



**9370-S/SR SERIES
ELECTRONIC CHANGER
OPERATION AND SERVICE MANUAL**



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SECTION 1: GENERAL INFORMATION

INTRODUCTION

This manual contains information on installing, operating and maintaining the Coinco **9370-S** coin changer. Familiarize yourself with this manual to obtain the best performance from your coin changer.

Refer to the model and serial number when calling for information. Both serial and model numbers can be found on the label on the side of the changer.

Example: Serial No. 1291008242 (week 12, year 91). The first and second digits indicate the week of manufacture and the third and fourth digits indicate the year of manufacture.

AFTER UNPACKING

After unpacking the unit, inspect it for any possible shipping damage. If the unit is damaged, notify the shipping company immediately. Only the co-signee (the person or company receiving the unit) can file a claim against the carrier for shipping damage. We recommend that you retain the original carton and packing materials to reuse if you need to transport or ship your changer in the future.

If the coin changer is being stored or used as a spare, always keep it in its shipping carton when not in use. This will keep it clean and offer the best protection for the unit.

MODEL EXPLANATIONS

The 9370-S will collect, store, and transfer MIS data fields to a hand held computer using the DEX/UCS standard.

The 9370-S changer has a vend price setting up to \$12.75 in five-cent increments and is equipped with electronic coin acceptance. It pays out nickels, dimes and quarters from self-loading coin tubes and accepts nickels, dimes, quarters and dollar coins.

The 9370-S directly interfaces with bill validators.

FEATURES

Change capacity of \$40.55.

On-site field programming.

Pays out nickels, dimes and quarters from self-loading, high capacity change tubes.

Select high or low quarter tube level by flipping a switch.

Dollar coins and/or Canadian coins can be rejected by flipping a switch.

Heavy-duty payout solenoids provide fast, accurate payout.

State-of-the-art electronic logic system is designed for reliability and performance.

Lightweight, rugged plastic construction provides dependable, maintenance-free service.

Provides the fastest and most accurate coin acceptance of any electronic unit available today.

Interfaces with a hand held computer to provide total cash control.

Pays out to the last coin in the changer tube to provide the maximum usage of a bill validator.

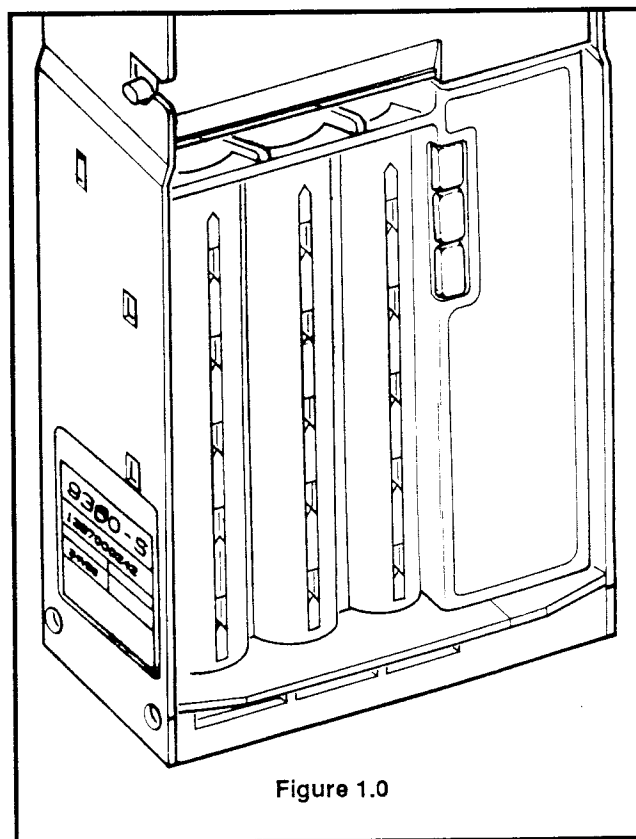


Figure 1.0

SECTION 1: GENERAL INFORMATION

MAIN LOGIC BOARD ASSEMBLY

The main logic board contains the micorporcessor which controls all the functions of the coin changer based on information from other changer parts as well as the vending machine.

Also contained on the main logic board is the power supply which receives the primary AC voltage from the vendor. From there, the primary AC voltage goes to two places: to be rectified to a DC primary voltage to operate the coin dispensing solenoids, and to the changer transformer where it is stepped down to a 12 VAC voltage. This 12 VAC is routed back to the control board where it is rectified and filtered for logic board operation.

SPECIFICATIONS

POWER REQUIREMENTS

95 to 130 VAC 60 HZ
350 m Amp. Max Operating
1 Amp. Max During Payout

VEND PRICE RANGE

\$.05 to \$12.75

OPERATING TEMPERATURE

0 to 150 degrees Fahrenheit
-18 to 65 degrees Celsius

STORAGE TEMPERATURE

-22 to 160 degrees Fahrenheit
-30 to 72 degrees Celsius

PHYSICAL DIMENSIONS

Height: 14.81 inches high (base to top of coin return lever)

Width: 5.28 inches in width (acceptor latch to acceptor latch)

Depth: 2.86 inches (gate closed)

PHYSICAL WEIGHT IN SHIPPING CARTON

5.6 pounds

	\$.05 Tube	\$.10 Tube	\$.25 Tube	
			LO \$.25 Option Swi Lch Set to OFF position	LO \$.25 Option Switch Set to ON position
Low Sensor Level	7	9	7	7
Full Sensor Level	78	113	77	22
Hand Load Level	86	125	95	22

INSTALLING THE CHANGER

1. Remove power from vendor.
2. Remove the acceptor from the changer by releasing acceptor latches and pulling the top of the acceptor forward, away from changer. Unplug ribbon cable from changer. Free lower acceptor studs from changer housing. With the acceptor removed, set key holes in back of changer housing over mounting screw in the vendor. Tighten snugly.
3. Set the desired vend price and changer options (See Vend Price and Option Switch Setting).
4. Replace the acceptor by inserting bottom acceptor studs into changer housing guides. Plug the acceptor ribbon cable into the changer. Press top of acceptor into changer housing until top acceptor studs lock into changer's acceptor latches.
5. Connect changer to desired options. Plug changer into eight-pin vendor socket.
6. Load coin tubes making sure all coins lie flat.
7. Apply power to vendor.
8. Test changer with a variety of coins to insure proper operation.
9. To retrieve MIS data; plug the hand held computer plug into the changer jack. Once the HHC is connected and meets initial communication requirements, data retrieval takes approximately two seconds.

CAUTION: When using the hand held computer to retrieve data, the adaptor harness, part number 406895, must be grounded, or damage can occur to the system.

SECTION 2: INSTALLATION

VEND PRICE AND OPTION SWITCH SETTINGS

See Figure 2.0

1. Unplug the coin changer.
2. Remove the acceptor.
3. Located in the upper portion of the changer is a single switch module with 12 rocker switches. When the top of the rocker switch is pushed in, it is in the ON position. The switches correspond as follows:

- 1=5¢
- 2=10¢
- 3=20¢
- 4=40¢
- 5=80¢
- 6=\$1.60
- 7=\$3.20
- 8=\$6.40
- 9=USA/CAN
- 10=\$ coin acceptance
- 11=LO 25¢
- 12=escrow until select

4. The vend price is set by adding the value of switches 1-8, which are in the ON position. Example: switches 1, 3, and 4 in the ON position = 65¢ vend price.

5. Set switches 1-8 to desired vend price. Make sure vend price set on changer corresponds to vend price indicated on front of vendor.

6. Set option switches 9-12 to desired setting.

9-USA/CAN ON: US and Canadian coins will be accepted.

OFF: Canadian coins will be rejected.

10-\$ ACPT ON: Dollar coin will be accepted.

OFF: Dollar coins will be rejected.

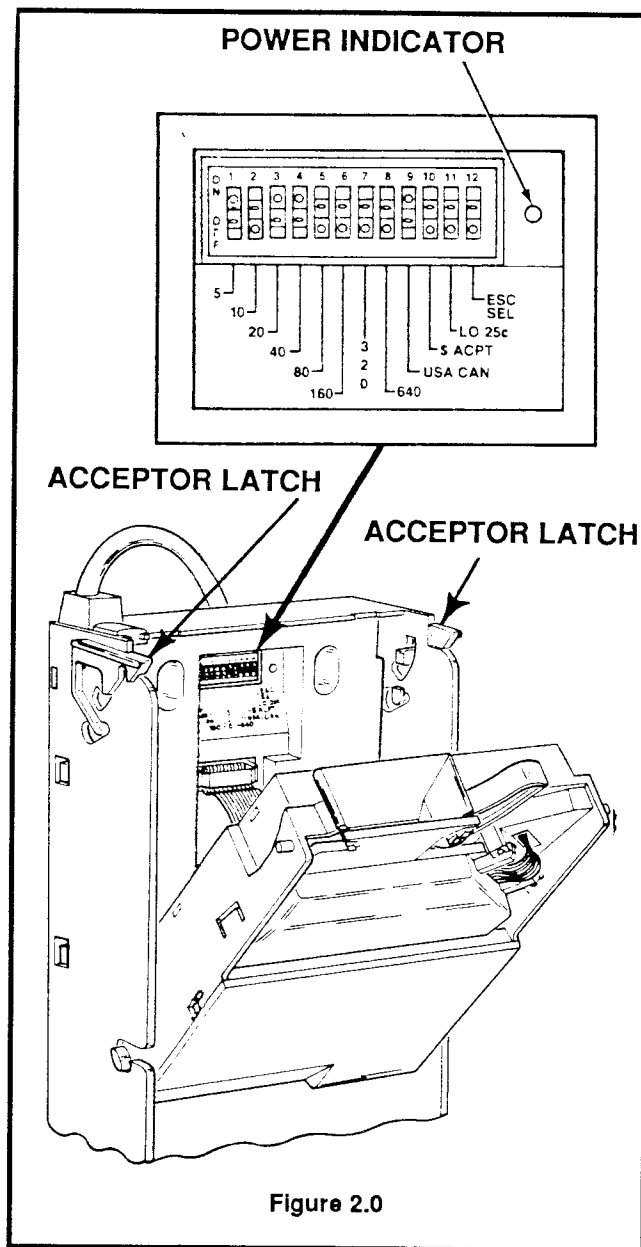
11-LO 25¢ ON: Quarters are directed to cash box once change tube has approximately 22 quarters

OFF: Quarters are directed to cash box once change tube is full.

12-ESC-SEL ON: Changer allows complete escrow until selection and delivery have been made.

OFF: Changer allows escrow until vend price is accumulated.

NOTE: Vending machine dictates which position is used. For standard can/bottle. Switch 12 must be in the OFF position.



COIN RECOGNITION

See Figure 3.0

As a coin enters the changer through the acceptor funnel, its impact is absorbed by a white ceramic rail which debounces the coin and allows it to continue down the coin rail at a smooth and steady speed. As a coin rolls down the rail, it passes between two sets of LED sensors which measure the speed and size of the coin. The coin also passes between two sets of coils which measure the metallic content of the coin. These measurements are used to determine if the coin is valid and the value (denomination) of the coin.

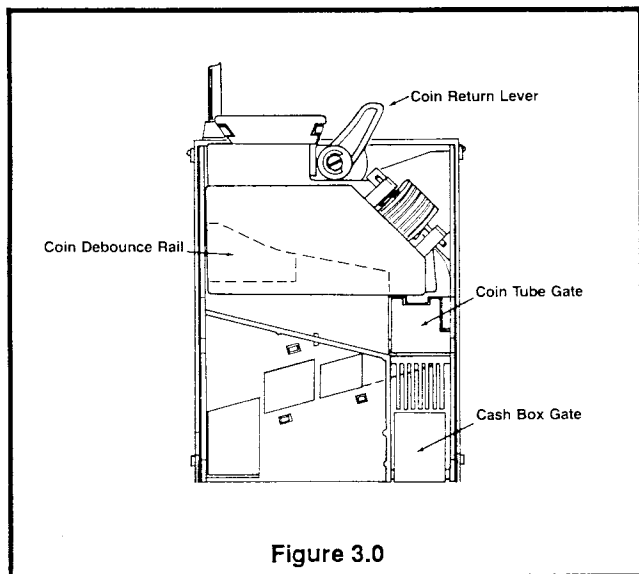
COIN SEPARATION

See Figure 3.0

After the coin's validity has been determined, the coin rolls off the end of the coin rail and enters the separator section of the acceptor. The UPPER (coin tube) gate and the LOWER (cash box) gate are opened and closed by their respective solenoids. These solenoids are energized and de-energized by an electrical signal from the acceptor logic board based on the following criteria.

- the validity of the coin
- the denomination of the coin
- the status (full or empty) of the appropriate coin tube

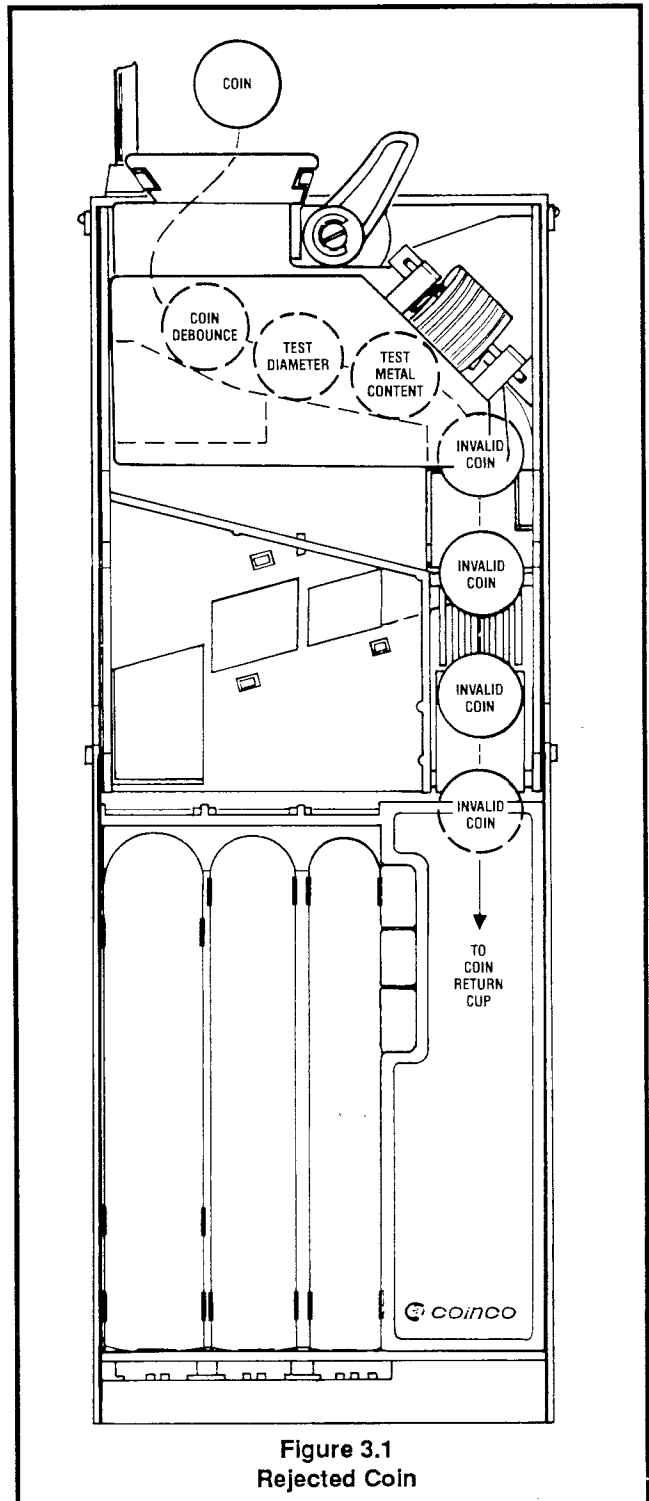
The positions of these two gates cause the coin to be routed to one of three places: the appropriate changer coin tube, the vendor cash box, or if the coin is rejected, the vendor coin return cup.



Rejected Coin

See Figure 3.1

If a coin is rejected for any reason, both the UPPER (coin tube) gate and the LOWER (cash box) gate will remain closed. All rejected coins will drop into the vendor coin return cup via the coin changer coin return chute.



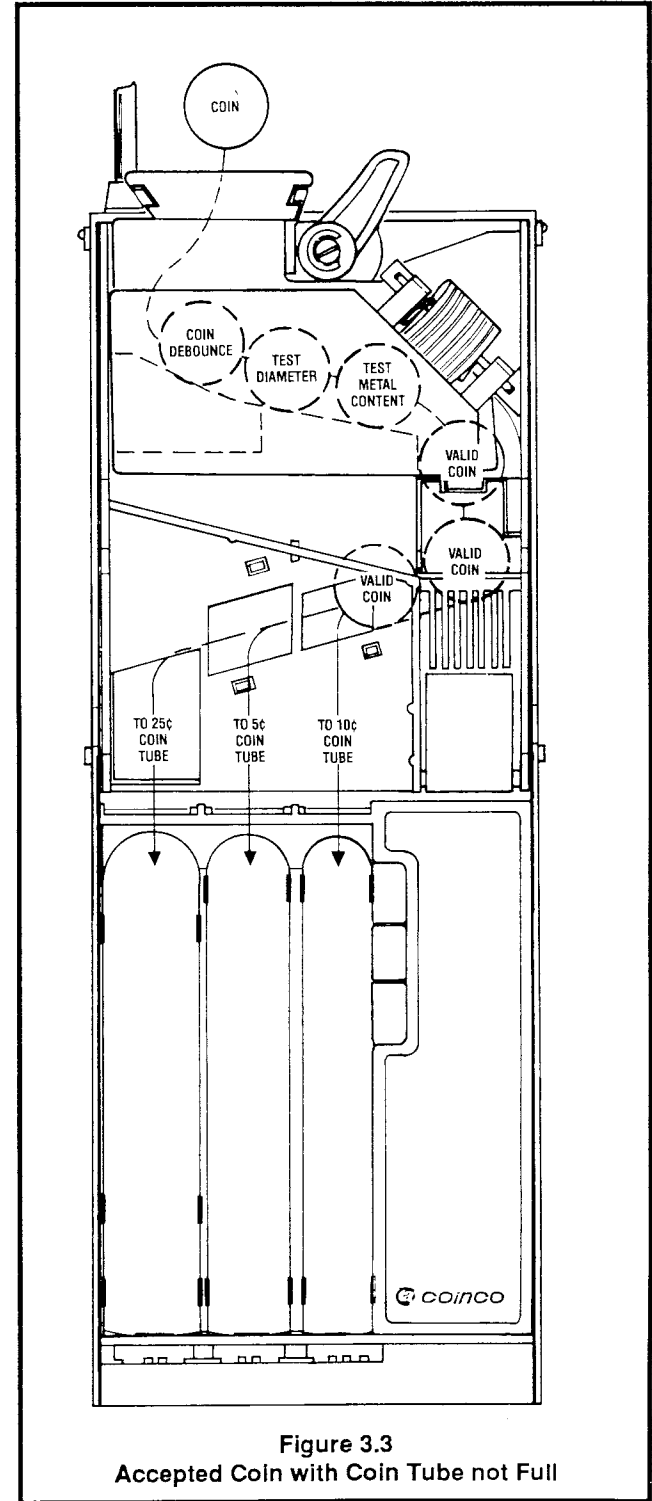
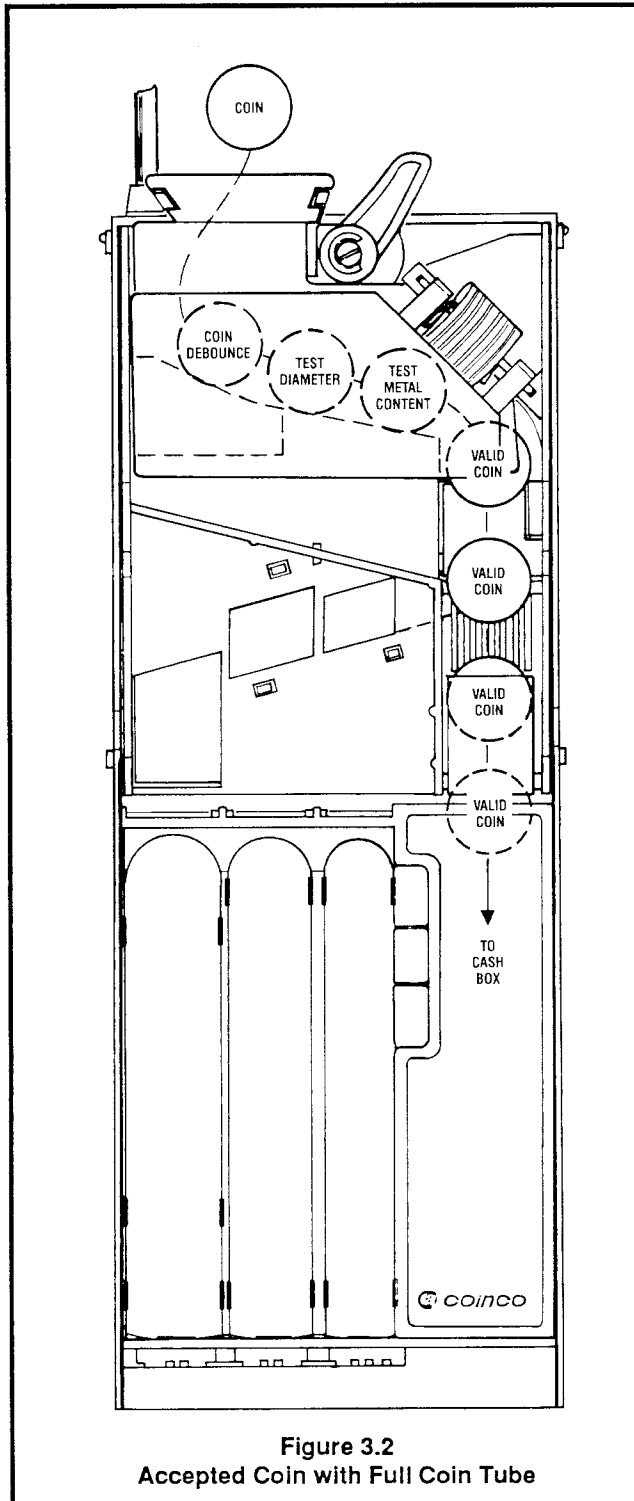
SECTION 3: OPERATION

Accepted Coin

See Figures 3.2 and 3.3

An accepted coin is diverted in one of two directions depending on the full sensor in each coin tube. If the full coin tube sensor is blocked (tube full) for the corresponding coin, the lower (cash box) solenoid energizes, sending that coin to the cash box. If the full

tube sensor is not blocked (tube not full) for the corresponding coin, the upper (coin tube) solenoid will energize, sending that coin to the separator rail where it is diverted to the correct coin tube. Dollar coins are diverted directly to the cash box via the lower (cash box) solenoid.



CREDIT AND ACCUMULATION

See Figure 3.4

There are two sensors, one in the separation section of the acceptor and one in the cash box path of the acceptor. As coins pass either one of these sensors, the changer sends credit information to the vendor electronic controller board where the coin credit is accumulated.

MAIN LOGIC BOARD

The main logic board is responsible for all logic functions of the changer. It receives information from other changer modules as well as the vending machine, and based on this information, controls the operation of the changer.

The main logic board also contains the changer power supply. It receives the incoming AC voltage from the vendor and does the following: First, it is rectified to a DC voltage for the payout solenoids. Second, it is routed to the transformer's primary where it is reduced to 12 VAC. This 12 VAC is routed back to the logic board where it is rectified and filtered to the operating DC voltage.

COIN TUBE SENSING

See Figure 3.5

The low tube sensors in each coin tube continually report the (blocked/not blocked) coin level to the microprocessor. This information is used to determine the availability of change for:

- Change Payback
- Escrow
- Exact Change Condition

The full tube sensors in each coin tube continually report the (full/not full) status to the coin changer's microprocessor. The information is then used to determine the placement of the next accepted coin. This information controls the action of the acceptor's coin tube and cash box gates.

EXAMPLE: If the quarter coin tube is full (full sensors blocked by coins), the acceptor's coin tube gate will remain closed and the cash box gate will open each time a quarter is accepted, routing all quarters to the vendor cash box via the changer's coin chute. After one or more quarters is paid out as change, leaving the full sensor exposed (quarter tube not full), the acceptor's coin tube gate will open each time a quarter is accepted, routing quarters to the changer's coin tube until it is full.

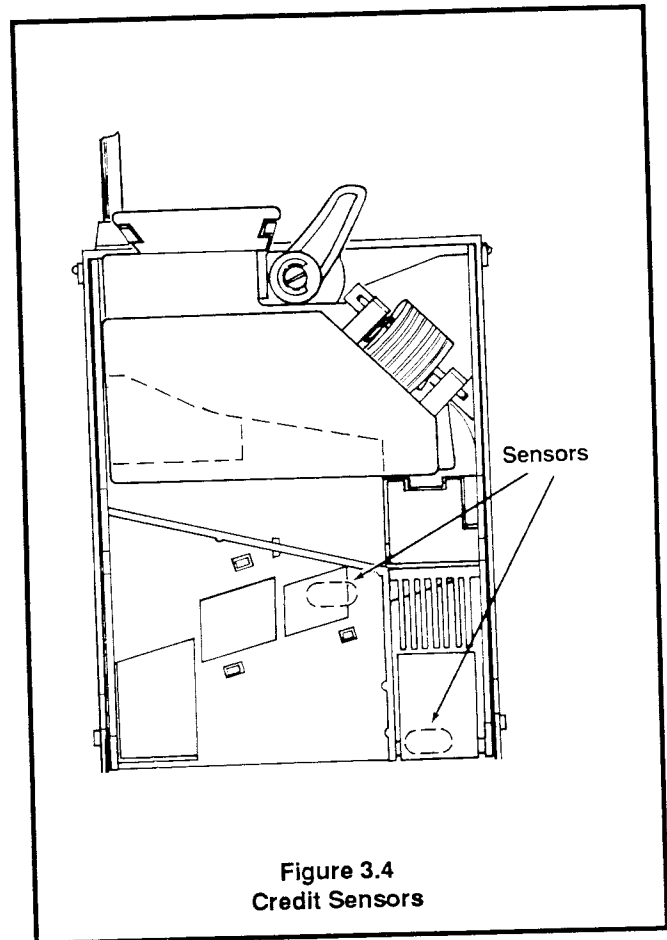


Figure 3.4
Credit Sensors

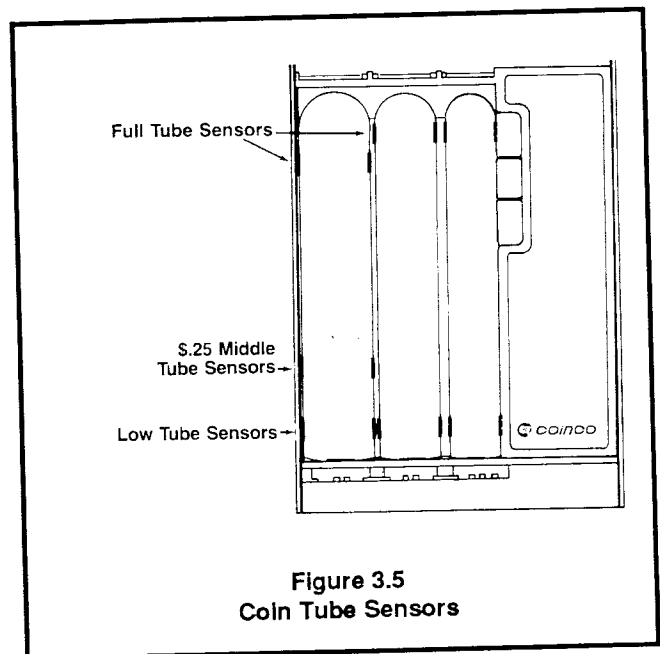


Figure 3.5
Coin Tube Sensors

SECTION 3: OPERATION

NOTE: If the changer's LO 25c option switch is set to the ON position, accepted quarters will be routed to the cash box when the (middle 25c tube sensor) is blocked by coins.

CHANGE PAYBACK

The low tube sensor report which coins are available for payback so payout can be made in the fewest coins available.

EXACT CHANGE CONDITION

The microprocessor is constantly looking at the change status. If correct change cannot be made, the changer rejects the last coin deposited, resulting in an over insertion. At this time, the correct change light flashes on and off in one second intervals for 10 seconds, during which time the escrow lever may be depressed for a full refund, the correct change may be inserted or the same coin which was rejected may be reinserted. (However, no change payout will be attempted under this condition.) If correct change cannot be made for a dollar bill, the correct change light will be lit continuously, inhibiting the bill validator.

COIN PAYOUT

The payout assembly pays out coins using three solenoid-operated slides. Coins are paid out for: change payout, escrow return and manual inventory of the coin tubes.

When a solenoid energizes, the upward motion of its plunger compresses a spring and draws the solenoid lever, which in turn pushes a payout slide forward. This loads the coin for payout. When the solenoid de-energizes, the spring force returns the plunger to its de-energized state, which returns the solenoid lever, which returns the payout slide, which in turn pays out a coin. Payout rate is two coins per second.

Change Payout: When the amount of credit exceeds the vend price, a payout will be made in the least number of available coins. (See Exact Change Condition)

Escrow Return: When a request for escrow is made, the changer will return the amount credited in the least number of coins. Under exact change conditions, nickels, dimes and quarters may be returned coin for coin.

Manual Inventory of Coins: Operating the manual inventory switches manually empties the changer coin tubes. The inventory switches are red, white and blue and are located on the front of the inventory tube assembly. Only one inventory switch will operate at a time.

DOLLAR CREDIT ESCROW OPTION

9370-S: Credit from the dollar bill validator of dollar coin is inhibited from escrow. Credit will be retained if the escrow lever is depressed. At this time, a selection must be made.

ESCROW

Escrow Until Vend: Allows the customer to get a full refund any time before actual vend price is reached.

Escrow Until Select: Allows the customer to receive a full refund any time prior to product delivery.

NOTE: The vendor circuit determines whether the escrow to select feature can be used.

SECTION 3: OPERATION

ESCROW UNTIL VEND CHANGER VENDOR INTERFACE

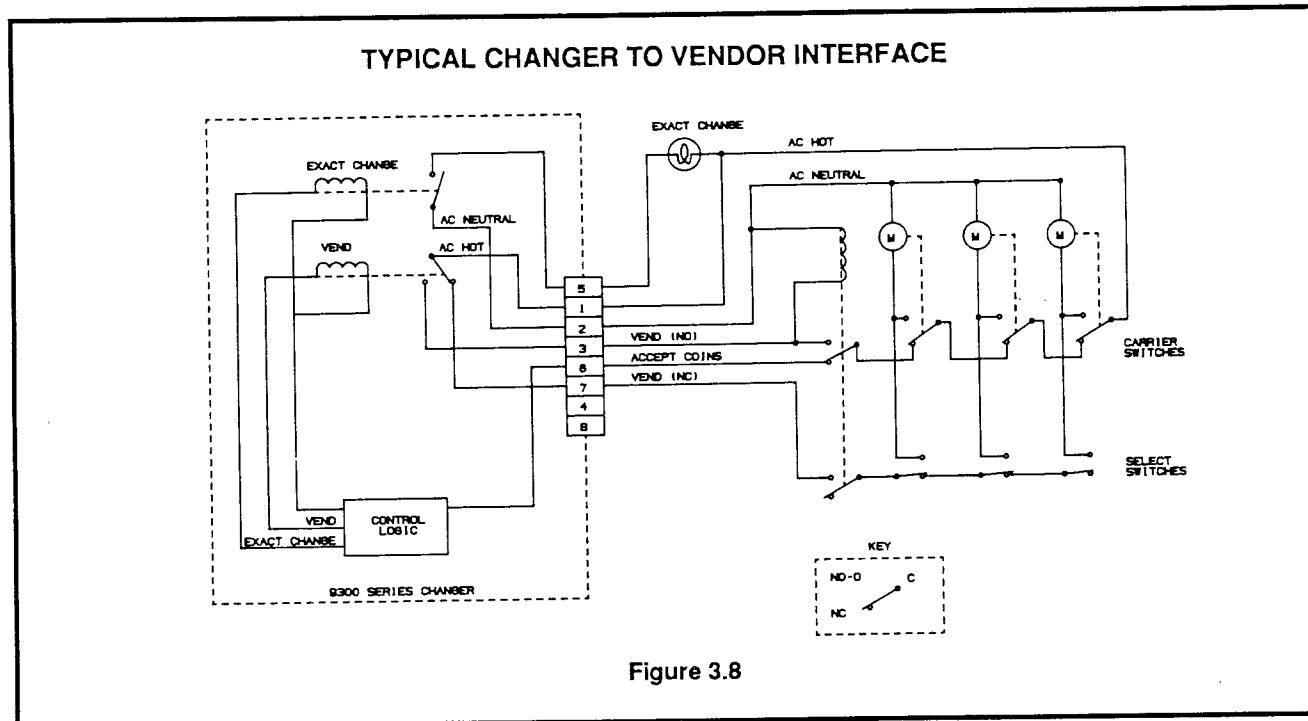
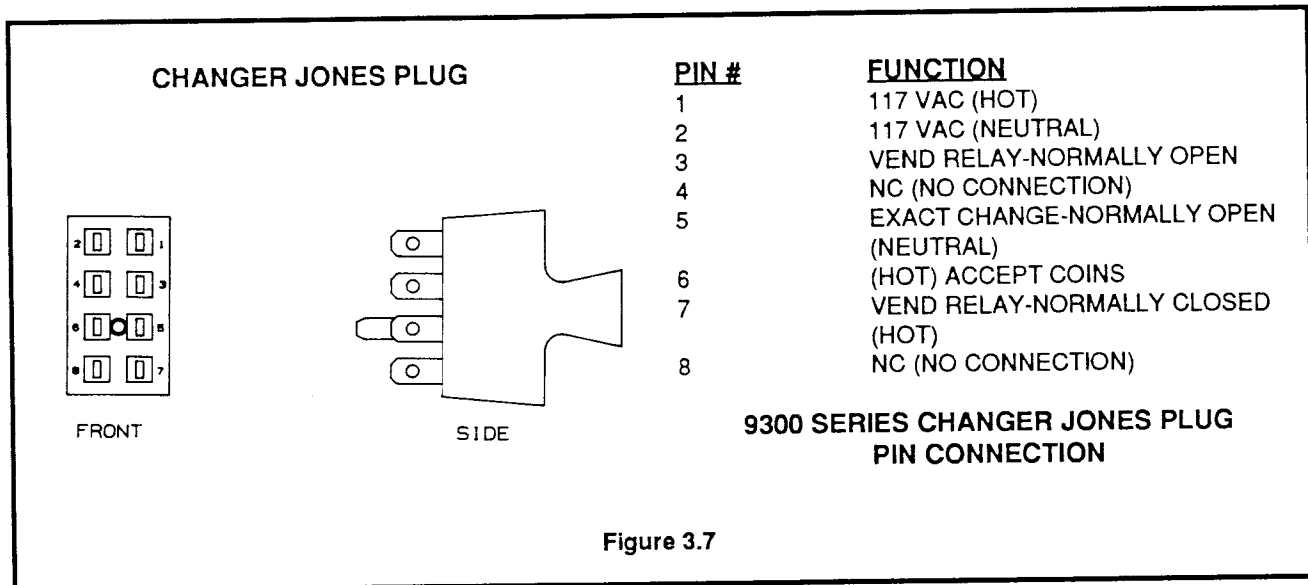
See Figures 3.7 and 3.8

As coins are inserted, the changer's logic board compares the accumulated credit to the vend price. When adequate credit is reached, the changer's logic board activates the changer's vend relay for a minimum of 100 milliseconds. This energizes the vendor's credit relay, cancels the changer's credit and initiates the change making cycle if required.

The energizing and latching of the credit relay removes power from Jones plug pin six, which inhibits the acceptance of coins and sets the selection

switches for vending. The changer's vend relay's N/C contact connects the AC hot line to the vendor's credit relay's N/O contact.

When a selection switch is activated, the vendor's vend motor begins to run. The vend motor mechanically acitvates a motor carrier switch which holds power to the vend motor until the motor returns to its home position and deactivates the vend relay of the vendor. This returns the power to Jones plug pin six enabling the acceptance of coins.



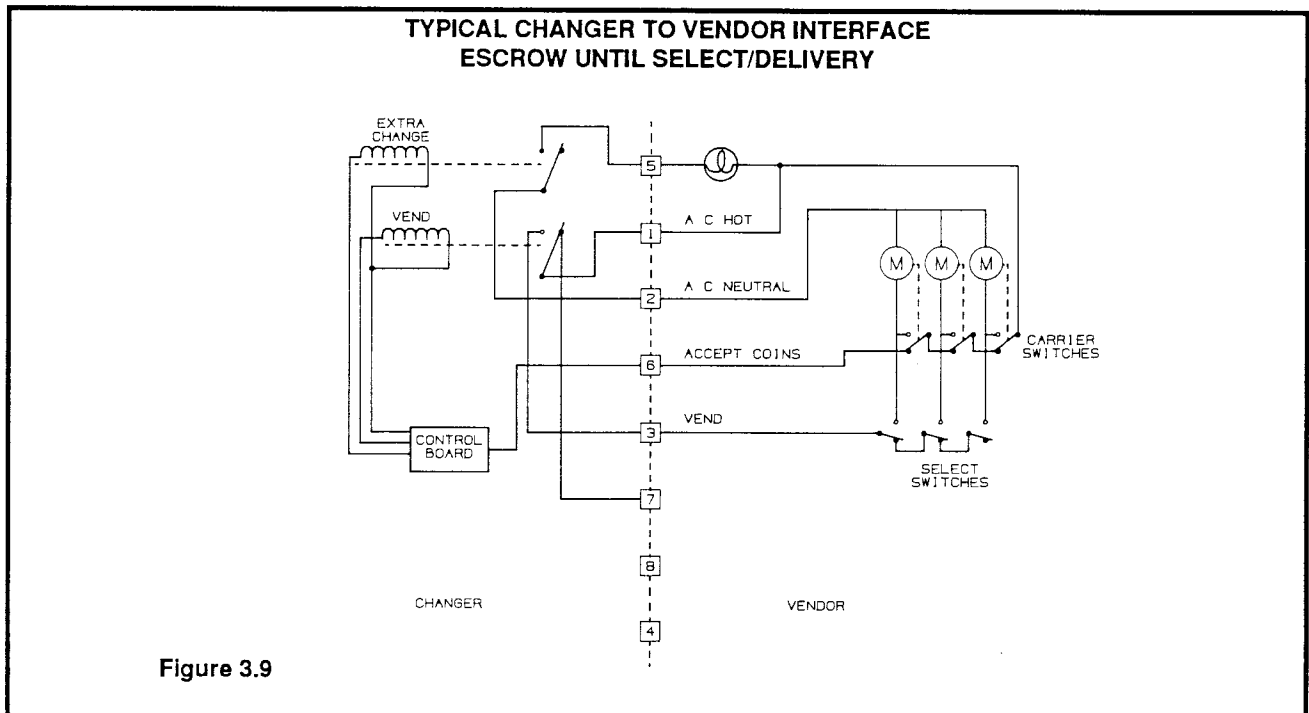
SECTION 3: OPERATION

ESCROW UNTIL SELECT CHANGER VENDOR INTERFACE

See Figure 3.9

As coins are inserted, the changer's microprocessor accumulates and holds the credit until a selection and delivery are made. When a selection is made, the changer senses the selections through Jones plug line three. If the accumulated credit is equal to or greater than the vend price, the changer will send a hot AC signal out on Jones plug pin three, until the hot AC signal to Jones plug pin six is broken. At this time, the changer will pay out any change owed and reset. Upon the return of the hot AC signal to Jones plug pin six, the changer will stand by for the next transaction.

If an escrow is detected while waiting for the hot AC signal to Jones plug pin six to break, then the hot AC signal to Jones plug pin six is monitored for two seconds, then an escrow of the accumulated credit is made. If the hot AC signal to Jones plug pin six does break within two seconds, then the escrow is ignored and the changer pays out any change owed and resets. Upon the return of the hot AC signal to Jones plug pin six, the changer will stand by for the next transaction.



ROUTINE MAINTENANCE

Routing maintenance will improve performance and extend the working life of the 9370-S series changer and reduce the need for more involved repairs. Frequency of routine maintenance will depend on environment and number of transactions.

The coin changer should be kept in its original shipping carton when not in use. This will keep the changer clean and afford the best protection for the unit.

REMOVING/REPLACING INDIVIDUAL MODULE ASSEMBLIES

Modular assembly replacement provides the basis of all 9370-S series changer repair. Instructions for removing and replacing modules are provided below. These modules should be removed in the following sequence:

Acceptor

To remove the acceptor, raise the two acceptor latches and pull the top of acceptor forward and away from the changer housing. Unplug ribbon cable from main logic board. Raise acceptor and pull outward until the acceptor clears the housing slots.

Coin Tube and Tube Sensor Assembly

Remove logic board cover by spreading the changer housing slightly and pulling up on board cover. Unplug tube sensor ribbon cable from logic board. Spread the lower part of the housing slightly and pull out on tube assembly. To separate the coin tube assembly from the tube sensor board assembly, place the assembly face down. While freeing the four locking tabs, pull up on tube sensor board. Be careful not to damage sensors on logic board.

Main Logic Board Assembly

Unplug payout solenoids and main harness assembly from logic board. Lift logic board out of housing.

Payout Assembly

With payout solenoids disconnected from main logic board, remove the four screws - two from each side- at the bottom of the housing. Separate payout assembly from changer housing by releasing cash box chute locking tab on back of changer housing and pulling downward on payout assembly.

CLEANING

The main material used in the manufacture of the 9370-S series changer is a high-quality industrial grade plastic, which should only be cleaned with a warm water and mild detergent solution.

CAUTION:

- **NEVER SUBMERGE CHANGERS IN WATER.**
- **DO NOT USE PETROLEUM SOLVENTS, STEEL WOOL, SCOURING PADS OR A METAL BRUSH FOR CLEANING.**
- **DO NOT SPRAY ANY PART OF CHANGER WITH ANY TYPE OF LUBRICANT.**

Since all coins share a common coin ramp, heavy usage or a dirty environment can result in dirt build-up. To clean the coin ramp, lift the acceptor gate upward and diagonally to the right. Hold gate firmly to prevent it from snapping back. Wipe the exposed coin ramp and inner surface with a damp cloth. For excessively dirty units, use a damp cloth with a mild detergent.

NOTE: Do no submerge in water.

For detailed cleaning of the acceptor, remove the front cover by pulling out and down on the front cover. Now remove the back cover by pushing in on two locking tabs on the side of the acceptor. To remove the coin sorting rail, first unsnap the two sensor coils, one from the sorting rail and one from the cash box area by using a small flat-tip screwdriver. Second, unhook the sensor coils from finger on sorting rail. Third, from the front of the acceptor, in area exposed by removing the front cover, locate the three locking tabs which secure the sorting rail. Using a small straight tip screwdriver, free the three locking tabs and remove sorting rail. See Figure 4.0.

SECTION 4: MAINTENANCE

Disassembling Payout Base for Cleaning

See Figure 4.1

Remove the four Phillips head screws from the bottom plate. Remove bottom plate and individual slides. Clean parts with mild detergent and hot water as desired. DO NOT SUBMERGE SOLENOIDS IN WATER.

Replace slides making sure part numbers face up into changer. With the slides correctly seated on plunger tabs, reinstall the bottom plate, securing with bottom tabs. Reinstall payout module into changer, securing with side screws.

CLEARING COIN JAMS

Should a coin jam occur in the cash box chute area, use the following steps to help dislodge coins:

1. Remove change from vendor.
2. Keeping changer in an upright position, insert a narrow screwdriver into cash box chute or reject chute from bottom of changer to relieve jam. Access holes are also provided at the rear of the changer housing to help relieve coin jam.

CAUTION: Excessive screwdriver pressure or twisting can cause permanent damage to the coin changer.

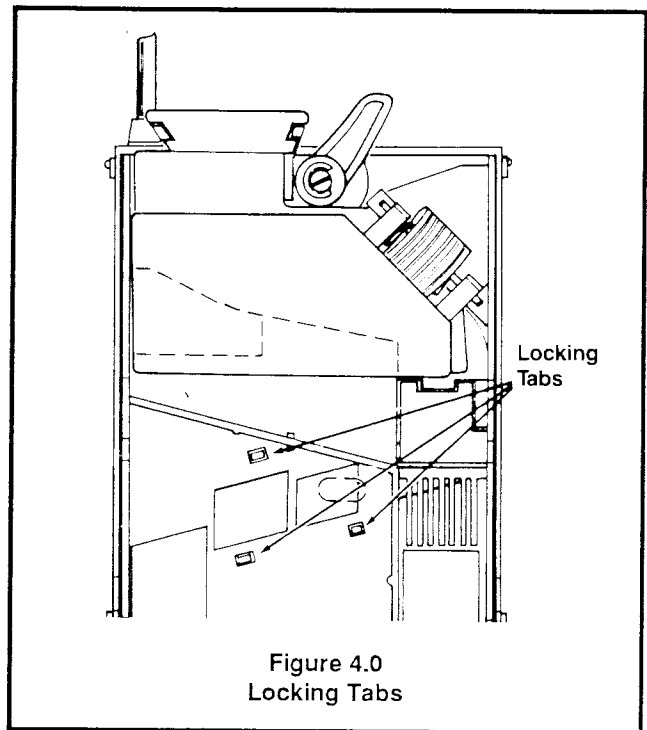


Figure 4.0
Locking Tabs

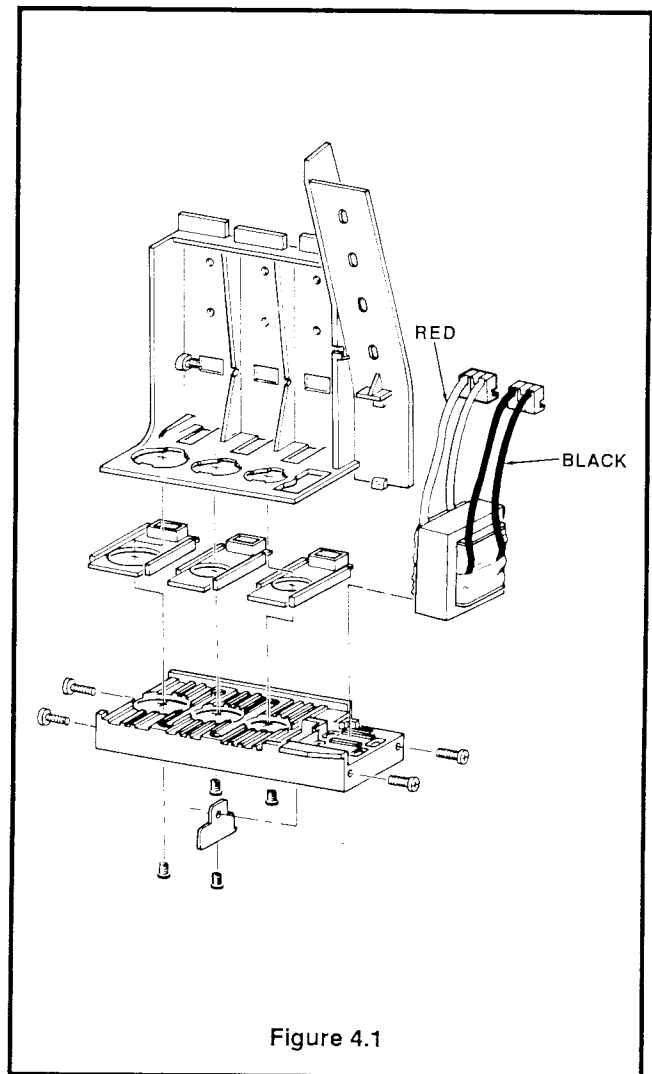


Figure 4.1

SECTION 4: MAINTENANCE

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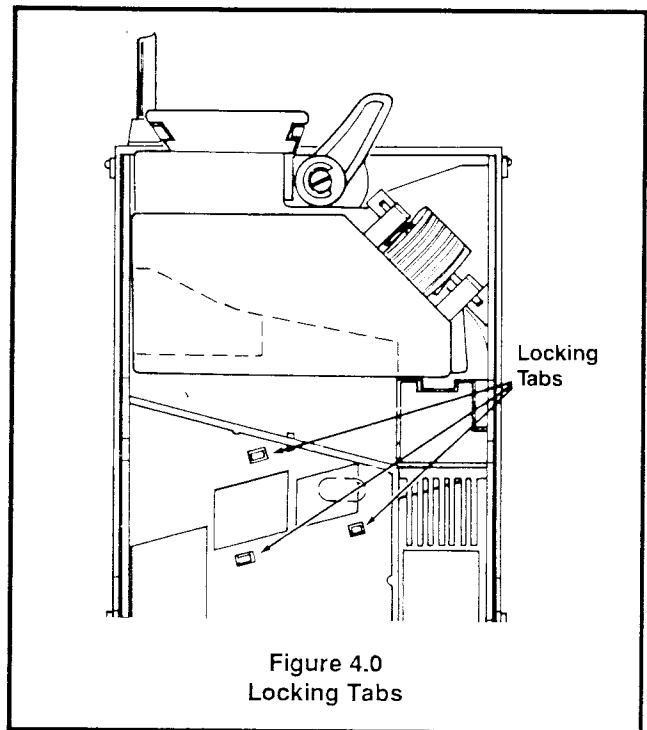


Figure 4.0
Locking Tabs

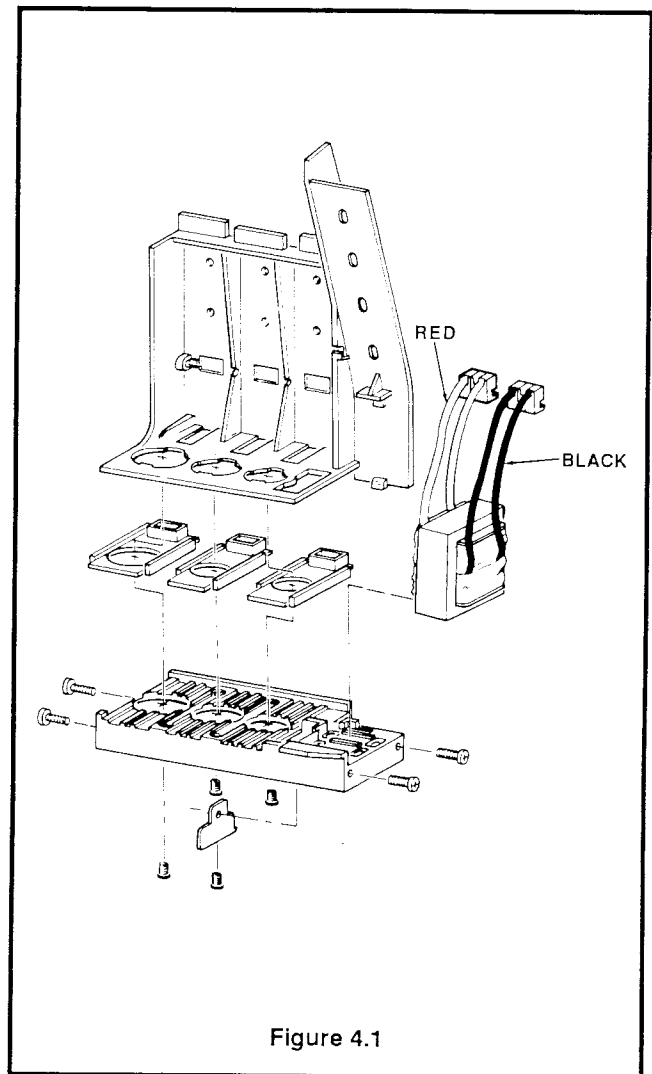


Figure 4.1

SECTION 5: TROUBLESHOOTING

INTRODUCTION

The Troubleshooting Guide on the following pages is intended to help locate problems within the coin changer. If a changer cannot be repaired by following the guide, return the changer to the nearest Coinco service center for repair. If it is necessary to return the changer to Coinco, please accompany the changer with a brief description of the malfunction to help expedite the repair and return of the changer.

Logic troubleshooting minimizes time spent in removing and replacing modules that are not defective. Some failures are caused by minor problems such as loose or faulty connections. Please check the following before replacing any parts:

- Connectors are inserted correctly
- Connector pins are not bent or broken
- All wires are properly secured
- Inventory tubes are filled to their correct levels

NOTE: The following Troubleshooting Guide is based on the fact that the tester or vendor, with which the defective changer is being tested, functions properly when used with a known good changer.

This guide is not intended to cover all failures, but to cover the most common failures.

9370-S TROUBLESHOOTING GUIDE

<u>TROUBLE</u>	<u>POSSIBLE CAUSE</u>	<u>PROCEDURE</u>	<u>REMEDY</u>
No coin acceptance and no payout when inventory switch is actuated Changer appears to be dead	No power	Make sure changer is plugged into vending machine or tester has power	Plug changer into vendor
		Hinge acceptor down, check red LED next to price option switch, if LED is ON	Replace main logic board
		If LED is OFF, check continuity between Jones plug pin 1 and P3 pin 7 Jones plug pin 2 and P3 pin 4 and Jones plug pin 2 and P3 pin 2. If continuity does not exist between all three pairs	Replace harness
		If continuity does exist between all three pairs check foil fuse on back of main logic board.	Repair fuse or replace main logic board

SECTION 5: TROUBLESHOOTING

<u>TROUBLE</u>	<u>POSSIBLE CAUSE</u>	<u>PROCEDURE</u>	<u>REMEDY</u>
		If fuse is good, check transformer as follows: Check between P7 pins 1 and 2 for approx. 12-18 VAC, if no voltage or less than 12 VAC (See Fig 5.0)	Replace transformer
		If 12-18 VAC exist	Replace main logic board
No coin acceptance solenoids energize when inventory switches are actuated	Coin return lever	Make sure changer is mounted correctly and coin return lever is in proper position	Reposition changer and/or vendor coin return lever
	Acceptor	Make sure acceptor is plugged in properly	Plug acceptor in properly
	No blocker (CREM) signal	Hinge acceptor down and check to see that the red LED next to the option switch is ON	
		If not, check continuity between changer Jones plug pin 6 to P3 pin 4	If no continuity replace main harness
		If continuity is present	Replace acceptor
		If still no acceptance	Replace main logic board
Rejects coins or percentage of good coins	Improper tuning	Tune for coin being rejected	See field tuning procedure, Sec. 4 Maintenance
		If still rejects coins	Replace acceptor
		If still rejects coins	Replace main logic board
Rejects Canadian coins	Check for USA/CAN switch in ON position	If in OFF position only	Turn USA/CAN switch ON
		If still rejects Canadian coins	Tune unit with Canadian coins, Sec. 4-Maintenance
		If still does not accept	Replace acceptor
		If still does not accept	Replace main logic board

SECTION 5: TROUBLESHOOTING

<u>TROUBLE</u>	<u>POSSIBLE CAUSE</u>	<u>PROCEDURE</u>	<u>REMEDY</u>
Accepted coins always go to cash box	Tube sensor board or acceptor	Check the sensor board for loose or broken components. Make sure tube sensor board is properly secured to tube assembly. Check cable from sensor board for damage or improper connection	Replace tube sensor board
		If coin still goes to cash box, replace acceptor with good acceptor and test. If changer functions properly	Replace acceptor
		If coin still goes to cash box	Replace changer main logic board
Accepted coins always go to coin tubes	Coin tube gate in open position	Remove acceptor back cover, check solenoid for free operation	Replace acceptor
	Tube sensor board	Replace tube sensor board with good tube sensor board and test. If changer functions properly	Replace tube sensor board
		If coins still go to coin tubes	Replace changer main logic board
Accepts money but will not vend	Open circuit	Check continuity between Jones plug pin 3 & P3 pin 6	If open, replace main harness
		Check continuity between Jones plug pin 7 & P3 pin 5	If open, replace main harness
		If still no vend	Replace acceptor
Accepts coins and vends but no payout	Payout solenoid does not energize	Actuate 5¢, 10¢ & 25¢ inventory switches one at a time. If an or all solenoids do not energize, check resistance of solenoids in question. Resistance should be .210 ohms + or - 10% if incorrect	Replace solenoid or solenoids in question
		If resistance is correct	Replace tube sensor board

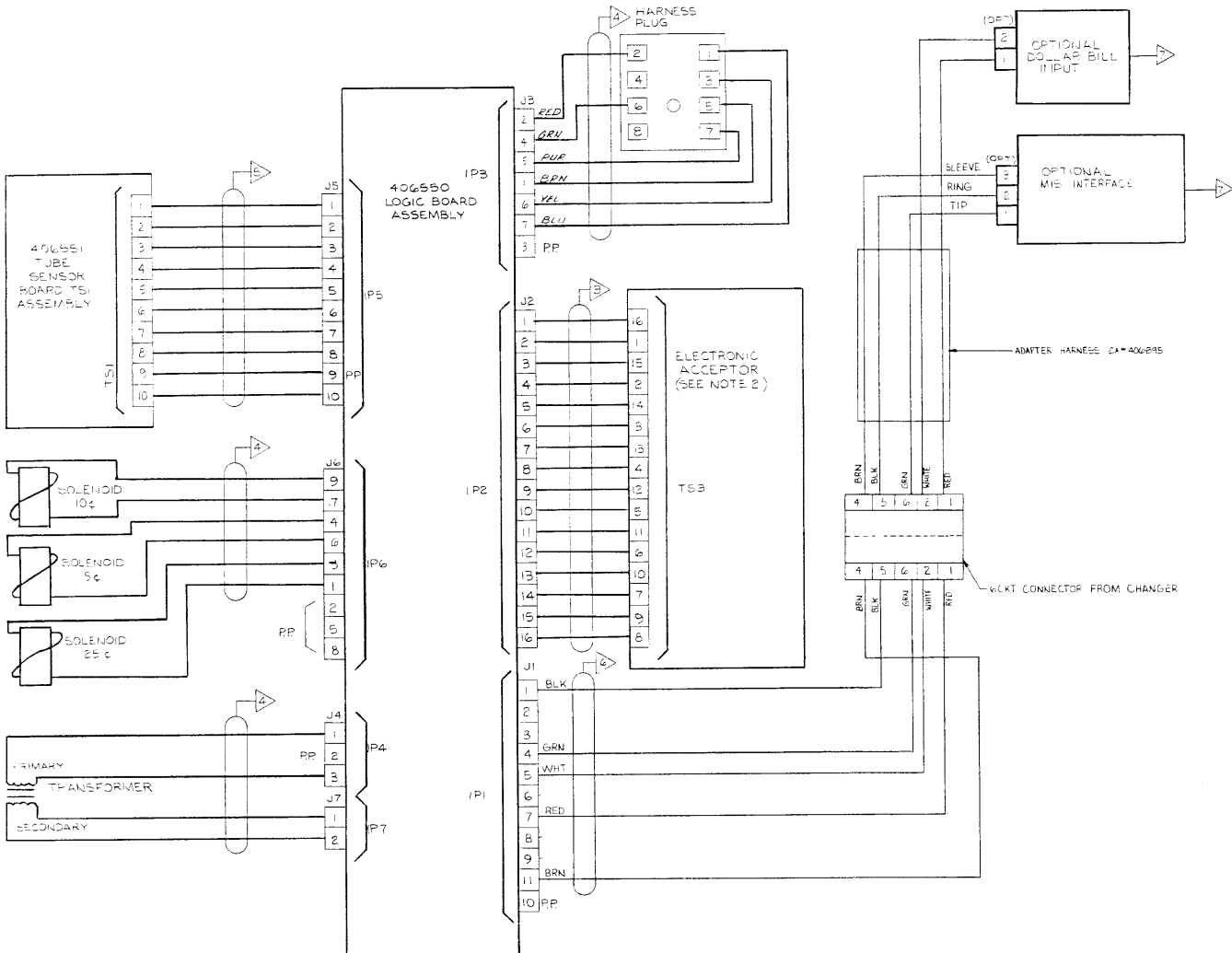
SECTION 5: TROUBLESHOOTING

<u>TROUBLE</u>	<u>POSSIBLE CAUSE</u>	<u>PROCEDURE</u>	<u>REMEDY</u>
		If still no inventory or payout	Replace main logic board
Incorrect change payout	Main logic board or acceptor	Check solenoids for correct connection	Connect solenoids correctly
		If solenoid connection is correct	Replace main logic board
		After changing logic board there is still incorrect payout	Replace acceptor
<p>NOTE: If correct change is not available for a \$ bill, the correct change light remains ON. See exact change condition, Section 3: Operation.</p>			
Exact change light does not flash or an over insertion when correct change is not available	Open circuit	Check continuity between pin 5 of changer 8 pin Jones plug and P3 pin 1, if open	Replace harness
Vends at wrong price	Logic board or acceptor	Set vend price for 50¢. Deposit 25¢. Depress coin return. Deposit 5¢, press coin return. Deposit 10¢ depress coin return. If amount returned doesn't equal amount deposited	Check solenoids for proper connection If solenoid properly connected
		If the problem still exists	Replace logic board
		If the problem still exists	Replace acceptor
Coin always goes to cash box	Tube sensor board or acceptor	Check sensor boards for broken or loose components and check cable from sensor board for damage or improper connection	Replace tube sensor board
		If coin still goes to cash box	Replace acceptor
		If coin still goes to cash box	Replace main logic board
Coin always goes to coin tubes	Coin tube gate in open position	Remove acceptor back cover, check solenoid for free operation	Replace acceptor
	Defective tube sensor board	Inspect tube board for loose or broken components, frayed cable, etc.	Replace tube sensor board
		If coin still goes to change tubes	Replace main logic board

SECTION 5: TROUBLESHOOTING

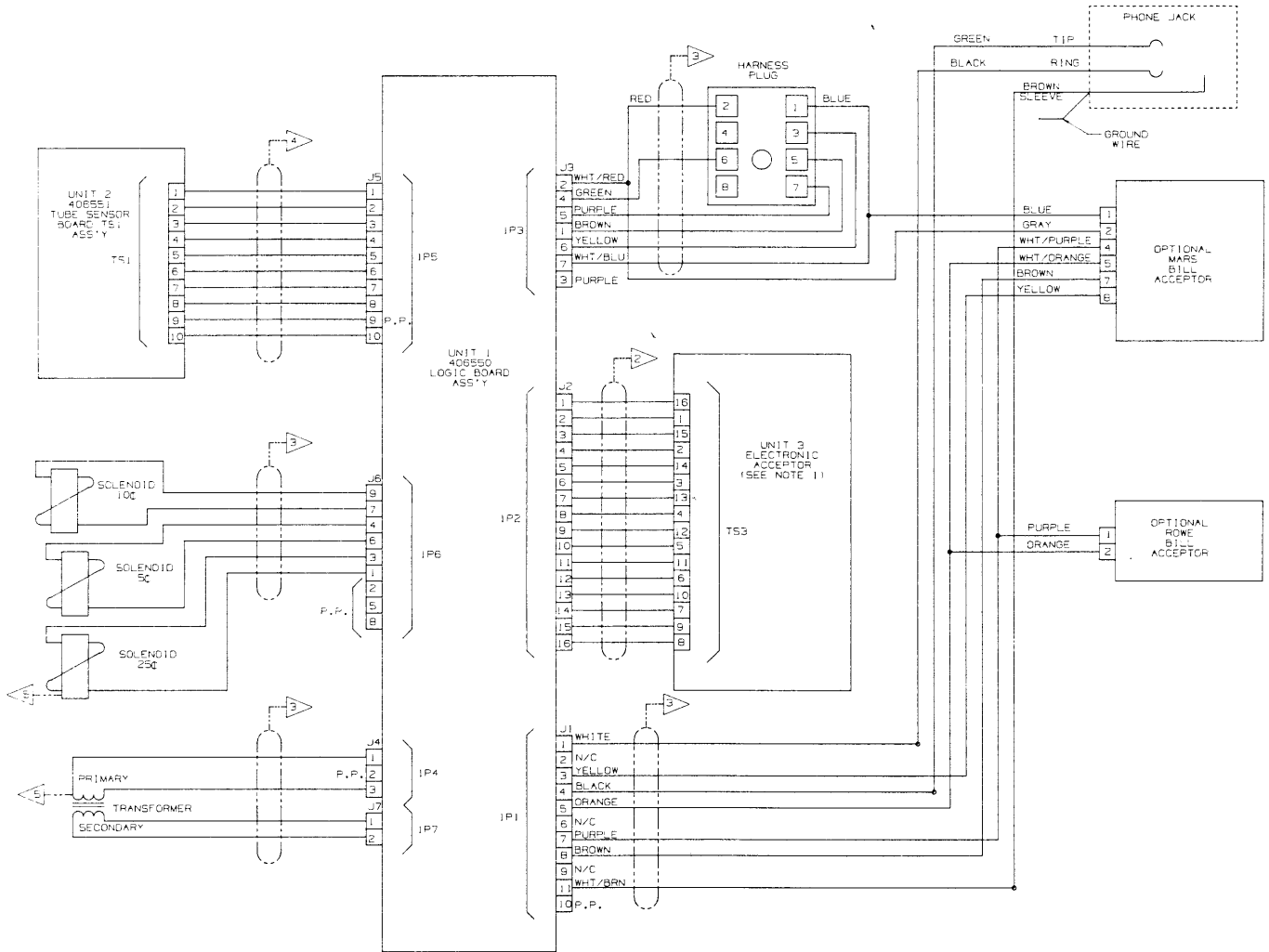
<u>TROUBLE</u>	<u>POSSIBLE CAUSE</u>	<u>PROCEDURE</u>	<u>REMEDY</u>
Does not accept dollar coins	Dollar accept switch OFF		Turn dollar switch ON
	Improper tuning	Tune unit	Retune unit. See Sec. 4-Maintenance
		If still doesn't accept	Replace acceptor
		If still doesn't accept	Replace logic board
Does not escrow properly in ESC/SEL mode	Check for position of escrow option	Set escrow option. If set properly	Replace logic board
		If still no escrow	Replace acceptor
Fills 25c tube when LO 25c tube level is selected	Check LO 25c option switch in ON position	If coin still goes to quarter tube	Replace tube sensor board
		If coin still goes to tube	Replace logic board
		If coin still goes to tube	Replace acceptor

SECTION 5: TROUBLESHOOTING



Interconnect 9370-S

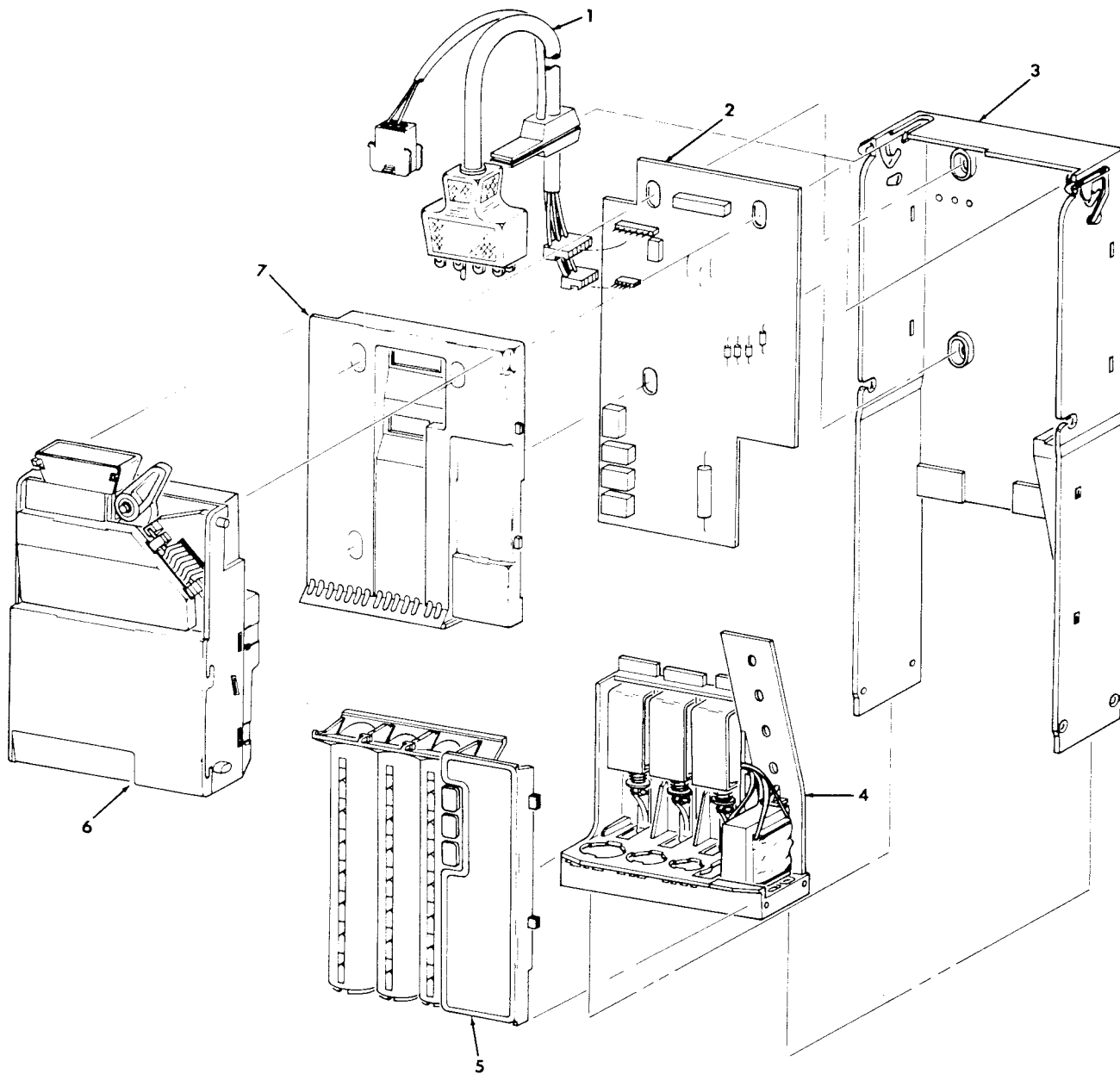
SECTION 5: TROUBLESHOOTING



Interconnect 9370-SR

SECTION 6: PARTS LIST

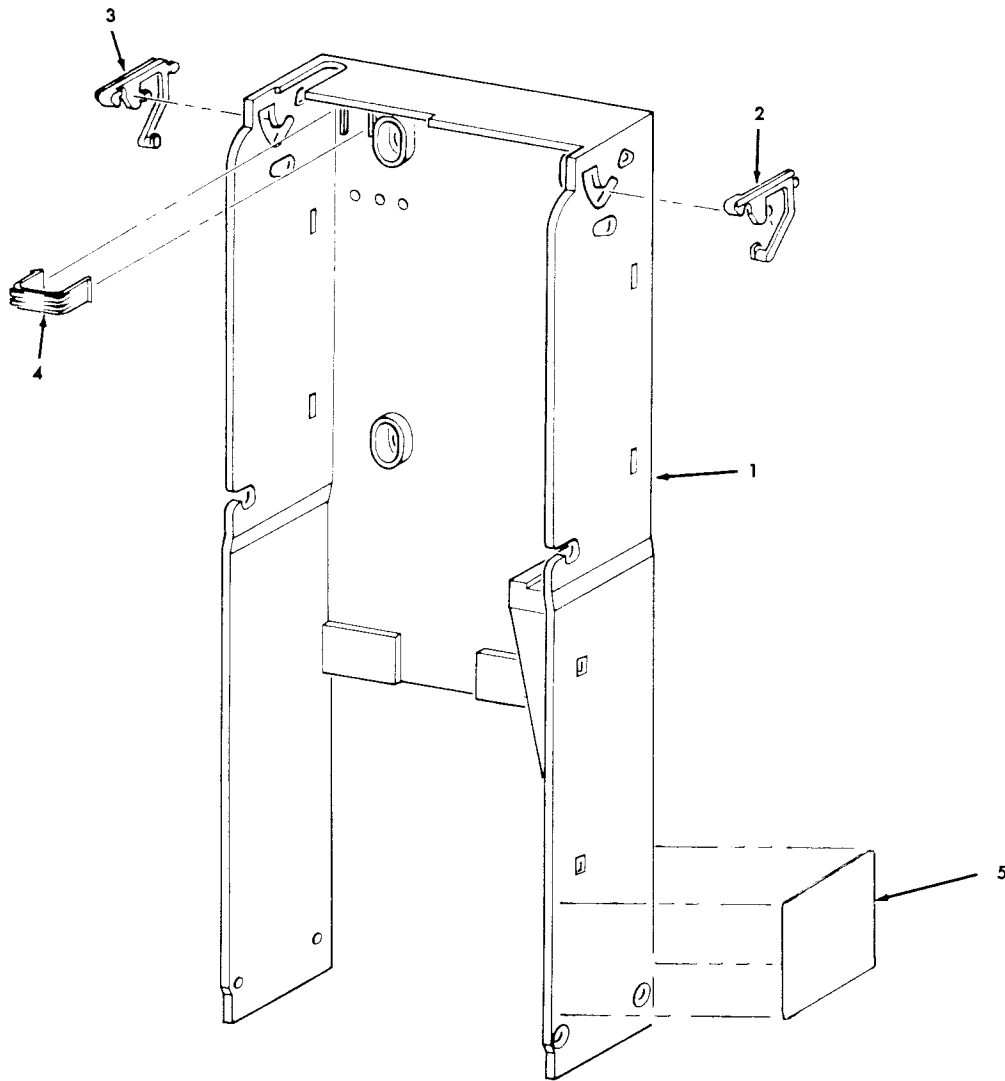
Modular View 9370-S Series Changer



Item No.	Part No.	Description	Quantity
1	406893	Harnes, 9370-S	1
	407377	Harness, 9370-SR	1
2	407336-1	Logic Board, 9370-S	1
	407336-2	Logic Board, 9370-SR	1
3	909100	Changer Housing	1
4	406739-1	Payout Assembly	1
5	406728	Inventory tube & board assy.	1
6	406900-1	Acceptor	1
7	406788	Logic board cover assy.	1

SECTION 6: PARTS LIST

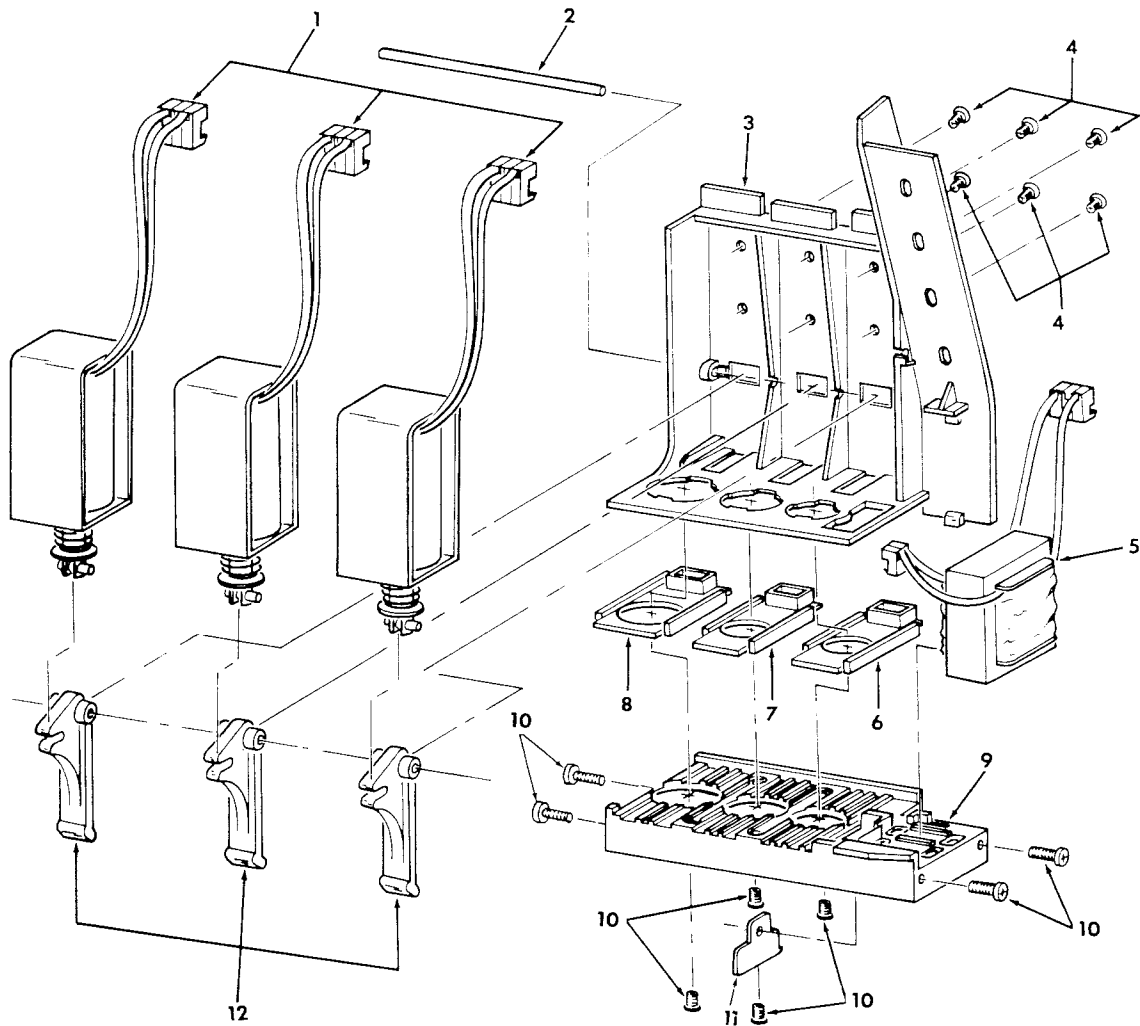
9370-S Changer Housing



Item No.	Part No.	Description	Quantity
1	909100	Housing (only)	1
2	902011-1	Acceptor Latch, right	1
3	902010-1	Acceptor Latch, left	1
4	904195	Harnes clamp	1
5	909729	Label	1

SECTION 6: PARTS LIST

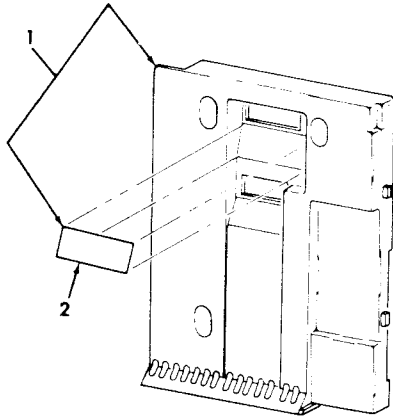
9370-S Payout Assembly 406739-1



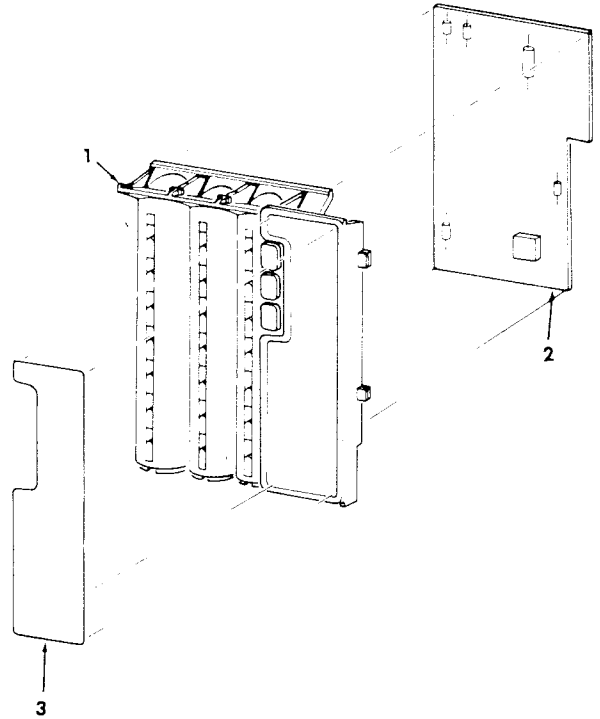
Item No.	Part No.	Description	Quantity
1	406607-1	Solenoid Assy. 110 VDC	3
2	909113	Pivot Shaft	1
3	909141	Upper payout base	1
4	909630	Screw, 6-32 x 3/16 FH undcut blk	6
5	406606-3	Transformer Assy, 110 VAC, fused	1
6	909105	10¢ Payout slide	1
7	909104	5¢ Payout slide	1
8	909103	25¢ Payout slide	1
9	909102	Lower payout base	1
10	345P4R7	Screw, 4 x 7/16 PH PHL Plas Blk	8
11	909135	Coin Return Liner	1
12	909106	Solenoid Lever	3

SECTION 6: PARTS LIST

Logic Board Cover 406788 Assembly



Inventory Tube Assembly

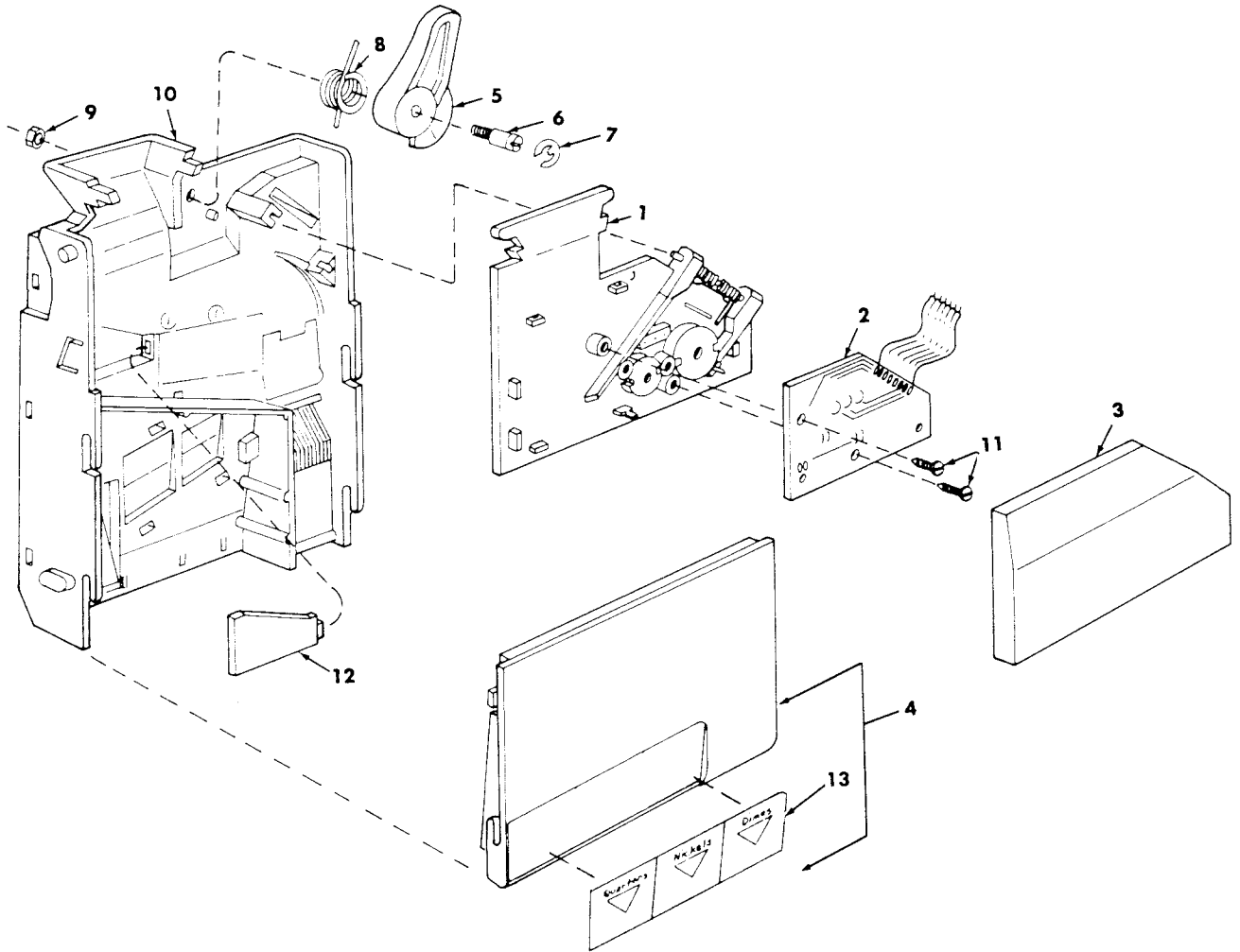


Item No.	Part No.	Description	Quantity
1	909585-1	Logic Bd. Cover	1
2	909087	Label, Switch Options	1

Item No.	Part No.	Description	Quantity
1	406727	Inventory Tube Assy & Decal	1
2	407446	Bd. Assy. tube sensor	1
3	909115-3	Inventory Tube Label	1

SECTION 6: PARTS LIST

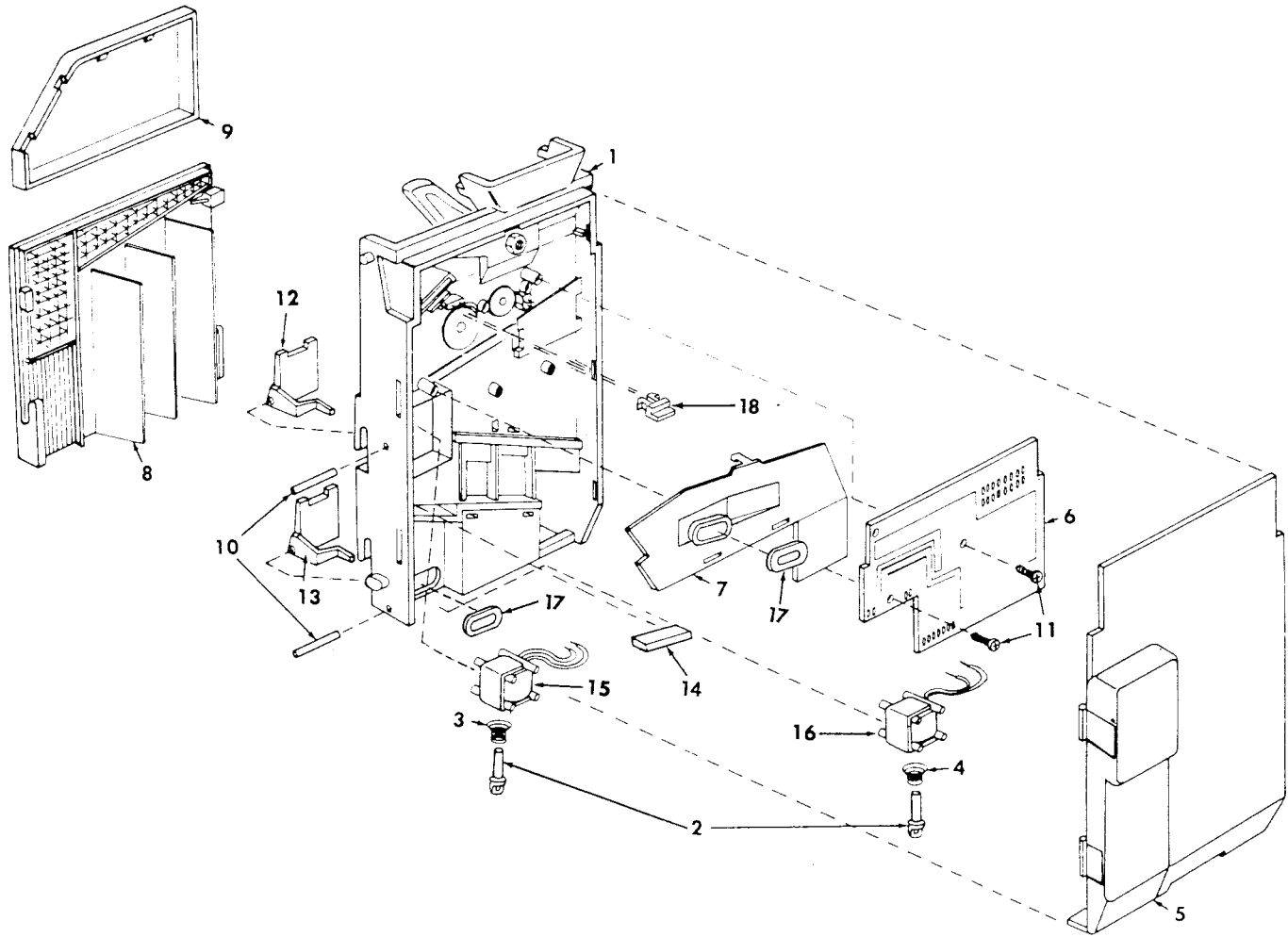
Acceptor Front View 406900-1 Assembly



Item No.	Part No.	Description	Quantity
1	406184-2	Gate & Coil Asy.	1
2	406567	Gate Bd. Assy LED	1
3	906596-1	Cover	1
4	920023	Dex Decal	1
5	906606-1	Operating Lever	1
6	906624	Screw, gate lever pivot	1
7	751S21X	Retaining ring	1
8	906618	Spring, operating lever	1
9	400-8	Nut, 8-32 Lock	1
10	406611	Mainplate & Coil Assy	1
11	345-4R5	Screw, 4 x 5/16 PH PHL PLAS	2
12	906616	Coin rail	1
13	909086	Front cover decal only	1
14	909095-2	Front cover	1

SECTION 6: PARTS LIST

Acceptor Back View Assembly



Item No.	Part No.	Description	Quantity	Item No.	Part No.	Description	Quantity
1	406611	Mainplate & coils	1	9	906596-1	Cover Gate	1
2	406167	Plunger & Yoke Assy.	2	10	906622	Pin, Diverter Pivot	2
3	906619-2	Spring, copper plated	1	11	345S4R7	4 x 7/16 PH PHL PLASS SS screw	2
4	906619-1	Spring, nickel plated	1	12	906600-1	Diverter door, Upper	1
5	909096-1	Back cover	1	13	909092	Diverter door, Lower	1
6	407506	Bd. Assy, 9300 acceptor	1	14	909853	Coin rail	1
7	406612	Rear chute & coil assy.	1	15	406857	Coil Assy. solenoid, upper	1
8	909095-2	Front Cover	1	16	406857-2	Coil Assy. solenoid, lower	1
				17	406613-1	Coil Assy. , sensing	2
				18	908845-1	Plug, Spring Retention	2

THIS COINCO PRODUCT IS COVERED BY THE FOLLOWING PATENTS:

UNITED STATES PATENT NUMBERS

4,254,857 4,625,852 4,646,904 4,739,869 4,763,769
For Use Under U.S. Patent Numbers 4,216,461 and 4,369,442

CANADIAN PATENT NUMBERS

1,121,873 1,251,565 1,251,862 1,281,134