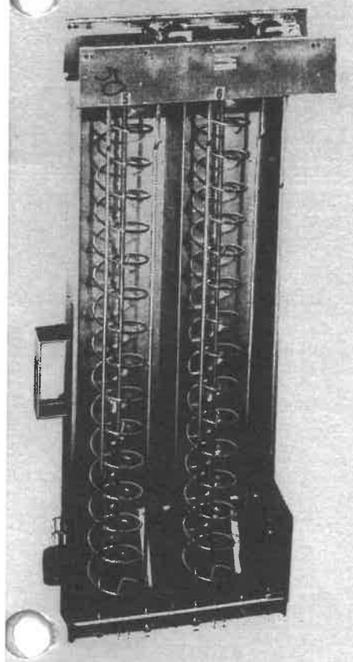
Dixie-Narco® INC.

Lawrence Street
Ranson, West Virginia 25438
(304) 725-3481
(800) 624-0553

SERVICE MANUAL AND PARTS LIST 0001-2629CH

ASEPTIC MODELS

WITH RED CAM ON VEND MOTORS
WITH SINGLE RELAY LOCK-OUT CIRCUIT
VEND MOTOR- 14 RPM



ASEPTIC PACKAGE VENDER

DNP 200-8 **DNTP 232-8**
DNP 310-10 **DNTP 350-10**
DNTP 360-10

Another MAGIC CHEF® Company

The number 0001-2629CH on the front cover of the manual is the beginning Serial Number for the Aseptic Model Venders listed on the front cover.

Thus, the beginning Serial Number for DNTP 232-8 is 0001-2629CH

The beginning Serial Number for DNP 200-8 is 0001-2690AI

The beginning Serial Number for DNTP 350-10 is 0001-2738BI

The beginning Serial Number for DNP 310-10 is 0001-2764DI

The beginning Serial Number for DNTP 360-10 is 0001-2842CJ

Reference: Serial Number 0001-2629CH

The letter C indicates the quarter of the calendar year in which the vender was manufactured.

The letter H indicates the calendar year in which the vender was manufactured.

Thus C = 3rd quarter
H = Year 1983

The date system started in 1976

Thus,

For a given year the first letter is the quarter, i.e.,

A = First Quarter
B = Second Quarter
C = Third Quarter
D = Fourth Quarter

The second letter is the year, i.e.,

A = Year, 1976
B = Year, 1977
C = Year, 1978
D = Year, 1979
E = Year, 1980
F = Year, 1981
G = Year, 1982
H = Year, 1983
I = Year, 1984
J = Year, 1985
K = Year, 1986
L = Year, 1987

– WARRANTY –

Dixie-Narco Warrants to the original purchaser of a Dixie-Narco unit all parts thereof (except light bulbs, fuses, or finish) to be free from defects in material and workmanship, under normal use and service for a period of 15 months from the date of shipment of the unit from either our plant or warehouse.

The term "original purchaser" as used in this warranty shall be deemed to mean that person, firm, association, or corporation to which the machine was sold originally.

Dixie-Narco's obligation under this warranty is limited to repairing or replacing without charge any part which upon our examination and to our satisfaction was defective in material or in workmanship and which failed under normal operating conditions and service.

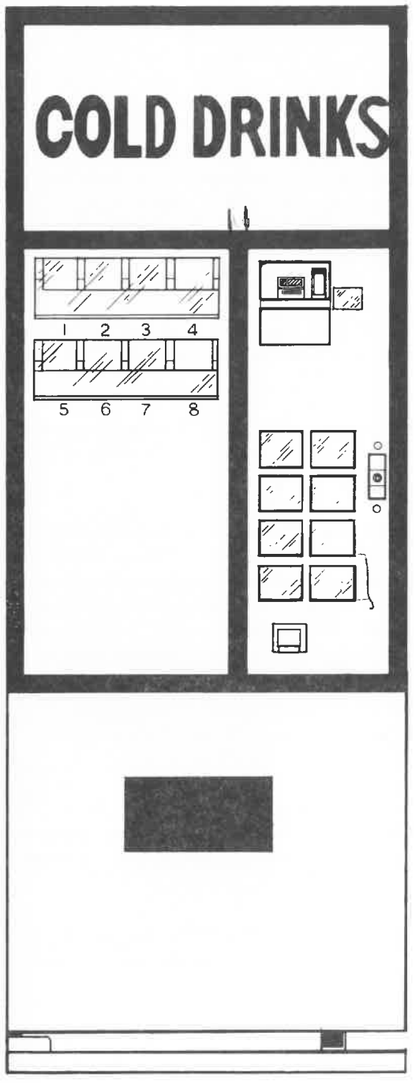
The hermetically sealed refrigeration system, consisting of the motor compressor, condenser, evaporator and the refrigerant tubing is warranted for a total period of five (5) years and three (3) months from date of shipment.

The five year warranty does not apply to any electrical controls, vend motor, fan motors, overload switches, starting relays, temperature controls, wiring harnesses, cabinet or finish. Dixie-Narco's obligation under this warranty on the sealed refrigeration system referred to above is limited to repairing and returning or replacing at Dixie-Narco's option any unit with a similar unit when upon examination and to our satisfaction it was determined to have been defective. If our examination reveals that the unit is inoperative because of a defective accessory, both cost of repairs and freight charges will be paid by the customer.

Dixie-Narco will pay transportation charges under this warranty on all parts replaced or repaired when transportation has been made in the most economical way. If special handling or special transportation is used or requested, the charges will be paid by the customer.

This warranty only applies to units located within the United States and when operated in normal conditions and with electrical power supplies of 110/120 volts, 60 cycle. Further, the warranty is voided when a unit or any part has been subject to misuse, neglect, alteration without prior authorization, accident, or damage caused by transportation, flood, civil disorder, fire or the Acts of God.

"Return Material Tags", indicating model number of unit, serial number, and explanation of defect, must accompany all returned parts or units. "Return Material Tags" will be furnished upon request.



DNP 200-8
Height: 72"
Width: 28 5/16"
Depth: 26"
Shipping Wt: 555 lbs.
Capacity:
Package 200
250 ml or 8.45 oz.

DNTP 232-8
Height: 72"
Width: 28 5/16"
Depth: 26"
Shipping Wt: 555 lbs.
Capacity:
Package 232
250 ml or 8.45 oz.

DNP 310-10
Height: 79"
Width: 37"
Depth: 26"
Shipping Wt: 714 lbs.
Capacity:
Package 310
250 ml or 8.45 oz.

DNTP 350-10
Height: 79"
Width: 37"
Depth: 26"
Shipping Wt: 714 lbs.
Capacity:
Package 350
250 ml or 8.45 oz.

DNTP 360-10
Height: 79"
Width: 37"
Depth: 26"
Shipping Wt: 714 lbs.
Capacity:
Package 360
250 ml or 8.45 oz.

CONTENTS

WHAT TO DO WHEN YOU GET A NEW VENDER

– SET IT UP –

KEYS

Keys are taped inside coin return cup.

SERIAL NUMBER PLATE

The serial number plate is attached outside to the left side of the main door.

COIN MECHANISM

The coin mechanism is shipped in a separate package.

To install, do this:

1. Open the inner door.
2. Remove the slug rejector.
3. Line the three holes in the coin mechanism with the three screws and push the coin mechanism over the three screws. Let the coin mechanism drop down onto the screws, tighten the screws.
4. Reinstall the slug rejector.
5. Connect the changer plug to the socket.

INSTALLATION OF PRICE CARD

1. Install card from rear of main door.

– LOAD THE VENDER –

ADJUSTMENTS

1. The venders are shipped to dispense Aseptic Packages.
2. For adjustments, look under "Things to Adjust".

LOAD THE VENDER

1. Load vender with Packages.
2. Install coin changer.
3. Plug vender "in" - Dispense Aseptic Package to check vending operation.

WHAT TO DO WHEN YOU GET A NEW VENDER (Cont.)

– LOAD THE VENDER – (Cont.)

OPERATIONAL CHECKS

1. Plug service cord into outlet with correct voltage. (See serial number plate.)
   Do Not use extension cords.
2. The vender must be grounded. If 3 prong outlet is available, plug vender directly into outlet. If 3 prong outlet is not available, plug the vender into 2 prong outlet, using 2 prong adapter. Be sure to ground "pigtail" on adapter.
3. Make sure that nothing obstructs air intake at bottom of door. Check rear of cabinet occasionally to be sure that exhaust is not blocked by waste paper, etc. Use spacer provided to space rear of vender 4 inches from wall. This spacing is essential.

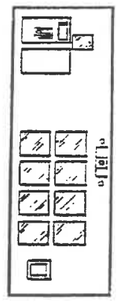
CARE AND MAINTENANCE

1. Exterior cleaning. Wash cabinet periodically with soap and water. Wax often, using a good automotive wax.
2. If corrosion occurs on cabinet interior, rub it off with fine steel wool and paint over spot with aluminum paint, or zinc rich.
3. Keep condenser clean. Use brush or vacuum cleaner to remove dust accumulation from condenser.

PROPER SELECTION

Selections on the front door control panel are as in sketch below:

See stack numbering sequence on inside of vender.



WHAT TO DO WHEN YOU GET A NEW VENDER (Cont.)

– CHECK IT OUT –

WHAT TO DO	WHAT SHOULD HAPPEN	WHAT SHOULDN'T HAPPEN
Plug the supply cord in, close the vender door.	The compressor runs. The condenser fan runs. The evaporator fan runs. "Correct change only" window lights.	The refrigerant lines rattle.
Put in correct change.	Push the select button to dispense a package.	Some packages are frozen or the next to be vended packages are above the temperature of 38° F.
Load the money tubes and put a quarter into the vender.	A package may be dispensed from the module and correct change is returned.	
Fully load the vender with warm packages and let it run over night, then vend a package from each of the selections.	The first package vended has a temperature of 32° to 34° F.	

– PUT IT TO WORK –

SPACE NEEDED

Size of the working space needed around the vender is shown on the title page of this manual. DO NOT block the rear of the vender. Keep the vender 4 inches from the wall to provide adequate ventilation for the condenser. Make sure that nothing obstructs air intake at the bottom of the door.

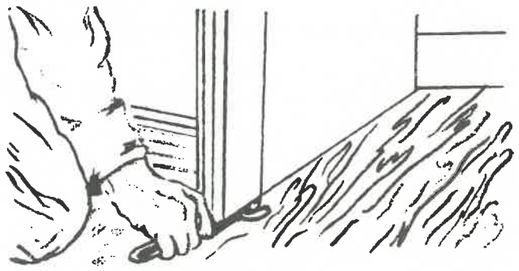
WHAT TO DO WHEN YOU GET A NEW VENDER (Cont.)

– PUT IT TO WORK – (Cont.)

LEVEL THE VENDER

Level the vender. When the vender is level then the door can be opened to any position and it will not move by itself. Try it half closed, straight open and wide open before you decide that the vender is level.

Make sure that all of the leveling screws are touching the floor.



Level the Vender

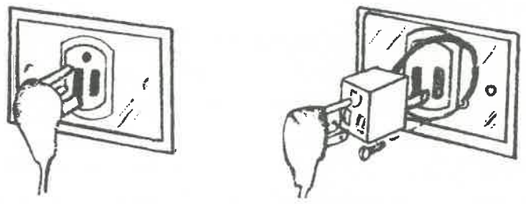
ELECTRIC POWER NEEDED

Look at the serial number plate on the left side of the main door to find out what the vender's power needs are. Be sure that the vender gets the right power.

The vender uses 115 volts single phase, either 50 or 60 cycle, alternating current. The voltage must never be lower than 103 or above 126.

GROUND THE VENDER

This vender is made with a three prong plug on the supply cord. It grounds when the plug is put into a three prong outlet. If there is no prong outlet near the vender, use a two prong adapter. If a two prong adapter is used, make sure the adapter's ground wire is connected to a good ground.

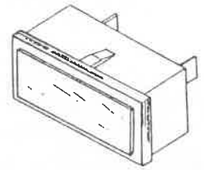


Ground the Vender

HOW THE VENDING MECHANISM WORKS

– ELECTRICAL PARTS –

CORRECT CHANGE LAMP

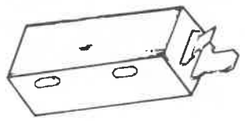


Correct Change Lamp

The correct change lamp is mounted in the coin insert casting and is retained by projections top and bottom.

The correct change lamp is in the coin tube switch circuit and is "ON" when coins are in the tube.

SELECT SWITCH NO.
1, 2, 3, 4, 5, 6, 7, 8, 9, & 10



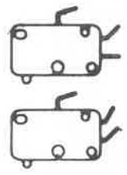
Select Switch

The select switch is located in the control panel behind the push button and is secured with two (2) screws.

The N.O. contact of the Select Switch is in the Vend Motor Coil and the Sold Out Lamp circuits. This N.O. contact closes and completes the Vend Motor Coil Circuit and the Sold Out Lamp Circuit.

The N.C. contact of the Select Switch is in the Vend Motor Coil Circuits. This N.C. contact opens the Control Panel Circuit.

LAMP SOLD OUT SWITCH
1, 2, 3, 4, 5, 6, 7, 8, 9, & 10



Lamp Sold Out Switch

The lamp sold out switch (one for each vending circuit) is located near the bottom of the module at the rear and is fastened with screws.

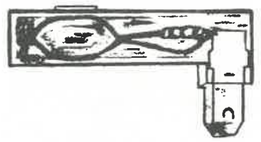
The N.C. contact of the (lamp) sold out switch is in the vend relay Coil Circuit and the Coin Changer Magnet circuit. This N.C. contact (kept closed by the package) is in parallel with all of the other N.C. contacts of the Lamp Sold Out Switches and when all are open, the coin changer magnets are turned off and the changer will not accept coins.

The N.O. contact of the (Lamp) sold out switch is in the sold out lamp circuit (kept open by the package). When not kept open by the package, this N.O. contact closes and completes the sold out lamp circuit.

HOW THE VENDING MECHANISM WORKS (Cont.)

– ELECTRICAL PARTS – (Cont.)

SOLD OUT LAMPS

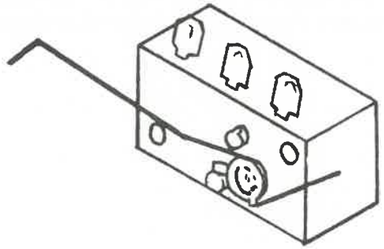


Sold Out Lamp

The Sold Out Lamp (one for each vending circuit) is secured to the back of the select button in the control panel.

The Sold Out Lamp is turned on by the closing of the N.O. contacts of the Lamp Sold Out Switch.

COIN VEND SWITCH (Coin Changer)



Coin Vend Switch

The Coin Vend Switch is located in the coin changer below the slug rejector.

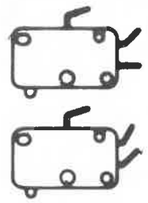
The N.O. contact of the Coin Vend Switch is in the vend relay coil and the coin changer magnet circuits. This N.O. contact closes and completes the vend relay coil circuits.

The N.C. contact of the Coin Vend Switch is in the vend motor coil circuits. This N.C. contact closes in the vend motor coil circuits to set up these circuits so that a selection can be made.

HOW THE VENDING MECHANISM WORKS (Cont.)

– ELECTRICAL PARTS – (Cont.)

VEND SOLD OUT SWITCH
1, 2, 3, 4, 5, 6, 7, 8, 9, & 10



Sold Out Switch

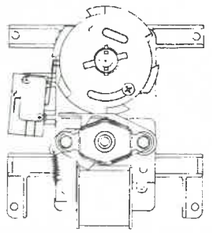
The Vend Sold Out Switch (one for each vending circuit) is located near the bottom of the module at the rear and is fastened with screws.

The N.C. contact of the Vend Sold Out Switch is in the Vend Motor Circuit. This N.C. contact (held closed by the package) stays closed in the vend motor circuit so the Vend Motor Circuit can be completed.

HOW THE VENDING MECHANISM WORKS (Cont.)

– ELECTRICAL PARTS – (Cont.)

VEND MOTOR

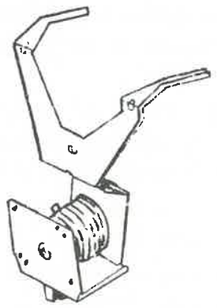


Vend Motor

The Vend Motor (two for each module) is mounted on top of the module.

The Vend Motor is in the vend motor coil circuit. The Vend Motor runs when a N.O. select switch (pushed) closes and completes the vend motor circuit. The Vend Motor continues to run through the N.C. contact (worked by the vend motor cam) of the cam hold switch. The Vend Motor stops when the vend motor switch arm drops off of the high side of the vend motor cam.

MAGNETS (Coin Changer)



Coin Return Magnet

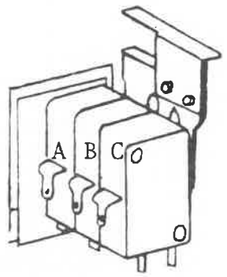
The Magnets are in the coin changer behind the coin rejector.

The Magnets N.O. and N.C. are in the Vend Relay Coil Circuit. The coin changer magnet are turned off when the N.C. Vend Relay Switch No. 1 opens and breaks the coin changer magnet circuit.

HOW THE VENDING MECHANISM WORKS (Cont.)

– ELECTRICAL PARTS – (Cont.)

VEND MOTOR SWITCH



A. Is Vend Motor Switch
B. Is Cam-Hold Switch
C. Is By-Pass Switch

The Vend Motor, the Cam-Hold and the By-Pass switches are together and do not come apart. The Vend Motor Switch, one (1) for each circuit, is located on the Vend Motor Assembly secured by two (2) screws.

The N.C. contact of the Vend Motor Switch is in the Coin Changer Circuit. This N.C. contact opens in the Coin Changer Circuit.

The N.O. contact of the Vend Motor Switch is in the Vend Motor Coil Circuit. This N.O. contact closes in the Vend Motor Coil Circuit to keep the Vend Motor running until the arm of the Vend Motor Switch drops into the cam notch and the Vend Motor stops.

CAM HOLD SWITCH

The Vend Motor, Cam-Hold and the By-Pass switches are together and do not come apart. The Cam-Hold switch, one (1) for each circuit, is located on the Vend Motor Assembly secured to a bracket by two (2) screws. This is in the vend motor circuit.

The N.O. contact of the Cam-Hold switch (held closed by the vending cam) is in the Vend Motor circuit. Shortly after the beginning of the vending cycle the arm of the switch (worked by the vending cam) drops into the cam notch and this N.O. contact opens in the circuit to the Select Panel.

When the arm of the switch reaches top side of cam this N.O. contact closes in the circuit to the control panel and is still closed at end of the vending cycle.

When the arm of the switch drops into the cam notch, the N.C. contact closes in the Vend Motor Coil Circuit to keep the Vend Motor running. When the arm of the switch reaches top side of cam, this N.C. contact opens in the Vend Motor circuit and is still open at end of the vending cycle.

BY–PASS SWITCH

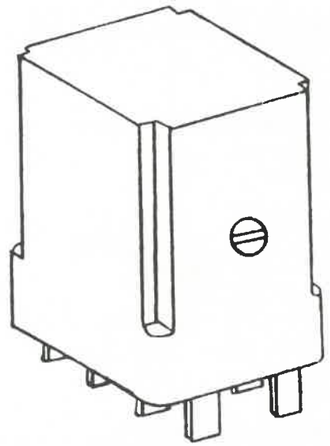
The Vend Motor, the Cam-Hold and the By-Pass switches are together and do not come apart. The By-Pass Switch, one (1) for each circuit, is located on the Vend Motor Assembly secured by two (2) screws. This switch is a by-pass around the Vend Motor Switch to keep the Coin Changer circuit closed if the Vend Motor stops or is stopped when the arm of the Vend Motor Switch is top side of the vending cam, i.e., all other vending circuits are operative.

HOW THE VENDING MECHANISM WORKS (Cont.)

– ELECTRICAL PARTS – (Cont.)

BY–PASS SWITCH (Cont.)

The N.O. contact of the By-Pass Switch, there is no N.C. (held closed by the vending cam), is in the Coin Changer Circuit. Shortly after the beginning of the vending cycle, the arm of the switch (worked by the vending cam) drops into the Cam notch and this N.O. contact opens in the Coin Changer Circuit. When the arm of the switch reaches top-side of cam this N.O. contact closes in the Coin Changer circuit and is still closed at end of the vending cycle.



VEND RELAY

VEND RELAY SWITCH NO. 1 N.C. (There is no N.O.)

The N.C. contact of Vend Relay Switch No. 1 is the Coin Changer Circuit. This N.C. contact opens and breaks the Coin Changer Magnet Circuit.

VEND RELAY SWITCH NO. 2 N.O. (There is no N.C.)

The N.O. contact of Vend Relay Switch No. 2 is in each of the Vend Motor Coil Circuits. This N.O. contact closes in the Vend Motor Coil Circuits to set up these circuits so that a selection can be made.

VEND RELAY NO. 3 N.O. (There is no N.C.)

The N.O. contact of Vend Relay Switch No. 3 is in the Vend Relay Coil Circuit. This N.O. contact closes in and keeps the Vend Relay Coil Circuit completed.

HOW THE VENDING MECHANISM WORKS (Cont.)

VENDING CYCLE AND

Study-

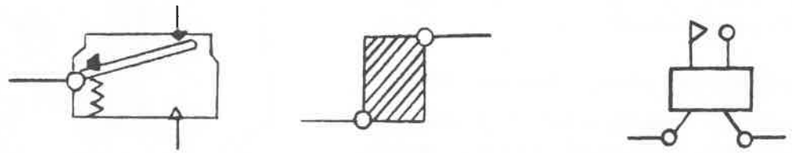
ACROSS THE LINE WIRING DIAGRAM

Study the written vending cycle beginning on Page 15 in connection with the across the line wiring diagram. The Across the Line Wiring Diagram can serve as an excellent "trouble shooting chart".

Example: Vender accepts coin.
Vender relay is energized but immediately "pops" out.

Do This: Look at Across The Line Wiring Diagram and locate:

1. coin vend switch
2. vend relay
3. vend relay switch No. 3



Observations:
1. Vend relay coil is the affected circuit.
2. N.O. coin vend switch is in the vend relay coil circuit.
3. N.O. Vend Relay Switch No. 3 is the "holding switch" for this circuit.

Conclusions:
1. N.O. Vend Relay Switch No. 3 did not "hold" or keep the circuit closed.

WHY:

Check:
1. Gap between contacts (too far apart).
2. Dirt between contact.
3. Weak coil on Vend Relay.

HOW THE VENDING MECHANISM WORKS (Cont.)

*– VEND CYCLE – (Cont.)

WHAT DOES IT	WHAT HAPPENS
The Vending Cam A coin	Pushes the coin vend switch arm down and;
The N.O. contact of the coin vend switch	Closes and completes the vend relay coil circuit.
The Vend Relay Coil	Closes the N.O. contact of Vend Relay Switch No. 3 in the Vend Relay Coil Circuit and at the same time, Closes the N.O. Contact of Vend Relay Switch No. 2 in the vend motor coil circuits. Opens the N.C. contact of Vend Relay Switch No. 1 in the Coin Changer Magnet Circuit and at the same time,
A spring (in the coin vend switch)	Pulls the vend switch arm back up and,
The N.C. contact of the coin vend switch	Closes in the Vend motor coil circuit,
The customer	Pushes a select button
The select button	Works the N.O. contact of the select switch
The N.O. contact of the select switch	Closes and completes the vend motor coil and the sold out lamp circuit, and
The vend motor	Starts to run and at the same time,
The N.C. contact of the select switch	Opens in the select panel circuit, and at the same time
The Vending Cam	Works the arm of the cam hold switch --- the arm drops into the cam's notch
The N.O. contact of the Cam Hold Switch (held closed by cam)	Opens in the Control Panel Circuit and at the same time,
The N.C. contact of the Cam Hold switch	Closes in the Vend Motor Coil Circuit to keep the motor turning and at the same time,

*Refer to Across the Line Wiring Diagram:

HOW THE VENDING MECHANISM WORKS (Cont.)

*– VEND CYCLE – (Cont.)

WHAT DOES IT	WHAT HAPPENS
The Vending Cam	Works the arm of the by-pass switch --- the arm drops into the cam's notch and,
The N.O. contact of the by-pass switch (held closed by cam)	Opens in the Coin Changer Circuit and,
The Vending Cam	Works the arm of the vend motor switch --- the arm rises to high side of cam and
The N.O. contact of the Vend Motor Switch	Closes in the Vend Motor Coil Circuit to keep the Vend Motor running and at the same time
The N.C. contact of the Vend Motor Switch	Opens and breaks the vend relay coil circuit and,
The N.O. contact of Vend Relay Switch No. 3	Opens in the vend relay coil circuit and at the same time,
The N.C. contact of Vend Relay Switch No. 1	Closes in the Coin Changer circuit and the arm of the by-pass switch and the cam hold switch ride to high side of cam and,
The N.O. contact of Vend Relay Switch No. 2	Opens in the Vend Motor Coil Circuits and rapidly thereafter
The N.O. contact of the by-pass switch	Closes in the Coin Changer Circuit and at the same time.
The N.O. contact of the Cam hold switch	Closes in the Control Panel Circuit and at the same time.
The N.C. contact of the Cam hold switch	Opens in the Vend Motor Coil Circuit and,
The Vending Cam	Continues to work the arm of the vend motor switch and the arm drops into the cam notch and
The N.O. contact of the Vend Motor Switch	Opens and breaks the Vend Motor Coil Circuit --- the Motor stops and the auger stops and,
The N.C. contact of the Vend Motor Switch	Closes in the Coin Changer Circuit.

*Refer to Across the Line Wiring Diagram:

HOW TO TAKE CARE OF THE VENDER

– WHAT TO CLEAN –

CABINET

Wash the vender exterior with either soap and warm water or a good detergent and warm water.

Wash all plastic parts with a mild soap and warm water.

The vender should be waxed often with a good grade of automobile wax.

Any corrosion inside the vender should be removed with fine steel wool and the area should be painted with aluminum paint.

Keep the condenser clean.

SLUG REJECTOR

Use a clean cloth to remove loose dirt. A dirty rejector should be cleaned with hot water and a good detergent. Dry it with a clean cloth.

Lubricate only the moving parts of the slug rejector. Oil should not be used on these moving parts.

– WHEN AND WHAT TO LUBRICATE –

HOW OFTEN	PART	LUBRICANT
Every six months	Main Door	
	1. Lock bolt and nut retainer	Mechanics Friend
	2. Hinge pivot points	Mechanics Friend
Every year	3. Door gasket, hinge side	Slipicone
Every six months	Inner Door	
	1. Latch assembly	Mechanics Friend
	2. Hinge pivot points	Mechanics Friend

HOW TO TAKE CARE OF THE VENDER (Cont.)

– THINGS TO ADJUST – (Cont.)

TEMPERATURE CONTROL – Ranco No. A12-1558
Cutler Hammer No. 9531N43

This is a "Constant Cut In" type of control which has two (2) adjustments: They are:

1. The temperature control cam on the outside of the temperature control box.
2. The inside range screw which is under the fibre cover of the temperature control box of the RANCO, and on the side wall of the Cutler Hammer (near terminal cover).

NOTE: The differential screw located between the terminals of the control is sealed and MUST NOT BE CHANGED.

As to No. 1 Adjustment:

The temperature control cam is set in an approximate neutral position. It can be used to make cut out temperature colder by turning the cam clockwise - or - to make the cut out temperature warmer by turning the cam counter clockwise. When the cam is used the cut in temperature (which governs the defrost) remains constant.

As to No. 2 Adjustment:

The inside range screw or screws are used for the altitude adjustment, see altitude below. This screw adjusts both the cut out and cut in settings on the RANCO. It may also be used for colder temperature by turning the screw counter clockwise or warmer by turning screw clockwise.

On the Cutler Hammer there are two (2) screws provided, one (1) for cut in and one (1) for cut out, both must be adjusted for altitude corrections. For temperature adjustment, turn screws clockwise for colder and counter clockwise for warmer. When adjusting for temperature DO NOT TURN more than 1/8 of a turn at a time. Let the machine run over night before making further adjustment.

TEMPERATURE CONTROL ALTITUDE ADJUSTMENT

Control is factory set at altitude of 500 ft. For higher altitudes, control should be adjusted to prevent freeze-up of product. Adjust inside range screw as follows:

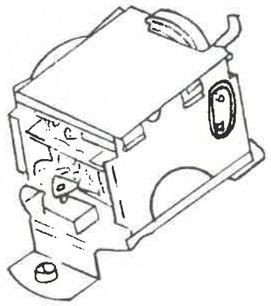
ALTITUDE FT.	RANCO SCREW CLOCKWISE	CUTLER–HAMMER BOTH SCREWS COUNTER–CLOCKWISE
2000	1/4 turn	1/8 turn
4000	1/2 turn	1/4 turn
6000	3/4 turn	1/2 turn
8000	1 turn	5/8 turn

HOW TO TAKE CARE OF THE VENDER (Cont.)

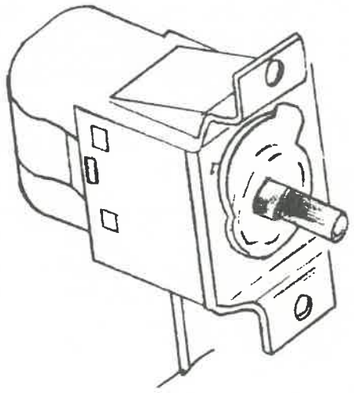
– THINGS TO ADJUST – (Cont.)

RANCO

TEMPERATURE CONTROL

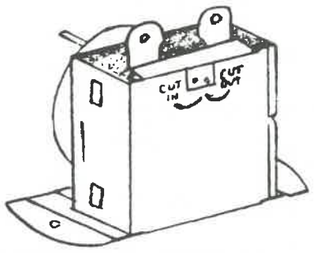


Inside
Range Screw

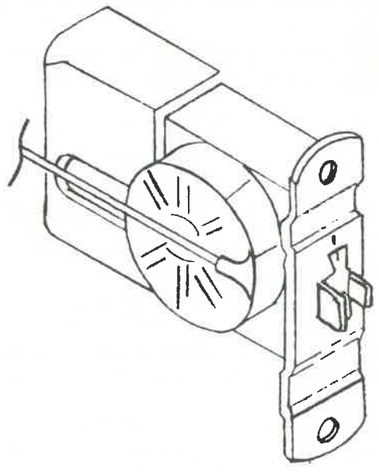


Outside
Range Screw

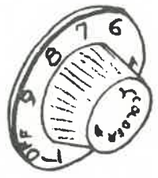
CUTLER – HAMMER



Inside
Range Screw



Outside
Range Screw



HOW TO CORRECT COMMON VENDING TROUBLES

– (1) ACCEPTS COINS WILL NOT VEND –

– (2) REJECTS ALL GOOD COINS –

It should be remembered that when one (1) or more circuits become inoperative on a Dixie-Narco Vender that has been operating satisfactorily, it is usually (1) component that has failed, and it is with this in mind that the accompanying trouble shooting schematic is presented.

Control Panel
Electrical Feed
Thru NC's of Each Select Switch

Fig. 1

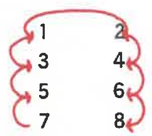


Fig. 2

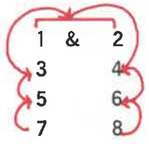


Fig. 3

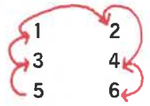


Fig. 4

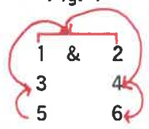


Fig. 5

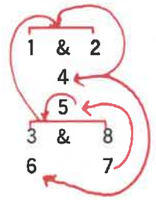


Fig. 6

Magnum

(CONTROL PANEL: Select Button and Select Switch Location)

The control panels shown represent some of the panels used on Dixie-Narco venders.

IMPORTANT to keep in mind is the feed of electrical current thru the select switches. The electrical feed always begins with the largest odd number and proceeds as:

7, 5, 3, 1, 2, 4, 6, 8 (Fig. 1)
or
7, 5, 3, 1 & 2, 4, 6, 8 (Fig. 2)
or
5, 3, 1, 2, 4, 6 (Fig. 3)
or
5, 3, 1 & 2, 4, 6 (Fig. 4)

On the inside of the Control Panel, all select buttons and switches are numbered. If not numbered, then Push Button arrangement is as shown in (1) one of the foregoing diagrams, i.e. Figures 1, 2, 3, or 4.

Figure 5: Figure 5 represents a Control Panel in actual use on a production model vender. (There are other Control Panels similar to it.) The Control Panel is shown to emphasize the need to know the actual location of the various Push Button Select Switches so that the electrical feed can be followed from select switch to select switch as already outlined i.e., 7, 5, 3, 1, 2, 4, 6, 8.

HOW TO CORRECT COMMON VENDING TROUBLES
(1) ACCEPTS COINS WILL NOT VEND
(Accepts coins - will not vend from one (1) or more circuits)

Although all circuit problems are not necessarily found to be (1) one or more inoperative select switches, the examples listed below are typical of select switch problems occuring in the control panel.

Refer to Figure 1:

PROBLEM 1: Selections 7 and 5 work.
Selections 3, 1, 2, 4, 6, and 8 do not work.
Selections 3, 1, 2, 4, 6, and 8 do not work.
Recall the feed of electrical current at 7, 5, 3, 1, 2, 4, 6, and 8.

ANSWER: Check N.C. & C. of Select Switch 5.

PROBLEM 2: Selection 7 works.
Selections 5, 3, 1, 2, 4, 6, and 8 do not work.
Recall the feed of electrical current.

ANSWER: Check N.C. & C. of Select Switch 7.

PROBLEM 3: Selections 7, 5, 3, 1, 2, 4, and 6 work.
Selection 8 does not work.
Recall the feed of electrical current.

ANSWER: Check N.C. & C. of Select Switch 6.
Check N.O. & C. of Select Switch 8.

Refer to Figure 2:

PROBLEM 4: Selection 7 works.
Selections 5, 3, 1, 2, 4, 6, and 8 do not work.
Recall the feed of electrical current.

ANSWER: Check N.C. & C. of Select Switch 7.

PROBLEM 5: Selections 7, 5, 3, 1 & 2 work.
Selections 4, 6, and 8 do not work.
Recall the feed of electrical current.

ANSWER: Check N.C. & C. of Select Switch 1 & 2.
(The symbol ⌐——¬, i.e., 1 & 2, indicates that one select switch serves two circuits.)

Refer to Figure 3:

PROBLEM 6: Selection 5 works.
Selections 3, 1, 2, 4, and 6 do not work.
Recall the feed of electrical current.

ANSWER: Check N.C. & C. of Select Switch 5.

HOW TO CORRECT COMMON VENDING TROUBLES

– (1) ACCEPTS COINS WILL NOT VEND –

– (2) REJECTS ALL GOOD COINS –

It should be remembered that when one (1) or more circuits become inoperative on a Dixie-Narco Vender that has been operating satisfactorily, it is usually (1) component that has failed, and it is with this in mind that the accompanying trouble shooting schematic is presented.

Control Panel
Electrical Feed
Thru NC's of Each Select Switch

Fig. 1

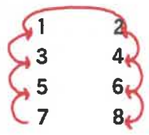


Fig. 2

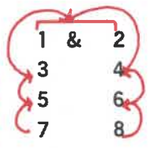


Fig. 3

Fig. 4

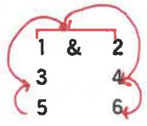


Fig. 5

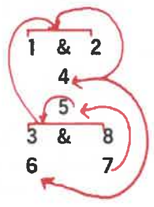


Fig. 6

Magnum

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or
7, 5, 3, 1 & 2, 4, 6, 8 (Fig. 2).
or
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or
5, 3, 1 & 2, 4, 6 (Fig. 4)

On the inside of the Control Panel, all select buttons and switches are numbered. If not numbered, then Push Button arrangement is as shown in (1) one of the foregoing diagrams, i.e. Figures 1, 2, 3, or 4.

Figure 5: Figure 5 represents a Control Panel in actual use on a production model vender. (There are other Control Panels similar to it.) The Control Panel is shown to emphasize the need to know the actual location of the various Push Button Select Switches so that the electrical feed can be followed from select switch to select switch as already outlined i.e., 7, 5, 3, 1, 2, 4, 6, 8.

HOW TO CORRECT COMMON VENDING TROUBLES
(1) ACCEPTS COINS WILL NOT VEND
(Accepts coins - will not vend from one (1) or more circuits)

– CONTINUED –

Refer to Figure 3:

PROBLEM 7: Selections 5, 3, and 1 work.
Selections 2, 4, and 6 do not work.
Recall the feed of electrical current.

ANSWER: Check N.C. & C. of Select Switch 1.

Refer to Figure 5:

PROBLEM 8: Selections 7 and 5 work.

Selections 3 & 8, 1 & 2, 4 and 6 do not work.
Recall the feed of electrical current.

ANSWER: Check N.C. & C. of Select Switch 5.

PROBLEM 9: Selections 7, 5, 3 & 8, 1 & 2 work.
Selections 4 and 6 do not work.
Recall the feed of electrical current.

ANSWER: Check N.C. & C. of Select Switch 1 & 2.

This symbol ⌐——¬ i.e., 1 & 2 and/or 3 & 8 indicates that one (1) Select Switch serves two (2) circuits.

Refer to Figure 4:

PROBLEM 10: Selections 5 and 3 work.

Selections 1 & 2, 4, and 6 do not work.
Recall the feed of electrical current.

ANSWER: Check N.C. & C. of Select Switch 3.

HOW TO CORRECT COMMON VENDING TROUBLES
– (1) ACCEPTS COINS WILL NOT VEND –
– (2) REJECTS ALL GOOD COINS –

PROBLEM 1: Accepts coins will not vend.

EXAMPLE:
#3 Selection will not vend.

Check:
N.O. of #3 Select Switch. (Note: If Sold Out Lamp comes on when button is pushed, select switch is OK.)

Check:
Sold Out Switch in vending circuit.
Check: Vend Motor.

PROBLEM 2: Rejects all good coins.

Coin changer will not accept coins - blocking fingers out.
Put product in each column.
Follow the red arrow WHICH IS THE DIRECTION OF FLOW OF ELECTRICAL CURRENT.

Do This:

1. Make sure product is in each column. Sold Out Lamps off.

2. Follow the red arrows from Left to Right.

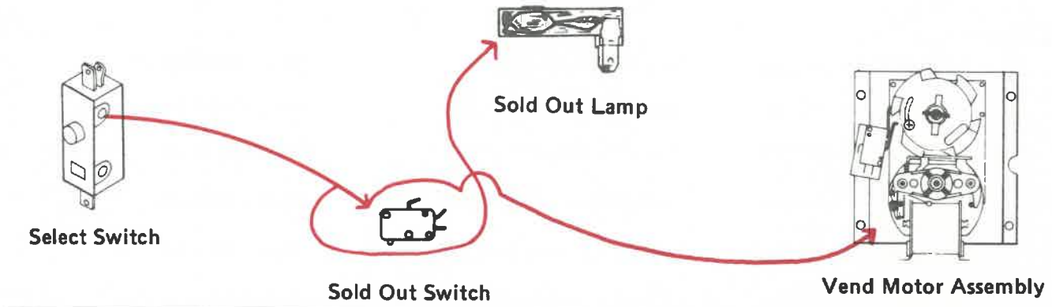
3. a. Push Vend Motor Switch - Motor F - Vend Motor Cycles.
   b. Push Vend Motor Switch - Motor E - Vend Motor Cycles.
   c. Push Vend Motor Switch - Motor D - Vend Motor Cycles.
   d. Push Vend Motor Switch - Motor C - Vend Motor does not cycle. Problem is Vend Motor Switch and By Pass Switch on Motor C and/or Motor D.
   e. If problem is not found, continue this procedure through Motors B and A.
   f. If problem is not found, replace Vend Relay.
   g. If problem is not found, the last component to check would be the coin changer.

HOW TO CORRECT COMMON VENDING TROUBLES

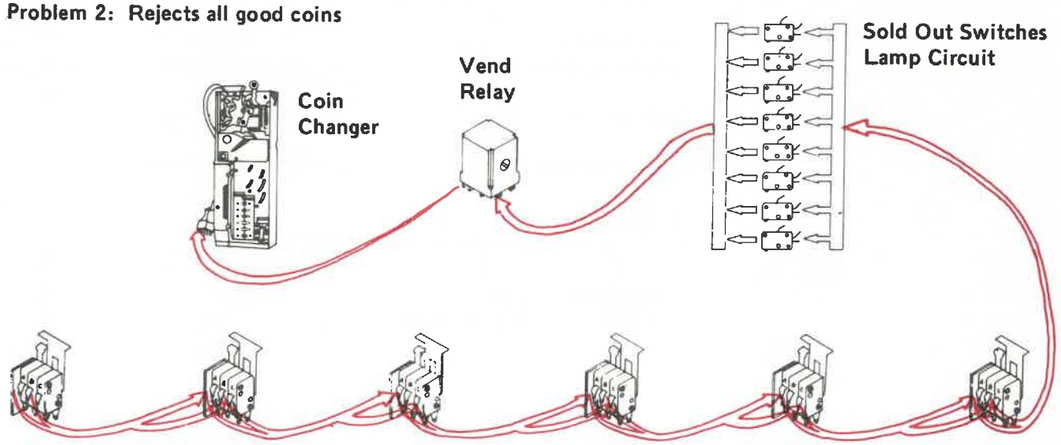
– (1) ACCEPTS COINS WILL NOT VEND –

– (2) REJECTS ALL GOOD COINS –

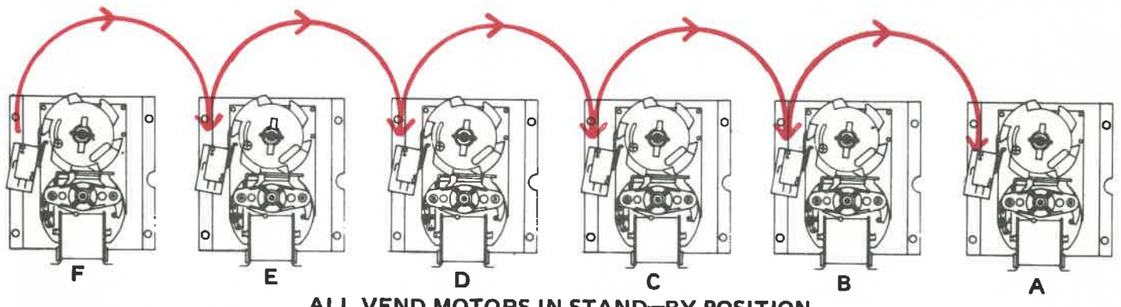
Problem 1: Accepts coins will not vend



Problem 2: Rejects all good coins



The written procedure on opposite page is a rapid check of both vend motor and bypass switches in the coin changer circuit.



ALL VEND MOTORS IN STAND–BY POSITION

The Red Arrows Show The Directions of Electrical Current Flow

HOW TO CORRECT COMMON VENDING TROUBLES

– (1) ACCEPTS COINS WILL NOT VEND –

Problem:

Set Up Credit | Push All Selections | No Vend

Do This:

1.	Unplug Coin Changer	Plug In Cheater Cord	Does Not Correct
2.	Remove Vend Relay	Install New Vend Relay	Does Not Correct
3.	Push each Vend Motor switch arm till motor runs and all arms are at bottom of notch. See Motors A through F. Follow Green Arrows	Depress Cheater Cord	Motor A Cycle
		Depress Cheater Cord	Motor B Cycle
		Depress Cheater Cord	Motor C Cycle

Example: If Motor C does not cycle then problem is Cam/Hold Switch on Motor C or Motor B.

Now Continue,

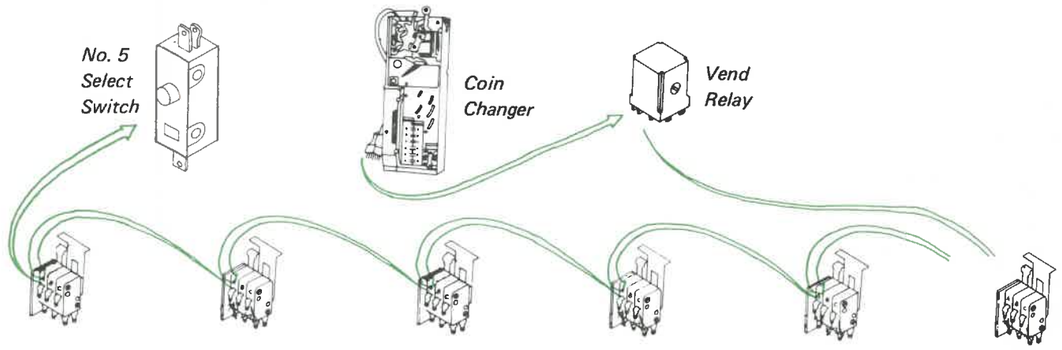
Depress Cheater Cord	Motor D Cycle
Depress Cheater Cord	Motor E Cycle
Depress Cheater Cord	Motor F Cycle

If still no correction,
Continuity test Cam/Hold Switch Motor F

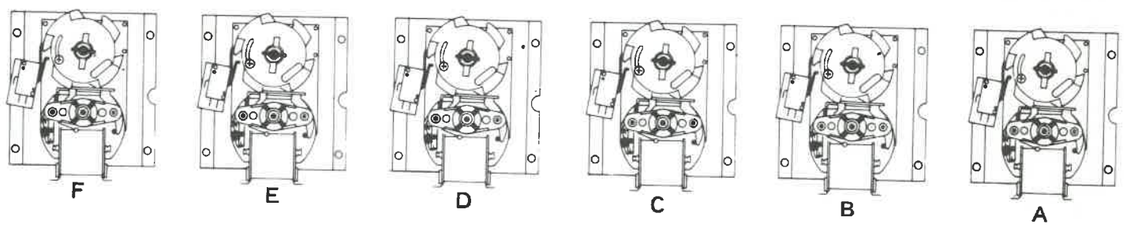
If still no correction,
Continuity test #5 Select Switch

HOW TO CORRECT COMMON VENDING TROUBLES

– (1) ACCEPTS COINS WILL NOT VEND –



THE GREEN ARROWS SHOW THE DIRECTION OF ELECTRICAL CURRENT FLOW



ALL SWITCH ARMS ARE SHOWN IN CAM NOTCH

HOW TO CORRECT COMMON VENDING TROUBLES

– REJECTS ALL GOOD COINS –

A POSSIBLE CAUSE IS	TO MAKE SURE	THIS IS WHAT TO DO
Vender not plugged in	Look, if not	Plug the vender in.
Slug rejector is neither vertical nor level.	Look at it and try a coin. If coin is rejected.	Level the vender.
Blocking fingers remain in coin path.	Remove the Slug Rejector - unplug the vender. Touch prods of test lamp to either side of electro magnet coil, lamp should light, if it doesn't,	Put in a new coil or magnet coil assembly.
The coin paths are dirty	Remove the slug rejector, look at it, if it is dirty,	Clean it with warm water, a good detergent. Dry it thoroughly.
The slug rejector is out of adjustment or the scavenger gate is not closed.	Remove the slug rejector. Put a coin in, if it rejects the coin,	Adjust the slug rejector.
Low voltage.	Check with a volt-meter, if voltage is low,	Correct with location outlet.
N.C. contact of Vend Relay Switch No. 1.	Put prods of test lamp to N.C. and C. contact. Lamp should light, if it doesn't,	Clean contact with approved cleaner or install new relay.
*N.O. contact of By-Pass Switch and	Push switch arm back - put prods of test lamp to N.O. and C. contact Lamp should light, if it doesn't,	Replace switch.
*N.C. contact of Vend Motor Switch.	Put prods of test lamp to N.C. and C. contact. Lamp should light, if it doesn't,	Replace switch.

*These two (2) switches combined and in the same circuit can break the circuit to the Coin Changer.

HOW TO CORRECT COMMON VENDING TROUBLES (Cont.)

– ACCEPTS COINS BUT DOES NOT LET A PACKAGE VEND FROM ANY COLUMN –

A POSSIBLE CAUSE IS	TO MAKE SURE	THIS IS WHAT TO DO
Vend Switch Coin Changer.	Put the prods of a test lamp to N.C. and C. contacts. Lamp should light, if it doesn't,	Put in a new Vend Switch.
Vend Switch Coin Changer.	Put the prods of a test lamp to N.O. and C. contacts. Push the switch arm down, lamp should light, if it doesn't,	Put in a new Vend Switch.
Vend Relay Coil.	Put the prods of a test lamp to either side of the coil. Lamp should light, if it doesn't,	Put in a new Vend Relay.
N.O. contact of Vend Relay Switch No. 2.	Energize Vend Relay Coil. If contact does not touch or if it touches but still inoperative,	Clean contact with approved cleaner or put in new relay.
N.C. contact of Select Switch No. 5.	Put the prods of a test lamp to N.C. and C. contacts. Lamp should light, if it doesn't,	Put in a new Select Switch.
N.O. contact of any cam hold switch.	Push switch arm back. Put prods of test lamp to N.O. and C. Lamp should light, if it doesn't,	Put in a new Cam hold Switch.
N.O. contact of Vend Relay Switch No. 3.	Energize Vend Relay Coil. If contact does not touch or it touches and then opens,	Clean contact with approved cleaner or put in new relay.

HOW TO CORRECT COMMON VENDING TROUBLES (Cont.)

– ACCEPTS COINS BUT DOES NOT LET A PACKAGE VEND FROM A GIVEN COLUMN –

A POSSIBLE CAUSE IS	TO MAKE SURE	THIS IS WHAT TO DO
Vend Motor.	Put the prods of a test lamp to either side of the coil. Lamp should light, if it doesn't,	Put in a new vend motor.
N.O. contact of Vend Motor Switch.	Push switch arm back. Put the prods of a test lamp to N.O. and C. contacts. Lamp should light, if it doesn't,	Put in a new vend motor switch.
N.O. contact of Vend Motor Switch.	Put the prods of a test Lamp to N.O. and C. contacts. Lift switch arm up, lamp should light, if it doesn't,	Put in a new switch.
N.O. contact of a Select Switch.	Push switch arm back. Put the prods of a test lamp to N.O. and C. contacts. Lamp should light, if it doesn't,	Put in a new switch.
N.C. contact of a Sold Out Switch in a Vending Circuit.	Put the prods of a test lamp to N.C. and C. contacts. Lamp should light, if it doesn't,	Put in a new switch.
N.C. contact Coin Vend Switch.	Put the prods of a test lamp to N.C. and C. contacts. Lamp should light, if it doesn't,	Put in a new Vend Switch.
N.O. contact of Vend Relay Switch No. 2.	Energize Vend Relay Coil. If contact does not touch or if it touches and then opens.	Clean contact with "Cobehn" or put in new relay.

HOW THE REFRIGERATION SYSTEM WORKS

– MECHANICAL PARTS –

COMPRESSOR MOTOR

The compressor motor (sealed in the compressor housing) drives the compressor with a shaft that is shared by both parts.

COMPRESSOR

The compressor (sealed in the compressor housing) sucks cold, low pressure freon gas from the evaporator and pumps hot, pressure freon gas out to the condenser.

CONDENSER

The condenser, located in the base of the vender, at the front, takes heat out of the hot, high pressure gas that comes from the compressor. The gas loses heat as it goes through the condenser coils, and changes into a liquid because it is still under high pressure.

CONDENSER FAN

The condenser fan (between the condenser and motor compressor) first sucks air from the outside of the vender through the condenser. This air takes heat from the condenser first and then is blown over the compressor housing from which it also takes heat before going back outside of the vender. The condenser fan runs when the motor compressor runs.

MOLECULAR STRAINER DRYER

The molecular strainer dryer is in the liquid line between the condenser and the capillary tube. This dryer traps and holds water molecules but lets oil molecules and freon molecules go through into the capillary tube.

CAPILLARY TUBE

The capillary tube (between the condenser and the evaporator in the refrigerant line) has a very small inside diameter, so the flow of the liquid freon from the condenser into the evaporator is slow, but steady, even with the pressure the compressor builds up in the condenser. This helps to keep the pressure in the evaporator low.

HOW THE REFRIGERATION SYSTEM WORKS (Cont.)

– ELECTRICAL PARTS – (Cont.)

EVAPORATOR

The evaporator (in the vender cabinet) takes heat from the air in the vender cabinet and gives this heat to the liquid refrigerant. The liquid refrigerant is evaporated (boiled off) as a gas, and the gas is sucked out by the compressor and so the pressure is kept low.

EVAPORATOR FAN

The evaporator fan sucks warm air from around the cans or bottles in the cooling compartment and blows it across the evaporator. As the air goes across the evaporator, it gives up heat to the evaporator. As the air goes across the evaporator, it gives up heat to the evaporator, then goes back to the cans or bottles, and takes heat from them. This fan runs all the time when the vender is plugged in.

CONDENSATE PAN

The condensate pan (located in the compressor compartment) collects the water which runs from the vender during the defrost cycle. The water is evaporated into the surrounding air by means of soakers, and the air movement resulting from the condenser fan blade rotation. The soakers extend down into the pan to absorb the water. Exposure to the surrounding air vaporizes the water in the soakers, and the water vapor is carried into the air by the action of the condenser fan blade.

– ELECTRICAL PARTS –

TEMPERATURE CONTROL

The temperature control is the name of a part that is made up of a control bulb connected by a small metal tube to a bellows. The control bulb is in a tube back of the evaporator. The bellows and a switch known as the temperature control switch are in the temperature control box which is fastened to the right side inside the vender.

The control bulb and the bellows have a vapor in them. When the temperature of the vapor in the bulb rises, it builds up pressure in the bellows tube. This pushes the bellows out, makes it longer. When the control bulb is cool, the vapor shrinks back, and the bellows pull in and get shorter. These movements of the bellows work the switch — called the temperature control switch — closing it when the bulb is heated and opening it when the bulb is closed.

HOW THE REFRIGERATION SYSTEM WORKS (Cont.)

– ELECTRICAL PARTS – (Cont.)

TEMPERATURE CONTROL (Cont.)

The contacts of the temperature control switch are in the compressor motor's running and starting circuits. They are also in the condenser fan motor circuit.

When the cabinet temperature gets up to the cut-on setting, the temperature control switch closes in the compressor motor's starting and running circuits and in the condenser fan circuit. When the cabinet temperature gets down to the cut-off setting, the temperature control switch opens in these circuits.

CAUTION: To adjust temperature control see pages 18 and 19 "Things to Adjust".

STARTING RELAY

The starting relay (in the terminal box on the side of the compressor shell) is an electromagnetic relay whose contacts are closed by the magnetic field of the relay coil, and are opened by gravity. It is made up of a relay coil and one set of contacts. The relay coil is in the running circuit of the compressor motor. The relay contacts are in the compressor motor's starting circuit and can complete or break only that circuit.

When the compressor motor and the condenser fan motor first start, the starting relay closes and completes the compressor motor starting, winding circuit. After the compressor motor gets up speed, the starting relay is opened by the force of gravity and the starting winding circuit is broken.

COMPRESSOR MOTOR

The compressor motor (sealed in the compressor housing) runs the compressor. It is started by the temperature control switch, the starting relay and the thermal overload switch. It is stopped by the temperature control switch, and, if it gets overloaded, by the thermal overload switch.

HOW THE REFRIGERATION SYSTEM WORKS (Cont.)

– ELECTRICAL PARTS – (Cont.)

THERMAL OVERLOAD ASSEMBLY

The thermal overload assembly (in the terminal box on the side of the compressor shell) is the name of a part that is made up of a switch (the thermal overload switch) and a heating wire. The heating wire is in the compressor motor's running and starting circuits. The thermal overload switch can complete or break the compressor motor's starting circuit and running circuit. If the compressor motor gets too warm, or draws too much current (which will make the heating wire get hot) the heat makes the thermal overload switch open in the running and starting circuit of the compressor and break those circuits. When the thermal overload assembly, the motor, and the compressor shell have all cooled enough to run safely, the thermal overload switch closes in these circuits and completes them.

CONDENSER FAN MOTOR

The condenser fan motor (between the condenser and the motor compressor) runs a fan that sucks air through the condenser coils. It starts when the temperature control switch is closed and it stops when the temperature control switch is open.

HOW THE REFRIGERATION SYSTEM WORKS (Cont.)

– ELECTRICAL OPERATION –

WHAT DOES IT	WHAT HAPPENS
WHEN THE VENDER TEMPERATURE GETS UP TO THE CUT-ON SETTING	
The temperature control switch	Closes in the running winding circuit of the compressor motor and completes that circuit.
	Closes in the starting relay coil circuit, and completes that circuit.
	Closes in the starting winding circuit of the compressor motor.
	Closes in the condenser fan motor circuit, completing the circuit.
THE HEAVY CURRENT, DRAWN BY THE RUNNING WINDING, ALSO FLOWS IN THE STARTING RELAY COIL, AND:	
The starting relay coil	Closes the starting relay contacts in the starting winding circuit of the compressor motor, completing that circuit.
WHEN THE COMPRESSOR MOTOR GETS UP TO SPEED	
The force of gravity	Pulls the starting relay contacts apart because
The starting relay coil	No longer gets enough current to hold the contacts closed, and
The starting relay contacts	Open in the starting winding circuit of the compressor motor, and break that circuit.
IF EITHER THE COMPRESSOR MOTOR OR THE CONDENSER FAN DRAWS TOO MUCH CURRENT AND CAUSES THE THERMAL OVERLOAD ASSEMBLY TO GET TOO WARM	
The thermal overload switch	Opens in the running winding circuit and the starting winding circuit of the compressor motor, and breaks both those circuits.
	Opens in the condenser fan motor circuit, and breaks that circuit.

HOW THE REFRIGERATION SYSTEM WORKS (Cont.)

– ELECTRICAL OPERATION – (Cont.)

WHAT DOES IT	WHAT HAPPENS
WHEN THE THERMAL OVERLOAD ASSEMBLY COOLS DOWN AGAIN	
The thermal overload switch	Closes in both the running winding circuit and the starting winding circuit of the compressor motor. Closes in the condenser fan motor circuit, and completes that circuit
WHEN THE VENDER TEMPERATURE GETS DOWN TO THE CUT-OFF SETTING	
The temperature control switch	Opens in the running winding circuit of the compressor motor, and breaks that circuit. Opens in the starting relay coil circuit, and breaks that circuit. Opens in the starting winding circuit of the compressor motor.

HOW THE REFRIGERATION SYSTEM WORKS (Cont.)

– ELECTRIC CIRCUITS AND CIRCUIT DIAGRAMS –

CONDENSER FAN CIRCUIT

SWITCHES IN THE WIRING	WHAT THE SWITCHES DO	WHAT MAKES THE SWITCHES WORK
Temperature control switch	Turns the condenser fan motor on and off.	The temperature in the vender has come up to the cut-on point (or gotten down to the cut-off point) set on the temperature control.

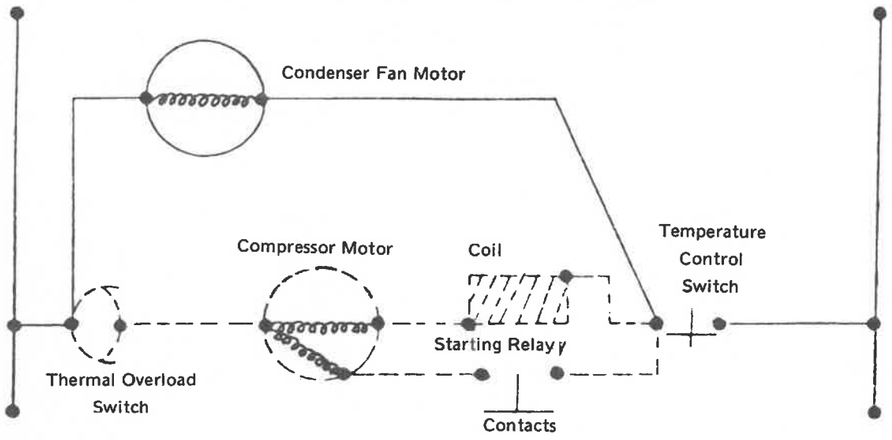
COMPRESSOR MOTOR RUNNING WINDING CIRCUIT

SWITCHES IN THE WIRING	WHAT THE SWITCHES DO	WHAT MAKES THE SWITCHES WORK
Thermal overload switch	Turns the running windings of the compressor motor on.	Current drawn by the motor or heat from the compressor can raise the temperature of the thermal overload assembly and make the thermal overload switch cut off.

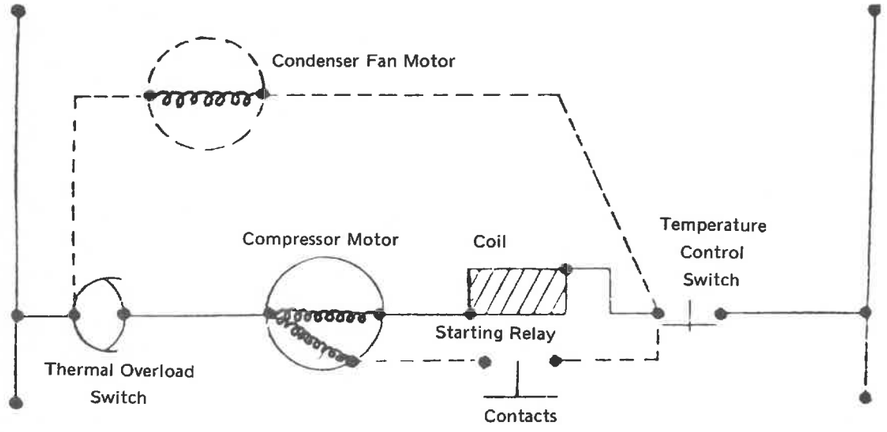
HOW THE REFRIGERATION SYSTEM WORKS (Cont.)

– ELECTRIC CIRCUITS AND CIRCUIT DIAGRAMS – (Cont.)

CONDENSER FAN CIRCUIT DIAGRAM



COMPRESSOR MOTOR RUNNING WINDING CIRCUIT DIAGRAM



HOW THE REFRIGERATION SYSTEM WORKS (Cont.)

– ELECTRIC CIRCUITS AND CIRCUIT DIAGRAMS – (Cont.)

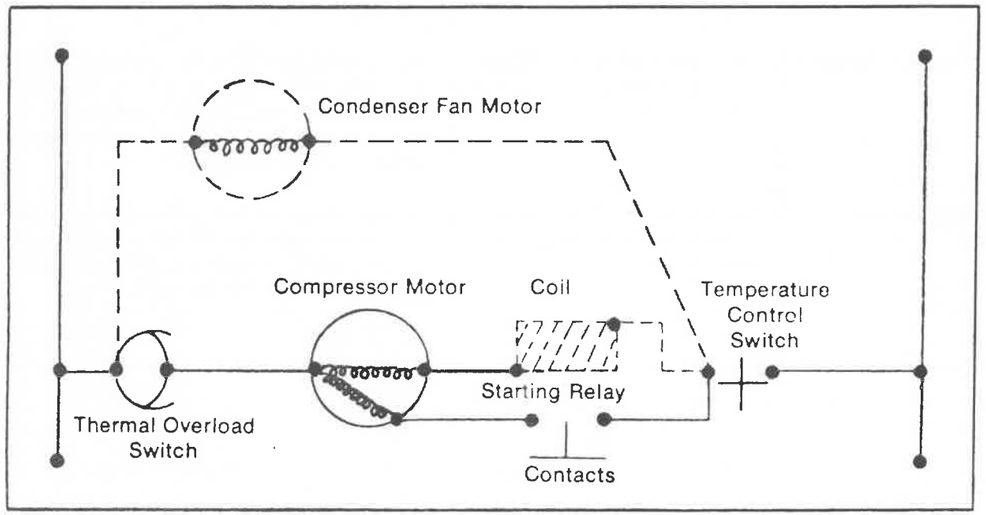
COMPRESSOR MOTOR STARTING WINDING CIRCUIT

SWITCHES IN THE WIRING	WHAT THE SWITCHES DO	WHAT MAKES THE SWITCHES WORK
Temperature control switch	Turns the starting windings of the compressor motor on.	The temperature in the vender has come up to the cut-on point set on the temperature control.
Starting relay contacts	Turns the starting windings of the compressor motor on and off.	The current drawn by the running winding of the compressor motor when it is first turned on also closes through the starting coil. This heavy current gives the relay coil enough power to close the contacts.
Thermal overload switch	Turns the starting windings of the compressor motor on and off.	Current drawn by the motor or heat from the compressor can raise the temperature of the thermal overload assembly and make the thermal overload switch open.

HOW THE REFRIGERATION SYSTEM WORKS (Cont.)

– ELECTRIC CIRCUITS AND CIRCUIT DIAGRAMS – (Cont.)

COMPRESSOR MOTOR STARTING WINDING CIRCUIT DIAGRAM



HOW THE REFRIGERATION SYSTEM WORKS (Cont.)

– REFRIGERATION CYCLE –

WHAT DOES IT	WHAT HAPPENS
The rising temperature in the vender	Warms the temperature control bulb and the liquid in it.
The liquid in the control bulb	Expands and pushes through the control tube and stretches the temperature control bellows.
The bellows	Moves, and closes the temperature control switch.
The temperature control switch	Turns the compressor motor on. Turns the condenser fan motor on.
The compressor motor	Drives the compressor.
The condenser fan motor	Drives the condenser fan.
The condenser fan motor	Sucks air through the condenser, cooling it.
The compressor	Sucks low pressure refrigerant gas from the evaporator, compresses the gas, and pumps it to the condensor.
The cooled condenser	Takes the heat out of the high pressure refrigerant gas.
The cooled gas	Turns into liquid refrigerant.
More hot gas coming from the compressor	Pushes the liquid refrigerant into the capillary tube.
The capillary tube	Lets only a certain amount of liquid refrigerant run into the evaporator.
The evaporator	(Where the pressure is kept low by the suction of the compressor) heats the liquid refrigerant.
The liquid refrigerant	Changes into gas at low pressure and is sucked below into the compressor.
The falling temperature in the vender	Cools the temperature control bulb and the liquid in it.

HOW THE REFRIGERATION SYSTEM WORKS (Cont.)

– REFRIGERATION CYCLE – (Cont.)

WHAT DOES IT	WHAT HAPPENS
The liquid in the control bulb	Shrinks, and lets the temperature control bellows pull back
The bellows	Move, and open the temperature control switch.
The temperature control switch	Turns the compressor motor off. Turns the condensor fan motor on.
The compressor	Stops.
The condenser fan motor	Stops.
(With the vender "Plugged In" the evaporator fan motor runs constantly)	

HOW TO TAKE CARE OF THE REFRIGERATION SYSTEM

– WHAT TO CLEAN –

Clean dirt and lint from the condenser with a brush, vacuum cleaner or compressed air

– WHEN AND WHAT TO LUBRICATE –

The refrigeration system is sealed up and does not have to be oiled or greased. Enough oil is put into the condenser and evaporator fan motors when they are manufactured to last as long as they will run.

– CORRECTING TROUBLES –

When the refrigeration system is not working right, go to the table called "Correcting Common Refrigeration Troubles" on the next pages. Find your trouble, see what the possible causes are, and try the tests (in the center column): they will let you know when you have the true cause of the trouble. When you have found the cause of the trouble, either make the adjustment, repair the part or put a new part in, whatever the table says to do. This table does not list all of the possible causes of any of the troubles — but it does have all of the common causes. If your vender has a trouble that is not shown on the chart, or the trouble is not the result of one of the causes shown on the chart, study the section on "How The Refrigeration Mechanism Works" and you will be able to find out what is wrong and fix it.

HOW TO CORRECT COMMON REFRIGERATION TROUBLES

TROUBLE

HOW TO CORRECT COMMON REFRIGERATION TROUBLES (Cont.)

THE COMPRESSOR WILL NOT RUN AT ALL

A POSSIBLE CAUSE IS	TO MAKE SURE	THIS IS WHAT TO DO
1. The vender is not plugged in.	Look, and if it isn't,	Plug the vender in.
2. The power is off	Plug a 110V lamp into the outlet, if it doesn't light.	Have someone who knows how, get power to the outlet.
3. The refrigeration unit is not made for the voltage it is getting.	Look at the nameplate on the vender to find out what voltage and cycle it is made for. Ask the local power company if they supply this kind of current. If they don't,	Put a vender in that is made for the kind of current you are getting.
4. A wire in the supply cord or control cable is broken.	Put the prods of 110V test lamp on terminal L of the starting relay and on terminal 3 of thermal overload switch (make sure the temperature control switch is closed). If it doesn't light,	Put a new supply harness on
5. The thermal overload switch is stuck open.	Unplug the vender for at least 15 minutes. Then plug the vender in and put the prods of a 110V test lamp on terminal L of the starting relay and on the common terminal of the compressor motor. If the lamp doesn't light,	Put a new thermal overload assembly in.
6. The temperature control bulb is either touching the evaporator or it is covered with ice and frost.	Look at it. If it is touching the evaporator or is covered with ice or frost	Defrost the evaporator and be sure the bulb is mounted right.

HOW TO CORRECT COMMON REFRIGERATION TROUBLES (Cont.)

THE COMPRESSOR WILL NOT RUN AT ALL (Cont.)

A POSSIBLE CAUSE IS	TO MAKE SURE	THIS IS WHAT TO DO
7. The temperature control bellows do not work.	Warm the temperature control bulb with your hand for about one minute. If the temperature control switch doesn't close,	Put a new temperature control in.
8. The temperature control switch contacts need cleaning.	Clean them and see if this helps	Clean the faces of the contacts with "Cobehn".
9. The starting relay contacts aren't closing.	Warm the temperature control bulb to close the temperature control switch. If the starting relay contacts don't close at the same time,	Check the relay out as explained in the next two steps. If they do close, skip the next two steps and go on to step twelve of this section.
10.	Put the prods of a 110V test lamp across M of the relay and 3 of the overload protector. If the lamp does not light.	Put in a new relay.
11. The starting relay contacts are stuck open.	Warm the temperature control bulb to close the temperature control switch. If the starting relay contacts don't close when the temperature control switch does,	Put a new starting relay in.
12. The compressor motor's starting or running winding is burned out.	Unplug the vender. Take all wires off the compressor terminals. Connect a 110V line to compressor motor terminals (C) and (R). At once, with an insulated wire, connect (for 2 seconds) compressor terminals (R) and (S). If the compressor does not start,	Put a new motor compressor in.

HOW TO CORRECT COMMON REFRIGERATION TROUBLES (Cont.)

THE COMPRESSOR STARTS, BUT WILL NOT KEEP RUNNING

A POSSIBLE CAUSE IS	TO MAKE SURE	THIS IS WHAT TO DO
1. The thermal overload switch opens every time, or almost every time, the compressor motor starts.	Wait until the compressor motor stops then unplug the vender and open the temperature control. See if switch is closed. If it is,	Check the "Possible Causes" in the next 6 steps. If it is not, skip the next 6 steps and go to step 8 of this section.
2. The tube from the compressor to the condenser is kinked or bent sharply.	Look, if it is,	Try to get the kink out
3. The capillary tube is kinked or bent sharply,	Look, if it is,	Try to get the kink out
	If this does not help and no other cause can be found for the trouble,	Put a new capillary tube on
4. The starting relay contacts are sticking closed.	Plug the vender back in. Then while the compressor is running see if the starting relay contacts stay closed. If they do,	Clean the relay contacts with "Cobehn".
	If the starting relay contacts stick closed again after cleaning.	Put a new starting relay in
5. The voltage at the vender is either too high or too low.	1. When an extension cord is not used on the supply cord. While the compressor is running put one prod of a volt meter on terminal (L) of the starting relay and the other prod on terminal (M) of the starting relay. If the voltage is not between 103V and 127V.	Have the person in charge of the vender tell the power company so they can take care of it.

HOW TO CORRECT COMMON REFRIGERATION TROUBLES (Cont.)

THE COMPRESSOR STARTS, BUT WILL NOT KEEP RUNNING (Cont.)

A POSSIBLE CAUSE IS	TO MAKE SURE	THIS IS WHAT TO DO
	2. When an extension is used on the supply cord. Put a double socket on the plug end of the extension and plug it into the outlet. While the compressor is running, put the prods of a volt meter into one of the other sides of the double socket. If the voltage is not between 103V and 127V.	Have the person in charge of the vender tell the power company so they can take care of it.
6. The cut-on temperature is set too close to the cut-off temperature.	Put a thermometer on the control bulb. Read the temperature when the refrigeration unit cuts on. Read the temperature again when it cuts off. If the two temperatures are less than 16°F apart.	Turn the outside range screw clockwise.
7. The thermal overload switch opens after the compressor has been running a short time but before the temperature control switch cuts off.	Wait until the compressor stops then unplug the vender and open the temperature control box to see if the temperature control switch is closed. If it is,	Check the "Possible Causes" in the next 3 steps.
8. Not enough air is getting to the condenser.	See if there is anything around the outside of the vender. If there is,	Take it away.
9. The condenser is dirty	Look. Also feel the tube from the compressor to the condenser. If the tube is very hot or if you see dirt on the condenser.	Clean the condenser with either a vacuum cleaner, a brush or compressed air.
10. The condenser fan motor is burned out.	With the condenser fan motor leads correctly connected to the compressor motor terminals (see wiring diagram) see if the condenser fan runs when the compressor does. If it doesn't,	Put a new condenser fan motor in.

HOW TO CORRECT COMMON REFRIGERATION TROUBLES (Cont.)

– THE COMPRESSOR RUNS BUT THE PACKAGES AREN'T COLD ENOUGH –

A POSSIBLE CAUSE IS	TO MAKE SURE	THIS IS WHAT TO DO
1. The evaporator fan is not working.	Look, if it is not working,	Check the "Possible Causes" in the next step. If it is working, skip the next step and go on to step 3 of this section.
2. The evaporator fan motor is burned out.	Remove black rubber junction block located on the fan motor bracket. Connect a 110V line to the evaporator fan motor leads. If the evaporator fan motor doesn't start,	Put a new evaporator fan motor in.
3. The temperature control cam is set too warm (high).	Turn the outside range screw of the temperature control clockwise to a colder setting and let the vender run over-night. If the cans/bottles get cold enough,	Leave the temperature control at that setting.
	If the cans/bottles did not get colder,	Put a new temperature control in.
4. The evaporator is covered with frost and ice.	Look at it,	Defrost the evaporator then check the "Possible Causes" in the next 2 steps. If it isn't, skip the next 2 steps and go to step 8 of this section.
5. The temperature control cam is set too cold and the evaporator is not defrosting.	Look at the evaporator for frost. If there is frost,	Turn the inside range screw.
	If the evaporator coil does not defrost on each cycle.	Turn the inside range screw.
	If, after the second setting, the coil still does not defrost.	Put a new temperature control in.

HOW TO CORRECT COMMON REFRIGERATION TROUBLES (Cont.)

– THE COMPRESSOR RUNS BUT THE PACKAGES AREN'T COLD ENOUGH (Cont.) –

A POSSIBLE CAUSE IS	TO MAKE SURE	THIS IS WHAT TO DO
6. The temperature control switch contacts stick closed.	If the unit runs all the time, and the evaporator builds up frost.	Put a new temperature control in.
7. The temperature control bulb sleeve is touching the evaporator.	Look at it, if it is touching the evaporator tube,	Bend the bracket so that there will be space between the bulb sleeve and the evaporator tube.
8. The control bulb is not in the sleeve (holder).	Look, if it is not,	Put the bulb in the sleeve (holder).
9. The temperature control bellows is not working,	Warm the temperature control bulb with your hand for about one minute. If the temperature control switch doesn't close,	Put a new temperature control in.
10. The refrigerant tubing is kinked or bent sharply,	Look, if it is,	Try to get the kink out.
	If this does not help and no other cause can be found for the trouble.	Put some new refrigerant tubing in.
11. There isn't enough refrigerant in the refrigeration system or the capillary tube is partly plugged.	Let the vender run at least 15 minutes and then see if the evaporator is frosted all over. If it isn't,	Try to blow the plug out of the capillary tube, evacuate the system and then put a new charge of gas in the refrigeration unit.
12. The condenser isn't getting enough air.	See if there is anything around the outside of the vender to keep the air out. If there is,	Take it away.
13. The condenser is dirty.	Look. Also feel the tube from the compressor to the condenser. If the tube is very hot, or if you see dirt,	Clean the condenser with either a vacuum cleaner, a brush or compressed air.

HOW TO CORRECT COMMON REFRIGERATION TROUBLES (Cont.)

– THE COMPRESSOR RUNS BUT THE PACKAGES AREN'T COLD ENOUGH (Cont.) –

A POSSIBLE CAUSE IS	TO MAKE SURE	THIS IS WHAT TO DO
14. The condenser fan motor is burned out.	With the condenser fan motor leads correctly connected to the compressor terminal, see if the condenser fan runs when the compressor does. If it doesn't,	Put a new condenser fan motor in.
15. The thermal overload switch is starting and stopping the compressor.	Unplug the vender for at least 15 minutes, then plug it in again. Be sure the temperature control switch is closed. (Warm the temperature control bulb with your hand to close it.) If the compressor motor cuts off then on, then off while the temperature control switch stays closed.	Check the "Possible Causes" in steps 16 and 17.
16. The voltage at the vender is either too high or too low.	1. When an extension is not used on the supply cord: While the compressor is running put one prod of a volt meter on terminal (S) of the starting relay and the other prod on terminal (L) of the starting relay. If the voltage is not between 103V and 127V.	Have the person in charge of the vender tell the power company so they can take care of it
	2. When an extension is used on the supply cord: Put a double socket on the plug end of the extension and plug it into the outlet. While the compressor is running, put the prods of a volt meter on terminal (S) of the starting relay and the other prod on terminal (L) of the starting relay. If the voltage is not between 103V and 127V.	Have the person in charge of the vender tell the power company so they can take care of it.

HOW TO CORRECT COMMON REFRIGERATION TROUBLES (Cont.)

– THE COMPRESSOR RUNS BUT THE PACKAGES AREN'T COLD ENOUGH (Cont.) –

A POSSIBLE CAUSE IS	TO MAKE SURE	THIS IS WHAT TO DO
17. The starting relay contacts are sticking closed.	Look and see, if they are,	Put a new starting relay in..
	THE PACKAGES ARE TOO COLD	
1. The temperature control bulb is not in its tube.	Look and see, if it isn't,	Put the bulb in its tube.
2. The temperature control cam is set too cold.	Turn the outside range screw of the temperature control cam counter-clockwise to a warmer setting and let the vender run over night. If the packages get cold enough but not too cold, unplug the vender and let the evaporator fan come to a stop.	Leave the temperature control cam at that setting
3. The temperature control switch is stuck closed.	Then block the fan blade so it can't turn. Remove the temperature control bulb from its tube and touch it to the evaporator tube. Plug the vender back in and let the compressor run until it cuts off, but not more than 30 minutes. If the vender has not cut off.	
	THE REFRIGERATION UNIT IS NOISY	
1. The refrigerant lines rattle.	Hold them between your fingers. If the rattle stops.	Bend them gently away from whatever they are hitting.

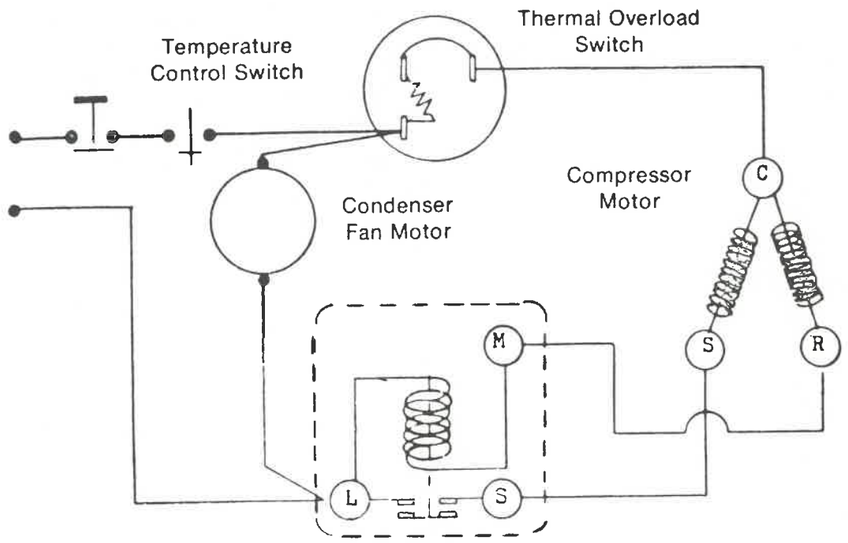
HOW TO CORRECT COMMON REFRIGERATION TROUBLES (Cont.)

THE COMPRESSOR MOTOR NEVER STOPS RUNNING

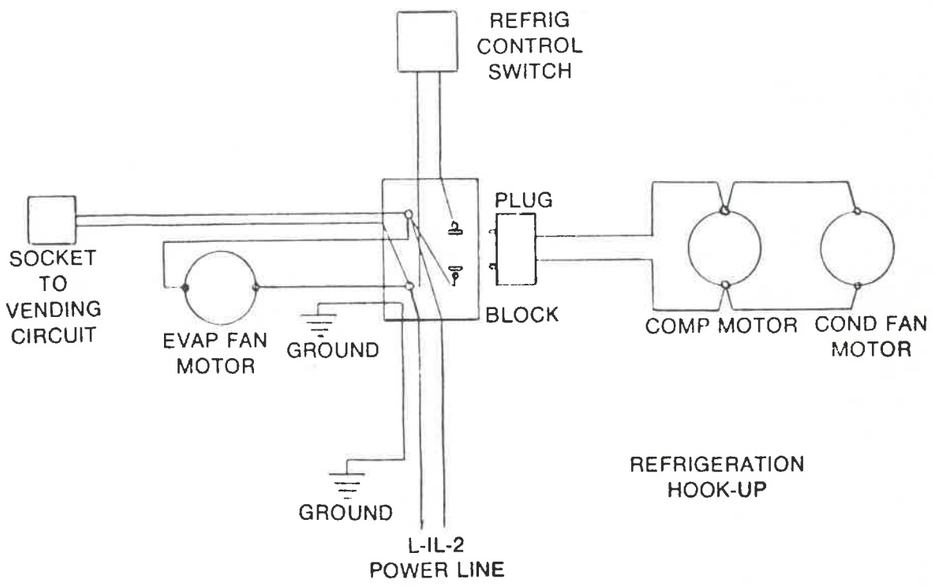
A POSSIBLE CAUSE IS	TO MAKE SURE	THIS IS WHAT TO DO
1. The temperature control switch is stuck closed.	Turn the inside range screw cam and the range screw to their warmest settings. Let the vender run overnight, or until it stops, if the compressor motor doesn't stop running,	Put a new temperature control in.
2. The compressor has a broken valve or no refrigerant in the refrigeration system.	The tube from the compressor to the condensor is not warm and the evaporator is not cold,	Put a new charge of refrigeration in the refrigeration unit.
	If this does not help,	Put a new motor compressor in the refrigeration unit.

HOW TO CORRECT COMMON REFRIGERATION TROUBLES (Cont.)

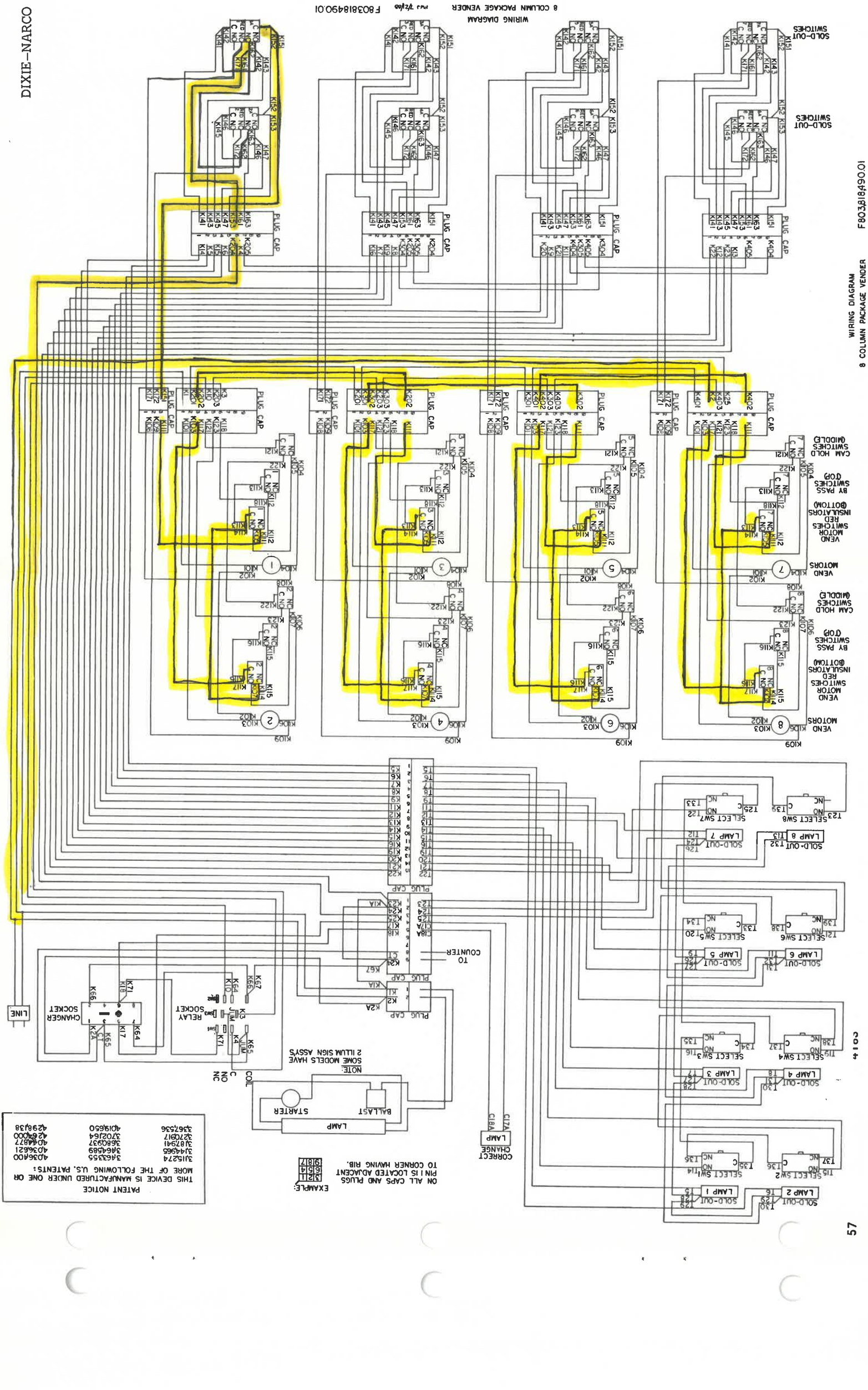
– WIRING DIAGRAM –



Starting Relay



REFRIGERATION
HOOK-UP

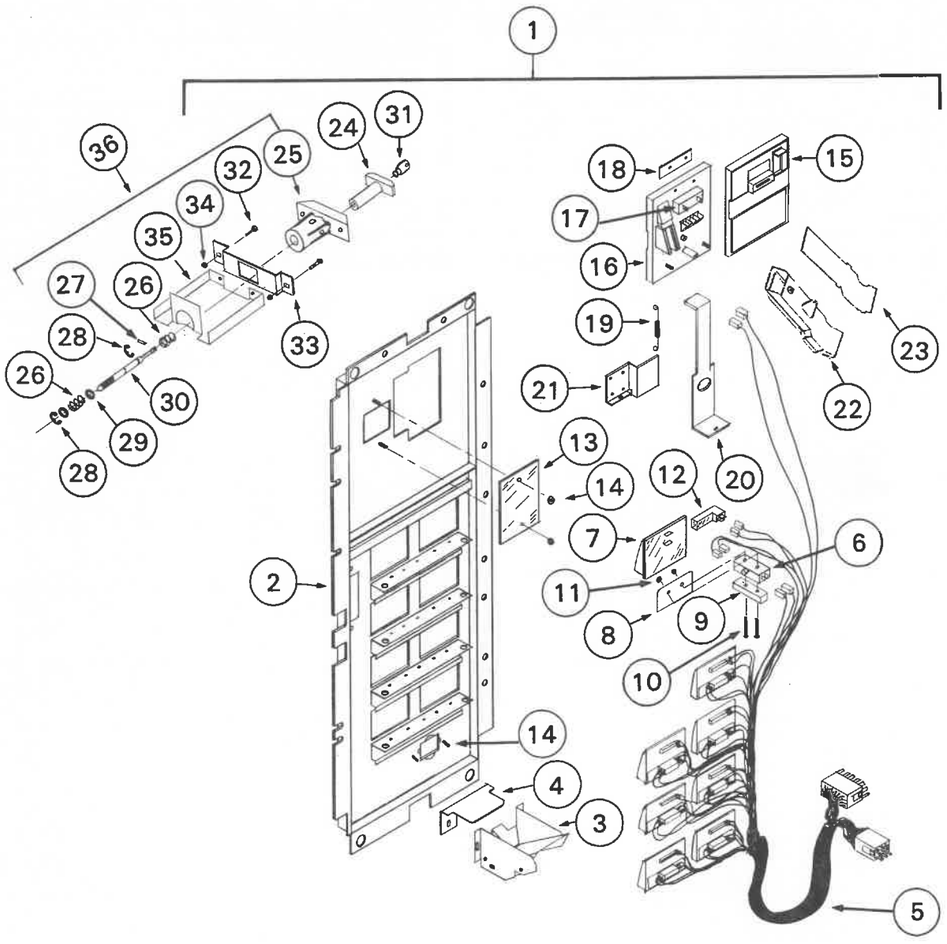

WIRING DIAGRAM
8 COLUMN PACKAGE VENDER
F803818490.01
SOLD-OUT SWITCHES
PLUG CAP
CAM HOLD SWITCHES (MIDDLE)
BY PASS SWITCHES (TOP)
VEND MOTOR SWITCHES
INSULATORS (BOTTOM)
RED
VEND MOTORS
LAMP 1
LAMP 2
LAMP 3
LAMP 4
LAMP 5
LAMP 6
LAMP 7
LAMP 8
SELECT SW1
SELECT SW2
SELECT SW3
SELECT SW4
SELECT SW5
SELECT SW6
SELECT SW7
SELECT SW8
TO COUNTER
LINE
CHANGER SOCKET
RELAY SOCKET
NOTE:
SOME MODELS HAVE
2 ILLUM SIGN ASSYS
COIL
STARTER
BALLAST
LAMP
CORRECT CHANGE LAMP
ON ALL CAPS AND PLUGS
PIN 1 IS LOCATED ADJACENT
TO CORNER HAVING RIB.
EXAMPLE:
PATENT NOTICE
THIS DEVICE IS MANUFACTURED UNDER ONE OR
MORE OF THE FOLLOWING U.S. PATENTS:
3,115,274
3,346,355
4,036,400
3,244,965
3,464,589
4,036,621
3,270,917
3,680,937
4,044,877
3,367,536
4,019,650
4,298,138

MAIN DOOR W/A

Item No.	PART NUMBER	PART NAME AND DESCRIPTION
	DNTP 232-8 & DNP 200-8	
1	D349,050,100.03	Main Door W/A
	DNTP 350-10 & DNP 310-10 & DNTP 360-10	
1	D378,050,100.03	Main Door W/A

WHEN ORDERING PARTS, INDICATE MODEL # AND SERIAL # OF VENDER. ALL PRICES ARE SUBJECT TO CHANGE WITHOUT NOTICE.

CONTROL PANEL ASSEMBLY

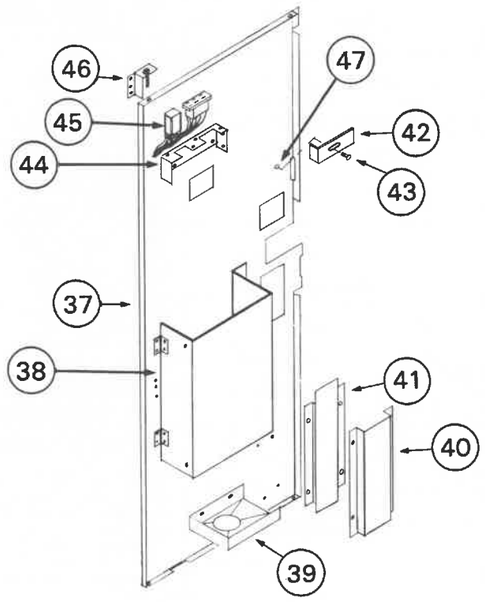


CONTROL PANEL ASSEMBLY

Item No.	PART NUMBER	PART NAME AND DESCRIPTION
1	C269,050,500.03	Control Panel Assembly -8 - DNTP 232-8 & DNP 200-8
1a	C369,050,400.03	Control Panel Assembly DNTP 350-10, DNP 310-10 & DNTP 360-10
2	C269,050,100.03	Control Panel W/A Only -8 - DNTP 232-8 & DNP 200-8
2a	C369,050,300.03	Control Panel W/A Only DNTP 350-10, DNP 310-10 & DNTP 360-10
3	C267,052,000.03	Change Cup Assembly
4	A267,050,610.13	Cover Change Cup
5	C269,050,200.53	Wiring Harness - Control Panel -8 - DNTP 232-8 & DNP 200-8
5a	C350,050,200.03	Wiring Harness - Control Panel DNTP 350-10, DNP 310-10 & DNTP 360-10
6	804,100,510.01	Select Switch
7	801,804,510.01	Select Button
8	801,804,620.01	Switch Shield and Spring
9	901,804,540.01	Button Stop
10	900,201,310.01	Machine Screw 6-32
11	900,800,490.01	Keps Nut 6-32
12	804,700,210.01	Lamp, Sold Out
13	801,804,550.01	Price Window
14	900,800,500.01	Keps Nut - 8-32
15	B/M213,010,600.04	Coin Insert Ass'y. (Items 15-23)
16	D801,200,920.21	Coin Insert (Only)
17	904,700,180.11	Correct Change Lamp
18	A143,051,220.73	Retainer - Coin Insert
19	901,700,630.11	Spring - Coin Return
20	801,303,610.11	Plunger Coin Return
21	A208,050,120.53	Plunger Retainer
22	801,805,370.11	Coin Chute
23	801,805,380.01	Cover, Coin Chute
24		Handel - Only
25		Body - Only
26	901,700,640.01	Spring
27	20-31	Pin
28	31-5	E-Ring
29	900,700,760.01	Washer
30	4255-6-56W	Stud
31	Specify Trademark	Lock and Keys
32	900,901,510.02	Machine Screw (10-32 x 5/8")
33	B267,050,480.13	Handle Mount
34	900,900,960.01	Hex Nut (10-32)
35	B267,050,191.33	Brace T-Handle
36	801,502,100.01	T-Handle Complete (Items 24-30)

WHEN ORDERING PARTS, INDICATE MODEL #AND SERIAL #OF VENDER. ALL PRICES ARE SUBJECT TO CHANGE WITHOUT NOTICE.

ACCESS DOOR AND PARTS

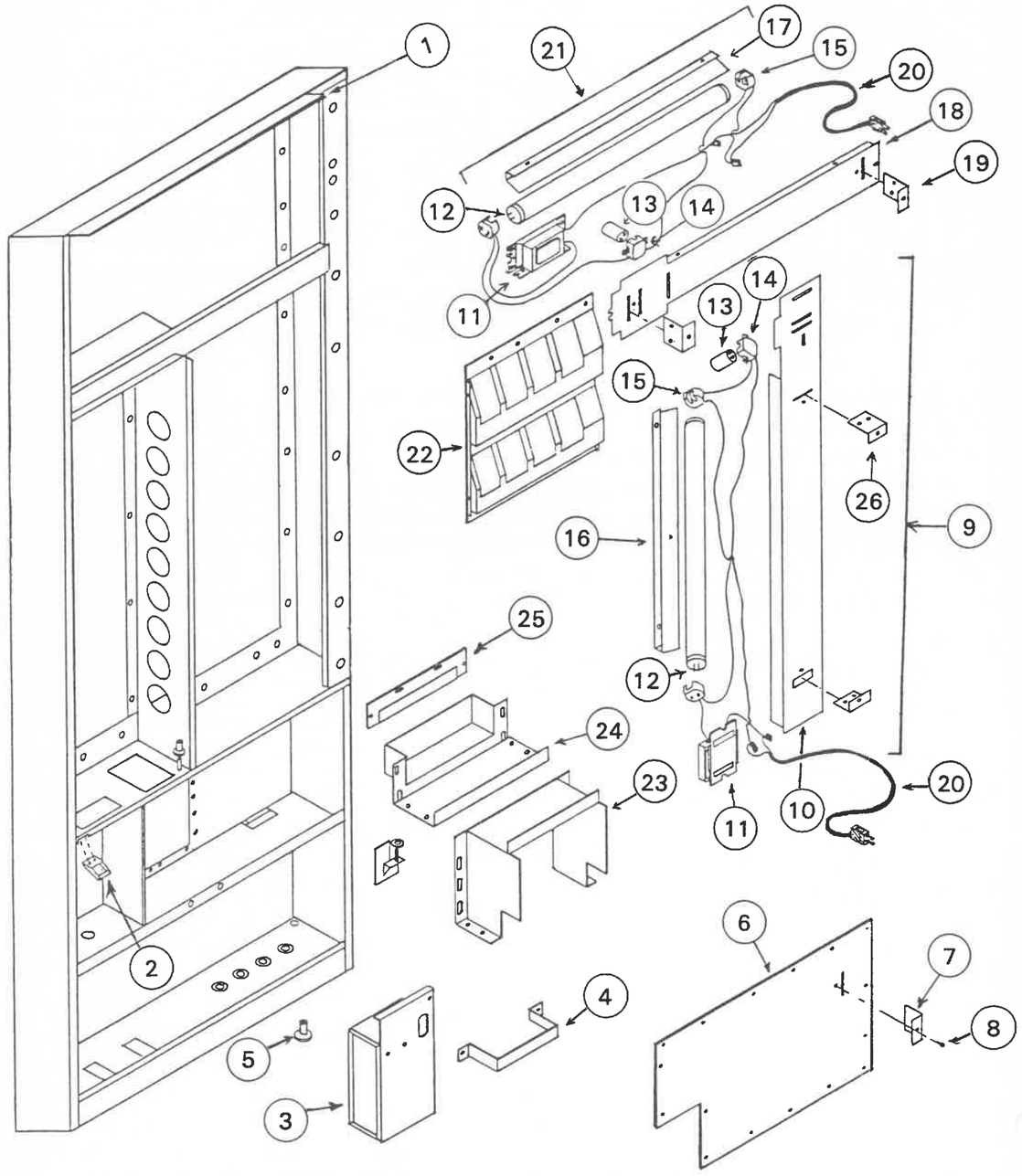


ACCESS DOOR AND PARTS

Item No.	PART NUMBER	PART NAME AND DESCRIPTION
	DNTP 232-8, DNP 200-8, DNTP 350-10, DNTP 310-10 & DNTP 360-10	
37	C267,050,072.33	Access Door Only
38	B267,050,430.13	Changer - Guard
39	801,804,300.01	Change Hopper
40	B267,050,920.13	Coin Chute
41	B267,050,570.13	Back Coin Chute
42	A267,050,170.13	Latch
43	A900,500,260.01	Screw - Shoulder Type
44	B176,150,290.43	Bracket - Relay & Changer Socket
45	804,200,170.01	Relay
46	A275,050,100.03	Top Hinge - Access Door
47	900,800,500.01	Keps Nut- 8-32

WHEN ORDERING PARTS, INDICATE MODEL #AND SERIAL #OF VENDER. ALL PRICES ARE SUBJECT TO CHANGE WITHOUT NOTICE.

INTERIOR MAIN DOOR



INTERIOR MAIN DOOR

Item No.	PART NUMBER	PART NAME AND DESCRIPTION
1	169,050,340.01	Rain Guard DNTP 232-8, DNP 200-8
1a	164,151,142.23	Rain Guard DNTP 350-10, DNP 310-10 & DNTP 360-10
2	801,501,620.01	Strike - Latch
3	B267,052,600.03	Cash Box
4	B231,000,030.03	Cabinet Spacer
5	901,803,710.01	Bearing Access Door
6	B275,050,090.33	Door Stiffener DNTP 232-8, DNP 200-8
6a	B164,050,051.43	Door Stiffener DNTP 350-10, DNP 310-10 & DNTP 360-10
7	A267,050,720.03	Bracket - Door Stiffener
8	900,301,500.01	Screw
9	C349,050,500.03	Lamp Panel Ass'y. (Vert.) DNTP 232-8, DNP 200-8
9a	C379,050,300.03	Lamp Panel Ass'y. - Bottom DNTP 350-10, DNP 310-10 & DNTP 360-10
10	C280,050,050.13	Lamp Panel (Only) DNTP 232, DNP 200 Vertical DNTP 350, DNP 360, DNP 310 Top
11	804,400,100.01	Ballast Sp-3
12	804,700,050.01	Lamp Bulb 24" 20w DNTP 232, DNP 200 Vertical DNTP 350, DNP 360, DNP 310 Top
12a	804,700,230.01	Lamp Bulb 18" 15w 350-10, 360-10, 310-10 Bottom
13	904,800,410.01	Starter FS-25
14	904,900,710.01	Socket - Starter
15	904,901,230.01	Lamp Holder
16	B275,050,160.23	Wire Cover - (Vert.) DNTP 232-8, DNP 200-8
16a	B275,050,160.23	Wire Cover - Top DNTP 350-10, DNP 310-10 & DNTP 360-10
17	B282,050,060.03	Wire Cover - (Horiz.) DNTP 232-8, DNP 200-8
17a	B267,050,730.01	Wire Cover - Bottom DNTP 350-10, DNP 310-10 & DNTP 360-10
18	C282,050,050.13	Lamp Panel (Only) DNTP 232-8, DNP 200-8 (Horizontal)
18a	C267,050,670.03	Lamp Panel (Only) - Bottom DNTP 350-10, DNP 310-10 & DNTP 360-10
19	A267,050,720.23	Bracket - Lamp Socket, Long DNTP 232-8, DNP 200-8
19a	A267,050,720.23	Bracket - Lamp Socket, Long DNTP 350-10, DNP 310-10 & DNTP 360-10
20	A208,051,500.03	Jumper Lamp Panel
21	C349,050,600.03	Lamp Panel Ass'y. (Horiz.) DNTP 232-8, DNP 200-8
21a	C379,050,200.03	Lamp Panel Ass'y. DNTP 350-10, DNP 310-10 & DNTP 360-10
22	C349,050,300.13	W/A Display Bulkhead DNTP 232-8, DNP 200-8
22a	C379,050,100.03	W/A Display Bulkhead DNTP 350-10, DNP 310-10 & DNTP 360-10
23	C349,050,010.23	Delivery Chute
24	C349,050,020.13	Delivery Chute - Bottom
25	B349,050,060.03	Closure Strip
26	A267,050,320.33	Bracket - Lamp Socket

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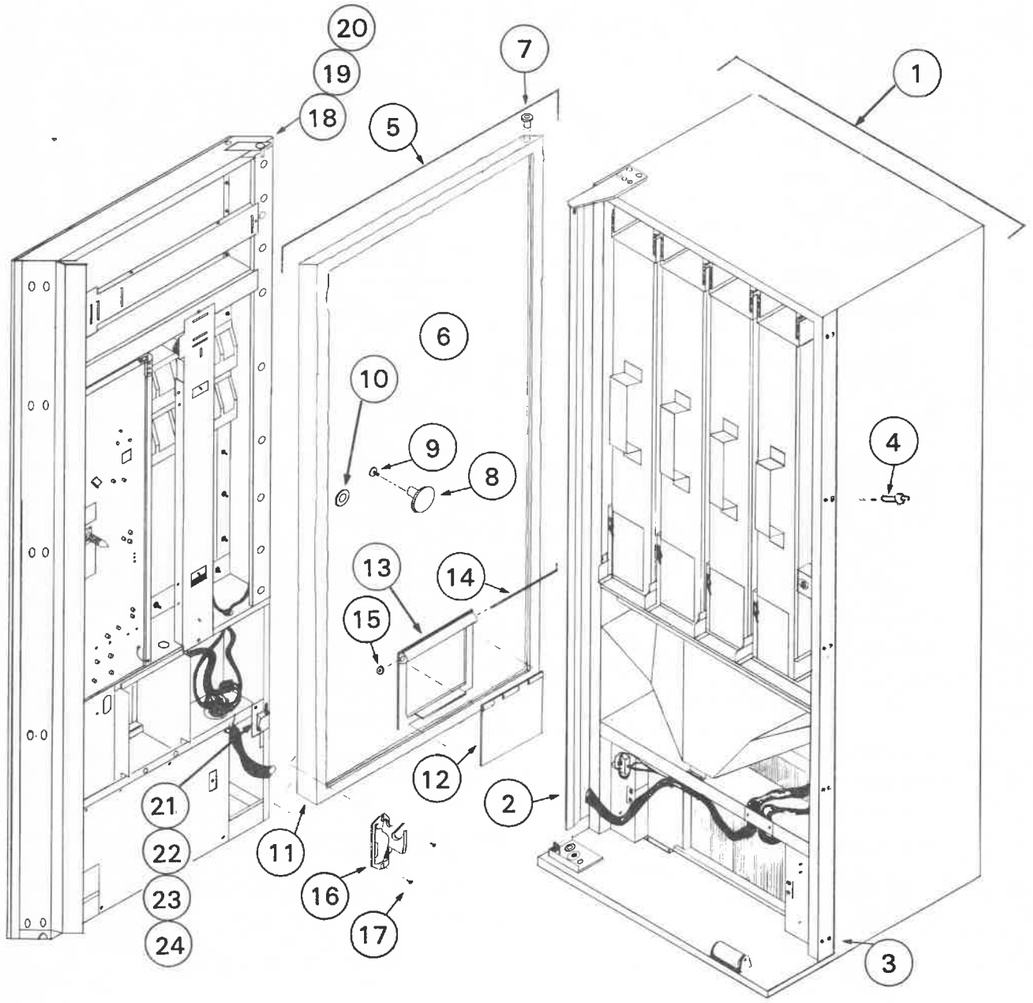
SHELL – TANK ASSEMBLY AND INNER DOOR ASSEMBLY



SHELL – TANK ASSEMBLY AND INNER DOOR ASSEMBLY

Item No.	PART NUMBER	PART NAME AND DESCRIPTION
1	D215,060,000.23	Shell & Tank Ass'y. (Only) DNTP 232-8, DNP 200-8
1a	D379,060,000.23	Shell & Tank Ass'y. (Only) DNTP 350-10, DNP 310-10 & DNTP 360-10
2	C165,000,030.93	Protective Plate Left Side-Cabinet DNTP 232-8, DNP 200-8
2a	C164,000,030.93	Protective Plate Left Side-Cabinet DNTP 350-10, DNP 310-10 & DNTP 360-10
3	B165,000,040.83	Protective Plate Right Side-Cabinet DNTP 232-8, DNP 200-8
3a	B164,000,040.83	Protective Plate Right Side-Cabinet DNTP 350-10, DNP 310-10 & DNTP 360-10
4	901,100,440.01	Drive Rivets ¼"
5	D279,050,300.03D	Inner Door Assembly DNTP 232-8, DNP 200-8
5a	D267,051,400.03A	Inner Door Assembly DNTP 350-10, DNP 310-10 & DNTP 360-10
6	C215,050,050.43	Rear Panel Inner Door (Only) DNTP 232-8, DNP 200-8
6a	C176,150,020.63	Rear Panel Inner Door (Only) DNTP 350-10, DNP 310-10 & DNTP 360-10
7	901,803,710.01	Nyline Bearing - Inner Door
8	901,501,700.01	Knob
9	900,201,230.01	Carriage Bolt (¼-20)
10	901,901,360.01	Snap Bushing
11	801,804,030.01	Gasket - Inner Door DNTP 232-8, DNP 200-8
11a	801,804,070.01	Gasket - Inner Door DNTP 350-10, DNP 310-10 & DNTP 360-10
12	801,804,200.01	Delivery Door
13	801,804,210.01	Frame Inner Door
14	A169,050,530.01	Hinge Pin - Inner Door
15	900,800,580.01	Stop Nut (Elastic)
16	A169,053,100.53	Burst Open Latch W/A
17	900,301,500.01	Sem Screw
18	A169,053,001.03	Hinge Top Inner Door
19	900,900,960.01	Hex Nut (10-32) Top Inner Door
20	903,000,170.02	Washer #10 Top Inner Door
21	A169,051,101.33	Hinge Bottom Inner Door
22	900,201,140.01	Machine Screw (#10-32) Bottom Hinge
23	903,000,170.02	Washer #10 - Bottom Hinge
24	900,900,960.01	Hex Nut - (#10-32) - Bottom Hinge

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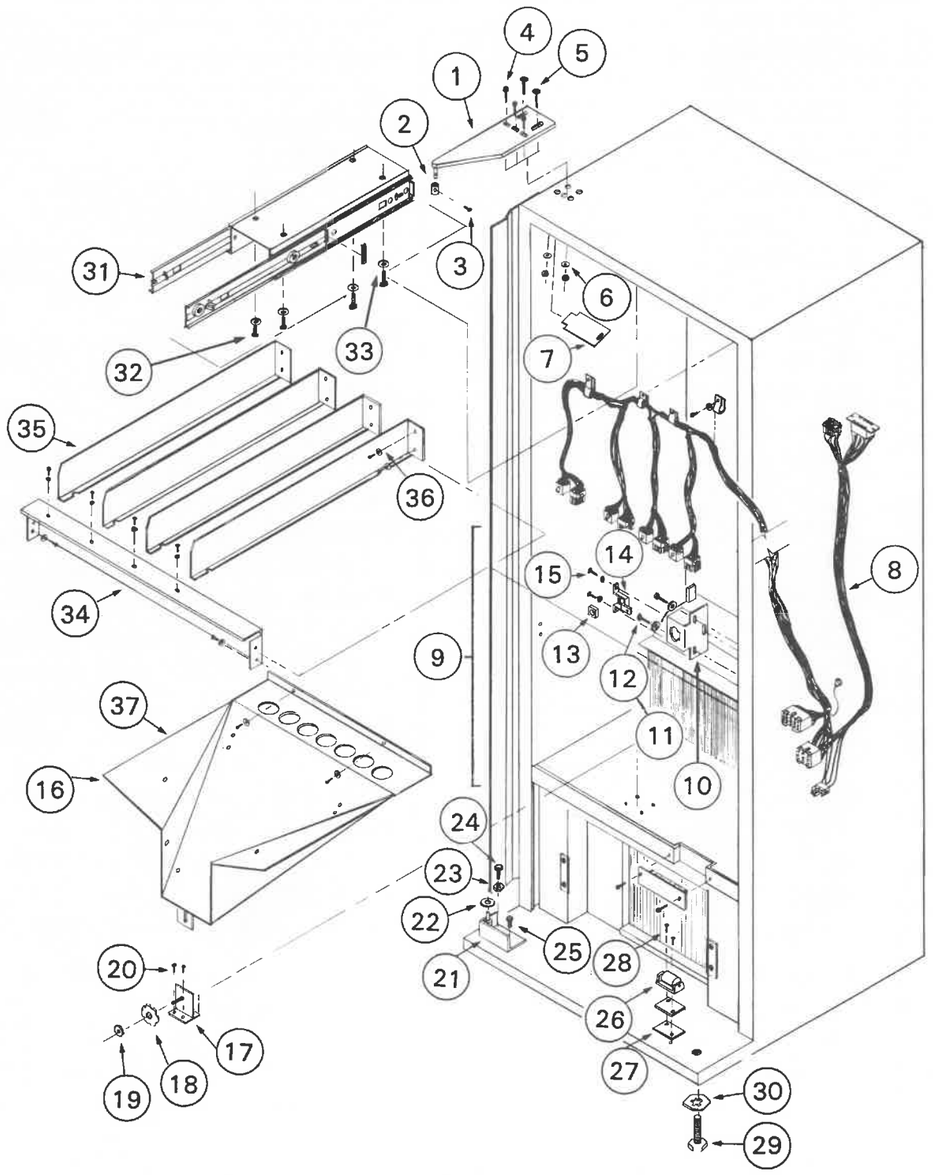
SHELL AND TANK INTERIOR PARTS



SHELL AND TANK INTERIOR PARTS

Item No.	PART NUMBER	PART NAME AND DESCRIPTION
1	801,501,710.31	Top Hinge Main Door
2	800,502,030.01	Collar - Hinge Pin
3	900,201,260.01	Lock Screw
4	900,301,710.01	¼ - Cutting Bolt
5	900,201,170.01	Carriage Bolt and Nut ¼-30
6	903,000,070.02	Washer (¼")
7	A169,000,130.03	Cover - Hinge Pocket
8	349,071,100.03	Wiring Harness - Cabinet - DNTP 232-8, DNP 200-8
8a	D378,070,100.13	Wiring Harness - Cabinet DNTP 350-10, DNP 310-10 & DNTP 360-10
9	B169,000,080.93	Latch Strike Ass'y. (Item #10-15)
10	B176,150,160.93	Nut Retainer Housing
11	Part of #12	Washer
12	900,301,730.01	Screw Hex Head Sems
13	900,800,570.11	Square Nut
14	801,303,320.61	Nut Housing
15	900,301,550.01	Screws - Long Sems
16	D349,000,030.13	Chute Ass'y. DNTP 232-8, DNP 200-8
16a	C378,000,010.03	Chute Ass'y. DNTP 350-10, DNP 310-10 & DNTP 360-10
17	B147,074,400.73	Chute Mounting Bracket
18	900,700,620.01	Washer-Dome Type
19	900,900,960.02	Hex Nut (10-32)
20	900,301,500.01	Screws - Self Drilling
21	B169,000,100.93	Main Hinge Cabinet - Bottom
22	900,800,330.51	Flanged Bushing
23	900,700,710.01	Washer
24	900,301,710.01	¼" Cutting Bolt
25	900,301,710.01	¼" Cutting Bolt
26	A142,161,700.63	Roller and Bracket Assembly
27	A142,160,580.43	Spacer for Bracket
28	900,901,510.02	Screws 10-32 x 5/8"
29	900,502,040.61	Leveling Screws (½)
30	900,700,820.01	Washer - ½"
31	B349,070,800.03	Hanger W/A
32	900,301,730.01	Screw - Hex Head
33	Part of #32	Washer
34	349,000,010.43	Guide Support
35	B349,000,020.23	Guide for Module
36	900,301,560.01	Sems Screw
37	C378,000,020.03	Chute Liner (Only) DNTP 350-10, DNP 310-10 & DNTP 360-10
37a	D349,000,040.03	Chute Liner (Only) DNTP 232-8, DNP 200-8 Serialized 2702 and higher
37b	A5160.06	Chute Liner (Only) DNTP 232-8, DNP 200-8 Serialized 2701 and under

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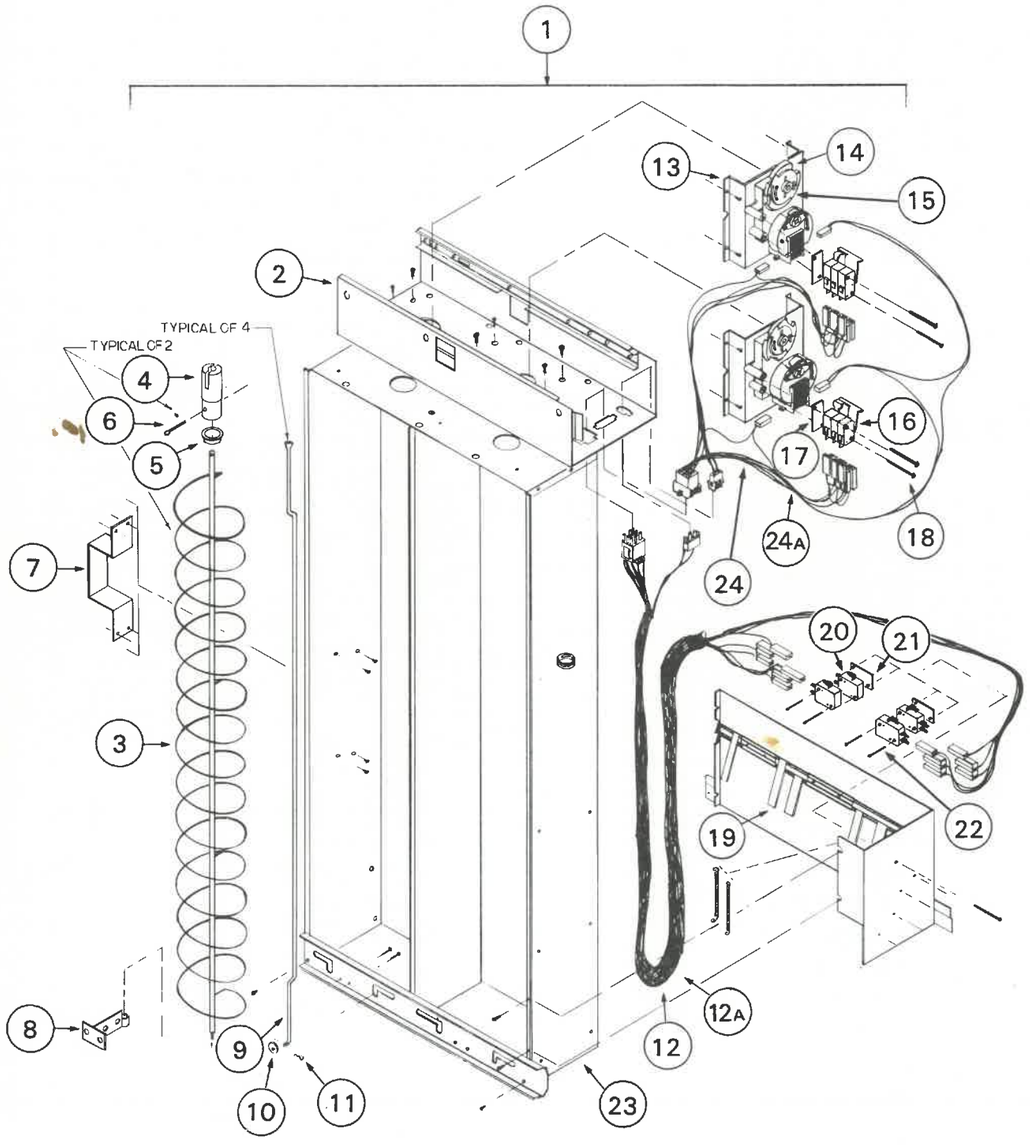
VEND – MODULE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VEND MODULE

Item No.	PART NUMBER	PART NAME AND DESCRIPTION
1	D349,071,300.03	Vend Module Ass'y. #1 - DNTP 232-8
1a	D362,070,600.03	Vend Module Ass'y. #1 - DNP 200-8
1b	D378,070,600.03	Vend Module Ass'y. #1 - DNTP 350-10 & DNTP 360-10
1c	D379,070,300.03	Vend Module Ass'y. #1 - DNP 310-10
1-1	D349,071,400.03	Vend Module Ass'y. #2 & up - DNTP 232-8
1-1a	D362,070,700.03	Vend Module Ass'y. #2 & up - DNP 200-8
1-1b	D378,070,700.03	Vend Module Ass'y. #2 & up - DNTP 350-10 & DNTP 360-10
1-1c	D379,070,400.03	Vend Module Ass'y. #2 & up - DNP 310-10
2	C378,070,400.03	W/A Motor Bracket - DNTP 232-8, 350-10 & DNTP 360-10
2a	C382,070,200.03	W/A Motor Bracket - DNP 200-8 & 310-10
3	801,401,270.01	Auger - DNTP 232-8
3a	801,401,320.01	Auger - DNP 200-8
3b	801,401,340.01	Auger - DNTP 350-10 & DNTP 360-10
3c	801,401,350.01	Auger - DNP 310-10
4	801,201,050.11	Hub for Auger
5	901,805,020.01	Nyliner
6	900,902,070.01	Pin Cotter
7	C349,070,270.13	Handle - Mechanism
8	A349,070,900.03	W/A Auger Support - DNTP 232-8, DNTP 350-10, DNP 200-8 & DNTP 360-10
8a	A382,070,100.03	W/A Auger Support DNP 310-10
9	See Service Bulletin #278	Pak Retainer
10	900,700,830.01	Washer
11	900,902,080.01	Hair Pin Cotter
12	C349,070,600.03	Wiring Harness - Sold Out Switch - Module #1 DNTP 232-8, DNP 200-8
12a	C378,070,200.03	Wiring Harness - Sold Out Switch - Module #1 DNTP 350-10, DNP 310-10 & DNTP 360-10
12-1	C349,070,700.03	Wiring Harness - Sold Out Switch - Module #2 & up DNTP 232-8, DNP 200-8
12-1a	C378,070,300.03	Wiring Harness - Sold Out Switch - Module #2 & up DNTP 350-10, DNP 310-10 & DNTP 360-10
13	349,071,200.03	Vend Motor Assembly
14	801,804,090.01	Cam - Vend
15	801,804,000.01	Adjustable Cam
16	804,100,500.01	Switch Cluster, Vend Motor
17	905,800,330.01	Insulator For Switch
18	900,301,610.01	Screw For Switch
19	349,071,500.03	Assembly Sold Out Bar DNTP 232-8, DNTP 350-10 & DNTP 360-10
19a	362,070,800.03	Assembly Sold Out Bar - DNP 200-8
19b	382,070,400.03	Assembly Sold Out Bar - DNP 310-10
20	804,100,570.01	Switch Sold Out
21	905,800,330.01	Insulator for Sold Out Switch
22	900,301,670.01	Screw for Sold Out
23	D349,071,000.03	Sub Assembly Module - DNTP 232-8
23a	D362,070,500.03	Sub Assembly Module - DNP 200-8
23b	D378,070,500.03	Sub Assembly Module - DNTP 350-10 & DNTP 360-10
23c	D382,070,300.03	Sub Assembly Module - DNP 310-10
24	C349,070,400.03	Motor & Switch Harness Module #1
24a	C349,070,500.03	Motor & Switch Harness Module #2 & up

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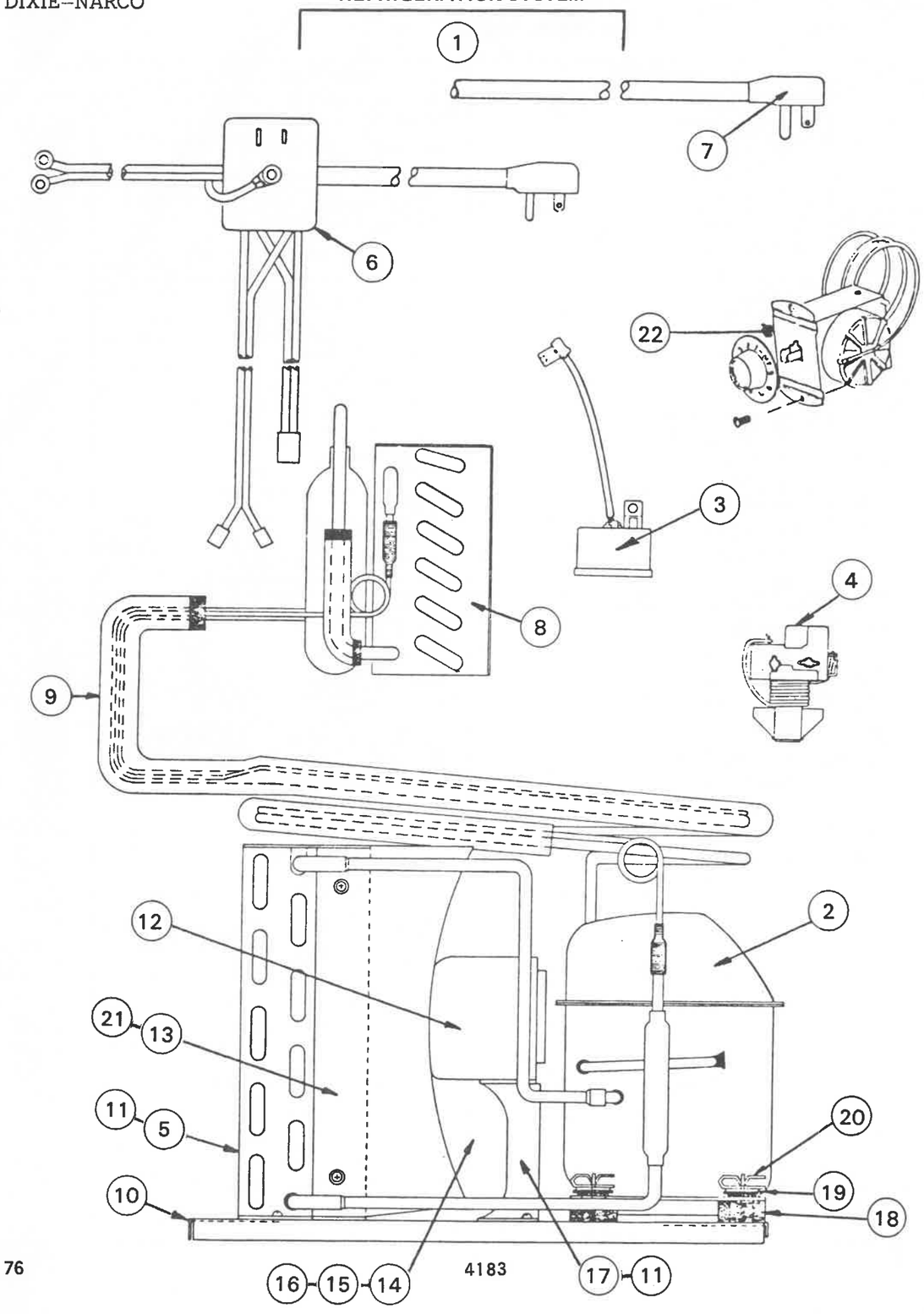
REFRIGERATION SYSTEM



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REFRIGERATION SYSTEM

Item No.	PART NUMBER	PART NAME AND DESCRIPTION
	DNTP 232-8, DNP 200-8, DNTP 350-10, DNP 310-10,& DNTP 360-10	
1	D143,040,402.13	Refrigeration System Complete, Model 300
2	802,500,170.01	Compressor, Model AE3440A Tecumseh
3	TEC8300MRTA 78	Overload for AE3440A compressor Tecumseh
*	(SPMRT - 22AIN - 34)	Overload for AE3440A compressor Tecumseh
4a	TEC8209660A09	Relay for AE3440A compressor Tecumseh
*	(SP9660-040-182)	Relay for AE3440A compressor Tecumseh
4b	820RR12A10	Relay for AE3440A compressor Tecumseh
*	(GE3ARR12-PB220)	Relay for AE3440A compressor Tecumseh
5	D808,700,090.02	Condenser
6	C804,900,601.51	Main Wiring Harness
7	A904,900,610.81	Compressor Lead w/plug
8	B802,600,370.51	Evaporator
9	903,300,530.01	Insulator Tube
10	C164,040,120.43	Base Plate - condensing unit
11	900,301,560.01	Screw Sems
12	802,302,120.02	Fan Motor - Condenser
13	D905,800,450.01	Shroud
14	900,103,370.02	Fan Blade
15	900,100,970.02-2	Silencer
16	900,100,970.02-1	Speed Nut
17	900,102,970.02	Fan Bracket
18	902,000,570.01	Grommet, compressor mounting
19	A901,803,910.11	Plug, compressor grommet
20	A900,901,880.01	Retainer Clip, compressor mounting
21	900,300,160.01	Screw, S/M #6 x 3/8
22	802,800,090.31	Temperature Control

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*Relative to relays and overloads, the numbers that appear in parenthesis ( ) are always stamped on the Relay & Overload. Either #can be used for ordering purposes.