FD-4/FB-5 Operation and Service Manual

TM

GPL

6300002

August, 1997

This merchandiser has been engineered to our own rigid safety and performance standards. It has earned a "Letter of Compliance" from NAMA indicating that it complies with sanitation and health guidelines recommended by the Automatic Merchandising Health-Industry Council (AMHIC) and it conforms with all other NAMA safety recommendations. This merchandiser has been FCC verified.

This merchandiser has been manufactured in accordance with the safety standards of both Underwriter's Laboratories and the Canadian Standards Association. To maintain this degree of safety and to continue to achieve the level of performance built into this machine, it is important that installation and maintenance be performed so as to not alter the original construction or wiring and that replacement parts are as specified in the parts section of your *Service Manual*. Your investment in this equipment will be protected by using this *Service Manual* in your operation, service, and maintenance work. By following prescribed procedures, machine performance and safety will be preserved.

This merchandiser is warranted for one (1) year against defective parts and workmanship. Any part or parts which are proven to be defective within one (1) year of the date of shipment will be repaired or replaced free of charge when the defective part is returned, with transportation charges prepaid, to the destination designated by the GPL Warranty Department.

This warranty applies only to the original purchaser of this merchandiser and is null and void if the merchandiser is sold during the period of warranty.

This warranty is also null and void for all electrical components, wiring, or circuits and/or for all mechanical parts or assemblies damaged as a result of operating the merchandiser at other than 110-120 volts, 60 Hertz current. This warranty is null and void in the event of vandalism, fire, or negligence on the part of the operator.

No warranty is given or implied on incandescent lamps, neon lamps, fluorescent lamps, ballasts, starters, or other expendable items. No warranty will be given when other manufactured components are installed in GPL merchandisers.

Further, GPL is not responsible for any cost of service rendered or repairs made on merchandisers or parts by anyone other than an authorized GPL distributor, unless authorization to incur such expense has been given in writing by GPL prior to incurring such expense.

This warranty is in lieu of all warranties expressed or implied, including, without limitation, warranties of merchantability and all other obligations or liabilities on the part of GPL. Furthermore, GPL neither assumes nor authorizes any person to assume for it any other obligation or liability in connection with the sale of said equipment or any part thereof.

FD-4/FB-5 Operation and Service Manual

TABLE OF CONTENTS

MACHINE REQUIREMENTS AND CHARACTERISTICS

POWER REQUIREMENTS

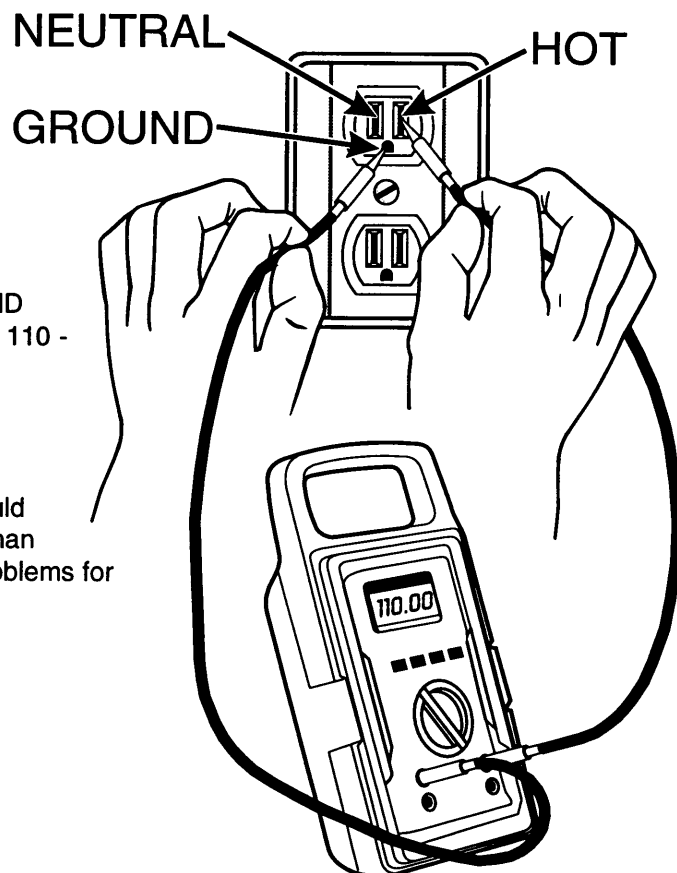| Volts AC	115
Amps	15
Hz	60
Phase	Single
Outlet	3-pin
Type	Grounded

CHECKING THE POWER OUTLET

Voltage Check

When placed across the HOT and NEUTRAL terminals, a volt-ohmmeter should indicate 110 - 130 volts AC.

Polarity Check

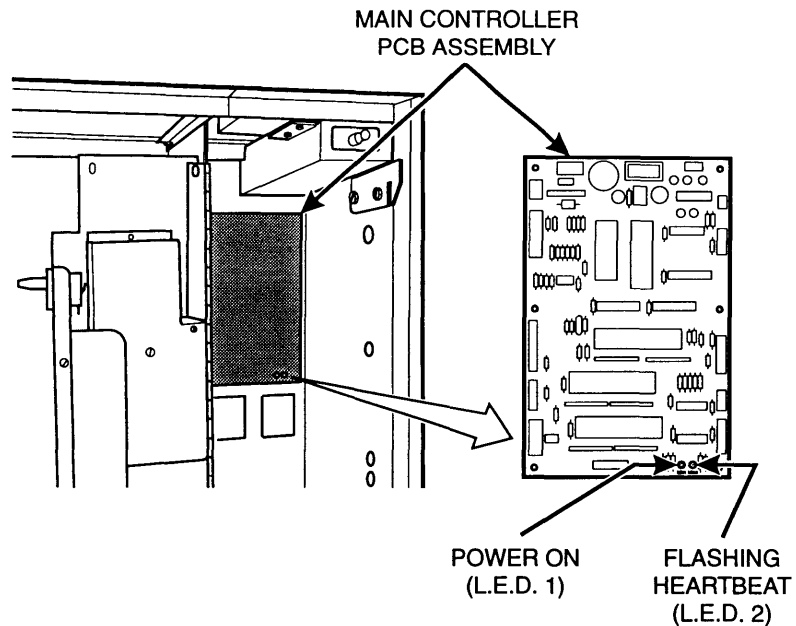When placed across the HOT and GROUND terminals, a volt-ohmmeter should indicate 110 - 130 volts AC.

Noise Potential Check

When placed across the NEUTRAL and GROUND terminals, a volt-ohmmeter should indicate 0 volts AC. A reading of greater than 1.5 to 2.0 volts AC could result in noise problems for the electronic circuitry.

NEUTRAL — GROUND — HOT

MAIN CONTROLLER
PCB ASSEMBLY

Controller Card
Display

POWER ON
(L.E.D. 1)

FLASHING
HEARTBEAT
(L.E.D. 2)

<u>Main Controller Card Display</u>. This display consists of two light emitting diodes (LED) mounted on the controller card.

POWER ON   When lit, this red LED indicates electrical power is applied to the controller card.

HEARTBEAT   When flashing, this red LED indicates that the controller card is active and the software is operating.

> **NORMAL CONDITIONS:**
> When the merchandiser is operating normally, you should see a steady red **POWER ON** indicator and a flashing red **HEARTBEAT** indicator. Refer to the maintenance manual if any other condition exists.

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GPL

LEVELING THE MERCHANDISER

From a safety standpoint it is very important that the merchandiser be level. A level merchandiser is less likely to tip over and cause personal injury. Level the merchandiser by moving the leg levelers in or out for proper adjustment. Pliers or channel locks may be required to loosen the leg levelers. Level the merchandiser from the right to left and from front to back using a spirit level. When the merchandiser is part of a bank of machines, it should be leveled in reference to the other machines.

Caution
Have an assistant hold the merchandiser
while you adjust the leg levelers.

COIN MECHANISM
Setting the Quarter Switch
If your coin mechanism is not a MARS TRC 6000, skip this procedure and begin loading the coin mechanism. If your coin mechanism is a MARS TRC 6000, flip down the top front of the mechanism and set the quarter switch as shown on the drawing to the right. Make sure switch #2 is in the down or "off" position.
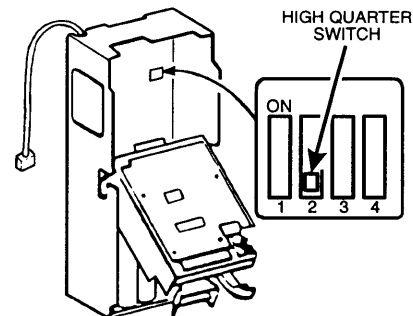
Loading the Coin Mechanism
1. Open the cabinet door and the monetary cabinet
2. Insert coins into their respective tubes. Make sure each tube is full.
3. Inspect the tubes for shingled coins and correct if necessary.

BILL VALIDATOR

Emptying the Stacker
1. Push up on the magazine latch to release the housing
2. Open the magazine by pulling it down.
3. Remove the bills and close the magazine. Make sure it is secure.

SETTING THE QUARTER SWITCH

HIGH QUARTER
SWITCH

ON

1 2 3 4

EMPTYING THE BILL STACKER

1. PUSH UP LATCH

2. PULL DOWN BILL STACKER

3. REMOVE
DOLLAR
BILLS

ADJUSTING WATER VALVES

This should be done in conjunction with setting the factory default times during Product Configuration programming.
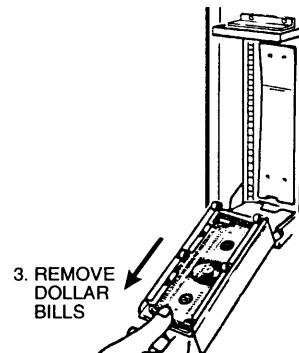
1. Using a slotted screwdriver, turn the adjustment screw clockwise to decrease the water flow rate.

2. Turn the adjustment screw counterclockwise to increase the water flow.
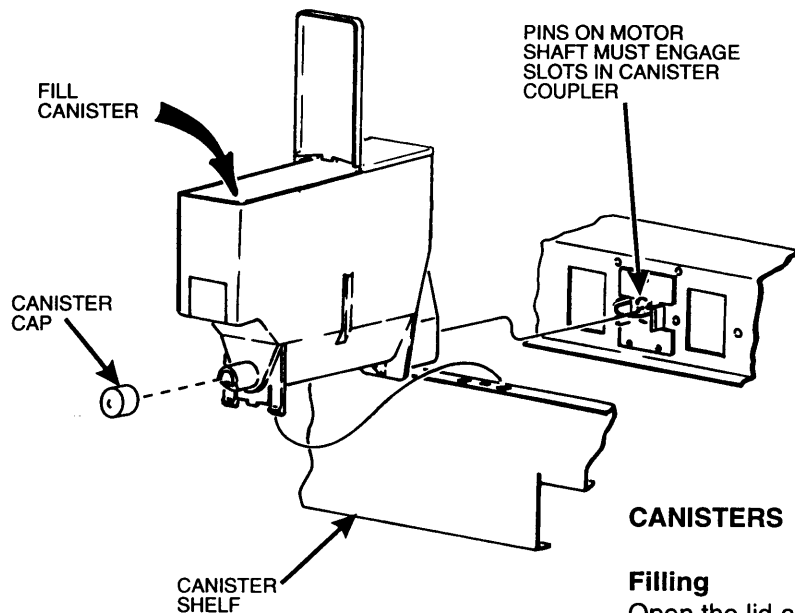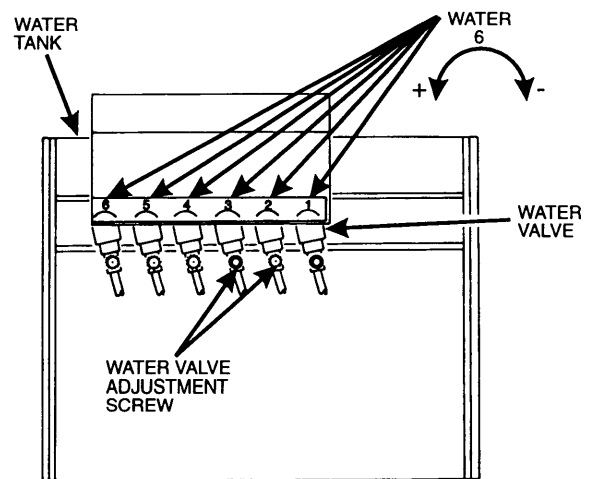
CANISTERS

Filling
Open the lid as shown, and carefully pour product into canister.

Installing
1. Place the canister in the position shown.
2. Engage the pins on the motor shaft with the slots in the canister coupler.
3. Fit tabs on the canister into the slots on the canister shelf.
4. To ensure the canister is correctly engaged with the rear mounting bracket, gently push down on the front edge of the canister lid.

WATER FILTER CARTRIDGE

If your merchandiser has a water filter option, it cannot be operated without a properly installed   water filter cartridge.

Note
Check the water filter installation record. There is a place to write the vend number on the cartridge. The filter is normally effective for approximately 26,000 7 oz. vends, 22,000 8 oz. vends, 20,000 9 oz. vends, or 15,000 12 oz. vends. Local conditions may require more frequent replacement.

Removal
1.   Turn the main power switch to the off position.
2.   Flip the lock lever UP (view A). The lock lever on the water filter head is used to open and close the water inlet to the merchandiser.
3.   Rotate the locking collar to the left about 60 degrees until it drops to the filter receiving position.
4.   Rotate the filter to the left until it drops free of the locking collar.

Installation
1.   Align the raised rib near the top of the cartridge with the ribless portion of the locking collar (view B).
2.   Push the cartridge up into the filter head (view B).
3.   Rotate the cartridge to the right until the lock lever engages the locking collar (view C).
4.   Rotate the locking collar to the right until it moves up into the locking position (view D).
5.   Push the lock lever DOWN (view E).

Note
Do not flush the water filter cartridge.

VIEW B   VIEW C   VIEW D   VIEW E

VIEW A
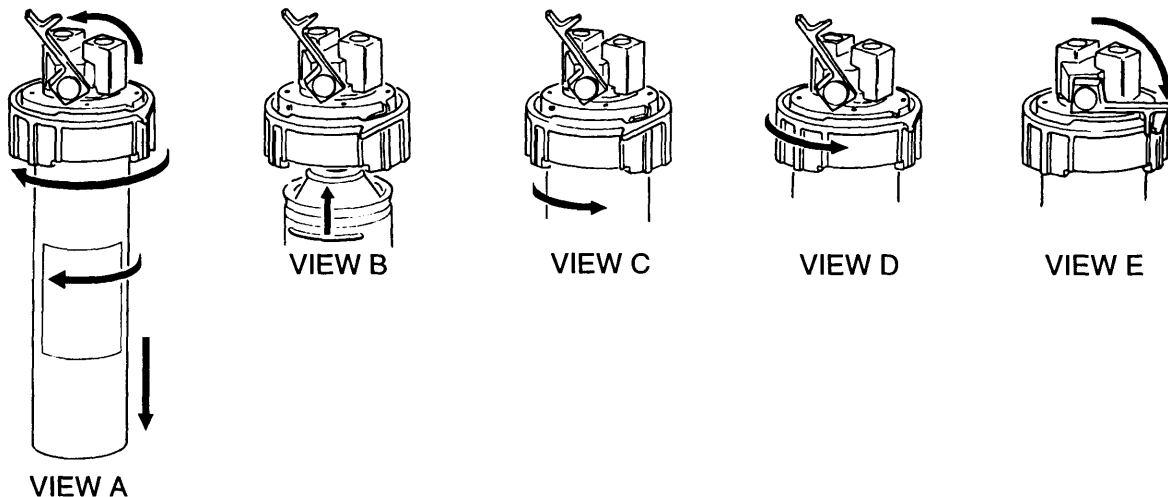
CUP MECHANISM

Loading

1. Support the cup mechanism in the upright position.
2. Push the latch forward to release the cup mechanism. Continue to support the mechanism while you lower it into the loading position.
3. Remove the turret cover.
4. Open the bottom of the wrapper on a stack of cups.
5. Insert the wrapped cups into the turret and pull the wrapper out.
6. Replace the turret cover after the turret has been loaded
7. Make sure the cup mechanism is locked into the upright position.
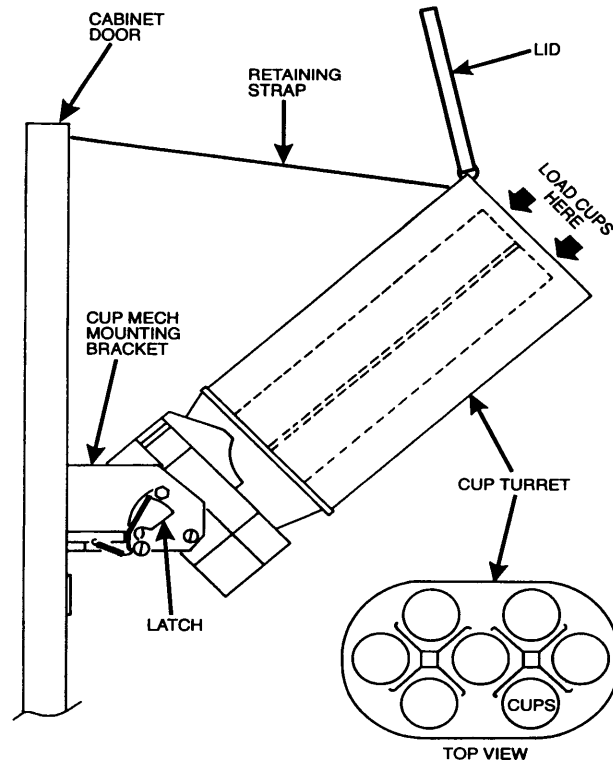
Cups

1. Use only cups which have been designated for use in a hot beverage vending machine.
2. Check to insure that the cup size you are loading agrees with the cup size selected during programming
3. Make sure you observe proper hygiene. Touch only the wrapper and not the cups.
4. Do not fill cups above the level marked on the outside of the cup turrets or above the "Fill Line" label inside each turret.
5. Check to make sure the cups you are loading are the same size and brand of those hot drink cups currently in the turret. Do not intermix.
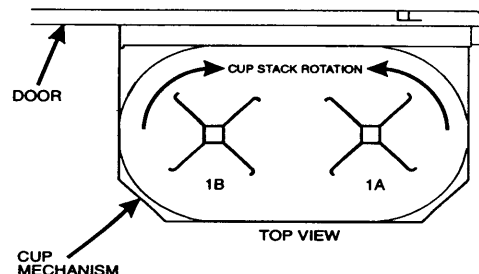
Adjustment

1. Place seven cups in the cup ring
2. Observe the clearance as shown in view B.
3. To adjust, first loosen the adjustment arm screw (view A).
4. Next, move the adjustment arm until the correct clearance is achieved.
5. Finally, hold the adjustment arm in place and tighten the adjustment arm screw.

CUP
MECHANISM

ADJUSTMENT
ARM

ADJUSTMENT ARM
SCREW

CUP RING
#1

VIEW A

CUP CAM

CORRECT
ADJUSTMENT

THIS SIDE SHOULD
BE SNUG AGAINST
THE CAM.

SET THIS SPACE JUST WIDE
ENOUGH TO ALLOW EJECTION
OF CUPS.

VIEW B

ADJUSTED
TOO TIGHT

VIEW C

ADJUSTED
TOO LOOSE
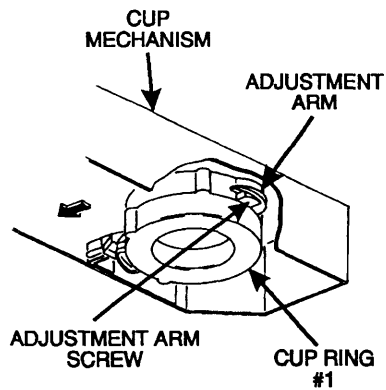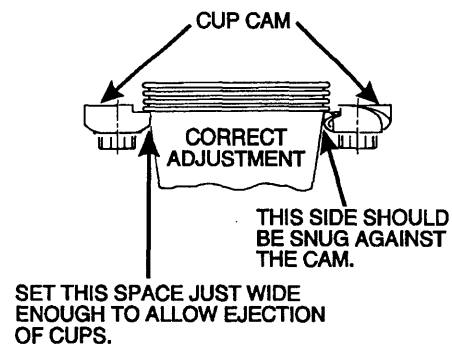
VIEW D

7. Feed paper through the paper guides.
8. Raise the basket housing assembly and feed paper over the lip of the paper mechanism housing.

NOTE
It may be necessary to reach underneath the brewer between the paper mechanism housing and swing arm assembly to push paper over the lip of the paper mechanism housing.

PAPER GUIDES
PINION GEAR SHAFT
BASKET HOUSING ASSEMBLY
SWING ARM ASSEMBLY
LIP OF PAPER MECHANISM HOUSING
PAPER MECHANISM HOUSING
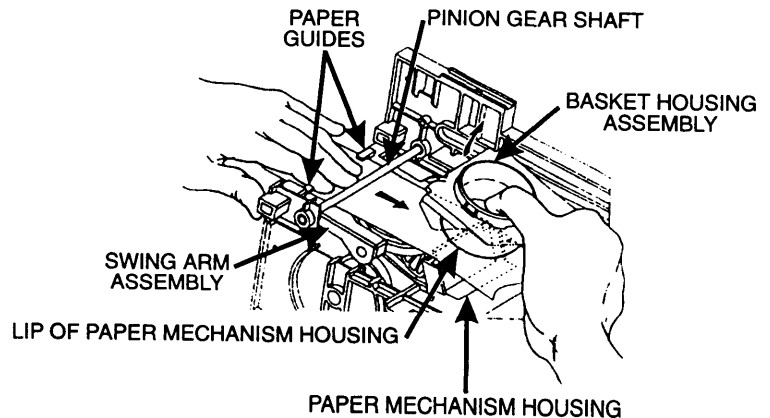
9. Reach underneath the brewer between the paper mechanism housing and basket housing assembly and push paper into the top of the paper mechanism housing between paper rollers.

LIP OF PAPER MECHANISM HOUSING
SWING ARM ASSEMBLY
PAPER MECHANISM HOUSING
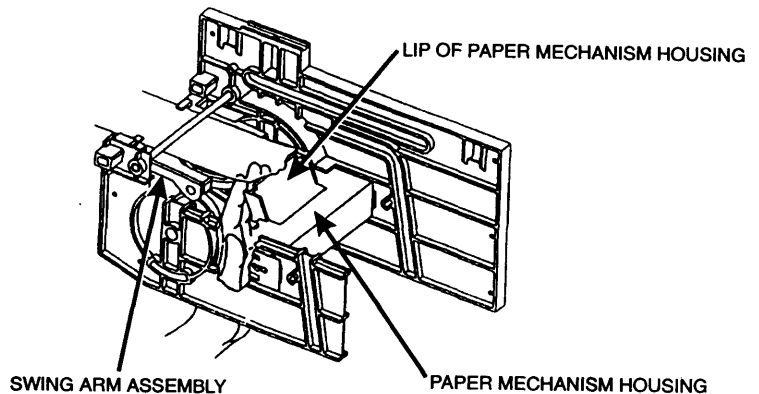
10. Reach underneath the brewer and pull paper roller to the right.
11. Pull paper down between the paper rollers.
12. Release the paper roller.

BASKET HOUSING ASSEMBLY
PAPER MECHANISM HOUSING
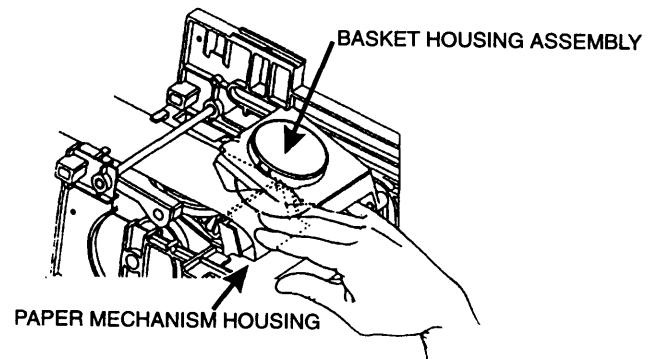
13. Place the main power switch in the *ON* position.
14. Enter *BREWER TEST* mode (see SERVICE) and cycle the brewer to observe that paper feeds properly.
15. Replace the cup station and grounds bucket.

PAPER ROLLER
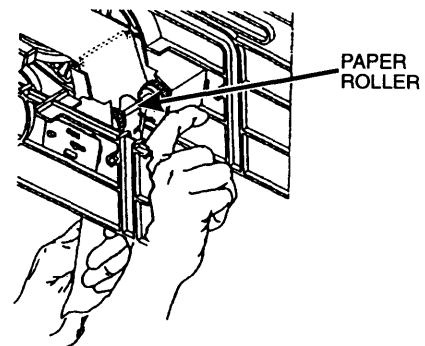
Pressure Adjust Control. This control determines the system pressure provided by the air compressor. Adjust the pressure as follows:

a.   With the compressor running, pinch the brewer inlet air tube.

b.   Adjust the pressure to read 10 - 12 psi on the gauge.

This will produce a pressure of 3 - 6 psi using regular coffee and 8¼ oz cups. No further air pressure adjustments should be necessary.

Pressure Gauge. This indicator shows the amount of air pressure in the system.
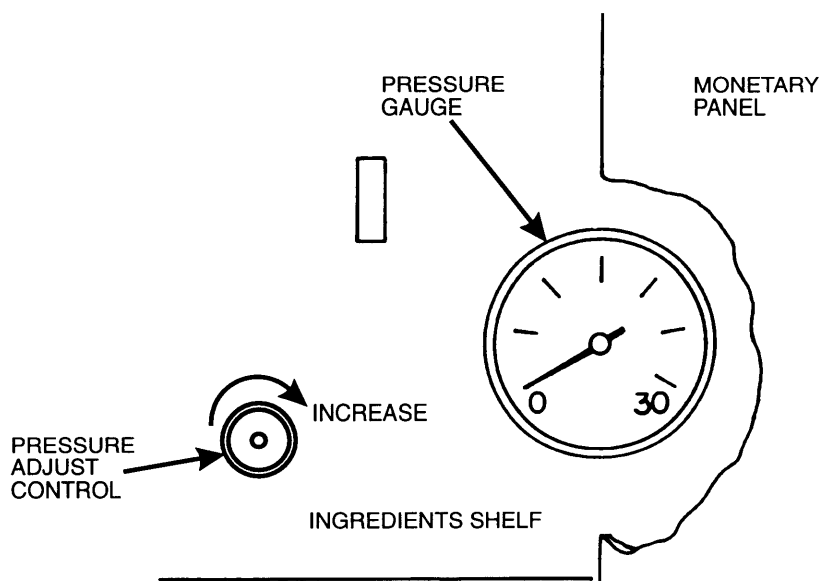
LOADING OPTIONAL FILTER PAPER

1.   Turn the main power switch to the *OFF* position.
2.   Remove the cup station and grounds bucket.
3.   Remove the paper holder cover by turning the fastener a quarter turn to the left.
4.   Insert a roll of paper into the paper holder. Route the free end of the paper to the brewer as shown.
5.   Replace the cover on the paper holder. Secure it by turning the fastener a quarter turn to the right.
6.   Feed paper over swing arm assembly and underneath pinion gear shaft.

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PROGRAMMING

Standby Message

DATA → Total Sales → Total Vends → Total Free Vend "Sales" → Total Free Vends → Total Test Vends

PAYOUT (NDQ = 123)

PRICE → Price Individual Selections

FAULTS → First Machine Fault Display → Second Machine Fault Display → . . . . → Last Machine Fault Display

SERVICE (SEE NEXT PAGE FOR DETAILS)

SETUP → Free Vend On/Off → Select Coin Mech → Validator Options → Change Options → Low Change Message → Declining Balance → Select Display Language

COFFEE (SEE NEXT PAGE FOR DETAILS)

TIME OF DAY → Date → Activate Inhibit Periods → Inhibit Period Start Time → Inhibit Period Stop Time

= These items do not appear when an EXEC coin mech is used.

Note:
Pressing and holding # will return to the standby message from anywhere.

The diagram on these pages is a map of the programming functions in your merchandiser. These functions will be described in greater detail, but this will help you get around once you are familiar with how programming works. The symbols ✱ and # represent special keys that move you around inside the programming modes, and from one mode to another. As you can see on the diagram, these symbols show up in the pathways in and around the modes.
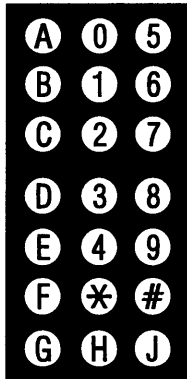
THE KEYPAD

During vending, customers use the keypad to make selections. When you pull the door switch to the ON position, the keypad becomes your programming input device. For reference, we will show the keypad on all the pages.

SPECIAL PROGRAMMING KEYS

(#) Press this key to move from one function to another.
From within a function, press once to return to the beginning of the function; press and hold to return to the standby message.

(✱) This key moves you around inside of a function.

(H) This key allows you to switch between two or more choices.

(J) This is the "action" key. It will start tests, fill the water tank, etc.

DATA

View several types of sales data:

NOTE
All data is not resettable.

1. Pull out the door switch button to the ON position.
2. Press (#) until the display shows *DATA*.
3. If you have the DEX option, press (J) to transfer data into your DEX device.
4. Press (✱). The display shows *NR$ .XX*. This is the dollar and cents amount of machine sales.
5. Press (✱). The display shows *NR XX*. This is the total count of all vends.
6. Press (✱). The display shows *FRV$ .XX*. This is the dollar and cents amount of free vend "sales". (Does not display if the total is zero.)
7. Press (✱). The display shows *FRV .XX*. This is the total count of free vends. (Does not display if the total is zero.)
8. Press (✱). The display shows *TST .XX*. This is the total count of test vends. (Does not display if the total is zero.)
9. Press (✱) to return to step 4, or (#) to exit.

□ = These items only appear when a brewer is used.

SERVICE

↓ *

Test Vend → #

↓ *

Software Version Number → #

↓ *

Water Tank Temp. → #

↓ *

Cup Test → #

↓ *

Whipper Test → #

↓ *

Air Compressor Test → #

↓ *

Brewer Test → #

↓ *

Bowl Rinse → #

↓ *

Brewer Rinse → #

↓ *

Fill Water Tank → #

↓ *

Input Test → #

↓ *

COFFEE

↓ *

Lockout → #

↓ *

Select Regular Drink Size → #

↓ *

Select Large Drink Size → #

↓ *

Set Water Throws → #

↓ *

Set Product Throws → #

↓ *

Set Sugar Throws → #

↓ *

Set Lightener Throws → #

↓ *

Set Steep Time → #

↓ *

Set Air Compresor Run Time → #

↓ *

Set Cappuccino Ratio → #

↓ *

Set Water Tank Temperature → #

↓ *

Set Machine Configuration → #

↓ *
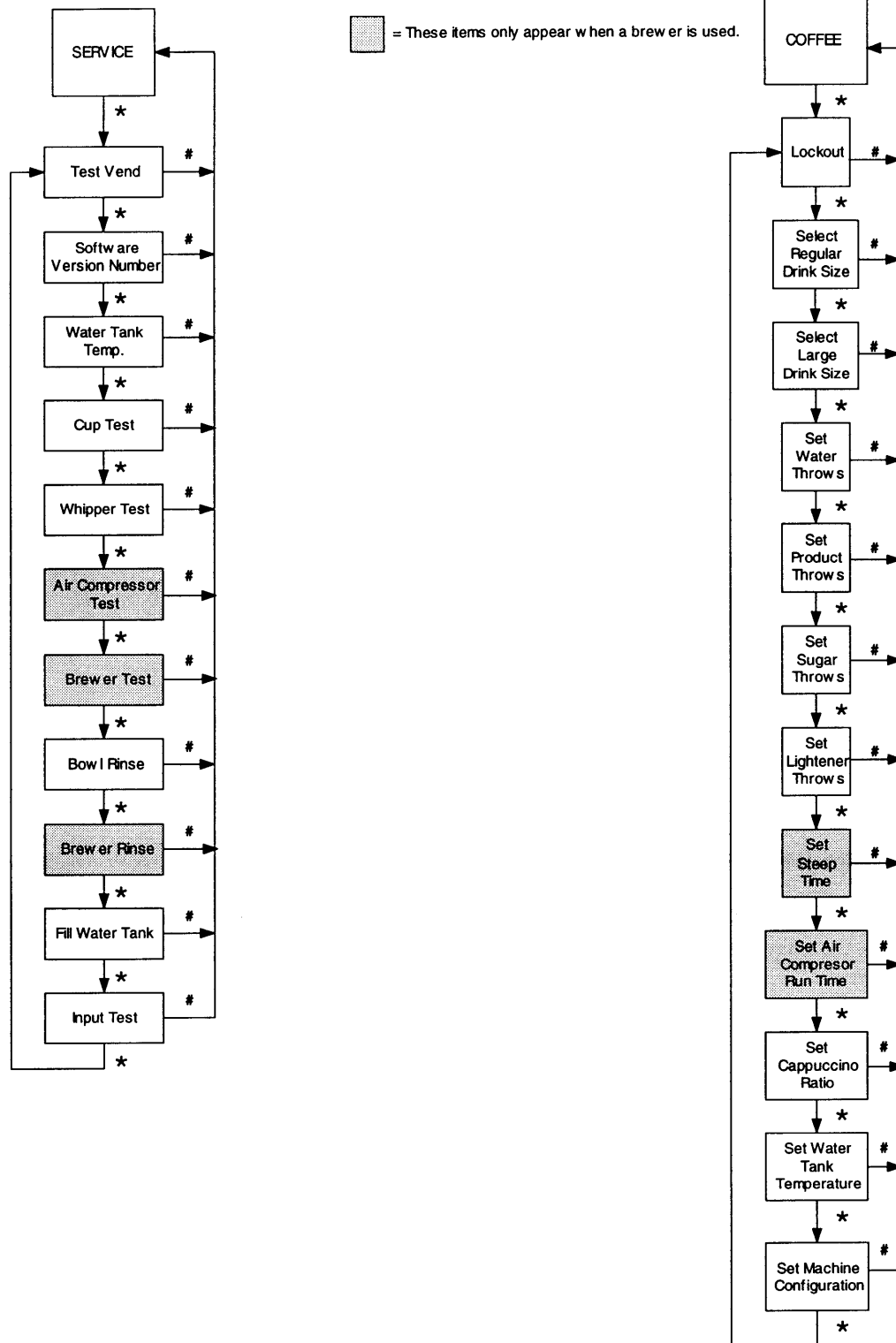
PAY OUT (Does not apply to machines with EXEC coin mechanisms.)

Pay out coins:
1. Pull out the door switch button to the ON position.
2. Press # until the display shows *N.D.Q. = 1.2.3*. This is telling you that pressing ① pays out Nickels, pressing ② pays out **Dimes**, and pressing ③ pays out **Quarters**.
3. Press the appropriate key once to pay out one coin.
4. Press and hold the appropriate key to pay out coins continuously.
5. Press and hold ⊛ to return to the standby message.

PRICE

Set prices for all the selections in your merchandiser:

The price display: *OR .25*

\\ Selection price

\\ Selection letter

Selection size:
blank = regular drink size
1 = large drink size
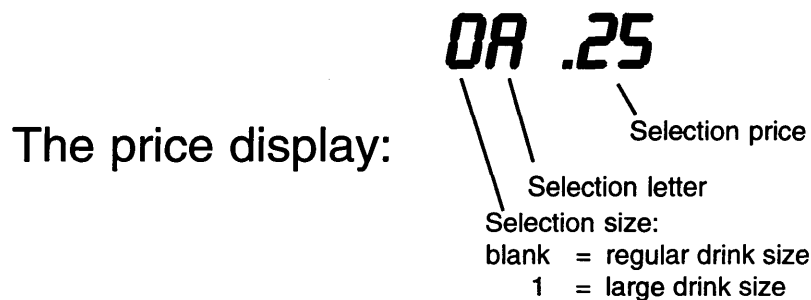
1. Pull out the door switch button to the ON position.
2. Press ⊛ until the display shows *PRICE*.
3. Press ⊛, and the display shows *R .XX*. "XX" is the price for the regular size **A** selection.
4. Press ⊛ until the selection you want to price is displayed.

OR

Press the letter of the selection you want to price, then press the selection size, and it will be displayed immediately.
5. Enter a new price with the number keys.
6. Repeat steps 4 and 5 until you have priced all the selections.

OR

7. Press ⊛ to return to the *PRICE* display, or hold ⊛ to exit.

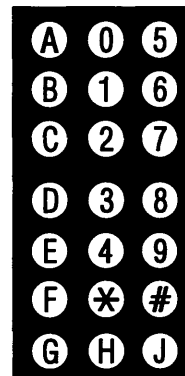|		
Ⓐ	⓪	⑤
Ⓑ	①	⑥
Ⓒ	②	⑦
Ⓓ	③	⑧
Ⓔ	④	⑨
Ⓕ	⊛	⌗
Ⓖ	Ⓗ	Ⓙ

FAULTS

Display all the <u>active</u> faults on your merchandiser:

1. Pull out the door switch button to the ON position.
2. Press (#) until the display shows *FAULTS*.
3. Press (✻) to see the list of faults:

NO ERRORS	There are no faults on the machine.
KEYPAD XY	Key(s) "X" and "Y" are stuck.
ROM ERROR	Error with ROM.
RAM ERROR	RAM is not initialized or is not compatible with the currently loaded software. If this message appears, initialize your RAM by performing the following procedure: **NOTE: Initializing RAM will erase all your data and drink settings. Be sure you have written this information down before continuing.** Press AND HOLD (C). You will see *CLEARING* in the display. Continue holding until two beeps are heard and the display shows *FINISHED*.
CONFIG ERR	Error with machine configuration.
RING.MTR	The cup ring is jammed.
MOT'R 12	Cup turret motor 1 or 2 is jammed.
NO CUPS 1	Out of cups.
WASTE PAIL	The waste pail is full.
LOW WATER	The water level in the tank is low.
COLD TANK	Water is too cold to vend.
NO SENSOR	Illegal temperature reading.
TANK ERR	A fault occurred in the inlet system.
WHIP 123	Whipper motor failure (motor 1, 2, or 3).
BREWER JAM	The brewer is jammed.
MECH ERR	Problem with the coin mechanism.
CHECK DBV	Problem with the bill validator.
NONE READY	Time of day inhibit is active, or all selections are out of service.
CHK PRICE	Illegal price is detected.
LOCKS SET	All selections are locked.

When the first fault item (if any) repeats, you have seen all the faults.

When active faults exist, pulling the door switch will automatically display
    FAULTS.

4. Press (✻) to see more faults or (#) to exit.
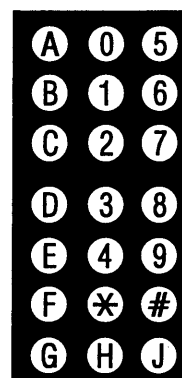
12. Press Ⓧ. The display shows *TANK.FILL*.

    a. Press Ⓙ. The display shows: *FILLING*. This indicates that the tank is filling and/or the error is cleared. When the tank is full, the display returns to *TANK.FILL*.

    b. If it is taking longer than 12 minutes to fill the tank **AND THERE ARE NO LEAKS**, you may see the *TANK ERR* message again. Just repeat step a after making sure there are no other problems, such as a restriction in the water inlet line.

NOTE

The heater does not function until the tank is full. The normal heat up time to reach operating temperature is 90 minutes, depending upon incoming water temperature.

13. Press Ⓧ. The display shows *IN KPHL1*. This screen lets you test the **IN**put switches.

    K = the letter or number of any key (except Ⓧ and Ⓗ) being pressed replaces "*K*"

    P = waste pail overflow switch

    H = water tank upper level

    L = water tank lower level (a decimal point appearing after the "L" indicates that the inlet valve is energized)

    1 = cup ring empty sensor

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

SERVICE

View machine status and test certain functions:

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

1. Pull out the door switch button to the ON position.
2. Press Ⓐ until the display shows *SERVICE*.
3. Press ✳. The display shows *TEST .00*. You can test vend selections. Insert coins and bills into the merchandiser, and the amount you inserted is displayed.
4. Press ✳. The display shows the software version number.
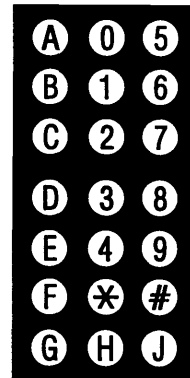5. Press ✳. The display shows the water tank temperature. Temperature is displayed in either degrees Fahrenheit (F) or Celsius (C), depending upon what was set in the *COFFEE* mode.
6. Press ✳. The display shows *CUP TEST*. To drop a cup, press Ⓙ.
7. Press ✳. The display shows *WHIP TEST*. To test the whipper(s), do one of the following:
a. Press the selection letter that uses the whipper you want to test. For example, pressing Ⓐ will test whipper #1. (The display shows *WHIP 1*.)
b. Press the number of the whipper. The display shows the whipper number you pressed. (If you press a whipper number that does not exist, nothing happens.)
8. Press ✳. The display shows *AIR TEST*. To test the air compressor, press Ⓙ.
9. Press ✳. The display shows *BREW TEST*. Press Ⓙ, and each brewer position is displayed:

WARNING
Keep away from the brewer mechanism while it is operating. Coming into contact with moving parts could injure you.

a. *BREW'R BREW* - The brewer is in the BREW position.
b. *BREW'R FLIP* - The brewer is in the FLIP position.
c. *BREW'R HOME* - The brewer is in the HOME position.

10. Press ✳. The display shows *BOWL RINSE*. To rinse the bowls, press Ⓙ. Hot water is delivered to the mixing bowl(s), and the display shows *RINSING* until the cycle is complete.
11. Press ✳. The display shows *BREW RINSE*. To rinse the brewer, press Ⓙ. The brewer cycles and the display shows *CLEANING* until the cycle is complete.

14. Press (✱) to return to step 3, or (#) to exit.

SETUP

Configure various machine functions:

1. Pull out the door switch button to the ON position.

2. Press (#) until the display shows *SETUP*.

3. Press (✱). The display shows either *FREE ALL* or *FREE OFF*. When *FREE ALL* is displayed, all selections are free. Press (H) to switch between **ALL** and **OFF**.

4. Press (✱). The display shows either *DUMB MECH, MDB MECH,* or *EXEC MECH*. Press (H) to switch between these coin mech choices.

NOTE
If your machine has an EXEC coin mechanism, skip to step 9.

5. Press (✱). The display shows either:

OK. $1.2.5.10.20 = The validator will accept $1, $2, $5, $10, and $20 bills.

OR

NO VALIDTR = NO bills wil be accepted, or there is no bill validator installed (in that case, you can exit this function). Press (H) to switch between the two choices. If you selected *OK. $1.2.5.10.20*, you can press (1), (2), (5), (6), or (7) (respectively) to display the bill (s) which will be accepted.

6. Press (✱). The display shows *CHANGE X.XX*. Change will be given for coins or bills up to this amount without the customer having to make a selection. For example, if **1.00** is displayed, the machine will give the customer change for a dollar without requiring a selection. Entering **0.00** means that no change will be given.

7. Press (✱). The display shows: *LOW.MSG X.XX*. The customer will see *USE EXACT CHANGE* in the display when the amount of available change in the coin mechanism falls below the level you set for **X.XX**. Enter a value with the number keys. For example, if *LOW.MSG 1.00* is selected, the customer sees the *USE EXACT CHANGE* message when less than a dollar's worth of change is in the coin mechanism.

8. Press (✱). The display shows either:

DECLINE.ON = More than one vend is allowed, with a declining balance. This means that the customer can choose multiple products until the amount of credit is lower than the lowest priced product in the machine.

OR

DECLINE.OFF = A declining balance is not allowed. Press (H) to switch between these two choices.

9. Press (✱). The display shows either *ENGLISH, DEUTSCH, FRANCAIS, ESPANOL, PORTUGUES* or *SWEDISH*. Press (H) to select the appropriate language for your display.

10. Press (✱) to return to step 3, or (#) to exit.
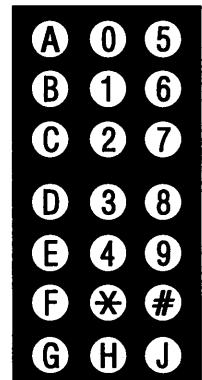
COFFEE

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

1.   Pull out the door switch button to the ON position.

2.   Press (#) until the display shows *COFFEE*.

3.   Press (✳). The display shows *LK. ABCDEFG*. When letters **A** through **G** are displayed, it indicates the selections that are locked out. An active selection is indicated by a dash (-). Pressing the appropriate letter key(s) switches from active to locked out.
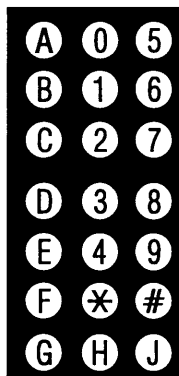
NOTE

If your machine is **NOT** equipped with the International Coffee option, you **MUST** lock out selection C. Failure to do so will allow "vending" a non-existant selection.

---

4.   In the next two steps, you will set up the two drink sizes. **Your machine only supports one cup size.** Therefore, the large size drink selection vends a full cup, while the regular size drink selection vends a *partially filled cup*. First, be sure that the cups you have loaded in your machine have the capacity to hold the large size drink volume. Then follow the two steps below to set up the two drink sizes:

    a.   Press (✳). The display shows **CUP   X OZ**. Press (Ⓗ) until the regular size drink volume you want is displayed.

    •   If you want to load the factory default water and product throw times for your new cup size, press and hold (Ⓓ). The display shows *CLEARING*, then *FINISHED*.

    b.   Press (✳). The display shows **CUP.1   X OZ**. Press (Ⓗ) until the large size drink volume you want is displayed.

    •   If you want to load the factory default water and product throw times for your new cup size, press and hold (Ⓓ). The display shows *CLEARING*, then *FINISHED*.

When setting up throw times for water, product, etc., each selection letter shows the time for a regular size drink and the time for a large drink. The large size drink throw time is shown with a "1" in front of the selection letter.

NOTE

If you are using a single drink size (CUP.0 = CUP.1), then you must enter throw times for Caffé Latte (1D) manually. These times will not be set when loading factory defaults in a single drink size machine.

8. Press ✖. The display shows *LIGHTENER*. This is the main screen for setting up lightener throws. If you don't want to do this, continue to step 9.
   a. Do one of the following:
      Press the letter of the selection whose lightener throw you want to set.

      OR

      Press Ⓗ to go to the **A** selection, then press ✖ until the desired selection is displayed.

      NOTE

      The **A** and **B** selections are represented by a star (✱). All other selections using lightener are represented normally.

   b. Example: The display shows *LIT. F .90*. This is the lightener screen for the **F** selection. The numbers on the right are the throw time for the selection (0.90 seconds in this example).
   c. Enter a new throw time, using the number keys.
   d. Press Ⓙ test throw lightener.
   e. Repeat steps a through d to set another selection.
   f. Press # to return to the *LIGHTENER* display.

9. Press ✖. The display shows *STEEP*. This is the main screen for setting up steep times for brewed selections. If you don't want to do this, continue to step 10.
   a. Do one of the following:
      Press the letter of the selection whose steep time you want to set.

      OR

      Press Ⓗ to go to the **A** selection, then press ✖ until the desired selection is displayed.

   b. Example: The display shows *STP. A+ 2.10*. This is the steep time screen for the **large A** selection. The numbers on the right are the steep time for the selection (2.10 seconds in this example).
   c. Enter a new steep time, using the number keys.
   d. Repeat steps a through c to set another selection.
   e. Press # to return to the *STEEP* display.

10. Press ✖. The display shows *AIR*. This is the main screen for setting up air compressor running times for brewed selections. If you don't want to do this, continue to step 11.
    a. Do one of the following:
       Press the letter of the selection whose compressor running time you want to set.

       OR

       Press Ⓗ to go to the **A** selection, then press ✖ until the desired selection is displayed.

    b. Example: The display shows *AIR. A 4.10*. This is the air compressor time screen for the **A** selection. The numbers on the right are the steep time for the selection (4.10 seconds in this example).
    c. Press **J** to run the air compressor.
    d. Repeat steps a through c to set another selection.
    e. Press # to return to the *AIR* display.

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

5. Press ⊗. The display shows *WATER*. This is the main screen for setting up water throws. If you don't want to do this, continue to step 6.
   a. Do one of the following:
      Press the letter of the selection whose water throw you want to set
<div align="center">**OR**</div>
      Press Ⓗ to go to the **A** selection, then press ⊗ until the desired selection is displayed.
   b. Example: The display shows *WAT. A 5.90*. This is the water screen for the **A** selection. The numbers on the right are the throw time for the selection (5.90 seconds in this example).
   c. Enter a new throw time, using the number keys.
   d. Press Ⓙ test throw the water.
   e. Repeat steps a through d to set another selection.
   f. Press ⌗ to return to the *WATER* display.

6. Press ⊗. The display shows *PRODUCT*. This is the main screen for setting up dry product throws. If you don't want to do this, continue to step 7.
   a. Do one of the following:
      Press the letter of the selection whose dry product throw you want to set
<div align="center">**OR**</div>
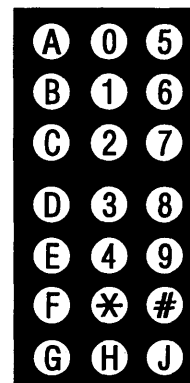   Press Ⓗ to go to the **A** selection, then press ⊗ until the desired selection is displayed.
   b. Example: The display shows *DRY. A 1.90*. This is the water screen for the **A** selection. The numbers on the right are the throw time for the selection (1.90 seconds in this example).
   c. Enter a new throw time, using the number keys.
   d. Press Ⓙ test throw the dry product.
   e. Repeat steps a through d to set another selection.
   f. Press ⌗ to return to the *PRODUCT* display.

7. Press ⊗. The display shows *SUGAR*. This is the main screen for setting up sugar throws. If you don't want to do this, continue to step 8.
   a. Do one of the following:
      Press the letter of the selection whose sugar throw you want to set
<div align="center">**OR**</div>
      Press Ⓗ to go to the **A** selection, then press ⊗ until the desired selection is displayed.
<div align="center">**NOTE**</div>
The **A** and **B** selections are represented by a star (∗). All other selections using sugar are represented normally.

   b. Example: The display shows *SUG. F 1.90*. This is the sugar screen for the **F** selection. The numbers on the right are the throw time for the selection (1.90 seconds in this example).
   c. Enter a new throw time, using the number keys.
   d. Press Ⓙ test throw sugar.
   e. Repeat steps a through d to set another selection.
   f. Press ⌗ to return to the *SUGAR* display.

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

11. Press ⊛. The display shows **RATIO .25**. This is the ratio of chocolate to coffee in a cappuccino drink. In this example, cappuccino uses 25% chocolate.
  a. Enter a new ratio using the number keys. **A ratio between 5 and 50% must be present, or you can't leave this step.**
12. Press ⊛. The display shows **SET XXX°F**. This is the setpoint for the hot water tank (in degrees Fahrenheit). The hot water tank will maintain this temperature within a few degrees. If you don't want to change the setpoint, continue to step 13.
  a. Enter a new setpoint using the number keys. Acceptable range: 149°-205° F (65°-96° C).
  b. Press ⓗ to switch the display between degrees Celsuis and degrees Fahrenheit.
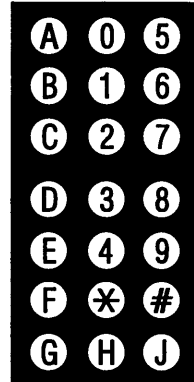
13. Press ⊛. The display shows **CONF XXXX**. The four "X"s represent the configuration code for your machine. **BE SURE THE CODE MATCHES YOUR MACHINE'S ACTUAL CONFIGURATION!** An invalid configuration will cause an "out of service" condition and a diagnostic message.
  a. Enter one of the following configurations using the number keys:
        If you have a . . .   . . . enter this code:
        Single brew machine 2111
        Dual brew machine 2121
        Freeze dry machine 2131
  b. Press ⊛ to return to step 3 or ⌗ to exit.

CAFFE' LATTE RECIPE
(12 oz. recommended)

1. Make sure the machine is configured to use 12 oz. cups.
2. Set up the 1D selection as follows:
  a. Water: 8.56 seconds = 6 ounces (about 177 ml)
  b. Coffee: 4.77 seconds = 17 grams
  c. Sugar: 0.24 seconds = 2.5 grams
  d. Lightener: 2.8 seconds = 5 grams
  e. Steep time: 12.5 seconds

Table D1. Dry Product Weight and Throw Time Factory Default Settings

Selection		Weight (in grams) per size cup Throw times (in seconds) per size cup					
		5 oz	7 oz	8 oz	9 oz	10 oz	12 oz
A	Fresh brew coffee	5.70 1.60	8.00 2.20	9.00 2.50	10.00 2.80	11.00 3.10	13.00 3.65
A	Freeze dry coffee	0.90 0.20	1.20 0.30	1.50 0.40	1.60 0.50	1.80 0.55	2.20 0.70
A	Strong freeze dry coffee	1.10 0.25	1.50 0.40	1.80 0.55	2.00 0.65	2.20 0.70	2.60 0.90
B	Fresh brew decaf	5.70 1.6	8.00 2.20	9.00 2.50	10.00 2.80	11.00 3.10	13.00 3.65
B	Freeze dry decaf	0.90 0.15	1.20 0.25	1.50 0.35	1.60 0.40	1.80 0.45	2.20 0.60
B	Strong freeze dry decaf	1.10 0.20	1.50 0.35	1.80 0.45	2.00 0.50	2.20 0.60	2.60 0.75
C	Soluble Product	10.0 2.55	13.5 3.40	16.2 4.10	17.8 4.50	19.7 5.00	23.7 6.00
D	Fresh brew coffee ESPRESSO	5.70 1.60	8.00 2.20	9.00 2.50	10.00 2.80	11.00 3.10	13.00 3.65
D	Freeze dry coffee ESPRESSO	0.90 0.20	1.20 0.30	1.50 0.40	1.60 0.50	1.80 0.55	2.20 0.70
D	Strong freeze dry coffee ESPRESSO	1.05 0.25	1.50 0.40	1.80 0.55	2.00 0.65	2.20 0.70	2.60 0.90
E	Fresh brew coffee CAPPUCCINO	5.70 1.60	8.00 2.20	9.00 2.50	10.00 2.80	11.00 3.10	13.00 3.65
E	Freeze dry coffee CAPPUCCINO	0.90 0.20	1.20 0.30	1.50 0.40	1.60 0.50	1.80 0.55	2.20 0.70
E	Strong freeze dry coffee CAPPUCCINO	1.05 0.25	1.50 0.40	1.80 0.55	2.00 0.65	2.20 0.70	2.60 0.90
F	Instant tea	0.90 0.70	1.20 1.00	1.50 1.25	1.60 1.30	1.80 1.60	2.20 1.85
F	Strong instant tea	1.10 0.90	1.50 1.25	1.80 1.60	2.00 1.75	2.20 1.85	2.60 2.10
G	Chocolate	17.00 3.25	24.00 4.60	28.00 5.40	31.00 5.90	34.00 6.50	41.00 7.80
H	Soup	4.30 0.80	6.00 1.15	7.00 1.30	7.60 1.40	8.50 1.60	10.20 1.90

Table D2. Dry Product Settings for Cappuccino (5 oz. cup)

	CHOCOLATE					FREEZE DRY COFFEE			FRESH BREW COFFEE		
Percent	Weight (gm)	Timing (sec)	Water Settings		Percent	Water Settings		Percent	Water Settings		
			Volume (ml)	Timing (sec)		Volume (ml)	Timing (sec)		Volume (ml)	Timing (sec)	
15 (default)	3.10	0.45	52	2.45	85 (default)	57	3.40	85 (default)	58	2.70	
20	4.10	0.65	54	2.65	80	54	3.20	80	55	2.50	
25	5.00	0.80	56	2.80	75	52	3.05	75	53	2.40	
30	5.80	0.95	59	2.95	70	49	2.95	70	49	2.30	
35	6.70	1.10	61	3.10	65	47	2.75	65	47	2.20	
40	7.60	1.30	63	3.30	60	44	2.55	60	45	1.95	
45	8.40	1.45	66	3.45	55	41	2.40	55	41	1.85	
50	9.30	1.60	68	3.60	50	38	2.25	50	38	1.75	

Table D2. Dry Product Settings for Cappuccino (7 oz. cup)

	CHOCOLATE					FREEZE DRY COFFEE			FRESH BREW COFFEE		
Percent	Weight (gm)	Timing (sec)	Water Settings		Percent	Water Settings		Percent	Water Settings		
			Volume (ml)	Timing (sec)		Volume (ml)	Timing (sec)		Volume (ml)	Timing (sec)	
15 (default)	4.50	0.65	56	2.65	85 (default)	101	5.50	85 (default)	115	4.35	
20	5.80	0.90	59	2.90	80	97	5.25	80	110	4.15	
25	7.10	1.15	63	3.15	75	92	5.00	75	104	3.90	
30	8.00	1.35	65	3.35	70	90	4.80	70	102	3.80	
35	9.30	1.60	69	3.60	65	86	4.55	65	96	3.60	
40	10.50	1.80	72	3.80	60	81	4.35	60	92	3.50	
45	11.80	2.05	76	4.05	55	77	4.10	55	87	3.25	
50	13.10	2.30	79	4.30	50	72	3.85	50	83	3.05	

Table D1. Dry Product Weight and Throw Time Factory Default Settings (Continued)

Selection		Weight (in grams) per size cup*					
		Throw times (in seconds) per size cup					
		5 oz	7 oz	8 oz	9 oz	10 oz	12 oz
I	Chocolate used in cappuccino	3.10 0.45	4.50 0.65	5.00 0.80	5.80 0.85	6.20 0.95	7.60 1.15
D	Sugar used in espresso	2.10 0.20	3.00 0.25	3.50 0.30	4.00 0.35	4.50 0.40	5.50 0.50
D	Extra sugar used in espresso	3.00 0.25	4.00 0.35	4.50 0.40	5.00 0.45	5.50 0.50	6.50 0.60
E	Sugar used in cappuccino	3.50 0.30	5.10 0.40	6.00 0.50	6.80 0.55	7.70 0.65	9.40 0.85
E	Extra sugar used in cappuccino	4.60 0.35	6.80 0.55	7.70 0.65	8.50 0.75	9.40 0.85	11.00 1.00
F	Sugar used in tea	4.20 0.40	6.00 0.50	7.00 0.60	8.00 0.70	9.00 0.80	11.00 1.00
F	Extra sugar used in tea	5.50 0.50	8.00 0.70	9.00 0.80	10.00 0.90	11.00 1.00	13.00 1.20
F	Lightener used in tea	1.20 0.70	1.50 0.85	2.00 1.15	2.50 1.45	3.00 1.70	4.00 2.25
F	Extra lightener used in tea	1.50 0.85	2.00 1.15	2.50 1.45	3.00 1.70	3.50 2.00	4.50 2.60
F	Sugar substitute used in tea	0.60 0.30	0.85 0.40	1.00 0.50	1.10 0.55	1.30 0.65	1.50 0.75
F	Extra sugar substitute used in tea	0.80 0.40	1.10 0.55	1.30 0.65	1.40 0.70	1.60 0.80	1.90 0.95
**	Sugar	4.20 0.40	6.00 0.50	7.00 0.60	8.00 0.70	9.00 0.80	11.00 1.00
**	Extra sugar	5.50 0.50	8.00 0.70	9.00 0.80	10.00 0.90	11.00 1.00	13.00 1.20
**	Lightener	1.20 0.70	1.50 0.85	2.00 1.15	2.50 1.45	3.00 1.70	4.00 2.25
**	Extra lightener	1.50 0.85	2.00 1.15	2.50 1.45	3.00 1.70	3.50 2.00	4.50 2.60
**	Sugar substitute	0.60 0.30	0.85 0.40	1.00 0.50	1.10 0.55	1.30 0.65	1.50 0.75
**	Extra sugar substitute	0.80 0.40	1.10 0.55	1.30 0.65	1.40 0.70	1.60 0.80	1.90 0.95

D   = Espresso
E   = Cappuccino

I = Chocolate times for cappuccino

*   The actual gram weight of a product or condiment throw will vary depending upon the type of product or condiment used. The weights given are approximate based upon factory testing.

**   Separate sugar, lightener, and sugar substitute timers are available for selections A/B/C, D, E, and F.

Table D2. Dry Product Settings for Cappuccino (8 oz. cup)

CHOCOLATE					FREEZE DRY COFFEE			FRESH BREW COFFEE		
Percent	Weight (gm)	Timing (sec)	Water Settings		Percent	Water Settings		Percent	Water Settings	
			Volume (ml)	Timing (sec)		Volume (ml)	Timing (sec)		Volume (ml)	Timing (sec)
15 (default)	5.40	0.80	59	2.80	85 (default)	132	6.80	85 (default)	153	5.20
20	6.80	1.05	62	3.05	80	128	6.55	80	150	5.10
25	8.00	1.35	66	3.35	75	122	6.25	75	144	4.90
30	9.30	1.60	69	3.60	70	117	6.00	70	137	4.70
35	11.00	1.85	73	3.85	65	112	5.75	65	131	4.45
40	12.70	2.15	78	4.15	60	108	5.45	60	124	4.25
45	14.00	2.40	82	4.40	55	105	5.20	55	118	4.00
50	15.65	2.70	85	4.70	50	91	4.90	50	112	3.80

Table D2. Dry Product Settings for Cappuccino (9 oz. cup)

CHOCOLATE					FREEZE DRY COFFEE			FRESH BREW COFFEE		
Percent	Weight (gm)	Timing (sec)	Water Settings		Percent	Water Settings		Percent	Water Settings	
			Volume (ml)	Timing (sec)		Volume (ml)	Timing (sec)		Volume (ml)	Timing (sec)
15 (default)	5.8	0.85	60	2.85	85 (default)	140	7.30	85 (default)	172	5.85
20	7.6	1.15	64	3.15	80	134	7.00	80	155	5.65
25	8.8	1.45	68	3.45	75	130	6.70	75	152	5.45
30	10.5	1.75	72	3.75	70	125	6.40	70	144	5.10
35	12.3	2.05	77	4.05	65	119	6.10	65	138	4.90
40	13.9	2.35	82	4.35	60	113	5.80	60	133	4.70
45	15.3	2.65	85	4.65	55	109	5.50	55	126	4.45
50	17.1	2.95	90	4.95	50	105	5.20	50	124	4.15

Table D2. Dry Product Settings for Cappuccino (10 oz. cup)

CHOCOLATE					FREEZE DRY COFFEE			FRESH BREW COFFEE		
Percent	Weight (gm)	Timing (sec)	Water Settings		Percent	Water Settings		Percent	Water Settings	
			Volume (ml)	Timing (sec)		Volume (ml)	Timing (sec)		Volume (ml)	Timing (sec)
15 (default)	6.2	0.95	60	2.95	85 (default)	166	8.70	85 (default)	185	6.65
20	8.0	1.30	65	3.30	80	161	8.35	80	178	6.30
25	9.8	1.60	70	3.60	75	155	8.05	75	172	6.10
30	11.3	1.95	74	3.95	70	150	7.70	70	167	5.85
35	13.6	2.25	80	4.25	65	143	7.40	65	159	5.65
40	15.3	2.60	85	4.60	60	137	7.05	60	152	5.30
45	17.1	2.90	90	4.90	55	131	6.75	55	144	5.10
50	18.7	3.25	94	5.25	50	126	6.40	50	138	4.90

Table D2. Dry Product Settings for Cappuccino (12 oz. cup)

CHOCOLATE					FREEZE DRY COFFEE			FRESH BREW COFFEE		
Percent	Weight (gm)	Timing (sec)	Water Settings		Percent	Water Settings		Percent	Water Settings	
			Volume (ml)	Timing (sec)		Volume (ml)	Timing (sec)		Volume (ml)	Timing (sec)
15 (default)	7.6	1.15	64	3.15	85 (default)	223	11.20	85 (default)	231	8.26
20	9.8	1.55	70	3.55	80	215	10.80	80	223	8.05
25	11.8	1.95	76	3.95	75	208	10.40	75	215	7.70
30	13.9	2.30	82	4.30	70	201	10.10	70	207	7.50
35	16.1	2.70	87	4.70	65	193	9.70	65	201	7.15
40	18.2	3.10	93	5.10	60	185	9.30	60	193	6.85
45	20.4	3.50	99	5.50	55	178	8.90	55	185	6.60
50	22.3	3.90	105	5.90	50	171	8.50	50	178	6.30

6300002

TIME OF DAY FEATURES

You can set the clock and calendar features of your machine, as well as set up to four intervals during the day when the machine will be inactive.

1. Pull out the door switch button to the ON position.
2. Press (#) until the display shows *TIME HH.MM*. This is the currently set time, expressed in 24-hour format.
    a. If desired, set the time using the number keys. Remember to express the time in 24-hour format: 2:00 pm = 14.00.
3. Press (✳). The display shows the current date: MM/DD   YY. For example, *07/25 97* is July 25, 1997.
    a. If desired, set the month, day, and year using the number keys.
    b. To display the date in the European format (DD-MM), press (H). Note that the European format uses a dash (-) instead of a slash (/) between the day and month to avoid confusing the two formats. The display for our example would then be *25-07 97*.
4. Press (✳). The display shows *INHIB 1-3-*. This shows the number of active "time-of-day inhibit" periods. In this example, inhibit periods 1 and 3 are active.
    a. To turn on or off the inhibit periods, press the corresponding number key (1, 2, 3, or 4).
5. Press (✳). The display shows *1.STRT 10.00*. This is the start time of the first inhibit period, expressed in 24-hour time format. This example shows period #1 beginning at 10:00 am.
    a. If desired, enter a new start time using the number keys.
6. Press (✳). The display shows *1.STOP 14.00*. This is the stop time of the first inhibit period, expressed in 24-hour time format. This example shows period #1 ending at 2:00 pm.
    a. If desired, enter a new stop time using the number keys.

    The machine will not vend between the hours of 10:00 am and 2:00 pm every day.

7. Press (✳). The display shows *3.STRT 0.00*. This is the start time of inhibit period #3. Notice that the display did not show inhibit period #2, since it was inactive (see step 4). This time period and any others are treated exactly the same as inhibit period #1.
8. Press (#) once to return to step 2, or press and hold (#) to exit.

Table W1. Water Throw Default Times and Volumes

Selection		Time (in seconds) per size cup					
		Volume (in ml) per size cup					
		5 oz	7 oz	8 oz	9 oz	10 oz	12 oz
A	Fresh brew coffee	4.50 130	6.40 190	7.50 220	8.20 240	9.00 265	11.00 315
B	Fresh brew decaf	4.50 130	6.40 190	7.50 220	8.20 240	9.00 265	11.00 315
A	Freeze dry coffee	5.90 120	8.20 170	9.65 200	10.20 210	11.70 240	14.80 305
B	Freeze dry decaf	5.90 120	8.20 170	9.65 200	10.20 210	11.70 240	14.80 305
C	6th Product	5.90 100	8.20 140	9.65 170	10.20 180	11.70 200	14.80 240
D	Espresso	2.95 60	4.10 85	4.85 100	5.10 105	5.85 120	7.40 153
F	Tea	5.90 120	8.20 170	9.65 200	10.20 210	11.70 240	14.80 305
G	Chocolate	5.90 100	8.20 140	9.65 170	10.20 180	11.70 200	14.80 240
H	Soup	5.90 110	8.20 160	9.65 190	10.20 200	11.70 230	14.80 280

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CLEANING AND SANITATION

Basics

INTRODUCTION

Anyone who services vending machines must use proper sanitary procedures. Health regulations require that hands be clean when cups, commodities, and food-contact parts are handled or serviced.

In addition, Federal and State Health Departments require regular cleaning and sanitizing procedures for food contact parts.

The information in this section will explain how to clean and sanitize the merchandiser on a day to day basis. A clean and well maintained merchandiser will provide a better product and greater safety for your customers.

CLEANING AND SANITIZING -- WHAT'S THE DIFFERENCE?

Clean means "free of visible soil". In cup vending machine servicing, cleaning is also done to maintain product quality and to remove food soils, oils, and mineral stains that could affect product taste, aroma, and appearance.

Sanitizing means the reduction, to safe levels, of the number of disease-causing bacteria that remain on the surface **after** cleaning. Therefore, cleaning and sanitizing are done in separate steps, as prescribed by health regulations and good industry practice.

When you sanitize you create a healthy and hygienic condition. This leads to wholesome food, which in turn leads to satisfied customers.

HOW DO I SANITIZE?

You can sanitize by using either of these two methods:

Chemicals: The object to be sanitized is treated with a bactericidal compound.

Heat: Raise the temperature of the object high enough to kill bacteria. Water must be at least 170° F.

Hot brew water (if available) is an acceptable sanitizer. When food contact surfaces are washed and/or rinsed, use the hot water available in the machine.

Turn the machine off before using water on the machine.

In either case, the object must be thoroughly clean and completely rinsed in order for the sanitizing process to work. Caked-on soils not removed by cleaning, for example, may shield bacteria from a sanitizing solution.

> **SANITIZING IS NO SUBSTITUTE FOR A GOOD CLEANING**

SANITATION PROCEDURES

Refer to the recommended cleaning and sanitation interval table on the final page of this section. For each item, complete the procedure as outlined here.
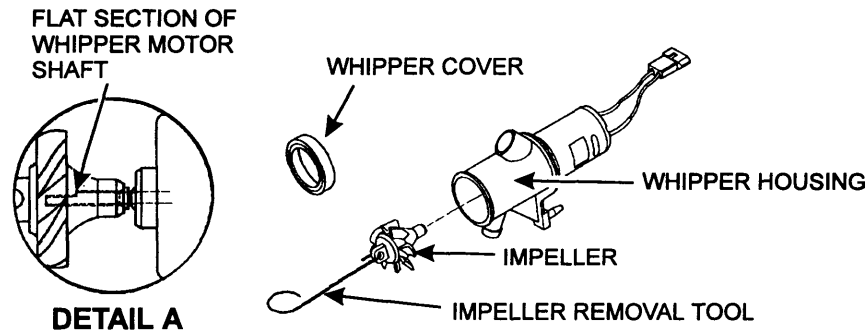
Food-Contact Parts

NOTE
All food-contact parts must be cleaned **AND** sanitized. Air dry, do not wipe dry.

Ingredient Canisters - Empty and clean the canisters, augers, and spouts by washing with warm water and detergent. Sanitize with hot water and allow to air dry completely before returning to the cabinet.

Mixing Bowls - It is important that the mixing bowls be kept clean. The inside of all mixing bowls should be rinsed whenever the machine is serviced by performing the "Bowl Rinse" operation as outlined in the Programming section of this manual.

When required by the cleaning and sanitation schedule at the end of this section or more often if needed, remove the mixing bowls from the dry ingredient shelf. Thoroughly clean the mixing bowls by washing with warm water and detergent. Sanitize with hot water and allow to air dry before reassembling.

Whipper Cover and Impellers - Remove lids and impellers from the whipper housings, wash the lids and impeller housing. Sanitize with hot water and allow to air dry before reassembling.

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FLAT SECTION OF
WHIPPER MOTOR
SHAFT                        WHIPPER COVER

                                                    WHIPPER HOUSING

                                         IMPELLER

   DETAIL A                  IMPELLER REMOVAL TOOL
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a. Remove the whipper assembly from its mounting and remove the whipper cover.
b. Using the impeller removal tool (located in the plastic bag assembly), remove the impeller from the whipper housing as shown.
c. Wash the cover, impeller, and impeller housing. Sanitize with hot water and allow to air dry before reassembling.
d. To reassemble, see detail A. Note that the whipper motor shaft has a flat section. Make sure this flat section lines up with the "D" shaped hole in the impeller. Press the impeller all the way onto the whipper motor shaft. Replace the cover.

A GOOD PLACE TO START -- YOUR SANITATION KIT

You need to be sure that each machine is clean, safe, and functioning when you leave it. In order to properly do this, you need to have a complete set of the right tools. In addition to the screwdrivers, pliers, and test equipment necessary to repair a machine, you need to have the tools to clean the machine.

Here is a checklist of the items needed for a good sanitation kit:

Sanitation pail
Tube and nozzle brushes for food contact surfaces
Utility brush for dry spillage around canisters, etc.
Disposable towels, wet-strength and lint-free

NOTE

Wiping with towels can re-contaminate sanitized food-contact parts. Therefore, towels should not be used to dry food-contact surfaces. Instead, these parts should be air dried.

Spray detergent, diluted to desired strength
Urn cleaner packets for coffee stains and oils
Odor control chemicals for pails
Replacement parts (if the exchange method is used)
Cabinet polish or window cleaner for the outside of the machine

Feel free to add some items to this list. For example, you may want to use a portable vacuum cleaner.

<u>Beverage Discharge Nozzles</u> - Disconnect the beverage dispensing tube from the nozzles. Remove the nozzles from the mounting bracket. Remove the cap from the nozzle, wash clean and sanitize the nozzles and cap. Refer to the tubing connection diagram for proper routing.

<u>Brewer, Brewer Basket, and Brewer Funnel</u> - The tubing and brewer may be sanitized by performing the BREW RINSE operation as outlined in the programming section. The machine features an automatic brewer sanitizing feature also described in the programming section.

At times, it may be necessary to wash and sanitize the individual brewer parts. If so, disconnect the tubes from the brewer manifold. Remove the brewer barrel and manifold assembly from its support. Remove the brewer basket and funnel assemblies.

Thoroughly wash all parts using soap and water. Sanitize by rinsing thoroughly with hot water.

<u>Ingredient Chutes</u> - Remove the metal chute(s), wash clean, and sanitize by rinsing with hot water. Air dry before reinstalling.

<u>Condiment Chute Assembly</u> - Remove the condiment chute and cover from the condiment canisters. Thoroughly wash all parts using soap and water. Sanitize by rinsing thoroughly with hot water.

Non Food-Contact Parts

<u>Brewer Mechanism Cleaning</u> - Remove the brewer mechanism from its mounting and rinse with the spray hose.

<u>Cup Delivery Compartment</u> - Remove the compartment from the merchandiser. Wash clean and rinse with hot water.

<u>Exhaust Fan Filter</u> - Remove the filter from its housing. Wash with soap and water, rinse, wring dry, and replace into housing.

<u>Grounds Pail</u> - Empty and rinse the grounds pail. Reline the pail with a clean plastic liner.

<u>Waste Pail</u> - Empty, wash, and rinse with hot water. Sprinkle detergent powder in the bottom of the pail to help control odors.

<u>Ingredient Rinse Tray</u> - Remove product canisters. Wash and rinse with hot water. Allow to air dry.

OVERALL CLEANING

Inspect your merchandiser both inside and out. Be sure to check corners and all less visible parts of the merchandiser.

Clean where needed.

Allow the inside of the cabinet to dry thoroughly before you close the door.

National Vendors recommends using the following supplies:

A commercial glass cleaner on the glass in the cabinet door.

A mild detergent and warm water on the cabinet, brewer, and other NON ELECTRICAL components.

CAUTION!
The plastic parts in your merchandiser should be cleaned with mild detergent and warm water. The use of other cleaning agents may damage the material, and should be avoided.

Do not get electrical connections or electrical components wet.

Do not use wax or lubricants which contain silicone on or in the merchandidser. Silicone or silicone vapors can cause electrical failures.

Set the main switch to OFF before cleaning or servicing the merchandiser.

Be sure the area is well ventilated and no open flames are present before using any aerosol spray.

Use protective glasses or a protective shield if an air hose is used for cleaning or drying.

RECOMMENDED CLEANING AND SANITATION INTERVALS

ITEM	DAILY	WEEKLY	MONTHLY	QUARTERLY	SEMI-ANNUALLY
Ingredient Canisters			C/S		
Mixing Bowls	R	C/S			
Whipper Lids and Impellers	R	C/S			
Beverage Discharge Nozzles		C/S			
Cup Delivery Compartment	C				
Exhaust Fan Filter			C		
Waste Pail	C				
Brewer, Basket, Funnel	C	S			
Ingredient Chutes	C	S			
Brewer Mechanism		C			
Grounds Pail	C				

S = Sanitize at this interval   R = Rinse   C = Clean at this interval
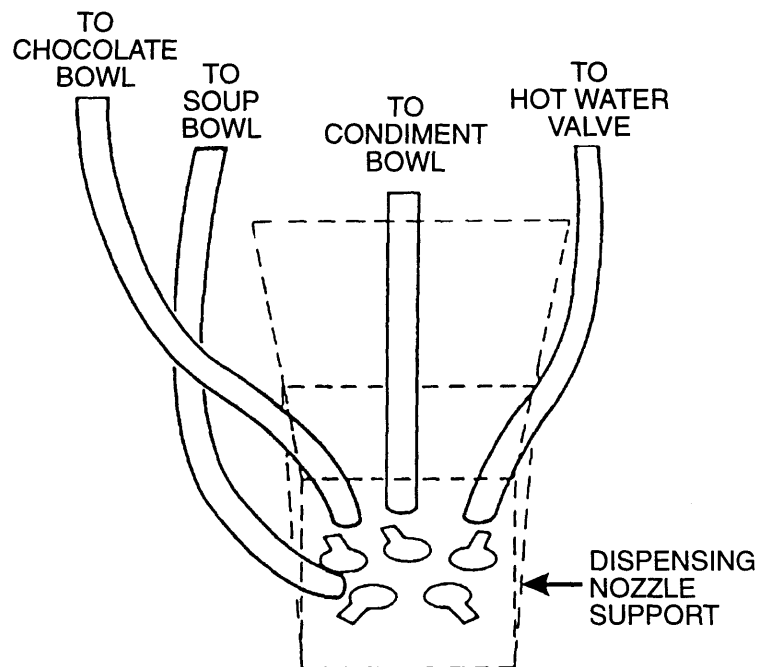
PREVENTIVE MAINTENANCE CLEANING

Periodically, you should visually inspect your merchandiser's hot water tank for excessive lime and scale buildup. This buildup on the tank walls, water valves, and heater element will vary dramatically, depending upon water quality. You should develop a cleaning and deliming schedule based on the apparent local water quality.

NOTE

To aid in removing scale from your merchandiser, National Vendors has a service kit available: part number 6400080. In addition, if your machine has the Everpure water inlet filter system option, a second kit (part number 6400086) is also available.

TO
CHOCOLATE
BOWL
TO
SOUP
BOWL
TO
CONDIMENT
BOWL
TO
HOT WATER
VALVE

DISPENSING
NOZZLE
SUPPORT

TUBE ROUTING DIAGRAM