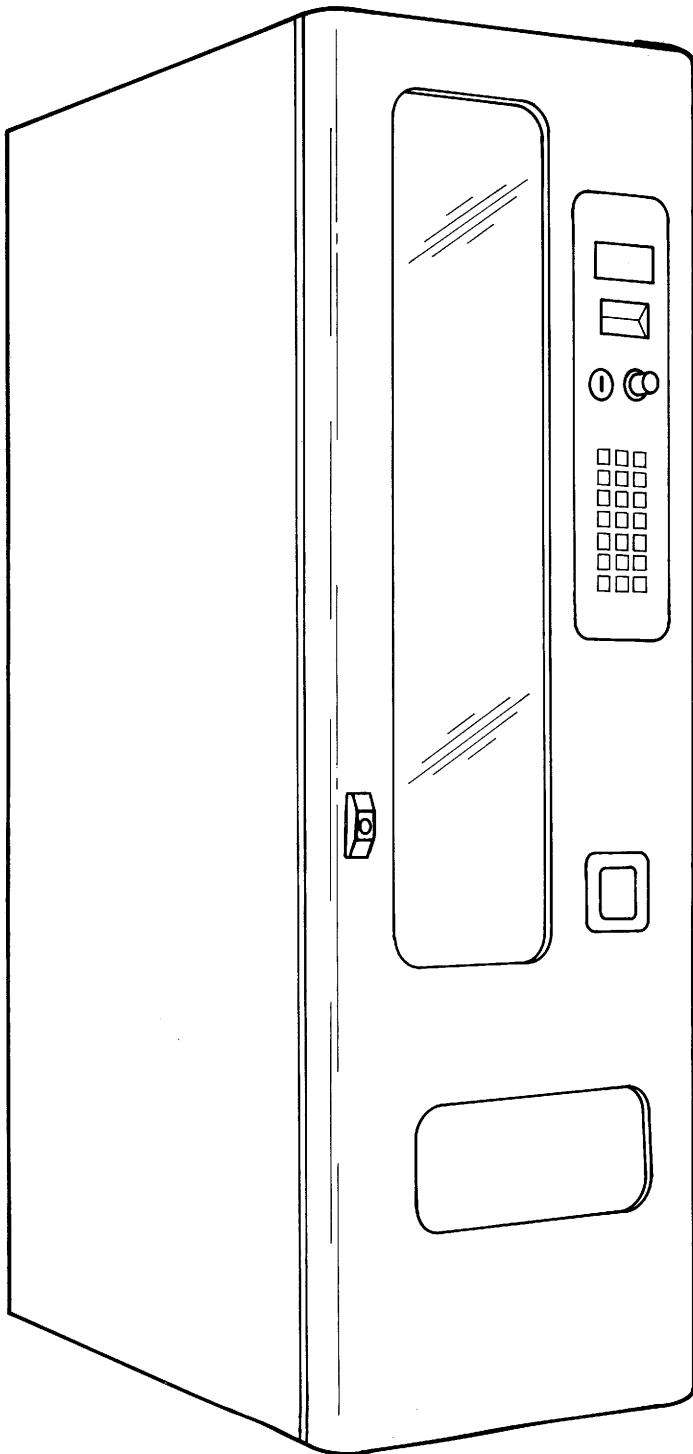
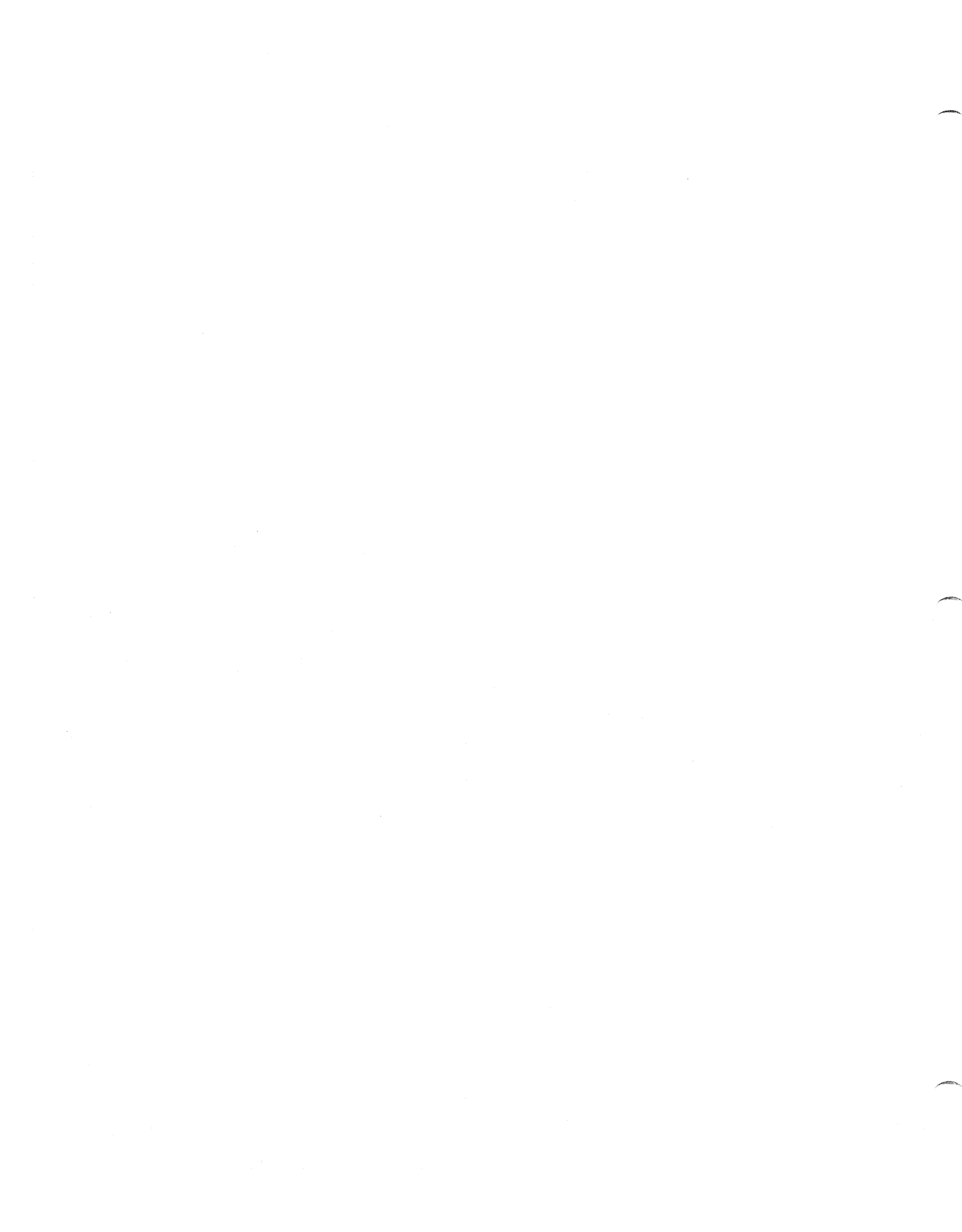


SNACK VENDOR MODEL 3051



SERVICE MANUAL

P/N 4206346



INTRODUCTION

This manual has been prepared for the purpose of providing service information for the proper operation of the Snack Vendor - model 3051. It is recommended that you read and thoroughly understand the information in this manual before attempting to put these vendors into operation.

The **10** selection Snack Vendor has been designed and engineered for many years of trouble-free merchandising, as well as maximum customer friendliness and simplified service and maintenance. "State-of-the-Art" electronics have been incorporated to provide increased pricing range to \$99.95 in 5 increments, automatic self-diagnostics, internal cash and unit accountability and the ability to add a companion vendor for cold drinks which utilizes the Snack Vendor's existing controller, coin changer, bill validator and keypad.

Other new features include:

- * Larger display area for ultimate merchandising and product display.
- * Unitized one-piece door, styled with an attractive European flair.
- * Adjustable helixes for greater vend reliability.
- * Drop-in 24 Volt DC, current limited motors for greater torque protection.
- * Vertical lighting for optimum product illumination.
- * Electronic keypad to eliminate electro-mechanical push button switches.
- * Programmable vend options to allow for the "fine tuning" of each vendor to the location's needs.

To minimize installation time and to avoid service problems due to improper installation, follow the instructions outlined in this manual.

SPECIFICATIONS:

ELECTRICAL:

Power Requirements - 115 Volts,
60 cycle
Transformer - 117 Volts AC Primary
24 Volts AC Secondary

COIN MECHANISM:

Coinco	Model 9302L
Mars	Model TRC6010
or Equivalent	

MACHINE DIMENSIONS:

Width	21 Inches
Depth	33 1/2 Inches
Height	68 Inches
Weight	350 Pounds

CAPACITY:

10 Select expandable to 18 Selections
Factory configured for 101 items

UNPACKING:

All vendors have been thoroughly inspected prior to shipment and have been packed in a manner to prevent damage during transit.

An inspection number appears on the final inspection form in each vendor. Also a model number and serial number will appear on the Serial Plate located on the rear of the cabinet and/or inside the vendor. Record the inspection number, model number and serial number for your records. Refer to these numbers when reporting any imperfections, inquires or correspondence pertaining to this vendor.

Unpacking is accomplished in the following manner:

1. Carefully remove the outside packing material in a manner not to damage the finish or exterior of the machine.
2. Remove the "Knock-A-Way" support by placing a 2 x 4 under the vendor, inserting a large screwdriver or prying tool into the groove of the "Knock-A-Way" and splitting the boards. (See **Illustration #1**)
3. Vendors are shipped without lock cylinder and keys. These are shipped separately so common keys can be installed in each route.
4. Pull the power cord out of the vendor to its full 9 foot length. Carefully "seat" the rubber grommet on the power cord into the hole in the back of the vendor.
5. Remove all packing material, shipping brackets and tape from inside the vendor. Adhesive residue can be removed with denatured alcohol or common household vinegar.

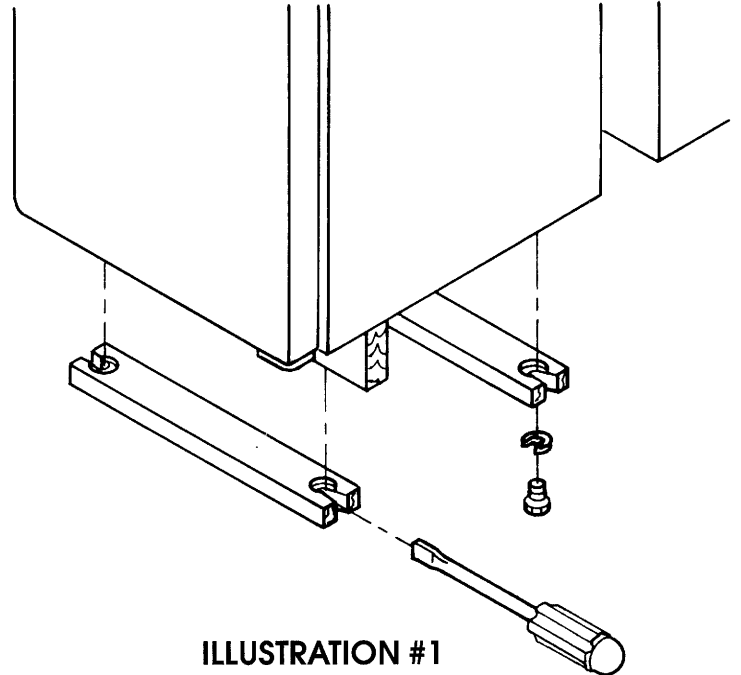


ILLUSTRATION #1

INSTALLATION:

Position the vendor in its place of operation no further than 9 feet from the power outlet or receptacle and check that the door will open fully without interference. For proper operation, especially in the coin changer, it is important that the vendor be installed perfectly level. Level the vendor, making sure all levelers are touching the floor. When the vendor is level, the door can be opened to any position and not move by itself. Try the door half closed, straight out and in the wide open position before deciding the vendor is level.

INSTALLING THE WALL BRACKET:

WARNING: Failure to install the Wall Mount Bracket in strict accordance with the following procedure may create an unintentional tipping, or hazard.

GROUNDING & ELECTRICAL

1. Locate the wall mount bracket and eight (8) screws packed inside the machine.
2. Securely attach the wall mount bracket with eight (8) screws to the cabinet back. Align holes in wall mount bracket with the hole pattern in cabinet back to ensure proper positioning of the wall mount bracket. (See **Illustration #2**)

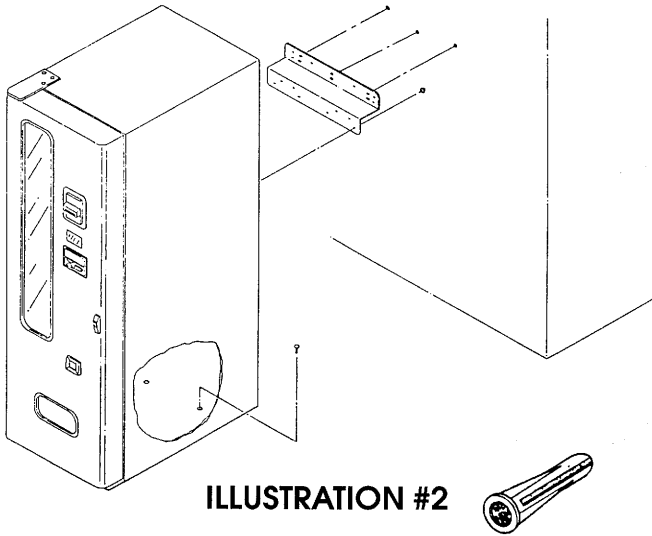
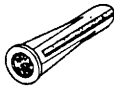
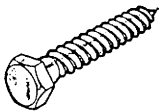


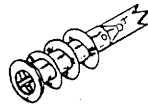
ILLUSTRATION #2



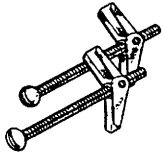
Plastic Lipped Screw Anchor
(Sheet Rock)



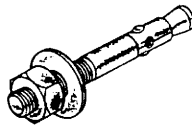
1/4 x 1 7/8 x 20 Lag Screw
(Wood Studs)



Self-Drilling Sheet Rock Anchor
(Absence of Stud)



3/16 x 4 Round Head Toggle Bolt
(Absence of Stud)



1/4 x 2 1/4 Carbon Steel
Concrete Wedge Anchor
(Concrete)

ILLUSTRATION #3

3. Push machine to desired position against wall and clearly mark, through wall mount bracket, holes intended for mounting. These holes

allow attachment to both concrete or sheet rock walls, using the two center holes for a 24" stud sheet rock wall, outer most holes for a 16" sheet rock wall, smallest holes for sheet rock wall when studs are not available and any pattern for a concrete wall. (Fasteners used are determined by the type of wall the machine is to be mounted to. For suggested fasteners, see **Illustration #3**.)

4. Push the machine away from the markings and drill mounting holes in the wall. The fasteners used to attach the bracket to the wall will determine the diameter of the holes to be drilled.

5. Finally, push the machine back to the desired position against the wall and securely attach the wall mount bracket to the wall using the proper fasteners. (Fasteners are not provided, see **Illustration #3** for suggestions.)

6. Holes are provided in the bottom of the cabinet (see **Illustration #2**) to allow the machine to be mounted to the floor. Follow the above procedures for marking and drilling holes. (Fasteners used are determined by the construction of the floor the machine is to be mounted to.) See **Illustration #3** for suggestions.

GROUNDING & ELECTRICAL:

For proper operation of any equipment utilizing electronically controlled components, it is recommended that the equipment be placed on an isolated or dedicated "noise free" 115 Volts AC, 60 cycle, circuit not less than 15 Amps, properly polarized and grounded. Checking the power source can be accomplished with an AC voltmeter in the following manner:

COIN MECHANISM

1. Voltage Check

When the AC voltmeter probes are connected to the HOT and NEUTRAL terminals, the voltmeter should indicate 110 to 130 volts AC. (See **Illustration #4**)

2. Polarity and Ground Check

When the AC voltmeter probes are connected to the HOT and GROUND terminals, the voltmeter should indicate 110 to 130 volts AC. (See **Illustration #4**)

3. Noise Potential Check

When the AC voltmeter probes are connected to the NEUTRAL and GROUND terminals, the voltmeter should indicate 0 volts AC. Any voltage readings could cause noise problems in the electronic controller. (See **Illustration #4**)

4. Amperage Check

At the fuse box or circuit breaker panel, locate the proper circuit, and ensure that the fuse or breaker protecting that circuit is rated at 15 amps or greater.

NOTE: In a standard three (3) prong 115 VAC wall outlet the **GROUND** pin is round, the **NEUTRAL** pin is rectangular and located clockwise from the ground pin and the **HOT** pin is rectangular and smaller than the neutral pin and located counterclockwise from the ground pin. (See **Illustration #4**)

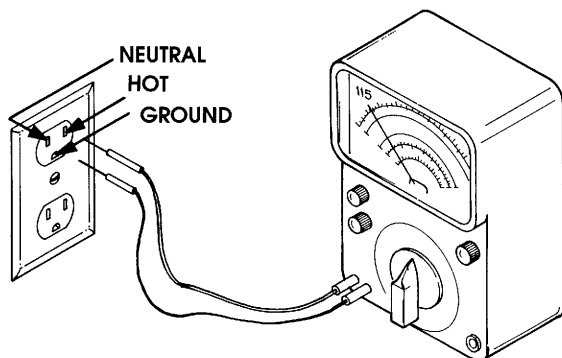


ILLUSTRATION #4

To correct negative voltage, amperage, polarity or ground checks, consult a licensed electrician. To correct a negative noise potential check, install a noise suppressor which can be obtained from any electrical or electronic supply store in kit form from Selectivend, Inc. 165 North 10th Street, Waukegan, IA 50263.

COIN MECHANISM:

The coin mechanism will accept nickels, dimes, quarters and \$1.00 coins. Payout on over deposit will be made from self-loading, high capacity change tubes in the least number of coins available. When credit has exceeded the highest vend price, the controller will disable the coin mechanism prohibiting additional coins being accepted. When the change in the payout tubes is below the low level sensors the **USE CORRECT CHANGE** indicator on the digital display will be illuminated.

Load the changer payout tubes with nickels, dimes and quarters. (See **Illustration #5**)

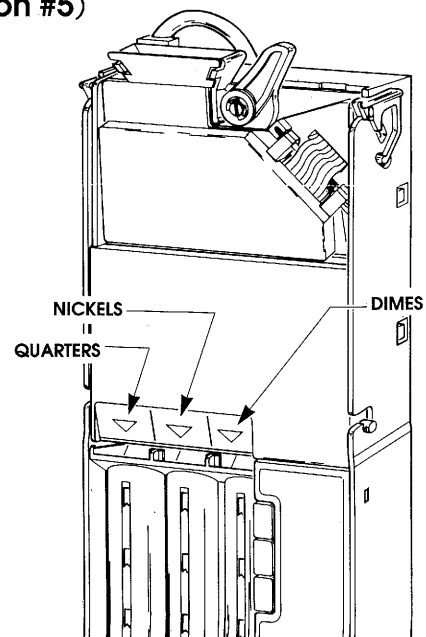


ILLUSTRATION #5

COINAGE MECHANISMS CONT.

COINAGE OPTION SWITCHES:

Located on the coin changer are three (3) option switches providing acceptance of either U.S. and Canadian coins or both. Where desired, the \$1.00 coin can be accepted. The amount of quarters inventoried for payout in the coin tube can be reduced when vend prices do not require a quarter payout. Should a different setting be desired, the following switch setters are provided:

- A. Open the main door of the vendor and turn the main power switch to the "OFF" position.
- B. Remove the upper section (Acceptor portion) of the coin changer. (See **Illustration #6**)
- C. Locate the coin changer option ("dip") switches and select from the following options:

OPTION SWITCH SETTINGS			
SW	DESCRIPTION	POS.	FUNCTION
1	USA/CAN	ON	U.S. AND CANADIAN COINS WILL BE ACCEPTED
		OFF	CANADIAN COINS WILL BE REJECTED
2	LO 25¢	ON	QUARTERS ARE DIVERTED TO CASH BOX WHEN THE CHANGE TUBE HAS INVENTORIED APPROXIMATELY 8 QUARTERS
		OFF	QUARTERS ARE DIVERTED TO CHANGE TUBE UNTIL THE CHANGE TUBE IS FULL
3	\$ ACCEPT	ON	DOLLAR COINS WILL BE ACCEPTED
		OFF	DOLLAR COINS WILL BE REJECTED

COIN TUBE CAPACITY				
	5¢	10¢	25¢	OPTION
			HI 25¢	LOW 25\$
FULL LEVEL	68 - 69	98 - 99	66 - 67	9 - 10
LOW LEVEL	7 - 8	10 - 11	8 - 9	9 - 10

The option switches have been factory set in the following positions:

- #1 - OFF
- #2 - OFF
- #3 - OFF

CAUTION: DO NOT PLUG OR UNPLUG CHANGER WITH POWER ON!

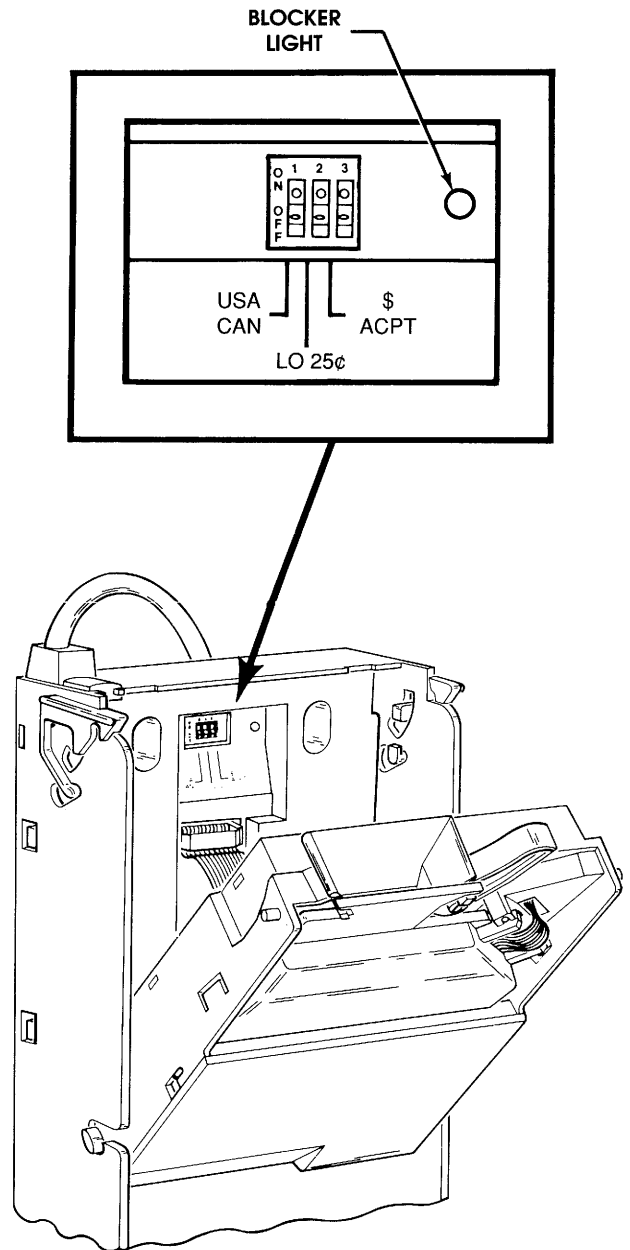


ILLUSTRATION #6

TRAY CONFIGURATION

TRAY CONFIGURATION:

Trays are configured at the factory, however the configuration can be changed on location as the need arises. Adjustments to tray spacing auger sizes and auger timing are provided to enhance the vending features of the vendor. If the product being vended does not fit the auger properly, it is recommended that a different "pitched" auger be used. A wide variety of augers are available.

The following is a list of augers and sizes that are available:

AUGER SIZES AVAILABLE		
	PRODUCT SIZE	
	NUMBER OF ITEMS	PRODUCT THICKNESS
4200272-000	15	1-3/16
4200272-001	18	31/32
4200272-002	24	11/16
4200272-003	30	1/2
4200272-004	12	1-1/2
4200272-005	9	2-1/16
4200272-006	6	3-1/8
4200272-031	10	1-27/32
4200272-032	11	1-11/16

Each auger can be rotated in 20 degree (20) increments, changing the auger position for a different "drop-off" point at the front of the tray.

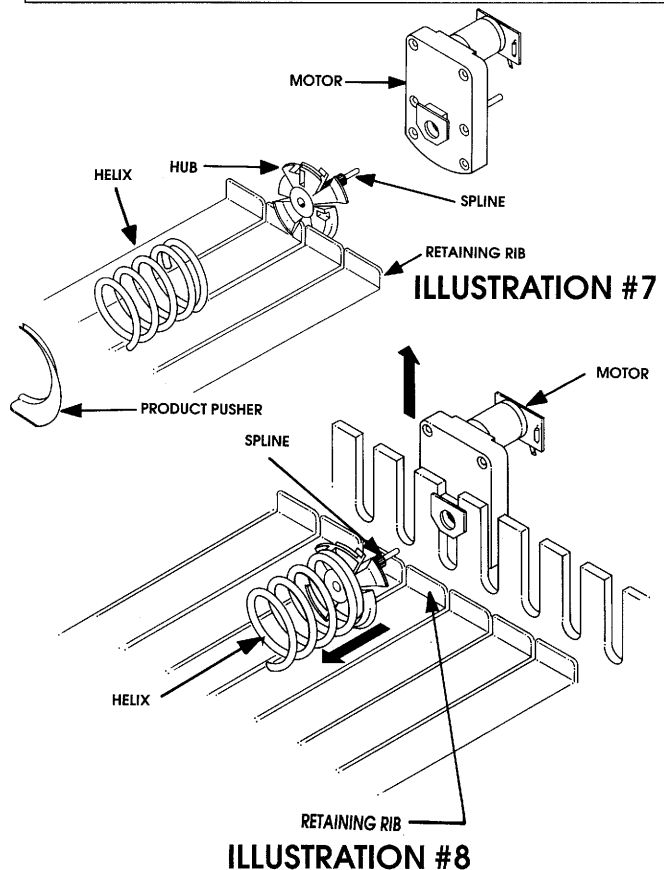
Research and testing have determined that the majority of products tested will vend successfully with the leading edge of the auger set at 6:00 o'clock.

Should you experience difficulty in vending odd size or shaped items, auger retiming can be accomplished on a trial and error basis as follows:

1. Pull the tray containing the auger to be retimed forward to its stop.
2. Remove the product from the compartment.

3. Remove the Motor Cover.
4. Lift the Motor slightly (approximately 3/4" to disengage the Auger Hub from the retaining rib in the bottom of the tray. (See **Illustration #7 & 8**)
5. Separate the helix and hub from the motor slightly by pulling forward on the helix hub to disengage it's spline from the motor's internal gear (see **Illustration #7 & 8**)
6. Rotate the helix and hub in either direction and re-install by pushing the spline into the internal gear motor.
7. Push down on the motor to seat the helix hub onto its retaining rib in the bottom of the tray. (See **Illustration #8**)
8. Replace Motor Cover, load product and push tray into its vend position, back and locked onto its detent.
9. Test vend for proper operation.

NOTE: If fine tuning is required for the helix timing, it can be accomplished by advancing or retarding the product pusher on the front of the helix. (See **Illustration #7**)



LOADING PRODUCTS

LOADING PRODUCTS:

To load products, lift tray slightly and pull forward until the tray stops. The upper most trays will tilt for ease of loading.

Load products from front to back, making sure all items fit freely between the helixes. Do not attempt to force over-size items or packages into the spaces. All spaces forward must have a product loaded into them; do not skip a space. The bottom of the item or package should be placed on the bottom of the compartment above the product helix, with the label facing the front of the machine for easy identification by the customer. (See **Illustration #9**)

When finished loading each tray, make sure the tray is returned to its proper standby position. All trays must be pushed to the rear of the cabinet and properly seated in the "detent" position.

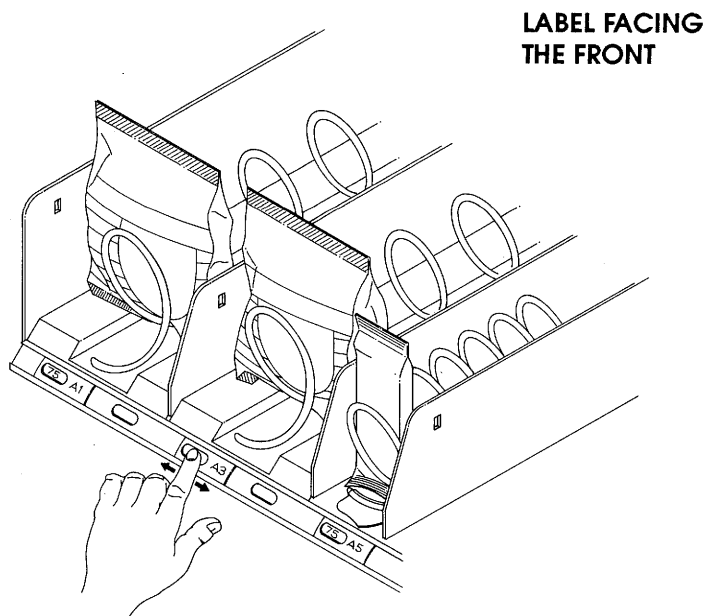


ILLUSTRATION #9

SERVICE MODE FUNCTIONS:

Setup mode is entered by pulling forward gently on the mode switch arm to depress the mode switch. The mode switch arm is located on the inside of the outer door just above the validator. The number of times the mode switch is depressed determines the function of the controller. (See **Illustration #10**).

Mode 1 Time = Motor Count

The number of active motors will be displayed.

NOTE: If any selection switches are stuck in the "ON" position, the switch(s) number will flash at a one second rate "S-xx".

Mode 2 Times = Coin Payout

"CPO" is displayed

1. Press A = \$.05
Press B = \$.10
Press C = \$.25
2. Press Mode to exit.

Mode 3 Times = Single Motor Test

"DTS" is displayed

1. Select motor to test.
2. Press Mode to exit.

Mode 4 Times = All Motor Test

"DTA" is displayed

1. Press any key to start the test.
2. Press Mode to exit.

SERVICE MODE FUNCTIONS

Mode 5 Times = Set Prices

"SPR" is displayed

1. Make a two key selection to display the existing price.
2. Press keypad selection 2 to increase the price.
Press keypad selection 4 to decrease the price.
3. Press Mode to exit.

Mode 6 Times = Option set

"OPT" is displayed

1. Depress (2) to display and increment option number. Depress (4) to decrement option number.
2. Depress (6) to change the state.
"0" = OFF
"1" = On

Options are as follows:

- 1 = Forced vend
- 2 = Bill Validator escrow
- 3 = Multi-vend

3. Press Mode to exit.

Mode 7 Times = Cash Display

The display format will flash 2 digits then 4 digits.

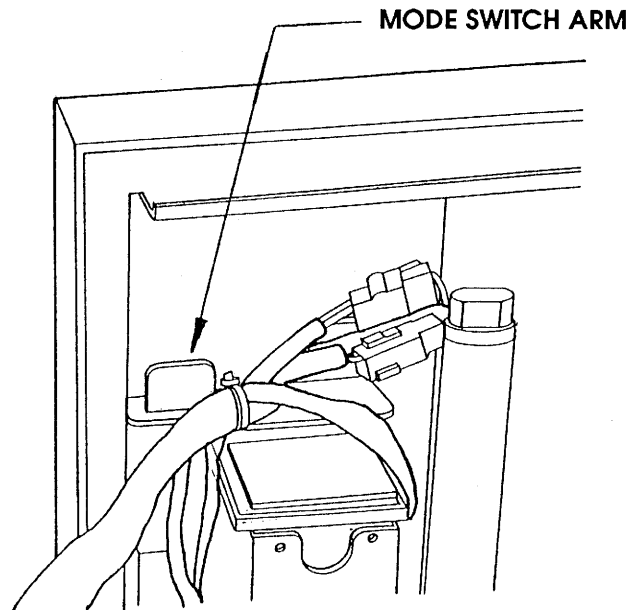
(Example: 01--23.45 would be \$123.45)

Mode 8 Times = Vend Count Display

The display will flash 2 digits then 4 digits.

(Example: 06--7899 would be 67,899 vends)

Mode 9 Times = Return to Sales Mode.



A	1	2
B	3	4
C	5	6
D	7	8
E	9	0
F	G	H
J	K	L

ILLUSTRATION #10

VALIDATOR OPERATION

The **Snack Vendors** are designed to operate with a Maka Dollar Bill Validator Model **NB 2**. To operate the dollar bill validator a Coinco **9302L** Coin Mechanism may be used as the coin mechanism in the vendor. The Coinco **9302L** Coin Mechanism must have nickels and quarters placed into the coin tubes before the dollar validator will accept a dollar bill.

VALIDATOR OPERATION

When a bill is inserted, the carrier motor rotates and the bill is drawn in on the belt. The information detected by the photo sensor and magnetic sensor is sent to the control board for discrimination.

If the bill is authentic, a vend signal is output and the bill is stacked.

If the bill is counterfeit the carrier motor rotates in reverse and the bill is returned. (See **Illustration #11**)

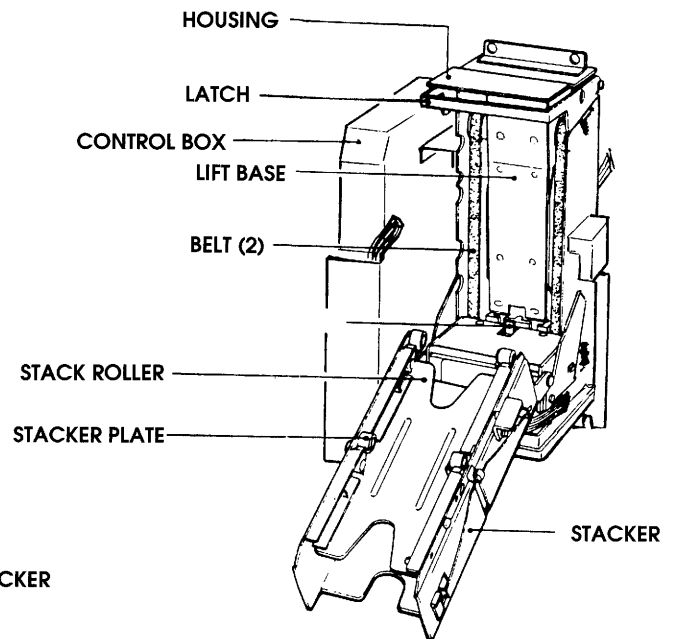
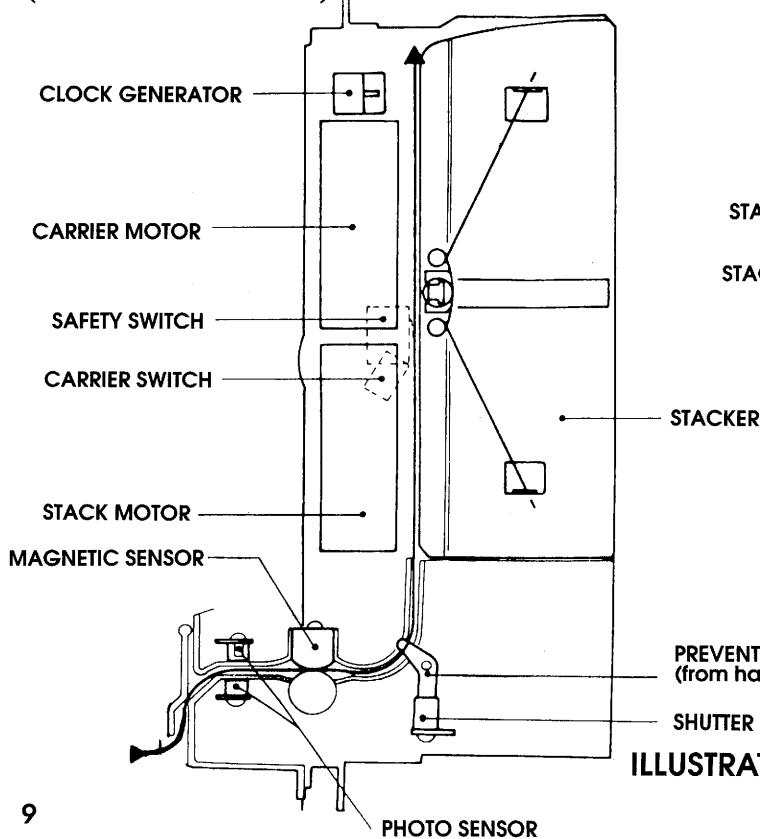
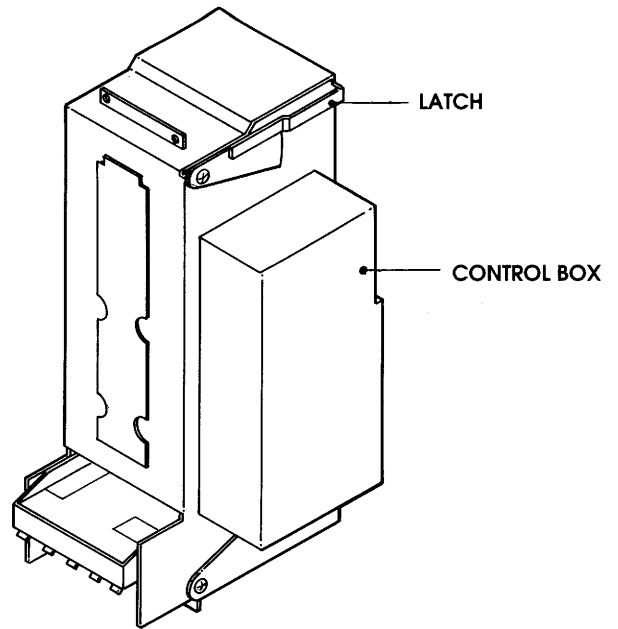
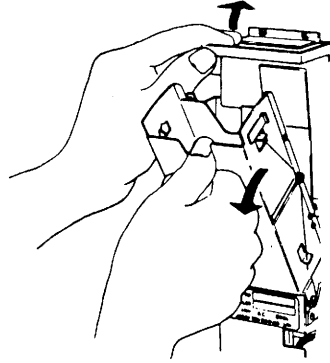


ILLUSTRATION #11

STACKER OPERATION

STACKER OPERATION

When the stacker motor rotates, the lift base is pressed by the lift lever and the bill is stacked between the stacker plate and stack guide. (See **Illustration #13**)



HOW TO WITHDRAW \$1 BILLS

Push up the latch and pull down the stacker. Take hold of the bills and pull them out. (Warning: Be sure to re-set stacker to original position.) (See **Illustration #12**)

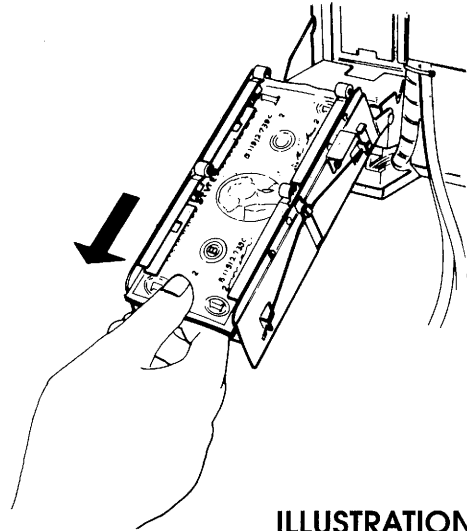


ILLUSTRATION #12

LATCH ENGAGEMENT

Push the stacker firmly until it latches.

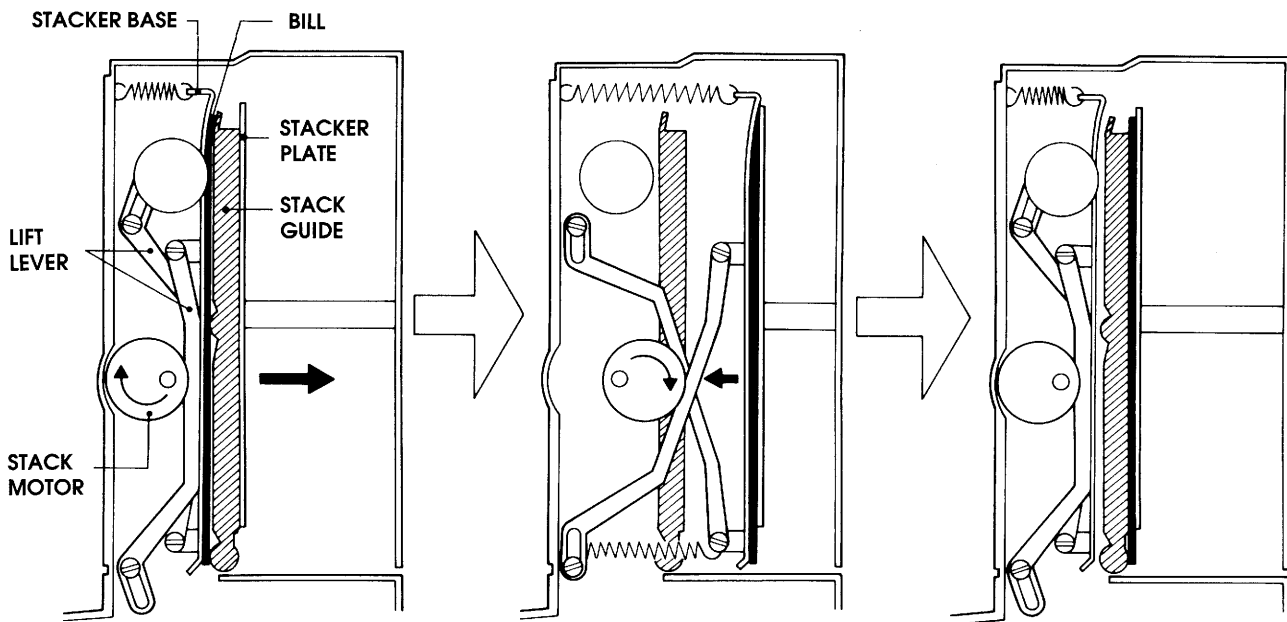
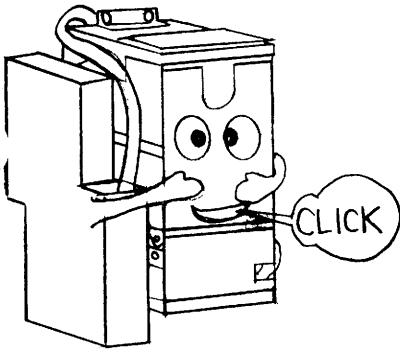


ILLUSTRATION #13

CARE & CLEANING

CARE & CLEANING

CAUTION: Always disconnect power source **BEFORE** cleaning.

If Authentic \$1 bill will not Accept or is Rejected after insertion.

Push up the latch and pull down the stacker. If full of bills, remove them.

Remove any bills or foreign matter clogging the stacker. (See **Illustration #14**)

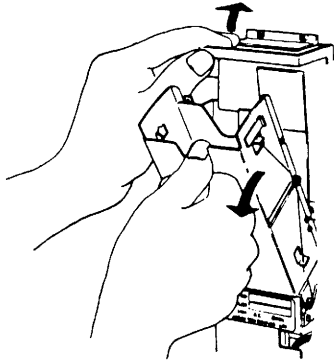


ILLUSTRATION #14

Prevention (of hanging) Lever should pull out easily and return smoothly without sticking. (See **Illustration #15**)

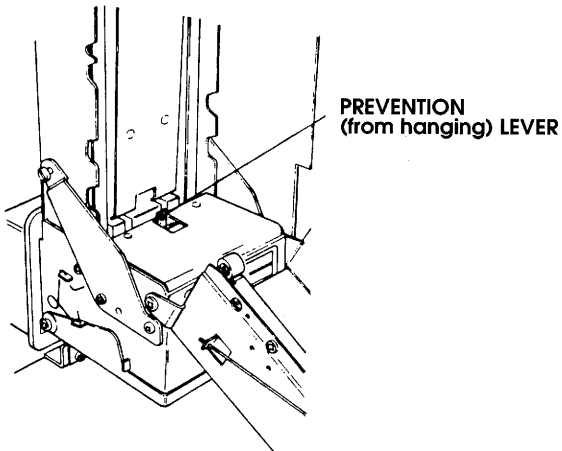


ILLUSTRATION #15

Press down the lower latch and pull up the stacker. (See **Illustration #16**)

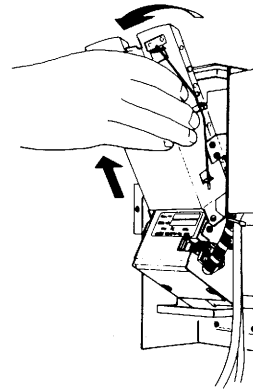


ILLUSTRATION #16

Protection (from pull-out) Lever should push easily, and when released, return smoothly without sticking. (See **Illustration #17**)

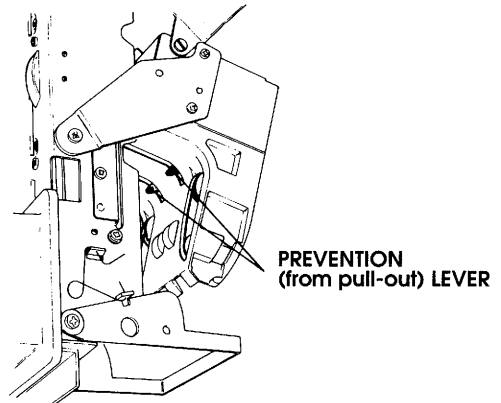


ILLUSTRATION #17

INSPECTION AND CLEANING

INSPECTION AND CLEANING

WARNING: OPEN THE MAIN DOOR TO TURN THE MAIN POWER SWITCH TO THE "OFF" POSITION AND DISCONNECT THE BILL VALIDATOR FROM THE POWER HARNESS.

- * Open the bill validator. (See **Illustration 14 & 16**)
- * Examine the magnetic heads, belts and the rollers. (See **Illustration 18**)
- * Clean the bill insertion opening with a mild detergent and a soft cloth. (See **Illustration 20**)

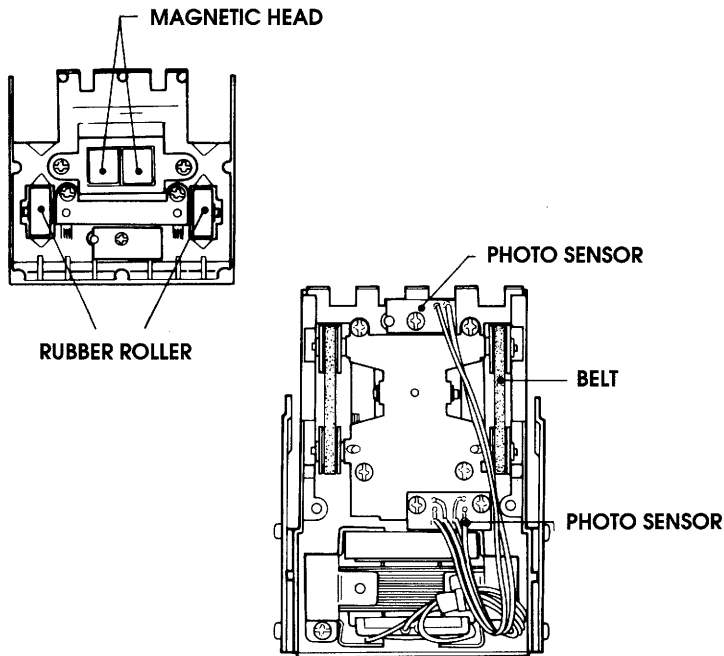


ILLUSTRATION #18

CAUTION: NEVER USE SPRAY SOLVENTS TO CLEAN THE BILL VALIDATOR.

- * Clean the magnetic heads by using a cotton applicator and a small amount of denatured alcohol.

Clean the photo-sensor with an applicator (See **Illustration 18 & 19**)

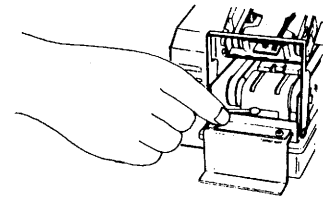


ILLUSTRATION #19

- * Wipe the chute roller, and belt with a soft cloth.

Use a soft brush to remove any loose foreign matter from inside the validator.

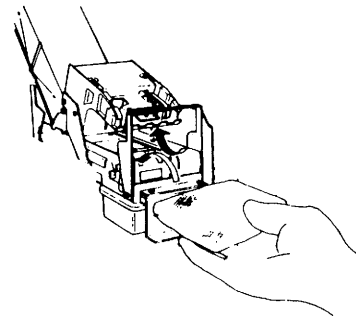


ILLUSTRATION #20

- * Inspect latches and levers for smooth operation.
- * Reconnect validator to the vendor, restore power and test the unit.

