

Instructions for 5230A Conversion Kit for Rowe BC 11 to a Mars Validator with \$1, \$5, \$10, and \$20 option

READ INSTRUCTIONS COMPLETELY BEFORE BEGINNING INSTALLATION.

**CAUTION: TURN OFF POWER AND UNPLUG THE BILL CHANGER
BEFORE BEGINNING INSTALLATION**

REQUIRES MARS AE2611U7E with 700 Stacker (300, 500 Stacker optional) for BC-11

Step 1 Inside The Bill Changer

- A. Lift and Remove Hoppers.
- B. Remove the Dispenser by following the directions located on the plate that is now in clear view with the hoppers removed.
- C. Unplug the bill transport plugs.
- D. Remove the bill transport by sliding along the rails and unlatching the catches.
- E. Unscrew the 2 screws holding the stacker assembly (Figure 1). Remove the stacker assembly by sliding out along the rails and unplugging the 8 pin plug from the rear. This also removes the coin chute at this point.

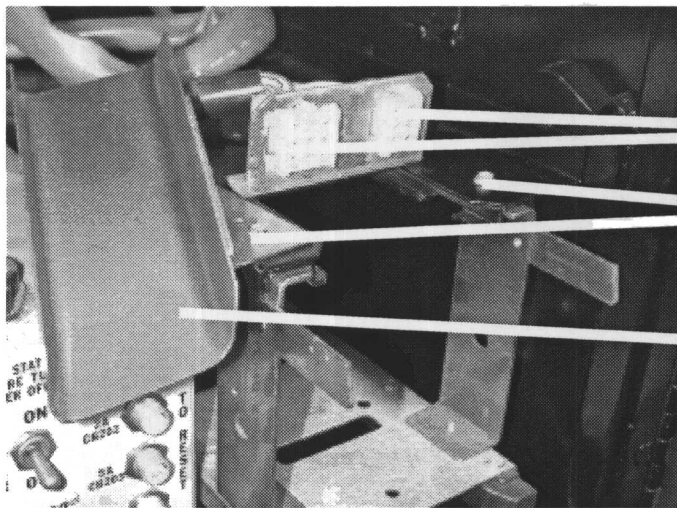


Figure 1

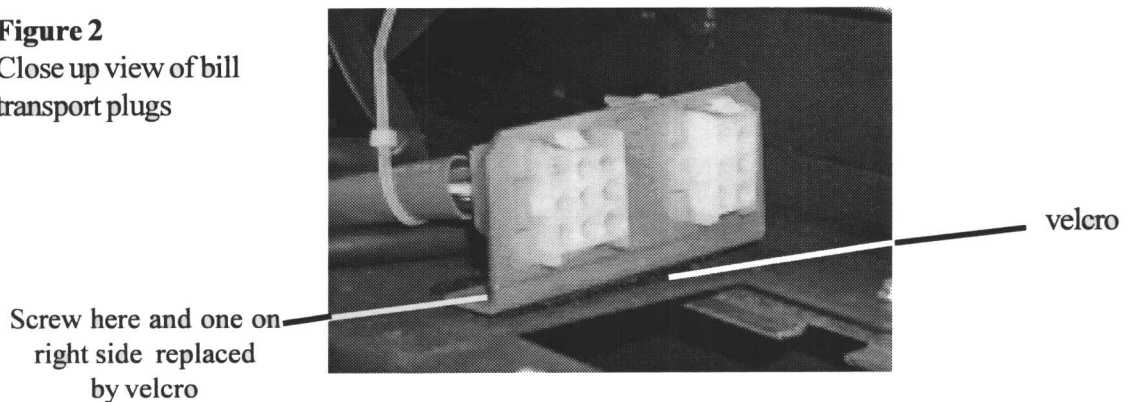
Bill Transport
Plugs

Screws to hold
stacker assembly

Coin Chute

- F. Unscrew the bracket holding the bill transport plugs and reattach using the 2" piece of velcro included with the kit (Figure 2)

Figure 2
Close up view of bill transport plugs



- G. Disconnect the coin acceptor plug, the sold out light plug and the power plug to the control box (Figure 3).

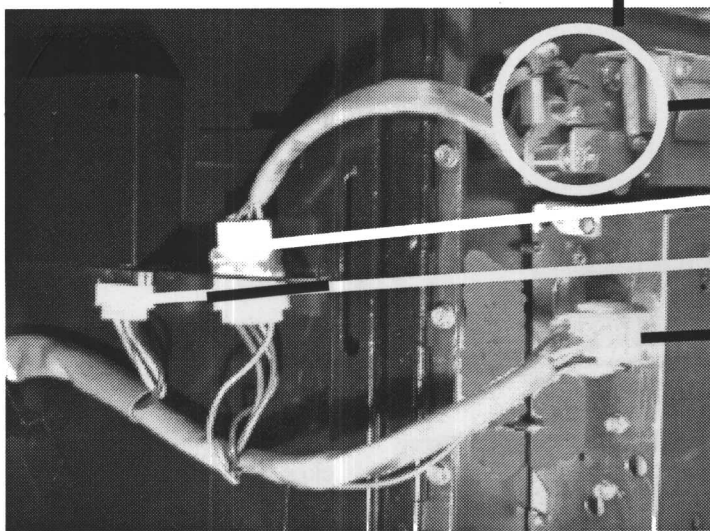
- H. Disconnect the 2 wires attached to the microswitch on the door that controls the money return handle. Tape ends of wire separately and tie these off using electrical tape.

NOTE: Failure to disconnect these wires could result in the customer losing his money.

Figure 3

Right hand, inside wall of bill changer

Door



Microswitch

Sold Out Light Plug

Power Plug to Control Box

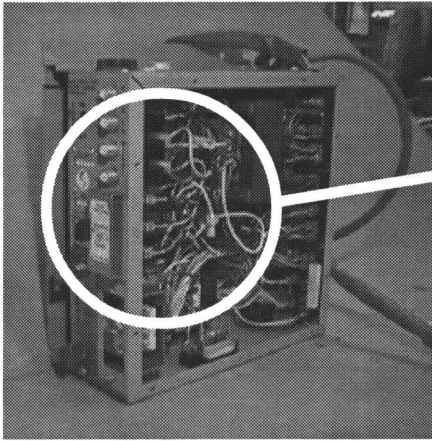
Coin Acceptor Plug

- I. Pull stacker harness up through the hole in the back right hand corner of the bill changer.
- J. Unscrew the 2 screws holding the power control center in place and slide the power control center completely out of the bill changer.

Step 2 Attaching the 3 Wire Harness to the Power Control Center

A. Remove the side plate of the Power Control Center (Figure 4).

Figure 4
Power Control Center
with side panel removed



Location of
Test (Payout) Switches

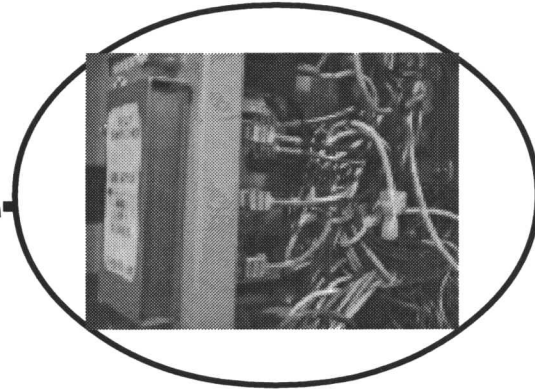


Figure 5
Terminal Connectors-Piggy Back
Style and Side by Side



B. Locate the 5193 3 wire harness. Using the multi stack terminals (Figure 5), connect the 5193 harness along with the original wires to the test (payout) switches with the following color coded wires (Figure 6): **SEE NOTE ON NEXT PAGE FOR SPECIFIC INSTRUCTION REGARDING THE USE OF PIGGY BACK CONNECTOR**

Test Switch
Wire Colors
Brown/White
Purple/White
Red/White

5193 Wire
Brown/White (Uses piggy back style-See Figure 5)
Purple/ White (Uses side by side style)
Red/White (Uses side by side style)

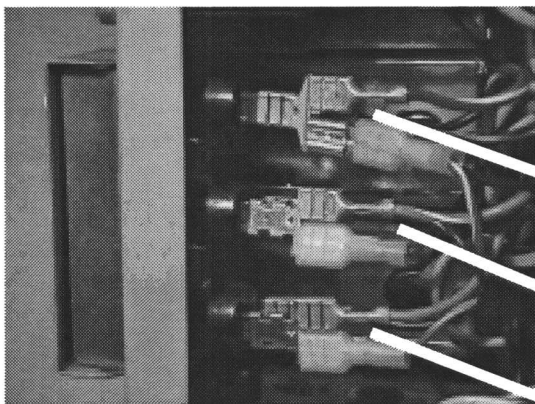


Figure 6 View with piggy back and
side by side connectors in place and
5193 harness attached to
matching wires

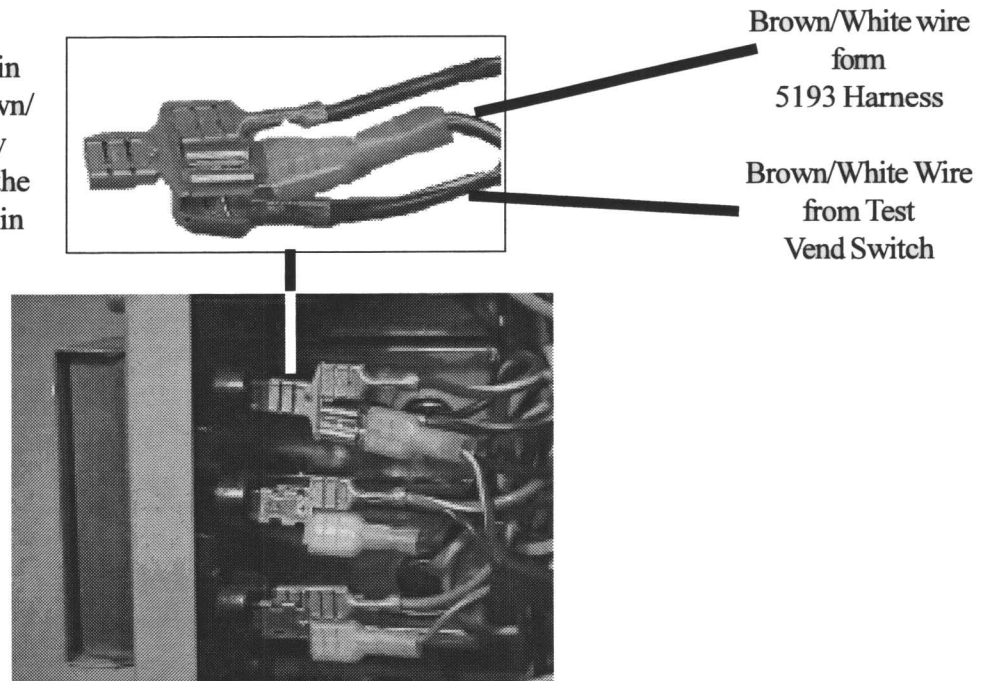
Brown/White Wire
(piggy back connector)

Purple/White Wire
(side by side connector)

Red/White Wire
(side by side connector)

NOTE: The brown/white wires to the test vend switch are already attached to the switch with a side by side terminal connector. You will be using the piggy back style connector to connect the brown/white wire from the 5193 harness to the brown/white wires from the test vend switch (Figure 7).

Figure 7
View of piggy back connector in place with 5193 Harness (brown/white wire) in place. The piggy back connector is attached to the side by side connector already in the Power Control Center.



- C. Run the harness through the Power Control Center so that it comes out through the back of the unit (Figure 8).
- D. Reinstall the side plate of the Power Control Center removed in Step A.
- E. Slide the control center back into place and reinstall the 2 screws to hold it in place. Make sure the wire harness that you just installed is off to the side so the connector can be reached.
- F. Run stacker harness back through the hole in the back right hand corner of the bill changer (Opposite of Step 1I).

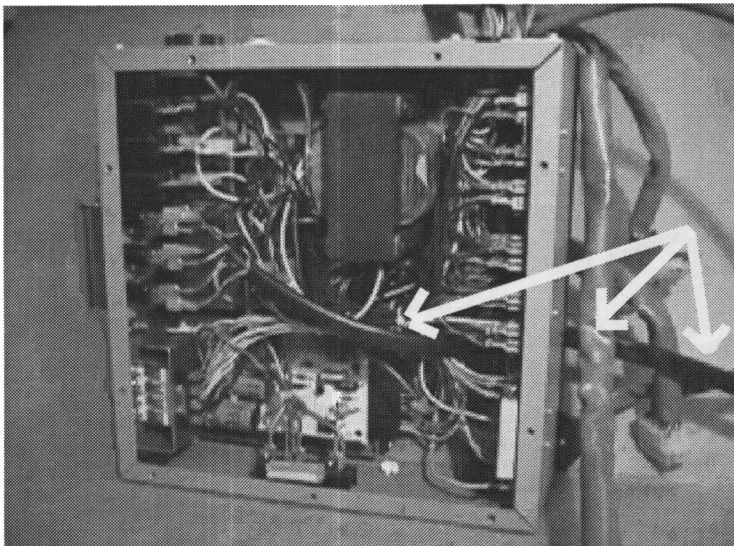
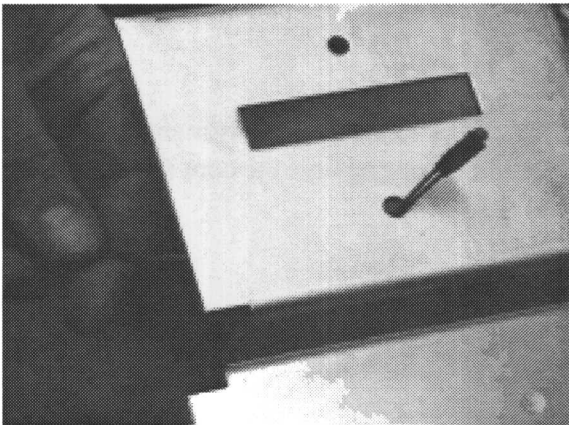


Figure 8
View with 5193 Harness in place and coming out the back of the power control center

Step 3 Install Mars Validator

- A. Set the following switches of the Mars validator to the ON position: 1, 2, 3, 8.
- B. Unplug the indicator light attached to the 5252 Main Box Assembly and insert into the hole located below the acceptor slot for the bill acceptor (for the purpose of this kit, you may ignore the hole above the bill acceptor slot-it will get covered by the label) See Figure 9. Use round clip included with kit to hold light in place.
- C. Attach the two adhesive backed clips to the underside of the slider bracket. They will be used to direct wires away from the validator later in the installation (Figure 22, page 10).
- D. Mount the Mars validator upside down to the slider bracket included with the kit (Figure 10). This bracket simply slides on the tracks where the transport was located before being removed in Step 1E. See Figure 11.

Figure 9



Inserting indicator light into slider bracket

Figure 10



Mounting validator to the slider bracket

Figure 11



Slider Bracket installs along these tracks

- E. The slider bracket included with the kit is adjustable using the slot located on the top of the bracket. Insert the carriage bolt included so that it is coming up from underneath the bracket and attach the hex nut to hold it in place(Figure 12).

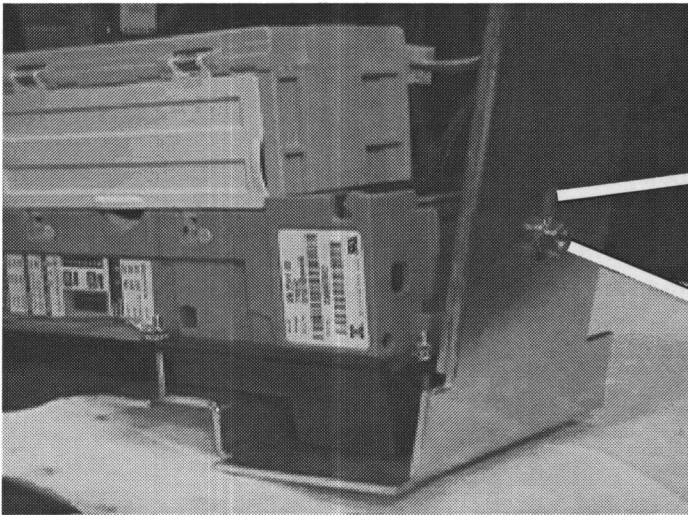


Figure 12

Adjusting Slot

Carriage Bolt is inserted underneath the bracket and hand tightened to the hex nut and lock washer included with the kit.

- F. Insert the bracket in the bill changer and close the door (See Figure 13). Make adjustments as necessary to the carriage bolt/hex nut so that the door closes but is snug against the door (Figure 14). Tighten the hex nut when satisfied.

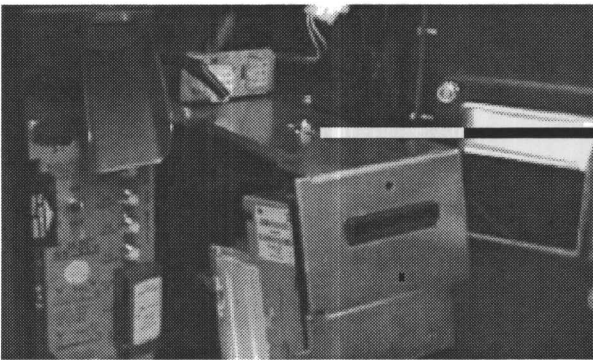
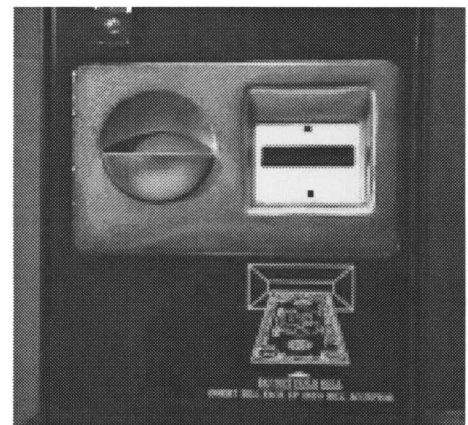


Figure 13

Hex nut and carriage bolt act as a stop against the metal holding the transport plugs

Figure 14

View of bill changer with door closed and slider bracket snug up against the door.



- G. Affix the label to the front of the slider bracket.
- H. Put the slider bracket/validator assembly to the side.

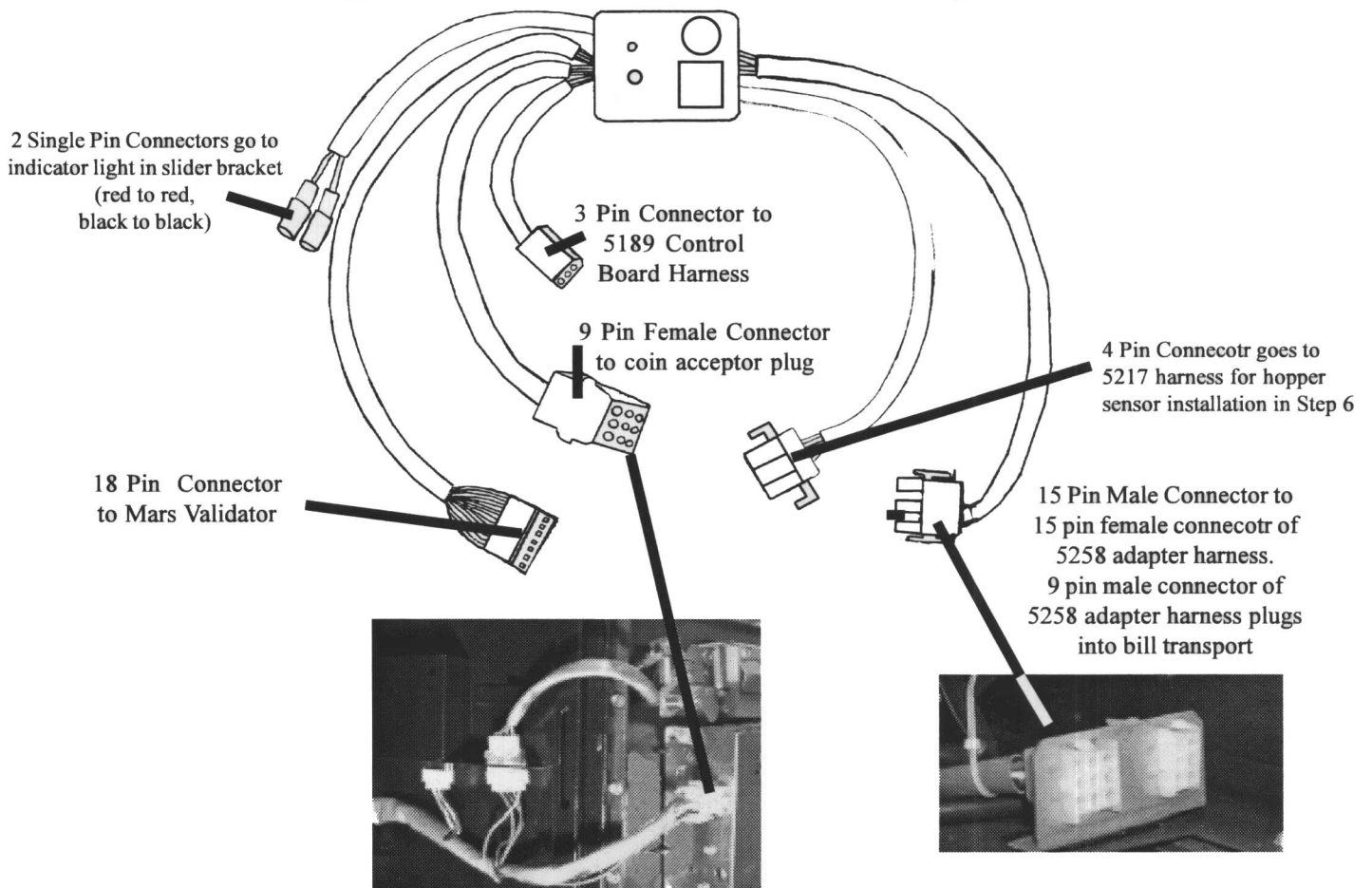
Step 4 Install the Power Harness (5186)

- A. Plug the 8 pin connector from the 5186 110V power harness included with the kit into the stacker plug. The other end plugs into the Mars Vaildator.

Step 5 Main Box Assembly (5252) Installation-Figure 15

- A. Unplug the 9 pin harness from the coin mechanism and plug the **female** 9 pin connector from the main box assembly into the appropriate 9 pin male connector.
- B. Attach the 15 pin female end of the 5258 adpater harness to the 15 pin male plug of the 5252 Main Box Assembly. Attach the 9 pin male end of the 5258 adpater harness to the 9 pin female bill transport plug as shown below. **WARNING: DO NOT PLUG INTO STACKER PLUG. IT IS ALSO A 9 PIN PLUG.**
- C. Plug the 18 pin connector from the main box assembly into the side of the Mars validator.
- D. Plug the 3 pin connector into the matching end of the 5193 Harness.
- E. Plug the two wires single pin wires from the indicator light into the matching red and black single pin wires from the 5252 Main Box Assembly (red to red - black to black).
- F. Plug the open end of the 5186 Harness from Step 4 into the Mars validator. Run the wires from the validator brack through the grey clips installed on the underside of the slider bracket.

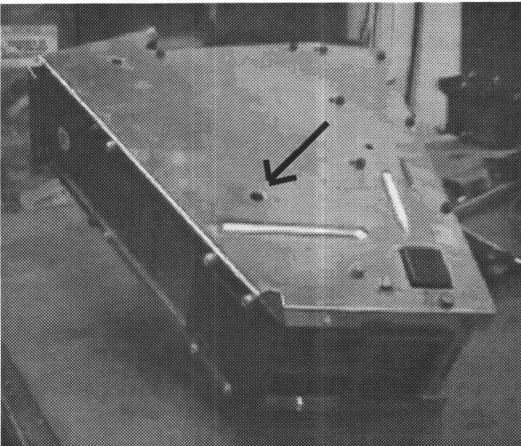
Figure 15 5252 Main Box and Harness Assembly



Step 6 Hopper Sensor Installation

- A. Take one of the empty hoppers and lay down flat on its left side so that the right side of the hopper is facing up (Figure 16).
- B. Locate one of the adhesive backed squares included with the kit. Peel the back off and place over the hole located near the bottom of the hopper side so that the hole in the square is centered over the hole of the hopper side. Press down firmly so that the square sticks to side of hopper. (Figure 17).

Figure 16



The arrow is pointing to the hole where the hopper sensor will be attached.

Figure 17

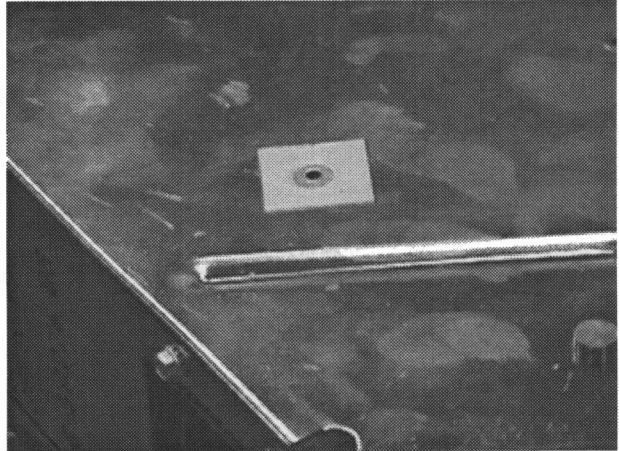
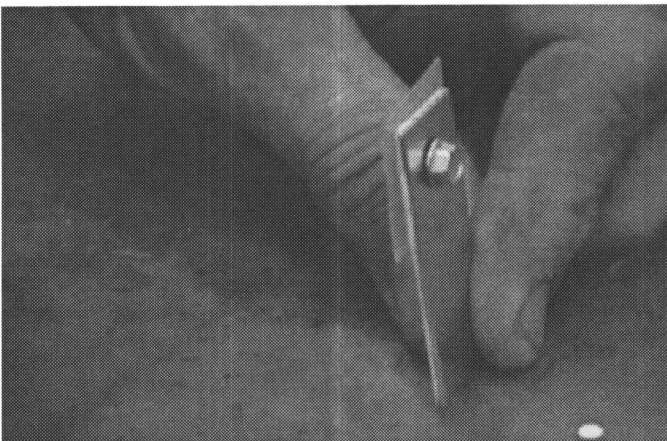


Photo shows placement of adhesive backed square with its hole centered over the hole located on the side of the hopper.

- C. Locate another the of the adhesive backed squares, a washer, and one of the #8 screws included with the kit. Put the screw through the hole of the washer and then through the square.
NOTE: For HIGH capacity hoppers, use the metal tab with double sided tape instead of the washer. This allows the sensor to go further down into the hopper (Figure 18).

Figure 18 For HIGH capacity hoppers ONLY

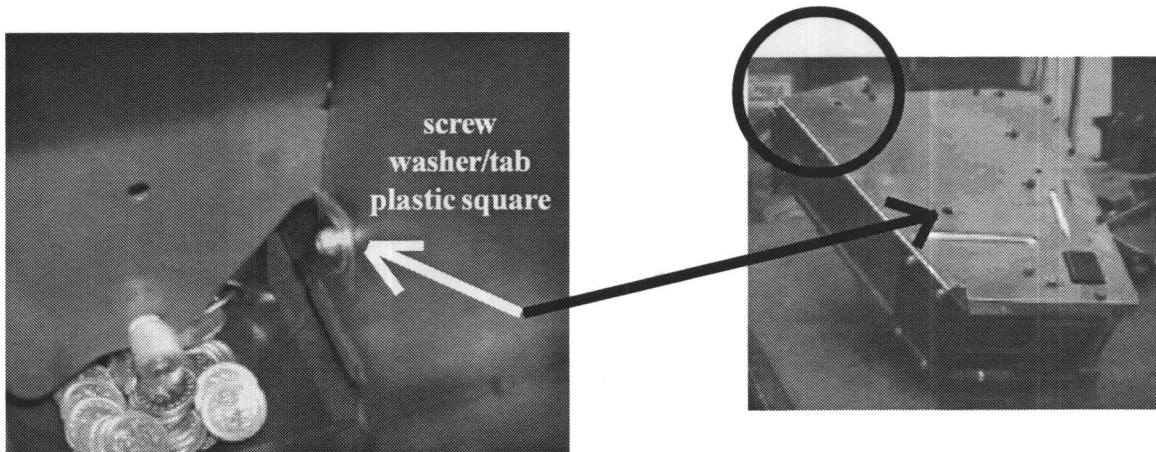


Metal tab with screw shown going through the tab and the adhesive backed square before being placed inside the hopper.

For REGULAR hoppers, the washer goes in place of the metal tab shown here.

- D. Peel off the backing from the square. Take this assembly and reach down into the hopper and place the screw through the side of the hopper and the square affixed to the side of the hopper in Step 6B (Figure 19).

Figure 19 View looking into hopper from top opening



View looking into the hopper from the top opening in the right hand photo. Shows the washer in place to act as a sensor when the coins are low.

- E. From the outside of the hopper, place a washer over the screw, then the ring terminal end of the 5217B wire and finally tighten down with the keps nut included with the kit (Figure 20).

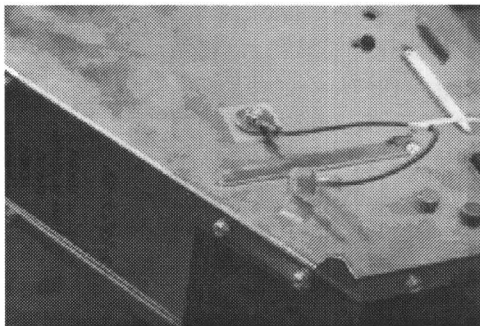


Figure 20

Outside view of hopper with sensor wire in place.

- F. One of the connectors from a white wire on the 5217 harness will attach to the 5217B wire just in stalled. The other two white wires from the 5217 harness are jumped out using the 5217A harness (Figure 21). The other end of the 5217 harness will connect to the Main Box Assembly (Page 7). **NOTE: It is not required to hook up hopper sensors to both hoppers. An extra 5217B lead wire and the other necessary components are included if you so desire.**

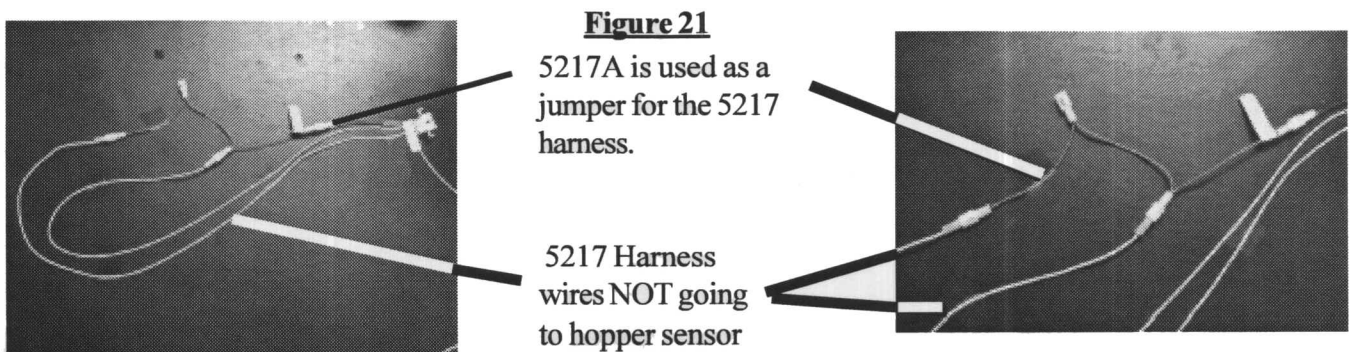


Figure 21

5217A is used as a jumper for the 5217 harness.

5217 Harness wires NOT going to hopper sensor

Step 7 Dress the Harnesses

- A. Attach the 2 clips included to the underside the slider bracket (if you have not already done so) and run the two harnesses from the validator into the clips (See Figure 22).
- B. Use the enclosed cable ties and cable tie holders to keep the other wires out of the way (Figure 23).

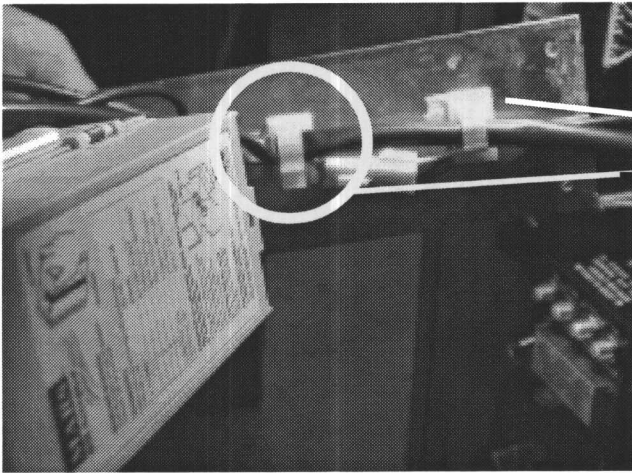


Figure 22

4652 Clips attached to underneath of slider bracket and harnesses running through the clips to avoid them getting in the way of the stacker.

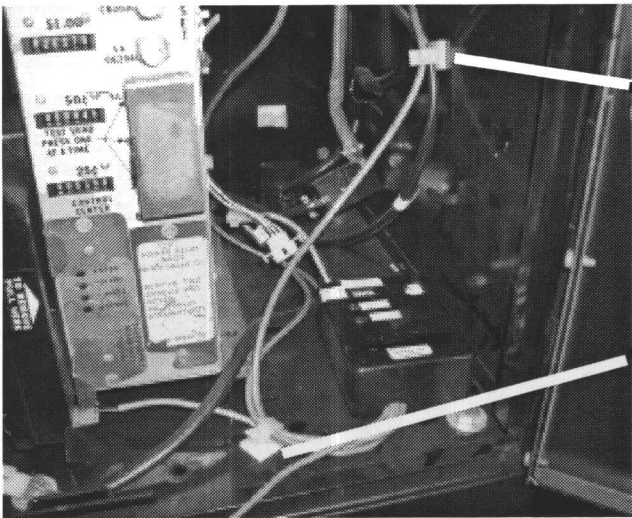
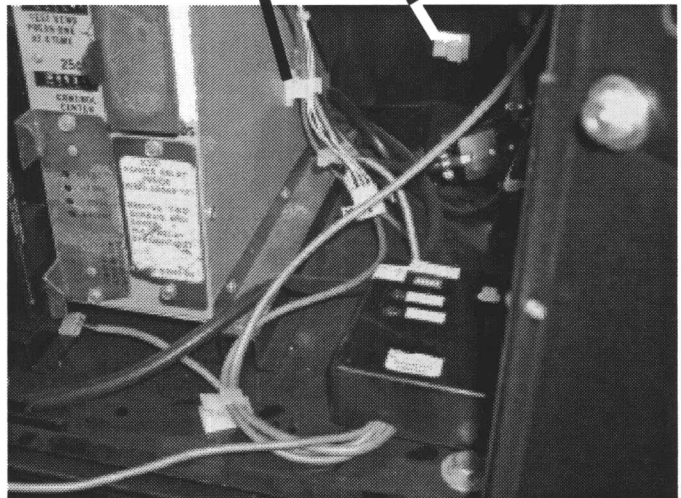


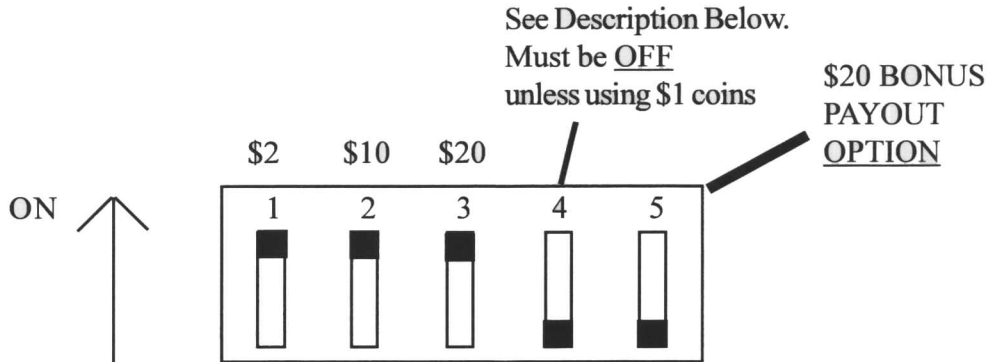
Figure 23

Using clips and cable ties enclosed, dress wires from the 5220 Main Box Assembly so that the box sits along the bottom of the bill changer unit.



Step 8 Settings for Dip Switch on 5252 Main Box Assembly and Control Board

The 5252 Main Box Assembly has a series of 5 Dip Switches. The \$1 and \$5 payouts are always ON. The other four switches are for the following:



SWITCH 1: Turns \$2 Payout OFF and ON

SWITCH 2: Turns \$10 payout OFF and ON

SWITCH 3: Turns \$20 Payout OFF and ON

SWITCH 4: When OFF: \$10 is paid in two-\$5 payouts and \$20 is paid in four-\$5 payouts
The 25 cent bucket = 25 cents

NOTE: SWITCH 4 can only be ON in a BC-11/12/20/25/35 when used with \$1 coins. Otherwise, SWITCH 4 must be OFF

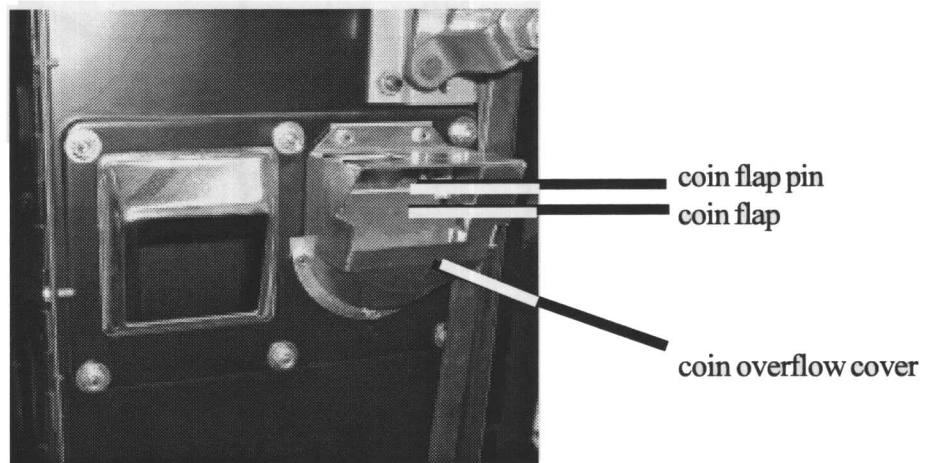
When ON: \$10 is paid in one-\$10 payout and \$20 is paid in two-\$10 payouts
The 25 cent bucket = \$1 and
The \$1 Bucket = \$10

SWITCH 5: **When ON, pays out an extra \$1 for \$20 (i.e. \$21 dollars for a \$20 bill)**
When OFF, pays out \$20 for a \$20 bill.

Step 10 Install the coin flap and coin return cup cover (prevent overflow of coins)

- A. Remove the existing coin flap by straightening and removing pin . Place new cover on pin and return to the door (Figure 24).
- B. Remove the two nuts holding the existing coin cup in place and attach the coin cup cover using those hex nuts to the existing coin cup. Make sure the coin chute lines up with the cover.

Figure 24
View of door with
coin overflow cover
in place.



Step 11 Put coin chute and hoopers back in place

- A. Put hoppers back in place.
- B. Reattach coin chute.

Step 12 Test vend the unit

Parts included with kit:

Part Number	Description	Qty.
5252	Main Box Assembly w/indicator light	1
5186	Power Harness-110V	1
5193	3 Wire Harness	1
5258	Adapter Harness	1
5184	Slider Bracket	1
5225	Label-Insert Bill Here	1
5213	Coin Flap	1
5214	Coin Overflow Cover	1
5217	Low Coin Sensor Harness	1
5217A	Daisy Harness (when not using hopper sensor)	1
5217B	Lead Wire for Hopper Sensor	2
5223	Plastic Square with Hole	4
5224	Metal Tab with double sided tape	2
5222	Label-\$1, \$5, \$10, \$20	1
5222A	Label-\$1, \$5, \$10	1
5227	Label-ATTENTION	1
5196	Multi Stack Terminal-Side x Side	2
5197	Multi Stack Terminal-Piggy Back Style	1
Hardware:		
4601	Cable Tie-5 1/2"	6
4650	Tie Mount	6
4652	Clip with adhesive	6
7207	Keps nut-8-32	4
7344	Carriage Bolt-1/2"	1
7260	Hex Nut-1/4-20	1
7261	Lockwasher-1/4-20	1
7349	Screw-8-32	2
7207	Keps Nut-8-32	2
MIS 815	WASHER	4
MIS 492	Velcro-Hook	2"
MIS 493	Velcro-Loop	2"