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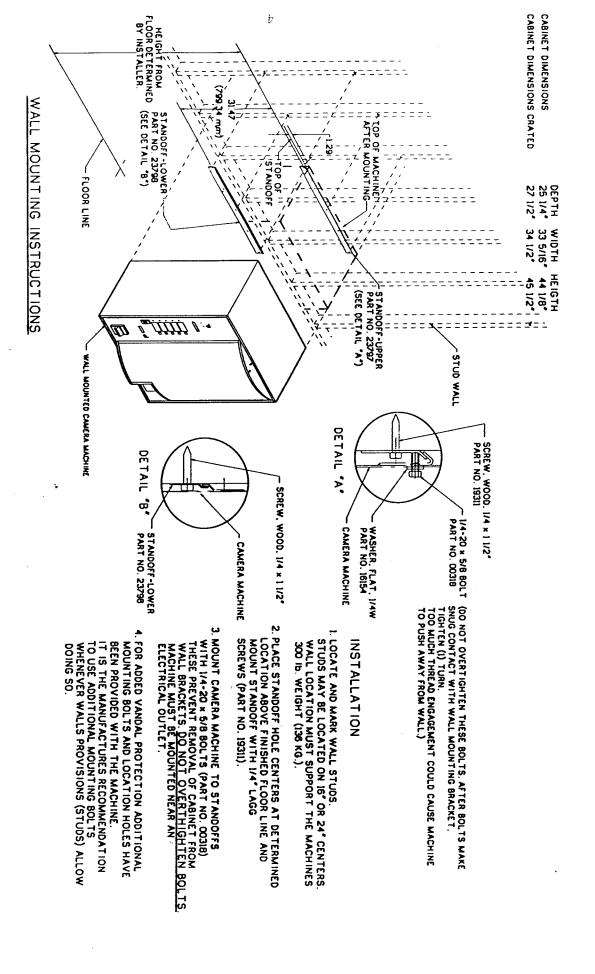
#### INSTALLATION

CAUTION: DISCONNECT POWER TO THE VENDING MACHINE BEFORE REMOVING THE CONTROL BOARD, OR COIN DISPENSING MECHANISM OR WORKING ON ANY ELECTRICAL COMPONENTS IN THIS MACHINE.

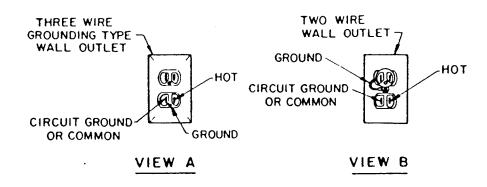
- \* Remove all external packing material.
- \* Inspect equipment for shipping damage, if evident file claim immediately with the carrier.
- \* Remove keys from product dispensing compartment(in small manila envelope), unlock the service door and remove any shipping material.
- \* Check the operation of the service door and locking mechanism. They should operate smoothly and latch at all three locking plates.
- \* Remove the plastic ties holding each tray in place if installed.
- \* If machine is to be wall mounted see instructions for Wall Mounting. If machine is to be mounted on a stand see instructions for Stand Assembly. Place machine on stand and place into position. Adjust leveling legs so the machine is level and all the legs sit firmly on the floor.
- \* Plug service cord into 110 VAC source using the three prong grounded plug provided. If a grounded outlet is not available, use a proper external ground on all locations.

NOTE: In order to comply with electrical safety regulations and Underwriters Laboratories requirements, all electrical equipment must be properly polarized and grounded. This machine is wired so that it is properly polarized in accordance with the electrical code. If the wall outlet is wired and grounded properly, then the vending machine will connect properly.

Shown in views A and B are two properly grounded and polarized wall outlets. One is a three wire grounded type wall outlet (See View A) and the other is a two wire wall outlet (See View B) with an adapter in place.

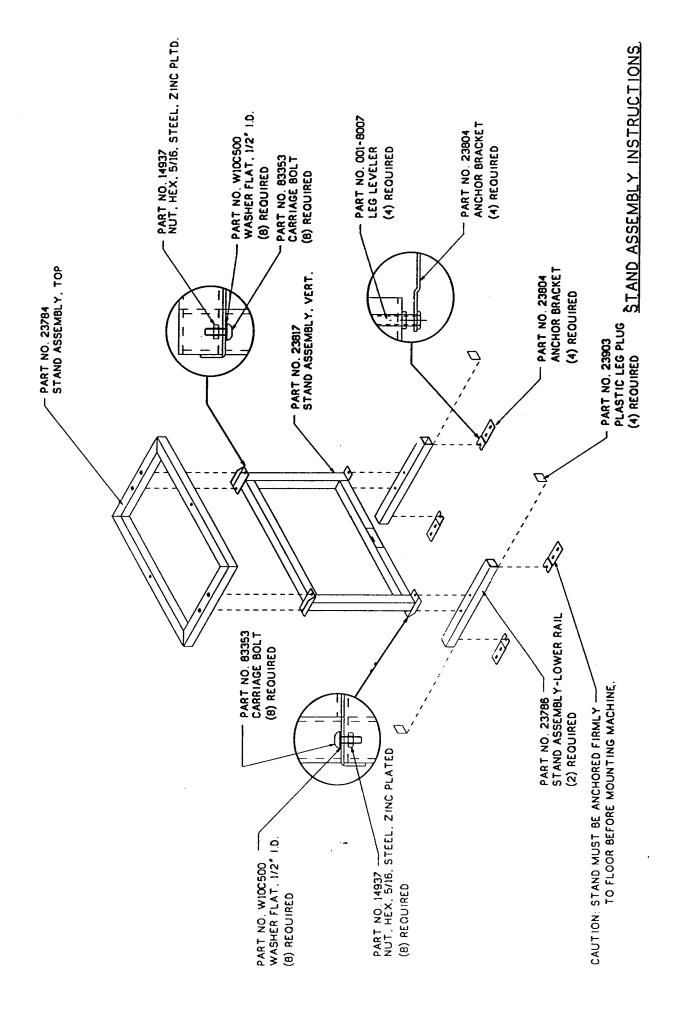


Should the polarity at the wall outlet appear any way other than that shown below, the outlet should be rewired by qualified personnel.



CAUTION: DISCONNECT POWER TO THE VENDING MACHINE BEFORE REMOVING THE CONTROL BOARD, OR COIN DISPENSING MECHANISM OR WORKING ON ANY ELECTRICAL COMPONENTS IN THIS MACHINE.

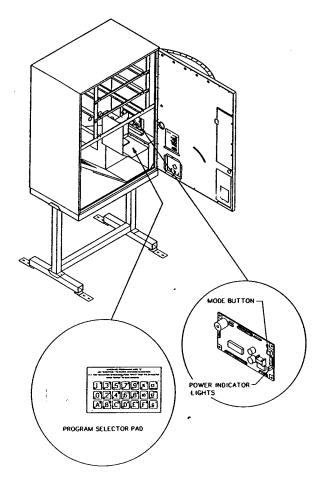
- \* Check to ensure that the power present 10.8 VAC and 24 VAC indicator lights are illuminated on the right hand side of the control board.
- \* Load the coin tubes on the coin dispensing mechanism and test unit by making purchases. When the product dispenses it will strike the impact sensor mounted on the back side of the delivery chute and the motor should stop. If the motor does not stop it will be necessary to adjust the sensor sensitivity. See sensor adjustment section.
- \* Install the sales stickers for the items beside the correct selection button on the front of the machine.
- \* Setup the control board so that the correct helix(s) are assigned to their respective selection buttons. See section Assigning a Motor to a Selection.
- Set prices for each selection. See section on Price Setting.
- Operate each dispenses belix using money. Make sure the correct product yends for the respective selection button.
- \* Load the machine with product(See section on product loading).



#### ELECTRONICS OPERATION

#### MODES OF OPERATION

The system will operate in one of two modes, sales or service. On power up(After completing configuration), the machine is in the sales mode. Service mode may be selected by press the mode button mounted on the control board. (For location of mode button see figure below).



The system will return to the sales mode if the mode switch is pressed again or after 25 seconds of no service mode activity.

#### SALES MODE

In the sales mode, the control board will control the dispensing of products according to customer credit and selection inputs. The control board will communicate with the bill validator so as credit is entered it will be shown on the scrolling display. If there is inadequate change available, the coin dispensing mechanism indicates that an exact change situation exits, the control board will show on the scrolling display "PLEASE INSERT EXACT MONEY".

When a customer makes a selection from the selection buttons on the front of the machine, the accumulated credit will be compared to the price set for this product and if the credit is equal to or exceeds the set price, the corresponding motor will be energized. If the vend is successful the price will be deducted from the credit value and the correct change returned.

The vend will be considered unsuccessful if the motor exhibits under current, the impact sensor fails to detect a product dropping into the delivery chute or the motor runs for more than six(6) seconds in which case the control board will then take that motor out of service. The vend will not be attempted on that motor if the particular motor has already been removed. The control board will then go to the next motor assigned to that selection and attempt to vend that motor. If the vend is successful the control board will deduct the price of that item from the credit value and the change returned below. If all items in that selection have been vended and the product delivery sensor does not detect a product vended the control board will not deduct credit and the "MAKE ALTERNATE SELECTION" message will be on the scrolling display until a new selection is made. The "Sold Out" light will be illuminated for the selection that does not have product available.

If there is insufficient credit for the selection made, the selection and price of that selection will be displayed for five(5) seconds, followed by the message "PLEASE INSERT MORE MONEY". This message will be displayed until enough credit is added and the selection made again or a lower priced item is chosen. During the vend, the selection number and price will be displayed.

If power should fail during a vend, the credit will be lost, the selected motor WILL NOT BE RE-ENERGIZED when power returns.

#### SERVICE MODE

This mode will be entered by pressing the "MODE BUTTON" located on the control board just above the two red power indicator lights. By using the numbers and letters on the program selector pad(located to the left of the control board), the operator can program and review the features of the control board. Upon pressing the "MODE BUTTON", the scrotling display will sequence through (1.5 seconds each), the alphanumeric motor identification(located on the tray by the individual motors) which the control board believes to have failed and an error code will appear on the right, telling the operator the reason for the failure. Pressing and holding in selection button #13 on the program selection pad will abort this sequence display.

#### ERROR CODES

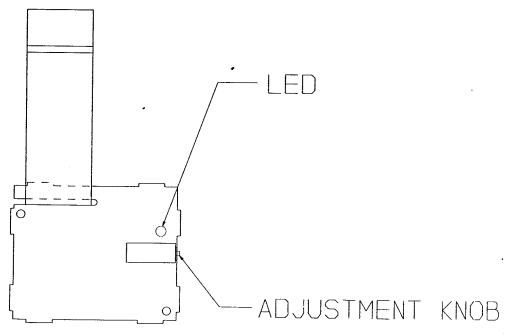
- 1. Error 1 = To little current.
- 2. Error 2 = Normal operation when motor helix is sold out.
- 3. Error 3 = The control board has lost communications with the changer. Changer has malfunctioned.
- 4. Error 4 = EEPROM sum check error.

Note: Error 4 = Prices have been inadvertently altered and all prices have automatically been set to maximum by the control board. To clear these prices, reset pricing as desired.

## SENSOR ADJUSTMENT FOR IMPACT SENSOR

The control board uses an impact sensor to detect that a product had been vended. It may be necessary to adjust the sensor when the machine is first setup or if the control board or impact sensor is replaced.

To adjust the sensor turn power on to the machine. Located above the control board to the left is a small printed circuit board. On this circuit board is a small adjustment pot (See drawing below). With a small screw driver turn the pot clockwise until the L.E.D. just above the pot lights. Turn the same pot counterclockwise 2 1/2 turns. Now making minor adjustments turn the pot clockwise to increase sensitivity(product does not stop the motor), or counterclockwise to decrease sensitivity(motor stops before product drops).



# DETAILED OPERATION OF CONTROL BOARD PROGRAM MODES

At the time of delivery from Polyvend, the control board will be set as follows:

- 1. All vend options will be off.
- 2. The maximum change limit is \$1.00.
- 3. The cash accountability will be set to \$00,000.00. Note: Due to factory testing the total will not be exactly \$00,000.00.
- 4. All prices will be set to \$.50.
- 5. The language will be set to English.
- 6. The point of sales message will be preprogramed to: "ENJOY ONE OF OUR FINE SNACK PRODUCTS".

There are two selector pads used to perform the functions listed under the program modes. The one is the program selection pad located inside of the machine assembly and the other is the selection pad located on the front of the drawer assembly (Selection buttons for product dispensing).

#### PROGRAM MODES

#### 1. VERIFYING MOTOR SELECTION

While in the service mode press selection button #2 on the program selection pad, then press the selection on the selection pad you wish to verify. The scrolling display will show the motors assigned to that selection two motors at a time.

## 2. ASSIGN A MOTOR TO A SELECTION

After going into the service mode, press selection button #3 on the program selection pad. The control board will show "SELECTION" on the scrolling display. Press the selection on the selection pad you wish to add the motor to. On the program selection pad, press each letter and number of each motor you want assigned to that selection(The letter and number of each motor is located on the front of the tray). The letter and number of each selection will be shown on the scrolling display as they are entered. After entering all of the motors including the new motor to this selection, press button #10 on the program selection pad.

#### 3. MOVING A MOTOR FROM ONE SELECTION TO ANOTHER

Go into the service mode and press button #3 on the program selection pad. The control board will show "SELECTION" on the scrolling display. Press the selection on the selection pad that you wish to move the motor to. On the program selection pad, press the letter and number of each motor that you want assigned to that selection including the motor you are adding. The letter and number of each selection will be shown on the scrolling display as they are entered. After entering all of the motors, press selection button #10 on the program selection pad.

Now you must remove the motor from the selection you are taking it from by, pressing button #3 on the program selection pad. The control board will show "SELECTION" on the scrolling display. Press the selection on the selection pad that the motor is being removed from. On the program selection pad, press the letter and number of each motor that will be in this selection(Do not press the letter and number of the motor you have taken out of this selection.).

After entering all of the motors, press button #10 on the program selection pad.

#### 4. ACCOUNTING

To display the stored accountability, while in the service mode, press button #4 on the program selection pad. The control board will display "ACCOUNTING" and then press the respective button on the program selection pad.

- A = Total cash accountability, which will rollover after \$99,999.95. Note: This function can not be reset.
- C = Total number of vends for an individual selection.

  After you press "C" the control board will display

  "SELECTION" then press a selection from the selection
  pad.

NOTE: This feature can not be reset.

# ACCOUNTING RESETABLE FUNCTIONS

D = Total number of vends of an individual selection. After pressing the letter "D" the control board will show "SELECTION" on the scrolling display, then press the selection button you wish to review. When the selection number is shown on the scrolling display an "R" to the right of the selection is also present (indicating that the function is resetable). NOTE: When the function is reset all selections will be reset at the same time (You can not reset an individual selection). To reset the selections while in the service mode, press button #4 on the program selection pad. Then press button "E" on the program selection pad and the scrolling display will show "RESET". Then press button "F" on the program selection pad. The function will then return to 00000 on the scrolling display.

## 5. PRICE SETTING

# A. Price Setting by Selection

To set the price on an individual selection, while in the service mode, press button #5 on the program selection pad. The control board will display "SELECTION" on the scrolling display. Press the selection button on the selection pad you wish to change the price of. The current selection price will be displayed. Using the numbers on the program selection pad, enter the most significant digit first, then the less significant digits.

Example: \$00.85. Press button #8 on the program selection pad, then button #5. The scrolling display should read \$00.85. To save this price for this selection only, press button #10 on the program selection pad. To set another single price, press button #5 on the program selection pad and repeat the above price setting sequence. To cancel an unwanted price before the fourth digit is entered press button #13 on the program selection pad.

# B. Price Setting of the Entire Machine

To set the price of the entire machine while in the service mode, press button #5 on the program selection pad. The control board will display "SELECTION". Press a selection button on the selection pad. The present price of that selection will be displayed on the scrolling display. Using the numbers on the program selection pad, enter the most significant digit first, then the less significant digits.

Example: \$00.75. Press button #7 on the program selection pad, then press button #5. To saved this price for the entire machine press button #12 on the program selection pad. To cancel an unwanted price before the fourth number is entered, press button #13 on the program selection pad.

## 6. SERVICE VEND

# A. Service Vend by Individual Motor

To service vend a motor while in the service mode, press button #6 on the program selection pad. The scrolling display will show "SELECTION". Then press the motor's letter and number on the program selection pad you wish to service vend. The control board will then attempt to service vend that motor. The letter and number of that selection will be displayed while the vend is attempted. If the vend is successful the control board will beep three times and the scrolling display will blank.

# B. Service Vend by Selection

To service vend a selection while in the service mode, press button #7 on the program selection pad. The scrolling display will show "SELECTION". Press the selection button on the selection pad. The control board will then display the motor's letter and number of that selection while the vends are attempted. Each motor in that selection will be vended. If the service vend is successful and all of the motors in that selection have vended the control board will beep three times and the scrolling display will blank.

To exit this mode press button #13 on the program selection pad and hold until the current vend is completed.

## C. Service Vend by Machine

To service vend the entire machine one time, while in the service mode, press button #8 on the program selection pad. The scrolling display will show the selection motor letter and number, as the corresponding vend is attempted. If the vend is successful, the control board will continue on with the next motor. If the vend is not successful the control board will beep three times and continue with the next motor. This cycle will be repeated until vends on all motors in the machine have been attempted. The display will then blank after the last motor has been vended.

To exit this mode press button #13 on the program selection pad and hold until the current vend is completed.

# 7. POINT OF SALES MESSAGE PROGRAMMING

The machine comes preset from the factory with the message "ENJOY ONE OF OUR FINE SNACK PRODUCTS".

If you wish to change the Point of Sales Message, press the service mode button on the control board, then press button #9 on the program selection pad. The scrolling display will show "MESSAGE". Using the keypad overlay and following the keypad definitions, enter the new message. Menu 1(Letters and symbols are blue in color) is the default menu. After each keypad entry, from either menu the keypad will return to menu 1. To use menu 2, (Letters and symbols are red in color) the "SHIFT" key must be pressed prior to pressing a menu 2 key. Put two(2) spaces to indicate the end of the message. To save the message the "ENTER" button must be pressed from within menu 2. To remove a wrong letter press back space.

NOTE: The maximum number of characters you can enter to form a message is 53 characters plus two(2) spaces at the end of the message. The two spaces are to prevent the end and the beginning of the next message from running together. A space between two words is considered one character.

MENU 1				MENU 2		
	(BLUE IN COI	LOR)		(RI	ED IN COLOR	(}
Α	G	M		S	Y	4
В	H	N		T	Z	5
C	I	О		U	0	6
$\mathbf{p}$	J	${f P}$		V	1	7
E	K	Q		W	2	8
F	L	R		X	3	9
SPAC	E SHIFT	BACK		*	ENTER	\$
	(NEXT MENU)	SPACE	•			

EXAMPLE: "ENJOY OUR SNACKS". Press the service mode button, then press button #9 on the program selection pad. "MESSAGE" will appear on display. Using the overlay on the program selector pad, press the letter E, letter N, letter J, letter O, press shift, press Y, press SPACE, press O, press SHIFT, press U, press R, press SPACE, press SHIFT, press S, press N, press A, press C, press K, press SHIFT, press S, press SPACE, press SPACE, press SHIFT, press S, press SPACE, press SPACE, press SHIFT, press ENTER. The message should start serolling when you press the mode switch.

#### PRODUCT LOADING

#### HELIX DISPENSER

There are several helix pitches (openings) available in this machine. To insure proper operation and maximum capacity, the product size should closely match the opening between the windings of the helix. The product should fit between the windings of the helix so as not to be tight, but should fill most of the opening. If you can lift up on the product in the helix and the helix lifts up with the product, it is to tight and a larger opening needs to be used.

#### PRODUCT LOADING

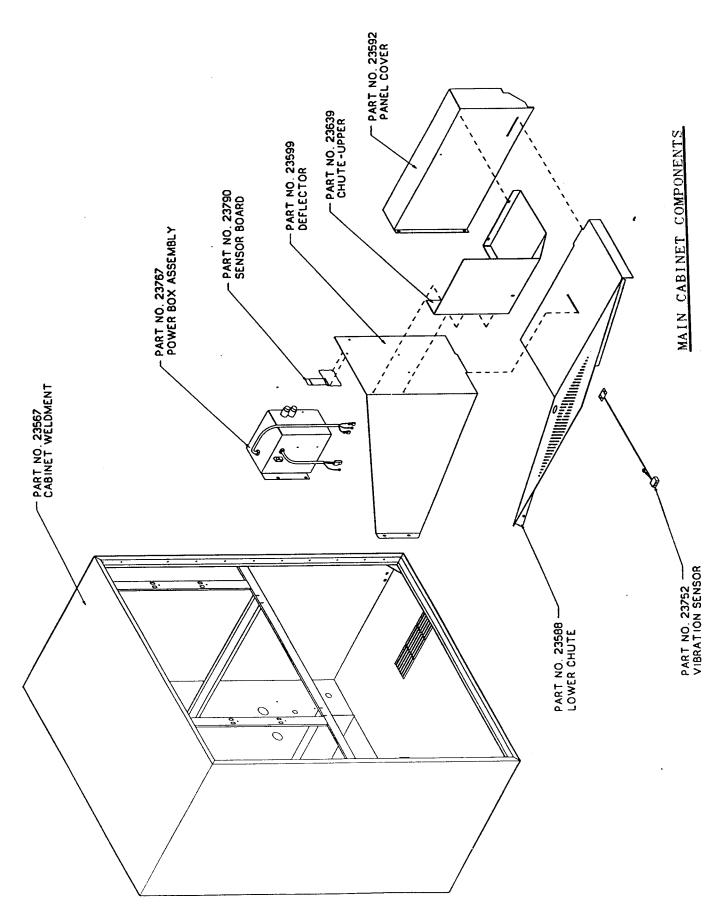
To load a tray, lift up on the side of the tray and pull the tray out until it comes to the tray stop, then let it tilt down into the loading position.

Starting at the front of the tray(the end of tray opposite to the vend motors), insert a product between each winding of the helix. Be sure to place the product all the way to the bottom of the tray and tilt free end at top backwards. Fill from front to back and be sure not to miss any positions. Note: Product must rest on tray NOT on helix. After filling the tray, lift up the tray, push it back in until the tray comes to the stop. Repeat the process for each tray in the machine.

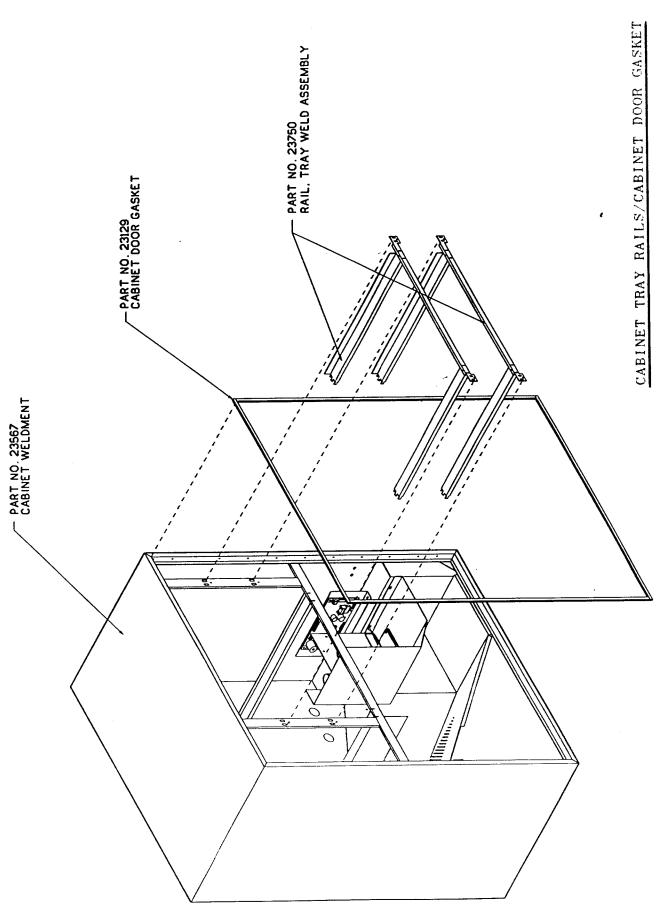
NOTE: The back selection helix is best used for short products such as film, etc.

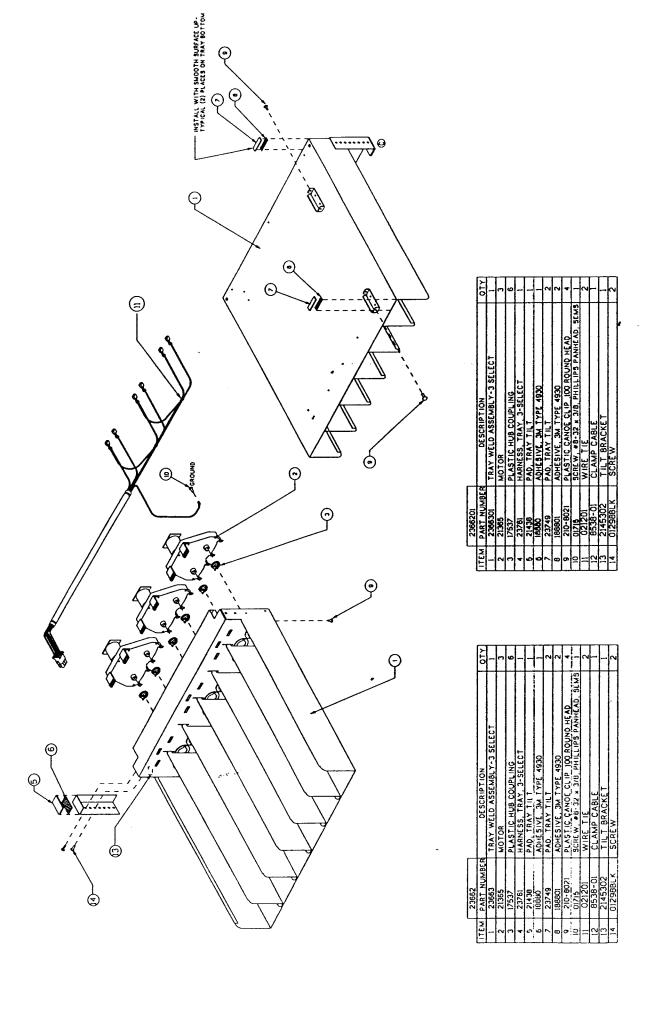
When reloading a helix that has sold out the helix may stop in a position where if you put in a product in the first space it may slip past the end of the helix. To correct this situation it will be necessary to leave the first space open then load the rest of the helix front to back. When the first product is vended it will now stop the helix in the correct position.

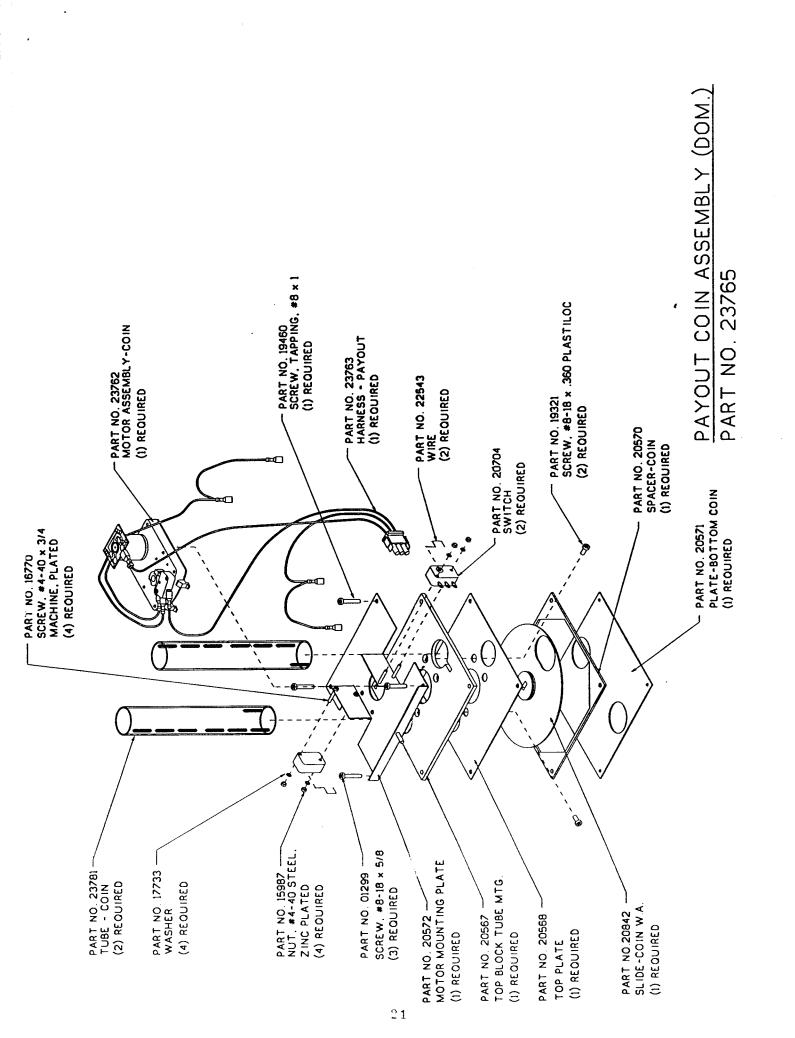
# DRAWINGS AND PARTS LISTS

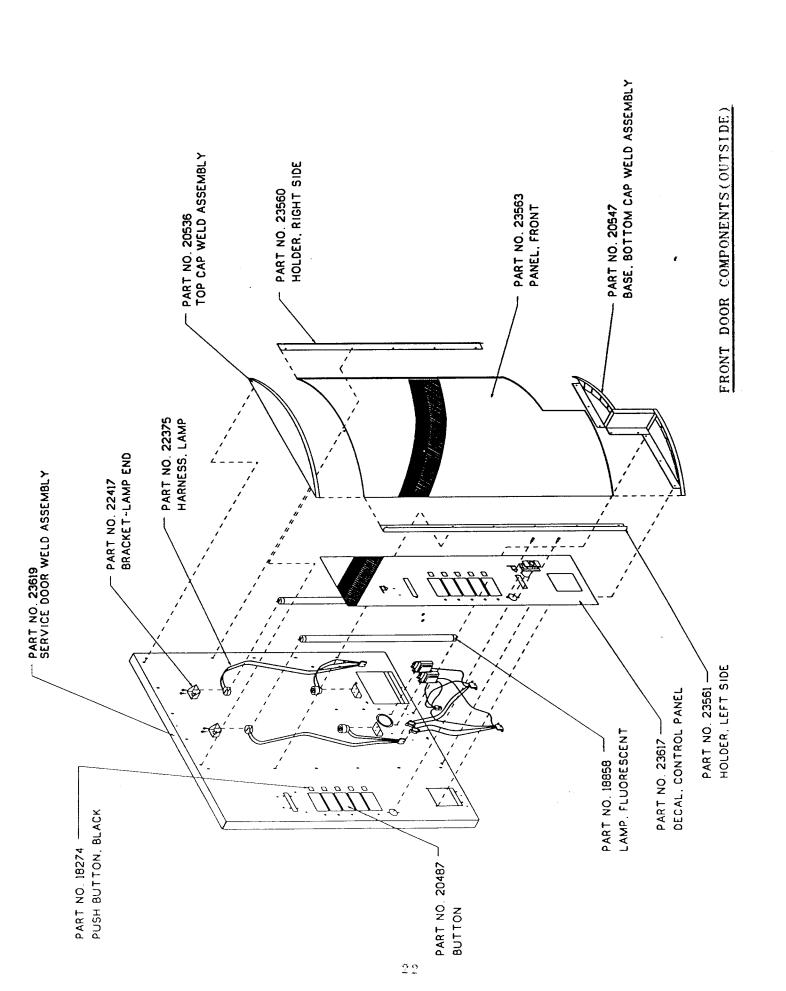


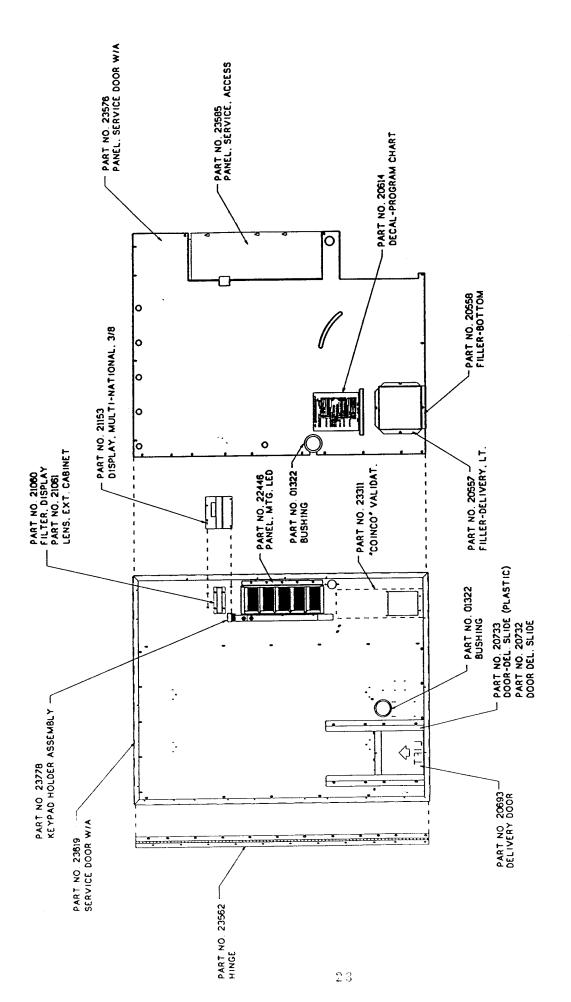
MAIN CABINET COMPONENTS ELECTRICAL



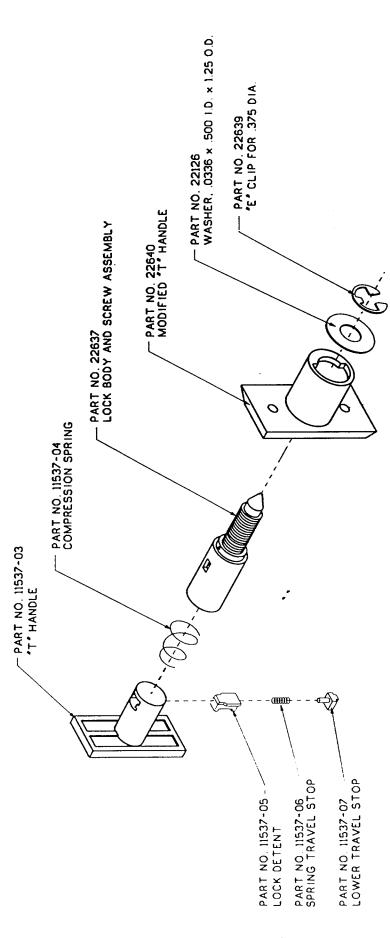




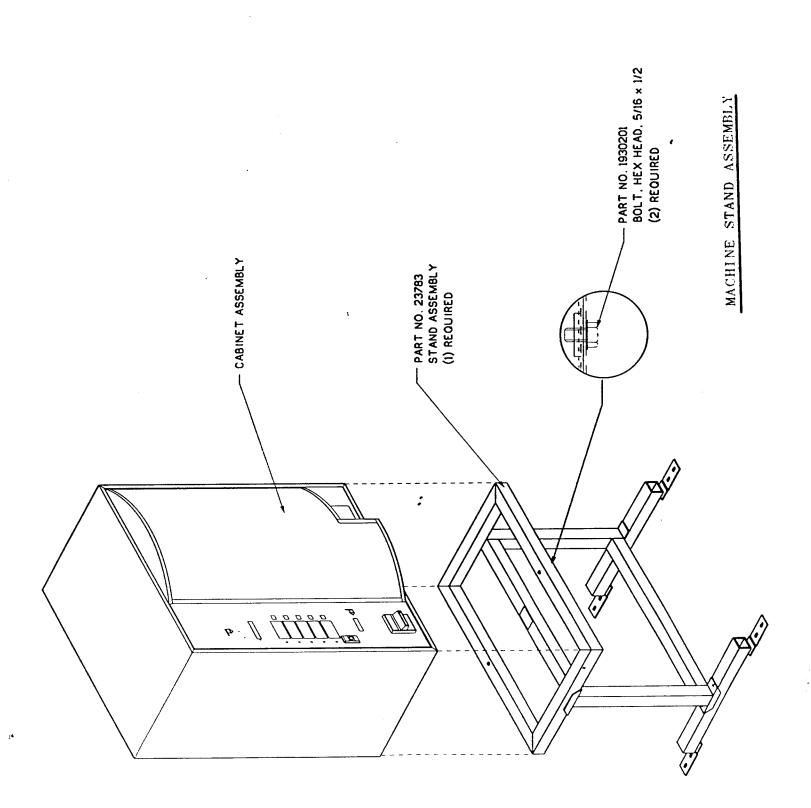




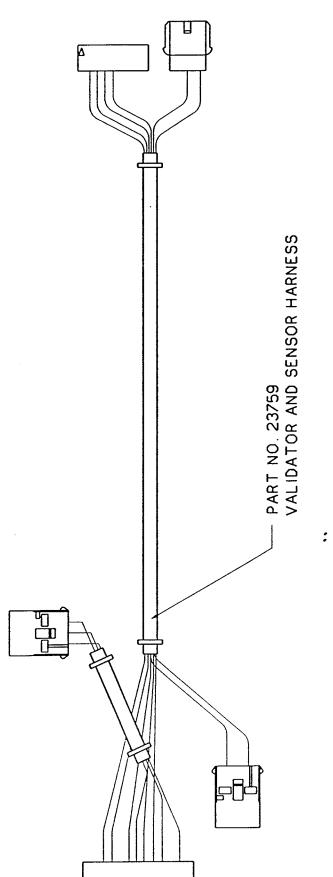
FRONT DOOR COMPONENTS (INSIDE)

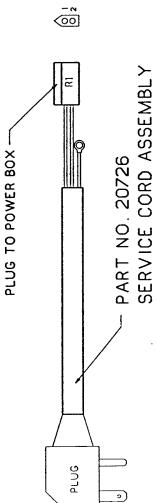


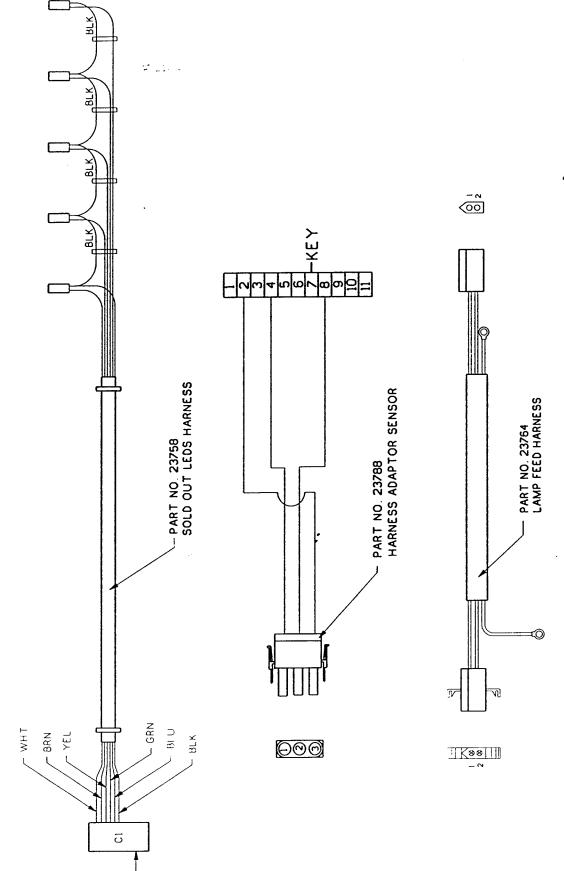
DOOR LOCK ASSEMBLY PART NO. 22650



MACHINE DECALS

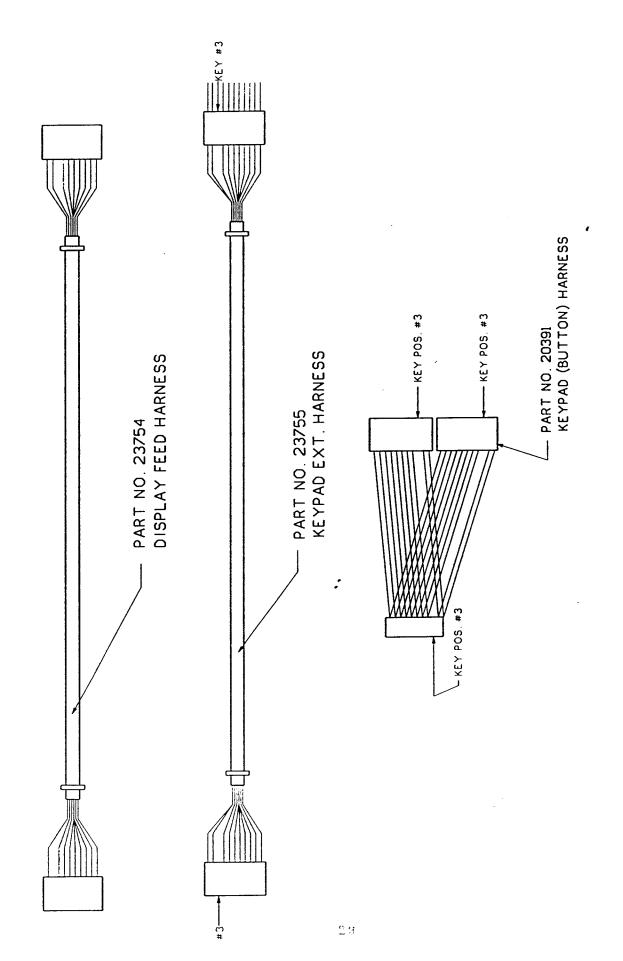




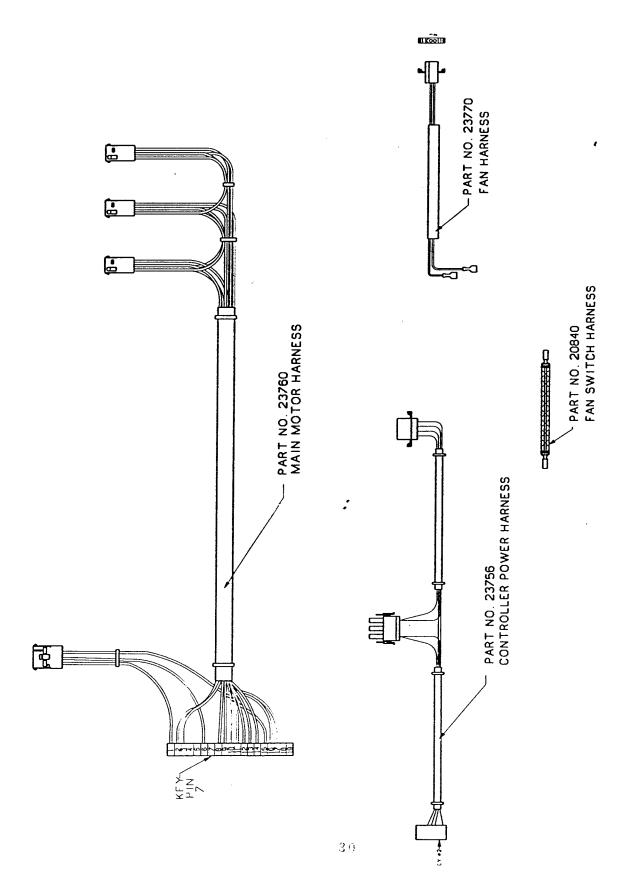


SOLDOUT L.E.D HARNESS/HARNESS ADAPTOR/LAMP HARNESS

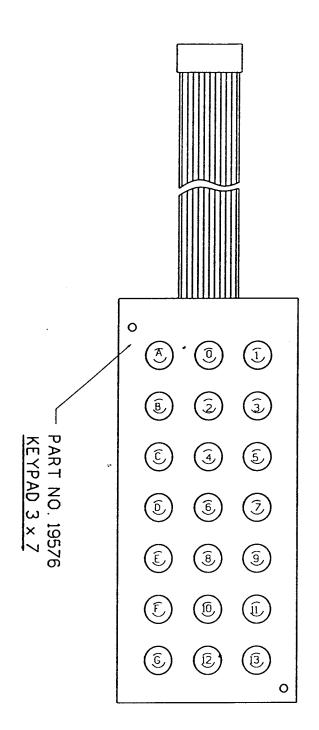
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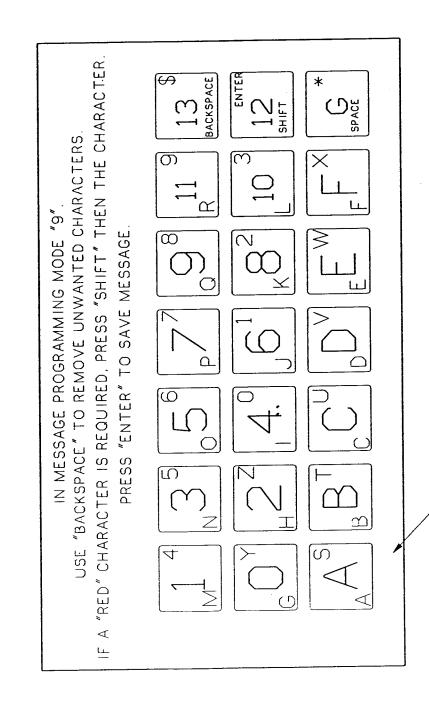


DISPLAY HARNESS/KEYPAD EXTENSION HARNESS



MAIN MOTOR HARNESS/FAN/FAN SWITCH HARNESS





- PART NO. 20377 OVERLAY BUTTON DECAL

# TROUBLE SHOOTING

DISCONNECT POWER TO MACHINE BEFORE CHANGING, DISCONNECTING OR CONNECTING ANY ELECTRICAL COMPONENTS.

SYMPTOM	POSSIBLE CAUSE	SOLUTION
VALIDATOR DEAD	NO 24 VOLTS	CHECK VAL. HARNESS LOOSE CONNECTION
	DEFECTIVE VALIDATOR	REPLACE VALIDATOR
SELECTION MOTOR FAILS TO RUN	INSUFFICIENT CREDIT	PRESS SELECTION BUTTON TO CHECK PRICE IS SAME AS MONEY INSERTED
IN SERVICE MODE SHOWS SELECTION AND ERROR 1.	DEFECTIVE MOTOR ASSEMBLY	ATTEMPT SERVICE VEND BAD MOTOR. REPLACE IF DEFECTIVE. NOTE 1.
	DEFECTIVE CONTROL BOARD	REPLACE CONTROL BOARD. NOTE 2.
ALL SELECTION MOTORS DO NOT RUN	DEFECTIVE CONTROL BOARD	REPLACE CONTROL BOARD. NOTE 2.
MOTOR RUNS AFTER PRODUCT DROPS	DEFECTIVE IMPACT SENSOR	REPLACE IMPACT SENSOR
	DEFECTIVE CONTROL BOARD	REPLACE CONTROL BOARD
TWO MOTORS RUN AT THE SAME TIME	DEFECTIVE CONTROL BOARD	REPLACE CONTROL BOARD. SEE NOTE 2
UNABLE TO MAKE A SELECTION.	SELECTOR PAD BAD. ATTEMPT TO CHANGE PRICE. UNABLE TO CHANGE.	OBSERVE KEYPAD
INSERT BILL(S), SHOWS CREDIT. NO PRODUCT DISPENSED	DEFECTIVE CONTROL BOARD	REPLACE CONTROL BOARD, SEE NOTE 2

INSERT BILL(S), DOES NOT SHOW CREDIT, CANNOT MAKE A SELECTION	VALIDATOR	REPLACE BILL VALIDATOR
	DEFECTIVE CONTROL BOARD	REPLACE CONTROL BOARD.SEE NOTE 2
DISPLAY IS BLANK POWER INDICATOR	DEFECTIVE DISPLAY	REPLACE DISPLAY
LIGHT ON.	DEFECTIVE CONTROL BOARD	REPLACE CONTROL BOARD. SEE NOTE 2.

NOTE 1: When replacing a bad motor, always service vend the new motor to tell the control board that a new motor has been installed.

NOTE 2: When you replace the control board always disconnect power to the equipment prior to removing the control board. After replacing the control board it will be necessary to reprogram all of the features.