipping boards, payment systems, column spacers, or other optional items are installed.

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

*** Can be used at temperatures lower than 32°F upon installation of optional heater kit.

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. **The leveling legs shall not raise the vendor more than 1 1/8 inch above the ground.**

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 rear to front 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 1 on page G-4). The power requirements are listed on the serial plate.

To ensure 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 SandenVendo America, Inc. office in your area.
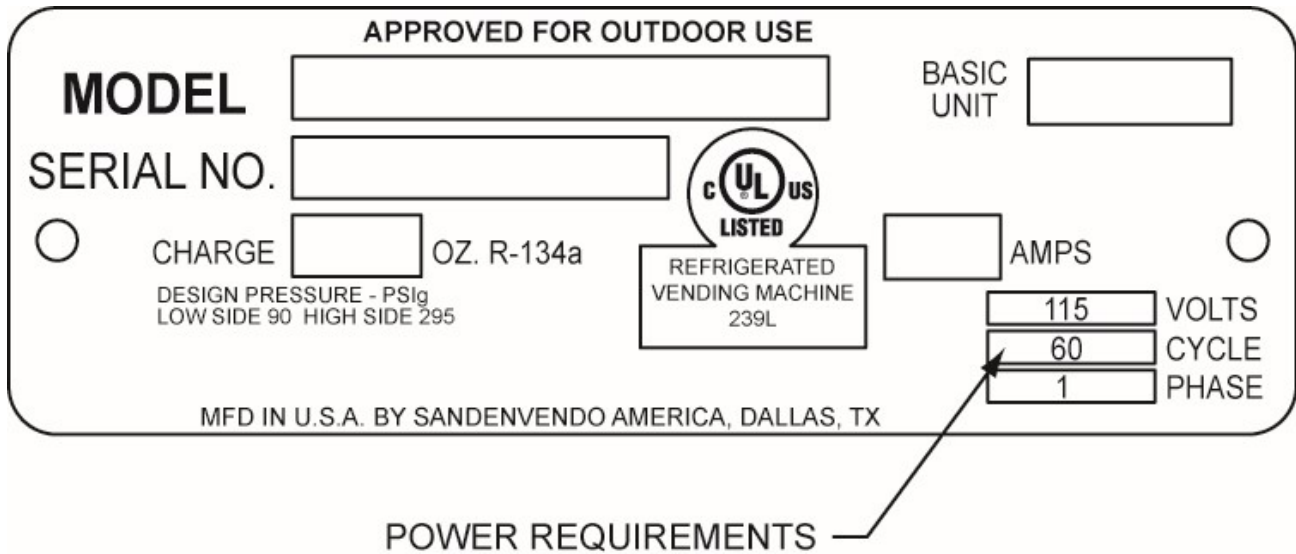
FIGURE 1

<u>**NOTE:**</u> *The* **Model** *number of the vending machine is located on the top, left hand corner of the serial plate.* <u>**Do Not use the "BASIC UNIT" number.**</u> *The BASIC UNIT number is the cabinet size, which is used on a number of different machines. A typical model number could read "721CDT00029". The 721 is the model number, CDT represents the product line of the vendor, and the remaining digits tell what options are included.*

LABEL INSTALLATION CHAMELEON

PRICE LABEL APPLICATION:
When used, apply Price Labels to Flavor Labels or near the Coin Insert Slot.
Note: Price information will be shown on the Display when a selection button is pressed and flashed continuously if all selections are set to a single price.

FLAVOR LABELS INSTALLATION:
As shown in Figure 2, insert flavor labels from the top or side of the selection window. Rear views of windows are shown. Arrows point the direction to insert labels.
Selection window and selection button labels identify product contained in columns.
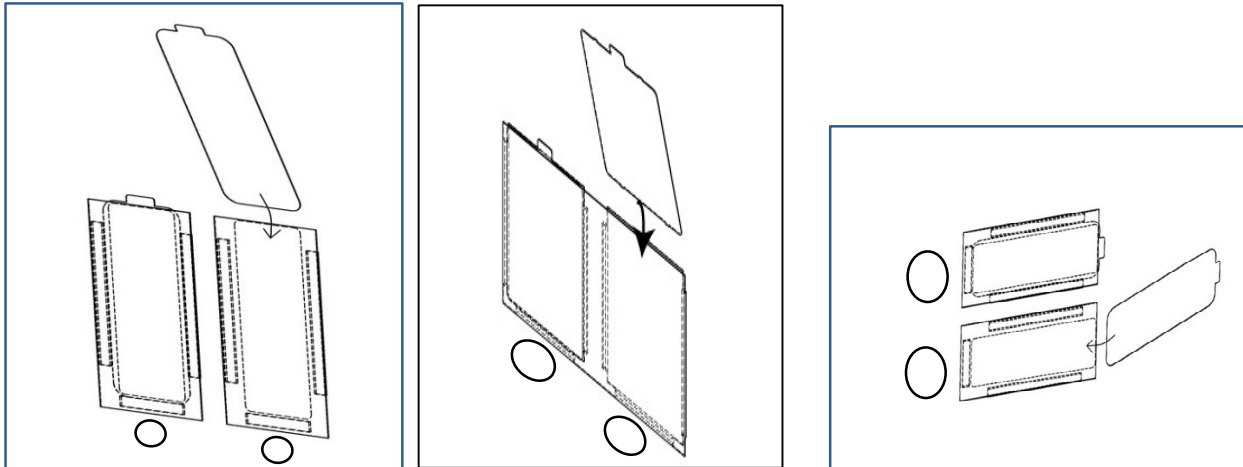
Figure 2

LABEL INSTALLATION HVV

A. FLAVOR LABELS

Before installing flavor labels, bend the top (removal) tab down. To install flavor labels, insert the two small tabs on the bottom edge of the label into the slots in the selection button. Press the label in near the two upper tabs until the tabs snap into the slots in the upper wall of the selection button. (See Figure 3)

B. PRICE LABELS

Individual price labels can be applied to the flavor labels. The price labels should be applied in the upper right corner of the flavor labels in the area indicated by a dashed oval.
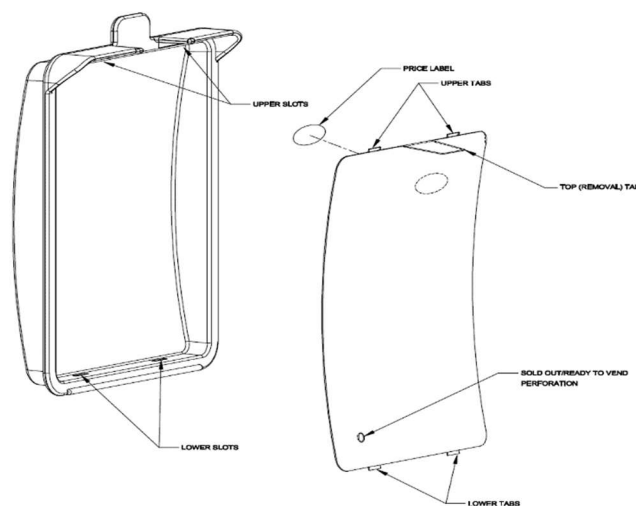
Figure 3
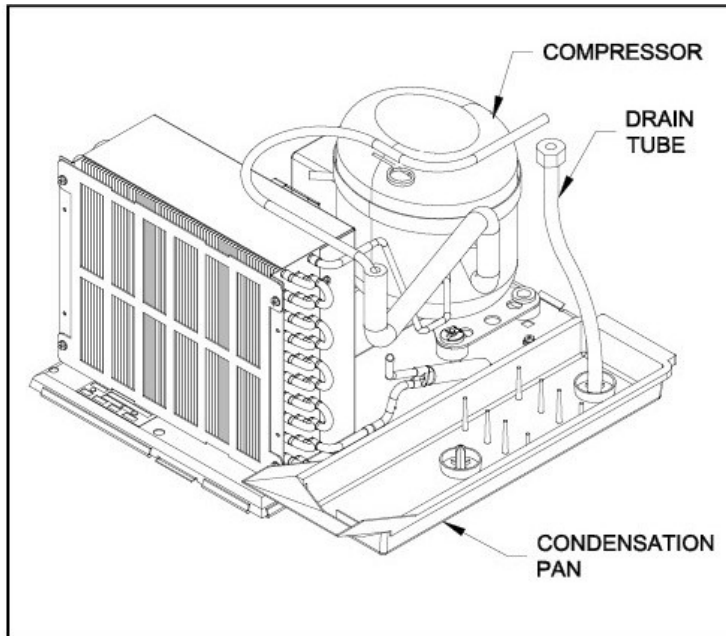
FIGURE 4

ALIGNMENT CHECKS

REFRIGERATION AREA CHECK:
Check the position of the condensation pan (see Figure 4). The correct position of the pan is on the right-hand side of the vendor with the ramp of the pan just outside the right-hand air dam. Be sure the drain tube is attached to the pan and is free of kinks. A water trap feature is included in the condensation pan and will prevent warm, moist air from reaching the evaporator area.

LOADING INSTRUCTIONS

BASIC LOAD SET-UP (see next page):
The V21 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 SandenVendo America, Inc. office in your area.

Load product evenly. Product is to be loaded differently depending on the type of product being vended. Use the directions in the PRODUCT LOADING section to determine how to load a specific product.

To maintain the integrity of the stack, never move a vending machine when it is loaded.

V21 PRODUCT SETUP AND LOADING INSTRUCTIONS

FOLLOW THE 3 STEPS BELOW WHEN SETTING VENDOR UP FOR A PRODUCT

1

BACK SPACER
Adjust the back spacer to provide approx. 1/4" to 1/2" gap between the front spacer, product and back spacer.
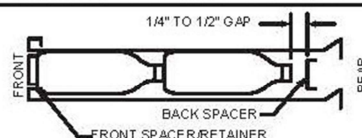
2

PRODUCT STEP
For short product vending, move the product step to the "FORWARD" position.
For tall product vending, move the product step to the "BACK" position.
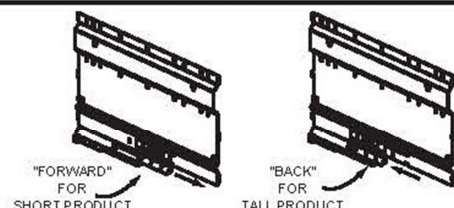
SHORT PRODUCT = LESS THAN 7.0" TALL (PRODUCT STEP FORWARD)
TALL PRODUCT = MORE THAN 7.0" TALL (PRODUCT STEP BACK)

3

DEPTH SETTING (ELECTRONIC CONTROL MODE)
The "DEPTH SETTING" for each column must correspond to the number of products in the column. For example; the depth setting for a column vending double depth bottles must be set to "2", and a column set to vend quadruple depth cans must be set to "4".
Refer to the VEC 12 programming instructions for details on how to access and change the depth setting mode.

- 4 Deep: Cans between 4.50" and 4.85" tall.
- 3 Deep: Bottles or cans between 4.85" and 6.50" tall.
- 2 Deep: Bottles between 6.50" and 9.95" tall.
- 1 Deep: Bottles taller than 9.95".

MIN. PRODUCT HEIGHT   4D   3D   2D
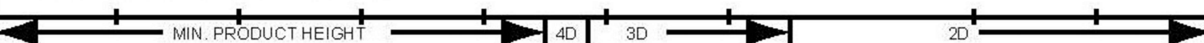
PRODUCT LOADING

- Single depth bottles should be loaded with cap toward the back.

- Double depth bottles may be loaded with caps toward the back, or butt to butt.

- Triple depth bottles must be loaded with caps toward the back.

- Quadruple depth cans may be loaded any direction.

FRONT OF VENDOR

1D
2D
2D
3D
4D
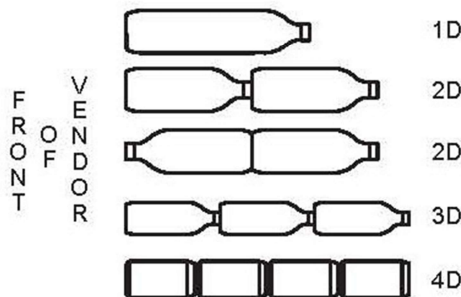
SMALL DIAMETER PRODUCT SETTING

- Small diameter products (less than 2.5" Ø) such as 500 ML water bottles require the use of side spacer PN 1125921.

  2.5" Ø OR LESS
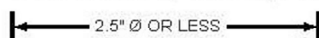
- Small diameter 250 ML energy drink cans (2.1" Ø) require the use of conversion kit PN 1121638.

  2.1" Ø
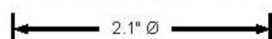
NOTES

- Side spacers **ARE NOT** required for 12 oz. can vending.

- Vend mechanism is self priming. No need to manually prime after initial load or reload.

- For questions regarding product settings, contact the Vendo Technical Services Department at 1-800-344-7216 ext.3368 (US/Canada) or 559-439-1770 ext.3368.

1126121

VEND MECHANISM PARTS DESCRIPTION

The parts listed below are part of the vend motor mechanism. One mechanism is required per column, except the drop sensor assembly, which is one assembly per machine. The parts are interchangeable. Setting will differ between single, double, triple, and quadruple depth.

VEND MOTOR ASSEMBLY:
The motor is attached to the mech plate by two screws.

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

MOTOR COUPLING CAM:
The coupling cam couples the motor to the bucket. It is located behind the motor, on the motor shaft. It is also a means to provide feedback to the controller to determine when the motor has reached maximum clockwise and counterclockwise positions.

GATE:
The gate holds product above the vend bucket.

GATE LINK:
The rotation of the coupling cam moves the gate link. This opens the gate, allowing one layer of product to drop into the bucket.

CAN STEP:
The can step is located at the bottom of the stack partition. It is pulled forward when vending cans and is moved back for bottle vending.

REAR BUSHING:
The rear bushing provides a low friction pivot for the rear of the bucket.

FRONT SPACER:
The front spacer helps to guide product into the bucket.

DROP SENSOR ASSEMBLY:
The drop sensor assembly is located below the delivery chute. When a product is vended, the drop sensor senses the impact, and cancels the credit.
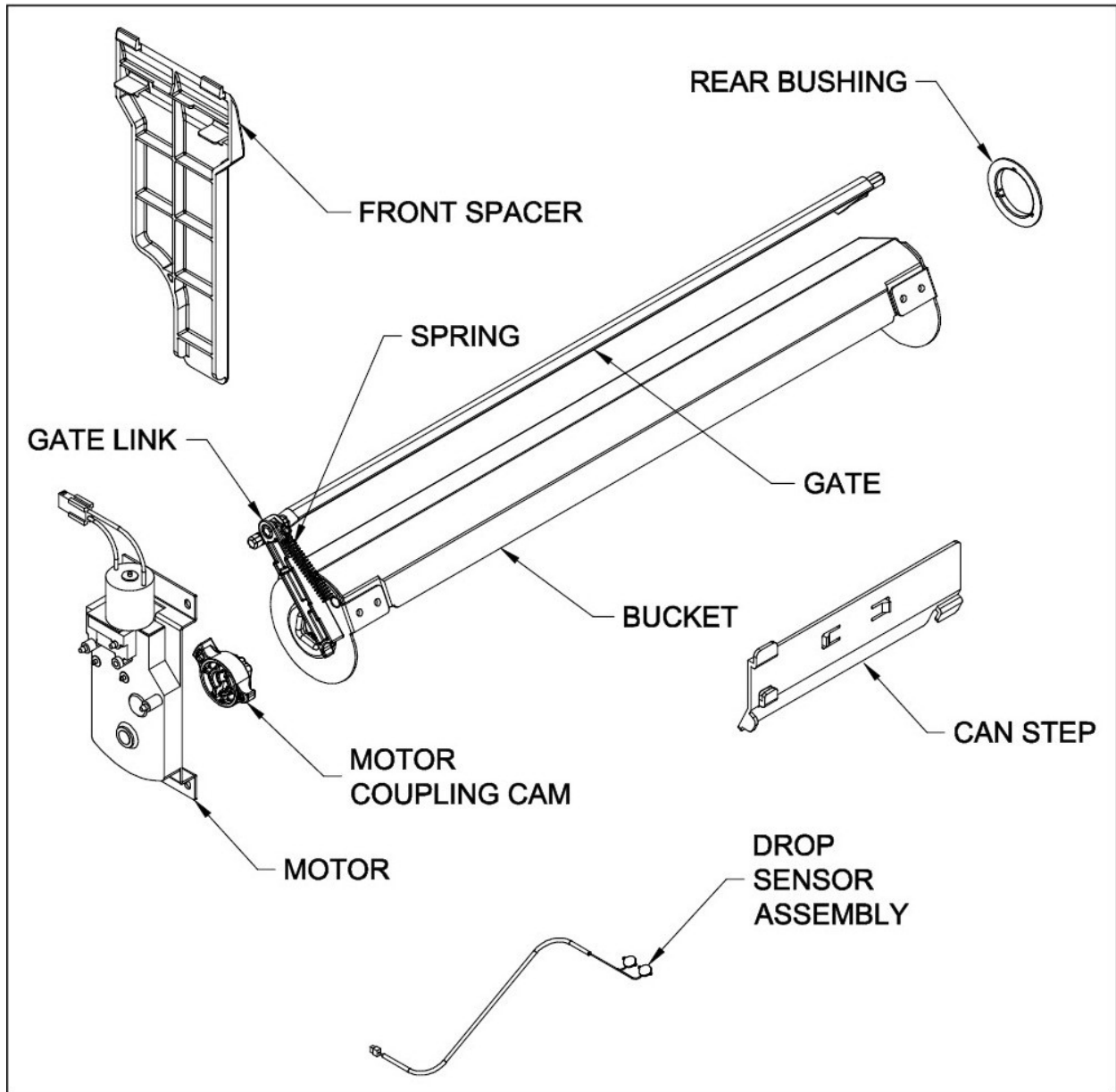
FIGURE 5

VEND CYCLE

Several operations take place during the vend cycle: When a selection is made, the coupler and bucket rotate, product is dispensed, and the bucket is then reloaded. The sequence of these operations changes slightly when the column's depth setting is changed. With the single depth setting, one purchase is made, and the bucket is reloaded. With the double depth setting, two purchases are made before the bucket is reloaded. With the triple depth setting, three purchases are made before the bucket is reloaded. With the quadruple depth setting, four purchases are made before the bucket is reloaded. (See Figures 6 & 7)

STANDBY POSITION
BUCKET LOADED

BUCKET ROTATES
CLOCKWISE
FIRST PRODUCT VENDS
BUCKETS STOPS

BUCKET RETURNS
TO STANDBY
POSITION

LAST PRODUCT VENDS
BUCKET CONTINUES
TO MAXIMUM
CLOCKWISE
ROTATION STOP

VEND SEQUENCE (DOUBLE DEPTH)

FIGURE 6

BUCKET ROTATES
COUNTERCLOCKWISE
CAM PUSHES LINK
LINK OPENS GATE

BUCKET CONTINUES
COUNTERCLOCKWISE
GATE CLOSES AS
PRODUCT LOWERS
INTO BUCKET

BUCKET REACHES
MAXIMUM
COUNTERCLOCKWISE
ROTATION STOP

BUCKET ROTATES
CLOCKWISE UNTIL IT
REACHES STANDBY
POSITION

RELOAD SEQUENCE

FIGURE 7

END OF LIFE / DISPOSAL

- To protect the environment please recycle materials where possible.
- Remove / reclaim refrigerant gas and compression oil in accordance with applicable laws and/or regulations.
  Examples include US EPA 40CFR Part 82, Subpart F.
- Do not dispose the vending machine with other domestic waste. Vending Machines contain electrical and electronic materials that may need to be processed in accordance with local laws and/or regulations. Examples include European Directive WEEE 2002/96/CE
- Recycling this product contributes towards reducing the need for new materials and reducing the accumulation of waste.

12.4 PROGRAMMING
HV3 / CHAMELEON

VEC 12.4 PROGRAMMING OPERATIONS

NOTE: Some units may contain a European font display, in which case the "°" symbol will be replaced by the "ß" symbol. Example: 72°F will be 72 ß F.

The VEC 12.4 Controller uses a 4-button programming system:

Programming Buttons: # 1 – Escape/Exit
                              # 2 – Decrease/Scroll Down
                              # 3 – Increase/Scroll Up
                              # 4 – Enter and/or Save

To access Mode functions, open the door. Locate the Mode Button on the Main Control Board and press until Diagnostics appears. Use selection button 2 or 3 to navigate through the modes.

The Modes are as follows:
Diagnostics
Coin Payout
Tube Fill
Test Mode
Cash Data
Sales Data
Set Price
Set Depth
Configuration
Space to Sales
Set Program Password
Set Language
Set Clock *
Lighting *
Refrigeration **
Sales Block 1 *
Sales Block 2 *
Discount *
Override **
Return

* These modes will only appear when the "Timing Feature" in Configuration is turned On.
** Limited options appear in this mode depending on whether the Timing Feature in
   Configuration is On/Off.

Diagnostics:

See inner door of vendor or Troubleshooting section for errors and how to clear them.

Coin Payout:
Coin Payout Mode allows the operator to 'test' for proper operation of the changer tubes.
1. Press Button 4 to enter into "Coin Payout" mode.
2. Press Button 2 or 3 to scroll to desired denomination.
3. Press Button 4 to dispense displayed denomination.
4. Press Button 1 to exit mode.

Tube Fill:
Allows you to fill coin tubes via the external coin insert. This is the recommended way to fill the coin tubes because the control board is able to keep an accurate count of the coins.
1. Press Button 4 to enter into "Tube Fill" mode.
2. Insert coins into coin insert slot and the controller will "count" the number of coins going into the coin mechanism.

Test Mode:
Allows you to test vend a column, jog a column, test selection switches, display, refrigeration system, lights, and heater.

Vending a Column:
1. At "Test Mode", press Button 4. Display will read –"Test Mode – Vending"
2. Press Button 4 to enter – the display will read "Column 1".
3. Press Button 2 or Button 3 to scroll to the desired column.
4. Press Button 4 to vend.
   a. If motor vends OK, DISPLAY will read "Test Mode - Vending Motor OK"
   b. If motor does not test OK on one of the following messages will appear:
      - "Test Mode - Vending Fail - Column Jam"
      - "Test Mode - Vending Fail - No Connection"
      - "Test Mode - Vending Fail - High Current"

Jogging a Column:

Allows you to test the column in forward and reverse direction.
1. At "Test Mode" press Button 4.
2. Press Button 2 or 3 to scrollto "Test Mode - Jog."
3. Press Button 4 and display will read "Column 1."
4. Press Button 2 or 3 to scroll to desired column.
5. Press Button 4 to enter into column and display will read "Column X Forward" with X being the desired column.
6. Press Button 2 or 3 to scroll between "Forward" or "Reverse."
7. Press Button 4 to move/jog the motor in the desired position.
8. Press Button 1 to exit this mode.

Test Mode Display:
Allows you to verify that all of the characters on the display illuminate.
1. At "Test Mode" press Button 4.
2. Press Button 2 or 3 to scroll until display reads "Test Mode - Display."
3. Press Button 4.
4. All of the characters on the display should illuminate.
5. Press Button 4 to exit.

Selection Switch Testing:
Allows you to test the selection switches.
1. At "Test Mode" press Button 4.
2. Press Button 2 or 3 to scroll to "Test Mode Switches".
3. Press Button 4
4. Press desired selection switch to be tested.
5. To exit press Button 1 and hold for 3 seconds.

Test Mode Relays:
Allows you to test the compressor, evaporator fan, lights and heater.
1. When "Test Mode" is displayed press Button 4.
2. Press Button 2 or 3 to scroll until display reads "Test Mode - Relays"
3. Press Button 4.
4. Press Button 2 or 3 to advance through sub-modes.
5. Press Button 4 at "Compressor" prompt to test compressor.
6. Press Button 4 at "Light" prompt to test lighting system.
7. Press Button 4 at "Fan" prompt to test evaporator fan.
8. Press Button 4 at "Heater" prompt to test optional heater.
9. Press Button 1 to exit sub-modes.

Cash Data:
This Mode allows you to retrieve historical information regarding the money accepted by the vendor. To clear the individual selection cash data, you must have the MIS Auto Reset in the "Configuration" mode turned to ON.
1. When "Cash Data" is displayed press Button 4. The non-resettable historical data is displayed.
2. Press Button 2 or 3 to display resettable individual selections.
3. To reset historical data, make sure the MIS Auto Reset is turned ON in the configuration mode.
4. Press Button 1 to exit mode.

Sales Data:

This Mode allows you to retrieve historical information regarding the number of units sold by vendor. To clear the individual selection sales data, you must have the MIS Auto Reset in the "Configuration" mode turned ON.
1. When "Sales Data" is displayed, press Button 4. The non re-settable historical data is displayed.
2. Press Button 2 or 3 to display resettable individual selections.
3. To reset historical data, make sure the MIS Auto Reset is turned ON in the configuration mode.
4. Press Button 1 to exit mode.

Discount Counter:

This mode allows you to view historical sales and cash data in the vendor that have been vended at a discounted price. This mode is populated only if there have been a discounted sales.
1. When "Discount Counter" is displayed, press Button 4 to view total discount vend sales.
2. Press Button 2 or 3 to display discount counter for individual selections.
3. Press Button 1 to exit mode.

Free Counter:

This mode allows you to view historical sales in the vendor at a free vend mode. This mode is visible only if there has been a sales on a free vend mode.
1. When "Free Counter" is displayed, press Button 4 to view total free vend sales.
2. Press Button 2 or 3 to display free counter for individual selections.
3. Press Button 1 to exit mode.

Set Price:

This Mode allows you the option to price each selection to the same vend price, or price each selection button independently.
1. When display reads "Set Price" press Button 4.
2. Press Button 2 or 3 to choose selections or "All."
3. Press Button 4 to start the current vend price flashing.
4. Press Button 2 or 3 to increase or decrease price.
5. Press Button 4 to save your new programmed price.
6. Press Button 1 to exit mode.

Set Depth:

This Mode allows you to set the depth of each column. In this mode, you have the option of setting the columns for single, double, triple or quadruple depths.
1. When display reads "Set Depth" press Button 4.
2. Press Button 2 or 3 to choose columns or "All."
3. Press Button 4 to enter into the column and start the depth flashing.
4. Press Button 2 or 3 to scroll through the depth settings (1-4).
5. Press Button 4 to save your new depth setting.
6. Press Button 1 to exit mode.

Configuration:

There are various options that you can turn ON/OFF. Options underlined are factory default.
Multi-Price
> ON - All selections can be programmed individually.
> OFF - All selections will be set to the same price as Selection 1.

*Timing Features**
> ON - Gives you access to the "Clock" settings and its associated modes.
> OFF - "Clock" settings and its associated modes are hidden.

Door Summary
> ON - Sales and cash data are displayed as soon as the outer door is opened or by activating the door switch.
> OFF - Sales and cash data are not displayed when the door is opened.

MIS Auto Reset
> ON - Resets if the counter is checked and after the door is closed.
> OFF - Does not reset.

Consumer Overpay
> ON - A dollar bill will be accepted even if the correct change light is on and there is insufficient change in the coin tubes.
> OFF - A vend will not be allowed when the correct change light is on and the consumer attempts to use the dollar bill validator.

Save Credit Timer
> ON - Credit that is established will be displayed for five minutes unless someone either makes a vend or presses the coin return button - whichever comes first.
> OFF - Credit that is established will remain indefinitely unless someone either makes a vend or presses the coin return button.

Force Vend
> ON - The consumer will not be able to insert a dollar into the validator, hit the coin return

and receive change without first attempting a vend.

OFF - The consumer can insert a bill into the validator, press the coin return button and immediately receive change.

Multi-Vend:

ON - The consumer may insert enough credit to make multiple vends. The credit will remain on the display until an additional vend is made or the coin return button is pressed.

OFF - The consumer is allowed to make a single vend and the credit (if applicable), will be returned after the completion of the vend.

Deny Escrow

ON - The validator will stack all bills received.

OFF - The validator will not stack the bills, rather it will hold them in escrow until a vend is complete.

SO Indicator

ON - A small symbol will appear in the lower right hand corner of the display when at least one column is sold out or the machine detects an error.

OFF - The symbol will not appear.

Count by Selection/Price

COUNT BY SELECTION - Individual sales and cash data will be reported in unit sales.

COUNT BY PRICE - Individual sales and cash data will be reported by vend price.

MIS Reset W/DEX

ON - MIS data will be reset with a DEX read.

OFF - MIS data will not be reset with a DEX read.

Depth Learning

ON - The control board will "learn" the depth setting after one row of product in the column is vended.

OFF - The control board will not "learn" the depth setting.

Display Scroll:

ON - The display will scroll the messages across the screen.

OFF – The Display will blink the message

Display Temperature:

ON – The refrigeration temperature will be displayed on the screen.

OFF – The temperature will not be displayed.

Space to Sales:

Allows you to program which column will vend when you choose a desired selection button. There are 6 preset configurations (See inner door label for preset options). You also have the option of doing a custom space to sales. To change current setting:

1. Press Button 4 when "Space to Sales" is displayed.
2. Press Button 4 to change current setting.
3. Press Button 2 or 3 to scroll through available settings.
4. Press Button 4 to save setting.
5. Press Button 1 to exit mode.

To customize your space to sales:

1. Press Button 4 when "Space to Sales" is displayed.
2. Press Button 2 or 3 to scroll until display reads "Space to Sales - Custom."
3. Press Button 4. Display reads "Clear Settings?"
4. Press Button 4 to clear. Display reads "Custom Sel X - None."
5. Press Button 4 to change a selection assignment.
6. Press Button 4 to assign (flashing) or unassigned (not flashing or steady) columns.
7. Press Button 1. Display reads "Save?"
8. Press Button 4 to save.
9. Press Button 1 to exit the mode.

Set Program Password:

Allows the operator to set a password to access Sales Data when the door is closed. Please note that this function will not work if the password is set at 0000.

1. Press Button 4 at "Closed Door Password" mode.
2. The current password will be displayed.
3. Press Button 2 or 3 while each digit is flashing to change current password.
4. Press Button 4 to save and advance to next digit.
5. Press Button 4 after the 4th digit to exit mode.

Set Language:

This Mode allows you to program different languages on the controller. The current languages available are English, Spanish, and French.

1. Press Button 4 at "Set Language" mode. The current language will be displayed.
2. To change current language, press Button 4 to start language flashing.
3. Press Button 2 or 3 to choose a language.
4. Press Button 4 to save the language change.
5. Press Button 1 to exit mode.

Set Clock:

If the "Timing Features" in the "Configuration" mode are turned ON, you will have access to this mode. This mode allows you to set the current month, day, year, hour and minute.

To set the clock:
1. Press Button 4 at the "Set Clock" prompt. You will be able to scroll through the following options by pressing Button 2 or 3.
    - Enable ON/OFF - This will turn the clock timer on or off.
    - MM/DD/YYYY HH:MM - This is the current time and date.
    - Daylight Savings
2. Press Button 4 to change current setting. The current setting will begin to flash.
3. Press Button 2 or 3 to change current setting.
4. Press Button 4 to save current setting.

Lighting:

If the "Timing Features" in the "Configuration" mode are turned ON, you will have access to this mode. This mode allows you to turn the lights on/off with the internal timer.
1. Press Button 4 when the display reads "Start Time 1" or "Start Time 2."
2. Press Button 4 at "Start Time 1" or "Start Time 2."
3. Press Button 4 at "Start Day 1" or "Start Day 2."
4. Scroll through the days of the week or "all" with Button 2 or 3.
5. Press Button 4 to change current setting.
6. Change setting by pressing Button 2 or 3.
7. Press Button 4 to save changes.
8. Press Button 2 or 3 at "Start 100.00" or "Start 200.00"
9. Press Button 4 to change time.
10. Press Button 2 or 3 to set time.
11. Press Button 4 to save.
12. Press Button 1 to exit mode.
13. Repeat process with "Stop Time 1" or "Stop Time 2."

Refrigeration:

If 'Timing Features' in Configuration Mode are 'Off', you will only have access to the following features:

Set Point Temperature
Sensor Reading
Degree Setting
Fan Energy Mode
Periodic Defrost Mode

To change the set point temperature:
1. Press Button 4 when the display reads "Refrigeration."
2. The display will read "Set Point XX" with the current setting displayed.
3. To change the setting press Button 4 and the current set point temperature will begin to flash.
4. Press Button 2 or 3 to increase or decrease the set point.

5. Press Button 4 to save changes.
6. Press Button 1 to exist and return "Refrigeration" on display.

To display the temperature:
1. Press Button 4 when the display reads "Refrigeration."
2. Press Button 2 or 3 until the display reads "Sensor Reading."
3. Press Button 4 and the current temperature will be shown in Fahrenheit or in Celsius.
4. Press Button 1 to exit and return the display to "Refrigeration."

To change the degree scale:
1. Press Button 4 when the display reads "Refrigeration."
2. Press Button 2 or 3 until the display reads "Degree Setting."
3. The display will show the current degree scale (Celsius or Fahrenheit).
4. Press Button 4 and the degree scale will begin to flash.
5. Press Button 2 or 3 to choose setting.
6. Press Button 4 to save setting.
7. Press Button 1 to exit and return the display to "Refrigeration."

To change the Fan Energy Savings mode:
1. Press Button 4 when the display reads "Refrigeration."
2. Press Button 2 or 3 until the display reads "Fan."
3. The display will read "Fan X" with the current setting displayed.
4. To change the setting press Button 4 and the current Fan mode will begin to flash.
5. Press Button 2 or 3 to increase or decrease the Fan mode.
6. Press Button 4 to save changes.
7. Press Button 1 to exit and return the display to "Refrigeration."

The refrigeration system shall have three types of fan mode operation (energy conservation modes) – **This requires fan relay needs to be installed**.

Fan Mode 0 (Disable)

The refrigeration system shall have a fan mode of operation in which the evaporator fan will be turned on/off based on the activation of compressor. When the fan mode 0 is activated through the Service Modes, the controller shall always turn on evaporator fan.

Fan Mode 1

The refrigeration system shall have a fan mode of operation in which the evaporator fan will be turned on/off based on the activation of compressor. When the fan mode 1 is activated through the Service Modes, the controller shall turn off evaporator fan after the delay for 5 minutes after the compressor is turned off. And when the compressor is turned on, the controller shall turn on evaporator fan at same time.
The fan mode 1 does not function for 24 hours from the pull-down mode start.

Fan Mode 2

The refrigeration system shall have an fan mode of operation in which the evaporator fan will be turned on/off based on the number of vended product per unit hour . When the fan mode 2 is activated through the Service Modes the controller shall turn on/off the compressor and evaporator fans, based on the following method.

When the number of vended product per one hour is equal or less than five, the controller should enter the fan mode 1. This causes the controller to work as fan mode 1 without any setting change.
When the number of vended product per one hour is more than five, the controller should enter the normal operation mode.
The fan mode 2 does not function for 24 hours from the pull-down mode start.

To change the Periodic Defrost Mode:
1. Press Button 4 when the display reads "Refrigeration."
2. Press Button 2 or 3 until the display reads "Periodic Defrost."
3. The display will show it on or off.
4. Press Button 4 and the setting value will flash.
5. Press Button 2 or 3 to choose your setting.
6. Press Button 4 to save setting.
7. Press Button 1 to exit and return the display to "Refrigeration."
If the "Timing Features" in the Configuration mode are turned ON, you will have additional access to the following modes:

> *Enable*
> *Start Time 1 or Start Time 2*
> > *Start Day 1 or Start Day 2*
> > *Start 100.00 or Start 200.00*
> *Stop Time 1 or Stop Time 2*
> > *Stop Day 1 or Stop Day 2*
> > *Stop 100.00 or Stop 200.00*

Sales Block 1 and 2:

Allows you to program the machine to turn off and on at regular intervals.

To program the blocking feature, you must enter the following information:
> *Start Time-* When the machine turns off
> *Start Days*
> *Stop Time-* When the machine turns back on
> *Stop Days*
> *Selections*

Discount:

Allows you to program the machine to discount beverages at regular intervals.

To program the "Discount" feature, you must enter the following information:
   Start Time- When the discounting begins
   Start Day
   Stop Time- When the discounting ends
   Stop Day
   Selections
   Amount– Amount subtracted/discounted from original vend price

Override:
Allows various items to be enabled or disabled depending on the status of an attached override switch.Additional override switch is required – kit # 1124429

Each of the following items can be enabled by setting an ON or disabled by setting an OFF.
"Override Free Vend"
"Override Sales Blocking"
"Override Discount"
"Override Light Timing"
"Override Refrigeration"

Return:
Exits the programming mode and returns the vendor to stand-by.

PRE - PROGRAMMED SPACE - TO - SALES

SEL #	COLUMNS									
1	1	1,2	1,2	1,2,3	1,2,3	1,2	1,2	1,2,3	ALL	NONE
2	2	3	3,4	4	1,2,3	1,2	1,2	1,2,3	ALL	NONE
3	3	4	5	5	4	3,4	3	1,2,3	ALL	NONE
4	4	5	6	6	5	5	4	4	ALL	NONE
5	5	6	7	7	6	6	5	5	ALL	NONE
6	6	7	8	8	7	7	6	6	ALL	NONE
7 *	7	8	9	9	8	8	7	7	ALL	NONE
8 *	8	9	10	10	9	9	8	8	ALL	NONE
9 *	9	10	~	~	10	10	9	9	ALL	NONE
10 *	10	~	~	~	~	~	10	10	ALL	NONE
SSSS#	10	9	8	7	6	5	4	3	2	1

Factory setting for 8 select 10 column or 6 select 8 column vendor
Factory setting for 9 select 10 column or 6 select 7 column vendor
Factory setting for 10 select vendor

* IF AVAILABLE

* IF AVAILABLE

BUTTON CONFIGURATIONS

1188767

12.6 PROGRAMMING
COKE CHAMELEON

VEC COKE CHAMELEON PROGRAMMING OPERATION

NOTE: Some units may contain a European font display, in which case the "°" symbol will be replaced by the "ß" symbol. Example: 72°F will be 72 ß F.

The VEC 12.6 Controller uses a 4-button programming system:
Programming Buttons: # 1 – Escape/Exit
                                            # 2 – Decrease/Scroll Down
                                            # 3 – Increase/Scroll Up
                                            # 4 – Enter and/or Save

To access Mode functions, open the door. Locate the Mode Button on the Main Control Board and press until Diagnostics appears. Use selection button 2 or 3 to navigate through the modes.

The Modes are as follows:
Diagnostics
Coin Payout
Tube Fill
Recycler Payout*
Recycler Fill*
Test Mode
Password
Cash Data
Sales Data
Set Price
Correct Change Only
Set Depth
Configuration
Space to Sales
Door Closed Password
Set Language
Set Clock **
Lighting **
Refrigeration ***
Sales Block 1 **
Sales Block 2 **
Discount **
Override ***
Return

* These modes will only appear if a recycler is being used in MDB level 4 mode.
** These modes will only appear when the "Timing Feature" in Configuration is turned On.
*** Limited options appear in this mode depending on whether the Timing Feature in
    Configuration is On/Off.

Please note: All modes except Diagnostics, Coin Payout, Tube Fill, Recycler Payout, Recycler Fill, Test Mode are password protected.

Diagnostics:

Diagnostics Mode displays the error in the vendor to help diagnose the problem.

See inner door of vendor or Troubleshooting section for errors.

To view the detailed error
1. Press Button 4 to enter into "Diagnostics" Mode
2. If there are no errors the display will read " Error None" otherwise the display will show the top level error
3. Press Button 4 to view the detailed error
4. Press Button 2 or 3 to scroll to check for more errors
      Refer to troubleshooting section for diagnosing the errors
5. Press Button 1 to exit

To Clear the error
1. Scroll to view the detailed error
2. Press and hold Button 4 for 2 seconds – the error will clear.
3. Press Button 1 to exit mode.

Coin Payout:

Coin Payout Mode allows the operator to 'test' for proper operation of the changer tubes.
1. Press Button 4 to enter into "Coin Payout" mode
2. Press Button 2 or 3 to scroll to desired denomination
3. Press Button 4 to dispense displayed denomination
4. Press Button 1 to exit mode

Tube Fill:

Allows you to fill the coin tubes via the external coin insert. This is the recommended way to fill the coin tubes because the control board is able to keep an accurate count of the coins.
1. Press Button 4 to enter into "Tube Fill" mode.
2. Insert coins into coin insert slot and the controller will "count" the number of coins going into the coin mechanism.

The Recycler Payout and the Recycler Fill Modes are displayed only if the vendor is connected with a recycler unit compatible in a MDB 4.0. Please note the Recycler Mode is to check the bill accepted and dispensed by the Bill Recycler and not the bills accepted by the Bill Validator. Bill Validator can accept equal or more bill types than the recycler but cannot dispense any bills.

Recycler Payout:

Recycler Payout Mode allows the operator to test the dispense operation of the bill recycler unit. This mode will only be displayed if the vendor is connected with a recycler unit in a MDB 4.0.

1. Press Button 4 to enter into "Recycler Payout" mode. The display will show the bill denomination and the count of bill that the recycler can dispense.
2. Press Button 4 to dispense displayed denomination bill.
3. Press Button 1 to exit mode.

Recycler Fill:

Recycler Fill Mode allows the operator to test the bill acceptance of the bill recycler unit.
This mode will only be displayed if the vendor is connected with a recycler unit in a MDB 4.0.
1. Press Button 4 to enter into "Recycler Fill" Mode – the display will read "Enable Test"
2. Press Button 4 to enter the mode. The display will show the bill denomination and the count of bill that the recycler can accept.
3. Insert the bill in the recycler – the recycler will only accept the bill it is programmed for.

   Please note: The bill denomination displayed in this mode is the type of bill the bill recycler is programmed to accept/dispense. To change the bill denomination on the recycler, please refer to the recycler manual.

Test Mode:

Allows you to test vend a column, jog a column, test selection switches, display, refrigeration system, lights, and heater.

Vending a Column:
1. At "Test Mode", press Button 4. Display will read –"Test Mode – Vending"
2. Press Button 4 to enter – the display will read "Column 1".
3. Press Button 2 or Button 3 to scroll to the desired column.
4. Press Button 4 to vend.
   a. If motor vends OK, DISPLAY will read "Test Mode - Vending Motor OK"
   b. If motor does not test OK on one of the following messages will appear:
      - "Test Mode - Vending Fail - Column Jam"
      - "Test Mode - Vending Fail - No Connection"
      - "Test Mode - Vending Fail - High Current"

Jogging a Column:
1. At "Test Mode" press Button 4.
2. Press Button 2 or 3 to scroll to "Test Mode - Jog."
3. Press Button 4 and display will read "Column 1."
4. Press Button 2 or 3 to scroll to desired column.
5. Press Button 4 to enter into column and display will read "Column X Forward" with X being the desired column.
6. Press Button 2 or 3 to scroll between "Forward" or "Reverse."
7. Press Button 4 to move/jog the motor in the desired position.
8. Press Button 1 to exit this mode.

Test Mode Display:

Allows you to verify that all of the characters on the display illuminate.
1. At "Test Mode" press Button 4.
2. Press Button 2 or 3 to scroll until display reads "Test Mode - Display."
3. Press Button 4.
4. All of the characters on the display should illuminate.
5. Press Button 4 to exit.

Selection Switch Testing:

Allows you to test the selection switches.
1. At "Test Mode" press Button 4.
2. Press Button 2 or 3 to scroll to "Test Mode Switches".
3. Press Button 4
4. Press desired selection switch to be tested.
5. To exit press Button 1 and hold for 3 seconds.

Test Mode Relays:

Allows you to test the compressor, evaporator fan, light and heater in the vendor.
1. When "Test Mode" is displayed press Button 4.
2. Press Button 2 or 3 to scroll until display reads "Test Mode - Relays" and press Button 4.
3. Press Button 2 or 3 to advance through sub-modes.
4. Press Button 4 at "Compressor" prompt to test compressor.
5. Press Button 4 at "Light" prompt to test lighting system.
6. Press Button 4 at "Fan" prompt to test evaporator fan.
7. Press Button 4 at "Heater" prompt to test optional heater.
8. Press Button 1 to exit sub-modes.

Please note: The Fan test and Heater test requires additional hardware – Please call customer service for this feature.

Password:

Allows you to enter the password protected area.

All modes except Diagnostics, Coin Payout, Tube Fill, Recycler Payout, Recycler Fill, Test Mode are password protected.
Default password is "4 2 3 1"

1. When "Password" is displayed press Button 4, the display will read "Please Enter The Password"
2. Press Button 4, 2, 3, 1 in consecutive sequence.
3. The display should read "Cash Data" to indicate that it is in password protected menu.

In case the password entered is invalid or if the user fails to enter the password within 10 seconds of entering password mode – then the display will switch back to "Password" mode to enable the user to re-enter.

Cash Data:

This Mode allows you to retrieve historical information regarding the money accepted by the vendor. To clear the individual selection cash data, you must have the MIS Auto Reset in the "Configuration" mode turned to ON.
1. When "Cash Data" is displayed press Button 4. The non-resettable historical data is displayed.
2. Press Button 2 or 3 to display resettable individual selections.
3. To reset historical data, make sure the MIS Auto Reset is turned ON in the configuration mode.
4. Press Button 1 to exit mode.

Sales Data:

This Mode allows you to retrieve historical information regarding the number of units sold by vendor. To clear the individual selection sales data, you must have the "MIS Auto Reset" in the "Configuration" mode turned ON.
1. When "Sales Data" is displayed, press Button 4. The non re-settable historical data is displayed.
2. Press Button 2 or 3 to display resettable individual selections.
3. Press Button 1 to exit.

Discount Counter:

This mode allows you to view historical sales and cash data in the vendor that have been vended at a discounted price. This mode is populated only if there have been a discounted sales.
1. When "Discount Counter" is displayed, press Button 4 to view total discount vend sales.
2. Press Button 2 or 3 to display discount counter for individual selections.
3. Press Button 1 to exit mode.

Free Counter:

This mode allows you to view historical sales in the vendor at a free vend mode. This mode is visible only if there has been a sales on a free vend mode.
1. When "Free Counter" is displayed, press Button 4 to view total free vend sales.
2. Press Button 2 or 3 to display free counter for individual selections.
3. Press Button 1 to exit mode.

Set Price:

This Mode allows you the option to price each selection to the same vend price, or price each selection button independently.
1. When display reads "Set Price" press Button 4.
2. Press Button 2 or 3 to choose selections or "All."
3. Press Button 4 to start the current vend price flashing.
4. Press Button 2 or 3 to increase or decrease price.
5. Press Button 4 to save your new programmed price.
6. Press Button 1 to exit mode.

Correct Change Only:

This mode allows you to manipulate the credit acceptance and customer display messages for use of correct change.
> ### *Customer Overpay:*
> On- Money will be accepted when the "Use Exact Change" display is on and there is insufficient coins in the coin tubes.
> Off – Exact or sufficient change required to make a vend.
> ### *Correct Change:*
> This is the minimum amount of change needed in the coin mechanism before the controller displays the "Use Exact Change" message.
> ### *Accept Value:*
> This is the largest denomination of any single form of currency that can be accepted without the knowledge that the equivalent value of coins can be returned.

Set Depth:

This Mode allows you to set the depth of each column. In this mode, you have the option of setting the columns for single, double, triple or quadruple depths.
1. When display reads "Set Depth" Press Button 4.
2. Press Button 2 or 3 to choose columns or "All."
3. Press Button 4 to enter into the column and start the depth flashing.
4. Press Button 2 or 3 to scroll through the depth settings (1-4).
5. Press Button 4 to save your new depth setting.
6. Press Button 1 to exit mode.

Configuration:

This mode allows you to set the different configurations in the vendor.
Default options are underlined

> Multi-Price
> On - All selections can be programmed individually.
> Off - All selections will be set to the same price as Selection 1.

Timing Features*
On - Gives you access to the "Clock" settings and its associated modes.
Off - "Clock" settings and its associated modes are hidden.

Door Summary
On - Sales and cash data are displayed as soon as the outer door is opened or by
   activating the door switch.
Off - Sales and cash data are not displayed when the door is opened.

MIS Auto Reset
On - Resets if the counter is checked and after the door is closed.
Off - Does not reset.

Save Credit Timer
On - Credit that is established will be displayed for five minutes unless someone
   makes a vend or presses the coin return button - whichever comes first.
Off - Credit that is established will remain indefinitely unless someone either makes a
   vend or presses the coin return button.

Force Vend
On - The consumer will not be able to insert a dollar into the validator, hit the coin return
   and receive change without first attempting a vend.
Off - The consumer can insert a bill into the validator, press the coin return button and
   receive change.

Multi-Vend:
On - The consumer may insert enough credit to make multiple vends. The credit will
   remain on the display until an additional vend is made or the coin return button is
   pressed.
Off - The consumer is allowed to make a single vend and the credit (if applicable),
   will be returned after the completion of the vend.

Deny Escrow
On - The validator will stack all bills received.
Off - The validator will not stack the bills, rather it will hold them in escrow until a
vend is complete.

SO Indicator
On - A small round symbol will appear in the lower right hand corner of the display when
   one column is sold out or the machine detects an error.
Off - The symbol will not appear.

Count by Selection/Price
COUNT BY SELECTION - Individual sales and cash data will be reported in unit sales.
COUNT BY PRICE - Individual sales and cash data will be reported by vend price.

MIS Reset W/DEX
On - MIS data will be reset with a DEX read.
Off - MIS data will not be reset with a DEX read.

*Display Scroll * (Available on version 14 and above)*
On - The messages will scroll across the display and change.

Off - The messages will blink and change.

*EMS DEX * (Available on version 14 and above)*
On - The Energy Management System Sales pattern in the vendor can be captured via the DEX data read.

Off – The Energy Management System Sales pattern in the vendor will not be sent out via DEX data read.

*Depth Learning * (Removed from version 14 and above)*
On - The control board will "learn" the depth setting after one row of product in the column is vended.

Off - The control board will not "learn" the depth setting.

Space to Sales:

Allows you to map the columns with the selection buttons.
Space to sales can be set by either choosing one of the 10 preset configurations or you can have the option of doing a custom space to sales.
For space to Sales mapping, refer to Inner Door Label STS or STS Label in the manual.

To change current setting:
1. Press Button 4 when "Space to Sales" is displayed.
2. Press Button 4 to change current setting.
3. Press Button 2 or 3 to scroll through available settings.
4. Press Button 4 to save setting.
5. Press Button 1 to exit mode.

To customize your space to sales:
1. Press Button 4 when "Space to Sales" is displayed.
2. Press Button 2 or 3 to scroll until display reads "Space to Sales - Custom."
3. Press Button 4. Display reads "Clear Settings?"
4. Press Button 4 to clear. Display reads "Custom Sel X - None."
5. Press Button 4 to change a selection assignment.
6. Press Button 4 to assign (flashing) or unassigned (not flashing or steady) columns.
7. Press Button 1. Display reads "Save?"
8. Press Button 4 to save.
9. Press Button 1 to exit the mode.

Door Closed Password:

Allows the operator to set a 4 digit password to access Sales,Cash Data when the door is closed.
The password is limited to 1 through 6. Default password is "4 2 3 1"
Please note that this function will not work if any of the password digit is set to 0.

1. Press Button 4 at "Closed Door Password" mode.
2. The current password will be displayed.
3. Press Button 2 or 3 while each digit is flashing to change current password.
4. Press Button 4 to save and advance to next digit.
5. Press Button 4 after the 4th digit to exit mode.

Set Language:

This Mode allows you to program different languages on the controller. The current languages available are English, Spanish, and French.
1. Press Button 4 at "Set Language" mode. The current language will be displayed.
2. To change current language, press Button 4 to start language flashing.
3. Press Button 2 or 3 to choose a language.
4. Press Button 4 to save the language change.
5. Press Button 1 to exit mode.

Set Clock:

If the "Timing Features" in the "Configuration" mode are turned ON, you will have access to this mode. This mode allows you to set the current month, day, year, hour and minute.

To set the clock:
1. Press Button 4 at the "Set Clock" prompt. You will be able to scroll through the following options by pressing Button 2 or 3.
   - *Enable ON/OFF* - This will turn the clock timer on or off.
   - *Daylight Savings*
     - *DST* – Off
     - *DST Stop Time*
       Press Button 4 to Set
       Press Button 2/3 to scroll
       1. Display will switch to Month, DAY, Week , Hour
       Set the Daylight Savings Time accordingly – Default : 11/Sun/1st / 02
     - *DST Start Time*
       Press Button 4 to Set
       Press Button 2/3 to scroll
       1. Display will switch to Month, DAY, Week , Hour
       Set the Daylight Savings Time accordingly – default : 03/Sun/2nd / 02

- *MM/DD/YYYY HH:MM* - This is the current time and date.
  Press Button 4 to Set
  Press Button 2/3 to scroll
  Set current date in the vendor.

Lighting:

If the "Timing Features" in the "Configuration" mode are turned ON, you will have access to this mode. This mode allows you to turn the lights on/off with the internal timer.
*Enable:*0 – Disabled – Energy Saving mode disabled
        1 – Lighting is regulated at timed intervals.
        2 – Lighting is regulated based on sales activity-Refer to Energy Management System
        Section
InActivity Time: 35 (0 -995) – Time to keep the lights on after activity for EMS activity. This is only applicable when the lighting enable is set to "2"

Start Time 1: To turn off the light at the allocated time
Stop Time 1: To turn on the light at the allocated time
Start Time 2: To turn off the light at the allocated time
Stop Time 2: To turn off the light at the allocated time
      Please note that the Enable option should be set to "1" to activate start / stop time. It is not necessary to set start time 2 if the lighting time needs to be turned off only once in a day.

1. Press Button 4 when the display reads "Start Time 1" or "Start Time 2."
2. Press Button 4 at "Start Time 1" or "Start Time 2."
3. Press Button 4 at "Start Day 1" or "Start Day 2."
4. Scroll through the days of the week or "all" with Button 2 or 3.
5. Press Button 4 to change current setting.
6. Change setting by pressing Button 2 or 3.
7. Press Button 4 to save changes.
8. Press Button 2 or 3 to scroll to the start time.
9. Press Button 4 to change time.
10. Press Button 2 or 3 to set time.
11. Press Button 4 to save.
12. Press Button 1 to exit mode.
13. Repeat process with "Stop Time 1" or "Stop Time 2."

*Refrigeration: * Features on version 14 and above.*

If 'Timing Features' in Configuration Mode are 'Off', you will only have access to the following features:

Set Point Temperature: The cabinet temperature during the normal mode. Refrigeration cuts-in two degrees above and cuts-off at a degree below the set point.

* Storage Temp: 45- Thisis the storage temperature during the energy saving mode.

* Display Temp. Off / On – The option to display the cabinet temperature in the display.

* Defrost Interval: 6h (1 –24 hrs) –The interval time for the compressor to perform a defrost cycle routine.

* InActivity Time: 35m – Time for the refrigeration system to go into energy savings mode after no sales activity – This is applicable if the Enable is set to "2".

Sensor Reading:– Refrigeration Temperature reading inside the cabinet.

Degree Setting:– Can change the temperature to Celsius or Fahrenheit.

Fan Energy Mode: – *Mode 0* – The fan turns off on door open and turns on door close

        Mode 1 – The fan turns off 5 minutes after the compressor stops and starts when the compressor turns on

        Default - The fan is turned on all the time.

Please note that the fan mode 1 and mode 2 is optional and needs a special hardware.

Periodic Defrost Mode:– Enables the refrigeration system to perform periodic defrost cycle.

Enable0 – Disabled – Refrigeration is regulated based on set point..

    1 – Refrigeration can be regulated at timed intervals.

    2 – Refrigeration is regulated based on Sales Activity. Refer to Energy Management System Section.

To change the set point temperature:
1. Press Button 4 when the display reads "Refrigeration."
2. The display will read "Set Point XX" with the current setting displayed.
3. To change the setting press Button 4 and the current set point temperature will begin to flash.
4. Press Button 2 or 3 to increase or decrease the set point.
5. Press Button 4 to save changes.
6. Press Button 1 to exist and return "Refrigeration" on display.

* To change the storage temperature:
1. Press Button 4 when the display reads "Storage Temp."
2. The display will read "Storage Temp. 45" with the current setting displayed.
3. To change the setting press Button 4 and the current storage temperature will begin to flash.
4. Press Button 2 or 3 to increase or decrease the storage temperature.
5. Press Button 4 to save changes.
6. Press Button 1 to exit

* To change the Temperature Display:
1. Press Button 4 when the display reads "Temperature Display "
2. The display will read "Temperature Display On" with the current setting displayed.
3. To change the setting press Button 4 and the On/Off begins to flash.
4. Press Button 2 or 3 to change to On or Off.
5. Press Button 4 to save changes.
6. Press Button 1 to exit

* To change the Defrost Interval
1. Press Button 4 when the display reads " Defrost Interval "
2. The display will read Defrost Interval 06h
3. To change the interval time, press Button 4 and the time will flash.
4. Press Button 2 or 3 to decrease or increase the time.
5. Choose the right time and press Button 4 to set.
6. Press Button 1 to exit.

* To change the Inactivity Time (Needs to have Enable Set to 2)
1. Press Button 4 when the display reads "InActivity Time : 35m"
2. The time settings will flash.
3. Press Button 2 or 3 to increase or decrease the time.
4. Choose the right time and press Button 4 to set.
5. Press Button 1 to exit.

To display the temperature:
1. Press Button 4 when the display reads "Refrigeration."
2. Press Button 2 or 3 until the display reads "Sensor Reading."
3. Press Button 4 and the current temperature will be shown in Fahrenheit or in Celsius.
4. Press Button 1 to exit and return the display to "Refrigeration."

To change the degree scale:
1. Press Button 4 when the display reads "Refrigeration."
2. Press Button 2 or 3 until the display reads "Degree Setting."
3. The display will show the current degree scale (Celsius or Fahrenheit).
4. Press Button 4 and the degree scale will begin to flash.
5. Press Button 2 or 3 to choose setting.
6. Press Button 4 to save setting.
7. Press Button 1 to exit and return the display to "Refrigeration."

To change the Fan Energy Savings mode:
1. Press Button 4 when the display reads "Refrigeration."
2. Press Button 2 or 3 until the display reads "Fan."
3. The display will read "Fan X" with the current setting displayed.
4. To change the setting press Button 4 and the current Fan mode will begin to flash.
5. Press Button 2 or 3 to increase or decrease the Fan mode.
6. Press Button 4 to save changes.
7. Press Button 1 to exit and return the display to "Refrigeration."

The refrigeration system shall have three types of fan mode operation (energy conservation modes) – **This requires fan relay needs to be installed**.

Fan Mode 0 (Disable)

The refrigeration system shall have a fan mode of operation in which the evaporator fan will be turned on/off based on the activation of compressor. When the fan mode 0 is activated through the Service Modes, the controller shall always turn on evaporator fan.

Fan Mode 1

The refrigeration system shall have a fan mode of operation in which the evaporator fan will be turned on/off based on the activation of compressor. When the fan mode 1 is activated through the Service Modes, the controller shall turn off evaporator fan after the delay for 5 minutes after the compressor is turned off. And when the compressor is turned on, the controller shall turn on evaporator fan at same time. The fan mode 1 does not function for 24 hours from the pull-down mode start.

Fan Mode 2

The refrigeration system shall have an fan mode of operation in which the evaporator fan will be turned on/off based on the number of vended product per unit hour . When the fan mode 2 is activated through the Service Modes the controller shall turn on/off the compressor and evaporator fans, based on the following method.

When the number of vended product per one hour is equal or less than five, the controller should enter the fan mode 1. This causes the controller to work as fan mode 1 without any setting change. When the number of vended product per one hour is more than five, the controller should enter the normal operation mode.
The fan mode 2 does not function for 24 hours from the pull-down mode start.

To change the Periodic Defrost Mode:
1. Press Button 4 when the display reads "Refrigeration."
2. Press Button 2 or 3 until the display reads "Periodic Defrost."
3. The display will show it on or off.
4. Press Button 4 and the setting value will flash.
5. Press Button 2 or 3 to choose your setting.
6. Press Button 4 to save setting.
7. Press Button 1 to exit and return the display to "Refrigeration."

Please note: Altering the Set point, Storage Temperature, Defrost Interval and Periodic Defrost Mode can affect the affect the cooling behavior of the vendor – Please call customer service for any questions in regards to these settings.

If the "Timing Features" in the Configuration mode are turned ON, you will have additional access to the following modes:
Enable
Start Time 1 or Start Time 2

Start Day 1 or Start Day 2
Start 1 or Start 2
Stop Time 1 or Stop Time 2
Stop Day 1 or Stop Day 2
Stop 1 or Stop 2

Sales Block 1 and 2:
Allows you to program the machine to disable Sales/Lights at regular intervals.

To program the blocking feature, you must enter the following information:
    Enable Off/On/Lights
    Start Time- When the machine turns off
    Start Days
    Stop Time- When the machine turns back on
    Stop Days
    Selections

Discount:
Allows you to program the machine to discount beverages at regular intervals.

To program the "Discount" feature, you must enter the following information:
    Start Time- When the discounting begins
    Start Day
    Stop Time- When the discounting ends
    Stop Day
    Selections
    Amount– Amount subtracted/discounted from original vend price

Override:
Allows various items to be enabled or disabled depending on the status of an attached override switch. Additional override switch is required – Kit # 1124429

Each of the following items can be enabled by setting an ON or disabled by setting an OFF.
"Override Free Vend"
"Override Sales Blocking"
"Override Discount"
"Override Light Timing"

"Override Refrigeration"

Return:
Exits the programming mode and returns the vendor to stand-by.

ENERGY MANAGEMENT SYSTEM (EMS)

Energy Management System is a feature that enables the vendor to control the refrigeration and light system in the machine according to the sales pattern in order to achieve the maximum energy efficiency.

Learn-and-React

It has a built-in-feature that learns the sales pattern in the location to mark a sales-time-zone and a no-sale-time-zone. The system reacts by regulating the illumination and refrigeration system during the learnt time zones.

The illumination system is disabled and the products are stored at a higher temperature during no-sales-hours.

In order to achieve set-point at the appropriate sales-time-zone, the regular refrigeration mode will be activated 4 and half hours prior to the sales-time-zone.

Activate EMS System:

Open the door – press the mode switch on the VMC board –

The display will read – 'Diagnostics'

1. **Set Timing Feature.**
    1. Press Button 2 to scroll to "Configuration"
    2. Press Button 4 to enter
    3. Press Button 2 to scroll to "Timing Feature"
    4. Press Button 4 – the "Off" will blink
    5. Press Button 2 to change it to "On"
    6. Press Button 4 to set.
2. **Set Clock.**
    1. Press Button 2 to scroll to "Set Clock"
    2. Set Time and Date
3. **Set Refrigeration to EMS Mode**
    1. Press Button 2 to scroll to Refrigeration
    2. Press Button 4 to enter
    3. Press Button 2 to scroll to "Enable"
    4. Press Button 4 to enter
    5. Press Button 2 to scroll to "2"
    6. Press Button 4 to set
4. **Set Light to EMS mode**
    1. Press Button 2 to scroll to "Light"
    2. Press Button 4 to enter
    3. Press Button 2 to scroll to "Enable"
    4. Press Button 4 to enter
    5. Press Button 2 to scroll to "2"
    6. Press Button 4 to set

De-Activate EMS system

Setting light Enable to '0' and setting Refrigeration Enable to '0' disables the EMS system.
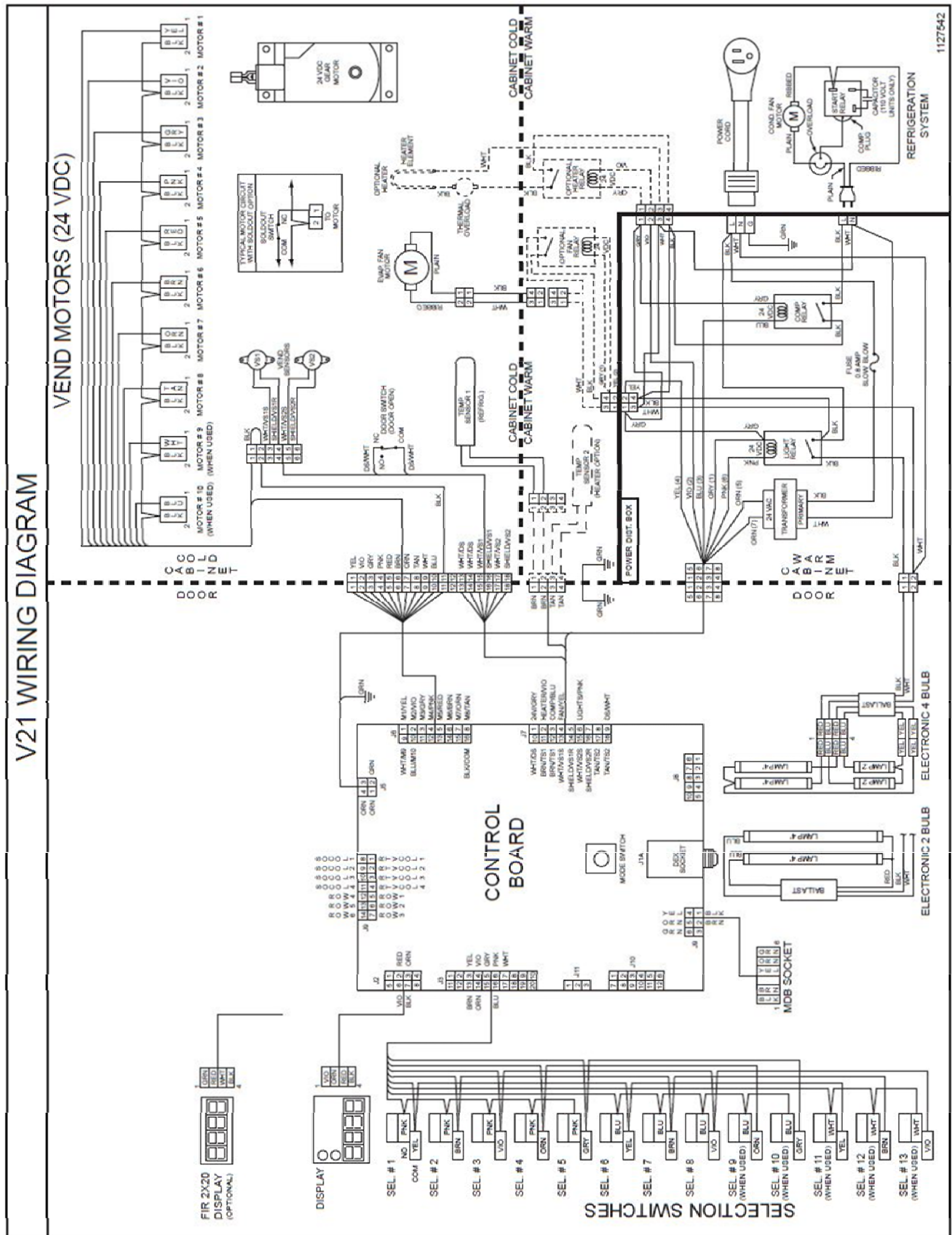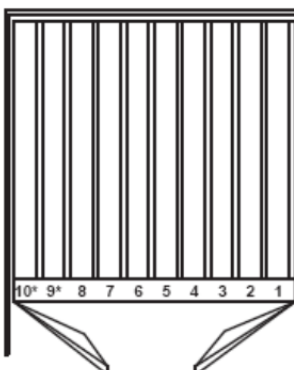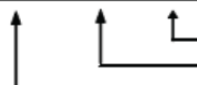
Figure to show Pre-Programmed Space to Sales:

PRE - PROGRAMMED SPACE - TO - SALES

SEL #	COLUMNS									
1	1	1,2	1,2	1,2,3	1,2,3	1,2	1,2	1,2,3	ALL	NONE
2	2	3	3,4	4	1,2,3	1,2	1,2	1,2,3	ALL	NONE
3	3	4	5	5	4	3,4	3	1,2,3	ALL	NONE
4	4	5	6	6	5	5	4	4	ALL	NONE
5	5	6	7	7	6	6	5	5	ALL	NONE
6	6	7	8	8	7	7	6	6	ALL	NONE
7 *	7	8	9	9	8	8	7	7	ALL	NONE
8 *	8	9	10	10	9	9	8	8	ALL	NONE
9 *	9	10	~	~	10	10	9	9	ALL	NONE
10 *	10	~	~	~	~	~	10	10	ALL	NONE
SSSS#	10	9	8	7	6	5	4	3	2	1

Factory setting for 8 select 10 column or 6 select 8 column vendor
Factory setting for 9 select 10 column or 6 select 7 column vendor
Factory setting for 10 select vendor

* IF AVAILABLE

* IF AVAILABLE

BUTTON CONFIGURATIONS

1188767

12.1 PROGRAMMING
TRADE

All programming of the V21 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

> **4EAr** Year Setting

> **nth** Month Setting

> **dATE** Date Setting

> **Hour** Hour Setting

> **dSt** Daylight Saving Time

THREE-BUTTON PROGRAMMING

All programming of the V21 control board 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. To scroll through all the service modes, use selection button one.

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	Exit	Return to previous level, exit, save

FIGURE 1

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 (Exit) 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 30 seconds, indicating the total number of units the machine has sold. After 30 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 30-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 button one to advance forward or backward through the selections. Please see page PG-7 to choose between count by selection and count by price.

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.

SET-UP AND CODE DESCRIPTION

Eror **Error Display Mode**

If selection button two is pressed at the "**Eror**" 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 "**Eror**" prompt.

Note: *See the Trouble Shooting section for errors and how to clear them.*

EXAMPLE: "**CJ01**" *would indicate a column jam error in column 1.*

COIn **Coin Pay Out/Tube Fill Mode**

If selection button two is pressed at the "**COIn**" prompt, the controller will enter the Coin Pay Out Mode. Pressing selection one will scroll through the denominations and pressing selection button two will start the denomination flashing. The display will indicate the denomination along with the number of that coin stored in the coin mechanism. If selection button two 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 two is pressed while 5 cents is displayed it will pay out a nickel.*

*When the controller enters the "**COIn**" 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.*

tESt **Test Mode**

If selection button two is pressed at the "**tESt**" prompt, the controller will enter the Test Mode where you are able to test the motors, the display, the compressor, the lights, the evaporator fans and the heater.

UEnd **Vend Testing**

Pressing selection button two at the test mode will enter the controller into the vend test mode. Upon entry into the vend test mode the display will show the first summary test, "**COL1**" (column 1). Pressing selection button one will scroll through the column selections. Pressing selection button two will test vend the displayed column. In order to exit the setting, press selection button three.

SET-UP AND CODE DESCRIPTION (CONTINUED)

JoG Jogging the Column

Pressing selection button two at the "**JoG**" mode, will enter into the Jog test mode. Upon entry into the Jog test mode the display will show the first summary test, "**COL1**" (column 1). Pressing selection button one will scroll through the column selections. Pressing selection button two will access **for** (forward) or **rEU** (reverse). Pressing selection button two again will move the motor in the desired direction. To exit the setting, press selection button three.

dSP Display Testing

Pressing selection button one at the Jog test mode will advance the controller to the Display test mode. Upon entry into the Display test mode the display will flash a series of lines and dashes if all characters in the display are operational. To exit the setting, press selection button three.

rELY Relay Testing

Pressing selection button one at the display test mode will advance the controller into the Relay test mode which allows the user to test the lights, compressor, evaporator fans or the heater. Upon entry into the relay test mode the display will read "**cnPO**" for the compressor test. To scroll through the components for testing, press selection button one. To activate the component, press selection button two and the "**0**" will begin to flash. Use selection button one to toggle between "**0**" (deactivate) and "**1**" (activate). Pressing selection button two will activate the component if the display reads "**XXX1**". To exit the setting, press selection button three.

> **CnPO/1** – Compressor test
> **Lit0/1** – Light test
> **FAn0/1** – Evaporator fan test
> **Htr0/1** – Heater testing

cASh MIS Data – Cash Mode

If selection button two is pressed at the "**CASh**" prompt, the display will show the non-resettable historical amount of money accepted by the machine. If selection button one is pressed, the display will show "**SL 1**" (selection one) and the amount received for selection button one. Continue pressing selection button one to scroll through all of the selections. To exit the setting, press selection button three.

SET-UP AND CODE DESCRIPTION (CONTINUED)

SALE **MIS Data – Sales Mode**

If selection button two is pressed at the "**SALE**" prompt, the display will show the non-resettable historical amount of units sold by the machine. If selection button one is pressed, the display will show "**SL 1**" (selection one) and the units sold for selection button one. Continue pressing selection button one to scroll through all of the selections. To exit the setting, press selection button three.

COSt **Cost Setting Mode**

The purpose of this mode is to enable the controller to set the vend price for each of the selections. If selection button two is pressed at the "**COSt**" prompt, the display will indicate "**SL 1**". Pressing selection button one will scroll through all of the selections or "**ALL**" to have all the vend prices set at the same price. Pressing selection button two will enter into the displayed selection button. Pressing selection button one will change the displayed vend price. Pressing selection button two again will save the price and selection button three will exit the mode.

dCtr **Discount Counter** (Only shows when discounts are used)

The discount counter allows you to access the sales and cash data for vends that have been discounted. Press selection button #2 when the display reads **dCtr**. The display will change to read **CASh**. Press selection button #2 when the display reads **CASh**. The display will change to read **CASh** and XXXX.XX, where XXXX.XX is the value of all discounts towards paid sales. This total is non-resettable and begins when the discount feature is enabled. Pressing selection button #1 will scroll through all of the selection buttons and display the value of the discounts toward product sales. The amounts for the individual selections can be reset using the rules in the **oPts** mode. To exit this mode, press selection button #3. The display will return to **CASh**. To advance to the sales information, press selection button #1. The display **CASh** will change to **SALE**. Press selection button #2 to access this information. The total number of discounted sales will be displayed. This total is non-resettable and begins when the discount feature is enabled. Pressing selection button #1 will scroll through all of the selection buttons and display each selection's number of discounted sales. The amounts for the individual selections can be reset using the rules in the **oPts** mode.

FCtr **Free Counter** (Only show if free vends during closed-door sales mode have been made)

The free counter allows you to access the sales and cash data (loss) for vends that have been free. Press selection button #2 when the display reads **FCtr**. The display will change to read XXXX.XX, where XXXX.XX is the value of all lost money based on the price value setting. This total is non-resettable and begins when the free vend override feature is enabled. Pressing selection button #1 will change to the second screen. The display will change to read **SALE** XXX.XX. It will display the total number of free vends that have occurred. This total is non-resettable and begins when the free vend override feature is enabled. Press selection button #3 to exit the mode.

SET-UP AND CODE DESCRIPTION (CONTINUED)

dSEt **Depth Setting Mode**

The purpose of this mode is to enable the controller to set the vending depth for each column. If selection button two is pressed at the "**dSEt**" prompt, the display will indicate "**OX**". Pressing selection button one will scroll through all of the columns. Pressing selection button two will enter into the displayed column. Pressing selection button one again will change the displayed depth settings from 1-4. Pressing selection button two will save the depth setting and selection button three will exit the mode.

OPtS **Option Mode**

If selection button two is pressed at the "**OPtS**" prompt, the controller will enter the Option mode. The purpose of this mode is to allow the controller to select the configuration options desired. Default options are underlined.

Display	Description	Meaning
FS	Force Select	Force select enabled (y) or disabled (<u>n</u>)
bE	Bill Escrow	Bill Escrow enabled (<u>y</u>) or disabled (n)
SE	Error/Sold Out Indicator	Error/Sold Out indicator "**o**" enabled (y) or disabled (<u>n</u>)
SP	Single Price	Single Price enabled (y)/Multi-Price enabled (<u>n</u>)
ct	Count by Price/Count by Selection	<u>y</u> = count by price n = count by selection
CC	Correct Change Light	Correct Change Light enabled (y)/Correct Change Light disabled (<u>n</u>)
OP	Allow Overpay	Allow overpay enabled (<u>y</u>)/Allow overpay disabled (n)
SC	Save Credit	Credit will remain for 5 minutes (<u>y</u>)/Credit will remain indefinitely (n)
NU	Multi Vend	Multi vend enabled, single vend disabled (y)/ Single vend enabled, multi vend disabled (<u>n</u>)
dL	Learning Mode*	Learning mode enabled (y)/Learning mode disabled (<u>n</u>)*
AR	Auto MIS reset	MIS data will reset with DEX read (y)/MIS data will not reset with DEX read (<u>n</u>)
dt**	Double Talk	Enable Double Talk (y)/ Disable Double Talk (<u>n</u>)

FIGURE 2

* The learning mode uses self-adaptive logic to "learn" what the depth setting of the column is, in the event that the control board depth setting isn't programmed properly.

* Available in version 33 and above

SET-UP AND CODE DESCRIPTION (CONTINUED)

StS **Space-to-Sales Setting Mode**

If selection button two is pressed at the "StS" prompt, the controller will enter the Space-to-Sales option. Upon entry into this setting the display will show the current option setting. Pressing selection button one will scroll through the various space to sales options as listed below. Pressing selection button two will change the current option and selection button three will save 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

SEL#	STS10 COL	STS9 COL	STS8 COL	STS7 COL	STS6 COL	STS5 COL	STS4 COL	STS3 COL	STS2 COL	STS1 COL
1	1	1,2	1	1	1,2,3	1,2	1	1,2	ALL	NONE
2	2	1,2	2	2	1,2,3	1,2	1	1,2	ALL	NONE
3	3	3	3	3	1,2,3	3	2	3	ALL	NONE
4	4	4	4	4	4	4	2	4	ALL	NONE
5	5	5	5	5	5	5	3	5	ALL	NONE
6	6	6	6	6	6	6	4	6	ALL	NONE
7	7	7	7	7	7	7	5	7	ALL	NONE
8	8	8	8	~	8	8	6	8	ALL	NONE
9	9	9	~	~	9	~	7	9	ALL	NONE
10	10	10	~	~	10	~	8	9	ALL	NONE
11*	~	~	~	~	~	~	9	10	ALL	NONE
12*	~	~	~	~	~	~	10	10	ALL	NONE

FIGURE 3

*Where available

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

CStS **Custom Space-to-Sales Setting Mode**

If selection button two is pressed at the "CStS" 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 selection button two is pressed while "SL X" is displayed, the display will change to "CO 1". Pressing selection button one will increase or decrease the column number displayed. Pressing selection button two will actuate the changed connection status of the column number

displayed. If the column number is flashing it is assigned to the selection that was entered. If the column number is steady, it is not assigned to the selection button. To exit this mode, press selection button three to display "SAVE", then press selection 2 to confirm save.

EnrG Energy Management Mode

If selection button two is pressed at "EnrG" prompt , the controller will enter the Energy Management Mode.
Available Options:
Each option will have its specific operational hours during which the EMS system will control the illumination and refrigeration system to achieve maximum energy efficiency.
EP 0: Disable Energy otions
EP 1: Facilities where operating hours are between 6 am till 9 pm (ex.Manufacturing facilities)
EP 2: Facilities where operating hours are between 7 am till 3 pm (ex corporate / Schools)
EP 3: Facilities where operating hours are between 9 am till 9 pm (ex Retail Stores)

St : 0,1,5,30 : If a sensor is present, this is the time the light will turn off after an inactivity period.

Please note : Activation of Clock is required - Please refer to Clock Setting in this manual.

SET-UP AND CODE DESCRIPTION (CONTINUED)

Cddr Closed Door Data Retrieval Mode

If selection button two is pressed at the "Cddr" prompt, the controller will enter the Closed Door Data Retrieval Mode by displaying "XXXX" where "XXXX" is the password. Pressing selection button number one while the digits are flashing will change the current password. The available digits are 0-6. (**See note below**.) Pressing selection button two will save the change and advance to the next digit. In order to save the password and exit the mode, press selection button two while the last/fourth digit is flashing.

Note: *If one of the digits in the password is "0" this feature 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".*

LAnG Language Mode

If selection button two is pressed at the "LAnG" prompt, the controller will enter the Language Mode by displaying the currently assigned language. The available languages are EnG – English, Frn – French, GEr – German, ItA – Italian, Port – Portuguese, and ESP – Spanish. Pressing selection button one will toggle though the language options. If selection button two is pressed, the display will save the language change and return the display to LAnG.

`CLOC` **Clock Setting Mode**

If selection button two is pressed at the "`CLOC`" prompt, the controller will enter the Clock Mode which allows you to set the clock on the control board. This field must be set in order to operate any modes associated with the time. Pressing selection button two while any of the options are displayed will enter you in to the clock setting options. Pressing selection button one will toggle you through the options. Pressing selection button three will exit this mode.

CLOCK SETTING OPTIONS	
YEAr	Current Year (Example: 2002)
dAtE	Current Date (month, day)
Hour	Current Time (hours, minutes)
dSt	Daylight Savings Time
CtLC	Clock Control

SET-UP AND CODE DESCRIPTION (CONTINUED)

`LitE` **Lighting Control Mode**

If selection button two is pressed at the "`LitE`" prompt, the controller will enter the Lighting Control Mode which allows you to have the lights turned off and on during specific time periods to conserve energy. Pressing selection button two while any of the settings are displayed will enter you in to the light control settings. Pressing selection button one will toggle you through the options. Pressing selection button three will exit this mode.

LIGHTING CONTROL SETTINGS	
Enb	Lighting control enabled (1)/disabled (0)
Strl	Start Time – Time lights shut off
dAY	Days associated with start time
Hour	Hour associated with start time
End1	End Time – Time lights turn back on
dAY	Days associated with end time
Hour	Hour associated with end time
Str2	2nd Start time – time lights shut off
dAY	Days associated with 2nd start time
Hour	Hour associated with 2nd start time
End2	2nd End Time – Time lights turn back on

dAY	Days associated with 2nd end time
Hour	Hour associated with 2nd end time

rFrG   Refrigeration Mode

If selection button two is pressed at the "**rFrG**" prompt, the controller will enter the Refrigeration Control Mode by displaying "**SEtP**" for set point temperature. Pressing selection button two again enters the temperature settings from "hhhh"(warmest) to "cccc"(coldest). Pressing selection button one will toggle through the settings. If selection button two is pressed, the display will return to "**SEtP**". Pressing selection button one will change the display to "**tNP**" for temperature. To view the temperature, press selection button two. To change the degree scale, press selection button two when the display reads "**ForC**" for Fahrenheit or Celsius. To change the current degree scale, press selection button one to scroll between F and C. Pressing selection button two will return the display to "**ForC**".

Note: The displayed thermostat setting and the actual temperature sensor reading for refrigeration control are listed below in Figure 4:

SET-UP AND CODE DESCRIPTION (CONTINUED)

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

There are two sub-modes within the refrigeration mode that can be activated to achieve energy conservation

The first sub-mode, **FAnX**, refers to an optional evaporator fan relay. When X =
   0 - the fan mode is disabled and the evaporator will turn on/off with the activation of the compressor
   1 - (Fan Mode 1) the evaporator fan will turn off 5 minutes after the compressor fan is turned off

The second sub-mode, **dEFX**, refers to the Periodic Defrost mode. If X =
   0 - the periodic defrost mode is disabled

1 - the machine will defrost every 6 hours for 30 minutes - used in high humidity environments .

Within the refrigeration mode, there is also a refrigeration conservation mode which raises the cabinet temperature 18º F or 10º C during specified periods of time. Pressing selection button two while any of the settings are displayed will enter you in to the refrigeration control settings. Pressing selection button one will toggle you through the options. Pressing selection button three will exit this mode.

SET-UP AND CODE DESCRIPTION (CONTINUED)

REFRIGERATION CONTROL SETTINGS	
Enb	Refrigeration control enabled (1)/disabled (0)
Str1	Start Time – Time temperature rises 18°F/10°C
dAY	Days associated with start time
Hour	Hour associated with start time
End1	End Time – Time temperature returns
dAY	Days associated with end time
Hour	Hour associated with end time
Str2	2nd Start time – Time temperature rises 18°F/10°C
dAY	Days associated with 2nd start time
Hour	Hour associated with 2nd start time
End2	2nd End Time – Time temperature returns
dAY	Days associated with 2nd end time
Hour	Hour associated with 2nd end time

"**nno**" – Monday
"**tUE**" – Tuesday
"**UUE**" – Wednesday
"**Thu**" – Thursday
"**Fri**" – Friday
"**SAt**" – Saturday
"**Sun**" – Sunday

"**ALL**" – All Days

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 two 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**" or "**CtL2**" depending on which blocking mode you are using. Using selection button one will let the operator toggle between the following modes:

SET-UP AND CODE DESCRIPTION (CONTINUED)

BLOCK SELECTION OPTIONS	
CtL1	Controls blocking option
SbL1	Set selection buttons – (y) assigned/(n) not assigned
Str1	Set time for machine to turn off
dAY	Set days for blocking to start
hour	Set hours for blocking to start
StP1	Set time for machine to turn back on
dAY	Set days for blocking to stop
hour	Set hours for blocking to stop

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 "**CtL1**". If selection button one is pressed it will toggle through the discount setting mode as listed below. Pressing selection button three will save the settings and return to the "**diSC**" mode.

DISCOUNT SETTING OPTIONS	
CtL1	Turns the discount setting On/Off
SdSC	Set selection buttons – (y) assigned/(n) not assigned
Strt	Set time for discounting to begin
dAY	Set days to discount

Hour	Set time for discounting to begin
StoP	Set time for discounting to stop
dAY	Set days for discounting to stop
Hour	Set time to start (24 hours)
LESS	Set discount amount

SET-UP AND CODE DESCRIPTION (CONTINUED)

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 override setting options as listed below. Pressing selection button three will save the currently displayed setting and return the operator to the "**OUEr**" prompt.

OVER-RIDE SETTING OPTIONS	
FrEn	Enable/Disable free vend (Edit mode Y/N)
bLCn	Selection blocking over-ride
Litn	Lighting over-ride
rFGn	Refrigeration 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**". Press selection button two. Pressing selection button one will toggle between "y" for enabled and "n" for disable. Pressing selection button two will save the currently displayed setting. Pressing selection button three will return the operator to the "**FrEn**" prompt.

 "Y" = Enable free vend.

"N" = Disable free vend.

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**". Press selection button two. Pressing selection button one will toggle between "Y" for enable and "N" for disable. Pressing selection button two will save the currently displayed setting. Pressing selection button three will return the operator to the "**bLCn**" prompt.

"Y" = Enable selection blocking.

"N" = Disable selection blocking

SET-UP AND CODE DESCRIPTION (CONTINUED)

Litn   **Over-Ride Lighting**

If selection button two is pressed at the "**Litn**" prompt, the controller will enter the Lighting Over-Ride Option. Upon entry into this program the display will show the current setting "**Lit4**" for enable and "**Litn**" for disable. Pressing selection button one will toggle between "y" for enabled and "n" for disable. Pressing selection button two will save the currently displayed setting. Pressing selection button three will return the operator to the "**Litn**" prompt.

"Y" = Enable Over-Ride Lighting blocking.

"N" = Disable Over-Ride Lighting blocking

rFGn   **Over-Ride Refrigeration**

If selection button two is pressed at the "**rFGn**" prompt, the controller will enter the Refrigeration Over-Ride Option. Upon entry into this program the display will show the current setting "**rFG4**" for enable and "**rFGn**" for disable. Pressing selection button one will toggle between "y" for enabled and "n" for disable. Pressing selection button two will save the currently displayed setting. Pressing selection button three will return the operator to the "**rFGn**" prompt.

"Y" = Enable refrigeration over-ride.

"N" = Disable refrigeration over-ride.

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 "**dSC4**" for enable and "**dSCn**" for disable. 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 "**dSCn**" prompt.

"Y" = Enable discount over-ride.

"N" = Disable discount over-ride.

12.1 WIRING DIAGRAM

DISPLAY

1 VIO
ORN
RED
BLK
4

DOOR · CABINET COLD

SEL. # 1
NO PNK
COM YEL

SEL. # 2
PNK
BRN

SEL. # 3
PNK
VIO

SEL. # 4
PNK
ORN

SEL. # 5
PNK
GRY

SEL. # 6
BLU
YEL

SEL. # 7
BLU
BRN

SEL. # 8
BLU
VIO

SEL. # 9
(WHEN USED)
BLU
ORN

SEL. # 10
(WHEN USED)
BLU
GRY

SEL. # 11
(WHEN USED)
WHT
YEL

SEL. # 12
(WHEN USED)
WHT
BRN

SEL. # 13
(WHEN USED)
WHT
VIO

SELECTION SWITCHES

J2
5 1
VIO 6 2 RED
BLK 7 3 ORN
8 4

J3
11 1
12 2
BRN 13 3 YEL
ORN 14 4 VIO
15 5 GRY
BLU 16 6 PNK
17 7 WHT
18 8
19 9
20 10

J11
1
2
3

J10
7 1
8 2
9 3
10 4
11 5
12 6

J9
14 13 12 11 10 9 8
7 6 5 4 3 2 1

SROWW 6 5 4 4
SROWW 3 2 1
SCOLL 4 3 2
SCOLL 1

RROTT WWVV COLL 4 3 2
RROTT WWVV COLL 1

VEC 12.1 OR 12.2 CONTROL BOARD

MODE SWITCH

J1A
DEX SOCKET

J9
6 5 4
3 2 1
BRN BLK

MDB SOCKET
BLK BRN YEL ORN GRN
1 2 3 4 5 6

ORN 4 3
ORN 1 2 GRN
J5

GRN

J6
WHT/M9 9 1 M1/YEL
BLU/M10 10 2 M2/VIO
11 3 M3/GRY
12 4 M4/PNK
13 5 M5/RED
14 6 M6/BRN
15 7 M7/ORN
BLK/COM 16 8 M8/TAN

J7
WHT/DS 10 1 24V/GRY
BRN/TS1 11 2 HEATER/VIO
BRN/TS1 12 3 COMP/BLU
WHT/VS1S 13 4 FAN/YEL
SHIELD/VS1R 14 5
WHT/VS2S 15 6 LIGHTS/PNK
SHIELD/VS2R 16 7
TAN/TS2 17 8
TAN/TS2 18 9 DS/WHT

J8
10 9 8 7 6
5 4 3 2 1

CABINET COLD
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18

CABINET WARM
BRN 1
BRN 2
TAN 3
TAN 4

GRN   GRN

5 1
6 2
7 3
8 4

DOOR · CABINET WARM

ELECTRONIC 2 BULB
BALLAST
LAMP 4'
LAMP 4'
BLU BLU
RED
BLK
WHT

ELECTRONIC 4 BULB
LAMP 4'
LAMP 4'
LAMP 2'
LAMP 2'
BALLAST
1
RED RED
BLU BLU
RED RED
BLU BLU
4
YEL YEL
YEL YEL
BLK
WHT
1
2

12.1 WIRING DIAGRAM (CONTINUED)
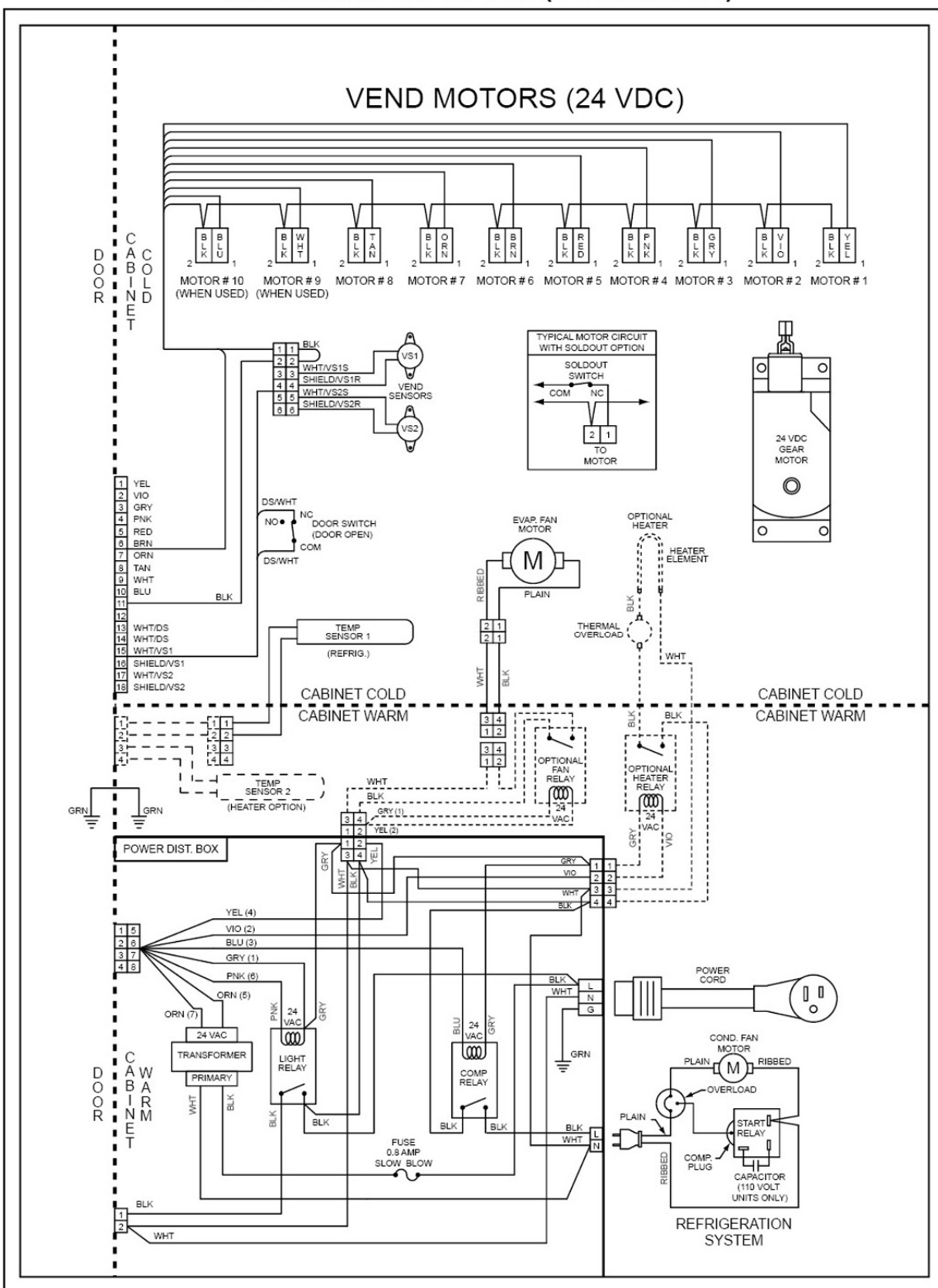
NOTE: If the outer door is left open for over an hour, the lights, and compressor will become active. In order to over-ride this option, press the door switch one time.

12.3 PROGRAMMING
HVV

VEC 12.3 CONTROL BOARD OPERATIONS

NOTE: Some units may contain a European font display, in which case the "°" symbol will be replaced by the "ß" symbol. Example: 72°F will be 72 ß F.

The VEC 12.3 Controller uses a 3-button programming system:

 Row 1 (all selection buttons in top row) – Increase/Decrease
 Row 2 (all selection buttons in top row) – Enter and/or Save
 Row 3 (all selection buttons in top row) – Escape/Exit

In order to access Mode functions, open the door. Locate the Mode Button. Press the mode button one time. Row 1 will take you through the modes.

The available modes are:
Diagnostics
Coin Payout
Tube Fill
Test Mode
Cash Data
Sales Data
Set Price
Set Depth
Configuration
Space to Sales
Door Closed Password
Set Language
*Set Clock **
*Lighting **
*Refrigeration ***
*Sales Block 1 **
*Sales Block 2 **
*Discount **
*Override ***
Return

* These modes will only appear when the "Timing Features" in *Configuration* are turned ON.
** Limited options appear in these modes depending on whether the Timing Features are ON/OFF.

Diagnostics:
See inner door of vendor or Troubleshooting section for errors and how to clear them.

Coin Payout:
Allows you to payout coin tubes.
- Press (2) to enter into "Coin Payout" mode.
- Press (1) to choose denomination.
- Press (2) to dispense displayed denomination.
- Press (3) to exit mode.

Tube Fill:
Allows you to fill coin tubes via the external coin insert. This is the recommended way to fill the coin tubes because the control board is able to keep an accurate count of the coins.
- Press (2) to enter into "Tube Fill" mode.
- Insert coins into coin insert slot and the controller will "count" the number of coins going into the coin mechanism.

Test Mode:
Allows you to test vend a column, jog a column, test selection switches, display, refrigeration system, lights, and heater.

Vend Testing:
- At "Test Mode", press (2)
- Display will read column <u>X</u>
- Press (1) to choose desired column
- Press (2) to vend
  - If motor vends OK, DISPLAY will read "Test Mode - Vending Motor OK"
  - If motor does not test OK one of the following messages will appear:
    - "Test Mode - Vending Fail - Column Jam"
    - "Test Mode - Vending Fail - No Connection"
    - "Test Mode - Vending Fail - High Current"

Jogging a Column:
- At "Test Mode" press (2)
- At "Test Mode – Vending" press (1)
- Display will read "Test Mode - Jog"
- Press (2) and display will read "Column 1"
- Press (1) to choose desired column
- Press (2) to enter into column and display will read "Column X Forward" with X being the desired column.
- Press (1) to toggle between "Forward" or "Reverse"
- Press (2) to move/jog the motor in the desired position
- Press (3) to exit this mode

Test Mode Display:
Allows you to verify that all of the characters on the display illuminate.
1. At "Test Mode" press Button 4.
2. Press Button 2 or 3 to scroll until display reads "Test Mode - Display."
3. Press Button 4.
4. All of the characters on the display should illuminate.
5. Press Button 4 to exit.

Selection Switch Testing:
Allows you to test the selection switches.
1. At "Test Mode" press Button 4.
2. Press Button 2 or 3 to scroll to "Test Mode Switches".
3. Press Button 4
4. Press desired selection switch to be tested.
5. To exit press Button 1 and hold for 3 seconds

Test Mode - Relays:
Allows you to test the compressor, evaporator fan, lights and heater.
- At "Test Mode" press (2)
- Press (1) until display reads "Test Mode - Relays"
- Press (2)
- To advance through sub-modes, press (1)
- To test compressor, press (2) at "Compressor" prompt
- Press Button 4 at "Light" prompt to test lighting system.
- Press Button 4 at "Fan" prompt to test evaporator fan.
- To test optional heater, press (2) at "Heater" prompt
- To exit sub-modes, press (3)

Cash Data:
Allows you to retrieve historical information regarding the money accepted by the vendor. To clear the individual selection cash data, you must have the "MIS Auto Reset" in the "Configuration" mode turned to ON.
- Press (2) when the display reads "Cash Data"
- The non-resettable historical data is displayed
- To display resettable individual selections, press (1)
- To reset historical data, make sure the "MIS Auto Reset" is turned ON in the configuration mode.
- To exit mode, press (3)

Sales Data:

Allows you to retrieve historical information regarding the number of units sold by vendor. To clear the individual selection sales data, you must have the MIS Auto Reset in the "Configuration" mode turned ON.
- Press (2) when the display reads "Sales Data"
- The non-resettable historical data is displayed
- To display resettable individual selections, press (1)
- To reset historical data, make sure the MIS Auto Reset is turned ON in the "Configuration" mode.
- To exit mode, press (3)

Set Price:

Allows you to set the vend price of each selection. In this mode, you have the option of pricing each selection button at the same vend price or price each selection button independently.
- Press (2) when display reads "Set Price"
- Pressing (1) will allow you to choose selections or "All"
- Pressing (2) will start the current vend price flashing
- Press (1) to increase/decrease the price
- Press (2) to save your new programmed price
- Press (3) to exit mode

Set Depth:

Allows you to set the depth of each column. In this mode, you have the option of setting the columns for single, double, triple or quadruple depths.
- Press (2) when the display reads "Set Depth"
- Pressing (1) will allow you to choose columns or "All"
- Pressing (2) will enter you into the column and start the depth flashing
- Press (1) to scroll through the depth settings (1-4)
- Press (2) to save your new depth setting
- Press (3) to exit mode

Configuration:
There are various options that you can turn ON/OFF. Default options are underlined.
Multi-Price

> ON = All selections can be programmed individually.
> OFF = All selections will be set to the same price as Selection 1.

Timing Features*

> ON = Gives you access to the "Clock" settings and its associated modes.
> OFF = "Clock" settings and its associated modes are hidden.

Door Summary

> ON = Sales and cash data are displayed as soon as the outer door is opened or by
>   activating the door switch.
> OFF = Sales and cash data are not displayed when the door is opened.

MIS Auto Reset

> ON = Resets if the counter is checked and after the door is closed.
> OFF = Does not reset.

Consumer Overpay

> ON = A dollar bill will be accepted even if the correct change light is on and there is
>   insufficient change in the coin tubes.
> OFF = A vend will not be allowed when the correct change light is on and the consumer
>   attempts to use the dollar bill validator.

Save Credit Timer

> ON = Credit that is established will be displayed for five minutes unless someone either
>   makes a vend or presses the coin return button - whichever comes first.
> OFF = Credit that is established will remain indefinitely unless someone either makes a
>   vend or presses the coin return button.

Force Vend

> ON = The consumer will not be able to insert a dollar into the validator, hit the coin
>   return and receive change without first attempting a vend.
> OFF = The consumer can insert a bill into the validator, press the coin return button and
>   immediately receive change.

Multi-Vend:

> ON = The consumer may insert enough credit to make multiple vends. The credit will
>   remain on the display until an additional vend is made or the coin return button is
>   pressed.
> OFF = The consumer is allowed to make a single vend and the credit (if applicable),
>   will be returned after the completion of the vend.

Deny Escrow

ON = The validator will stack all bills received.
OFF = The validator will not stack the bills, rather it will hold them in escrow until a
vend is complete.

SO Indicator

ON = A small symbol will appear in the lower right hand corner of the display when at
least one column is sold out or the machine detects an error.
OFF = The symbol will not appear.

Count by Selection/Price

COUNT BY SELECTION = Individual sales and cash data will be reported in unit sales.
COUNT BY PRICE = Individual sales and cash data will be reported by vend price.

MIS Reset W/DEX

ON = MIS data will be reset with a DEX read.
OFF = MIS data will not be reset with a DEX read.

Depth Learning

ON = The control board will "learn" the depth setting after one row of product in the
column is vended.

OFF = The control board will not "learn" the depth setting.

Display Temperature

ON = Display the refrigeration temperature.
OFF = Do not display the refrigeration temperature.

# of Selections 6/12

Number of Selections: 6 = 6 select vendor
Number of Selections: 12 = 12 select vendor
- To adjust any of the settings, press (2) at "Configuration" mode.
- Press (1) to scroll through modes.
- Press (2) to change the mode. The current setting will begin to flash.
- Press (1) to change current setting.
- Press (2) to save change.
- Press (3) to exit sub-mode.

DSP MSG

Pepsi = Displays brand name.
Beverages = Displays generic name.

Space to Sales:

Allows you to program which column will vend when you choose a desired selection button. There are 6 preset configurations (See inner door label for preset options). You also have the option of doing a custom space to sales. To change current setting:
- Press (2) at "Space to Sales" prompt.
- Press (2) to change current setting.
- Press (1) to scroll through available settings.
- Press (2) to save setting.
- Press (3) to exit mode.

To customize your space to sales:
- Press (2) at "Space to Sales" prompt.
- Press (1) until the display reads "Space to Sales - Custom."
- Press (2) and the display will begin to scroll the current configuration.
- To change a selection assignment, press (2).
- To assign (flashing) or unassign (no flashing/steady) columns, press (2).
- Pressing (3) will ask "Save?"
- Press (2) to save and (3) to exit the mode.

Door Closed Password:
Allows you to set a password to access Sales Data only when the door is closed. Please note that this function will not work if the password is set at 0000.
- Press (2) at "Closed Door Password" mode.
- The current password will be displayed.
- To change current password, press (1) while each digit is flashing.
- Press (2) to save and advance to next digit, valid digits are 1-6
- Press (2) after the 4th digit to exit mode.

Set Language:
Allows you to program different languages on the controller. The current languages available are English, Spanish, and French.
- Press (2) at "Set Language" mode.
- The current language will be displayed.
- To change current language, press (2) to start language flashing.
- Press (1) to choose a language.
- Press (2) to save the language change.
- Press (3) to exit mode.

Set Clock:
If the "Timing Features" in the "Configuration" mode are turned ON, you will have access to this mode. This mode allows you to set the current month, day, year, hour and minute.

To set the clock:

- Press (2) at the "Set Clock" prompt. You will be able to scroll through the following options by pressing (1).
  - o "Enable ON/OFF" - This will turn the clock timer on or off.
  - o "MM/DD/YYYY HH:MM" - This is the current time and date.
  - o "Daylight Savings"
- To change current setting, press (2).
- The current setting will begin to flash.
- Press (1) to change current setting.
- Press (2) to save current setting.

Lighting:

If the "Timing Features" in the "Configuration" mode are turned ON, you will have access to this mode. This mode allows you to turn the lights on/off with the internal timer.
- Press (2) when the display reads "Start Time 1" or "Start Time 2."
- Press (2) at "Start Time 1" or "Start Time 2."
- Press (2) at "Start Day 1" or "Start Day 2."
- Scroll through the days of the week or "all" with (1).
- To change current setting, press (2).
- Change setting with (1).
- Save changes with (2).
- Press (1) at "Start 100.00" or "Start 200.00"
- Press (2) to change time.
- Press (1) to set time.
- Press (2) to save.
- Press (3) to exit mode.
- Repeat process with "Stop Time 1" or "Stop Time 2."

Refrigeration:

If 'Timing Features' in Configuration Mode are 'Off', you will only have access to the following modes:

Set Point Temperature
Sensor Reading
Degree Setting
Fan Energy Mode
Periodic Defrost Mode

To change the set point temperature:
- Press (2) when the display reads "Refrigeration."
- The display will read "Set Point XX" with the current setting displayed.

- To change the setting press (2) and the current set point temperature will begin to flash.
- Press (1) to increase or decrease the set point.
- Releasing (1) and pressing again will decrease the set point
- Press (2) to save your changes.
- Press (3) to exist and return to the display to "Refrigeration."

To display the temperature:
- Press (2) when the display reads "Refrigeration."
- Press (1) until the display reads "Sensor Reading."
- Press (2) and the current temperature will be shown in Fahrenheit or in Celsius.
- Press (3) to exit and return the display to "Refrigeration."

To change the degree scale:
- Press (2) when the display reads "Refrigeration."
- Press (1) until the display reads "Degree Setting."
- The display will show the current degree scale (Celsius or Fahrenheit).
- Press (2) and the degree scale will begin to flash.
- Press (1) to choose setting.
- Press (2) to save setting.
- Press (3) to exit and return the display to "Refrigeration."

To change the Fan Energy Savings mode:
- Press (2) when the display reads "Refrigeration."
- Press (1) until the display reads "Fan."
- The display will read "Fan X" with the current setting displayed.
- To change the setting press (2) and the current Fan mode will begin to flash.
- Press (1) to increase the Fan mode.
- Releasing (1) and pressing again will decrease the Fan mode.
- Press (2) to save changes.
- Press (3) to exit and return the display to "Refrigeration."

The refrigeration system shall have three types of fan mode operation (energy conservation modes) – **This requires fan relay needs to be installed**.

Fan Mode 0 (Disable)

The refrigeration system shall have a fan mode of operation in which the evaporator fan will be turned on/off based on the activation of compressor. When the fan mode 0 is activated through the Service Modes, the controller shall always turn on evaporator fan.

Fan Mode 1

The refrigeration system shall have a fan mode of operation in which the evaporator fan will be turned on/off based on the activation of compressor. When the fan mode 1 is activated through

the Service Modes, the controller shall turn off evaporator fan after the delay for 5 minutes after the compressor is turned off. And when the compressor is turned on, the controller shall turn on evaporator fan at same time.
The fan mode 1 does not function for 24 hours from the pull-down mode start.

Fan Mode 2

The refrigeration system shall have an fan mode of operation in which the evaporator fan will be turned on/off based on the number of vended product per unit hour . When the fan mode 2 is activated through the Service Modes the controller shall turn on/off the compressor and evaporator fans, based on the following method.

When the number of vended product per one hour is equal or less than five, the controller should enter the fan mode 1. This causes the controller to work as fan mode 1 without any setting change.
When the number of vended product per one hour is more than five, the controller should enter the normal operation mode.
The fan mode 2 does not function for 24 hours from the pull-down mode start.

To change the Periodic Defrost Mode:
1. Press (2) when the display reads "Refrigeration."
2. Press (1) until the display reads "Periodic Defrost."
3. The display will show it on or off.
4. Press (2) and the setting value will flash.
5. Press (1) to choose your setting.
6. Press (2) to save setting.
7. Press (3) to exit and return the display to "Refrigeration."

If the "Timing Features" in the Configuration mode are turned ON, you will have additional access to the following modes:
> *Enable*
> *Start Time 1 or Start Time 2*
> > *Start Day 1 or Start Day 2*
> > *Start 100.00 or Start 200.00*
> *Stop Time 1 or Stop Time 2*
> > *Stop Day 1 or Stop Day 2*
> > *Stop 100.00 or Stop 200.00*

**Sales Block 1 and 2:**

Allows you to program the machine to turn off and on at regular intervals.

To program the blocking feature, you must enter the following information:
    Start Time- When the machine turns off
    Start Days
    Stop Time- When the machine turns back on
    Stop Days
    Selections

Discount:

Allows you to program the machine to discount beverages at regular intervals.

To program the "Discount" feature, you must enter the following information:
    Start Time- When the discounting begins
    Start Day
    Stop Time- When the discounting ends
    Stop Day
    Selections
    Amount– Amount subtracted/discounted from original vend price

Override:

Allows various items to be enabled or disabled depending on the status of an attached override switch.

Each of the following items can be enabled by setting an ON or disabled by setting an OFF.
"Override Free Vend"
"Override Sales Blocking"
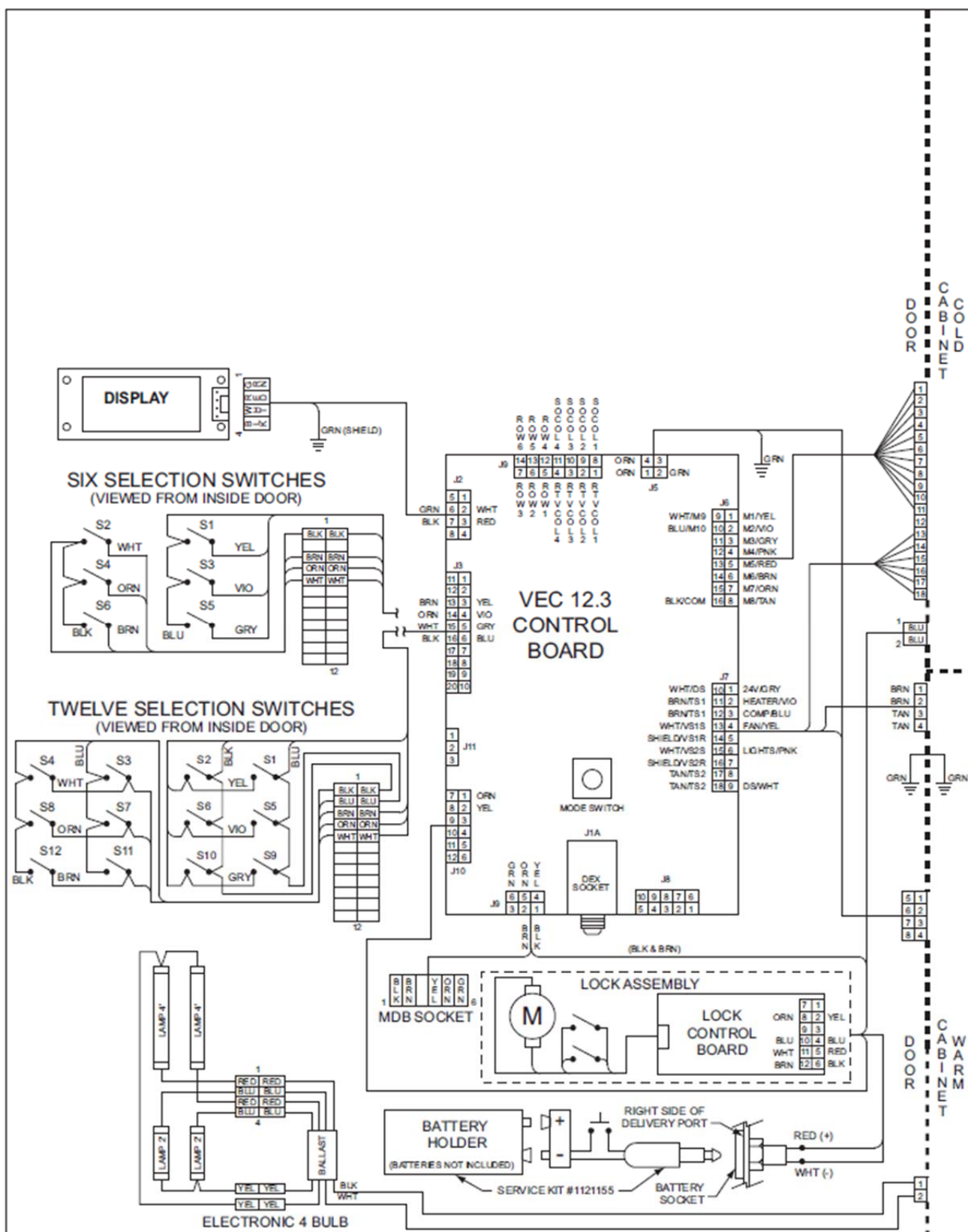*"Override Discount"*
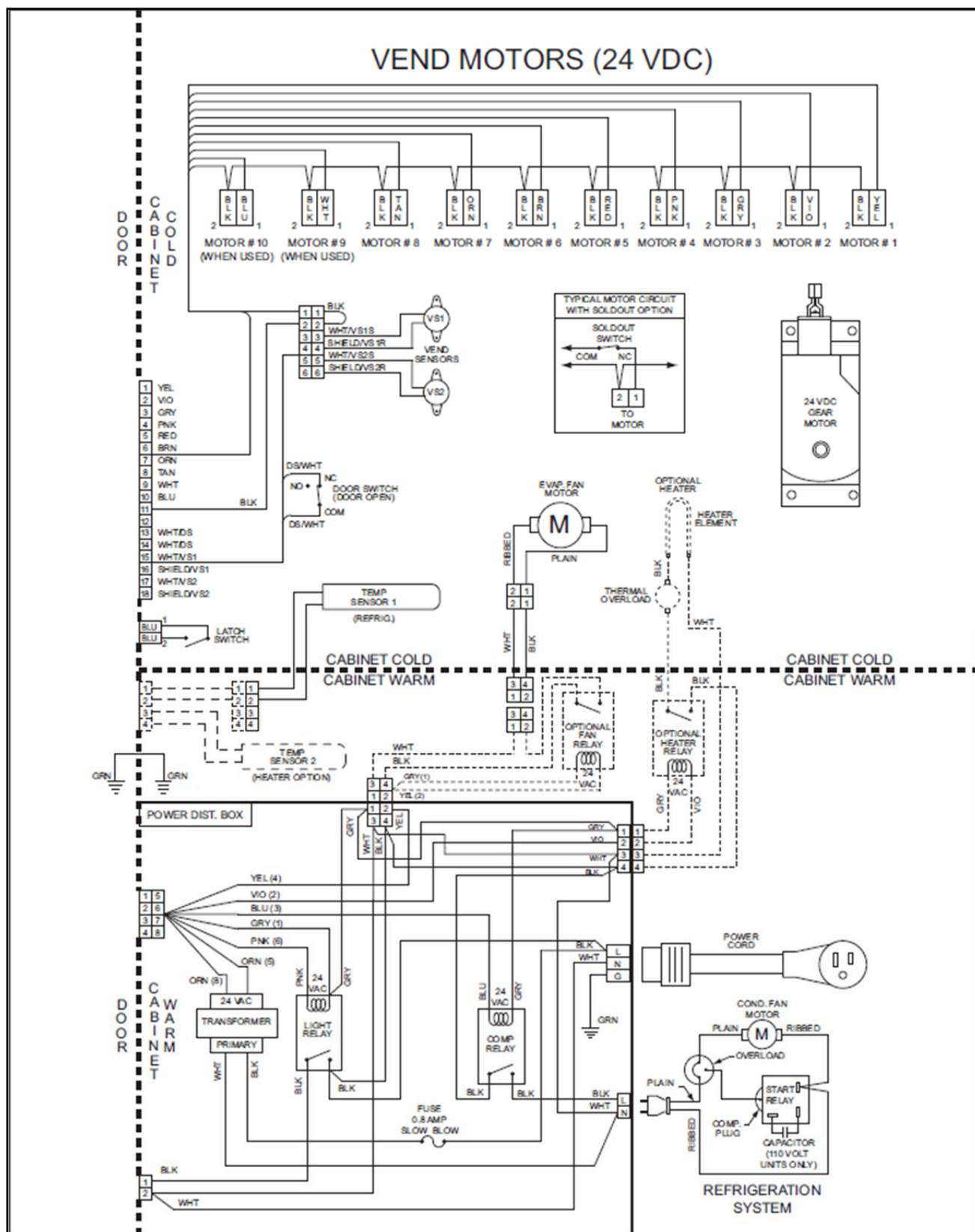*"Override Light Timing"*
"Override Refrigeration"

Return:

Exits the programming mode and returns the vendor to stand-by.

12.3 WIRING DIAGRAM

12.3 WIRING DIAGRAM

CABINET PARTS
(2020 update)

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 SandenVendo America, Inc., 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 or description and part numbers. See pages C-3 and C-4.
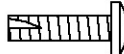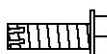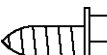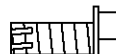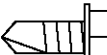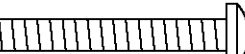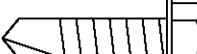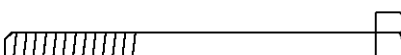
The example below will show how the parts are listed in the parts lists:
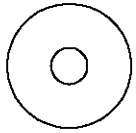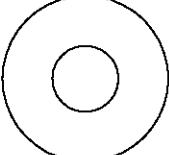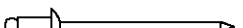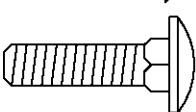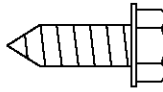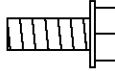
1.   **VEND MOTOR ASSEMBLY:** This is the main assembly name, and any replaceable parts will be indented below the assembly.

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.

ITEM NO	DESCRIPTION	QTY REQ	PART NO.
1	VEND MOTOR ASSEMBLY	~	1115821
2	RETAINER CAM	1	1113244
3	TIMING CAM	1	1113236
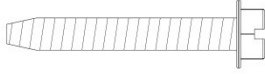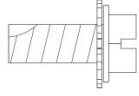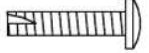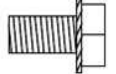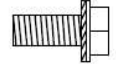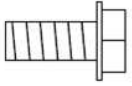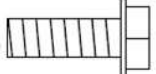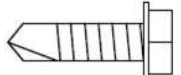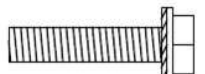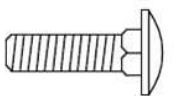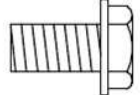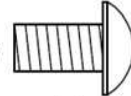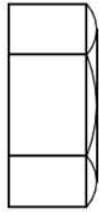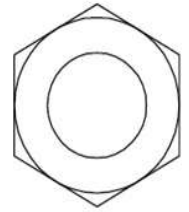
If an asterisk is listed below the parts list, it is an indication that special information is noted. There may be more than one asterisk (*) (**) (***) denoting special notes.
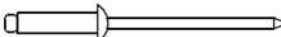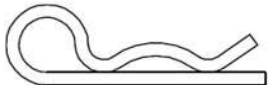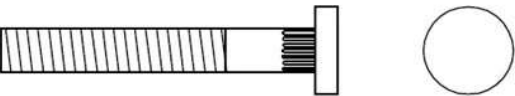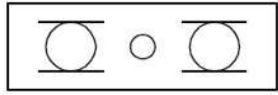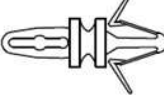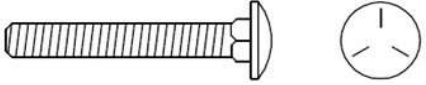
HARDWARE LIST

	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	V802214	#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	V802212	#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 SCREW		
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" BOLT	. . . .
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 O.D.	. . . .
AD	V801491	3/8" FLAT WASHER	. . . .
AE	V801412	1/8" POP RIVET	. . . .
AF	V801435	1/4" 20 X 1" CARRIAGE BOLT	. . . .
AG	V802220	1/4" X 3/4" TAPPING SCREW	. . . .
AH	1123719	SPACER	. . . .
AI	V801422	#10 X 1/2" TAPPING SCREW	. . . .

AJ V802162 **SCR 1/4 20x1 3/4 HX THD CUT** . . . .

AK V802251 **SCR, 1/4-20x5/8 HX W / LOCK WASHER** . . . .

AL V802008 #6 X 1/4" MACHINE SCREW . . . .

AM V802217 #6 X 7/8" TAPPING SCREW . . . .

AN V800586 #8 X 3/8" TAPPING SCREW W/ LOCK WASHER . . . .

AO V800718 #10 X 3/8" TAPPING SCREW W/ LOCK WASHER . . . .

AP V802147 #10 X 1/2" TAPPING SCREW . . . .

AQ V802155 #10 X 5/8" TAPPING SCREW . . . .

AR V802133 #10 X 3/4" SELF DRILLING SCREW . . . .

AS V802152 #10 X 7/8" TAPPING SCREW W / LOCK WASHER . . . .

AT V802005-1 #10 X 1/2" CARRIAGE BOLT . . . .

AU V802196 1/4" X 1/2" TAPPING SCREW . . . .

AV V800831 1/4" X 1/2" TAPPING SCREW . . . .

AW V800957 #10 NUT W/ LOCK WASHER . . . .

AX 387925 NYLON HEX NUT . . . .

AY	V801449	3/8" X 3/32 NUT...
AZ	V801471	1/8" X .419 POP RIVET ....
BA	V802043	PLASTIC SNAP PLUG ....
BB	V801080	5/16" RETAINER RING ....
BC	387450	COTTER PIN...
BD	1032526	COTTER PIN...
BE	390315-1	SHOLDER SCREW ....
BF	916923	CONDENSER NUT ....
BG	337241-1	CUP WASHER ....
BH	1121740	1/4" NYLON STANDOFF ....
BI	V802181	#10 X 1-1/4" CARRIAGE BOLT....................................
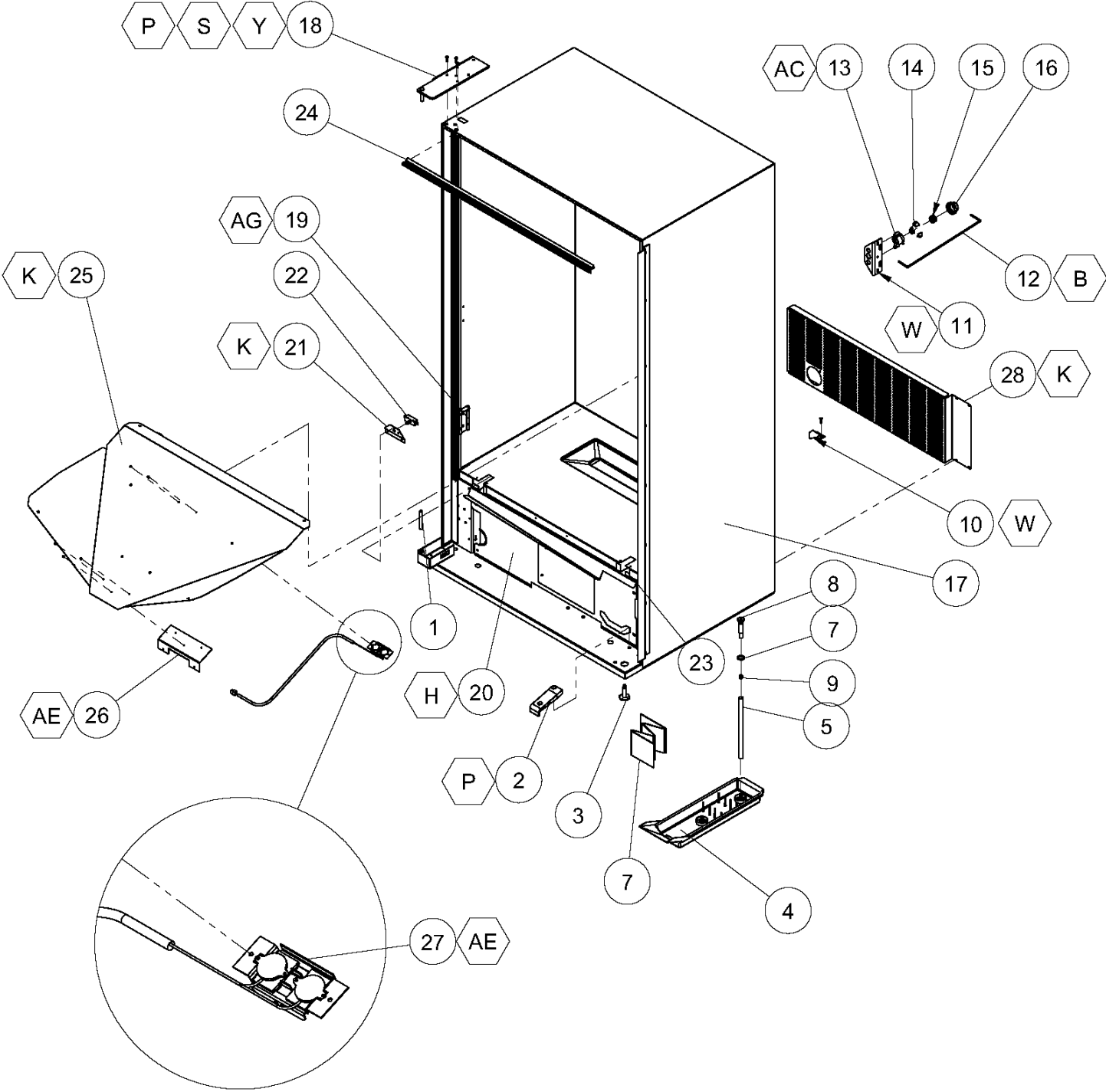
CABINET ASSEMBLY (CHAMELEON, TRADE, HV3)

ITEM NO.	DESCRIPTION	QTY REQ	PART NO. (621, 721, 821)
1	HINGE PIN	1	389071
2	RAMP	1	1120387
3	LEVELING LEG	1	1059902
4	CONDENSATE PAN	1	1122475
5	DRAIN TUBE	1	1088449-1
6	FIBERGLASS EVAPORATOR BOARD	1	1122728
7	DRAIN TUBE GASKET	1	387837
8	DRAIN TUBE FUNNEL	1	1068678
9	NUT – DRAIN TUBE	1	387925
10	BRACKET – REFRIGERATION	2	1123527
11	LATCH BRACKET	1	1123675
12	QUICKER LOCK ASSEMBLY	1	1123724
13	NUT RETAINER HOUSING	1	1123689
14	NUT SEGMENT	3	1033085
15	SPRING	1	389690
16	CAP	1	1111988
17	SIDE DECAL	2	**
18	TOP HINGE	1	2000805-03
19	BRACKET STACK SUPPORT	2	1148205
20	AIR DAM/KICK PANEL ASSEMBLY, 39"	1	1126880
20	AIR DAM/KICK PANEL ASSEMBLY, 32"	1	1126880-1
21	DOOR SWITCH BRACKET	1	1126691
22	DOOR SWITCH	1	323007
23	OVERLAPPING DOOR GUARD – 72"	1	2001376
23	OVERLAPPING DOOR GUARD – 79"	1	2002325
24	SEAL, 39"	1	1122500
25	VEND CHUTE, 39"	1	1121926-8
25	VEND CHUTE, 32"	1	1123451
26	CHUTE BRACKET	1	1148228
27	DROP SENSOR ASSEMBLY	1	1127568
28	SAFETY SCREEN, 39"	1	1225776
28	SAFETY SCREEN, 32"	1	1239473

FOR A COMPLETE LIST OF HARNESSES, PLEASE SEE PAGE C-18 & C-19.
* NOTE: WHEN ORDERING CABINET ASSEMBLY, PLEASE PROVIDE **9-CODE** OR **11-CODE** AND **MANUFACTURER'S DATE CODE**.
NOTE: WHEN ORDERING DECALS, PLEASE PROVIDE **STYLE.
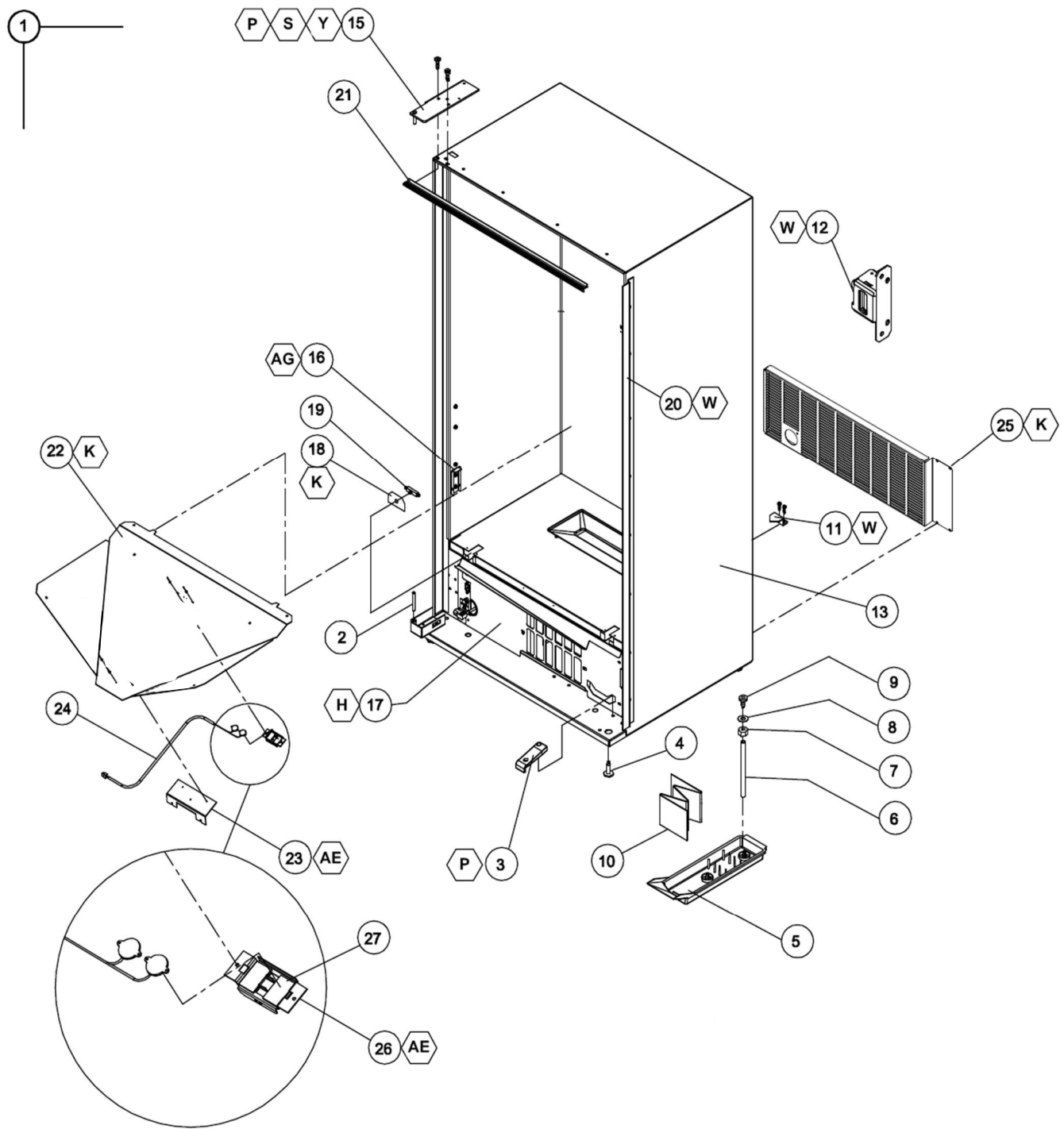
CABINET ASSEMBLY (HVV)

ITEM NO.	DESCRIPTION	QTY REQ	PART NO.
1*	CABINET ASSEMBLY - FOAMED	1	~
2	HINGE PIN	1	389071
3	RAMP	1	1120387
4	LEVELING LEG	4	1059902
5	CONDENSATE PAN	1	1122475
6	DRAIN TUBE	1	1088449-1
7	NUT - DRAIN TUBE	1	387925
8	DRAIN TUBE GASKET	1	387837
9	DRAIN TUBE FUNNEL	1	1068678
10	FIBERGLASS EVAPORATION BOARD	1	1122728
11	BRACKET - REFRIGERATION	2	1123527
12	LATCH RECEPTACLE ASSEMBLY	1	1121186
13**	SIDE DECAL	2	**
15	TOP HINGE	1	2000805-03
16	BRACKET STACK SUPPORT	2	1148205
17	AIR DAM/KICK PANEL ASSEMBLY, 39"	1	1126880
17	AIR DAM/KICK PANEL ASSEMBLY, 32"	1	1126880-1
18	DOOR SWITCH BRACKET	1	1126691
19	DOOR SWITCH	1	323007
20	OVERLAPPING DOOR GUARD - 72"	1	2001376
20	OVERLAPPING DOOR GUARD - 79"	1	2002325
21	SEAL, 39"	1	1122500
21	SEAL, 32"	1	1122500-1
22	VEND CHUTE, 39"	1	1121926-8
22	VEND CHUTE, 32"	1	1123451
23	CHUTE BRACKET	1	1148228
24	DROP SENSOR	1	1122923
25	SAFETY SCREEN, 39"	1	1225776
25	SAFETY SCREEN, 32"	1	1239473
26	DROP SENSOR MOUNTING BRACKET	1	1123601
27	FOAM PAD, DROP SENSOR	2	1123654

FOR A COMPLETE LIST OF HARNESSES, PLEASE SEE PAGE C-18 & C-19.

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

WHEN ORDERING DECALS, PLEASE PROVIDE **STYLE.
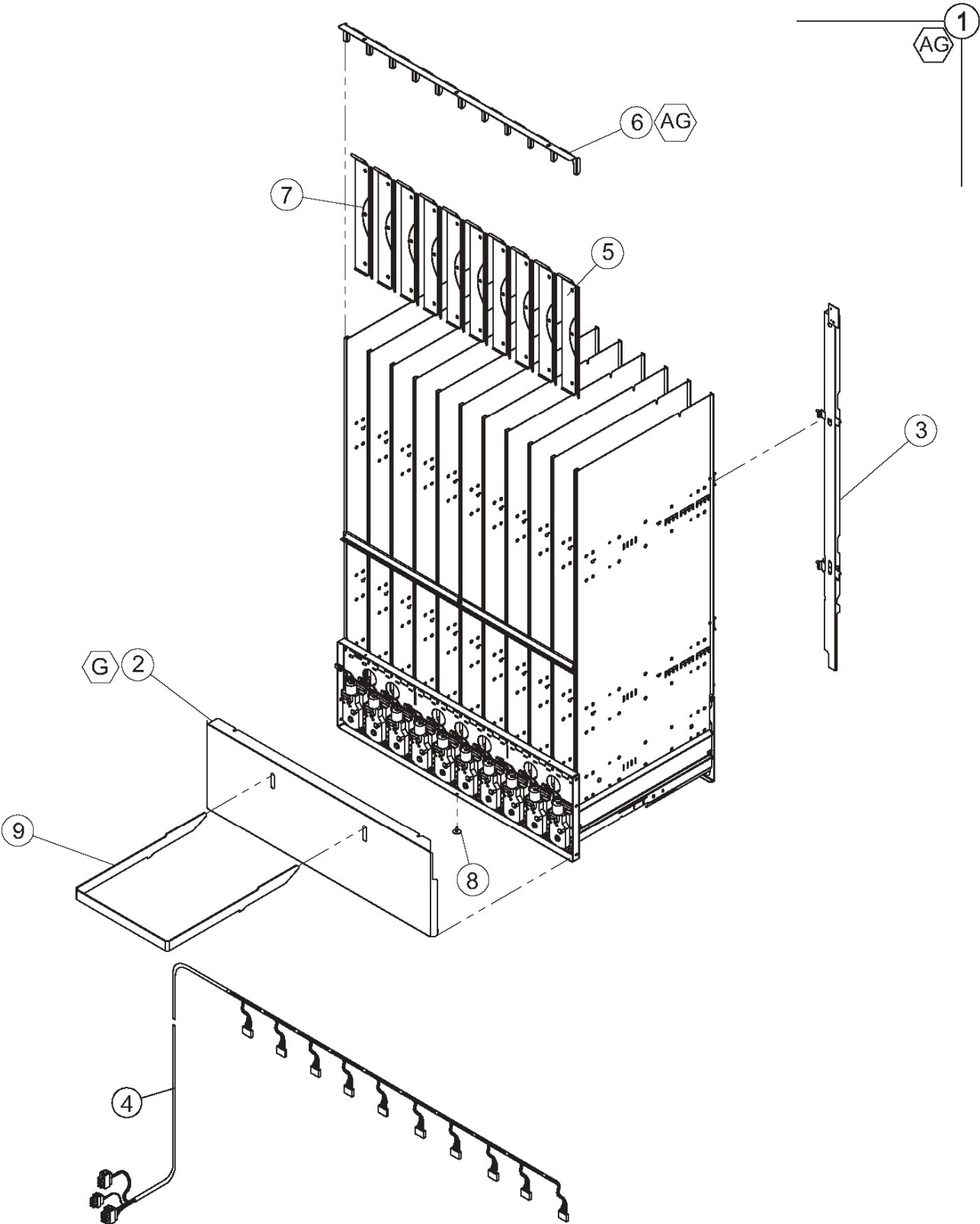
STACK ASSEMBLY

ITEM NO.	MODEL NUMBER	621		721		821	
	DESCRIPTION	QTY REQ	PART NO.	QTY REQ	PART NO.	QTY REQ	PART NO.
1	STACK CHASSIS ASSEMBLY	1	1123591-01	1	1123591-02	1	1123591-03
2	MOTOR COVER	1	1123037	1	1125116	1	1125116
3	BACK SPACER ASSEMBLY	8	1123047-1	10	1123047-1	10	1123047
4	MOTOR HARNESS	1	1123050	1	1122918	1	1122918
~	MOTOR HARNESS W/PRE-COOL	1	1124066	1	1124066	1	1124066
5	LOWER RETAINER	8	1148242	10	1148242	10	1148242
6	TOP STACK STRAP	1	1123039	1	1122809	1	1122809
7	FRICTION WIRE	8	1125607	10	1125607	10	1125607
8	SNAP IN PLUG	1	V802043	1	V802043	1	V802043
9	LOADING RACK	1	1123586	1	1123586	1	1123586
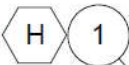
MECH PLATE ASSEMBLY

ITEM NO.	MODEL NUMBER	621		721/821	
	DESCRIPTION	QTY REQ	PART NO.	QTY REQ	PART NO.
1	VEND MOTOR ASSEMBLY	8	1122820	10	1122820
	VEND MOTOR ASSY (R290)	8	1256564	10	1256564
2	FRONT SPACER	8	1122814	10	1122814
3	VEND BUCKET	8	1122815	10	1122815
4	CAN CLIP	8	1122856	10	1122856
5	GATE	8	1122818	10	1122818
6	E-CLIP – GATE	8	V801080	10	V801080
7	GATE LINK	8	1122819	10	1122819
8	SPRING	8	390326	10	390326
9	COUPLING CAM	8	1122817	10	1122817
10	REAR BUSHING	8	1122816	10	1122816

FOR A COMPLETE LIST OF HARNESSES, PLEASE SEE PAGE C-18 & C-19.
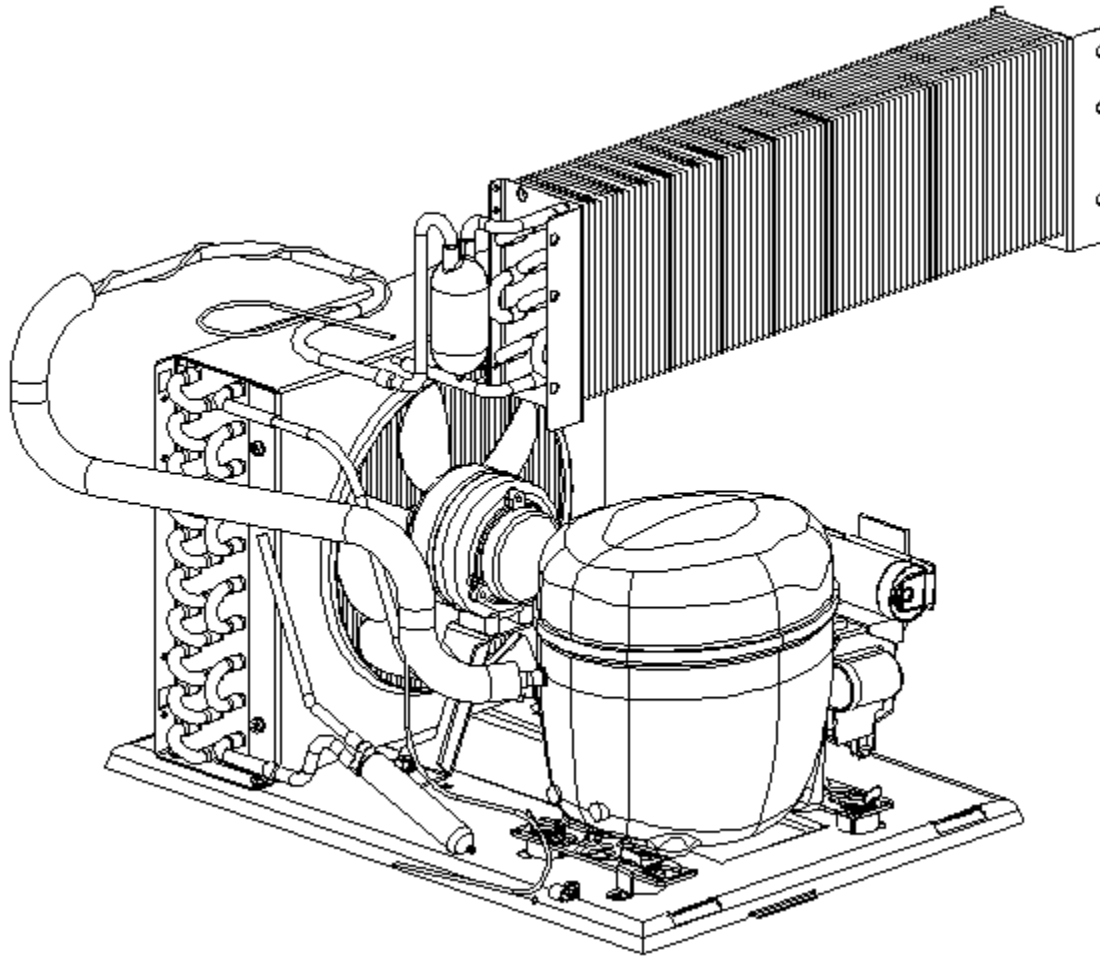
621 / 721 / 821 REFRIGERATION ASSEMBLY

ITEM NO.	DESCRIPTION	QTY REQ	PART NO.
1	ASY, REFER, R134a, 115VAC / 60Hz	1	1194536-3
	ASY, REFER, R134a, 230VAC / 50Hz	1	1194159-2
	ASY, REFER, R134a, 230VAC / 60Hz	1	1206198
	ASY, REFER, R290 (Propane), 115VAC / 60Hz	1	1260006
	ASY, REFER, R290 (Propane), 230VAC / 50-60Hz	1	1260006-1

Note: For individual components, please refer to refrigeration system part number marked on name plate located on refrigeration system base panel.
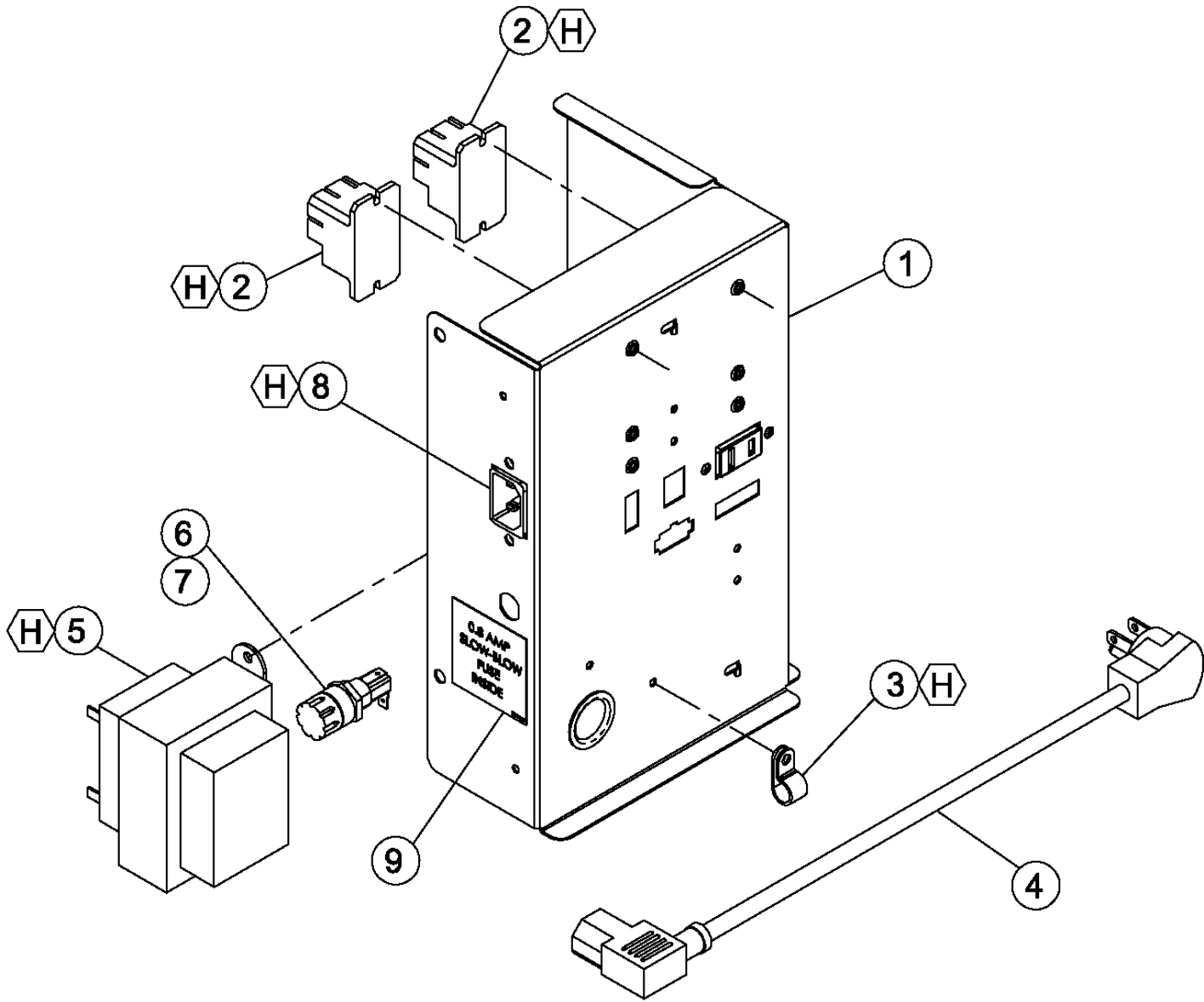
POWER BOX ASSEMBLY

ITEM NO.	DESCRIPTION	QTY REQ	PART NO. 115V	PART NO. 230V
1	POWER BOX ASSEMBLY	1	1123332-13	1123332-14
2	RELAY (R290)	3/2	1261363	1261363
3	CLAMP	1	324099-3	324099-3
4	CORDSET – NORTH AMERICA, WITH GFCI	1	1225355	~
	CORDSET – EURO PLUG	1	~	1251937
	CORDSET – CHILE	1	~	1124936
	CORDSET - AUSTRALIA	1	~	1124937
	CORDSET - SWISS	1	~	1124935
	CORDSET - UK	1	~	1251953
5	TRANSFORMER	1	1111201	1121932
6	FUSEHOLDER	1	1128474	1128474
7	0.8 AMP FUSE (NOT SHOWN)	1	1053864	1053864
8	POWER HARNESS	1	1236229	1123444
9	FUSE LABEL	1	1126640	1126640
10	TERMINAL BLOCK (NOT SHOWN)	1	1216006	~
11	BRKT, GROUND CONTACT (NOT SHOWN)	1	1233092	~
12	SWITCH, POWER ON/OFF (NOT SHOWN)	1	1187843	~
	SWITCH, POWER ON/OFF (R290) (NOT SHOWN)	1	1261398	~
13	STRAIN RELIEF (NOT SHOWN)	1	1233122	~
14	GROUND WIRE	1	1121309	~

FOR A COMPLETE LIST OF HARNESSES, PLEASE SEE PAGE C-18 & C-19.

HARNESS QUICK REFERENCE GUIDE for V21 VENDORS

The following Harnesses ARE CURRENTLY USED in Production Units					
PART NO.	**DESCRIPTION**	**PURPOSE**	**621**	**721**	**821**
1122905	Door Harness	Connects cabinet systems to the control board	X	X	X
1124570	MDB Harness	Connects payment systems to the control board	X	X	X
1126164	Display Harness	Connects the display to the control board	X	X	X
1124876	Display Harness HVV	Connects the display to the control board	X	X	X
1123050	Motor Harness – 8 Columns	Connects the vend motors to the door harness	X	N/A	N/A
1122918	Motor Harness – 10 Columns	Connects the vend motors to the door harness	N/A	X	X
1121639	Sold Out Switch Harness	Optional - Connects Sold Out switches to the motor harness (one per motor)	X	X	X
1188676	Selection Harness – 6 Select - Chameleon	Connects the selection buttons to the control board	X	N/A	N/A
1150879	Selection Harness – 8 Select - Chameleon	Connects the selection buttons to the control board	N/A	X	X
1142963	Selection Harness – 9 Select - Chameleon	Connects the selection buttons to the control board	N/A	X	X
1212689	Selection Harness – 6 Select HV3	Connects the selection buttons to the control board	X	N/A	N/A
1265083	Selection Harness – 10 Select HV3	Connects the selection buttons to the control board	N/A	X	X
1222406	Selection Harness – 8 or 10 Select – New TD	Connects the selection buttons to the control board	X	N/A	N/A
1122777	Selection Harness – 3 Select, Right HVV	Connects the selection buttons to the control board	X	N/A	N/A
1122778	Selection Harness – 3 Select, Left HVV	Connects the selection buttons to the control board	X	N/A	N/A
1121067	Selection Harness – 6 Select, Right HVV	Connects the selection buttons to the control board	N/A	X	X
1121085	Selection Harness – 6 Select, Left HVV	Connects the selection buttons to the control board	N/A	X	X
1122193	Evaporator Fan Harness	Connects the evaporator fan to the air duct housing	X	X	X
1124185	Evaporator Fan Extension Harness	Connects the air duct housing to the power distribution box	X	X	X

PART NO.	DESCRIPTION	PURPOSE			
1236229	Power Distribution Harness (115V)	Input for service cord and output to compressor, evaporator, fans, control board, and transformer	X	X	X
1123444	Power Distribution Harness (230V)	Input for service cord and output to compressor, evaporator, fans, control board, and transformer	X	X	X
1209155	Fan Relay Harness	Power Dist. Harness to evaporator fan control relay	X	X	X
1123679	Lock System Harness HVV	Connects the electronic lock to the control board	X	X	X
1121139	Door Switch Harness HVV	Connects the TT lock receptacle to the control board	X	X	X
1125854	Remote DEX Harness	Remote DEX Jack for HVV	X	X	X
1241915	Auxiliary DEX Harness	Optional – Remote DEX Jack	X	X	X
The following Harnesses are NO LONGER USED in Production Units **(Availability may vary based on supply)**					
PART NO.	**DESCRIPTION**	**PURPOSE**	**621**	**721**	**821**
1123943	Door Harness 4/5 Live Display	Connects cabinet systems to the control board	X	X	X
1087317	Display Harness, 7 Segment	Connects 7 segment display to control board	X	X	X
1087325	MDB Harness, 70"	Connects payment systems to lower mounted control board	X	X	N/A
1174502	DEX Harness, 67"	Remote DEX Jack for lower mounted control board	X	X	N/A
1111287	Selection Harness – 10 Selections Old Trade	Connects the selection buttons to the control board	N/A	X	X
1117872	Selection Harness – 8 Selections Old Trade	Connects the selection buttons to the control board	X	N/A	N/A
1126871	Live Display Selection Harness – 8 Select	Connects the selection buttons to the control board	X	N/A	N/A
1126872	Live Display RTV/Sold Out Harness	Connects to the selection harness	X	X	N/A
1204233	LED RELAY HV3	Connects the LED lights to door switch	X	X	X
1122609	Upper Lights Harness HVV T-8	Connects the upper lights to the lower lights	X	X	X
1123320	Lower Lights Harness HVV T-8	Connects the lower lights to the ballast	X	X	X

WHEN ORDERING LIGHTING SYSTEM HARNESS ASSEMBLIES, PLEASE PROVIDE **9-CODE** OR **11-CODE** AND **MANUFACTURER'S DATE CODE**

DOOR PARTS
CHAMELEON
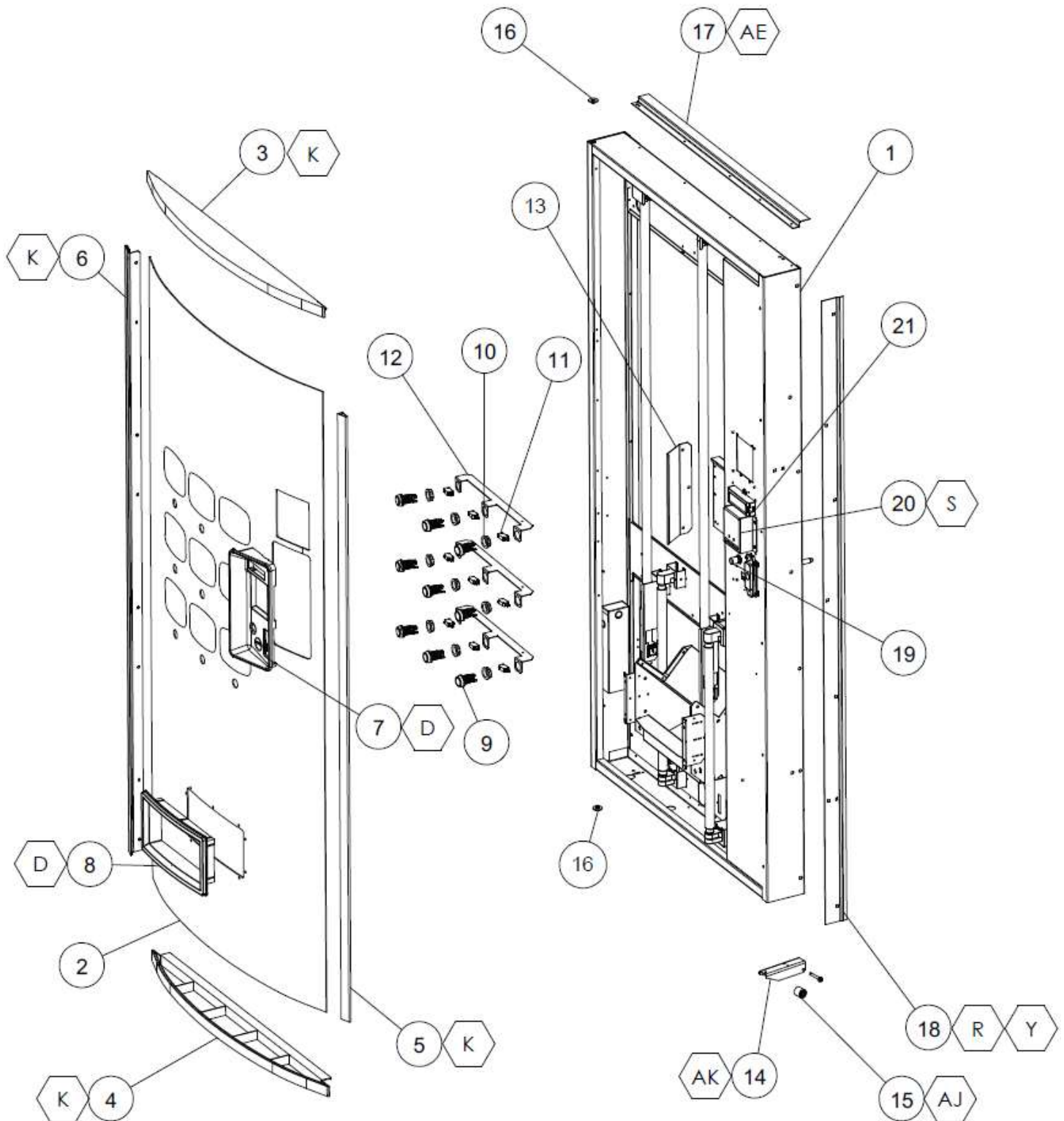
CHAMELEON TRADE DOOR

ITEM NO.	MODEL NUMBER	721		821		HARDWARE
	DESCRIPTION	QTY REQ	PART NO.	QTY REQ	PART NO.	
1	DOOR WELD	1	1149945	1	1150443	
2	SIGN FACE	1	**	1	**	
3	SIGN CAP, TOP	1	1114341	1	1114341	K
4	SIGN CAP, BOTTOM	1	1114341-1	1	1114341-1	
5	SIGN TRIM, VTL, RIGHT, 72"	1	1149889	1	1150455	K
6	SIGN TRIM, VTL, LEFT, 72"	1	1149891	1	1150466	K
7	BEZEL, CONSUMER INTERFACE	1	1143346	1	1143346	D
8	TRIM EYELET, CURVE	1	388271	1	388271	D
9	BUTTON ASY, ROUND, CHAMELEON	**	1149374	**	1149374	
10	PLASTIC NUT	**	1073538	**	1073538	
11	SELECTION SWITCH	**	368299	**	368299	
12	BRACKET, SIGN FACE	**	**	**	**	H
13	SUPPORT BRACKET	1	1143486	1	1143486	
14	DOOR ROLLER BRACKET	1	1239376	1	1239376	V802196
15	DOOR ROLLER	1	1120388	1	1120388	V802162
16	BUSHING HINGE	2	388094	2	388094	
17	RAIN GUARD	1	2000848	1	2000848	
18	DOOR GUARD	1	2010131	1	2009503	A, E
19	COIN RETURN BUTTON	1	1050473	1	1050473	
20	COVER, DBV (OPTIONAL)	1	1144557	1	1144557	
21	LENS, DISPLAY-BLUE	1	1121103	1	1121103	S

* NOTE: WHEN ORDERING DOOR ASSEMBLY, PLEASE PROVIDE 9-CODE OR 11-CODE AND MANUFACTIRERS DATE CODE.

** NOTE: PART NUMBER AND/OR QUANTITY IS CONFIGURATION DEPENDENT. CONTACT CUSTOMER SERVICE FOR ASSISTANCE.
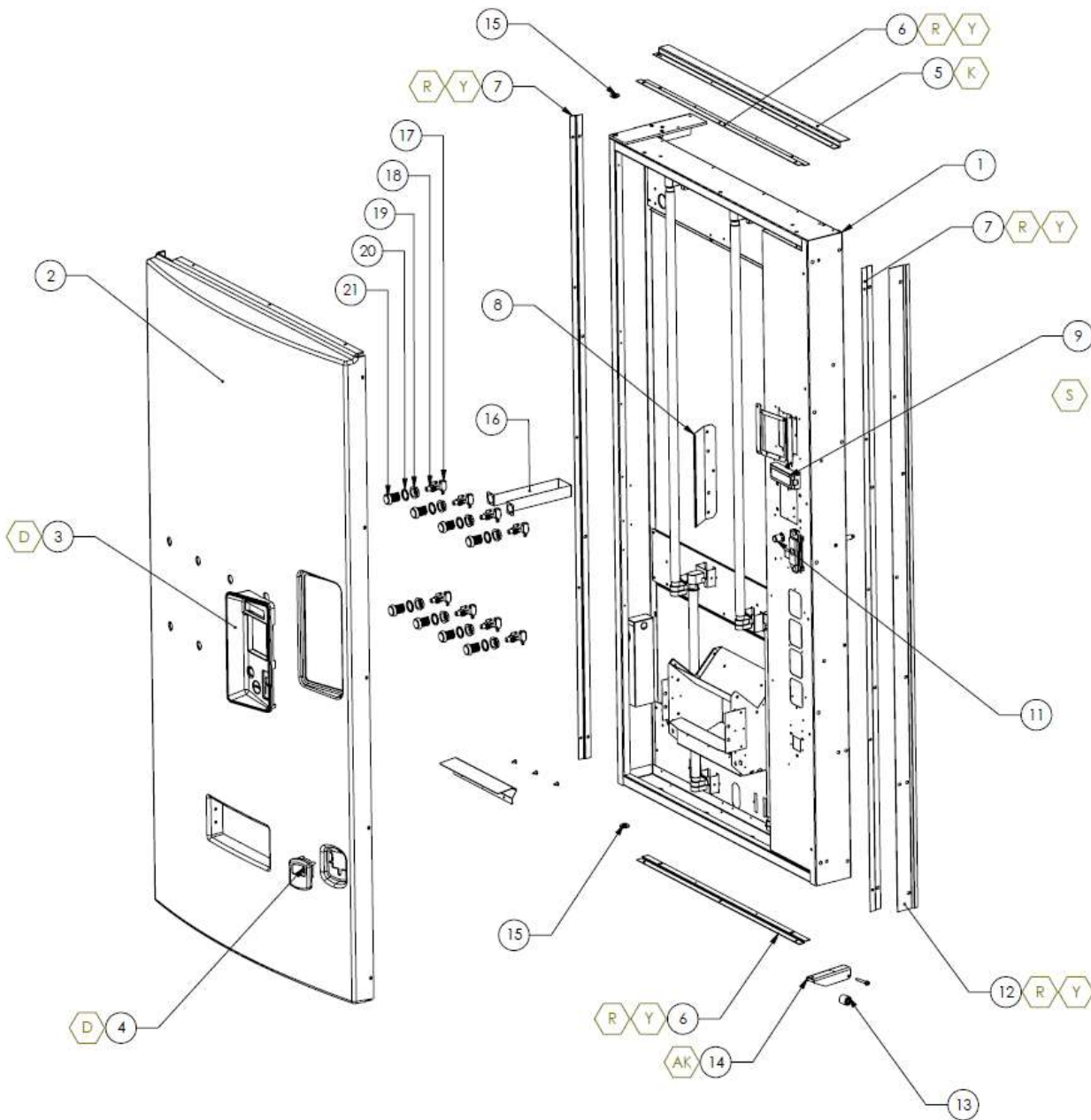
CHAMELEON 3D SIGN FACE DOOR

ITEM NO.	MODEL NUMBER	821 VIS		HARDWARE
	DESCRIPTION	QTY REQ	PART NO.	
1	DOOR WELD	1	1187325-1	
2	SIGN FACE	1	DEPENDENT ON BRAND	
3	BEZEL, CONSUMER INTERFACE	1	1143346	D
4	BEZEL, COIN RETURN	1	1170855-1	D
5	RAIN GUARD	1	2000848	K
6	PNT, MTG, BRKT, TOP/BTM, VIS, 821	2	1224518	R, Y
7	PNT, MTG, BRKT, SIDE, VIS, 821	2	1224509	R, Y
8	SUPPORT BRACKET	1	1143486	
9	LENS, DISPLAY-BLUE	1	1121103	
10	COVER, DBV (OPTIONAL)	1	1144557	S
11	COIN RETURN BUTTON	1	1050473	
12	DOOR GUARD	1	2010131	R, Y
13	DOOR ROLLER	1	1120388	A, J
14	DOOR ROLLER BRACKET	1	1239376	A, K
15	BUSHING HINGE	2	388094	
16	BRKT, SELECTION BUTTON SUPT.	1	1220009	
17	SELECTION SWITCH	8	368299	
18	HOLDER, SELECTION SWITCH, HAPP	8	1149385	
19	PLASTIC NUT	8	1073538	
20	PLASTIC WASHER	8	1073511	
21	BUTTON ASY, ROUND, CHAMELEON	8	1149374	

* NOTE: WHEN ORDERING DOOR ASSEMBLY, PLEASE PROVIDE 9-CODE OR 11-CODE AND MANUFACTURERS DATE CODE.

** NOTE: PART NUMBER AND/OR QUANTITY IS CONFIGURATION DEPENDENT. CONTACT CUSTOMER SERVICE FOR ASSISTANCE.
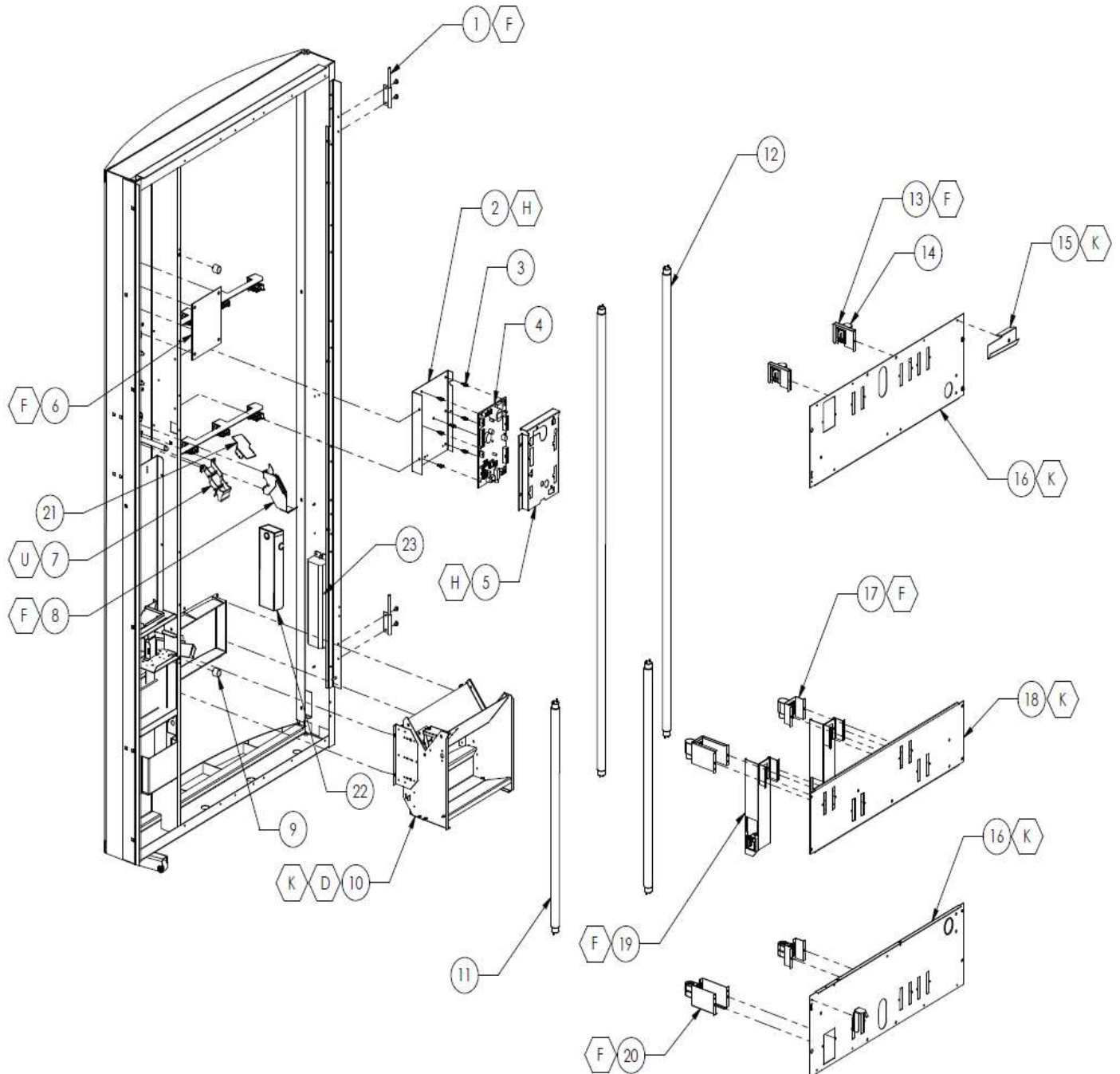
CHAMELEON TRADE / 3D SIGN FACE DOOR (CONTINUED)

ITEM NO.	MODEL NUMBER / DESCRIPTION	721 QTY REQ	721 PART NO.	821 QTY REQ	821 PART NO.	HARDWARE
1	HINGE – INNER DOOR, MALE	2	1121287	2	1121287	F
2	MOUNTING BRACKET - CONTROLLER	1	1124704	1	1124704	H
3	STAND OFF	7	1121740	7	1121740	
4	PCBA VEC 12.1 CONTROLLER	1	1167867	1	1167867	
5	PCBA COVER PANEL	1	1123049	1	1123049	H
6	PLATE, DBV PLUG, UPPER	1	1143498	1	1143498	F
7	COIN INSERT CHUTE	1	1121066	1	1121066	U
8	ASY,COIN RETURN LEVER	1	1182651	1	1182651	F
9	DOOR BUMPER	2	1036912	2	1036912	
10	DELIVERY HOPPER ASSEMBLY	**	1149325	1	1149325	D, K
10	DELIVERY HOPPER ASSEMBLY VIS	**	NA	1	1222353	R, Y
11	LAMP – 17W T-8, 24"	3	1130637	3	1130637	
11	LAMP LED 24"	2	1237136	2	1237136	
12	LAMP – 32W T-8, 48"	2	1121173-2	2	1121173-2	
12	LAMP LED 48"	2	1237136-1	2	1237136-1	
13	BKT, LIGHT, UPPER	2	1150387	~	~	
14	BULB, HOLDER, PLUNGER	4	1151265	4	1151265	
15	RAIN GUTTER	1	1121204	1	1121204	K
16	PNL, SHR, LWR, 39" 4-BLB	1	1238949	1	1238949	K
16	PNL, SHR, UPR, 39", 4-BLB	1	1238868		1238868	
17	LAMP BRACKET LOWER PROFILE	6	1151367	8	1151367	F
18	PNL, SHR, MIDDLE	1	1122308	1	1122308	
19	LAMP EXTENSION BRACKET	2	1150259	~	~	
20	BRKT, LAMP, HO, EXT	2	~	2	~	
21	COIN CHUTE COVER	1	1181555	1	1181555	
22	BALLAST COVER	1	1190155	1	1190155	
23	BALLAST	1	1127052	1	1127052	
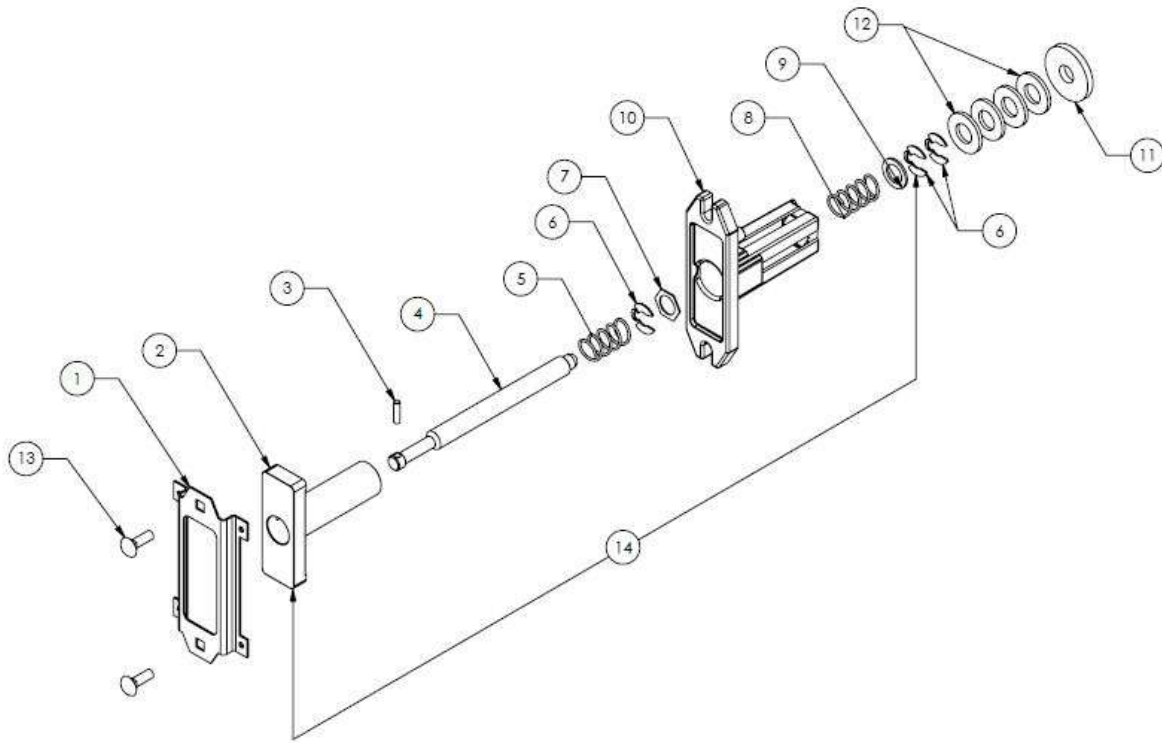
CHAMELEON TRADE / 3D SIGN FACE LOCK ASSEMBLY

ITEM NO.	DESCRIPTION	QTY REQ	PART NO.
1	BRKT, SECURITY, LOCK	1	1143402
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	FLAT WASHER	1	387718
10	T-HANDLE - FLANGE	1	1002384
11	VAPOR SEAL	1	388132
12	WASHER 1/2"	4	V801023
13	1/4" X 3/4" CARRIAGE BOLT	1	V801434
14	T - HANDLE ASSY.	1	1002635

V21 TRADE / 3D SIGN FACE INNER DOOR

ITEM NO.	MODEL NUMBER		721	821
	DESCRIPTION	QTY REQ	PART NO.	PART NO.
1	INNER DOOR ASSEMBLY	1	134302-160	134302-161
2	RAIN SEAL, INNER DOOR, 7"	1	1111732-2	1111732-2
3	INNER DOOR SEAL	1	1075678	1075678-1
4	UPPER PRODUCT RETAINER ASSEMBLY	1	1185792-1	1185792-2
5	UPPER PRODUCT RETAINER	1	1181827	1181827-1
6	LONG CLIP RETAINER	1	1125202	1125202-1
7	INNER DOOR HINGE, FEMALE	2	1121286	1121286
8	HINGE PIN	1	1172323	1172323
9	REVERSABLE VEND FLAP	1	1013076	1013076
10	INNER DOOR EYELET	1	387273	387273
11	GROMMET	1	388090	388090
12	INNER DOOR LATCH	1	1121711	1121711
13	INNER DOOR LATCH BRACKET	1	1121712	1121712

FOR A COMPLETE LIST OF HARNESSES, PLEASE SEE PAGE C-15.

V21 TRADE / 3D SIGN FACE INNER DOOR LABELS - NOT SHOWN

MODEL NUMBER		721 / 821
DESCRIPTION	QTY REQ	PART NO.
ERROR CODE LABEL, VEC 12.1	1	1170775
PROGRAMMING LABEL, VEC 12.1	1	1193696
WIRING DIAGRAM LABEL, VEC 12.1/12.2	1	1127542
PRODUCT SET UP, V21	1	1126121
SPACE TO SALES, VEC 12.1	1	1188767
INNER DOOR LABEL	1	1125783-1

DOOR PARTS
CHAMELEON ADA
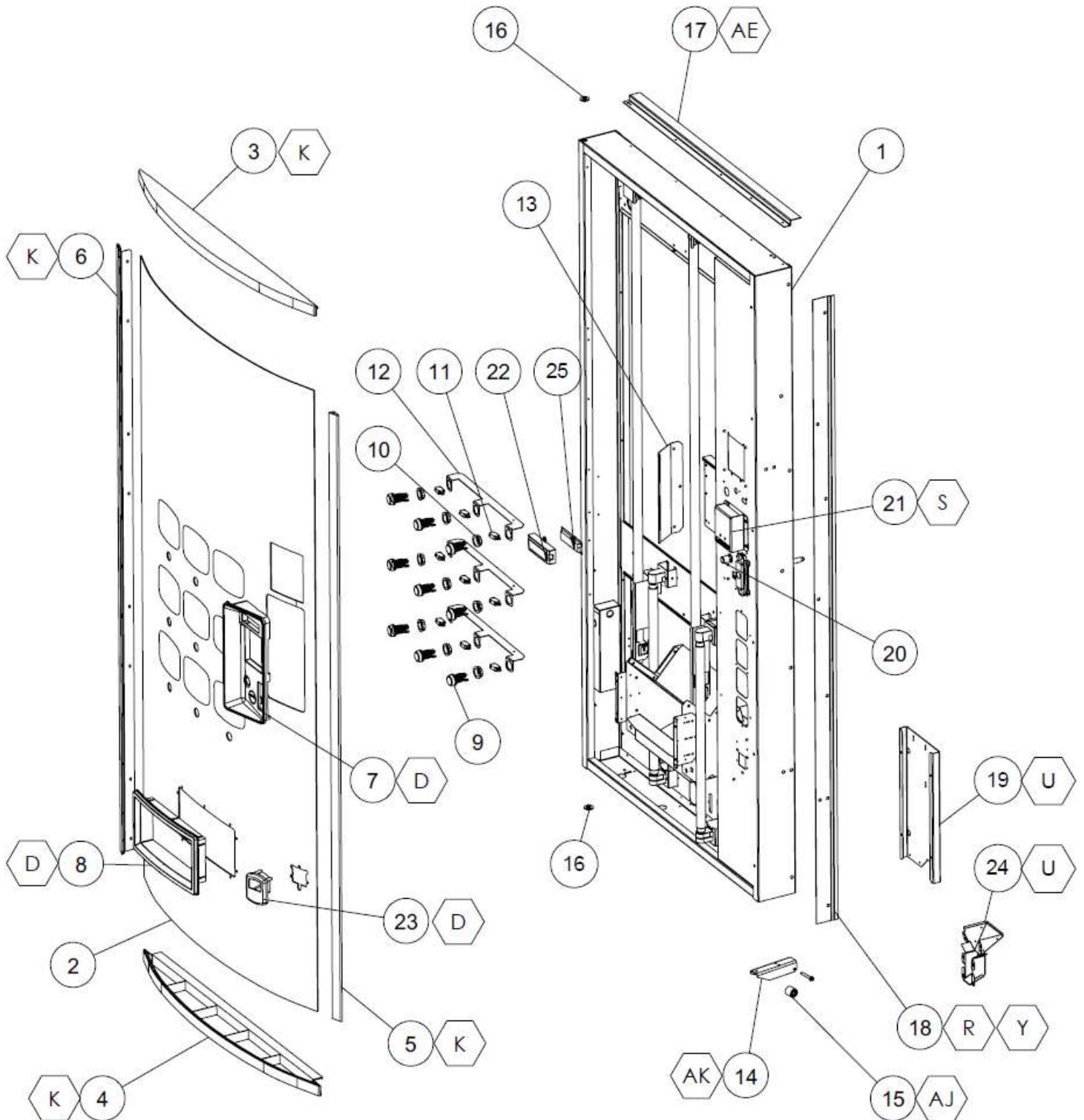
CHAMELEON ADA TRADE DOOR

ITEM NO.	MODEL NUMBER	621		721		821		HARDWARE
	DESCRIPTION	QTY REQ	PART NO.	QTY REQ	PART NO.	QTY REQ	PART NO.	
1	DOOR WELD	1	1190026	1	1189097	1	1189232	
2	SIGN FACE	1	**	1	**	1	**	
3	SIGN CAP, TOP	1	1127305	1	1114341	1	1114341	K
4	SIGN CAP, BOTTOM	1	1127510	1	1114341-1	1	1114341-1	
5	SIGN TRIM, VTL, RIGHT, 72"	1	1149889	1	1149889	1	1150455	K
6	SIGN TRIM, VTL, LEFT, 72"	1	1149891	1	1149891	1	1150466	K
7	BEZEL, CONSUMER INTERFACE	1	1143346	1	1143346	1	1143346	D
8	TRIM EYELET, CURVE	1	388271	1	388271	1	388271	D
9	BUTTON ASY, ROUND, CHAMELEON	6	1149374	**	1149374	**	1149374	
10	PLASTIC NUT	6	1073538	**	1073538	**	1073538	
11	SELECTION SWITCH	6	368299	**	368299	**	368299	
12	BRACKET, SIGN FACE	2	1163504	**	**	**	**	H
13	SUPPORT BRACKET	1	1143486	1	1143486	1	1143486	
14	DOOR ROLLER BRACKET	1	1239376	1	1239376	1	1239376	V802196
15	DOOR ROLLER	1	1120388	11	1120388	1	1120388	V802162
16	BUSHING HINGE	2	388094	2	388094	2	388094	
17	RAIN GUARD	1	2005937-2	1	2000848	1	2000848	
18	DOOR GUARD	1	2010131	1	2010131	1	2009503	AE
19	COIN SUPPORT PLATE	1	1143475	1	1143475	1	1143475	H
20	COIN RETURN BUTTON	1	1050473	1	1050473	1	1050473	
21	COVER, DBV (OPTIONAL)	1	1144557	1	1144557	1	1144557	
22	LENS, DISPLAY-CLEAR	1	1121103-1	1	1121103-1	1	1121103-1	S
23	COIN RETURN BEZEL	1	1170855-1	1	1170855-1	1	1170855-1	D
24	COIN RETURN CUP	1	1143414	1	1143414	1	1143414	H
25	DISPLAY BOARD, 2X20	1	1249924	1	1249924	1	1249924	

* NOTE: WHEN ORDERING DOOR ASSEMBLY, PLEASE PROVIDE 9-CODE OR 11-CODE AND MANUFACTIRERS DATE CODE.

** NOTE: PART NUMBER AND/OR QUANTITY IS CONFIGURATION DEPENDENT. CONTACT CUSTOMER SERVICE FOR ASSISTANCE.
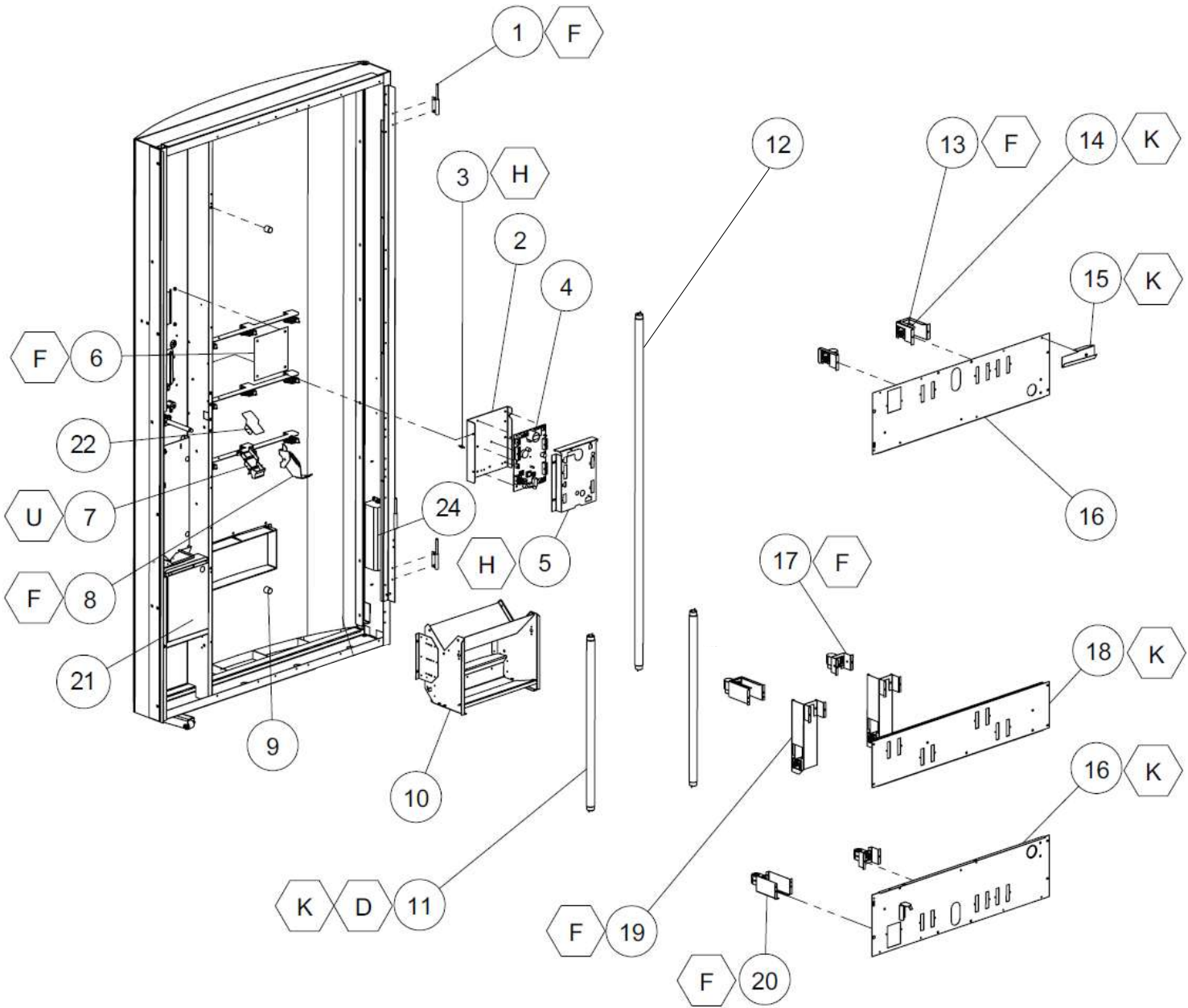
CHAMELEON ADA TRADE DOOR (CONTINUED)

ITEM NO.	MODEL NUMBER / DESCRIPTION	621 QTY REQ	621 PART NO.	721 QTY REQ	721 PART NO.	821 QTY REQ	821 PART NO.	HARDWARE
1	HINGE – INNER DOOR, MALE	2	1121287	2	1121287	2	1121287	F
2	MOUNTING BRACKET - CONTROLLER	1	1124704	1	1124704	1	1124704	H
3	STAND OFF	7	1121740	7	1121740	7	1121740	
4	PCBA VEC 12.1 CONTROLLER	1	1167867-44	1	1167867-44	1	1167867-44	
5	PCBA COVER PANEL	1	1123049	1	1123049	1	1123049	H
6	PLATE, DBV PLUG, UPPER	1	1143498	1	1143498	1	1143498	F
7	COIN INSERT CHUTE	1	1121066	1	1121066	1	1121066	U
8	ASY,COIN RETURN LEVER	1	1182651	1	1182651	1	1182651	F
9	DOOR BUMPER	2	1036912	2	1036912	2	1036912	
10	DELIVERY HOPPER ASSEMBLY	1	1189115-1	1	1189115	1	1189115	D,K
11	LAMP, LED, 24"	2	1237136	2	1237136	2	1237136	
12	LAMP, LED, 48"	1	1237136-1	1	1237136-1	2	1237136-1	
13	BKT, LED HOLDER, UPPER	3	1262912	3	1262912	2	1262912	
14	BULB, HOLDER	3	1151253	3	1151265	4	1151265	
15	RAIN GUTTER	1	1121204	1	1121204	1	1121204	K
16	PNL, SHR, LOWER	1	1264559	1	1260904	1	1260904	K
	PNL, SHR, UPPER	1	1264575	1	1262882	1	1262882	
17	LAMP BRACKET, UPPER	1	1217916	1	1217916	1	1217916	F
18	PNL, SHR, MIDDLE	1	1264567	1	1262874	1	1262874	
19	LAMP EXTENSION BRACKET	1	1217729	1	1217729	~	~	F
20	LAMP BRACKET, LOWER	2	1222424	2	1222424	2	1222424	
21	COIN BOX	1	388392	1	388392	1	388392	
22	COIN CHUTE COVER	1	1181555	1	1181555	1	1181555	
24	POWER SPPLY (LED)	1	1237144	1	1237144	1	1237144	
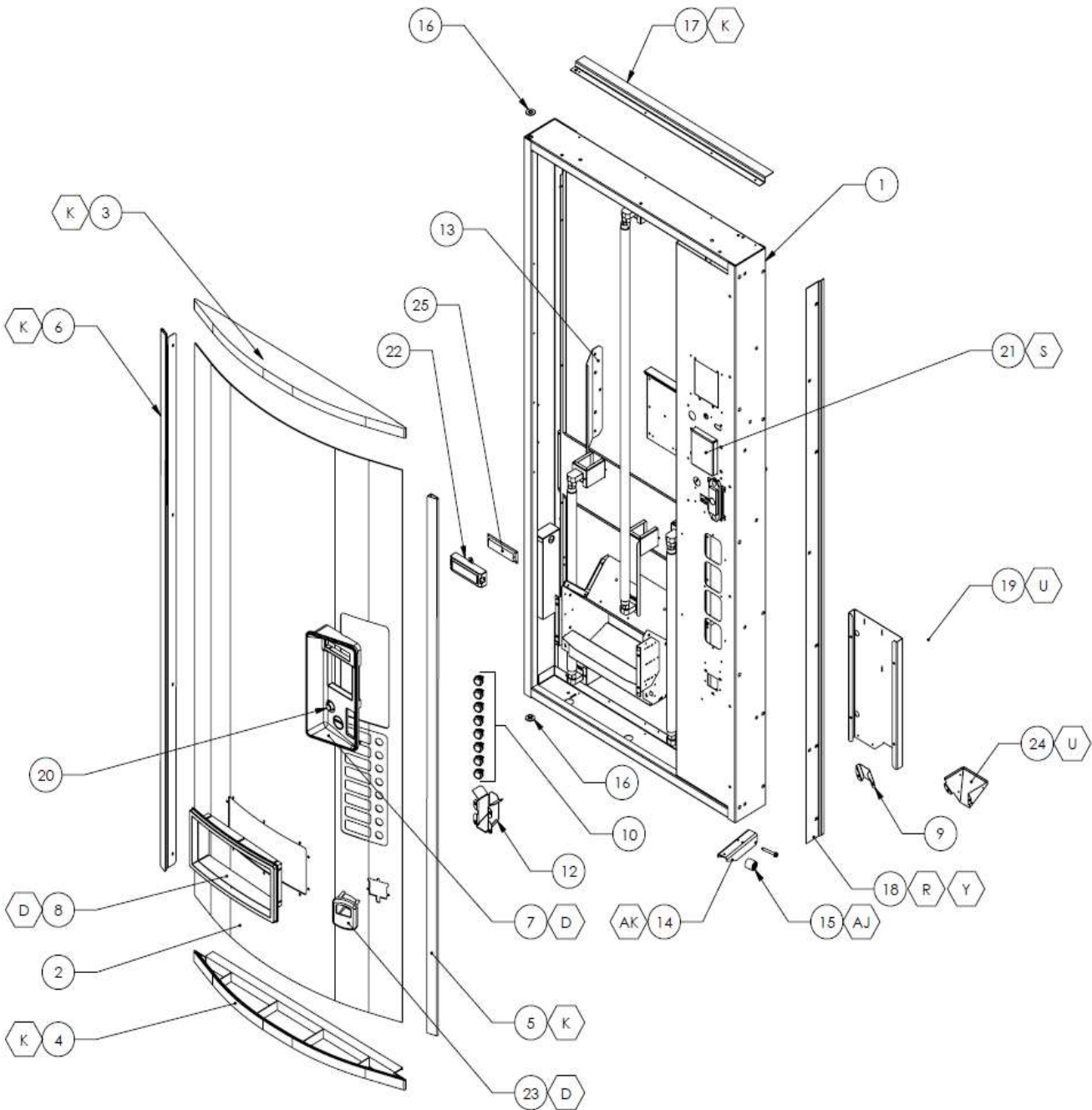
CHAMELEON ADA TRADE DOOR (RED BULL)

ITEM NO.	MODEL NUMBER	621		HARDWARE
	DESCRIPTION	QTY REQ	PART NO.	
1	DOOR WELD - SLV	1	1190026-1	
2	SIGN FACE	1	2020693-PR4D	
3	SIGN CAP, TOP	1	1127305-3	K
4	SIGN CAP, BOTTOM	1	1127510-3	K
5	SIGN TRIM, VTL, RIGHT, 72"	1	1241516-1	K
6	SIGN TRIM, VTL, LEFT, 72"	1	1241508-1	K
7	BEZEL, CONSUMER INTERFACE	1	1143346-2	D
8	TRIM EYELET, CURVE	1	388271-1	D
9	COIN CHUTE	1	1184805	
10	SELECTION SWITCH	8	1222415	
11	HARNESS (NOT SHOWN)	1	1222406	
12	COIN RETURN CUP	1	1171627	
13	SUPPORT BRACKET	1	1143486	
14	DOOR ROLLER BRACKET	1	1239376	V802196
15	DOOR ROLLER	1	1120388	V802162
16	BUSHING HINGE	2	388094	
17	RAIN GUARD - SLV	1	2005937-3	K
18	DOOR GUARD - SLV	1	2010131-1	AE
19	COIN SUPPORT PLATE	1	1143475	H
20	COIN RETURN BUTTON	1	1050473	
21	COVER, DBV (OPTIONAL)	1	1149907	
22	LENS, DISPLAY-CLEAR	1	1121103-1	S
23	COIN RETURN BEZEL	1	1170855-2	D
24	COIN RETURN CHUTE	1	1143414	H
25	DISPLAY BOARD, 2X20	1	1249924	
26	CAB GUARD (NOT SHOWN)	1	2001376-1	AE
27	TOP HINGE – SLV (NOT SHOWN)	1	2000805-15	
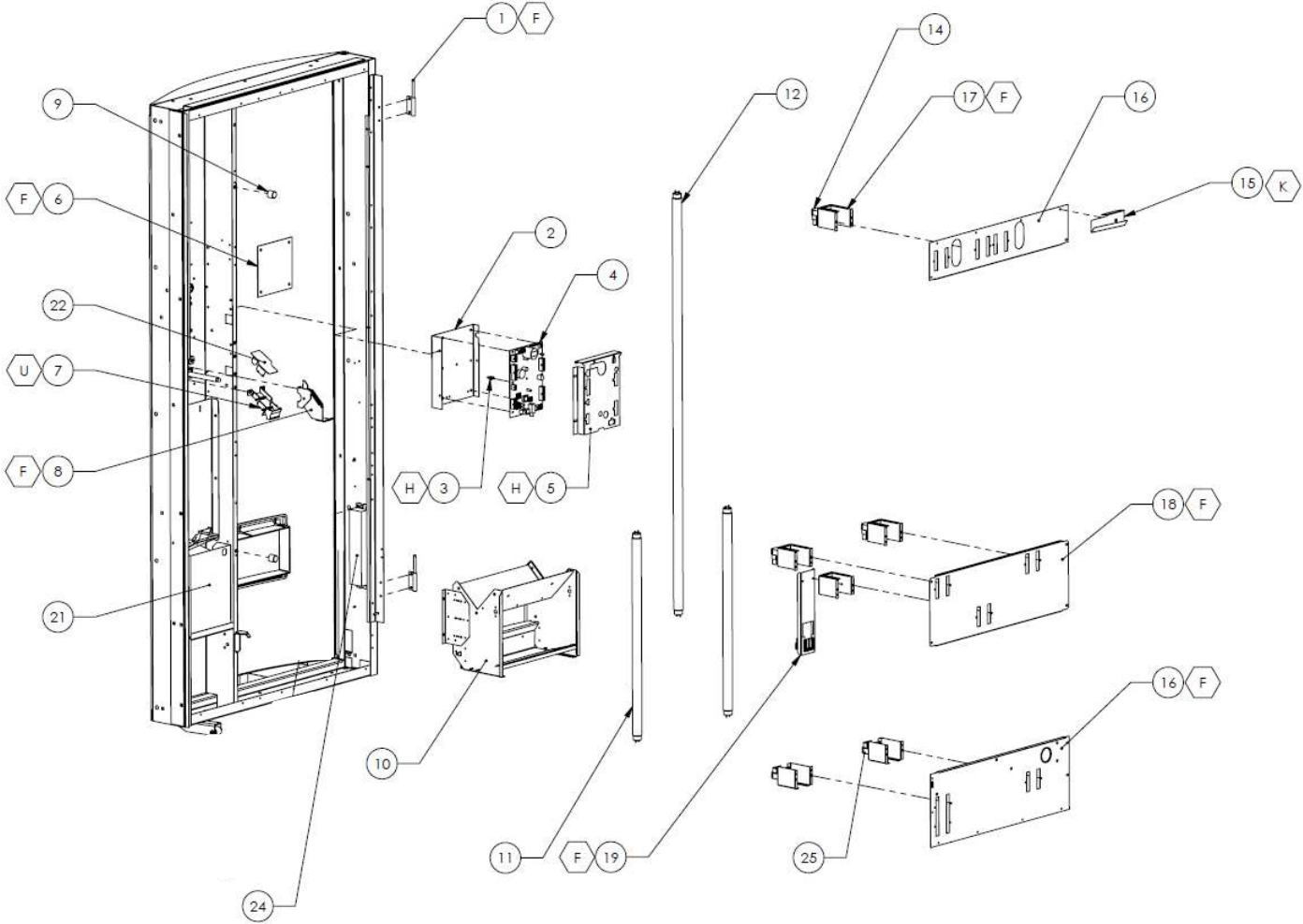
CHAMELEON ADA TRADE DOOR (RED BULL) (CONTINUED)

ITEM NO.	MODEL NUMBER	621		HARDWARE
	DESCRIPTION	QTY REQ	PART NO.	
1	HINGE – INNER DOOR, MALE	2	1121287	F
2	MOUNTING BRACKET - CONTROLLER	1	1124704	H
3	STAND OFF	7	1121740	
4	PCBA VEC 12.1 CONTROLLER	1	1167867-44	
5	PCBA COVER PANEL	1	1123049	H
6	PLATE, DBV PLUG, UPPER	1	1143498	F
7	COIN INSERT CHUTE	1	1121066	U
8	ASY,COIN RETURN LEVER	1	1182651	F
9	DOOR BUMPER	2	1036912	
10	DELIVERY HOPPER ASSEMBLY	1	1189115-1	D,K
11	LAMP, LED, 24"	2	1237136	
12	LAMP, LED, 48"	1	1237136-1	
14	BULB, HOLDER, PLUNGER	3	1151265	
15	RAIN GUTTER	1	1121204	K
16	PNL, SHR, LOWER	1	1264559	F
	PNL, SHR, UPPER	1	1264575	
17	LAMP BRACKET	3	1217916	F
18	PNL, SHR, MIDDLE	1	1264567	F
19	LAMP EXTENSION BRACKET	1	1217729	
21	COIN BOX	1	1088058	
22	COIN CHUTE COVER	1	1181555	
24	POWER SUPPLY (LED)	1	1237144	
25	BULB, HOLDER	3	1151253	
26	DOOR HARNESS	1	1122905	
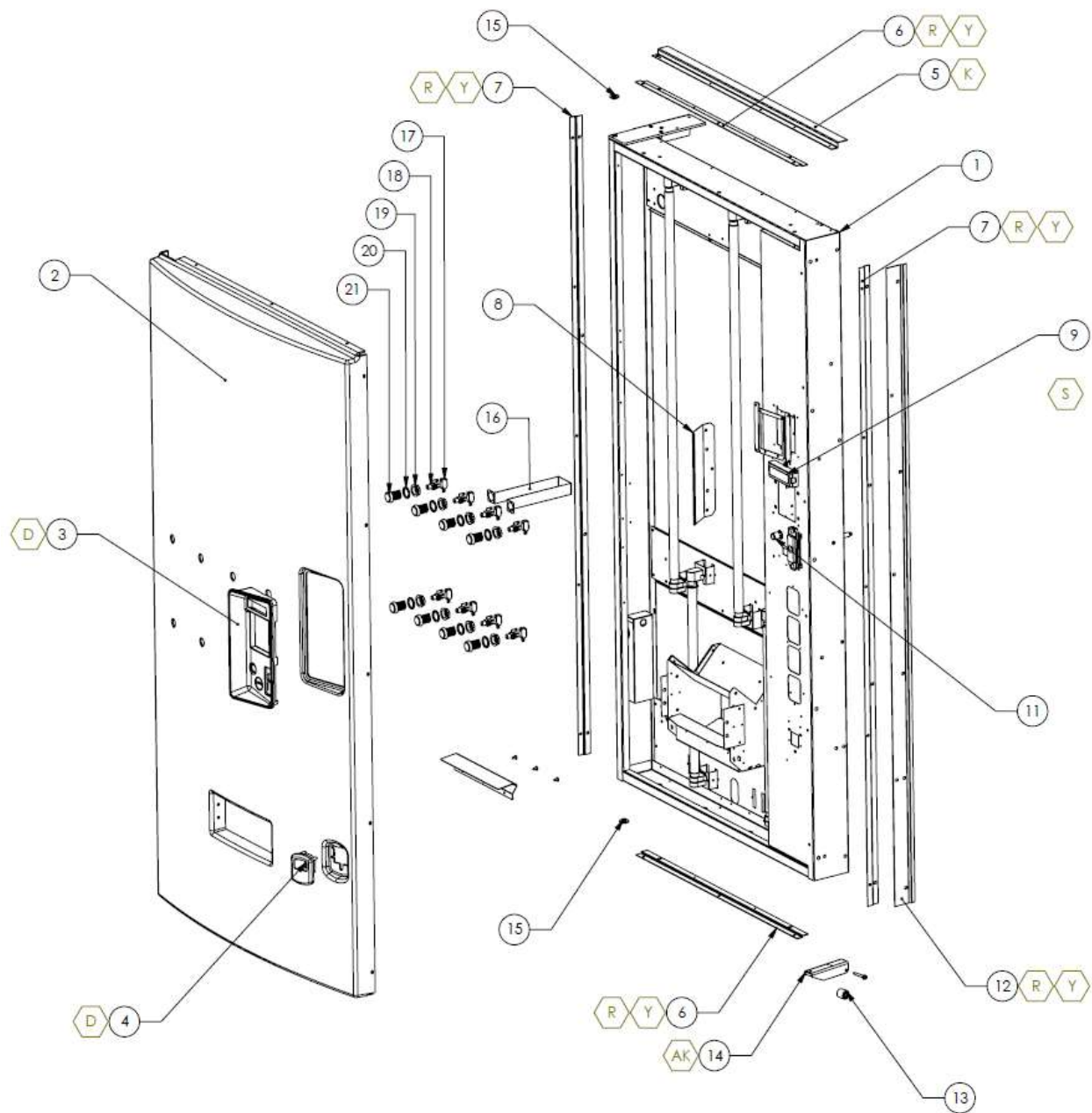
CHAMELEON 3D SIGN FACE DOOR

ITEM NO.	MODEL NUMBER		621	721	821	HARD-WARE
	DESCRIPTION	QTY REQ	PART NO.	PART NO.	PART NO.	
1	DOOR WELD	1	1228043	1265539	1221356	
2	SIGN FACE	1	**	**	**	
3	BEZEL, CONSUMER INTERFACE - BLACK	1	1143346-1	1143346-1	1143346-1	D
4	BEZEL, COIN RETURN	1	1170855-1	1170855-1	1170855-1	D
5	RAIN GUARD	1	2005937-2	2000848	2000848	K
6	MTG, BRKT, TOP/BTM, 3D	2	1228099	1224518	1224518	R, Y
7	MTG, BRKT, SIDE, 3D	2	1228105	1228105	1224509	R, Y
8	SUPPORT BRACKET	1	1143486	1143486	1143486	
9	LENS, DISPLAY-CLEAR	1	1121103-1	1121103-1	1121103-1	
10	COVER, DBV (OPTIONAL)	1	1144557	1144557	1144557	S
11	COIN RETURN BUTTON	1	1050473	1050473	1050473	
12	DOOR GUARD	1	2010131	2010131	2009503	R, Y
13	DOOR ROLLER	1	1120388	1120388	1120388	A, J
14	DOOR ROLLER BRACKET	1	1239376	1239376	1239376	A, K
15	BUSHING HINGE	2	388094	388094	388094	
16	BRKT, SELECTION BUTTON SUPT.	1	~	1220009	1220009	
17	SELECTION SWITCH	AR	368299	368299	368299	
18	HOLDER, SELECTION SWITCH	AR	1149385	1149385	1149385	
19	PLASTIC NUT	AR	1073538	1073538	1073538	
20	PLASTIC WASHER	AR	1073511	1073511	1073511	
21	BUTTON ASY, ROUND	AR	1149374	1149374	1149374	

* NOTE: WHEN ORDERING DOOR ASSEMBLY, PLEASE PROVIDE 9-CODE OR 11-CODE AND MANUFACTURERS DATE CODE.

** NOTE: PART NUMBER AND/OR QUANTITY IS CONFIGURATION DEPENDENT. CONTACT CUSTOMER SERVICE FOR ASSISTANCE.
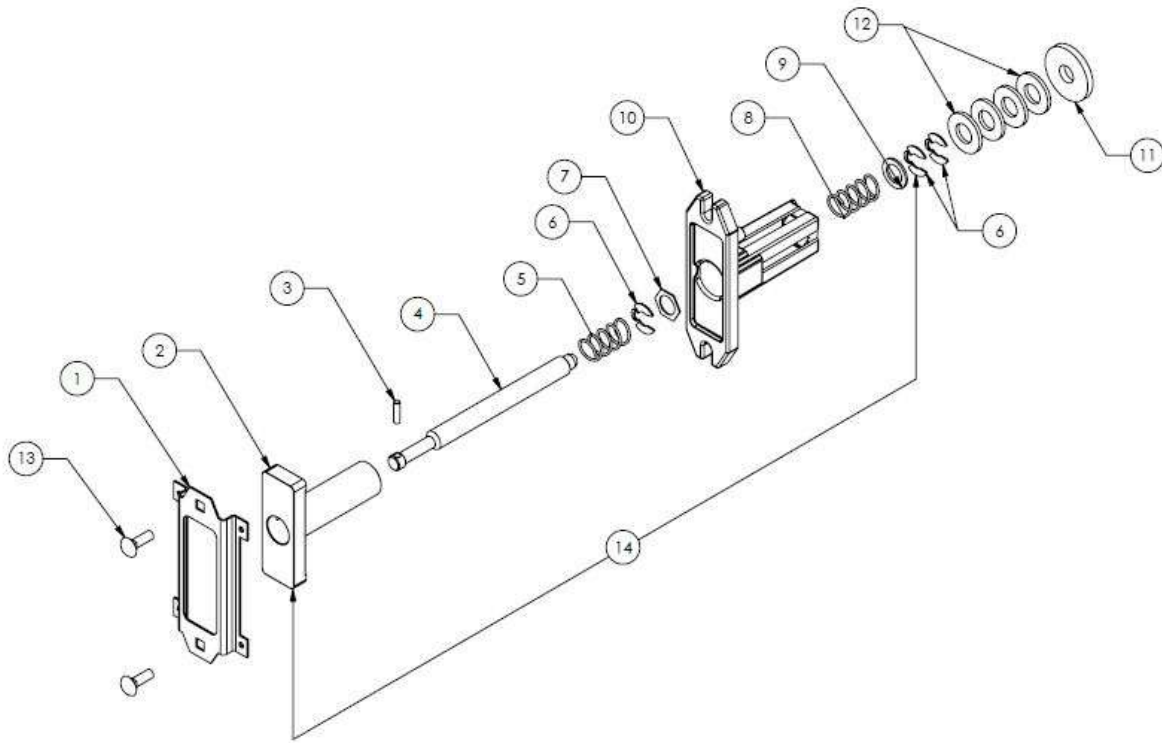
CHAMELEON TRADE LOCK ASSEMBLY

ITEM NO.	DESCRIPTION	QTY REQ	PART NO.
1	BRKT, SECURITY, LOCK	1	1143402
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	FLAT WASHER	1	387718
10	T-HANDLE - FLANGE	1	1002384
11	VAPOR SEAL	1	388132
12	WASHER 1/2"	4	V801023
13	1/4" X 3/4" CARRIAGE BOLT	1	V801434

| 14 | T - HANDLE ASSY. | 1 | 1002635 |

V21 ADA CHAMELEON INNER DOOR

ITEM NO.	MODEL NUMBER		621	721	821
	DESCRIPTION	QTY REQ	PART NO.	PART NO.	PART NO.
1	INNER DOOR ASSEMBLY	1	134302-162	134302-160	134302-161
2	RAIN SEAL, INNER DOOR, 7"	1	1111732-2	1111732-2	1111732-2
3	INNER DOOR SEAL	1	1075678-2	1075678	1075678-1
4	UPPER PRODUCT RETAINER ASSEMBLY	1	1251228-2	1251228	1251228-1
5	INNER DOOR HINGE, FEMALE	2	1121286	1121286	1121286
6	HINGE PIN	1	1172323	1172323	1172323
7	REVERSABLE VEND FLAP	1	1013076	1013076	1013076
8	INNER DOOR LATCH BRACKET	1	387273	1121712	387273
9	INNER DOOR LATCH	1	388090	1121711	388090
10	GROMMET	1	1121711	388090	1121711
11	INNER DOOR EYELET	1	1121712	387273	1121712

FOR A COMPLETE LIST OF HARNESSES, PLEASE SEE PAGE C-18, C-19.

V21 ADA CHAMELEON INNER DOOR LABELS - NOT SHOWN

MODEL NUMBER		621 / 721 / 821
DESCRIPTION	QTY REQ	PART NO.
ERROR CODE LABEL, VEC 12.1	1	1170775
PROGRAMMING LABEL, VEC 12.1	1	1193696
WIRING DIAGRAM LABEL, VEC 12.1/12.2	1	1127542
PRODUCT SET UP, V21	1	1126121
SPACE TO SALES, VEC 12.1	1	1188767
INNER DOOR LABEL (WARNING)	1	1208597

DOOR PARTS
CHAMELEON
LIVE DISPLAY
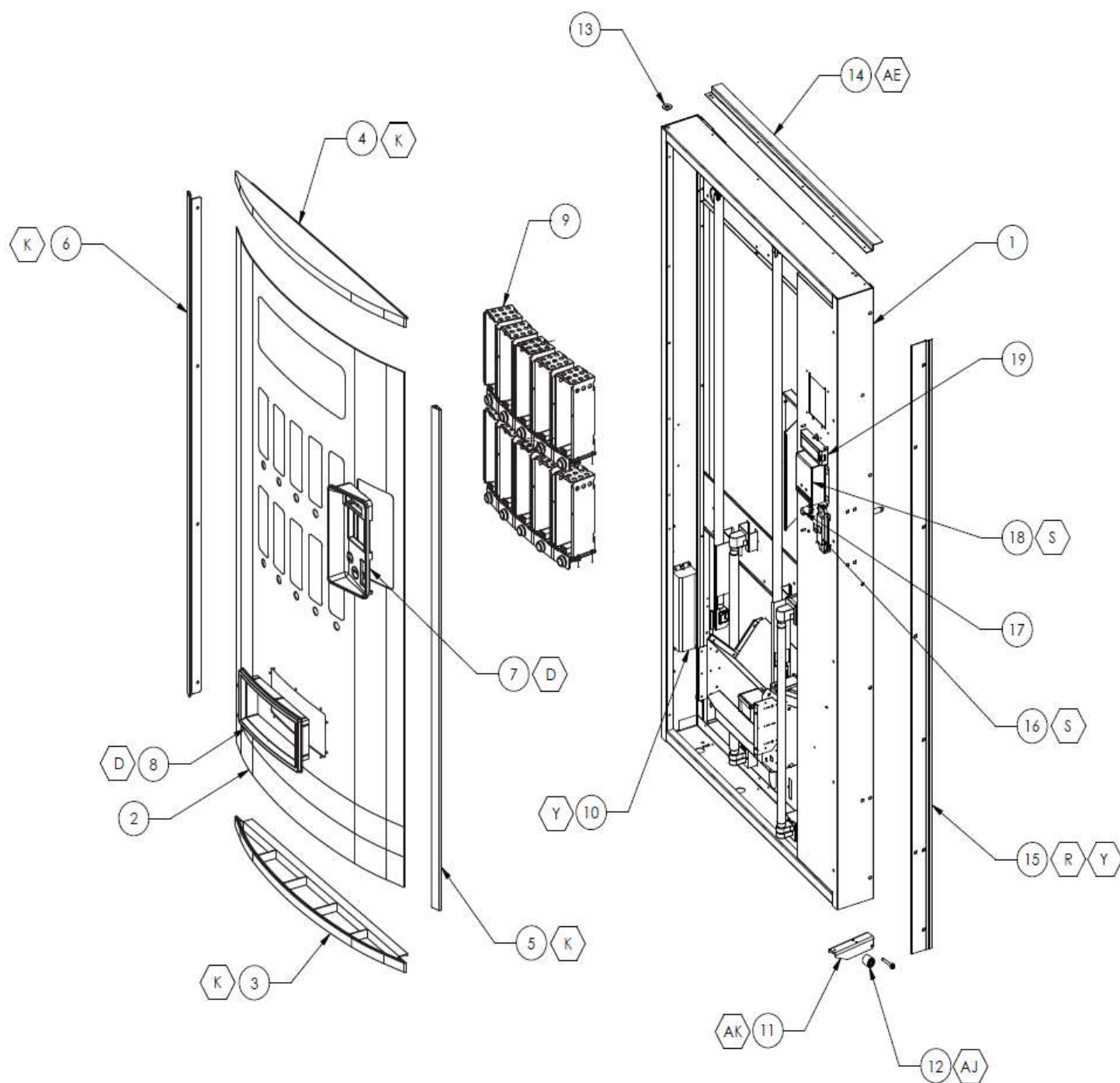
CHAMELEON LIVE DISPLAY DOOR

CHAMELEON LIVE DISPLAY DOOR

ITEM NO.	MODEL NUMBER		721	821	HARDWARE
	DESCRIPTION	QTY REQ	PART NO.	PART NO.	
1	DOOR WELD	1	1123712	1123713	
2	SIGN FACE	1	**	**	
3	SIGN CAP, BOTTOM	1	1114341-1	1114341-1	K
4	SIGN CAP, TOP	1	1114341	1114341	K
5	SIGN TRIM, VTL, RIGHT, 72"	1	1143505	1143505-1	K
6	SIGN TRIM, VTL, LEFT, 72"	1	1143516	1143516-1	K
7	BEZEL, CONSUMER INTERFACE	1	1143346	1143346	D
8	TRIM EYELET, CURVE	1	388271	388271	D
9	LIVE DISPLAY ASY (SEE PG 6)	2	~	~	
10	BALLAST	1	1127052	1127052	Y
11	DOOR ROLLER BRACKET	1	1239376	1239376	V802196
12	DOOR ROLLER	1	1120388	1120388	V802162
13	BUSHING HINGE	1	388094	388094	
14	RAIN GUARD	1	2000848	2000848	AE
15	DOOR GUARD	1	2010131	2009503	R,Y
16	LOCK ASSEMBLY (SEE PG 7)	1	~	~	
17	COIN RETURN BUTTON	1	1050473	1050473	
18	COVER, DBV (OPTIONAL)	1	1144557	1144557	S
19	LENS, DISPLAY-BLUE	1	1121103	1121103	
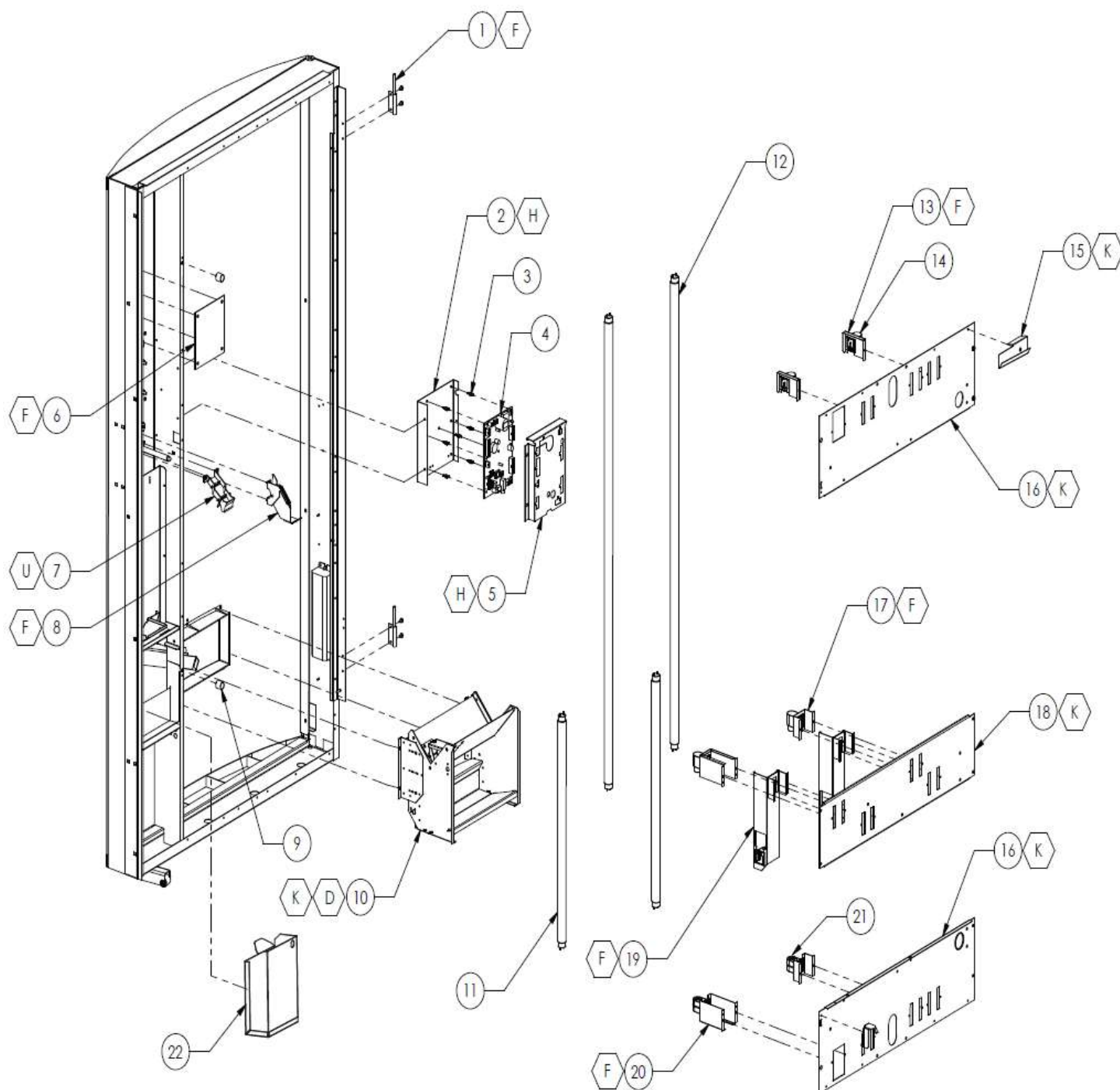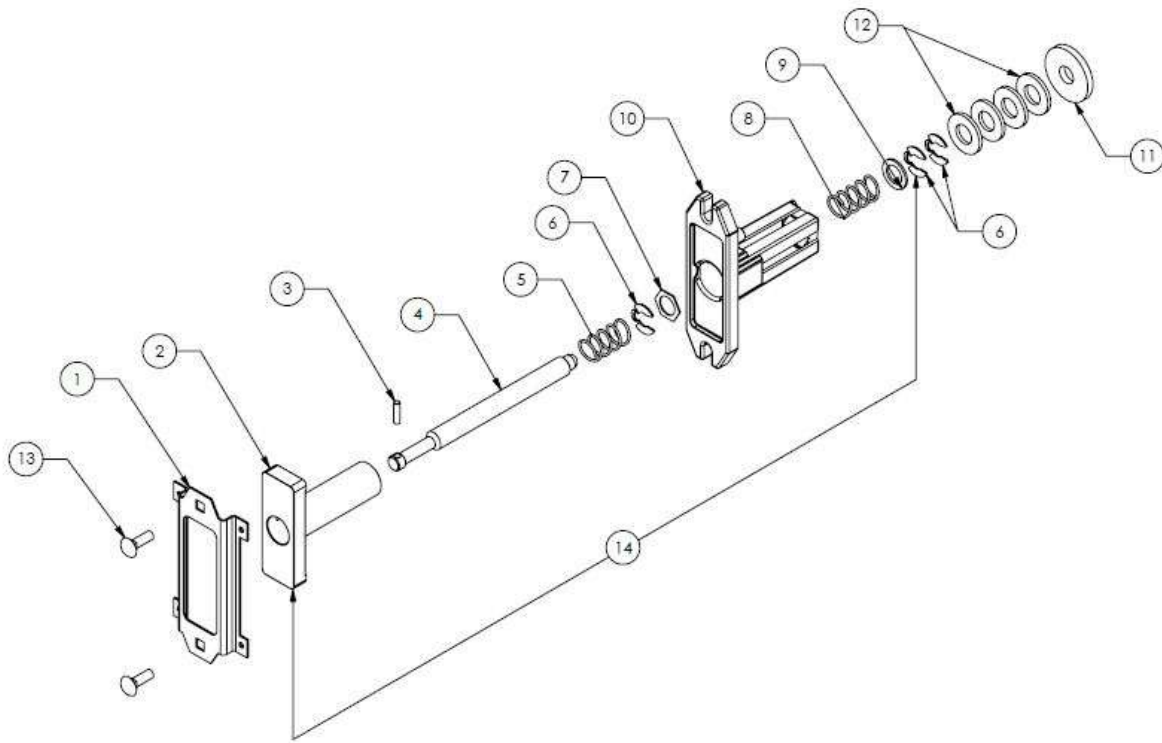
CHAMELEON TRADE DOOR (CONTINUED)

ITEM NO.	MODEL NUMBER		721	821	HARDWARE
	DESCRIPTION	QTY REQ	PART NO.	PART NO.	
1	HINGE – INNER DOOR, MALE	2	1121287	1121287	F
2	MOUNTING BRACKET - CONTROLLER	1	1077716	1077716	H
3	STAND OFF	7	1121740	1121740	
4	PCBA VEC 12.4 CONTROLLER	1	1167867-XX	1167867-XX	
5	PCBA COVER PANEL	1	1123049	1123049	H
6	PLATE, DBV PLUG, UPPER	1	1143498	1143498	F
7	COIN INSERT CHUTE	1	1121066	1121066	U
8	ASY,COIN RETURN LEVER	1	1182651	1182651	F
9	DOOR BUMPER	2	1036912	1036912	
10	DELIVERY HOPPER ASSEMBLY	1	1149325	1149325	D,K
11	LAMP – 17W T-8, 24"	2	1130637	1130637	
	LAMP, LED, 24"	2	1237136	1237136	
12	LAMP – 32W T-8, 48"	2	1130637-2	1130637-2	
	LAMP, LED, 48"	2	1237136-1	1237136-1	
13	BKT, LIGHT, UPPER	2	1150387	~	
14	BULB, HOLDER, PLUNGER	4	1151265	1151265	
15	RAIN GUTTER	1	1121204	1121204	K
16	PNL, SHR, LWR, 39" 4-BLB	1	1238949	1238949	K
	PNL, SHR, LWR, 39" 4-BLB	1	1238868	1238868	
17	LAMP BRACKET LOWER PROFILE	4	1151367	1151367	F
18	PNL, SHR, MIDDLE	1	1122308	1122308	
19	LAMP EXTENSION BRACKET	2	1150259	~	
20	BRKT, LAMP, HO, EXT	2	1143528	1143528	
21	BULB HOLDER, FIXED	4	1151253	1151253	
22	COIN BOX	1	1088058	1088058	
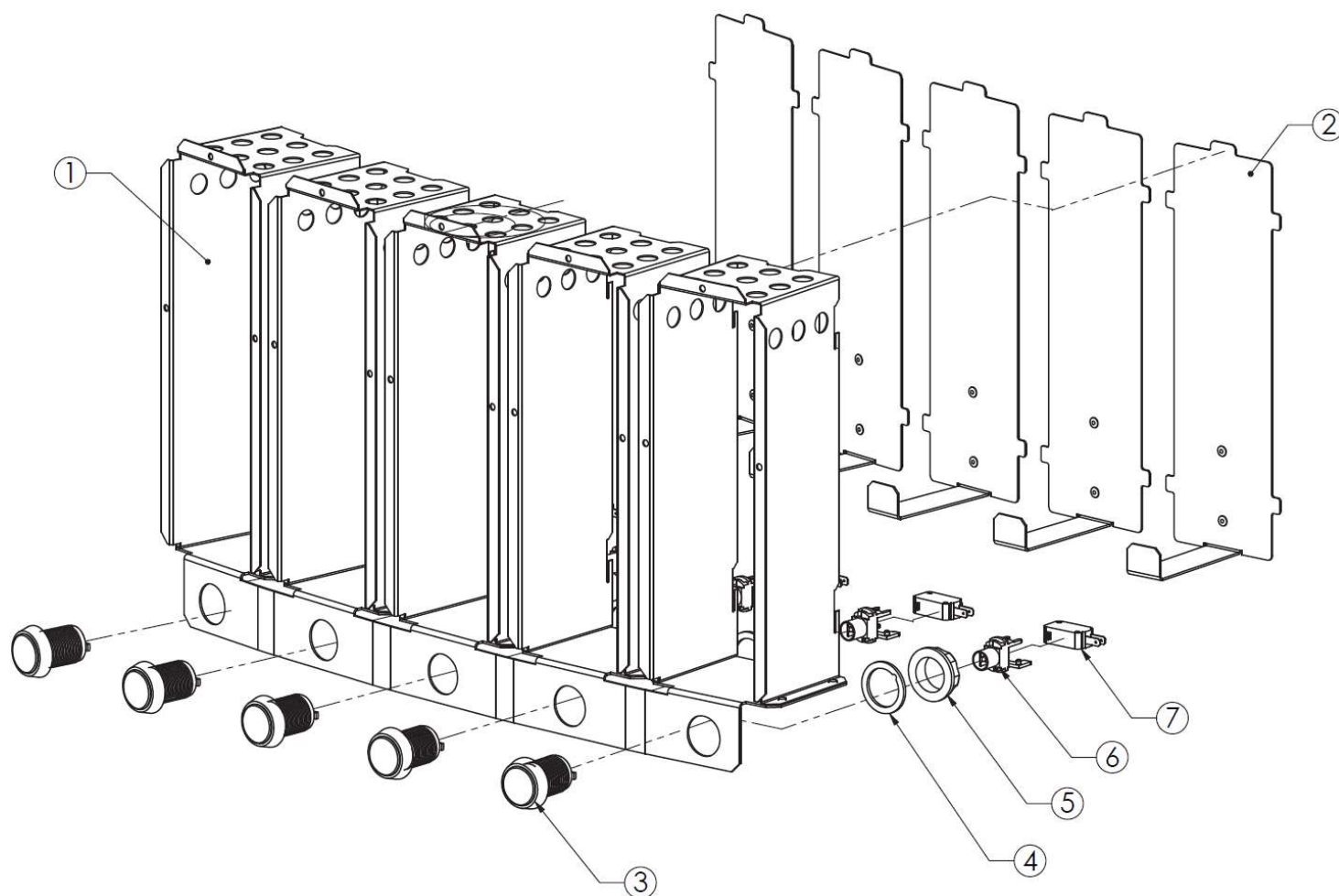
CHAMELEON LIVE DISPLAY ASSEMBLY

ITEM NO.	DESCRIPTION	QTY REQ	PART NO.
1	FRAME ASSEMBLY	1	1147716
2	BACK ASSEMBLY	5	1147728
3	BUTTON, ROUND	5	1149374
4	WASHER, PLASTIC	5	1073511
5	NUT, PLASTIC	5	1073538
6	HOLDER, SELECTION SWITCH	5	1149385
7	SELECTION SWITCH	5	368299

CHAMELEON LIVE DISPLAY LOCK ASSEMBLY

ITEM NO.	DESCRIPTION	QTY REQ	PART NO.
1	BRKT, SECURITY, LOCK	1	1143402
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	FLAT WASHER	1	387718
10	T-HANDLE - FLANGE	1	1002384
11	VAPOR SEAL	1	388132
12	WASHER 1/2"	4	V801023
13	1/4" X 3/4" CARRIAGE BOLT	1	V801434
14	T - HANDLE ASSY.	1	1002635

V21 ADA CHAMELEON INNER DOOR

ITEM NO.	MODEL NUMBER		721
	DESCRIPTION	QTY REQ	PART NO.
1	INNER DOOR ASSEMBLY	1	134302-174
2	RAIN SEAL, INNER DOOR, 7"	1	1111732-2
3	INNER DOOR SEAL	1	1075678
4	UPPER PRODUCT RETAINER ASSEMBLY	1	1251228-2
5	INNER DOOR HINGE, FEMALE	2	1121286
6	HINGE PIN	1	1172323
7	REVERSABLE VEND FLAP	1	1013076
8	INNER DOOR LATCH BRACKET	1	1121712
9	INNER DOOR LATCH	1	1121711
10	GROMMET	1	388090
11	INNER DOOR EYELET	1	387273

FOR A COMPLETE LIST OF HARNESSES, PLEASE SEE PAGE C-17.

V21 ADA CHAMELEON INNER DOOR LABELS - NOT SHOWN

DESCRIPTION	QTY REQ	PART NO.
ERROR CODE LABEL, VEC 12.1	1	1123715
PROGRAMMING LABEL, VEC 12.1	1	1123343
WIRING DIAGRAM LABEL, VEC 12.1/12.2	1	1127542
PRODUCT SET UP, V21	1	1126121
SPACE TO SALES, VEC 12.1	1	1128991
INNER DOOR LABEL (WARNING)	1	1208597

DOOR PARTS
TRADE

V21 TRADE OUTER DOOR – CURVED

ITEM NO.	MODEL NUMBER		721	821
	DESCRIPTION	QTY REQ	PART NO.	PART NO.
*1	OUTER DOOR ASSEMBLY	1	1148435-007	1148435-008
2	SIGN CAP – TOP	1	1014986	1014986
**3	SIGN FACE	1	**	**
4	BUSHING HINGE	2	388094	388094
5	FLAT WASHER 3/8" – BOTTOM	2	V801491	V801491
6	SIGN TRIM – LEFT AND RIGHT	2	388125-2B	388125B
7	SIGN CAP – BOTTOM	1	1068988	1068988
8	EYELET TRIM	1	388271	388271
9	COIN RETURN CUP	1	1079546	1079546
10	DBV PLUG GATE	1	1089597	1089597
11	DRAIN TUBE	1	1110619	1110619
12	WATER COLLECTION PLATE	1	1110562	1110562
13	DBV PLUG PLATE – UPPER	1	1089597	1089597
14	DBV MOUNT PLATE – UPPER	1	1089619	1089619
15	DOOR GUARD	1	2010131	2009503
16	RAIN GUARD	1	2000848	2000848
17	LOCK ASSEMBLY (SEE PAGE TD-8 – TD-9)	1	~	~
18	SELECTION PANEL (SEE PAGE TD-10 – TD-11)	1	~	~
19	DBV GASKET – LOWER	1	1086759	1086759
20	DBV GASKET – UPPER	1	1120606	1120606
21	DOOR ROLLER BRACKET	1	1239376	1239376
22	DOOR ROLLER	1	1120388	1120388
23	ANTI-VANDAL HOPPER	1	1124314	1124314

FOR A COMPLETE LIST OF HARNESSES, PLEASE SEE PAGE C-15.

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

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

V21 TRADE OUTER DOOR – 2 BULB LIGHTING

ITEM NO.	MODEL NUMBER		621	721	821
	DESCRIPTION	QTY REQ	PART NO.	PART NO.	PART NO.
1	DOOR WELD – BLACK	1	1121232	1123712	1123713
2	HINGE – INNER DOOR, MALE	2	1121287	1121287	1121287
3	MOUNTING BRACKET - CONTROLLER	1	1124704	1124704	1124704
4	STAND OFF	7	1121740	1121740	1121740
5	PCBA VEC 12.1 CONTROLLER	1	1123051-12.1	1123051-12.1	1123051-12.1
6	COVER PANEL	1	1123049	1123049	1123049
7	COIN DOOR ASSEMBLY	1	1081155	1081155	1081155
8	LATCH – COINAGE DOOR	1	1085546	1085546	1085546
9	BARRIER PANEL	1	1148198	1148198	1148198
10	BULKHEAD COIN BOX SUPPORT	1	1197689	1197689	1200135
11	SHEAR PANEL – MIDDLE (FLAT DOOR) – (NP)	1	1120713	1120713	~
12	DOOR BUMPER	2	1036912	1036912	1036912
13	RAMP/CATCH – INNER DOOR	1	1121714	1121714	1121714
14	COIN BOX ASSEMBLY	1	1088058	1088058	1088058
15	BALLAST, 2-3 LAMP, 120/277V, 50/60HZ	1	1127582	1127582	1127582
16	SHEAR PANEL – LOWER	1	~	1123915	1238949
	SHEAR PANEL – UPPER	1		1241672	1238868
17	HARNESS TIE	3	1088864	1088864	1088864
18	LAMP HOLDER - FIXED, MEDIUM BI-PIN	2	1151253	1151253	1151253
19	RAIN GUTTER	1	1121204	1121204	1121204
20	LAMP HOLDER - PLUNGER, MEDIUM BI-PIN	2	1151265	1151265	1151265
21	BRACKET - LAMPHOLDER	4	1122305	1122305	1122305
22	LAMP T8,40W,5 FT	2	1130637-3	1130637-3	1130637-3
	LAMP, LED, 5 FT	2	1237136-2	1237136-2	1237136-2
23	DOOR HARNESS	1	1122905	1122905	1122905
24	RAIN CURTAIN, BALLAST - (NP)	1	1121838-1	1121838-1	1121838-1
25*	RAIN CURTAIN, LIGHTS - (NP)	2	1121838	1121838	1121838
26	MDB HARNESS - (NP)	1	1124570	1124570	1124570
27	LABEL, CAUTION, T-8 LAMPS ONLY	1	1122973	1122973	1122973
28	GROMMET	1	388090	388090	388090
29*	BALLAST, 230V, 50HZ - (NP)	1	1121313	1121313	1121313
30	SHEAR PANEL, LWR (621 FLAT DOOR) - (NP)	1	1123925	~	~
31	SHEAR PANEL, UPR (621 FLAT DOOR) - (NP)	1	1123669	~	~

NOTE: FOR A COMPLETE LIST OF HARNESSES, PLEASE SEE PAGE C-15.

NOTE: (NP) – NOT PICTURED

*EARLY PRODUCTION AND INTERNATIONAL UNITS (PRE-2011)

V21 ADA TRADE OUTER DOOR - 4 BULB LIGHTING

ITEM NO.	MODEL NUMBER		621	721	821
	DESCRIPTION	**QTY REQ**	**PART NO.**	**PART NO.**	**PART NO.**
1	DOOR WELD - BLACK	1	1121232	1123712	1123713
2	HINGE - INNER DOOR, MALE	2	1121287	1121287	1121287
3	MOUNTING BRACKET - CONTROLLER	1	1124704	1124704	1124704
4	STAND OFF	7	1121740	1121740	1121740
5	PCBA VEC 12.1 CONTROLLER	1	1123051-12.1	1123051-12.1	1123051-12.1
6	COVER PANEL	1	1123049	1123049	1123049
7	COIN DOOR ASSEMBLY	1	1081155	1081155	1081155
8	LATCH - COINAGE DOOR	1	1085546	1085546	1085546
9	BARRIER PANEL	1	1148198	1148198	1148198
10	BULKHEAD COIN BOX SUPPORT	1	1197689	1197689	1200135
11	SHEAR PANEL - MIDDLE (FLAT DOOR) - (NP)	1	1120713	1120713	~
	SHEAR PANEL - MIDDLE, 4-BULB T-8	1	~	1122308	1122308
12	DOOR BUMPER	2	1036912	1036912	1036912
13	RAMP/CATCH - INNER DOOR	1	1121714	1121714	1121714
14	COIN BOX ASSEMBLY	1	1088058	1088058	1088058
15	BALLAST, 3-4 LAMP, 120/277V, 50/60HZ	1	1127052	1127052	1127582
16	SHEAR PANEL – LOWER	1	~	1123915	1238949
	SHEAR PANEL – UPPER	1		1241672	1238868
17	HARNESS TIE	3	1088864	1088864	1088864
18	LAMP HOLDER - FIXED, MEDIUM BI-PIN	4	1151253	1151253	1151253
19	RAIN GUTTER	1	1121204	1121204	1121204
20	LAMP HOLDER - PLUNGER, MEDIUM BI-PIN	4	1151265	1151265	1151265
21	BRACKET - LAMPHOLDER	8	1122305	1122305	1122305
22	LAMP - 17W T-8, 24"	2	~	1130637	1130637
	LAMP, LED. 24"	2	~	1217228	1217228
23	LAMP - 32W T-8, 48"	2	~	1121173-2	1121173-2
	LAMP, LED, 48"	2	~	1217228-1	1217228-1
24	DOOR HARNESS	1	1122905	1122905	1122905
25*	RAIN COVER BRACKET, BALLAST	1	1125150	1125150	1125150
26	RAIN CURTAIN, LIGHTS - (NP)	2	1121838	1121838	1121838
27	MDB HARNESS - (NP)	1	1124570	1124570	1124570
28	LABEL, CAUTION, T-8 LAMPS ONLY	1	1122973	1122973	1122973
29*	GROMMET	1	388090	388090	388090
30	BALLAST, 230V, 50HZ - (NP)	1	1121313	1121313	1121313
31	SHEAR PANEL, LWR (621 FLAT DOOR) - (NP)	1	1123925	~	~
32	SHEAR PANEL, UPR (621 FLAT DOOR) - (NP)	1	1123669	~	~

NOTE: FOR A COMPLETE LIST OF HARNESSES, PLEASE SEE PAGE C-15.

NOTE: (NP) – NOT PICTURED

*EARLY PRODUCTION AND INTERNATIONAL UNITS (PRE-2011)

V21 TRADE OUTER DOOR (FLAT)

ITEM NO.	MODEL NUMBER	QTY REQ	621	721
	DESCRIPTION		PART NO.	PART NO.
1	OUTER DOOR ASSEMBLY	1	*	*
2	SIGN TRIM - TOP/BOTTOM	2	388284-20	388284-21
3**	SIGN FACE	1	**	**
4	BUSHING HINGE	2	388094	388094
5	FLAT WASHER - BOTTOM	2	V801491	V801491
6	SIGN TRIM - SIDE	1	388284-1B	388284-1B
7	EYELET TRIM	1	387125	1124071
8	COIN RETURN CUP ASSEMBLY	1	1079546	1079546
9	DRAIN TUBE	1	1110619	1110619
10	WATER COLLECTION TRAY	1	1110562	1110562
11	DBV PLUG - LOWER	1	1089597	1089597
12	DBV MOUNT PLATE - UPPER	1	1089619	1089619
13	DBV PLUG PLATE - UPPER	1	1089597	1089597
14	RETAINER - SIGN FACE	1	1087988	1087988
15	DOOR GUARD	1	2010131	2010131
16	RAIN GUARD	1	2000848	2005937-2
17	LOCK ASSEMBLY (REFER TO TD-14 - TD-15)	1	~	~
18	SELECTION PANEL (REFER TO TD-16 - TD-17)	1	~	~
19	DBV GASKET - UPPER	1	1120606	1120606
20	DBV GASKET - LOWER	1	1086759	1086759
21	ANTI-VANDAL HOPPER	1	1124157	1124157

*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**.

V21 TRADE 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	FLAT WASHER	1	387718
10	FLANGE	1	1002384
11	VAPOR SEAL	1	388132
12	WASHER 1/2	2	V801023
13	LEVER - COIN RETURN	1	1052619
14	CRANK - COIN RETURN LEVER	1	1002244
15	PIVOT BRACKET - COIN RETURN	1	1002252
16	BUSHING	2	385603-4
17	SPRING - COIN RETURN LEVER	1	1060023

FOR A COMPLETE LIST OF HARNESSES, PLEASE SEE PAGE C-15.

V21 TRADE SELECTION PANEL

ITEM NO.	MODEL NUMBER	621		721/821	
	DESCRIPTION	QTY REQ	PART NO.	QTY REQ	PART NO.
1	SELECTION PANEL ASSEMBLY-TRADE CURVE/FLAT (10/8 SELECT)	1	2007325-013	1	2007325-011
2	SELLECTION WINDOW & BUTTON ASSEMBLY	8	1036203	10	1036203
3	SELECTION WINDOW ASSEMBLY	8	133431	10	133431
4	SELECTION WINDOW	8	388223	10	388223
5	SELECTION WINDOW - BACK	8	388116	10	388116
6	SELECTION BUTTON	8	1116775	10	1116775
7	SELECTION SPRING	8	388858	10	388858
8	BUTTON HOUSING	8	1006932	10	1006932
9	SELECTION SWITCH	8	368299	10	368299
10	SOLD-OUT PLUG	8	1006975-1	10	1006975-1
11	SELECTION PANEL	1	2010183	1	2010158
12	SELECTION HARNESS	1	1117872	1	1111287
13	DISPLAY HARNESS	1	1126164	1	1126164
14	COIN RETURN BUTTON	1	1050473	1	1050473
15	COIN INSERT/RETURN GUIDE PLATE	1	2001481	1	2001481
16	DISPLAY LENS	1	1141039	1	1141039
17	DIGITAL DISPLAY PCB - ELECTRONIC	1	1132544	1	1132544
18	COIN CHUTE ASSEMBLY	1	1034154	1	1034154
19	COIN CHUTE	1	1002333	1	1002333
20	CHUTE COVER	1	1002341	1	1002341
21*	COIN INSERT PLATE	1	--	1	--
22	COIN INSERT SECURITY PLATE	1	2001481	1	2001481

FOR A COMPLETE LIST OF HARNESSES, PLEASE SEE PAGE C-15.

* NOTE: WHEN ORDERING COIN INSERT PLATE, PLEASE SPECIFY **STYLE**.
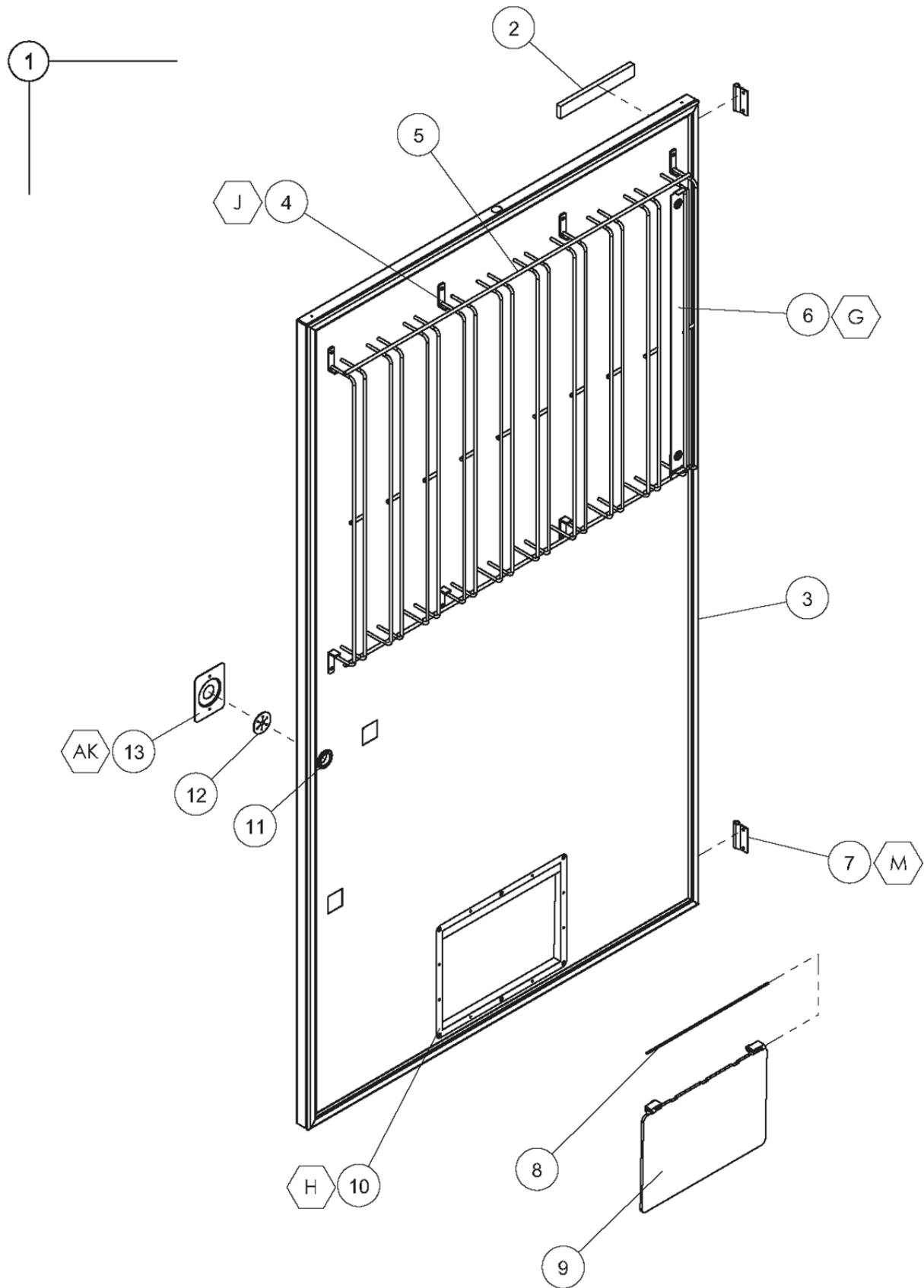
V21 TRADE INNER DOOR

ITEM NO.	MODEL NUMBER		621	721	821
	DESCRIPTION	QTY REQ	PART NO.	PART NO.	PART NO.
1	INNER DOOR ASSEMBLY	1	134302-115	134302-103	134302-104
2	RAIN SEAL, INNER DOOR, 7"	1	1111732-2	1111732-2	1111732-2
3	INNER DOOR SEAL	1	1075678-2	1075678	1075678-1
4	UPPER PRODUCT RETAINER ASSEMBLY	1	1185792	1185792-1	1185792-2
5	UPPER PRODUCT RETAINER	1	1185778	1181827	1181827-1
6	LONG CLIP RETAINER	1	1125202	1125202	1125202-1
7	INNER DOOR HINGE, FEMALE	2	1121286	1121286	1121286
8	HINGE PIN	1	389192	389192	389192
9	REVERSABLE VEND FLAP	1	1013076	1013076	1013076
10	INNER DOOR EYELET	1	387273	387273	387273
11	GROMMET	1	388090	388090	388090
12	INNER DOOR LATCH	1	1121711	1121711	1121711
13	INNER DOOR LATCH BRACKET	1	1121712	1121712	1121712

FOR A COMPLETE LIST OF HARNESSES, PLEASE SEE PAGE C-15.

V21 TRADE INNER DOOR LABELS - NOT SHOWN

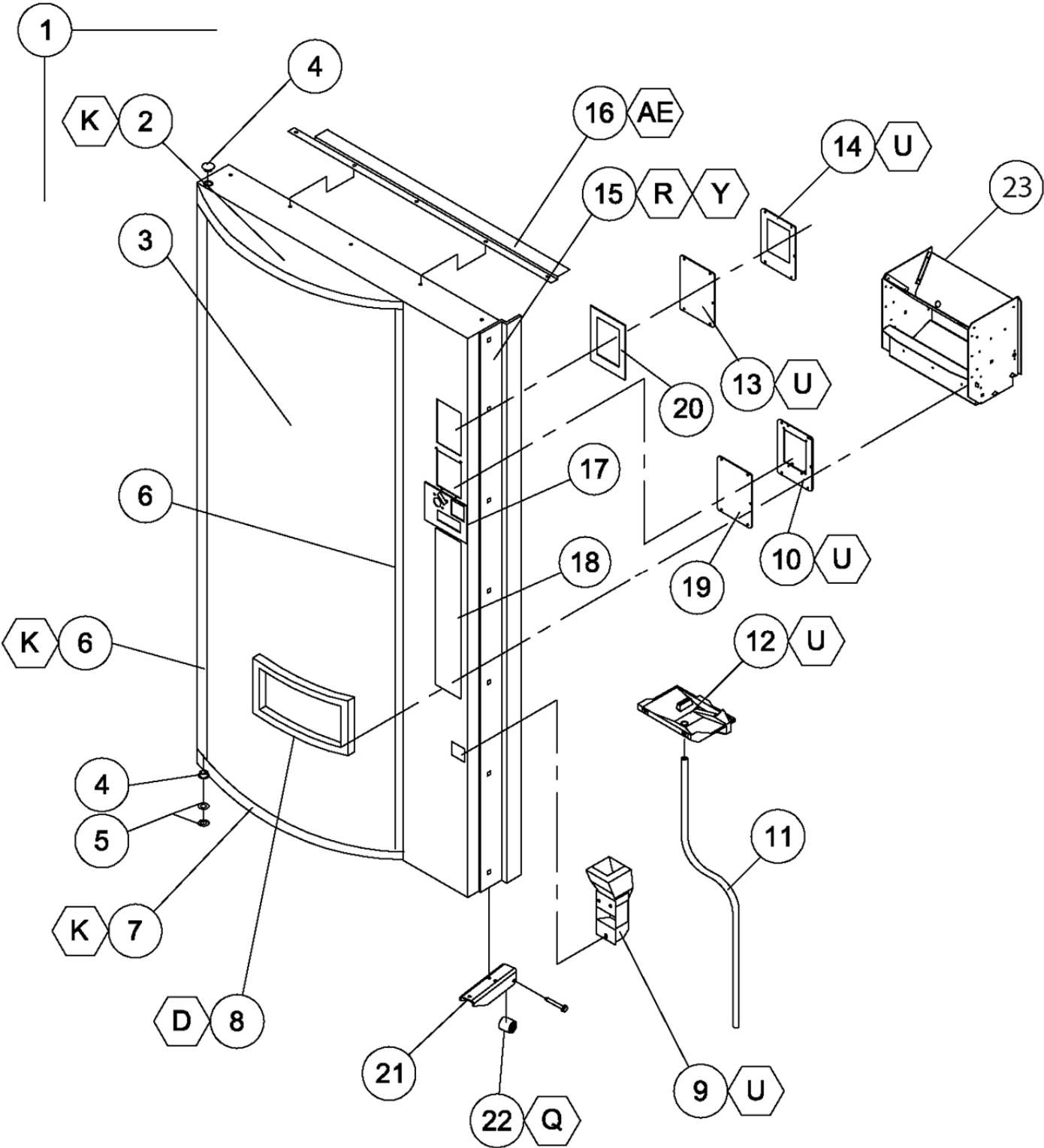| MODEL NUMBER		621 / 721 / 821
DESCRIPTION	QTY REQ	PART NO.
ERROR CODE LABEL, VEC 12.1	1	1123715
PROGRAMMING LABEL, VEC 12.1	1	1123343
WIRING DIAGRAM LABEL, VEC 12.1/12.2	1	1127542
PRODUCT SET UP, V21	1	1126121
SPACE TO SALES, VEC 12.1	1	1128991
INNER DOOR LABEL	1	1125783-1

DOOR PARTS
TRADE ADA

V21 ADA TRADE OUTER DOOR – CURVED

ITEM NO.	MODEL NUMBER		721	821
	DESCRIPTION	QTY REQ	PART NO.	PART NO.
*1	OUTER DOOR ASSEMBLY	1	2010187-319	2010187-320
2	SIGN CAP – TOP	1	1014986	1014986
**3	SIGN FACE	1	**	**
4	BUSHING HINGE	2	388094	388094
5	FLAT WASHER 3/8" – BOTTOM	2	V801491	V801491
6	SIGN TRIM – LEFT AND RIGHT	2	388125-2B	388125B
7	SIGN CAP – BOTTOM	1	1068988	1068988
8	EYELET TRIM	1	388271	388271
9	COIN RETURN CUP	1	1079546	1079546
10	DBV PLUG GATE	1	1207234	1207234
11	DRAIN TUBE	1	1110619	1110619
12	WATER COLLECTION PLATE	1	1110562	1110562
13	DBV PLUG PLATE – UPPER	1	1089619	1089619
14	DBV MOUNT PLATE – UPPER	1	1089619	1089619
15	DOOR GUARD	1	2010131	2009503
16	RAIN GUARD	1	2000848	2000848
17	LOCK ASSEMBLY (SEE PAGE TD-8 – TD-9)	1	~	~
18	SELECTION PANEL (SEE PAGE TD-10 – TD-11)	1	~	~
19	DBV GASKET – LOWER	1	1086759	1086759
20	DBV GASKET – UPPER	1	1120606	1120606
21	DOOR ROLLER BRACKET	1	1239376	1239376
22	DOOR ROLLER	1	1120388	1120388
23	ANTI-VANDAL HOPPER	1	1124314	1124314

FOR A COMPLETE LIST OF HARNESSES, PLEASE SEE PAGE C-15.

*NOTE: WHEN ORDERING OUTER DOOR ASSEMBLY, PLEASE PROVIDE **9-CODE** OR 1**1-CODE** AND **MANUFACTURER'S DATE CODE**.

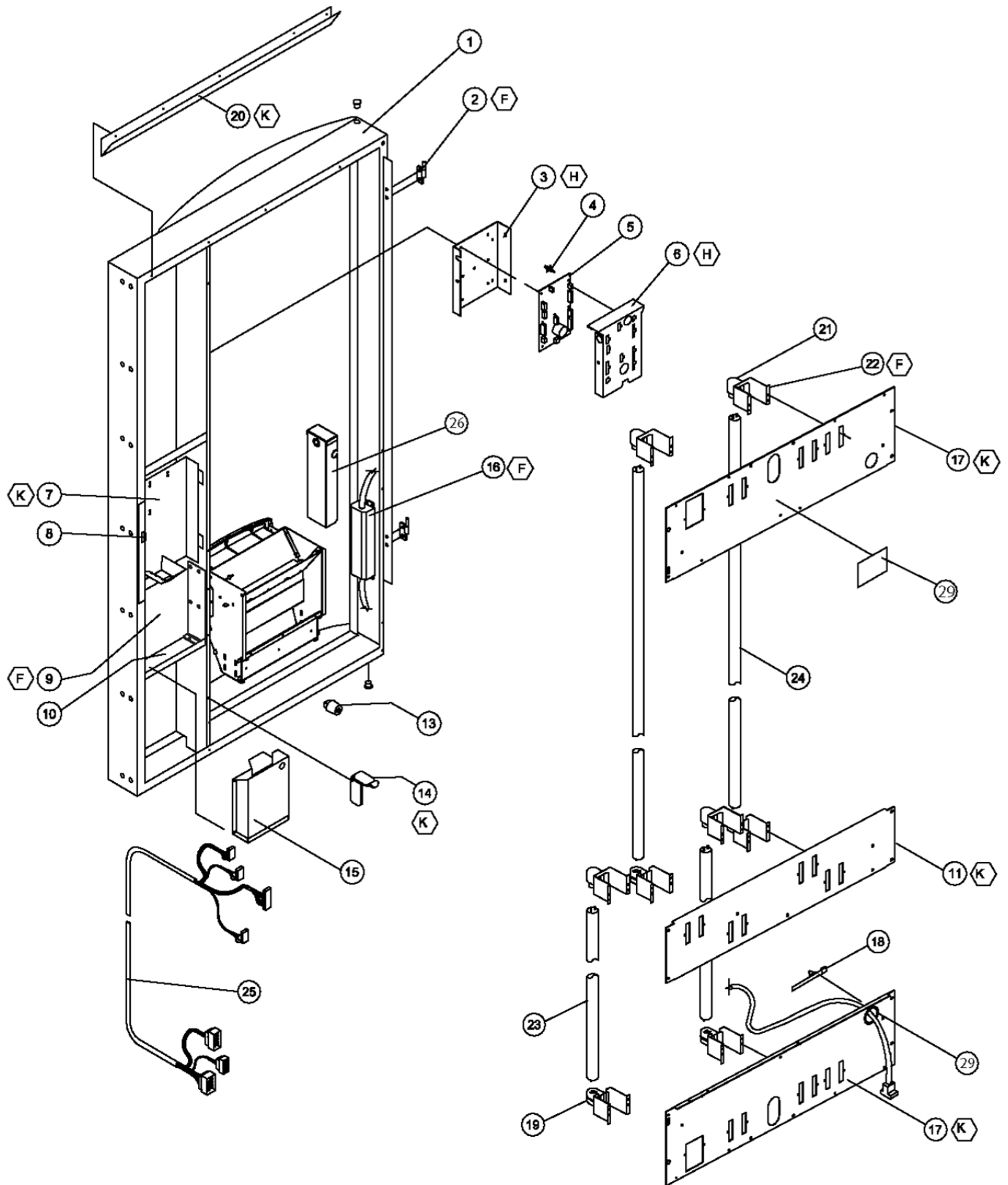**NOTE: WHEN ORDERING SIGN FACE, PLEASE PROVIDE **FRANCHISE** AND **STYLE**.

V21 ADA TRADE OUTER DOOR – 2 BULB LIGHTING

ITEM NO.	MODEL NUMBER		621	721	821
	DESCRIPTION	QTY REQ	PART NO.	PART NO.	PART NO.
1	DOOR WELD – BLACK	1	1197768	1197241	1197393
2	HINGE – INNER DOOR, MALE	2	1121287	1121287	1121287
3	MOUNTING BRACKET - CONTROLLER	1	1124704	1124704	1124704
4	STAND OFF	7	1121740	1121740	1121740
5	PCBA VEC 12.1 CONTROLLER	1	1123051-12.1	1123051-12.1	1123051-12.1
6	COVER PANEL	1	1123049	1123049	1123049
7	COIN DOOR ASSEMBLY	1	1081155	1081155	1081155
8	LATCH – COINAGE DOOR	1	1085546	1085546	1085546
9	BARRIER PANEL	1	1148198	1148198	1148198
10	BULKHEAD COIN BOX SUPPORT	1	1197689	1197689	1200135
11	SHEAR PANEL – MIDDLE (FLAT DOOR) – (NP)	1	1120713	1120713	~
12	DOOR BUMPER	2	1036912	1036912	1036912
13	RAMP/CATCH – INNER DOOR	1	1121714	1121714	1121714
14	COIN BOX ASSEMBLY	1	1088058	1088058	1088058
15	BALLAST, 2-3 LAMP, 120/277V, 50/60HZ	1	1127582	1127582	1127582
16	SHEAR PANEL – LOWER	1	~	1123915	1238949
	SHEAR PANEL – UPPER	1		1241672	1238868
17	HARNESS TIE	3	1088864	1088864	1088864
18	LAMP HOLDER - FIXED, MEDIUM BI-PIN	2	1151253	1151253	1151253
19	RAIN GUTTER	1	1121204	1121204	1121204
20	LAMP HOLDER - PLUNGER, MEDIUM BI-PIN	2	1151265	1151265	1151265
21	BRACKET - LAMPHOLDER	4	1122305	1122305	1122305
22	LAMP T8,40W,5 FT	2	1130637-3	1130637-3	1130637-3
	LAMP, LED, 5 FT	2	1237136-2	1237136-2	1237136-2
23	DOOR HARNESS	1	1122905	1122905	1122905
24	RAIN CURTAIN, BALLAST - (NP)	1	1121838-1	1121838-1	1121838-1
25*	RAIN CURTAIN, LIGHTS - (NP)	2	1121838	1121838	1121838
26	MDB HARNESS - (NP)	1	1124570	1124570	1124570
27	LABEL, CAUTION, T-8 LAMPS ONLY	1	1122973	1122973	1122973
28	GROMMET	1	388090	388090	388090
29*	BALLAST, 230V, 50HZ - (NP)	1	1121313	1121313	1121313
30	SHEAR PANEL, LWR (621 FLAT DOOR) - (NP)	1	1123925	~	~
31	SHEAR PANEL, UPR (621 FLAT DOOR) - (NP)	1	1123669	~	~

NOTE: FOR A COMPLETE LIST OF HARNESSES, PLEASE SEE PAGE C-15.

NOTE: (NP) – NOT PICTURED
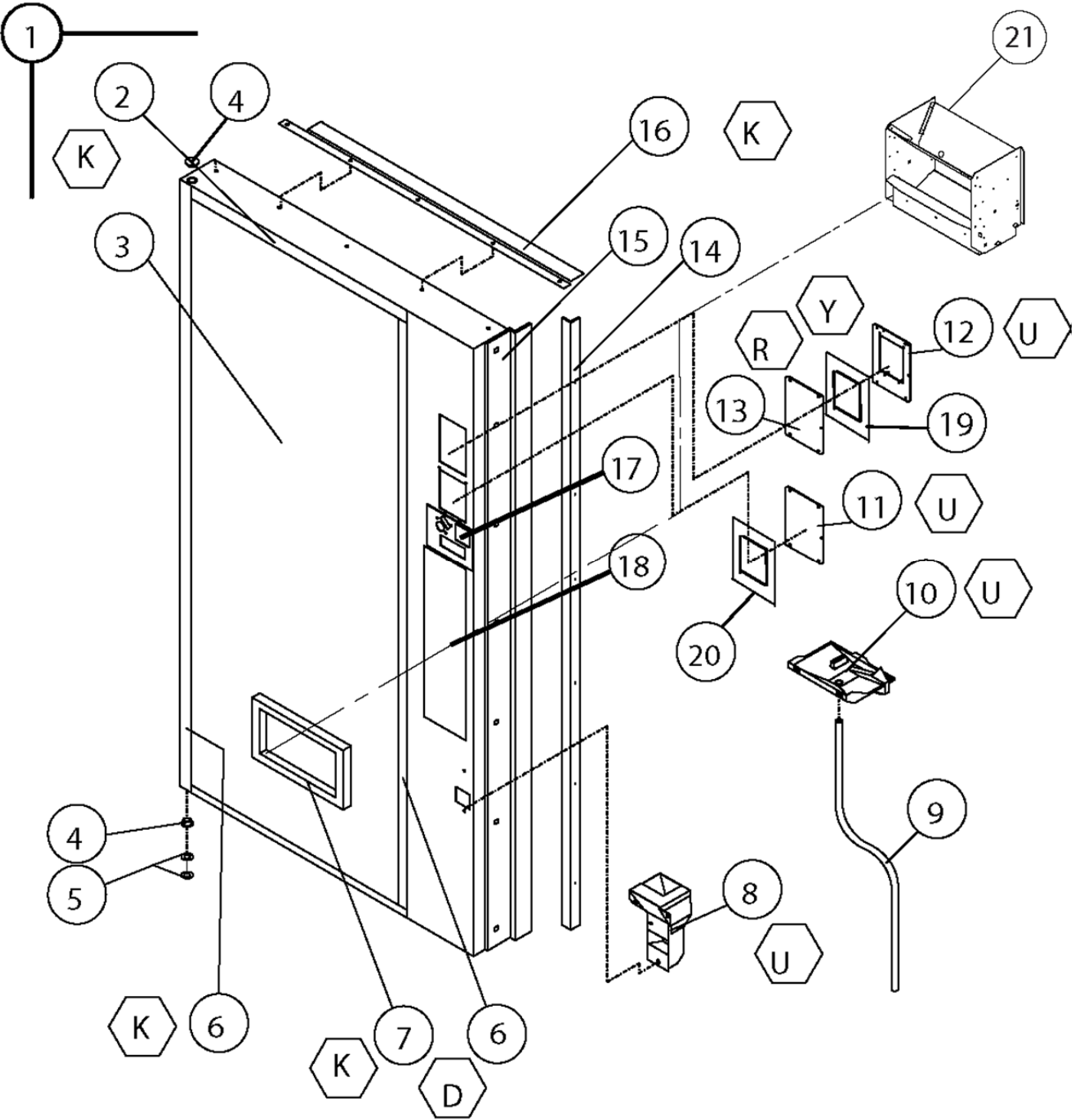
*EARLY PRODUCTION AND INTERNATIONAL UNITS (PRE-2011)

V21 TRADE OUTER DOOR - 4 BULB LIGHTING

ITEM NO.	MODEL NUMBER		621	721	821
	DESCRIPTION	QTY REQ	PART NO.	PART NO.	PART NO.
1	DOOR WELD - BLACK	1	1197768	1197241	1197393
2	HINGE - INNER DOOR, MALE	2	1121287	1121287	1121287
3	MOUNTING BRACKET - CONTROLLER	1	1124704	1124704	1124704
4	STAND OFF	7	1121740	1121740	1121740
5	PCBA VEC 12.1 CONTROLLER	1	1123051-12.1	1123051-12.1	1123051-12.1
6	COVER PANEL	1	1123049	1123049	1123049
7	COIN DOOR ASSEMBLY	1	1081155	1081155	1081155
8	LATCH - COINAGE DOOR	1	1085546	1085546	1085546
9	BARRIER PANEL	1	1148198	1148198	1148198
10	BULKHEAD COIN BOX SUPPORT	1	1197689	1197689	1200135
11	SHEAR PANEL - MIDDLE (FLAT DOOR) - (NP)	1	1120713	1120713	~
	SHEAR PANEL - MIDDLE, 4-BULB T-8	1	~	1122308	1122308
12	DOOR BUMPER	2	1036912	1036912	1036912
13	RAMP/CATCH - INNER DOOR	1	1121714	1121714	1121714
14	COIN BOX ASSEMBLY	1	1088058	1088058	1088058
15	BALLAST, 3-4 LAMP, 120/277V, 50/60HZ	1	1127052	1127052	1127582
16	SHEAR PANEL – LOWER	1	~	1123915	1238949
	SHEAR PANEL – UPPER	1		1241672	1238868
17	HARNESS TIE	3	1088864	1088864	1088864
18	LAMP HOLDER - FIXED, MEDIUM BI-PIN	4	1151253	1151253	1151253
19	RAIN GUTTER	1	1121204	1121204	1121204
20	LAMP HOLDER - PLUNGER, MEDIUM BI-PIN	4	1151265	1151265	1151265
21	BRACKET - LAMPHOLDER	8	1122305	1122305	1122305
22	LAMP - 17W T-8, 24"	2	~	1130637	1130637
	LMAP, LED, 24"	2	~	1237136	1237136
23	LAMP - 32W T-8, 48"	2	~	1121173-2	1121173-2
	LAMP, LED, 48"	2	~	1237136-1	1237136-1
24	DOOR HARNESS	1	1122905	1122905	1122905
25*	RAIN COVER BRACKET, BALLAST	1	1121838-1	1121838-1	1121838-1
26	RAIN CURTAIN, LIGHTS - (NP)	2	1121838	1121838	1121838
27	MDB HARNESS - (NP)	1	1124570	1124570	1124570
28	LABEL, CAUTION, T-8 LAMPS ONLY	1	1122973	1122973	1122973
29*	GROMMET	1	388090	388090	388090
30	BALLAST, 230V, 50HZ - (NP)	1	1121313	1121313	1121313
31	SHEAR PANEL, LWR (621 FLAT DOOR) - (NP)	1	1123925	~	~
32	SHEAR PANEL, UPR (621 FLAT DOOR) - (NP)	1	1123669	~	~

NOTE: FOR A COMPLETE LIST OF HARNESSES, PLEASE SEE PAGE C-15.

NOTE: (NP) – NOT PICTURED
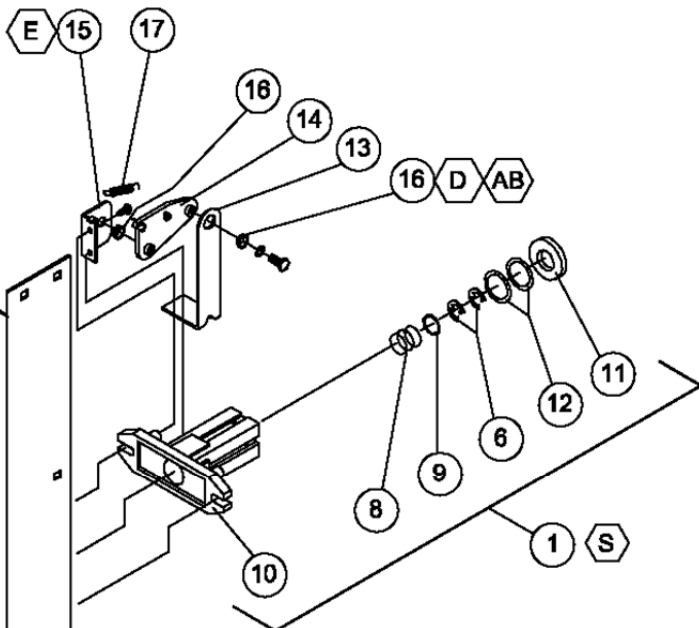
*EARLY PRODUCTION AND INTERNATIONAL UNITS (PRE-2011)

V21 ADA TRADE OUTER DOOR (FLAT)

ITEM NO.	MODEL NUMBER		621	721
	DESCRIPTION	QTY REQ	PART NO.	PART NO.
1	OUTER DOOR ASSEMBLY	1	*	*
2	SIGN TRIM - TOP/BOTTOM	2	388284-20	388284-21
3**	SIGN FACE	1	**	**
4	BUSHING HINGE	2	388094	388094
5	FLAT WASHER - BOTTOM	2	V801491	V801491
6	SIGN TRIM - SIDE	1	388284-1B	388284-1B
7	EYELET TRIM	1	387125	1124071
8	COIN RETURN CUP ASSEMBLY	1	1079546	1079546
9	DRAIN TUBE	1	1110619	1110619
10	WATER COLLECTION TRAY	1	1110562	1110562
11	DBV PLUG - LOWER	1	1089597	1089597
12	DBV MOUNT PLATE - UPPER	1	1089619	1089619
13	DBV PLUG PLATE - UPPER	1	12072234	12072234
14	RETAINER - SIGN FACE	1	1087988	1087988
15	DOOR GUARD	1	2010131	2010131
16	RAIN GUARD	1	2000848	2005937-2
17	LOCK ASSEMBLY (REFER TO TD-14 - TD-15)	1	~	~
18	SELECTION PANEL (REFER TO TD-16 - TD-17)	1	~	~
19	DBV GASKET - UPPER	1	1120606	1120606
20	DBV GASKET - LOWER	1	1086759	1086759
21	DELIVERY HOPPER ASSEMBLY	1	1124157	1124157

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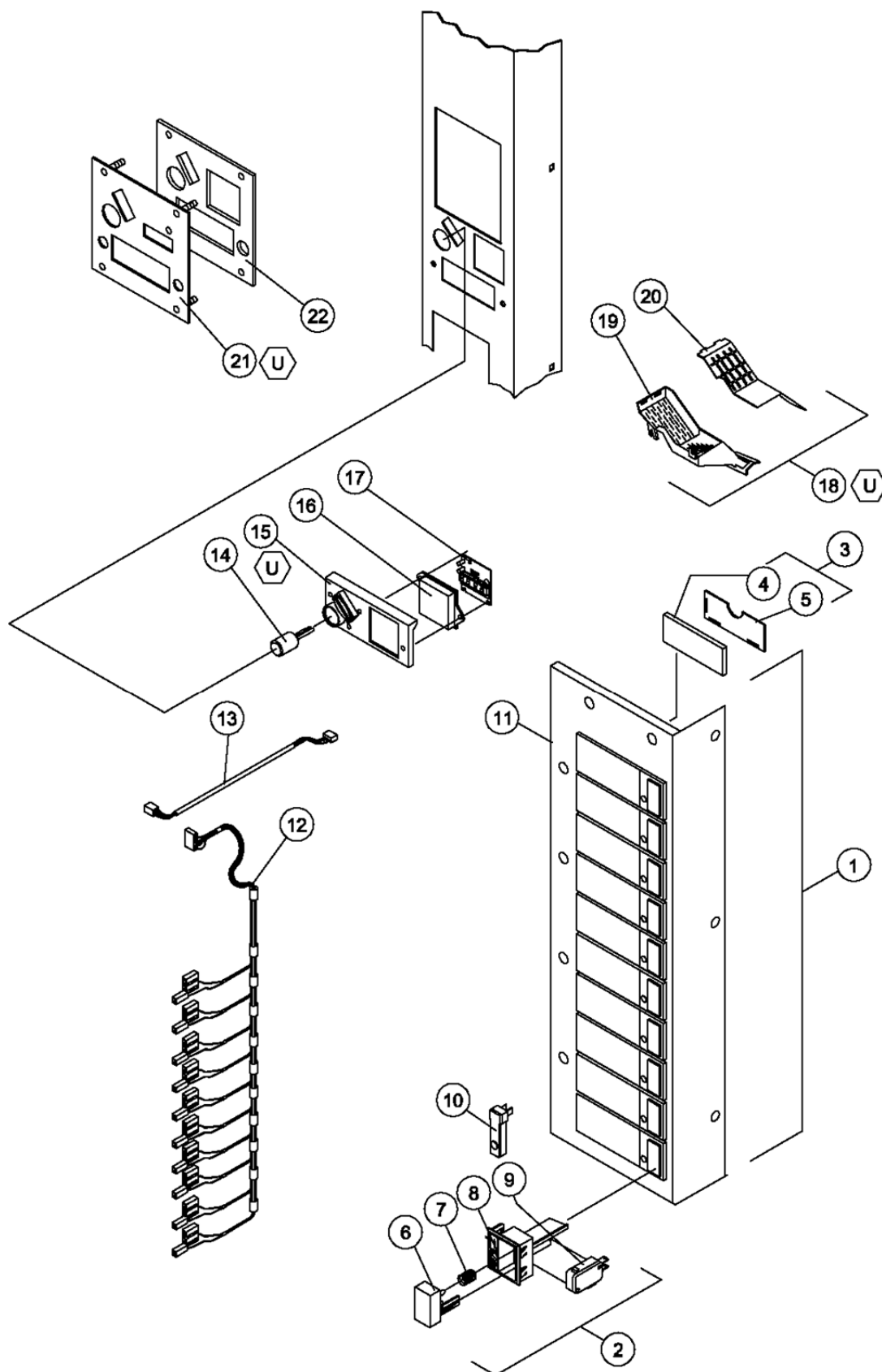
   MANUFACTURER'S DATE CODE.

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

V21 TRADE 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	FLAT WASHER	1	387718
10	FLANGE	1	1002384
11	VAPOR SEAL	1	388132
12	WASHER 1/2	2	V801023
13	LEVER - COIN RETURN	1	1052619
14	CRANK - COIN RETURN LEVER	1	1002244
15	PIVOT BRACKET - COIN RETURN	1	1002252
16	BUSHING	2	385603-4
17	SPRING - COIN RETURN LEVER	1	1060023

FOR A COMPLETE LIST OF HARNESSES, PLEASE SEE PAGE C-15.

V21 TRADE SELECTION PANEL

ITEM NO.	MODEL NUMBER	621		721/821	
	DESCRIPTION	**QTY REQ**	**PART NO.**	**QTY REQ**	**PART NO.**
1	SELECTION PANEL ASSEMBLY-TRADE CURVE/FLAT (10/8 SELECT)	1	2007325-013	1	2007325-011
2	SELLECTION WINDOW & BUTTON ASSEMBLY	8	1036203-4	10	1036203-4
3	SELECTION WINDOW ASSEMBLY	8	133431	10	133431
4	SELECTION WINDOW	8	388223	10	388223
5	SELECTION WINDOW - BACK	8	388116	10	388116
6	SELECTION BUTTON	8	1116775	10	1116775
7	SELECTION SPRING	8	388858	10	388858
8	BUTTON HOUSING	8	1006932	10	1006932
9	SELECTION SWITCH	8	368299	10	368299
10	SOLD-OUT PLUG	8	1006975-1	10	1006975-1
11	SELECTION PANEL	1	2010183	1	2010158
12	SELECTION HARNESS	1	1117872	1	1111287
13	DISPLAY HARNESS	1	1126164	1	1126164
14	COIN RETURN BUTTON	1	1050473	1	1050473
15	COIN INSERT/RETURN GUIDE PLATE	1	2001481	1	2001481
16	DISPLAY LENS	1	1141039	1	1141039
17	DIGITAL DISPLAY PCB - ELECTRONIC	1	1132544	1	1132544
18	COIN CHUTE ASSEMBLY	1	1087961	1	1087961
19	COIN CHUTE	1	1002333	1	1002333
20	CHUTE COVER	1	1002341	1	1002341
21*	COIN INSERT PLATE	1	--	1	--
22	COIN INSERT SECURITY PLATE	1	2001481	1	2001481

FOR A COMPLETE LIST OF HARNESSES, PLEASE SEE PAGE C-15.

* NOTE: WHEN ORDERING COIN INSERT PLATE, PLEASE SPECIFY **STYLE**.

V21 ADA TRADE INNER DOOR

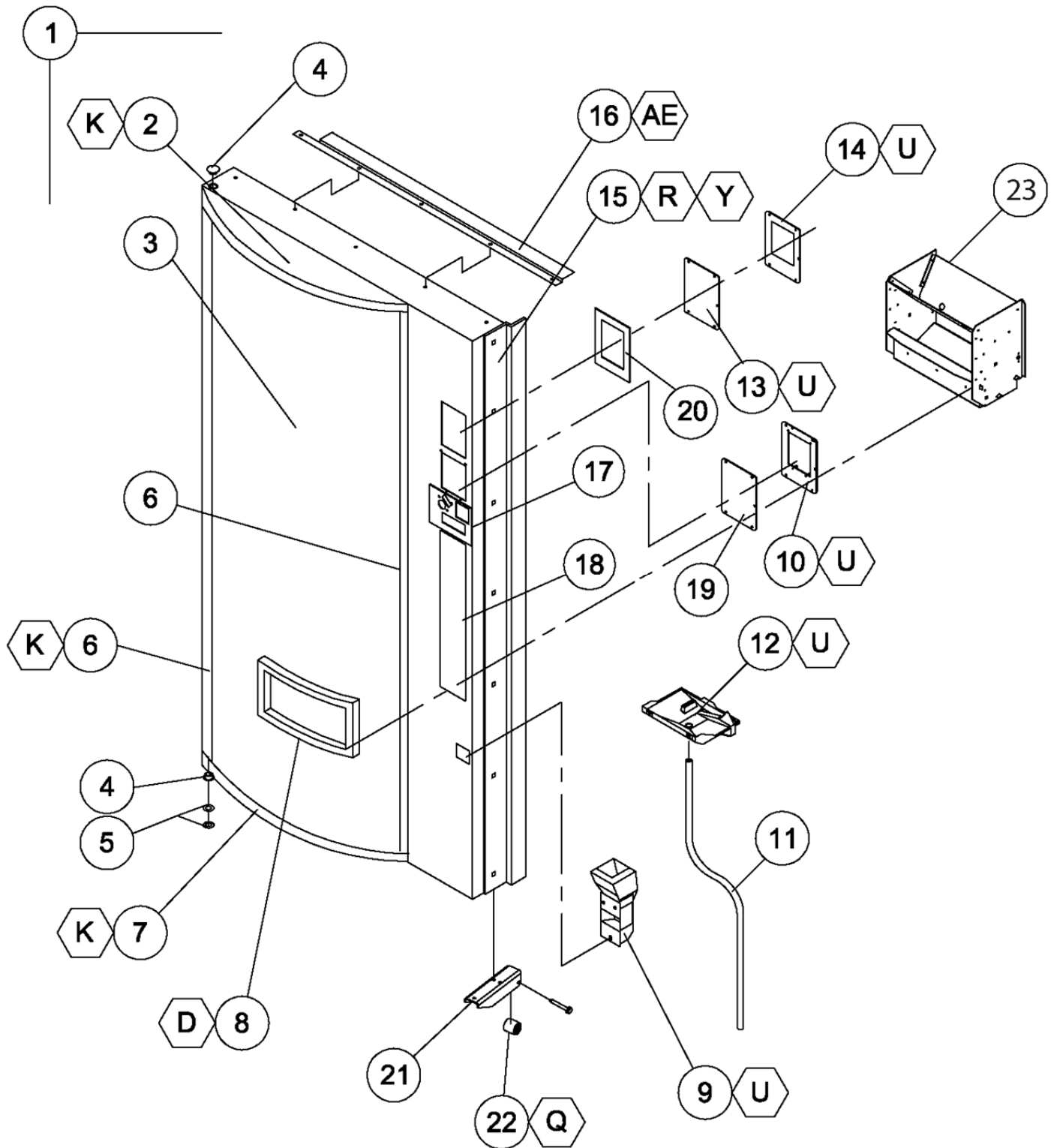| ITEM NO.	MODEL NUMBER		621	721	821
	DESCRIPTION	**QTY REQ**	**PART NO.**	**PART NO.**	**PART NO.**
1	INNER DOOR ASSEMBLY	1	134302-166	134302-163	134302-164
2	RAIN SEAL, INNER DOOR, 7"	1	1111732-2	1111732-2	1111732-2
3	INNER DOOR SEAL	1	1075678-2	1075678	1075678-1
4	UPPER PRODUCT RETAINER ASSEMBLY	1	1185792	1185792-1	1185792-2
5	UPPER PRODUCT RETAINER	1	1185778	1181827	1181827-1
6	LONG CLIP RETAINER	1	1125202	1125202	1125202-1
7	INNER DOOR HINGE, FEMALE	2	1121286	1121286	1121286
8	HINGE PIN	1	389192	389192	389192
9	REVERSABLE VEND FLAP	1	1013076	1013076	1013076
10	INNER DOOR EYELET	1	387273	387273	387273
11	GROMMET	1	388090	388090	388090
12	INNER DOOR LATCH	1	1121711	1121711	1121711
13	INNER DOOR LATCH BRACKET	1	1121712	1121712	1121712

FOR A COMPLETE LIST OF HARNESSES, PLEASE SEE PAGE C-15.

V21 ADA TRADE INNER DOOR LABELS - NOT SHOWN

MODEL NUMBER		621 / 721 / 821
DESCRIPTION	**QTY REQ**	**PART NO.**
ERROR CODE LABEL, VEC 12.1	1	1123715
PROGRAMMING LABEL, VEC 12.1	1	1123343
WIRING DIAGRAM LABEL, VEC 12.1/12.2	1	1127542
PRODUCT SET UP, V21	1	1126121
SPACE TO SALES, VEC 12.1	1	1128991
INNER DOOR LABEL	1	1125783-1

DOOR PARTS
TRADE LIVE DISPLAY
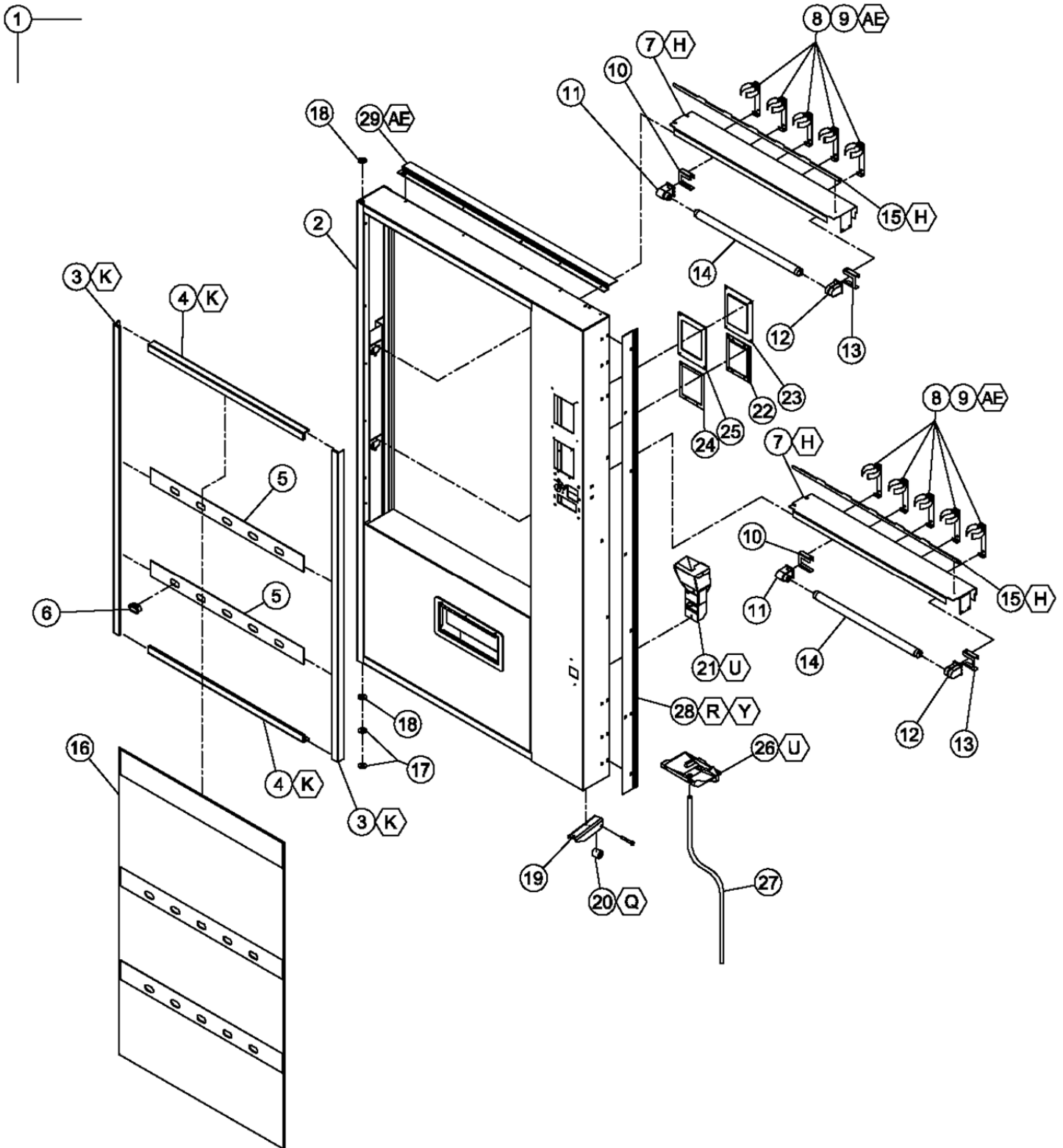
V21 TRADE LIVE DISPLAY OUTER DOOR – FLAT

ITEM NO.	MODEL NUMBER	621		721	
	DESCRIPTION	QTY REQ	PART NO.	QTY REQ	PART NO.
1	OUTER DOOR ASSEMBLY	1	*	1	*
2	DOOR WELD ASSEMBLY (NON ADA)	1	1124879	1	1124890
	DOOR WELD ASSEMBLY (ADA)***	1	1217569	1	1217522
3	LEFT AND RIGHT SIGN TRIM	2	388284-22	2	388284-22
4	TOP AND BOTTOM SIGN TRIM	2	388284-20	2	388284-21
5	BUTTON RETAINER	2	1126136	2	1126137
6	BUTTON	8	1087074	10	1087074
7	SHELF	2	1124882	2	1124891
8	SUPPORT BRACKET – PRODUCT HOLDER CLIP	8	1124884	10	1124884
9	PRODUCT HOLDER CLIP	8	1120074	10	1120074
10	LAMP HOLDER BRACKET - PLUNGER	2	1124881	2	1124881
11	LAMP HOLDER PLUNGER	2	1151265	2	1151265
12	LAMP HOLDER FIXED	2	1151253	2	1151253
13	LAMP HOLDER BRACKET - FIXED	2	1124880	2	1124880
14	24" LAMP - T-8	3	1121173	3	1121173
	24" LAMP – 24V LED	3	1237136-3	3	1237136
15	PRICE LABEL BRACKET	2	1124885	2	1124894
16	OUTER DOOR SIGN FACE	1	**	1	**
17	3/8" FLAT WASHER - BOTTOM	2	V801491	2	V801491
18	BUSHING - HINGE	2	388094	2	388094
19	DOOR ROLLER BRACKET	1	1239376	1	1239376
20	DOOR ROLLER	1	1120388	1	1120388
21	COIN RETURN CUP ASSEMBLY	1	1079546	1	1079546
22	DBV FILLER PLATE	1	390142	1	390142
23	DBV PLUG	1	1086503	1	1086503
24	DBV PLUG GASKET	1	1086759	1	1086759
25	DBV FILLER PLATE GASKET	1	1120606	1	1120606
26	WATER COLLECTION TRAY	1	1110562	1	1110562
27	DRAIN TUBE	1	1110619	1	1110619
28	DOOR GUARD - 72"	1	2010131	1	2010131
29	RAIN GUARD	1	2005937-2	1	2000848
30	T-8 ONLY LABEL (NOT SHOWN)	1	1122973	1	1122973

FOR A COMPLETE LIST OF HARNESSES, PLEASE SEE PAGE C-15.

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

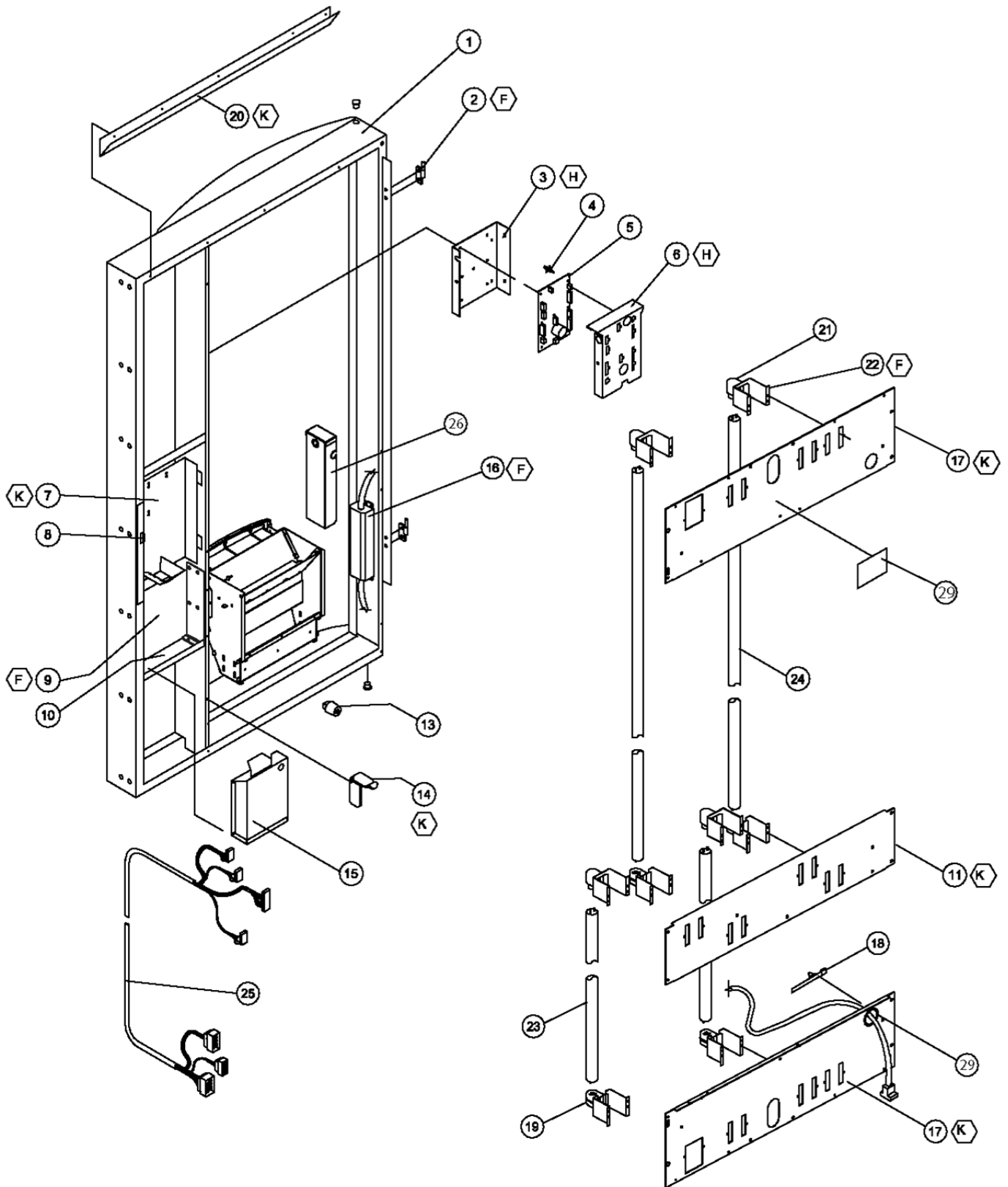**NOTE: WHEN ORDERING SIGN FACE, PLEASE PROVIDE **FRANCHISE, MODEL** AND **STYLE**.

***ADA STYLE REFERS TO ALL MODEL NUMBERS XXX**TAL**XXXXX.
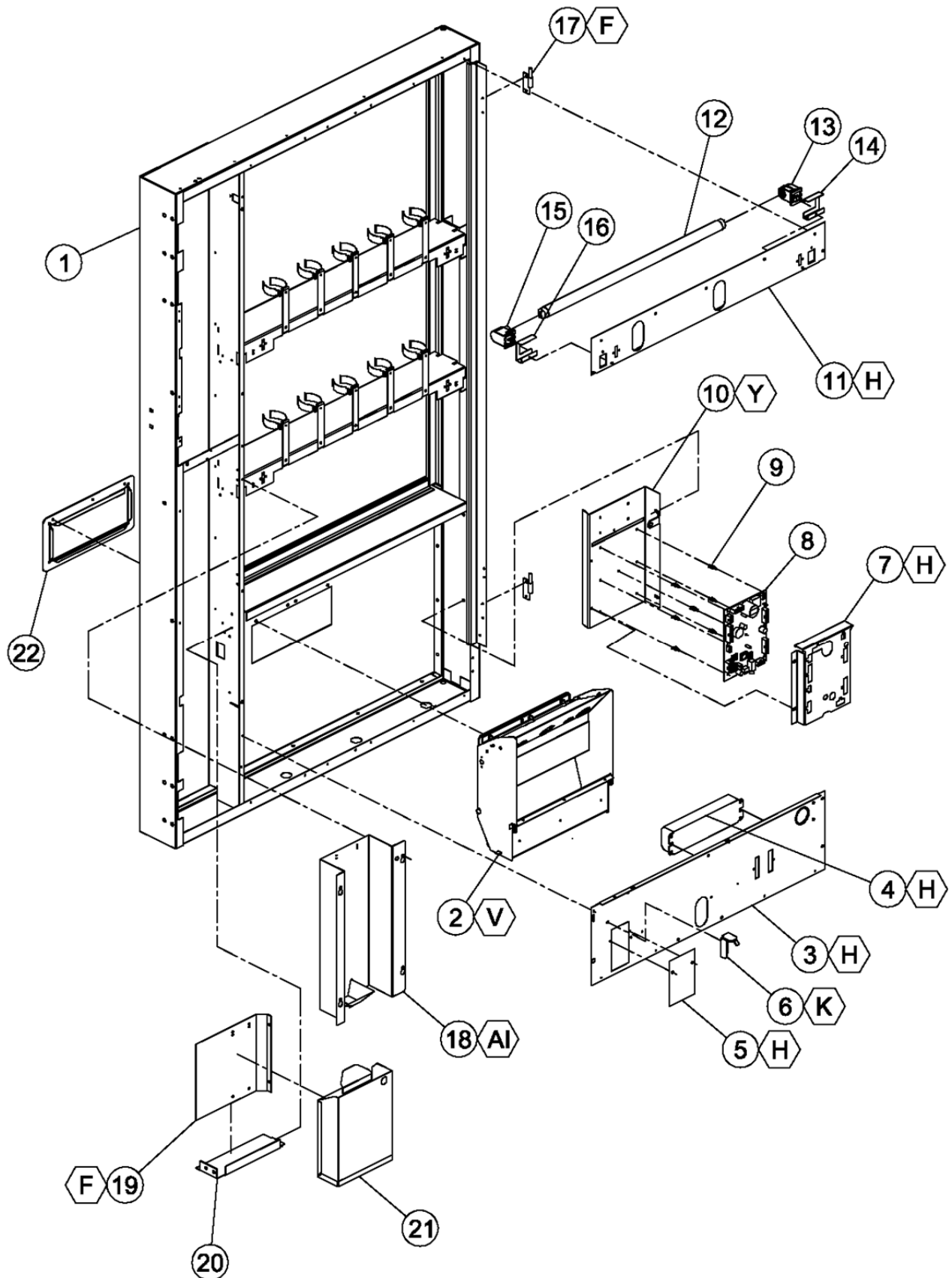
V21 TRADE LIVE DISPLAY OUTER DOOR - FLAT (CONTINUED)

ITEM NO.	MODEL NUMBER	621		721	
	DESCRIPTION	**QTY REQ**	**PART NO.**	**QTY REQ**	**PART NO.**
1	DOOR WELD - BLACK (NON ADA)	1	1124879	1	1124890
	DOOR WELD - BLACK (ADA)*	1	1217569	1	1217522
2	HOPPER ASSEMBLY (NON ADA)	1	1124157	1	1124157
	HOPPER ASSEMBLY (ADA)*	1	133574	1	133574
3	SHEAR PANEL	1	1124932	1	1123915
4	BALLAST, U.S. 110V	1	1127582	1	1127582
5	COVER - SHEAR PANEL	1	1124844	1	1124844
6	INNER DOOR RAMP	1	1121714	1	1121714
7	COVER - CONTROLLER	1	1123049	1	1123049
8	PCBA VEC 12.1 CONTROLLER	1	1123051-12.1	1	1123051-12.1
9	STANDOFF	7	1121740	7	1121740
10	BRACKET - CONTROLLER	1	1127473	1	1127473
11	UPPER SHEAR PANEL	1	1124883	1	1124945
12	24" LAMP - T-8	3	1121173	3	1121173
	24" LAMP – 24V LED	3	1237136-3	3	1237136
13	LAMP HOLDER FIXED	1	388531	1	388531
14	LAMP HOLDER BRACKET - FIXED	1	1124880	1	1124880
15	LAMP HOLDER PLUNGER	1	388352	1	388532
16	LAMP HOLDER BRACKET - PLUNGER	1	1124881	1	1124881
17	INNER DOOR HINGE - MALE	2	1121287	2	1121287
18	COIN MECH BRACKET ASSEMBLY	1	1124886	1	1124886
19	BARRIER PANEL	1	1148198	1	1148198
20	COIN BOX BULKHEAD	1	1112155	1	1112155
21	COIN BOX ASSEMBLY	1	1088058	1	1088058
22	EYELET – HOPPER (NON ADA)	1	1124101	1	1124101
	EYELET – HOPPER (ADA)*	1	387125	1	387125
23	RAIN CURTAIN - BALLAST (NOT SHOWN)	1	1125150	1	1125150

FOR A COMPLETE LIST OF HARNESSES, PLEASE SEE PAGE C-15.

* ADA STYLE REFERS TO ALL MODEL NUMBERS XXX**TAL**XXXXX.
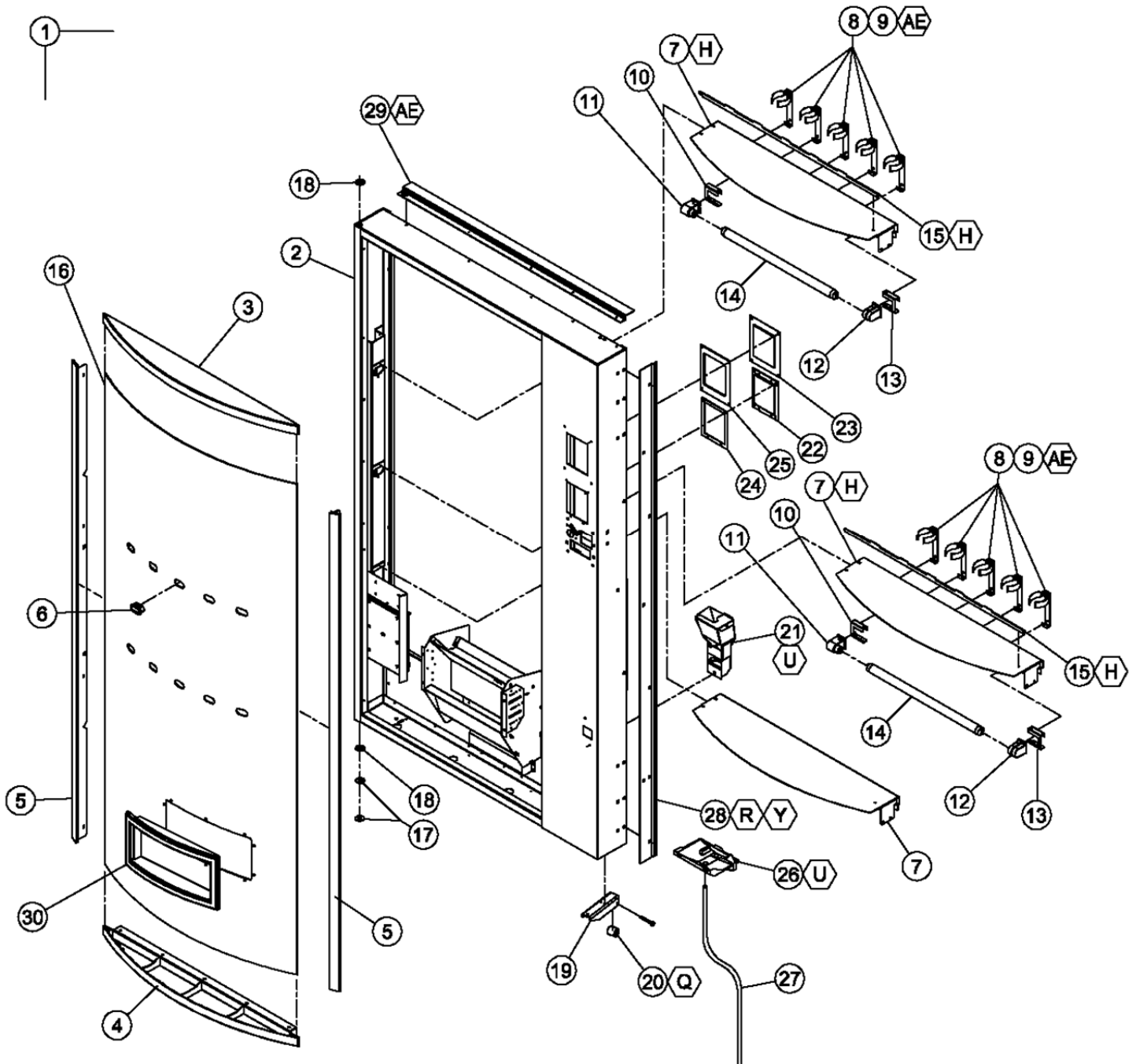
V21 TRADE LIVE DISPLAY OUTER DOOR - CURVED

ITEM NO.	MODEL NUMBER DESCRIPTION	721 QTY REQ	721 PART NO.
1	OUTER DOOR ASSEMBLY	1	*
2	DOOR WELD ASSEMBLY (NON ADA)	1	1124908
	DOOR WELD ASSEMBLY (ADA)***	1	1217513
3	SIGN CAP - TOP	1	1014986
4	SIGN CAP - BOTTOM	1	1068988
5	SIDE TRIM - LEFT & RIGHT	2	1121981
6	BUTTON	10	1087074
7	SHELF	2	1124907
8	SUPPORT BRACKET - PRODUCT HOLDER CLIP	10	1124884
9	PRODUCT HOLDER CLIP	10	1120074
10	LAMP HOLDER BRACKET - PLUNGER	2	1124881
11	LAMP HOLDER PLUNGER	2	388532
12	LAMP HOLDER FIXED	2	388531
13	LAMP HOLDER BRACKET - FIXED	2	1124880
14	24" LAMP - T-8	2	1121173
	LAMP, LED, 24"	2	1237136
15	PRICE LABEL BRACKET	2	1124894
16	OUTER DOOR SIGN FACE	1	**
17	3/8" FLAT WASHER - BOTTOM	2	V801491
18	BUSHING - HINGE	2	388094
19	DOOR ROLLER BRACKET	1	1120552
20	DOOR ROLLER	1	1120388
21	COIN RETURN CUP ASSEMBLY	1	1079546
22	DBV FILLER PLATE	1	390142
23	DBV PLUG	1	1086503
24	DBV PLUG GASKET	1	1086759
25	DBV FILLER PLATE GASKET	1	1120606
26	WATER COLLECTION TRAY	1	1110562
27	DRAIN TUBE	1	1110619
28	DOOR GUARD - 72"	1	2010131
29	RAIN GUARD	1	2000848
30	TRIM EYELET - CURVE	1	388271
31	T-8 ONLY LABEL (NOT SHOWN)	1	1122973

FOR A COMPLETE LIST OF HARNESSES, PLEASE SEE PAGE C-15.

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

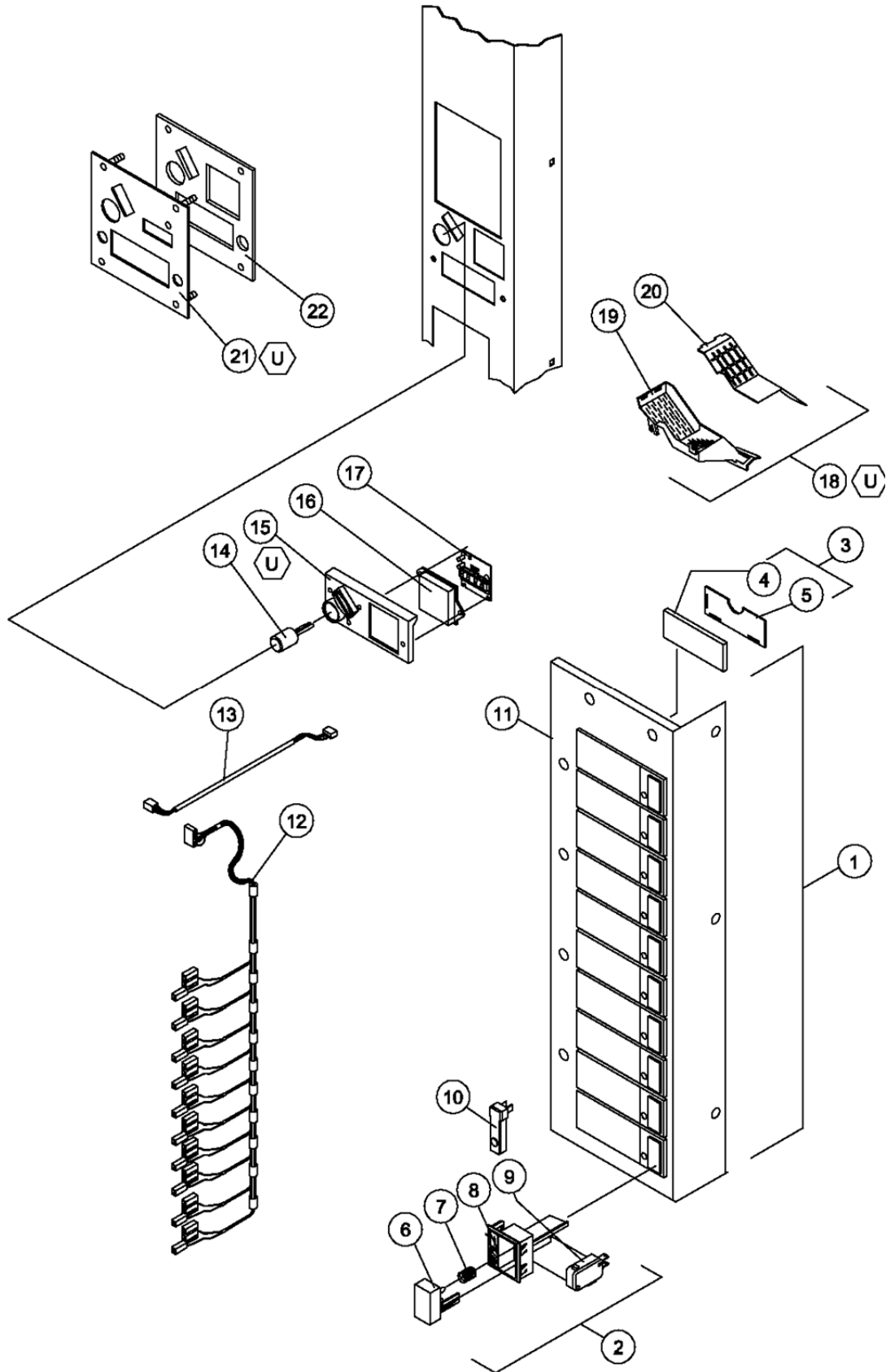**NOTE: WHEN ORDERING SIGN FACE, PLEASE PROVIDE **FRANCHISE, MODEL** AND **STYLE**.

***ADA STYLE REFERS TO ALL MODEL NUMBERS XXX**TAL**XXXXX.
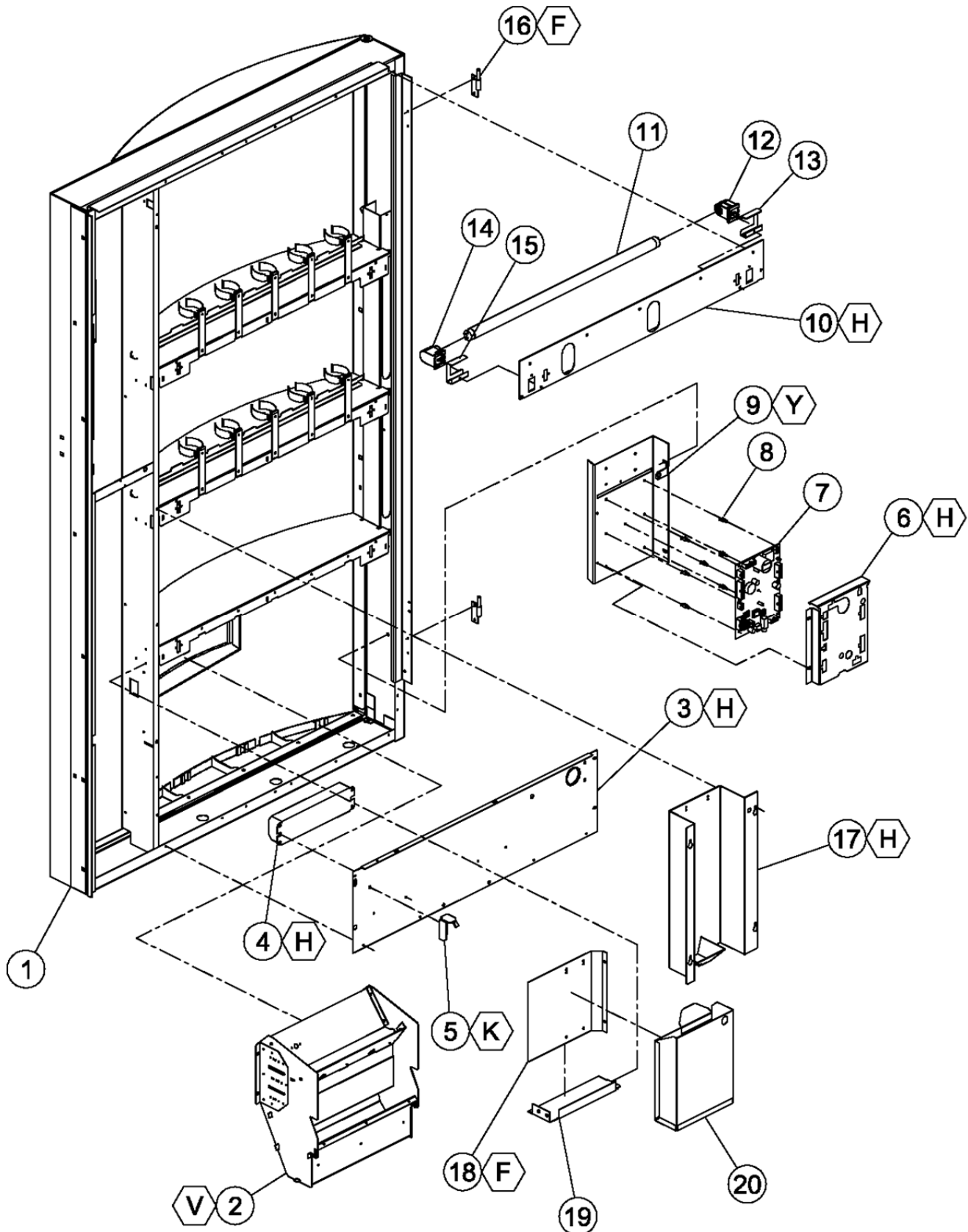
V21 TRADE LIVE DISPLAY OUTER DOOR - CURVED (CONTINUED)

ITEM NO.	MODEL NUMBER	721	
	DESCRIPTION	QTY REQ	PART NO.
1	DOOR WELD - BLACK (NON ADA)	1	1124908
	DOOR WELD - BLACK (ADA)*	1	1217513
2	HOPPER ASSEMBLY (NON ADA)	1	1124162
	HOPPER ASSEMBLY (ADA)*	1	1189115-3
3	SHEAR PANEL	1	1124931
4	BALLAST, U.S. 110V	1	1122380
5	INNER DOOR RAMP	1	1121714
6	COVER - CONTROLLER	1	1123049
7	PCBA VEC 12.1 CONTROLLER	1	1123051-12.1
8	STANDOFF	7	1121740
9	BRACKET - CONTROLLER	1	1124644
10	UPPER SHEAR PANEL	1	1124945
11	LAMP - 24" T-8	3	1121173
	LAMP - 24" 24V LED	3	1237136
12	LAMP HOLDER FIXED	1	388531
13	LAMP HOLDER BRACKET - FIXED	1	1124880
14	LAMP HOLDER PLUNGER	1	388532
15	LAMP HOLDER BRACKET - PLUNGER	1	1124881
16	INNER DOOR HINGE - MALE	2	1121287
17	COIN MECH BRACKET ASSEMBLY	1	1124886
18	BARRIER PANEL	1	1117147
19	COIN BOX BULKHEAD	1	1112155
20	COIN BOX ASSEMBLY	1	133563
21	RAIN CURTAIN - BALLAST (NOT SHOWN)	1	1125150

FOR A COMPLETE LIST OF HARNESSES, PLEASE SEE PAGE C-15.

*ADA STYLE REFERS TO ALL MODEL NUMBERS XXX**TAL**XXXXX OR XXX**TAD**XXXXX.
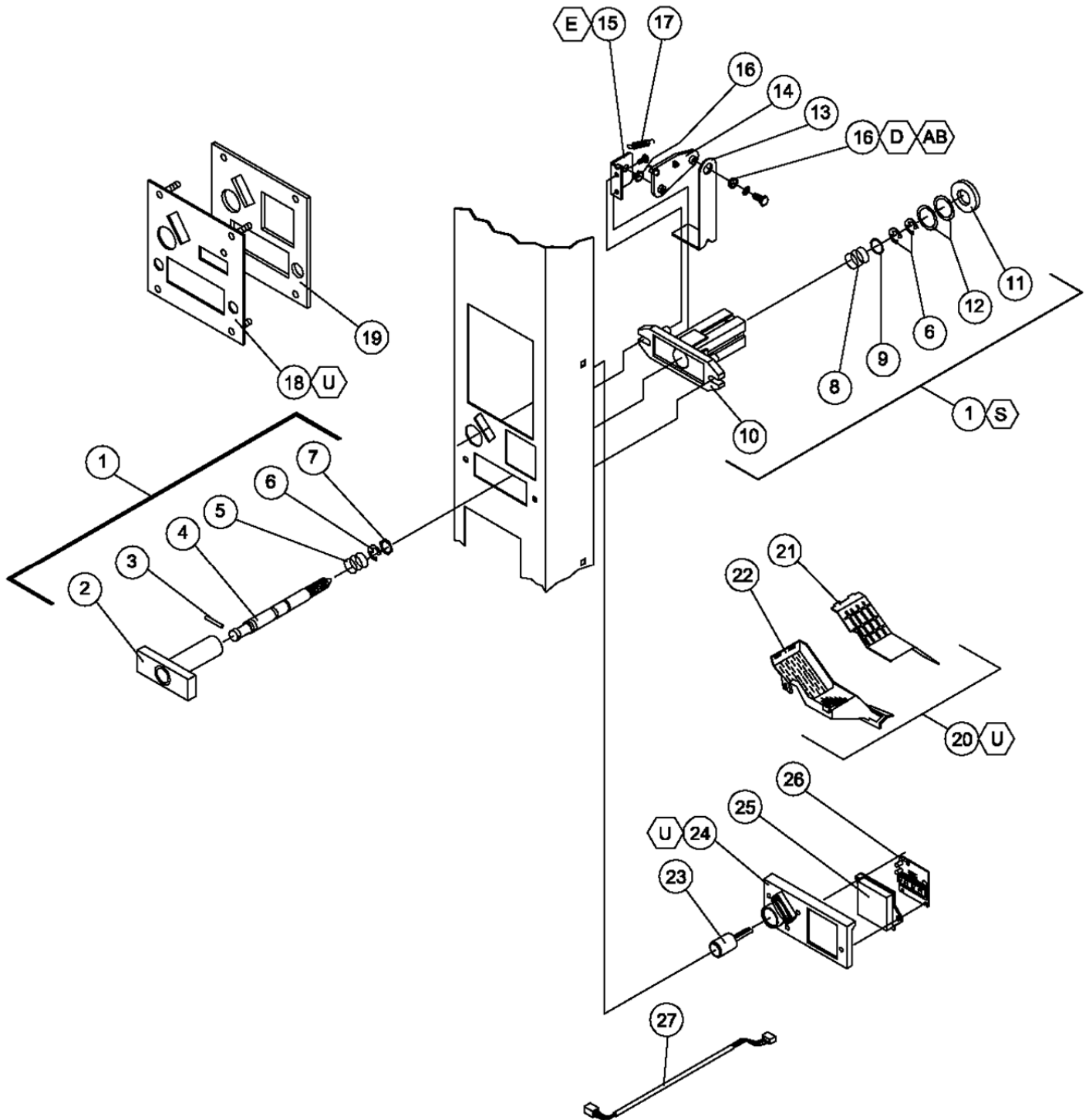
V21 TRADE LIVE DISPLAY LOCK & TRANSACTION ASSEMBLY

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	FLAT WASHER	1	387718
10	FLANGE	1	1002384
11	VAPOR SEAL	1	388132
12	WASHER 1/2	2	V801023
13	LEVER - COIN RETURN	1	1052619
14	CRANK - COIN RETURN LEVER	1	1002244
15	PIVOT BRACKET - COIN RETURN	1	1002252
16	BUSHING	2	385603-4
17	SPRING - COIN RETURN LEVER	1	1060023
18*	COIN INSERT PLATE	1	--
19	COIN INSERT SECURITY PLATE	1	2001481
20	COIN CHUTE ASSEMBLY	1	1087961
21	CHUTE COVER	1	1002341
22	COIN CHUTE	1	1002333
23	COIN RETURN BUTTON	1	1050473
24	COIN INSERT/RETURN GUIDE PLATE	1	1125014
25	DISPLAY LENS	1	1141039
26	DIGITAL DISPLAY PCB - ELECTRONIC	1	1132544
27	DISPLAY HARNESS	1	1087317

FOR A COMPLETE LIST OF HARNESSES, PLEASE SEE PAGE C-15.

* NOTE: WHEN ORDERING COIN INSERT PLATE, PLEASE SPECIFY **STYLE**.
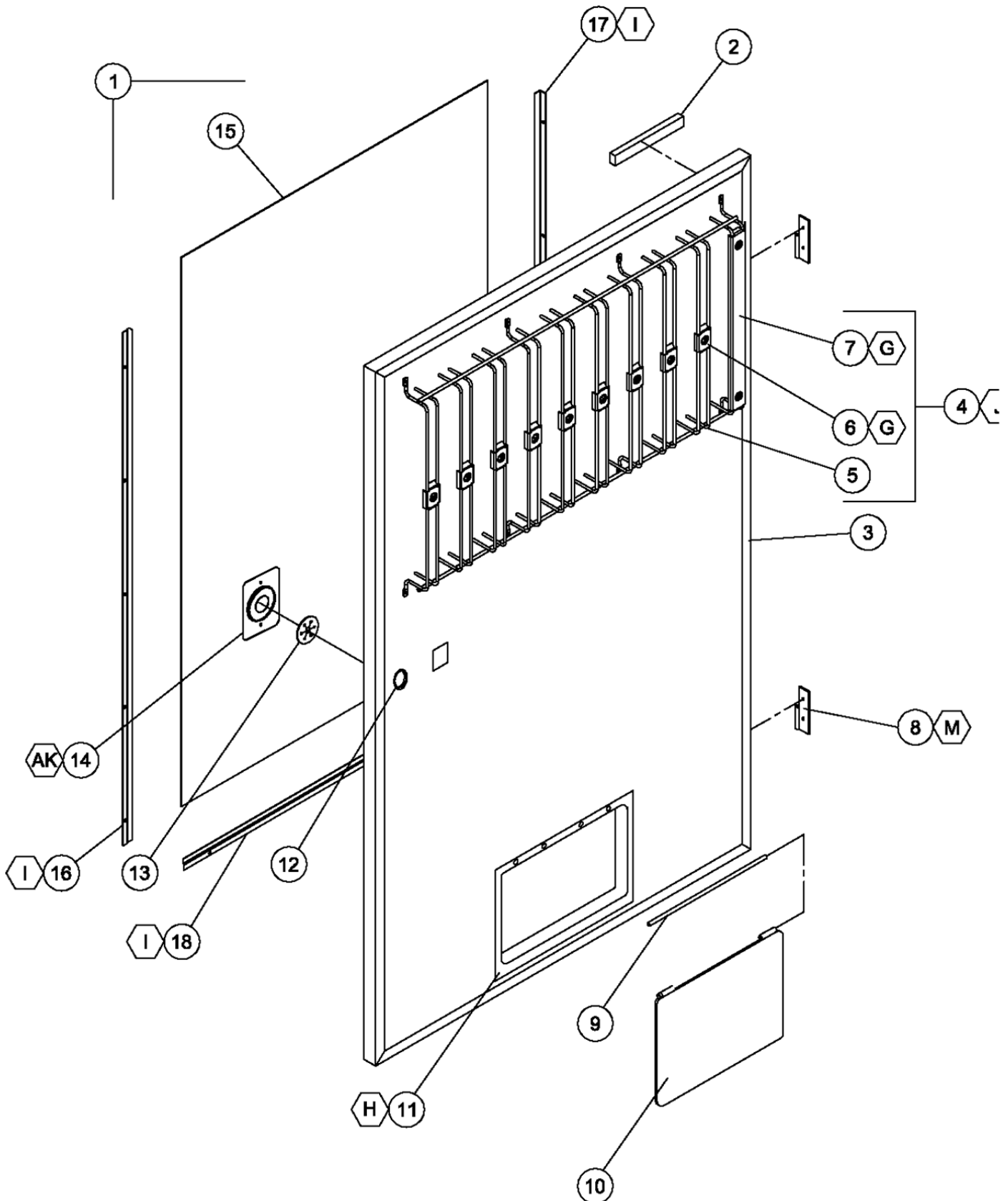
V21 TRADE LIVE DISPLAY INNER DOOR

ITEM NO.	MODEL NUMBER			621	721
	DESCRIPTION	QTY REQ		PART NO.	PART NO.
1	INNER DOOR ASSEMBLY	1		134302-80	134302-112
2	RAIN SEAL, INNER DOOR, 7"	1		1111732-1	1111732-2
3	INNER DOOR SEAL	1		1075678-2	1075678
4	UPPER PRODUCT RETAINER ASSEMBLY	1		1125206	1125206-1
5	UPPER PRODUCT RETAINER	1		1185778	1181827
6	SHORT CLIP ASSEMBLY	*		1125261	1125261
7	LONG CLIP ASSEMBLY	1		1125262	1125262
8	INNER DOOR HINGE, FEMALE	2		1121286	1121286
9	HINGE PIN	1		1172323	1172323
10	REVERSABLE VEND FLAP	1		1013076	1013076
11	INNER DOOR EYELET	1		387273	387273
12	GROMMET	1		388090	388090
13	INNER DOOR LATCH	1		1121711	1121711
14	INNER DOOR LATCH BRACKET	1		1121712	1121712
15	INNER DOOR GRAPHICS	1		**	**
16	RETAINER, GRAPHICS, SIDE	1		1125123-2	1125123-2
17	CORNER RETAINER, GRAPHICS	1		1124653	1124653
18	RETAINER, GRAPHICS, BOTTOM	1		1125123	1125123-1

FOR A COMPLETE LIST OF HARNESSES, PLEASE SEE PAGE C-15.

*NOTE: QTY OF 9 FOR MODEL 721 & QTY 7 FOR MODEL 621

NOTE: WHEN ORDERING INNER DOOR GRAPHICS, PLEASE PROVIDE **FRANCHISE, MODEL AND **STYLE**.

V21 TRADE LIVE DISPLAY INNER DOOR LABELS - NOT SHOWN

DESCRIPTION	QTY REQ.	PART NO.
ERROR CODE LABEL, VEC 12.1	1	1123715
PROGRAMMING LABEL, VEC 12.1	1	1123343
WIRING DIAGRAM LABEL, VEC 12.1/12.2	1	1127542
PRODUCT SET UP, V21	1	1126121
SPACE TO SALES, VEC 12.1	1	1128991
INNER DOOR LABEL	1	1125783-1

DOOR PARTS
HV3 ADA
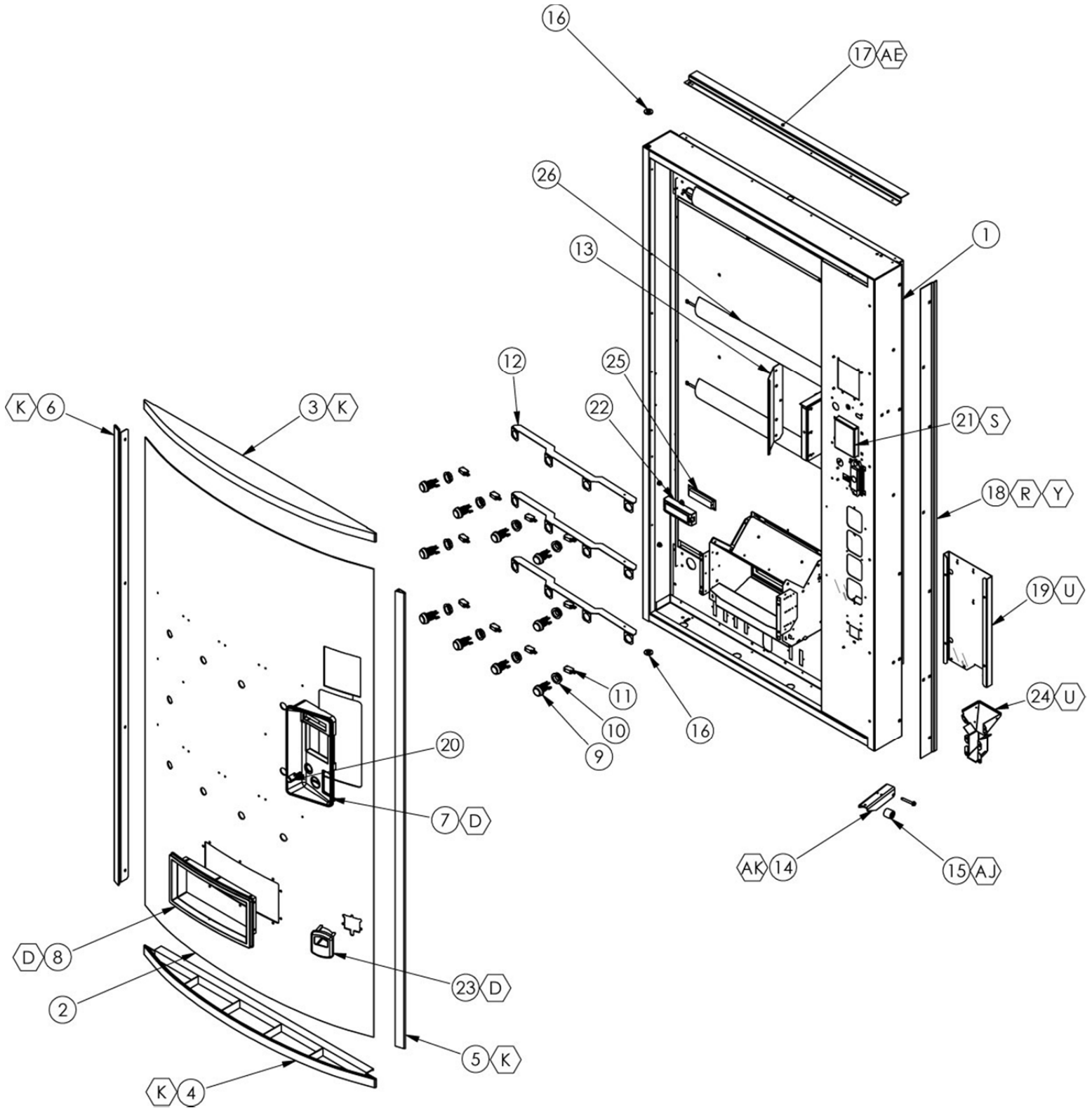
HV3 OUTER DOOR – CURVED

| ITEM NO. | MODEL NUMBER | 721 | | 821 | | HARDWARE |
	DESCRIPTION	QTY REQ	PART NO.	QTY REQ	PART NO.	
1	DOOR WELD	1	134442-257	1	134442-258	
2	SIGN FACE	1	**	1	**	
3	SIGN CAP, TOP	1	1114341	1	1114341	K
4	SIGN CAP, BOTTOM	1	1114341-1	1	1114341-1	
5	SIGN TRIM, VTL, RIGHT, 72"	1	1149889	1	1150455	K
6	SIGN TRIM, VTL, LEFT, 72"	1	1143516	1	1150466	K
7	BEZEL, CONSUMER INTERFACE	1	1143346	1	1143346	D
8	TRIM EYELET, CURVE	1	388271	1	388271	D
9	BUTTON ASY, ROUND, CHAMELEON	10	1149374	10	1149374	
10	PLASTIC NUT	10	1073538	10	1073538	
11	SELECTION SWITCH	10	368299	10	368299	
12	BRACKET, SIGN FACE	3	1204888	3	1204888	H
13	SUPPORT BRACKET	1	1143486	1	1143486	
14	DOOR ROLLER BRACKET	1	1239376	1	1239376	V802196
15	DOOR ROLLER	1	1120388	1	1120388	V802162
16	BUSHING HINGE	2	388094	2	388094	
17	RAIN GUARD	1	2000848	1	2000848	
18	DOOR GUARD	1	2010131	1	2009503	AE
19	COIN SUPPORT PLATE	1	1143475	1	1143475	H
20	COIN RETURN BUTTON	1	1050473	1	1050473	
21	COVER, DBV (OPTIONAL)	1	1144557	1	1144557	
22	LENS, DISPLAY-BLUE	1	1121103	1	1121103	S
23	COIN RETURN BEZEL	1	1170855-1	1	1170855-1	D
24	COIN RETURN CUP	1	1079546	1	1079546	H
25	DISPLAY BOARDS, 2X20	1	1137414	1	1137414	
26	ASY,LED LIGHT FXTR	2	1198967	2	1198967	

FOR A COMPLETE LIST OF HARNESSES, PLEASE SEE PAGE C-15.

*NOTE: WHEN ORDERING OUTER DOOR ASSEMBLY, PLEASE PROVIDE **9-CODE** OR 1**1-CODE** AND **MANUFACTURER'S DATE CODE**.

**NOTE: WHEN ORDERING SIGN FACE, PLEASE PROVIDE FRANCHISE AND STYLE.
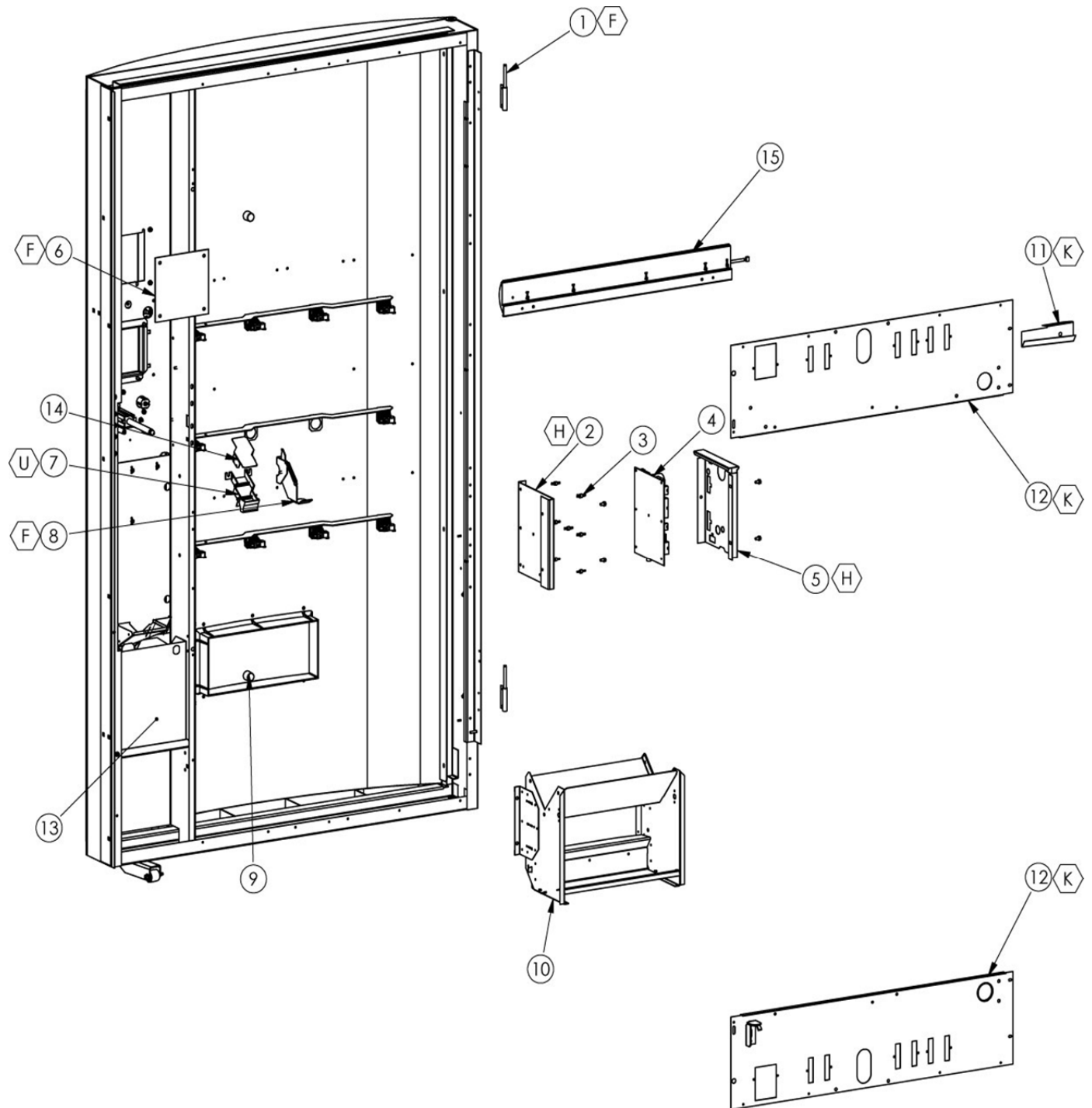
HV3 DOOR (CONTINUED)

ITEM NO.	MODEL NUMBER	721		821		HARDWARE
	DESCRIPTION	QTY REQ	PART NO.	QTY REQ	PART NO.	
1	HINGE - INNER DOOR, MALE	2	1121287	2	1121287	F
2	FLUSH MOUNTING BRACKET - CONTROLLER	1	1202557	1	1213677	H
3	STAND OFF	7	1121740	7	1121740	
4	PCBA VEC 12.1 CONTROLLER	1	1167867	1	1167867	
5	PCBA COVER PANEL	1	1123049	1	1123049	H
6	PLATE, DBV PLUG, UPPER	1	1143498	1	1143498	F
7	COIN INSERT CHUTE	1	1121066	1	1121066	U
8	ASY, COIN RETURN LEVER	1	1182651	1	1182651	F
9	DOOR BUMPER	2	1036912	2	1036912	
10	DELIVERY HOPPER ASSEMBLY	1	1189115	1	1189115	D,K
11	RAIN GUTTER	1	1121204	1	1121204	K
12	PNL, SHR, UPR/LWR, 39" 4-BLB	2	1204361	2	1204361	K
13	COIN BOX	1	1088058	1	1088058	
14	COIN CHUTE COVER	1	1181555	1	1181555	
15	ASY,LED LIGHT FIXTURE	1	1198967	1	1198967	

NOTE: FOR A COMPLETE LIST OF HARNESSES, PLEASE SEE PAGE C-15.

NOTE: (NP) – NOT PICTURED

*EARLY PRODUCTION AND INTERNATIONAL UNITS (PRE-2011)

TRADE LOCK ASSEMBLY

ITEM NO.	DESCRIPTION	QTY REQ	PART NO.
1	BRKT, SECURITY, LOCK	1	1143402
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	FLAT WASHER	1	387718
10	T-HANDLE - FLANGE	1	1002384
11	VAPOR SEAL	1	388132
12	WASHER 1/2"	4	V801023
13	1/4" X 3/4" CARRIAGE BOLT	1	V801434
14	T - HANDLE ASSY.	1	1002635

HV3 INNER DOOR

ITEM NO.	DESCRIPTION	QTY REQ	MODEL NUMBER 721 PART NO.	821 PART NO.
1	INNER DOOR ASSEMBLY	1	134302-160	134302-161
2	RAIN SEAL, INNER DOOR, 7"	1	1111732-2	1111732-2
3	INNER DOOR SEAL	1	1075678	1075678-1
4	UPPER PRODUCT RETAINER ASSEMBLY	1	1185792-1	1185792-2
5	UPPER PRODUCT RETAINER	1	1181827	1181827-1
6	LONG CLIP RETAINER	1	1125202	1125202-1
7	INNER DOOR HINGE, FEMALE	2	1121286	1121286
8	HINGE PIN	1	1172323	1172323
9	REVERSABLE VEND FLAP	1	1013076	1013076
10	INNER DOOR EYELET	1	387273	387273
11	GROMMET	1	388090	388090
12	INNER DOOR LATCH	1	1121711	1121711
13	INNER DOOR LATCH BRACKET	1	1121712	1121712

FOR A COMPLETE LIST OF HARNESSES, PLEASE SEE PAGE C-15.

HV3 INNER DOOR LABELS - NOT SHOWN

MODEL NUMBER		721 / 821
DESCRIPTION	QTY REQ	PART NO.
ERROR CODE LABEL, VEC 12.3/V12.4	1	1170775
PROGRAMMING LABEL, VEC 12.4	1	1193696
WIRING DIAGRAM LABEL, VEC 12.1/12.2	1	1127542
PRODUCT SET UP, V21	1	1126121
SPACE TO SALES LABEL	1	1188767
INNER DOOR LABEL	1	1125783-1
WIRING SCHEMATIC, LED LIGHTING	1	1206035

DOOR PARTS
HVV
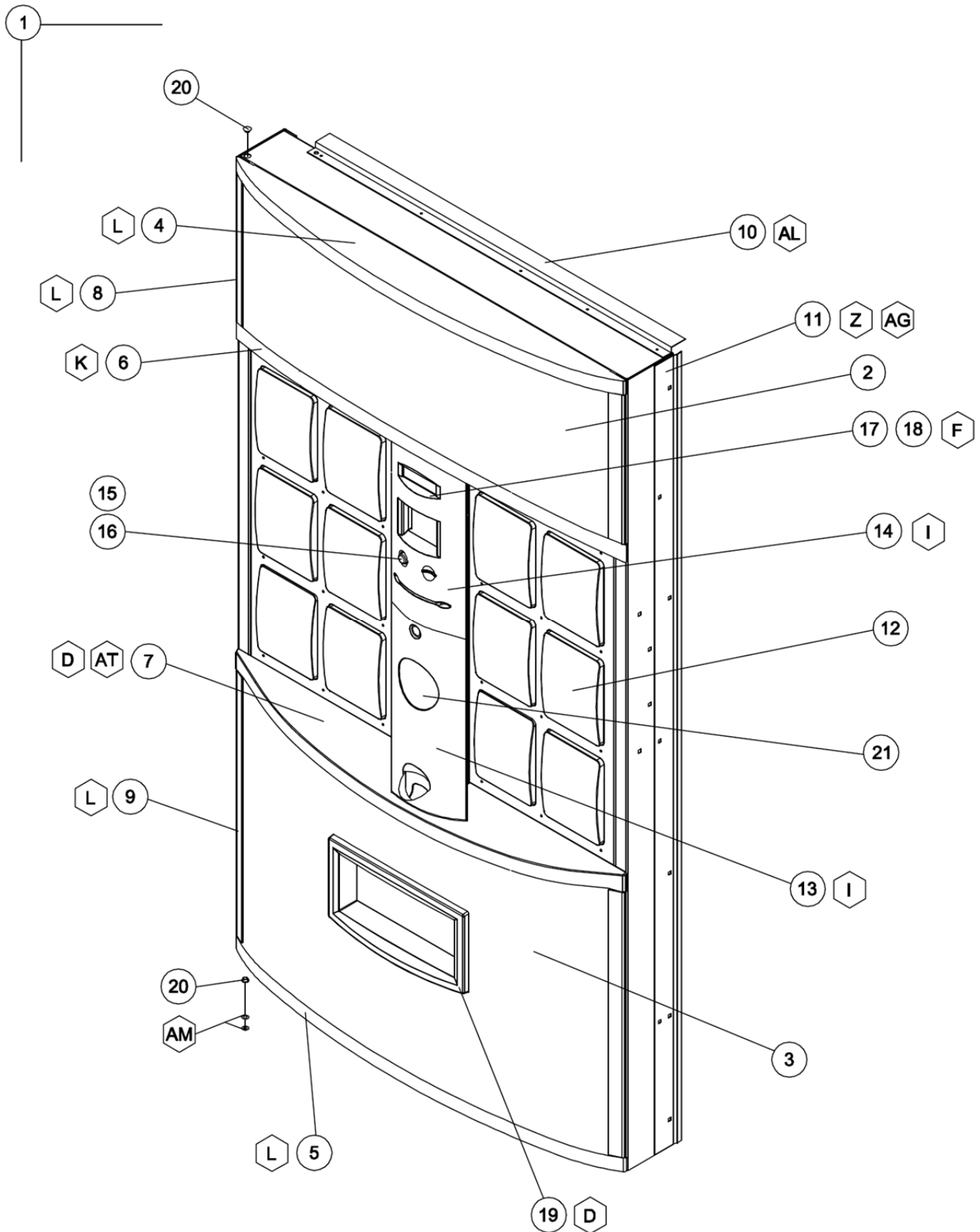
V21 HVV DOOR FRONT

ITEM NO.	MODEL NUMBER / DESCRIPTION	QTY REQ	621 PART NO.	721 PART NO.	821 PART NO.
1	SERVICE DOOR, BLUE, W/O SO/RTV	1	1112619-50	1112619-35	1112619-37
	SERVICE DOOR, BLUE, WITH SO/RTV		1112619-51	1112619-36	1112619-38
	SERVICE DOOR, GREEN, W/O SO/RTV		N/A	1112619-39	1112619-41
	SERVICE DOOR, GREEN, WITH SO/RTV		N/A	1112619-40	1112619-42
2	UPPER SIGN FACE **	1	**	**	**
3	LOWER SIGN FACE **	1	**	**	**
4	UPPER SIGN CAP, BLUE	1	1127305-1	1114341-2	1114341-2
	UPPER SIGN CAP, GREEN		1127305-2	1114341-4	1114341-4
	UPPER SIGN CAP, BLACK		1127305	1114341	1114341
5	LOWER SIGN CAP, BLUE	1	1127510-1	1114341-3	1114341-3
	LOWER SIGN CAP, GREEN		1127510-2	1114341-5	1114341-5
	LOWER SIGN CAP, BLACK		1127510	1114341-1	1114341-1
6	UPPER / MIDDLE SIGN CAP, BLUE	1	1122769	1121063	1121063
	UPPER / MIDDLE SIGN CAP, GREEN		1122769-1	1121063-1	1121063-1
	UPPER / MIDDLE SIGN CAP, BLACK		1122769-2	1121063-2	1121063-2
7	LOWER / MIDDLE SIGN CAP, BLUE	1	1122768	1121060	1121060
	LOWER / MIDDLE SIGN CAP, GREEN		1122768-1	1121060-1	1121060-1
	LOWER / MIDDLE SIGN CAP, BLACK		1122768-2	1121060-2	1121060-2
8	UPPER SIGN TRIM, 72", BLUE	2	1121100-1	1121100-1	~
	UPPER SIGN TRIM, 79", BLUE		~	~	1121100-2
	UPPER SIGN TRIM, 72", GREEN		N/A	1121100-4	~
	UPPER SIGN TRIM, 79", GREEN		N/A	~	1121100-5
	UPPER SIGN TRIM, 72", BLACK		N/A	1121100-7	~
	UPPER SIGN TRIM, 79", BLACK		N/A	~	1121100-8
9	LOWER SIGN TRIM, 72" & 79", BLUE	2	1121100	1121100	1121100
	LOWER SIGN TRIM, 72" & 79", GREEN		N/A	1121100-3	1121100-3
	LOWER SIGN TRIM, 72" & 79", BLACK		~	1121100-6	1121100-6
10	RAIN GUARD (BLUE)	1	2005937	2005872	2005872
	RAIN GUARD (GREEN)		2005937-1	2005872-01	2005872-01
	RAIN GUARD (BLACK)		N/A	2000848	2000848
11	DOOR GUARD, 72", BLUE	1	1122179	1122179	~
	DOOR GUARD, 79", BLUE		~	~	1122179-1
	DOOR GUARD, 72", GREEN		N/A	1122179-2	~
	DOOR GUARD, 79", GREEN		N/A	~	1122179-3
	DOOR GUARD, 72", BLACK		N/A	2010131	~
	DOOR GUARD, 79", BLACK		N/A	~	2009503
12	SELECTION PANEL (SEE PAGE D-7)	~	~	~	~
13	LOWER CONSUMER PANEL, WITHOUT KEY	1	1121064-4	1121064-4	1121064-4
14	UPPER CONSUMER PANEL	1	1121084-11	1121084-11	1121084-11
	-WITHOUT DBV		1121084-8	1121084-8	1121084-8
	-WITHOUT DBV, CA FRENCH		1121084-8	1121084-8	1121084-8
	-LARGE DBV		1121084-11	1121084-11	1121084-11
	-UNIVERSAL LANGUAGE		1121084-7	1121084-7	1121084-7
	-UNIVERSAL LANG., WITHOUT DBV		1121084-8	1121084-8	1121084-8
	-UNIVERSAL LANG., WITHOUT DBV, LARGE COIN		1121084-9	1121084-9	1121084-9
	-UNIVERSAL LANG., LARGE DBV, LARGE COIN		1121084-10	1121084-10	1121084-10
	-UNIVERSAL LANG., LARGE DBV		1121084-11	1121084-11	1121084-11
15	SELECTION SPRING	1	1029959	1029959	1029959
16	COIN RETURN BUTTON	1	1050473	1050473	1050473
17	DISPLAY LENS	1	1121103	1121103	1121103
18	SERIAL DISPLAY, 2 X 20	1	1137414	1137414	1137414
19	EYELET TRIM	1	1121102	1121102	1121102
20	HINGE BUSHING	2	388094	388094	388094
21	PEPSI LOGO DECAL **	1	**	**	**
	AQUAFINA LOGO DECAL **		**	**	**
	MOUNTAIN DEW LOGO DECAL **		**	**	**
	GATORADE LOGO DECAL **		**	**	**

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

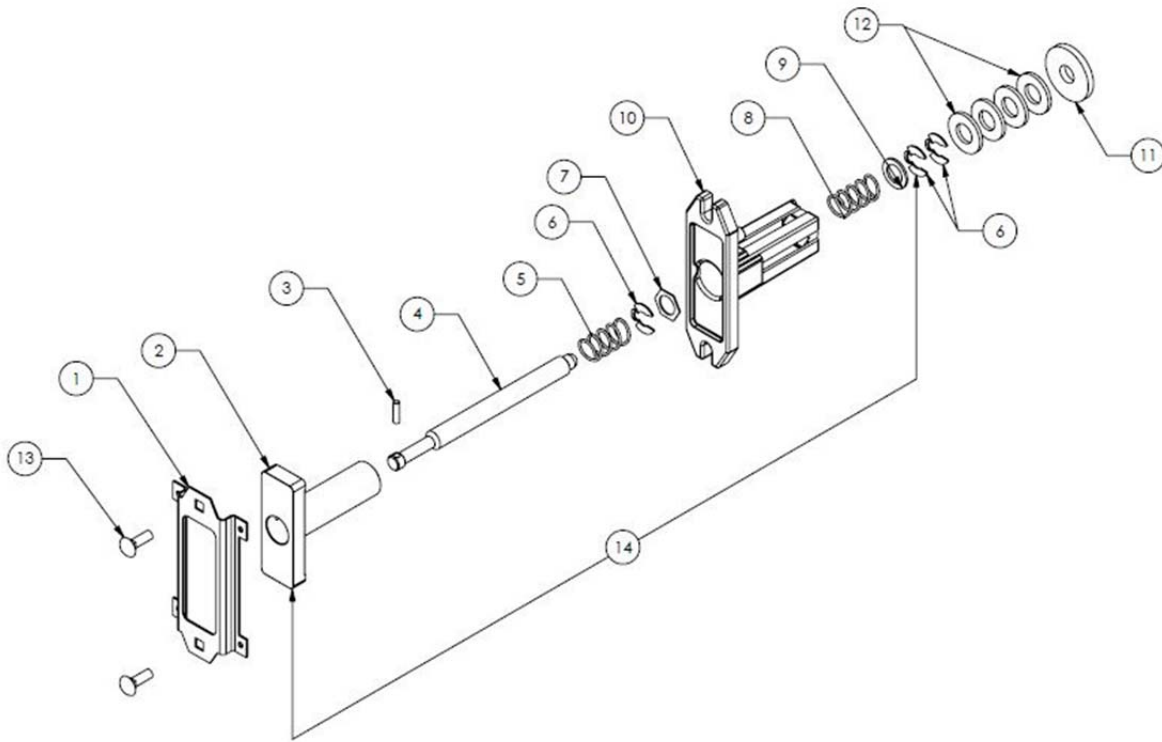**NOTE: WHEN ORDERING SIGN FACE, PLEASE PROVIDE **FRANCHISE** AND **STYLE**.
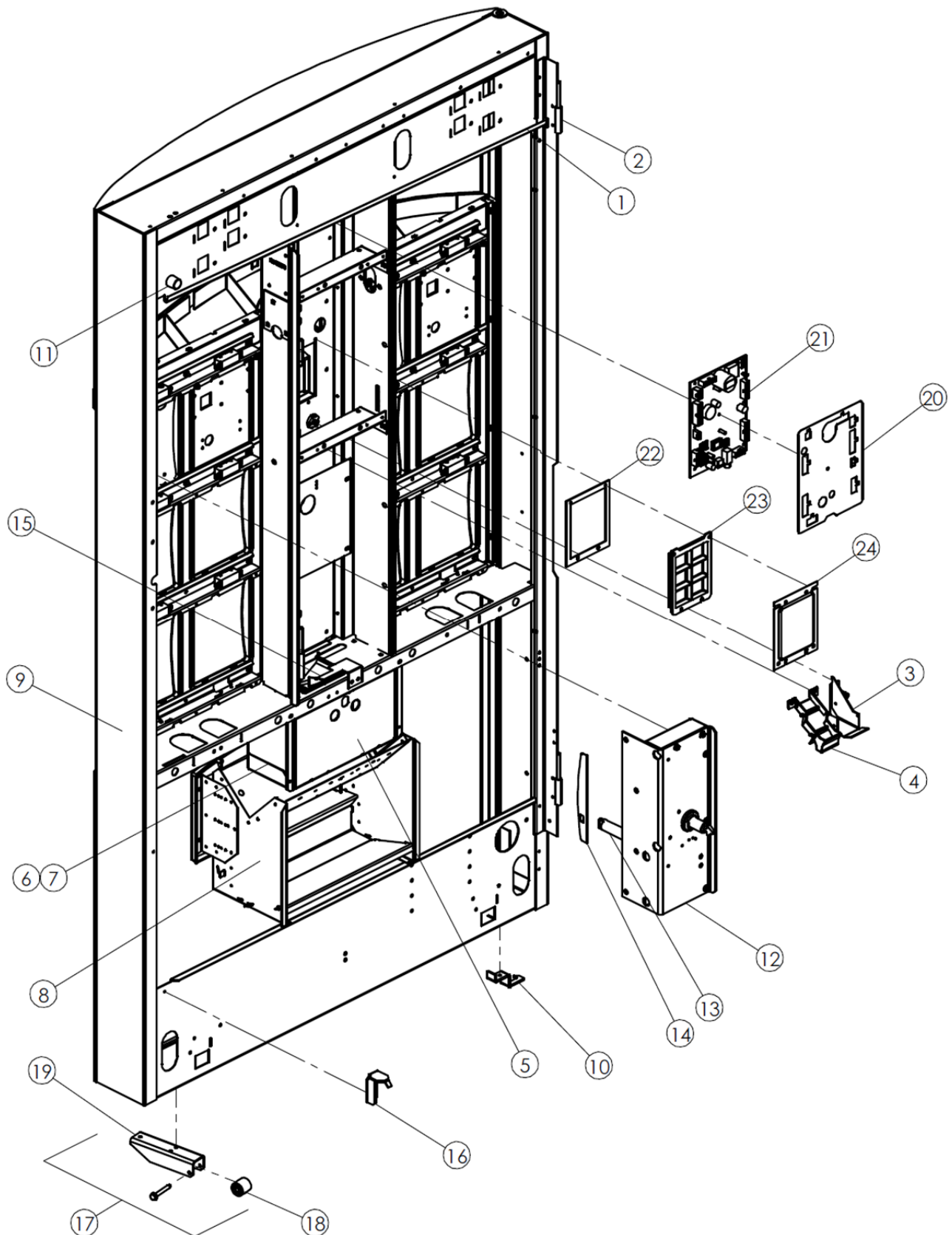
V21 HVV DOOR BACK

ITEM NO.	MODEL NUMBER DESCRIPTION	QTY REQ	621 PART NO.	721 PART NO.	821 PART NO.
1	RAIN GUTTER	1	1121204	1121204	1121204
2	INNER DOOR HINGE, MALE	1	1121287	1121287	1121287
3	COIN RETURN ASSEMBLY	1	2006236-43	2006236-43	2006236-43
	COIN RETURN PIVOT BRACKET		1121071	1121071	1121071
	COIN RETURN CRANK		1121072	1121072	1121072
	COIN INSERT SPRING		1060023	1060023	1060023
	SHOULDER WASHER		1122715	1122715	1122715
4	COIN INSERT CHUTE	1	1121066	1121066	1121066
5	COIN BOX ASSEMBLY	1	1121124-1	1121124-1	1121124-1
6	COIN RETURN CHUTE SHIELD	1	1122615	1122615	1122615
7	COIN BOX HOUSING	1	1124376	1124376	1124376
8	HOPPER ASSEMBLY	1	1124162	1124162	1124162
9	DOOR WELD, 72"	1	~	1121120-3	~
	DOOR WELD, 79"		1121120-5	~	1121120-4
10	LOWER HINGE HOOK	1	1121923	1121923	1121923
11	DOOR BUMPER (HEYCO 2551)	1	1036912	1036912	1036912
12	LOCK ASSEMBLY, HT2-TT *	1	1123073	1123073	1123073
13	TRITEQ LOCK LIGHT PIPE/SHROUD	1	1123640	1123640	1123640
14	LIGHT PIPE SHIELD	1	1123641	1123641	1123641
15	COIN RETURN CHUTE	1	1142809	1142809	1142809
16	INNER DOOR RAMP	1	1121714	1121714	1121714
17	DOOR ROLLER ASSEMBLY	1	1120564	1120564	1120564
18	DOOR ROLLER	1	1120388	1120388	1120388
19	DOOR ROLLER BRACKET	1	1239376	1239376	1239376
20	ELECTRONIC CONTROLLER COVER	1	1123529	1123529	1123529
21	VEC 12.3 PCBA	1	1123053-XX	1123053-XX	1123053-XX
22	DBV GASKET	1	1086759	1086759	1086759
23	DBV PLUG	1	388216-1	388216-1	388216-1
24	DBV INSERT (PLUG) BK	1	2000856	2000856	2000856
25	DOOR HARNESS (NOT PICTURED)	1	1122905	1122905	1122905

NOTE: T-HANDLE OPTION IS AVAILABLE FOR MODEL 621 ONLY. SEE PAGES PD-12 TO PD-13.
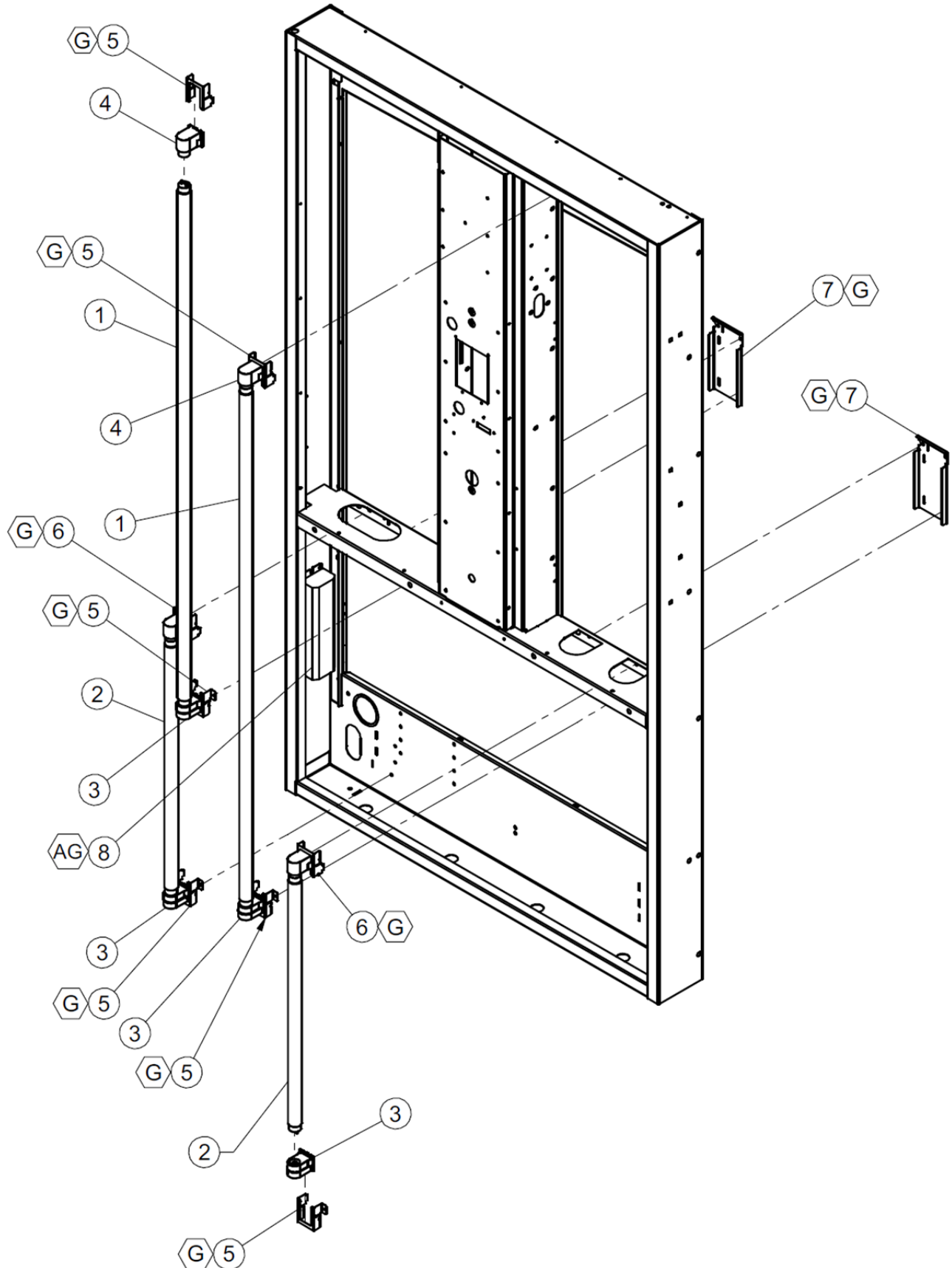
V21 HVV U.S. LIGHTING

ITEM NO.	DESCRIPTION	QTY REQ	PART NO.
1	LAMP, T-8, 4'	2	1121173-2
	LAMP, LED, 4'	2	1237136-1
2	LAMP, T-8, 2'	2	1121173
	LAMP, LED, 2'	2	1237136
3	LAMPHOLDER, FIXED	2	388531
4	LAMPHOLDER, PLUNGER	2	388532
5	LAMP BRACKET, 90°	6	1126231B
6	LAMP BRACKET, STRAIGHT	2	1126231-2B
7	VERTICAL SUPPORT, MIDDLE	2	1125176
8	BALLAST, 120V/60HZ	1	1127052
9	RAIN CURTAIN, BALLAST (NOT SHOWN)	1	1125150
10	RAIN CURTAIN, LIGHTS, T8 (NOT SHOWN)	1	1121838-1
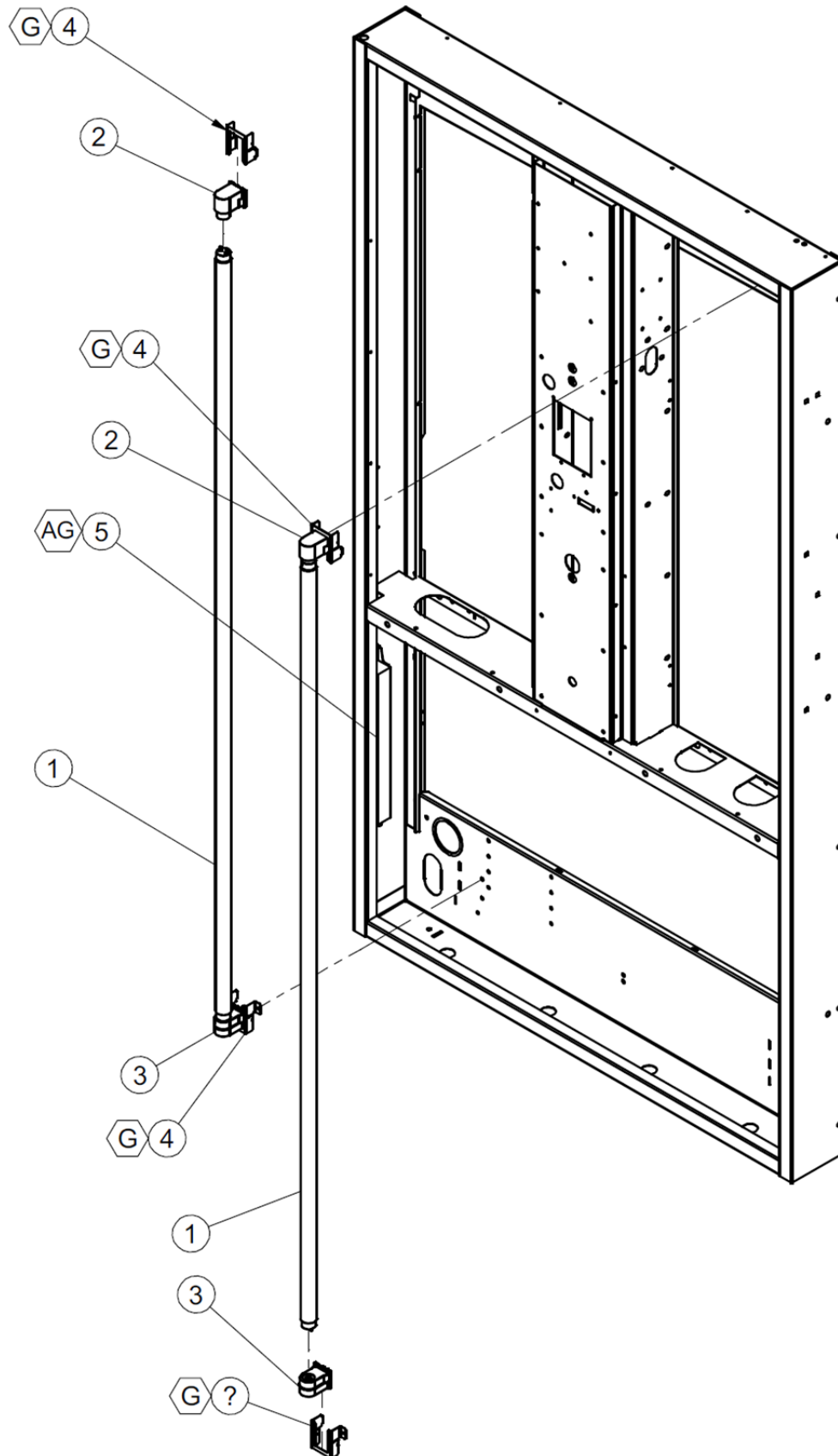
V21 HVV INTERNATIONAL LIGHTING

ITEM NO.	DESCRIPTION	QTY REQ	PART NO.
1	LAMP, T-8 (FOR MODEL 721)	2	1121030
	LAMP, T-8 (FOR MODEL 821)		1119340
2	LAMPHOLDER, PLUNGER	2	388532
3	LAMPHOLDER, FIXED	2	388531
4	LAMP BRACKET	4	1126231B
5	BALLAST, 220V (FOR MODEL 721)	1	1120450
	BALLAST, 220V/240V (FOR MODEL 821)		1124848
6	RAIN CURTAIN, BALLAST (NOT SHOWN)	1	1125150
7	RAIN CURTAIN, LIGHTS, T8 (NOT SHOWN)	1	1121838-1
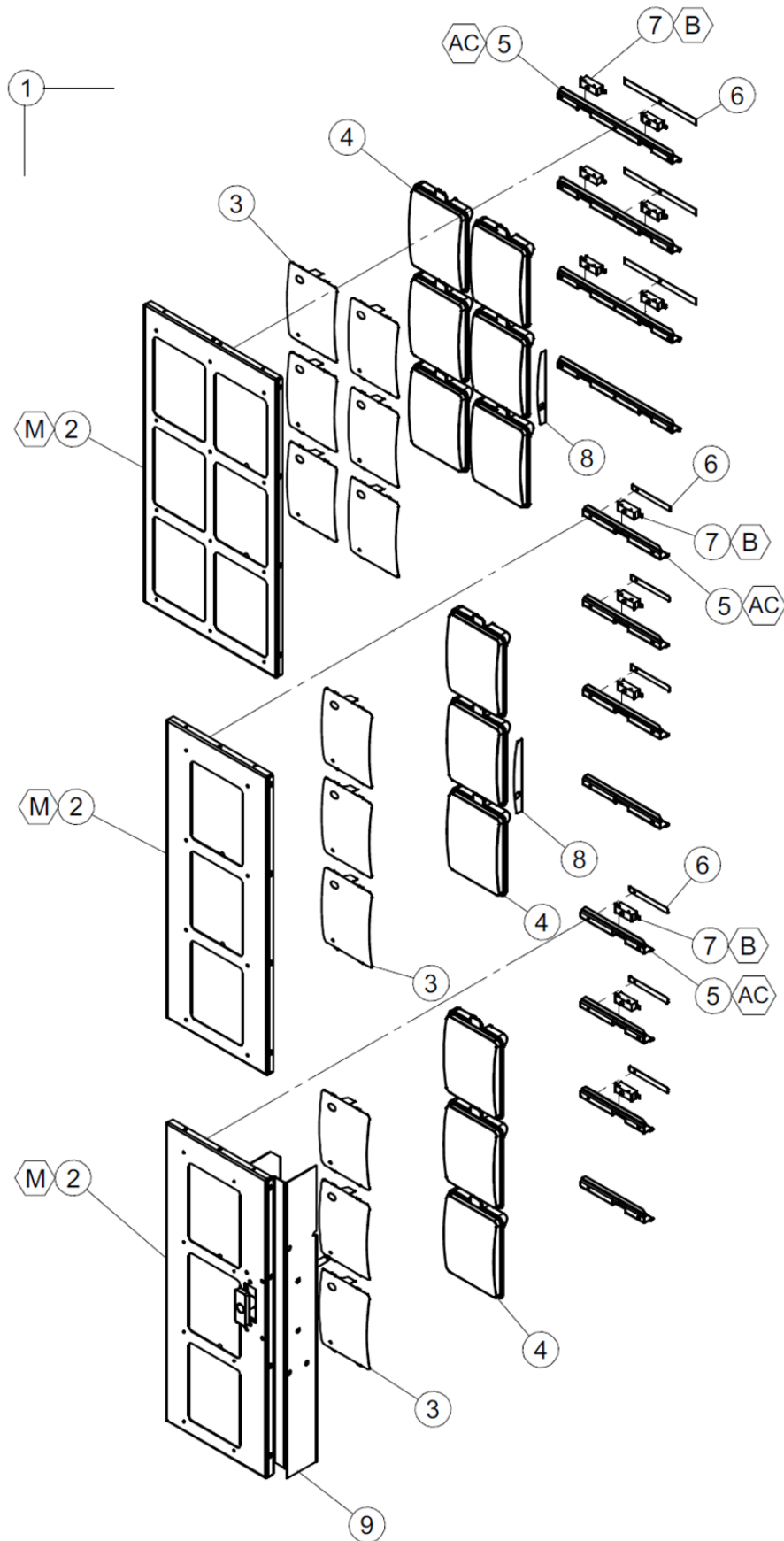
V21 HVV SELECTION PANEL ASSEMBLY

ITEM NO.	MODEL NUMBER DESCRIPTION	QTY REQ	621 PART NO.	721 / 821 PART NO.
1	BUTTON ASSEMBLYS:			
	RIGHT PANEL ASSEMBLY, 6 SELECTION, BLUE	2	N/A	1122613
	LEFT PANEL ASSEMBLY, 6 SELECTION, BLUE	2	N/A	1122613-1
	SOLD OUT/READY TO VEND ASSY, RIGHT, 6 SEL, BLUE	2	N/A	1122613-2
	SOLD OUT/READY TO VEND ASSY, LEFT, 6 SEL, BLUE	2	N/A	1122613-3
	RIGHT PANEL ASSEMBLY, 6 SELECTION, GREEN	2	N/A	1122613-6
	LEFT PANEL ASSEMBLY, 6 SELECTION, GREEN	2	N/A	1122613-7
	SOLD OUT/READY TO VEND ASSY, RIGHT, 6 SEL, GREEN	2	N/A	1122613-8
	SOLD OUT/READY TO VEND ASSY, LEFT, 6 SEL, GREEN	2	N/A	1122613-9
	RIGHT PANEL ASSEMBLY, 6 SELECTION, BLACK	2	N/A	1122613-20
	LEFT PANEL ASSEMBLY, 6 SELECTION, BLACK	2	N/A	1122613-21
	SOLD OUT/READY TO VEND ASSY, RIGHT, 6 SEL, BLACK	2	N/A	1122613-22
	SOLD OUT/READY TO VEND ASSY, LEFT, 6 SEL, BLACK	2	N/A	1122613-23
	RIGHT PANEL ASSEMBLY, 3 SELECTION, BLUE	2	1122613-4	N/A
	LEFT PANEL ASSEMBLY, 3 SELECTION, BLUE	2	1122613-5	N/A
	RIGHT PANEL ASSEMBLY, 3 SEL, T-HANDLE OPTION, BLUE	2	1122613-24	N/A
2	BUTTON PANEL, BLUE	2	1122884	1121121
	BUTTON PANEL, T-HANDLE, BLUE (RIGHT SIDE ONLY)	1	1122884-2	N/A
	BUTTON PANEL, GREEN	2	1122884-1	1121121-01
	BUTTON PANEL, BLACK	2	N/A	1121121-03
3	FLAVOR LABEL	**	**	**
4	SELECTION BUTTON	A/R	1121057	1121057
5	BUTTON RETAINER SWITCH MOUNT, 6 SEL	8	N/A	1121070
	BUTTON RETAINER SWITCH MOUNT, 3 SEL	4	1122619	N/A
	BUTTON RETAINER SWITCH MOUNT, 3 SEL, T-HANDLE	4	1126109	N/A
6	FLAT SPRING	A/R	1122622	1121112
7	2-TERMINAL SWITCH	A/R	1120885	1120885
8	LIGHT PIPE SHIELD	1	1123641	1123641
9	T-HANDLE LOCK ASSEMBLY (SEE PAGES PD-12 TO PD-13)	~	~	~

NOTE: WHEN ORDERING FLAVOR LABELS, PLEASE PROVIDE **FRANCHISE AND **STYLE**.
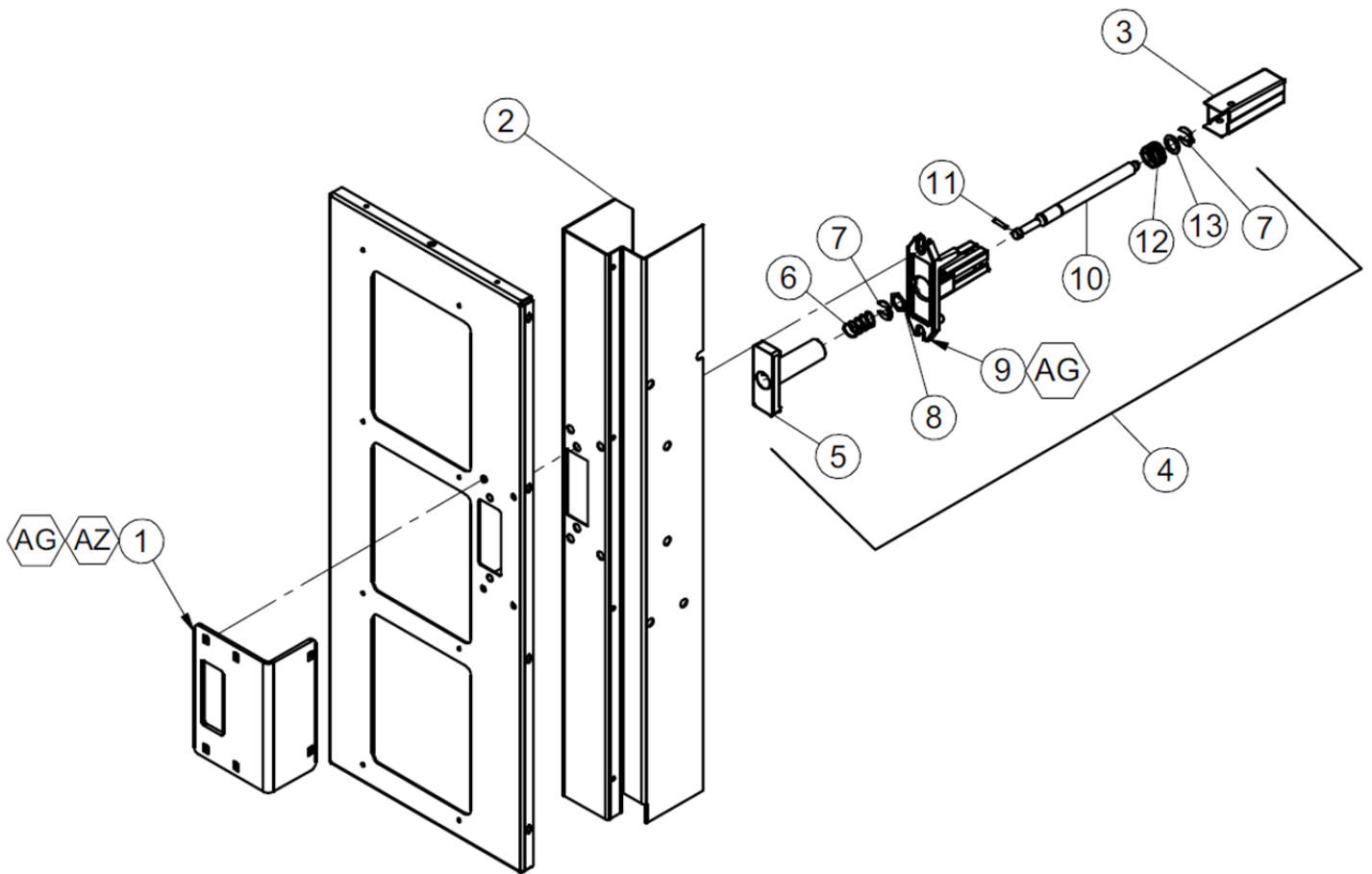
V21 HVV T-HANDLE ASSEMBLY

ITEM NO.	DESCRIPTION	QTY REQ	PART NO.
1	LOCK COVER PLATE, BLUE	1	1126568
2	LOCK SHIELD	1	1126218
3	LOCK STUD COVER	1	1121817-1
4	T-HANDLE LOCK ASSEMBLY	1	1126557
5	T-HANDLE	1	1002392
6	SPRING	1	389691
7	E-RING RETAINER	2	388589
8	HEX WASHER	1	387600
9	FLANGE	1	1002384
10	LOCK STUD	1	1122399
11	PIN, LOCK STUD	1	387601
12	SPRING QUICKER LOCK	1	389690
13	WASHER	1	387718
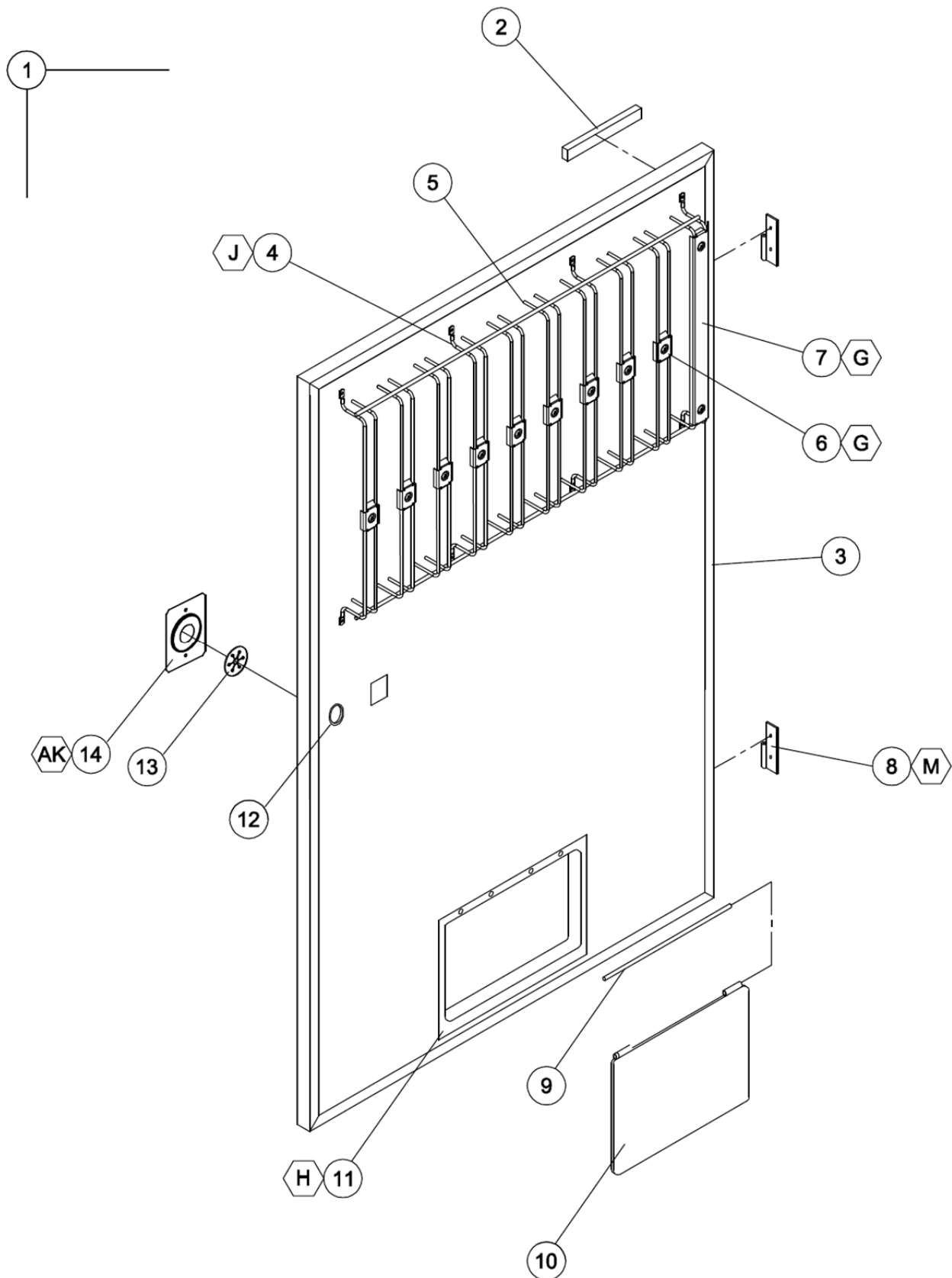
V21 HVV INNER DOOR

ITEM NO.	MODEL NUMBER			721	821
	DESCRIPTION		QTY REQ	PART NO.	PART NO.
1	INNER DOOR ASSEMBLY		1	134302-126	134302-127
2	RAIN SEAL, INNER DOOR, 7"		1	1111732-2	1111732-2
3	INNER DOOR SEAL		1	1075678	1075678-1
4	UPPER PRODUCT RETAINER ASSEMBLY		1	1125206-1	1125206-2
5	UPPER PRODUCT RETAINER		1	1181827	1181827-1
6	SHORT CLIP ASSEMBLY		9	1125261	1125261
7	LONG CLIP ASSEMBLY		1	1125262	1125263
8	INNER DOOR HINGE, FEMALE		2	1121286	1121286
9	HINGE PIN		1	1172323	1172323
10	REVERSABLE VEND FLAP		1	1013076	1013076
11	INNER DOOR EYELET		1	387273	387273
12	GROMMET		1	388090	388090
13	INNER DOOR LATCH		1	1121711	1121711
14	INNER DOOR LATCH BRACKET		1	1121712	1121712

V21 HVV INNER DOOR LABELS - NOT SHOWN

DESCRIPTION	QTY REQ	PART NO.
WARNING/PATENTS, U.S. OR WARNING/PATENTS, INTL.	1	1125783-1 1125783
ERROR CODE LABEL, VEC 12.3	1	1123717
PROGRAMMING LABEL, VEC 12.3	1	1123345
WIRING DIAGRAM LABEL, VEC 12.3	1	1127541
PRODUCT SET UP, V21	1	1126121
SPACE TO SALES, VEC 12.3	1	1123311

DOOR PARTS
HVV ADA
(2020 update)
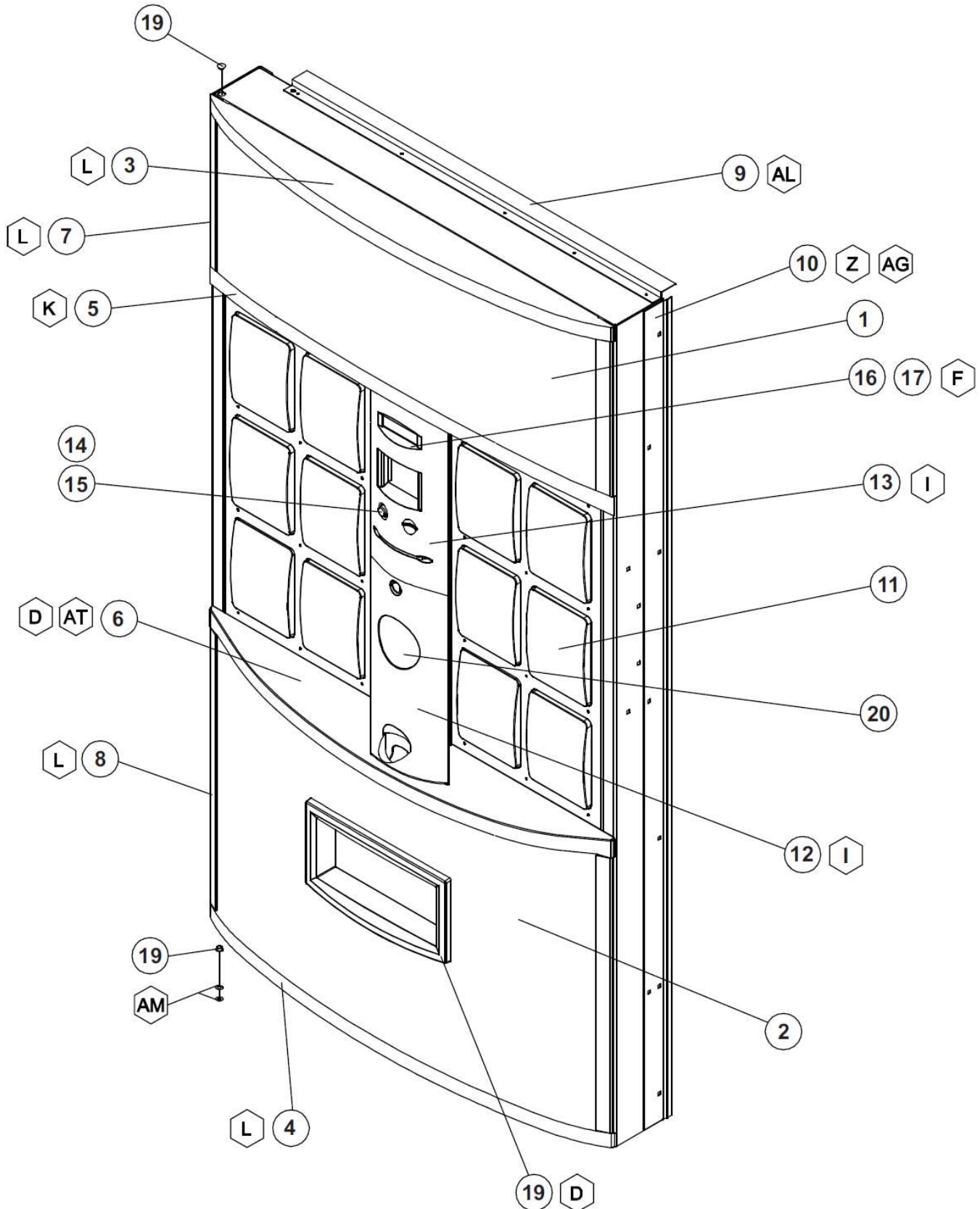
V21 HVV ADA DOOR FRONT

ITEM NO.	MODEL NUMBER / DESCRIPTION	QTY REQ	621 PART NO.	721 PART NO.	821 PART NO.
1	UPPER SIGN FACE **	1	**	**	**
2	LOWER SIGN FACE **	1	**	**	**
3	UPPER SIGN CAP, BLUE (SERVICE USE ONLY)	1	1127305-1	1114341-2	1114341-2
	UPPER SIGN CAP, BLACK		1127305	1114341	1114341
4	LOWER SIGN CAP, BLUE (SERVICE USE ONLY)	1	NLA	1114341-3	1114341-3
	LOWER SIGN CAP, BLACK		1127510	1114341-1	1114341-1
5	UPPER / MIDDLE SIGN CAP, BLUE (SERVICE ONLY)	1	1122769	1121063	1121063
	UPPER / MIDDLE SIGN CAP, BLACK		1122769-2	1121063-2	1121063-2
6	LOWER/MIDDLE SIGN CAP, BLUE (SERVICE ONLY)	1	1122768	1121060	1121060
	LOWER / MIDDLE SIGN CAP, BLACK		1122768-2	1121060-2	1121060-2
7	UPPER SIGN TRIM, 72", BLACK	2	1220608	1220608	~
	UPPER SIGN TRIM, 79", BLACK		~	~	1220617
8	LOWER SIGN TRIM, 72" & 79", BLACK	2	1220582	1220582	1220582
9	RAIN GUARD BLACK	1	2005937-2	2000848	2000848
10	DOOR GUARD, 72", BLACK	1	2010131	2010131	~
	DOOR GUARD, 79", BLACK		~	~	2009503
11	SELECTION PANEL (SEE PAGE D-7)	~	~	~	~
12	LOWER CONSUMER PANEL, WITHOUT KEY	1	1121064-4	1121064-4	1121064-4
13	UPPER CONSUMER PANEL WITH DBV OPENING	1	1121084-11	1121084-11	1121084-11
	-WITHOUT DBV		1121084-8	1121084-8	1121084-8
14	SPRING	1	1029959	1029959	1029959
15	COIN RETURN BUTTON	1	1050473	1050473	1050473
16	DISPLAY LENS (CLEAR)	1	1121103-1	1121103-1	1121103-1
17	DISPLAY, 2 X 20	1	1249924	1249924	1249924
18	EYELET TRIM	1	1121102	1121102	1121102
19	HINGE BUSHING	2	388094	388094	388094
20	LOGO DECAL **	1	**	**	**

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

NOTE: WHEN ORDERING SIGN FACE, PLEASE PROVIDE **FRANCHISE AND **STYLE**.
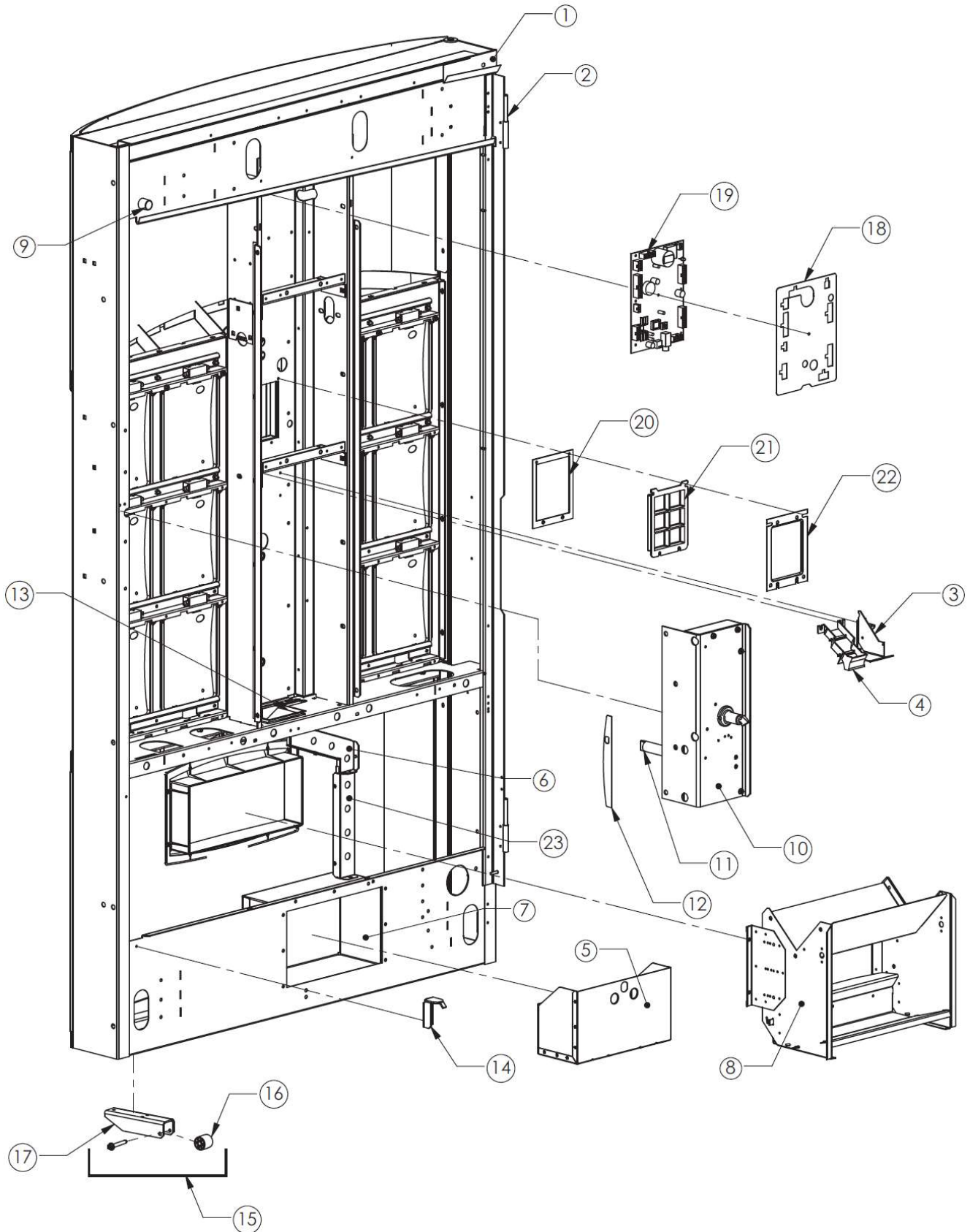
V21 HVV ADA DOOR BACK

ITEM NO.	MODEL NUMBER / DESCRIPTION	QTY REQ	621 PART NO.	721 PART NO.	821 PART NO.
1	RAIN GUTTER	1	1121204	1121204	1121204
2	INNER DOOR HINGE, MALE	1	1121287	1121287	1121287
3	COIN RETURN ASSEMBLY	1	2006236-43	2006236-43	2006236-43
	COIN RETURN PIVOT BRACKET		1121071	1121071	1121071
	COIN RETURN CRANK		1121072	1121072	1121072
	COIN INSERT SPRING		1060023	1060023	1060023
	SHOULDER WASHER		1122715	1122715	1122715
4	COIN INSERT CHUTE	1	1121066	1121066	1121066
5	COIN BOX ASSEMBLY	1	1121124-1	1121124-1	1121124-1
6	COIN CHUTE, UPPER	1	1200007	1200007	1200007
7	COIN BOX HOUSING	1	1199961	1199961	1199961
8	HOPPER ASSEMBLY	1	1189115	1189115	1189115
9	DOOR BUMPER (HEYCO 2551)	1	1036912	1036912	1036912
10	LOCK ASSEMBLY, HT2-TT	1	1123073	1123073	1123073
11	TRITEQ LOCK LIGHT PIPE/SHROUD	1	1123640	1123640	1123640
12	LIGHT PIPE SHIELD	1	1123641	1123641	1123641
13	COIN RETURN CHUTE	1	1142809	1142809	1142809
14	INNER DOOR RAMP	1	1121714	1121714	1121714
15	DOOR ROLLER ASSEMBLY	1	1120564	1120564	1120564
16	DOOR ROLLER	1	1120388	1120388	1120388
17	DOOR ROLLER BRACKET	1	1239376	1239376	1239376
18	ELECTRONIC CONTROLLER COVER	1	1123529	1123529	1123529
19	VEC 12.3 PCBA	1	1123053-XX	1123053-XX	1123053-XX
20	DBV GASKET	1	1086759	1086759	1086759
21	DBV PLUG	1	388216-1	388216-1	388216-1
22	DBV INSERT (PLUG) BK	1	2000856	2000856	2000856
23	COIN BOX CHUTE, LOWER	1	1200033	1200033	1200033
24	DOOR HARNESS (NOT PICTURED)	1	1122905	1122905	1122905
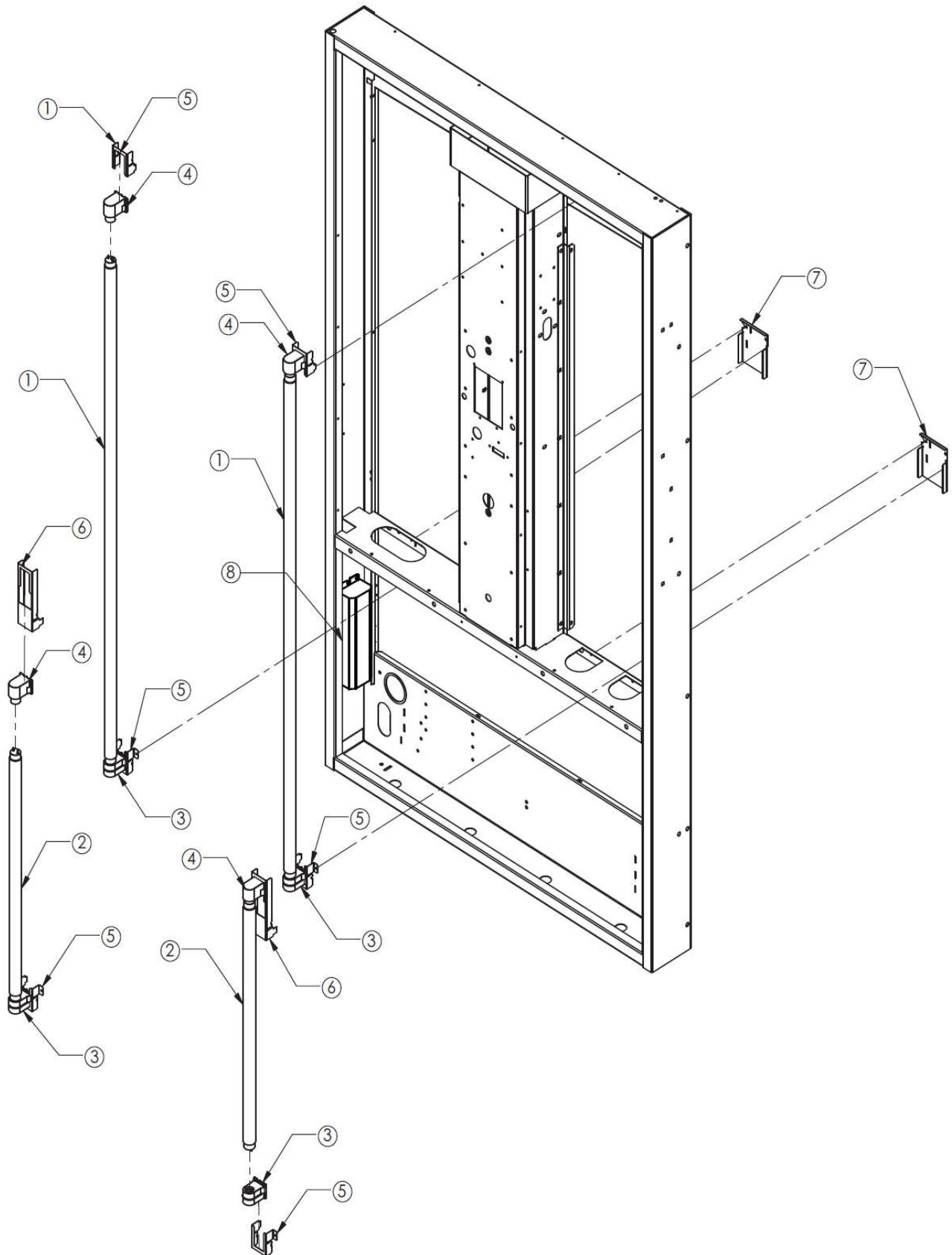
V21 HVV ADA 4 BULB LED LIGHTING (PRIOR TO 2019)

ITEM NO.	MODEL NUMBER			621 / 721	821
	DESCRIPTION	QTY REQ		PART NO.	PART NO.
1	LAMP, LED, 48"	2		1237136-1	1237136-1
2	LAMP, LED, 24"	2		1237136	1237136
3	LAMPHOLDER, FIXED	4		1151253	1151253
4	LAMPHOLDER, PLUNGER	4		1151265	1151265
5	LAMP BRACKET, 90°	6		1126231	1126231
6	LAMP BRACKET, STRAIGHT	2		1198634	1198634
7	VERTICAL SUPPORT, MIDDLE	2		1199005	1198645
8	POWER SUPPLY 24V LED DRIVER	1		1237144	1237144
	BRKT, PS MOUNTING (NOT SHOWN)	1		1237152	1237152

WHEN ORDERING PARTS FOR OLDER FUORESCENT BULB UNITS PLEASE PROVIDE **9-CODE** OR **11-CODE** AND **MANUFACTURER'S DATE CODE**
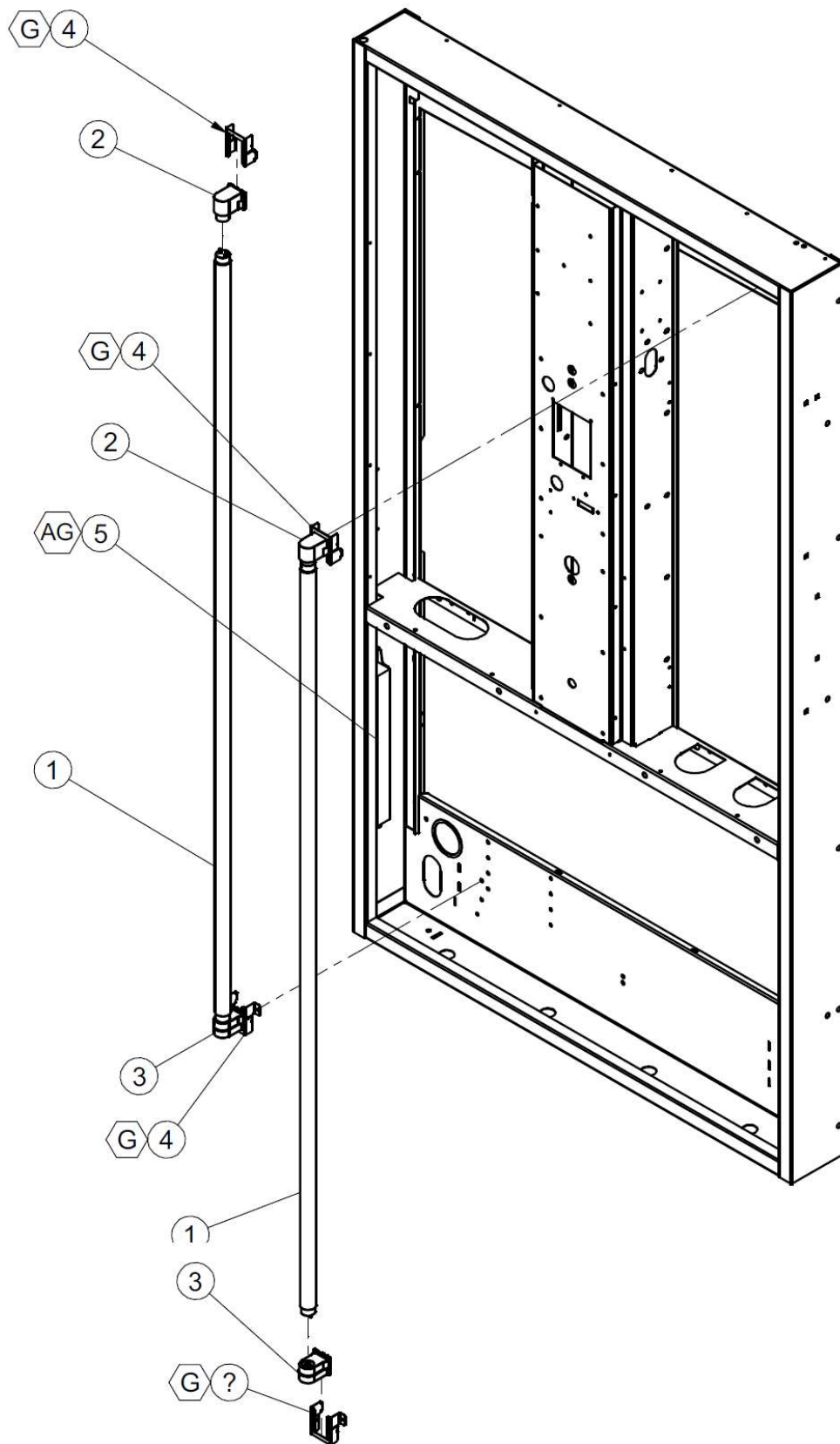
V21 HVV ADA 2 BULB LED LIGHTING (DOE 2019 COMPLIANT)

ITEM NO.	DESCRIPTION	QTY REQ	PART NO.
1	LAMP, LED 5.0 FT (FOR MODELS 621 & 721)	2	1237136-2
	LAMP, LED 5.7 FT (FOR MODEL 821)		1237136-4
2	LAMPHOLDER, PLUNGER	2	1151265
3	LAMPHOLDER, FIXED	2	1151253
4	LAMP BRACKET	4	1126231
5	POWER SUPPLY 24V LED DRIVER	1	1237144
	BRKT, PS MOUNTING (NOT SHOWN)	1	1237152

WHEN ORDERING PARTS FOR OLDER FUORESCENT BULB UNITS PLEASE PROVIDE **9-CODE** OR **11-CODE** AND **MANUFACTURER'S DATE CODE**
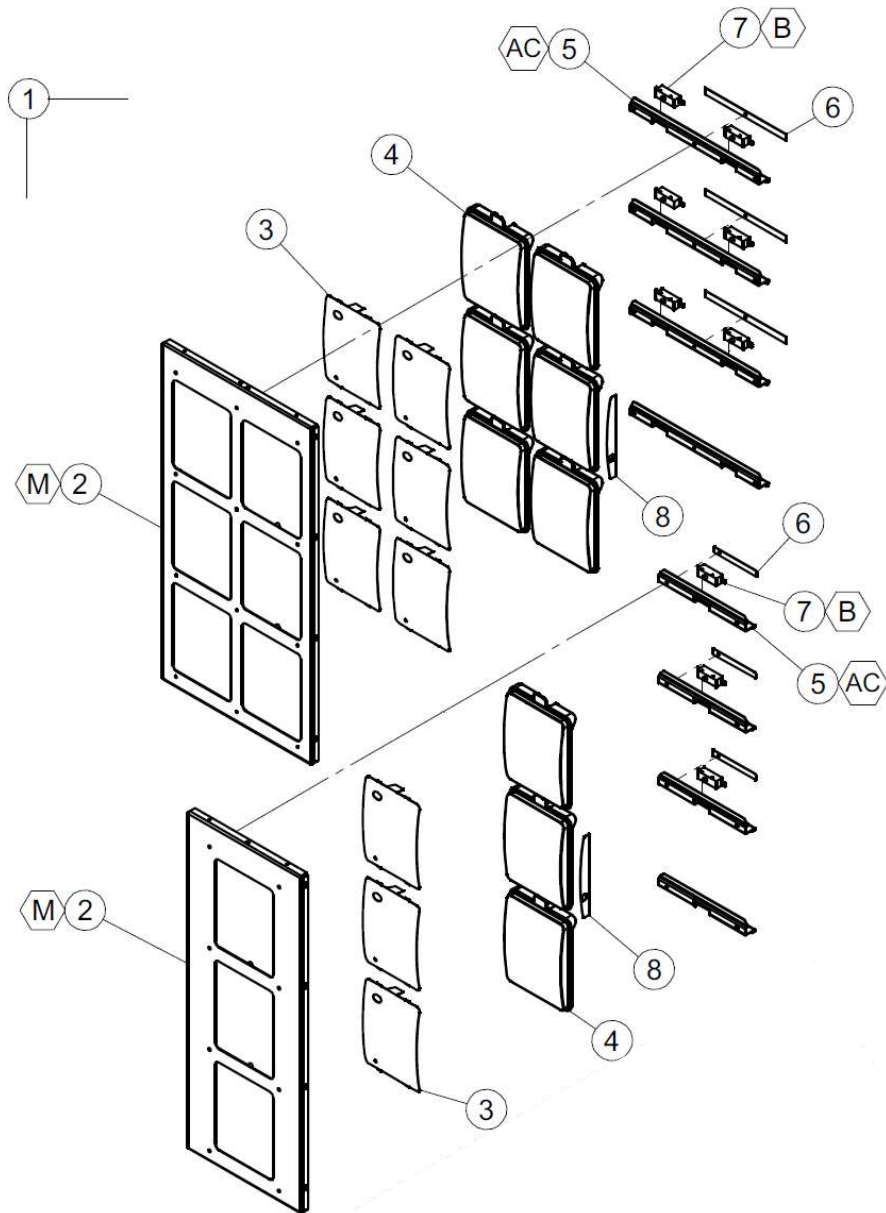
V21 HVV ADA SELECTION PANEL ASSEMBLY

ITEM NO.	MODEL NUMBER		621	721 / 821
	DESCRIPTION	QTY REQ	PART NO.	PART NO.
1	BUTTON ASSEMBLYS:			
	RIGHT PANEL ASSEMBLY, 6 SELECTION, BLACK	1	N/A	1122613-27
	LEFT PANEL ASSEMBLY, 6 SELECTION, BLACK	1	N/A	1122613-21
	RIGHT PANEL ASSEMBLY, 3 SELECTION, BLACK	1	1122613-30	N/A
	LEFT PANEL ASSEMBLY, 3 SELECTION, BLACK	1	1122613-26	N/A
2	BUTTON PANEL, BLACK	2	1122884-3	1121121-03
3	FLAVOR LABEL **	**	**	**
4	SELECTION BUTTON	A/R	1121057	1121057
5	BUTTON RETAINER SWITCH MOUNT, 6 SEL	8	N/A	1121070
	BUTTON RETAINER SWITCH MOUNT, 3 SEL	4	1122619	N/A
6	FLAT SPRING	A/R	1122622	1198207
7	2-TERMINAL SWITCH	A/R	1120885	1120885
8	LIGHT PIPE SHIELD	1	1123641	1123641

NOTE: WHEN ORDERING FLAVOR LABELS, PLEASE PROVIDE **FRANCHISE AND **STYLE**.
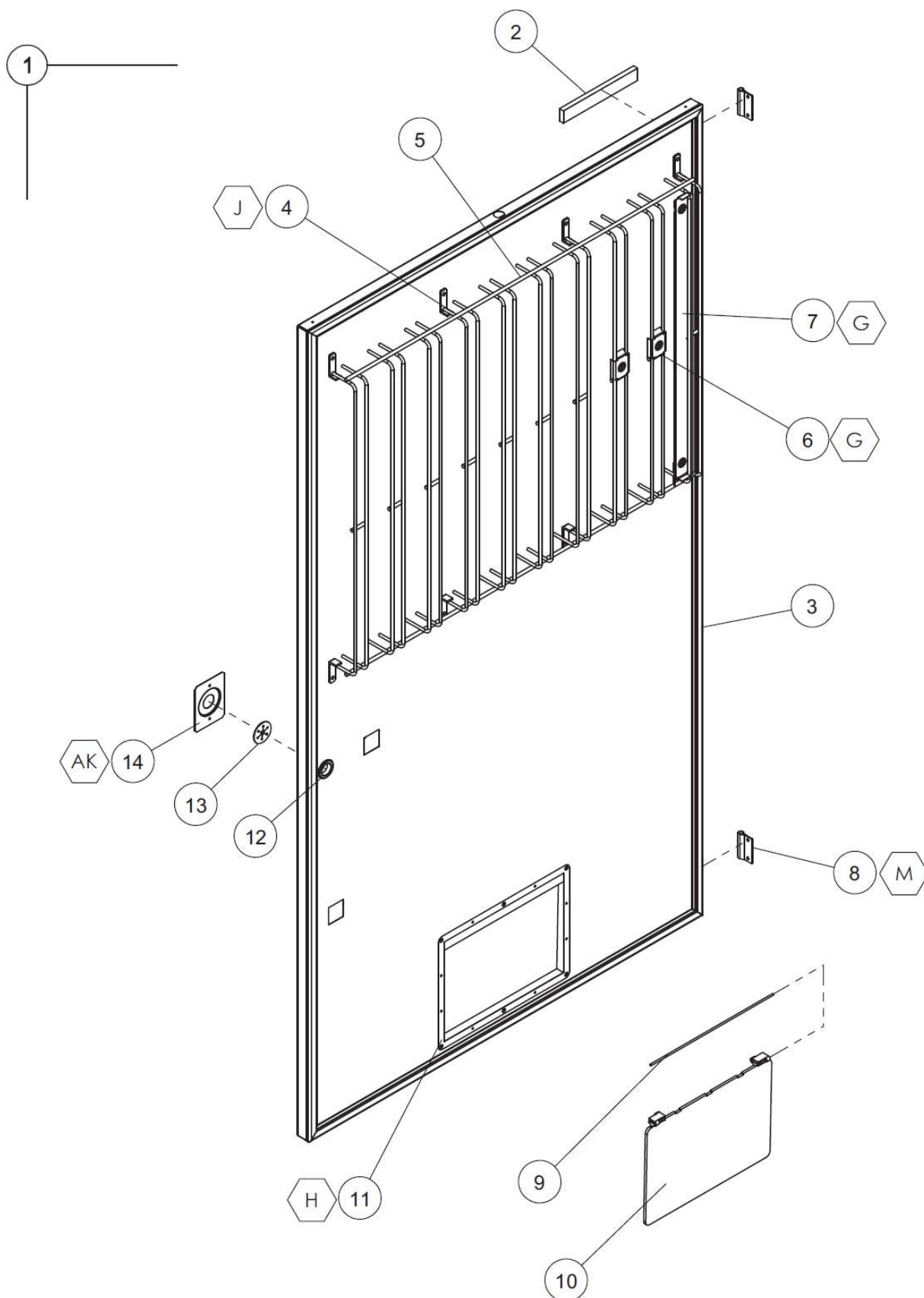
V21 HVV ADA INNER DOOR

ITEM NO.	MODEL NUMBER		621	721	821
	DESCRIPTION	QTY REQ	PART NO.	PART NO.	PART NO.
1	INNER DOOR ASSEMBLY	1	134302-170	134302-168	134302-169
2	RAIN SEAL, INNER DOOR, 7"	1	1111732-2	1111732-2	1111732-2
3	INNER DOOR SEAL	1	1075678-2	1075678	1075678-1
4	UPPER PRODUCT RETAINER ASSEMBLY	1	1251228-2	1251228	1251228-1
5	NO LONGER AVAILABLE				
6	NO LONGER AVAILABLE				
7	NO LONGER AVAILABLE				
8	INNER DOOR HINGE, FEMALE	2	1121286	1121286	1121286
9	HINGE PIN	1	1172323	1172323	1172323
10	REVERSABLE VEND FLAP	1	1013076	1013076	1013076
11	INNER DOOR EYELET	1	387273	387273	387273
12	GROMMET	1	1123629	1123629	1123629
13	INNER DOOR LATCH	1	1121711	1121711	1121711
14	INNER DOOR LATCH BRACKET	1	1121712	1121712	1121712

V21 HVV ADA INNER DOOR LABELS - NOT SHOWN

MODEL NUMBER		621 / 721 / 821
DESCRIPTION	QTY REQ	PART NO.
ERROR CODE LABEL, VEC 12.1	1	1170775
PROGRAMMING LABEL, VEC 12.1	1	1123345
WIRING DIAGRAM LABEL, VEC 12.1/12.2	1	1127541
PRODUCT SET UP, V21	1	1126121
SPACE TO SALES, VEC 12.1	1	1123311
INNER DOOR LABEL, WARNING	1	1208597

FOR A COMPLETE LIST OF HARNESSES
SEE CABINET PARTS SECTION C.

DOOR PARTS
3D LIVE DISPLAY
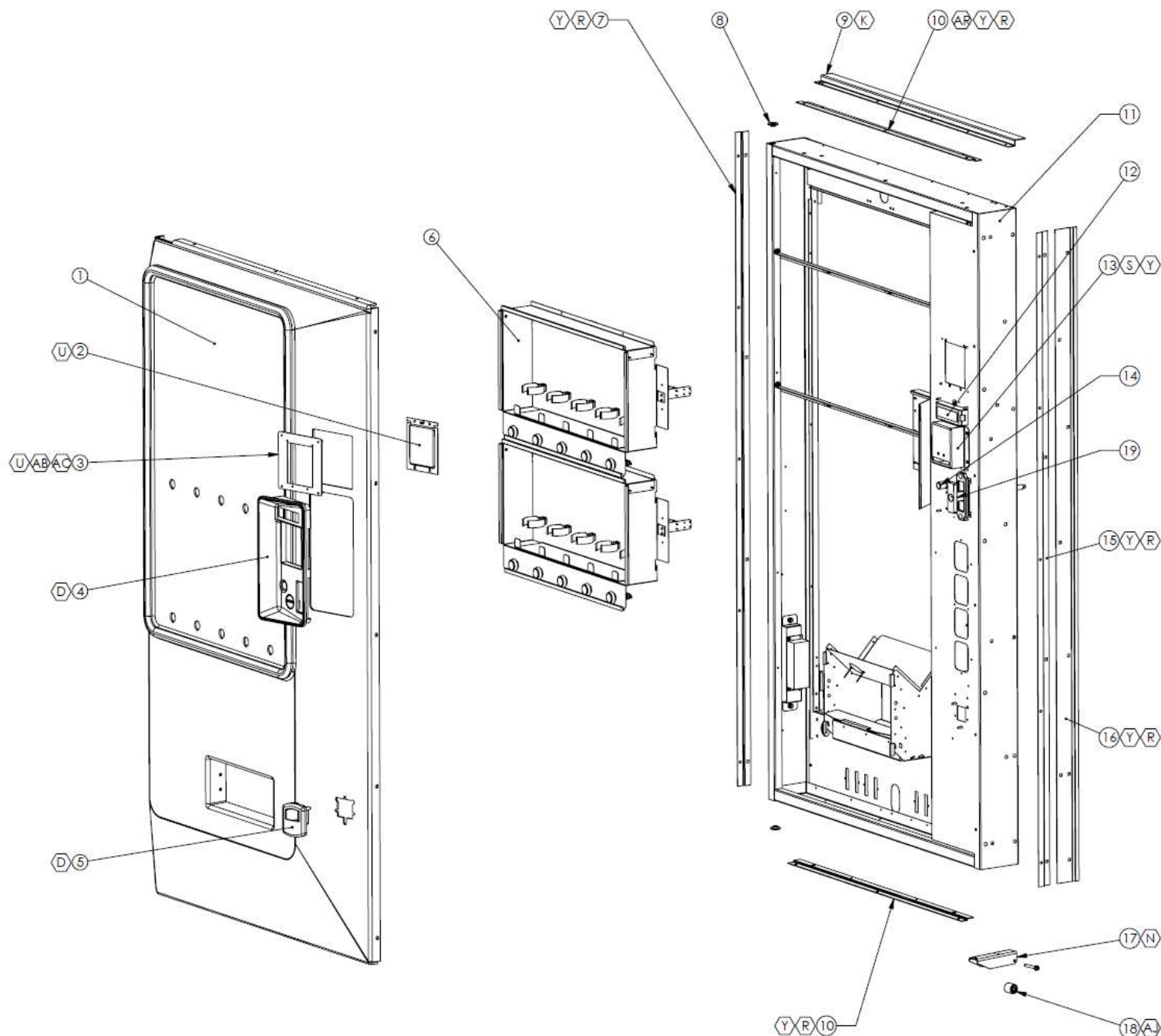
3D LIVE DISPLAY DOOR

ITEM NO.	MODEL NUMBER		721	HARDWARE
	DESCRIPTION	QTY REQ	PART NO.	
1	SIGN FACE	1	**	~
2	DBV FILLER PLATE	1	2000856	U
3	PLT, UPR BEZEL, FLUSH, VIS	1	1236954	U, AB, AC
4	BEZEL, CONSUMER INTERFACE	1	1143346-1	D
5	BEZEL, COIN RETURN	1	1170855-1	D
6	PRODUCT BOX ASY (SEE PG 6)	2	~	~
7	MTG BRKT, SIDE, 72"	2	1228105	R, Y
8	BUSHING HINGE	1	388094	~
9	RAIN GUARD	1	2000848	K
10	MTG, BRKT, TOP/BTM, 39"	2	1224518	AR, Y, R
11	DOOR, 39X72, BK, CHM, 3D	1	1265539	~
12	LENS, DISPLAY, CLEAR	1	1121103-1	
13	DBV PLUG	1	1149907	S, Y
14	COIN RETURN BUTTON	1	1050473	
15	COVER, DBV (OPTIONAL)	1	1144557	S
16	DOOR GUARD	1	2010131	R, Y
17	BRKT, DOOR ROLLER, V21	1	1239376	N
18	DOOR ROLLER	1	1120388	AJ
19	LOCK ASSEMBLY (SEE PG 7)	1	~	
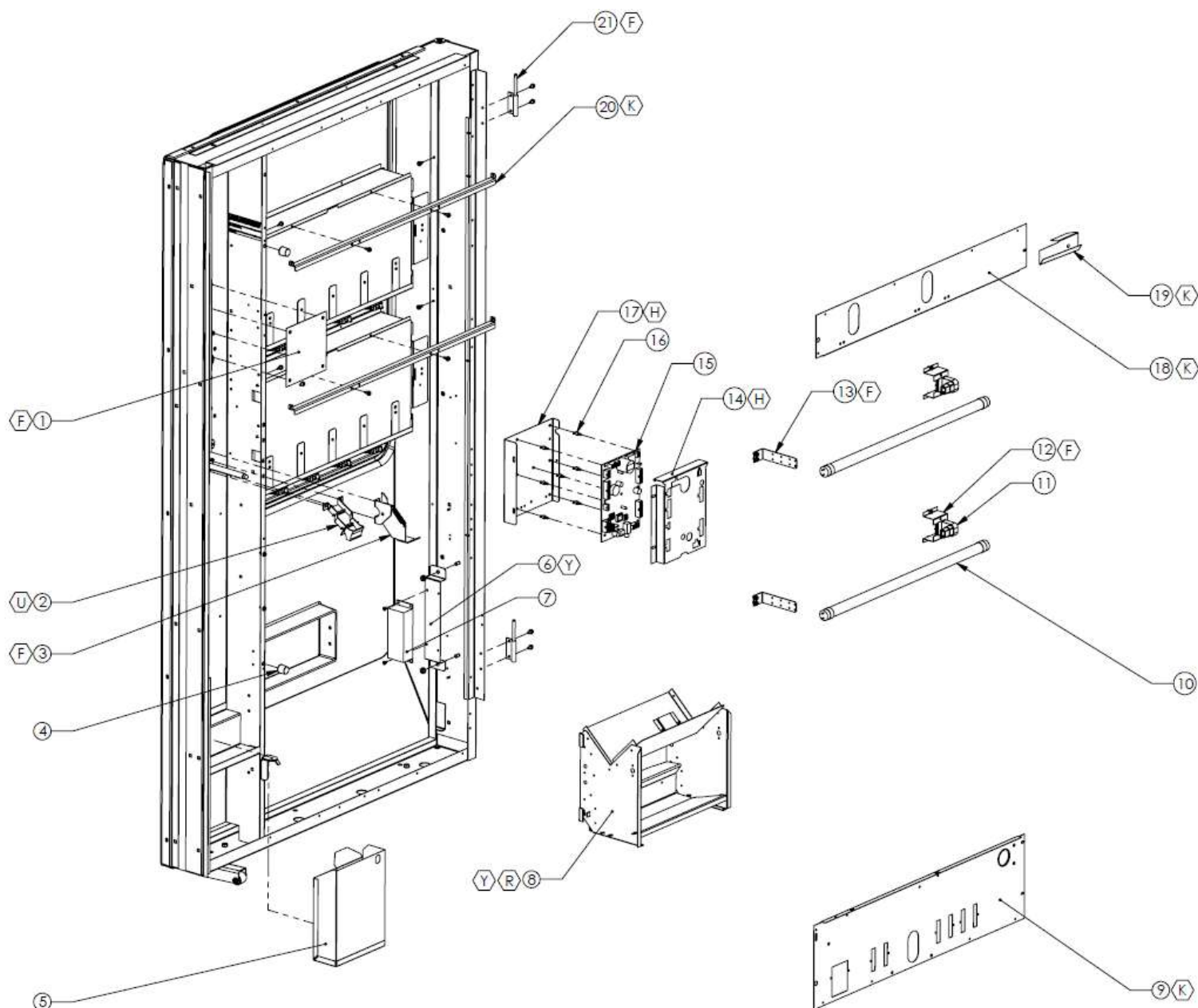
3D LIVE DISPLAY DOOR (CONTINUED)

ITEM NO.	MODEL NUMBER		721	HARDWARE
	DESCRIPTION	QTY REQ	PART NO.	
1	PLATE, DBV PLUG, UPPER	1	1143498	F
2	COIN INSERT CHUTE	1	1121066	U
3	ASY, COIN RETURN LEVER	1	1182651	F
4	DOOR BUMPER	2	1036912	
5	COIN BOX	1	1088058	
6	BRKT, MNT, PWR SPLY, LED	1	1237152	Y
7	POWER SUPPLY, LED	1	1237144-1	
8	DELIVERY HOPPER ASSEMBLY	1	1222353-3	Y, R
9	PNL, SHR, UPR/LWR, 39"	1	1123917	K
10	LAMP, LED, 24"	2	1237136	
11	BULB, HOLDER, PLUNGER	4	1151265	
12	LAMP BRACKET LOWER PROFILE	4	1151367	F
13	BRKT, LED HOLDER, CHAM	2	1262912	F
14	COVER, VEC 12 CONTROLLER	1	1123049	H
15	ASY, CONTROLLER, DC	1	1167867-44	
16	STAND OFF	7	1121740	
17	BASE, PCB	1	1124704	H
18	PNL, SHEAR, UPR, 39"	1	1262882	K
19	RAIN GUTTER	1	1121204	K
20	BRKT, SUPT, DISPLAY BOX	2	1264397	K
21	HINGE – INNER DOOR, MALE	2	1121287	F
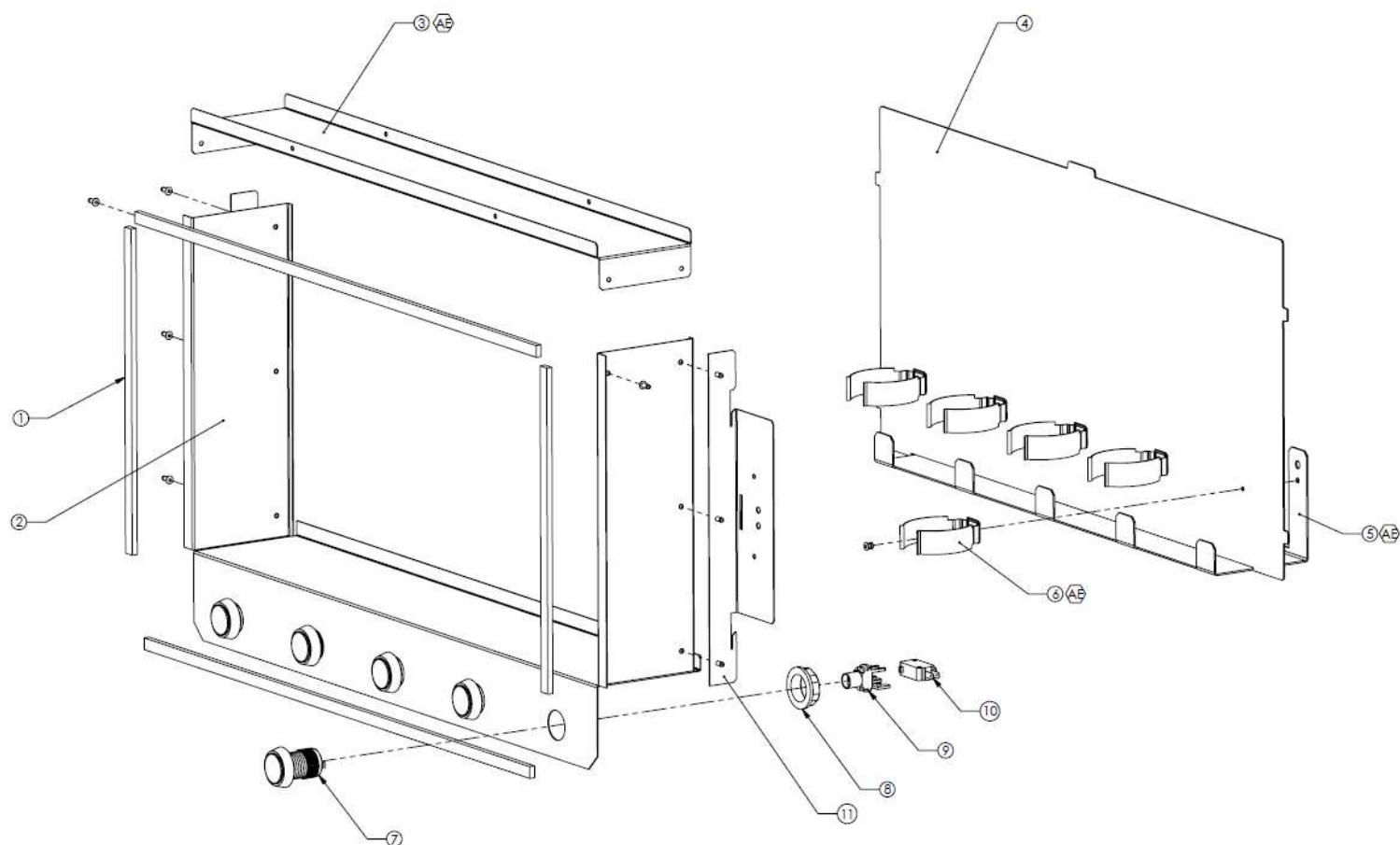
3D LIVE DISPLAY ASSEMBLY

ITEM NO.	DESCRIPTION	QTY REQ	PART NO.	HARDWARE
1	FOAM, TAPE, VINYL	~	14563	
2	BRKT, DISPLAY BOX, BOTTOM	1	1265318	
3	BRKT, DISPLAY BOX, TOP	1	1265296	AE
4	BACKER, 3D LDS	1	**	
5	BKT, SUPT, PROD	1	1265288	AE
6	PRODUCT HOLDER CLIP	5	1120074	AE
7	BUTTON, ROUND	5	1149374	
8	NUT, PLASTIC	5	1073538	
9	HOLDER, SELECTION SWITCH	5	1149385	
10	SELECTION SWITCH	5	368299	
11	BRKT, LIGHT / BACKER HOLDER	1	1265733	AE

3D LIVE DISPLAY LOCK ASSEMBLY

ITEM NO.	DESCRIPTION	QTY REQ	PART NO.
1	BRKT, SECURITY, LOCK	1	1143402
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	FLAT WASHER	1	387718
10	T-HANDLE - FLANGE	1	1002384
11	VAPOR SEAL	1	388132
12	WASHER 1/2"	4	V801023
13	1/4" X 3/4" CARRIAGE BOLT	2	V801434
14	T - HANDLE ASSY.	1	1002635

V21 ADA CHAMELEON INNER DOOR

ITEM NO.	MODEL NUMBER		721
	DESCRIPTION	QTY REQ	PART NO.
1	INNER DOOR ASSEMBLY	1	134302-174
2	RAIN SEAL, INNER DOOR, 7"	1	1111732-2
3	INNER DOOR SEAL	1	1075678
4	UPPER PRODUCT RETAINER ASSEMBLY	1	1251228-2
5	INNER DOOR HINGE, FEMALE	2	1121286
6	HINGE PIN	1	1172323
7	REVERSABLE VEND FLAP	1	1013076
8	INNER DOOR LATCH BRACKET	1	1121712
9	INNER DOOR LATCH	1	1121711
10	GROMMET	1	388090
11	INNER DOOR EYELET	1	387273

FOR A COMPLETE LIST OF HARNESSES, PLEASE SEE PAGE C-17.

V21 ADA CHAMELEON INNER DOOR LABELS - NOT SHOWN

DESCRIPTION	QTY REQ	PART NO.
ERROR CODE LABEL, VEC 12.1	1	1123715
PROGRAMMING LABEL, VEC 12.1	1	1123343
WIRING DIAGRAM LABEL, VEC 12.1/12.2	1	1127542
PRODUCT SET UP, V21	1	1126121
SPACE TO SALES, VEC 12.1	1	1128991
INNER DOOR LABEL (WARNING)	1	1208597

MAINTENANCE

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 the evaporator drain for obstruction; water in the evaporator area must drain to the condensation pan.
    F. Empty condensation pan.
    G. Clean the condenser filter.
    H. Check that evaporator fan runs 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. Check for proper operation of the coinage mechanism by inserting all denominations of coins accepted by the vendor.
    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:**

<div style="border:1px solid black; padding:10px">

DO NOT USE WATER JET FOR CLEANING.

</div>

<div style="border:1px solid black; padding:10px">

AVOID USING WATER OR ANY OTHER LIQUIDS NEAR ELECTRONIC COMPONENTS

</div>

A. GENERAL PROCEDURE (painted metal areas)
Wash the 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 any specialized label removal liquid. When the label material does not allow penetration of solvent (such as vinyl), the application of heat (ie – hot air gun) 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.
  A. Wash sign with mild soap or detergent and lukewarm water.
  B. Using a soft cloth or sponge, gently wash the sign. **DO NOT SCRUB!**
  C. Rinse well with clean lukewarm water.
  D. 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, using extreme caution not to bend the condenser vanes. 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 SandenVendo America, Inc. 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 rear 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

EVAPORATOR

EVAPORATOR FAN

CAPILLARY RESTRICTION TUBE

LIQUID

ACCUMULATOR

LOW PRESSURE

50° 110°

SUCTION

VAPOR

COMPRESSOR

DRIER

LIQUID

CONDENSER FAN

CONDENSER

DISCHARGE

HIGH PRESSURE SIDE
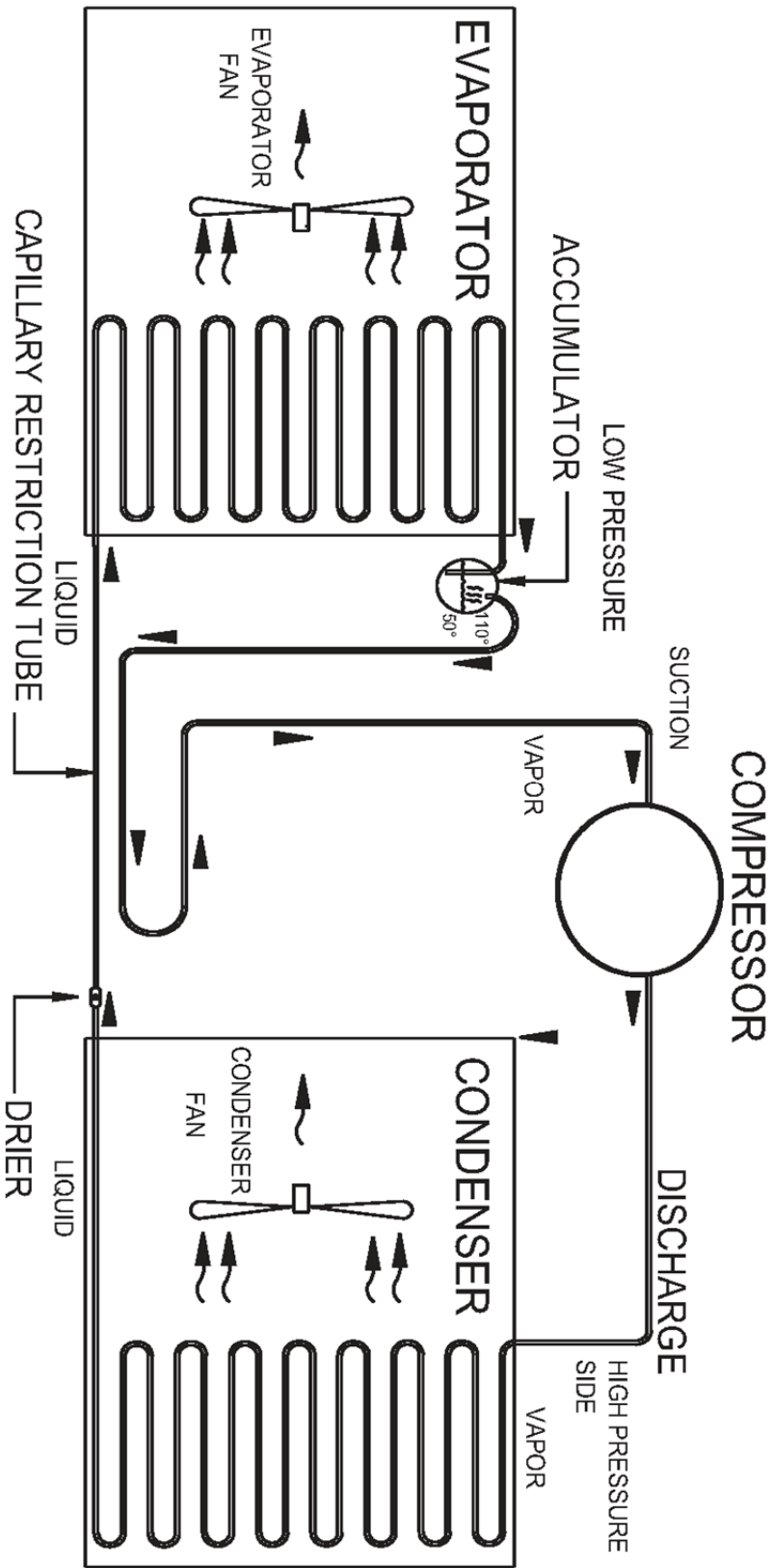
VAPOR

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.

EVAPORATOR FAN
ASSEMBLY

EVAPORATOR

TEMPURATURE
SENSOR

COMPRESSOR

STARTING RELAY
& CAPACITOR

ACCUMULATOR

CAPILLARY TUBES

CONDENSER FAN
ASSEMBLY

CONDENSER
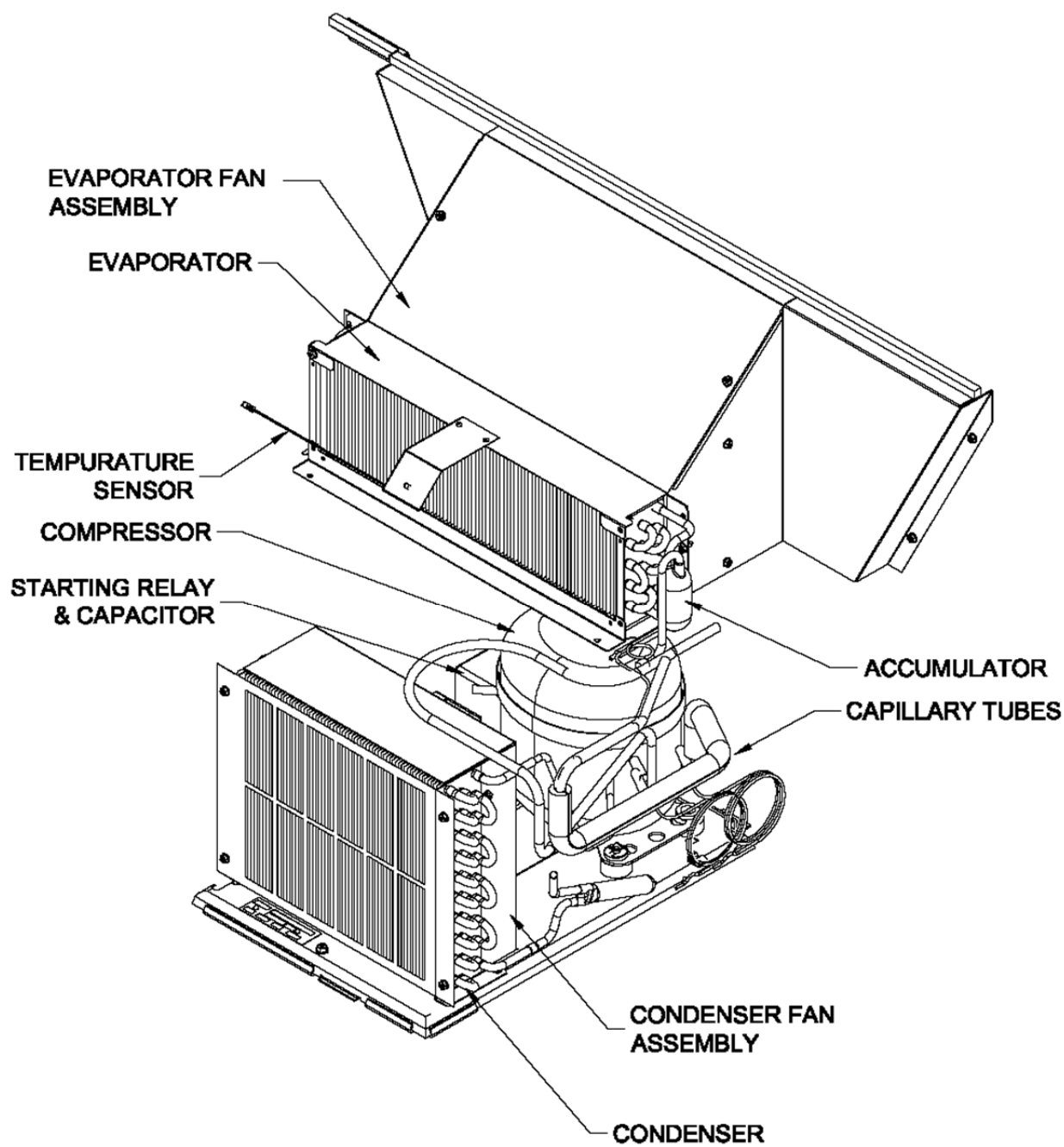
FIGURE 2

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

START CAPACITOR - P/N
CHAMELEON: 1112805
TRADE: 1112805
HV3: 1124549
HVV: 1124549
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
CHAMELEON: 513506066
TRADE: 513506066
HV3: 513506066
HVV: 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
CHAMELEON: 513506066
TRADE: 513506066
HV3: 513506066
HVV: 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 restart.

TEMPERATURE SENSOR – P/N
CHAMELEON: 1122924
TRADE: 1122924
HV3: 1122924
HVV: 1122924
The temperature sensor is mounted in the inlet airflow of the evaporator. This monitors the air temperature and reports it to the electronic controller so that the controller can operate the refrigeration system via the power box.

TROUBLESHOOTING

SandenVendo America, Inc.
NEW EQUIPMENT WARRANTY
V21 VENDING MACHINES
Distributor - United States / Canada / Mexico

I.   This warranty benefits each current owner of a V21 vending machine, whether that owner is the original purchaser or a transferee.

II.   The SandenVendo America, Inc. 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 SandenVendo America, Inc. option, may be used to facilitate credit approval or the replacement of parts.

VII.   SandenVendo America, Inc. 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 machine owner.

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, Canada, and Mexico, 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 machine owner 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 machine owner 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 purchaser or third party negligence, accident, vandalism, or an act of God.

XII.   SandenVendo America, Inc. 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/WARRANTY PROCESS

1. **Advance Warranty:** Order is placed using normal ordering payment methods. Once defective parts have been returned and inspected, a credit is issued and all applicable charges are reimbursed.

2. **Replace Upon Receipt**: Defective parts are to be returned for inspection. Once defective parts have been returned and inspected, replacement parts will be shipped as applicable.

RETURN POLICY

All parts returned must be accompanied by a Return Goods Authorization Number received from your SandenVendo Customer Service Rep at 1-800-344-7216.

All parts must be properly wrapped and packed securely to avoid further damage. Failure to do so may void your warranty.

Mark all packages with the Returns Goods Authorization number provided by your CSR and send it by the most inexpensive method of transportation (Federal Express Ground or Overnight Transportation).

SandenVendo can also provide pick up service upon request. Please ask your CSR about this option.

> Return package(s) to:
>> **SANDENVENDO**
>> **Attn: Warranty Returns Department**
>> **4010 Distribution Drive, Suite 200**
>> **Garland, Texas 75041**

If you have requested 'replace upon receipt', a like part will be shipped at no charge if our inspection shows that the inoperative part became defective during the warranty period.

If you have requested 'advance warranty', 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 or the RG was requested.

SandenVendo does not issue cash credit for the return of any part or accessory

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

TROUBLE SHOOTING GUIDE CHAMELEON / TRADE / HV3

The V21 vendor provides self-diagnostics to aid you in the trouble shooting process. Error codes are stored in the controller's memory when a system error is sensed. These codes can be accessed by following the procedure listed below.

The trouble shooting guide below contains information on how to solve problems with the **1)** Vend system; **2)** Refrigeration system; **3)** Peripherals; **4)** Selection switches; and **5)** Miscellaneous problems. The guide is divided into subsections with these headers.

1. When the door is opened, the machine goes into "Door Open Data Retrieval" mode.
2. If there are any error states, the display will show "Eror". If there are no recorded errors, the display will show "none".
3. If "Eror" is displayed, press selection button two to enter the error diagnostics.
4. Pressing selection button one will scroll through the summary error codes (see appendix for detailed list).
5. To get greater detail on a particular error code, press selection button two.
6. While displaying a detailed error code, using selection button one (up/down), the controller shall cycle through all of the active detailed errors for the current summary level error code.
7. If selection button two (Enter) is pressed and held for 2 seconds during the display of any detailed error code, that detailed error code will be reset or cleared.
8. After clearing a displayed error code, either the next existing detailed error code, summary level error code, or the "nonE" message will be displayed, respectively.
9. If selection button three (Return) is pressed, the controller shall return to the summary level error code prompt.

ERROR	DESCRIPTION OF ERROR CODE	CHECKING METHOD	CORRECTIVE ACTION
Vending Mechanism			
CJnn	Column jam – vend cycle for column "nn" did not start or complete.	Look in column to see if product is jammed against gate or bucket.	Clear jam, complete a test vend cycle.
		Insure can clip is in correct position (reference set-up diagram).	Correct clip position, complete vend test.
		Insure bottles are loaded as shown in the Product Setup and Loading label.	Load bottles correctly.
CSn	Chute sensor error.	No test available.	Replace chute sensor assembly.
Selection Switches			
SSnn	Bad Selection Switch - Selection switch nn is actuated for more than 15 seconds while in the Customer Mode or Door Open Sales Test Mode.	Check the selection switch number shown in the detailed error code "nn" to see if: 1) the button is sticking; 2) the switch is sticking/defective; 3) the harness is wired wrong/shorted.	Try to correct the problem if one of the three items is found. If you can't correct it, then replace the component in question.
Space to Sales			
Ucnn	Column nn is not assigned to a selection.	Access space-to-sales mode and go to custom space-to-sales.	Change space-to-sales setting as required. In some situations, it may be quicker to completely reset all space-to-sales.
		Check all selections for the column shown in the detailed error description (nn).	

Error	DESCRIPTION OF ERROR CODE	CHECKING METHOD	CORRECTIVE ACTION
Usnn	Selection switch skipped - switch nn unassigned and a higher number switch is assigned.		Switch is assigned.
Coin Changer			
CC	Changer communication error - no changer communication for more than 2 seconds.	1) Check that red light is fashing on control board.	If light is not ?ashing, there is no power to board. Check and replug any unplugged connections.
			If fuse is blown replace it.
			Replace transformer.
		2) Defective acceptor.	Replace acceptor.
TtS	Tube sensor is defective -- reported by changer .	Check changer tubes for blockage.	Clear tube blockage. If no blockage is found, replace changer.
IC	Changer inlet chute blocked - no coins sensed for over 96 hours by the changer.	Check inlet chute for blockage. Drop coins to test acceptance. Manually clear the error.	Clear inlet chute blockage. If no blockage found, replace changer. If acceptance rate is acceptable, system is OK. If acceptance rate is low or changer will not accept coins, replace changer.
tJ	Tube pay out jam -- reported by changer.	Check changer tubes and payout for blockage.	Clear blockage, if found. If no blockage is found, replace changer.
CrCH	Changer check sum incorrect -- reported by changer.	Turn power switch off, wait at least five seconds, then turn on. Manually clear the error.	If error does not clear, replace changer/acceptor.
			Replace changer.
EE	Excessive escrow requests -- more than 255 requests since the last coin was sensed.	Check escrow lever and associated mechanisms.	Manually clear the lever and error.
		Close door then reopen. Check to see if error still occurs.	Replace changer/acceptor.
nJ	Coin jam - reported by changer.	Check changer/acceptor for jammed coins or other obstructions.	If no obstructions are apparent, replace changer/acceptor.
LA	Low acceptance rate -- coin acceptance has fallen below 80%.	Check changer/acceptor for obstructions or dirt.	If no obstructions are apparent, and acceptance appears to be OK, this may be an indication of cheating attempts.
		Drop coins to test acceptance.	If no obstructions are apparent and coins do not accept, or acceptance rate is poor, replace changer/acceptor.
diS	Disconnected acceptor -- indicates that an acceptor is unplugged.	Check coin mechanism plugs. Check for faulty harness wiring (see wiring diagram for circuit).	Correct connections.
rout	Coin routing - indicates a coin was routed incorrectly.	Verify changer set-up using manufacturer's recommendations.	If acceptor was set up correctly, replace changer.

Error	DESCRIPTION OF ERROR CODE	CHECKING METHOD	CORRECTIVE ACTION
Dollar Bill Validator			
bC	Bill validator communications - No bill validator communication for 5 seconds.	If changer or card reader is being used, check for "CC" or "rC" errors.	If there are no "CC" or "rC" errors:
		Turn off door switch and wait at least five seconds. Turn on door switch.	1) Check bill validator harness; 2) Replace bill validator. If there is a "C" or "rC" error: 1) Check control board MDB harness.
bFUL	Bill validator full - reported by validator (STACKER command).	Insure bill cashbox is empty and that the cashbox is properly closed and in place.	If cashbox appears to be OK, replace bill validator.
biLL	Bill validator motor is reported as defective by validator.	No test available.	Replace bill validator.
bJ	Bill jammed -- reported by validator.	Check bill validator for obstructions or dirt.	If no obstructions are apparent, replace bill validator.
brCH	Bill validator check sum is incorrect.	Turn power switch off. Wait at least five seconds. Turn power switch on. Manually clear the error.	If error does not clear, replace bill validator.
bOPn	Bill validator is open.	Check that bill cashbox is closed and in correct position.	If cashbox appears to be OK, replace bill validator.
bS	Bill validator sensor is not functioning.	Check bill validator for obstructions or dirt.	If no obstructions are apparent, replace bill validator.
Card Reader			
CrC	There is no card reader communication for 5 seconds.	If card reader/bill acceptor is being used, check for "rC' or "bC" errors.	If there is no "rC" or "bC" error: 1) Check changer harness. 2) Replace changer.
		Turn power switch off. Wait at least five seconds. Turn power switch on.	If there is a "rC" or "bC" error: 3) Check control board MDB harness.
CrXY	Most recent "non-transient error" from the card reader.	No test available.	Refer to card reader manual for corrective action.
Refrigeration			
SENs	The temperature sensor is defective or unplugged.	Check to see that temperature sensor harness is plugged into door harness at air dam area.	If the sensor is unplugged, replug it.
		Check for temperature sensor connection J7 on control board is plugged in.	
CnPr	System has failed to decrease temperature 1° per hour while the compressor is running.	Access relay mode (refer to programming manual).	Refer to the refrigeration section on the following pages.
		Check refrigeration settings (refer to refrigeration section of programming manual).	Change settings as required.
Htr	Heater system has failed to increase temperature 1° per hour while heater is on.	Heater circuit not properly wired.	Check electrical connections.
		Bad sensor on heater circuit.	Replace sensor.
		Defective heating element.	Replace heating element.
Miscellaneous Problems			
ds	Door has been open for more than one hour.	Check the vendor's door switch to see if it's sticking or miswired.	Replace the door switch, if defective.
Ran	Ram check sum for service mode settings stored in non-volatile memory has been corrupted.	No test available.	If error shows up frequently, replace the control board.
ACLO	AC voltage to the controller is low for more than 30 seconds.	Check for low voltage at the wall outlet at unit start-up.	Contact a qualified electrician.

ERROR	DESCRIPTION OF ERROR CODE	CHECKING METHOD	CORRECTIVE ACTION
SF	Scaling Factor error - one of the credit peripherals has introduced a scaling factor that is not compatible with the current configuration.	Check the connections of changer harness; make sure changer is plugged in and working.	Make corrections to harness or replace the changer if necessary.
IS	Machine's coin inlet sensor is blocked for more than 1 minute.	Check changer harnessing for cut, pinched or crimped wires.	Replace harnesses or changer.
Ib	3 successive coins are detected at the inlet but do not make it into the changer in 10 seconds.	Check inlet for blockage. If nothing is found, check changer harnessing for cut, pinched or crimped wires.	Clear blockage or replace harness or changer.

ERROR	PROBABLE CAUSE	CORRECTIVE ACTION
Coin Acceptance/Payout (Record all errors for reference if SandenVendo America, Inc. Technical Service is required)		
Coin mechanism will not accept coins.	No power to control board.	Check to make sure the red LED on the control board is flashing red. If flashing, check MDB harness connections. If connections are good, replace changer.
	Harness from coin mech to board is cut or disconnected.	Use a meter and check each wire for continuity and ground.
	Short in coin mechanism.	Replace coin changer/acceptor.
	Acceptor is dirty or other problem may exist (not tuned).	Clean acceptor or contact your local coin mech dealer.
	Defective control board.	Replace control board.
No acceptance or rejects a percentage of good coins.	Coin return lever pressing down on acceptor's coin plunger.	Make sure changer is mounted correctly and the coin return lever is in the proper position.
	Acceptor is dirty or foreign matter is in the path.	Clean acceptor or contact dealer.
	Coin changer is improperly tuned (if turnable)	Contact manufacturer for tuning.
	Defective control board.	Replace/test control board.
Always accepts coins but gives erratic/no credit.	If NO CREDIT: Defective harness between coin mech and control board (will have "CC" error).	Check harness for cut wires or wrong/bad connections. Test each wire for continuity or test to ground. If found to be defective, replace.
	If ERRATIC OR NO CREDIT: Acceptor or coin mech.	Replace coin mech and test.
	If NO CREDIT: Defective control board.	Replace/test control board.
Changer will not payout coins.	Defective harness between coin mech and control board.	Test vendor's manual coin payout. If vendor won't pay out using the COIN mode or during sales, check harness for cuts, bad continuity or wrong connections. If defective, replace and test.
	Defective coin mech.	Replace coin mech and test.
	Defective controller board.	If coin mech won't payout coins manually in the COIN mode or during the Sales Mode and the above two procedures have failed, replace the control board and test payout both in the COIN mode and during a sale.
	Changer payout buttons are disabled while door is closed or while in Open-Door Sales Mode.	Enter the Service Mode or access the Coin Payout Mode ("COIN").
BILL ACCEPTANCE		
Bill validator will not pull bill in.	No power to validator.	Turn off power switch. Wait for 10 seconds. Turn on power switch and see if bill validator cycles. If not, check validator harnessing or replace the bill validator.
	Acceptance disabled by coin mech (if present), or bad harnessing.	Make sure that the coin mech is plugged in (accepts coins) and that the coin tubes have enough coins to enable bill acceptance.
	Coin mech is not operative.	Make sure that the changer harnessing is correctly connected and has continuity. Repair or replace if necessary.
	Replace validator and test.	If validator accepts, bill validator was defective.

ERROR	PROBABLE CAUSE	CORRECTIVE ACTION
Bill validator takes a bill but does not establish credit.	Defective validator harness (credit not getting from validator to control board through the harness).	Make sure that the validator and harnessing is correct for your style of validator and it is plugged in and wired properly.
	Defective validator.	Replace/test validator.
	Defective control board.	Replace/test control board.
Bill validator takes a bill and credits but not erasing credit.	Defective bill validator.	Replace validator and test acceptance and erasure of credit.
	Defective control board.	Replace/test control board for erasure of credit.
	Both vend sensors are defective.	Replace vend sensor.
Validator takes a bill and allows payback of coins without a selection.	Configurations not set properly in control board.	Access vendor configuration mode and check the "Force Vend" setting.

VENDING PROBLEMS

ERROR	PROBABLE CAUSE	CORRECTIVE ACTION
Multiple vending (not canceling credit).	If multiple vending is from all selections, delivery sensor is cut, improperly	Replace sensors and test.
	NOTE: If both sensors are not present or are defective, the V21 will allow up to four products from each column to be vended before the column is determined to be sold out.	Replace sensors and test.
	Depth setting on partition not adjusted correctly.	Move can clip to proper position (refer to loading diagram on machine).
	Mechanical Error.	Check for correct operation of the motor, gate link, bucket and gate.
Wrong product vending upon selection.	Misload by vendor loader.	Ensure that all product within each column is the same.
	Space-to sales not set properly.	Look for StS error. Check or reset space-to-sales.
	Miswired selection.	Check the wiring from the controller to the selection switches. Test selection switches.
No vend upon selection.	Delivery sensor is malfunctioning or a column is jammed or sold out.	Check to see if the delivery chute sensor LED is constantly on. If so, replace vend sensor.
	Defective controller board.	Unplug the sensors connection from the control board. Watch LED. If the sensor LED stays on, replace the defective control board.
Dry Vend (No refund).	Premature vend detection.	Tap on chute and check for a green flashing light on the control board. If no light is flashing or light is constantly on, replace
Completely sold out.	Check to see if blocking is enabled.	Change time or turn off blocking.
	Check if vend sensor is unplugged.	Plug back in.
	Space to sales has been cleared.	Reinitiate space to sales.

MISCELLANEOUS PROBLEMS

ERROR	PROBABLE CAUSE	CORRECTIVE ACTION
Display shows sold out immediately upon pressing selection button of full column (sold out not clearing).	Door switch wired incorrectly or cut/pinched.	Manually press door switch. If lights and fan don't come on, check wiring or replace door switch.
	Control board.	If door switch is replaced and still reading sold out, replace control board.
Vendor appears dead; no digital display and no lights.	Defective main harness or secondary power harness to the transformer.	Check transformer.

ERROR	PROBABLE CAUSE	CORRECTIVE ACTION
No digital display; vendor lights on.	Defective display or display harness.	Check display and display harness. Replace if necessary.
	Check for a flashing red light on control board.	If no light, replace control board.
Vendor scrolls message on display but does not accept money.	Changer out of tune.	See "Tuning Changer".
	Defective changer.	Replace changer.
	Defective control board.	Replace control board.
Vendor accepts money but does not credit.	Defective changer.	Replace changer.
	Defective control board.	Replace control board.
Vendor accepts and credits money but does not vend (does not indicate a sold-out).	Defective selection switch	Replace switch
	Defective selection switch harness	Repair or replace harness.
	Defective control board.	Replace control board.
Vendor delivers wrong product.	Vendor loaded wrong.	Correct loading.
	Vendor space-to-sales set wrong.	See "StS".
	Defective control board.	Replace control board.
Flashing 8888's on the LED.	Chips on control board not seated properly.	Seat the chips down properly
	Bad LED connection.	Replace LED and/or harness.
	Defective control board.	Unplug everything from the board except the LED and power in. If the 8888's remain then replace the control board.
	Defective components.	If the 8888's have disappeared from the previous step, then begin plugging in harnesses one at a time. Replace whatever causes the 8888's to reappear. Be sure to power down each time you plug in a harness.
Solid 8888's on the LED	Defective LED.	Replace LED and/or harness.
	Defective control board.	Replace control board.
Refrigeration		
Refrigeration unit will not run even at the specific temperature	No power or insufficient to refrigeration unit	Check power supply and connection to see if each component gets the specific voltage of power. Replace parts and line if necessary.
	Defective temperature sensor	Replace temperature sensor
	Defective relay	Replace the refrigeration relay
	Defective control board	Replace board
Unit will only run in the compressor test mode. (Located under tEST)	Defective door switch.	Open and close the door to make sure lights and fan come on. If not, then check the door switch.
	Defective temperature sensor	Follow the same steps detailed above about the temperature sensor.
	Wait the 3 minute delay once the door is closed	Wait to see if unit comes on.
	Defective control board	If unit still does not come on, then replace the control board
Unit will not run even in the compressor test mode. **NOTE: Leave the compressor test mode on in order to check for voltage.	Defective door switch.	Upon opening the door, the lights and condenser fan motors should shut off. If they don't replace the door switch.
	Defective control board	Replace the board.
Refrigeration unit runs constantly.	Defective door switch.	Upon opening the door, the lights and compressor should shut off. If they don't replace the door switch.
	Defective control board	Replace the board.
	Defective relay	Replace the refrigeration relay
Condenser fan motor doesn't run.	Defective condenser fan motor	Replace the motor
	Bad connection	Check the connection and lines
	Defective relay	Replace the condenser motor relay

ERROR	PROBABLE CAUSE	CORRECTIVE ACTION
Compressor will not start, condenser fan motor running - unit hot (power to compressor)	Defective overload relay	Replace the overload relay.
	Compressor motor rocked	Replace the refer unit.
	Defective capacitor	Replace the capacitor.
	Defective PTC relay	Replace the PTC relay.
Compressor starts but doesn't run.	Loss of refrigerant	Replace the refrigeration unit.
	Smashed tubings and capillary	Replace the refrigeration unit.
	Defective overload relay	Replace the overload relay.
Compressor runs but cabinet temperature warm.	Loss of refrigerant	Replace the refrigeration unit.
	Smashed tubings	Replace the refrigeration unit.
	Defective drainage	Make sure the drain hose is not kinked or clogged.
	Defective temperature sensor	Replace the temperature sensor.
	Poor air flow	Make sure nothing is sitting in front of the evaporator.
	Defective control board	Replace the control board.
	Defective door seal	Make sure the vend flap and gasket are not open or damaged.
	Defective heat exchange on condenser/ Blocking air flow by dust, lint or fin damage	Clean the surface of the condenser fins or straighten the bent fins.
Evaporator frosted over	Loss of refrigerant	Replace the refrigeration unit.
	Smashed tubings	Replace the refer unit.
	Defective drainage	Make sure the drain hose is not kinked or clogged. Re-install hose correctly if kinked or clogged.
	Defective temperature sensor	Replace the temperature sensor.
	Defective control board	Replace the board.
	Poor sealing	Check gasket, vend flap, and permagum on the bulkhead.
Product freezing up (too cold)	Temperature setting too low.	Adjust set point in control board.
	Defective temperature sensor	Replace the temperature sensor.
	Defective control board	Replace the board.
Excessive noise	Fan blade hitting shroud or loose fitting	Replace the fan blade or re-install correctly.
	Defective fan motor	Re-install or replace the motor.
	Defective compressor	Replace the refrigeration unit.
	Referigeration base deformed	Re-install or replace the base and plastic trim.
Drain pan over flow	Poor sealing	Make sure the vend flap closes correctly and the gasket is sealing.
	Evaporation board (wick) dirty	Clean or exchange the evaporation board.
	Drain hose falls out from the stud of drain pan.	Install hose correctly .
	Defective condenser fan motor	Replace the motor.
	Abnormal amount of water goes into the pan at one time	Throw out the water and check periodically to make sure the problem is not still occurring.
Heater		
Heater will not run even at the specific ambient temperature	No power to refrigeration unit	Check power supply and connection. Replace if necessary.
	Defective temperature sensor	Replace temperature sensor.
	Defective relay	Replace the heater relay.
	Defective control board	Replace the control board
Refrigeration unit will not run even at the specific cabinet temperature	No power to refrigeration unit	Check power supply and connection. Replace if necessary.
	Defective temperature sensor	Replace temperature sensor.
	Defective control board	Replace the control board

Unit will only run in the heater test mode. (Located under tEST)	Defective door switch.	Open and close the door to make sure lights and fan come on. If not, then check the door switch.
	Defective temperature sensor	Follow the same steps detailed above about the temperature sensor.
	Defective control board	Replace the control board.

ERROR	PROBABLE CAUSE	CORRECTIVE ACTION
Unit will not run even in the heater test mode. **NOTE: Leave the compressor test mode on in order to check for voltage.	Defective door switch.	Upon opening the door, the lights and compressor should shut off. If they don't replace the door switch.
	Defective control board	Replace the board.
Heater runs but product freezing up.	Defective heater	Replace the heater assembly.
	Poor air flow	Make sure that nothing is sitting in front of the heater.
	Defective evap fan motor	Check the connection and installation of fan blade. Replace the motor if necessary.
	Defective temperature sensor	Replace the temperature sensor.
	Defective control board	Replace the board.
	Defective door seal	Make sure the vend flap and gasket are not open or damaged.

TROUBLE SHOOTING GUIDE HVV

The V21 vendor provides self-diagnostics to aid you in the trouble shooting process. Error codes are stored in the controller's memory when a system error is sensed. These codes can be accessed by following the procedure listed below.

The trouble shooting guide below contains information on how to solve problems with the 1) Vend system; 2) Refrigeration system; 3) Peripherals; 4) Selection switches; and 5) Miscellaneous problems. The guide is divided into subsections with these headers.

ACCESSING ERROR CODES USING DIAGNOSTICS MODE

ERROR	DESCRIPTION OF ERROR CODE	CHECKING METHOD	CORRECTIVE ACTION
Vending Mechanism			
Column Jam	Column jam – vend cycle for column "nn" did not start or complete.	Look in column to see if product is jammed against gate or bucket.	Clear jam, complete a test vend cycle. Complete an auto-homing cycle
		Insure can clip is in correct position (reference set-up diagram).	Correct clip position, complete test vend and auto-homing cycle.
		Insure bottles are loaded correctly.	Load bottles correctly. See loading label.
Chute Sensor Error	Chute sensor error.	No test available.	Replace chute sensor assembly.
Selection Switches			
Selection Switch Error #nn	Bad Selection Switch - Selection switch nn is actuated for more than 15 seconds while in the Customer Mode or Door Open Sales Test Mode.	Check the selection switch number shown in the detailed error code "nn" to see if: 1) the button is sticking; 2) the switch is sticking/defective; 3) the harness is wired wrong/shorted.	Try to correct the problem if one of the three items is found. If you can't correct it, then replace the component in question.
Space to Sales			
Unassigned Column. #nn	Column nn is not assigned to a selection.	Access space-to-sales mode and go to custom space-to-sales.	Change space-to-sales setting as required. In some situations, it may be quicker to completely reset all space-to-sales.
		Check all selections for the column shown in the detailed error description (nn).	
Unassigned Sel. SW. #nn	Selection switch skipped - switch nn unassigned and a higher number switch is assigned.		Switch is assigned.
Coin Changer			
Coin Communication	Changer communication error - no changer communication for more than 2 seconds.	1) Check that red light is flashing on control board.	If light is not flashing, there is no power to board. Check and replug any unplugged connections.
		2) Check to make sure service cord is plugged into the power distribution box.	If all connections are properly plugged in.
		3) Check fuse.	If fuse is blown replace it.
		4) Check transformer.	Replace transformer.
		5) Defective acceptor	Replace acceptor.
Tube Sensor	Tube sensor is defective - reported by changer.	Check changer tubes for blockage	Clear tube blockage. If no blockage is found, replace changer.

ERROR	DESCRIPTION OF ERROR CODE	CHECKING METHOD	CORRECTIVE ACTION
Coin Inlet	Changer inlet chute blocked - no coins sensed for over 96 hours by the changer.	Check inlet chute for blockage. Drop coins in Sales Mode or Tube Fill Mode to test acceptance. Manually clear the error.	Clear inlet chute blockage. If no blockage found, replace changer. If acceptance rate is acceptable, system is OK. If acceptance rate is low or changer will not accept coins, replace changer.
Tube Jam	Tube pay out jam -- reported by changer.	Check changer tubes and payout for blockage.	Clear blockage, if found. If no blockage is found, replace changer.
Coin Read Only Memory	Changer check sum incorrect -- reported by changer.	Unplug machine, wait at least five seconds, replug machine. Manually clear the error.	If error does not clear, replace changer/acceptor.
			Replace acceptor.
Excessive Escrow	Excessive escrow requests -- more than 255 requests since the last coin was sensed.	Check escrow lever and associated mechanisms.	Manually clear the lever and error.
		Close door then reopen. Check to see if error still occurs.	Replace changer/acceptor.
Coin Jam	Coin jam - reported by changer.	Check changer/acceptor for jammed coins or other obstructions.	If no obstructions are apparent, replace changer/acceptor.
Low Acceptance	Low acceptance rate -- coin acceptance has fallen below 80%.	Check changer/acceptor for obstructions or dirt.	If no obstructions are apparent, and acceptance appears to be OK, this may be an indication of cheating attempts.
		Drop coins to test acceptance.	If no obstructions are apparent and coins do not accept, or acceptance rate is poor, replace changer/acceptor.
Accept Disconnect	Disconnected acceptor -- indicates that an acceptor is unplugged.	Check coin mechanism plugs. Check for faulty harness wiring (see wiring diagram for circuit).	Correct connections.
Routing	Coin routing - indicates a coin was routed incorrectly.	Verify changer set-up using manufacturer's recommendations.	If acceptor was set up correctly, replace acceptor.
Dollar Bill Acceptor			
Bill Acceptor Communication	Bill acceptor communications - No bill acceptor communication for 5 seconds.	If changer or card reader is being used, check for "Changer Communication" or "Rom Checksum" errors.	If there are no "Changer Communication" or "Rom Checksum" errors: 1) Check bill acceptor harness; 2) Replace bill acceptor. If there are those errors: 1) Check control board MDB harness.
		Unplug service cord. Wait at least 5 seconds. Plug in service cord. Manually clear the error.	
Bill Acceptor Full	Bill acceptor full - reported by acceptor (STACKER command).	Insure bill cashbox is empty and that the cashbox is properly closed and in place.	If cashbox appears to be OK, replace bill acceptor.
Bill Acceptor Motor	Bill acceptor motor is reported as defective by acceptor.	No test available.	Replace bill acceptor.
Bill Acceptor Jammed	Bill jammed -- reported by acceptor.	Check bill acceptor for obstructions or dirt.	If no obstructions are apparent, replace bill acceptor.

Error	DESCRIPTION OF ERROR CODE	CHECKING METHOD	CORRECTIVE ACTION
Bill Acceptor ROM	Bill acceptor check sum is incorrect.	Unplug service cord. Wait at least 5 seconds. Plug in service cord. Manually clear the error.	If error does not clear, replace bill acceptor.
Bill Acceptor Open	Bill acceptor is open.	Check that bill cashbox is closed and in correct position.	If cashbox appears to be OK, replace bill acceptor.
Bill Acceptor Sensor	Bill acceptor sensor is not functioning.	Check bill acceptor for obstructions or dirt.	If no obstructions are apparent, replace bill acceptor.
Card Reader			
Card Reader Communication	There is no card reader communication for 5 seconds.	If card reader/bill acceptor is being used, check for "Rom Checksum" error.	If there is no "Rom Checksum" error: 1) Check changer harness. 2) Replace card reader.
		Unplug service cord. Wait at least 5 seconds. Plug in service cord. Manually clear the error.	If there is a "Rom Checksum" error: Check control board MDB harness.
Card Reader	Most recent "non-transient error" from the card reader.	No test available.	Refer to card reader manual for corrective action.
Refrigeration			
Temp Sensor	The temperature sensor is defective or unplugged.	Check to see that temperature sensor harness is plugged into door harness at air dam area.	If the sensor is unplugged, replug it.
		Check for temperature sensor connection J7 on control board is plugged in.	
Not Cooling	System has failed to decrease temperature 1° per hour while the compressor is running.	Access relay mode (refer to programming manual).	Refer to the refrigeration troubleshooting flow chart on the following pages.
		Check refrigeration settings (refer to refrigeration section of programming manual).	Change settings as required.
Not Heating	Heater system has failed to increase temperature 1° per hour while heater is on.	Heater circuit not properly wired.	Check electrical connections.
		Bad sensor on heater circuit.	Replace sensor.
		Defective heating element.	Replace heating element.
Miscellaneous Problems			
Door Switch	Door has been open for more than one hour.	Check the vendor's door switch to see if it's sticking or miswired.	Replace the door switch, if defective.
Ram Error	Ram check sum for service mode settings stored in non-volatile memory has been corrupted.	No test available.	If error shows up frequently, replace the control board.
AC Low	AC voltage to the controller is less than 20Vrms for more than 30 seconds.	Check for low voltage at the wall outlet at unit start-up.	Contact a qualified electrician.
Scale	Scaling Factor error - one of the credit peripherals has introduced a scaling factor that is not compatible with the current configuration.	Check the connections of changer harness; make sure changer is plugged in and working.	Make corrections to harness or replace the changer if necessary.
Inlet Sensor	Machine's coin inlet sensor is blocked for more than 1 minute.	Check changer harnessing for cut, pinched or crimped wires.	Replace harnesses or changer.

ERROR	DESCRIPTION OF ERROR CODE	CHECKING METHOD	CORRECTIVE ACTION
Inlet block	3 successive coins are detected at the inlet but do not make it into the changer in 10 seconds.	Check inlet for blockage. If nothing is found, check changer harnessing for cut, pinched or crimped wires.	Clear blockage or replace harness or changer.

ERROR	PROBABLE CAUSE	CORRECTIVE ACTION	
Coin Acceptance/Payout (Record all errors for reference if SandenVendo America, Inc. Technical Service is required)			
Coin mechanism will not accept coins.	No power to control board.	Check to make sure the red LED on the control board is flashing red. If flashing, check MDB harness connections. If connections are good, replace changer.	
	Harness from coin mech to board is cut or disconnected.	Use a meter and check each wire for continuity and ground.	
	Short in coin mechanism.	Replace coin changer/acceptor.	
	Acceptor is dirty or other problem may exist (not tuned).	Clean acceptor or contact your local coin mech dealer.	
	Defective control board.	Replace control board.	
No acceptance or rejects a percentage of good coins.	Coin return lever pressing down on acceptor's coin plunger.	Make sure changer is mounted correctly and the coin return lever is in the proper position.	
	Acceptor is dirty or foreign matter is in the path.	Clean acceptor or contact dealer.	
	Coin changer is improperly tuned (if tunable).	Contact manufacturer for tuning.	
	Defective control board.	Replace/test control board.	
Always accepts coins but gives erratic/no credit.	If NO CREDIT: Defective harness between coin mech and control board (will have "Changer Communication" error).	Check harness for cut wires or wrong/bad connections. Test each wire for continuity or test to ground. If found to be defective, replace.	
	If ERRATIC OR NO CREDIT: Acceptor or coin mech.	Replace coin mech and test.	
	If NO CREDIT: Defective control board.	Replace/test control board.	
Changer will not payout coins.	Defective harness between coin mech and control board.	Test vendor's manual coin payout. If vendor won't pay out using the CPO mode or during sales, check harness for cuts, bad continuity or wrong connections. If defective, replace and test.	
	Defective coin mech.	Replace coin mech and test.	
	Defective controller board.	If coin mech won't payout coins manually in the Change Payout mode or during the Sales Mode and the above two procedures have failed, replace the control board and test payout both in the Change Payout mode and during a sale.	
	Changer payout buttons are disabled while door is closed or while in Open-Door Sales Mode.	Enter the Service Mode or access the Coin Payout Mode ("Change Pay Out").	
BILL ACCEPTANCE			
Bill acceptor will not pull bill in.	No power to acceptor.	Unplug service cord. Wait for 10 seconds. Plug in service cord and see if bill acceptor cycles. If not, check acceptor harnessing or replace the bill acceptor.	
	Acceptance disabled by coin mech (if present), or bad harnessing.	Make sure that the coin mech is plugged in (accepts coins) and that the coin tubes have enough coins to enable bill acceptance.	
	Coin mech is not operative.	Make sure that the changer harnessing is correctly connected and has continuity. Repair or replace if necessary.	
	Replace acceptor and test.	If acceptor accepts, bill acceptor was defective.	

ERROR	PROBABLE CAUSE	CORRECTIVE ACTION
Bill acceptor takes a bill but does not establish credit.	Defective acceptor harness (credit not getting from acceptor to control board through the harness).	Make sure that the acceptor and harnessing is correct for your style of acceptor and it is plugged in and wired properly.
	Defective acceptor.	Replace/test acceptor.
	Defective control board.	Replace/test control board.
Bill acceptor takes a bill and credits but not erasing credit.	Defective bill acceptor.	Replace acceptor and test acceptance and erasure of credit.
	Defective control board.	Replace/test control board for erasure of credit.
	Both vend sensors are defective.	Replace vend sensor.
Acceptor takes a bill and allows payback of coins without a selection.	Controller configurations not set properly.	Access vendor configuration mode and check the "Forced Vend" setting.
VENDING PROBLEMS		
Multiple vending (not canceling credit).	If multiple vending is from all selections, delivery sensor is cut, improperly grounded, or defective.	Test vend sensor (green light on control board when the chute is hit). Replace sensors and test.
	NOTE: If both sensors are not present or are defective, the V21 will allow up to four products from each column to be vended before the column is determined to be sold out.	Replace sensors and test.
	Depth setting on partition not adjusted correctly.	Move can clip to proper position (refer to loading diagram on machine).
	Mechanical Error.	Check for correct operation of the motor, lock link, bucket and gate.
Wrong product vending upon selection.	Misload by vendor loader.	Ensure that all product within each column is the same.
	Space-to sales not set properly.	Look for Space to Sales error. Check or reset space-to-sales.
	Miswired selection.	Check the wiring from the controller to the selection switches. Test selection switches.
No vend upon selection.	Delivery sensor is malfunctioning or a column is jammed or sold out.	Check to see if the delivery chute sensor LED is constantly on. If so, replace vend sensor.
	Defective controller board.	Unplug the sensors connection from the control board. Watch LED. If the sensor LED stays on, replace the defective control board.
Dry Vend (No refund).	Premature vend detection.	Tap on chute and check for a green flashing light on the control board. If no light is flashing or light is constantly on, replace sensors.
Completely sold out.	Check to see if blocking is enabled.	Change time or turn off blocking.
	Check if vend sensor is unplugged.	Plug back in.
	Space to sales has been cleared.	Reinitiate space to sales.
MISCELLANEOUS PROBLEMS		
Display shows sold out immediately upon pressing selection button of full column (sold out not clearing).	Door switch wired incorrectly or cut/pinched.	Manually press door switch. If lights and fan don't come on, check wiring or replace door switch.
	Control board.	If door switch is replaced and still reading sold out, replace control board.

ERROR	PROBABLE CAUSE	CORRECTIVE ACTION
Vendor appears dead; no digital display and no lights.	Defective main harness or secondary power harness to the transformer.	Check transformer and fuse.
	Control Board LED	Check power to control board. If there is power check LED. If LED is not lit or is solid red, replace the control board.
	Check if vend sensor is unplugged.	Plug back in.
	Space to sales has been cleared.	Reinitiate space to sales.
No digital display; vendor lights on.	Defective display or display harness.	Check display and display harness. Replace if necessary.
	Check for a flashing red light on control board.	If no light, replace control board.
	Defective MDB harness.	Replace MDB harenss.
Vendor scrolls message on display but does not accept money.	Changer out of tune.	See "Tuning Changer".
	Defective changer.	Replace changer.
	Defective control board.	Replace control board.
Vendor accepts money but does not credit.	Defective changer.	Replace changer.
	Defective control board.	Replace control board.
Vendor accepts and credits money but does not vend (does not indicate a sold-out).	Defective selection switch	Replace switch
	Defective selection switch harness	Repair or replace harness.
	Defective control board.	Replace control board.
Vendor delivers wrong product.	Vendor loaded wrong.	Correct loading.
	Vendor space-to-sales set wrong.	See "Space to Sales".
	Defective control board.	Replace control board.
Display not Functioning correctly or dead.	Check connection.	Replace display and/or harness.
Refrigeration		
Refrigeration unit will not run.	Defective temperature sensor.	1. Check connection.
		2. Replace temperature sensor.
	Defective control board.	Replace board.
Refrigeration unit will not run at all.	No power to vendor.	Check power supply, also check service cord connections.
Unit will only run in the compressor relay test mode. (Located under Test).	Defective door switch.	Open and close the door to make sure lights come on. If not, then check the door switch.
	Defective temperature sensor.	Follow the same steps detailed above about the temperature sensor.
	Wait the 3 minute delay once the door is closed.	Wait to see if unit comes on.
	Defective control board.	If unit still does not come on, then replace the control board.

ERROR	PROBABLE CAUSE	CORRECTIVE ACTION
Unit will not run even in the compressor test mode. **NOTE: Leave the compressor test mode on in order to check for voltage.	Defective control board.	Remove air dam and check 3-pin connection on power board for 110V at pins 1 & 3. Turn compressor on in test mode. (See flow chart if 110V exists).
	Defective relay.	Upon opening the door, the lights and compressor should shut off. If they don't, replace the door switch.
Refrigeration unit runs constantly.	Defective door switch.	Upon opening the door, the display should not read "Hello Welcome…". If it does, then replace the door switch.
	Defective control board	Replace the board.
	Defective relay – contacts are welded together.	Replace power board.
Compressor will not start.	Overload protector inoperative.	Check overload,(apply insulated jumper across terminal, if compressor starts replace overload protector.
	Defective door switch.	Check for error codes. Replace door switch.
Compressor will not start, condenser fan motor running - unit hot (power to compressor).	Starting relay or capacitor inoperative.	Replace starting relay or capacitor.
	Compressor inoperative.	Disconnect power to vender, remove all leads from compressor, check continuity from "common", "start" and "run" to compressor case. If shows continuity, replace compressor (windings shorted). Also check from common to start, verify that continuity exist between both terminals.
Compressor starts but does not run.	Will not cycle.	Check overload and contacts. Replace if needed. Replace Start relay. Check, replace if needed.
	Starting relay stays closed.	
	Compressor motor problem.	
Compressor runs but cabinet temperature warm.	Loss of refrigerant.	Replace refrigeration unit, contact SandenVendo America, Inc. Technical for warranty service. Check for obstruction of fan blades check circuit to fan motor, replace. Clean lint and dirt from condenser fins. Check for obstruction of evaporator fan blades, check circuit for fan motor, replace. Check for moisture on seal adjust inner door as needed. Replace.
	Condenser fan not working.	
	Blocked or dirty condenser (refer to initial installation in the service manual).	
	Evaporator fan not working.	
	Bad inner door seal.	
Both compressor and condenser fan motors will not operate.	Bad refrigeration control relay.	Test relay with relay test function of the control board, replace relay. Check wiring connections
	Bad connection at power board.	
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.
	Defective control board.	Replace control board.
	Evaporator motor.	Verify 120 Volts exists to evaporator motors.
	Defective evaporator motor.	Replace motor.
Product freezing up (too cold).	Temperature setting too low.	Adjust temperature setting in electronic controller.
	Defective temperature sensor.	Replace Temperature sensor.
Excessive noise.	Fan blade hitting shroud.	Relocate shroud position.
	Fan motor noisy.	Replace if necessary.
	Refrigeration base loose or bent.	Tighten bolt or replace if necessary.