



3243 North California Avenue, Chicago, IL 60618

DIPLOMAT POPCORN MACHINE with LOGIC II OPTION OPERATION MANUAL

**120/208 - 240 Volt,
Single and Three Phase, 60 Hz**

**230 Volt
Single Phase, 50 & 60 Hz**

**400 Volt, 3N~
Three Phase, 50 Hz**

**100/200 Volt,
Single Phase, 50 & 60 Hz**



READ and **UNDERSTAND** these operating, and safety instructions before operating this popcorn machine

SAFETY FIRST

The information in this manual is essential for the safe installation of your Cretors popcorn machine. The manual must be read and understood before installing, operating this equipment, or equivalent training must be provided.



"The employer shall instruct each employee in the recognition and avoidance of unsafe conditions and the regulations applicable to his work environment to control or eliminate any hazards or other exposure to illness or injury".
Ref.: 29 CFR 1926.20 (b)(4)(a)(2)



It is understood that safety rules within individual companies vary. If a conflict exists between the safety procedures contained in this manual and the rules of a using company, the more stringent rule should take precedence.

I INTRODUCTION

This manual is filled with time-saving and money-saving information regarding your Cretors popcorn machine. There is nothing, however, more important than the safety aids and warnings that are found throughout this document. The Safety Alert Symbol is used to identify topics of primary safety concern wherever they appear. Furthermore, a separate section has been included which deals exclusively with operation and accident prevention.

If, after reviewing this manual, anything is unclear or technical problems are encountered, contact the dealer from whom you purchased your machine for assistance and if there are any additional questions, feel free to contact our Customer Service Department at the address and/or phone number listed on the front and back covers of this manual. Always have the model and serial number of your machine available to assist in obtaining the correct information.

II SAFETY ALERT SYMBOL

The symbol shown below is used to call your attention to instructions concerning your personal safety and the safety of others. Watch this symbol. It points out important safety precautions. It means "ATTENTION! Become Alert! Your personal safety is involved!" Read the message that follows and be alert to the risk of personal injury or death.



III PURPOSE OF MANUAL



This instruction manual is intended to familiarize owners with the operation, and safety procedures associated with your Cretors popcorn machine.



This manual should be kept available to operating personnel.



A person who has not read and understood all operating and safety instructions is not qualified to operate the machine.

IV PRODUCT IDENTIFICATION

CRETORS POPCORN MACHINE WITH LOGIC OPTION
 DIPLOMAT Models: DIL20CP, DIL32CP, DIL20FP, DIL32FP
 DIL205, DIL325, TDIL326,

ELECTRICAL SPECIFICATIONS: Diplomat Models are available in the following Electrical configurations:

120/208 - 240Volt, Single and Three Phase, 60 Cycle

230 Volt, Single Phase, 50 & 60 Cycle

400 Volt, Three Phase, 50 Cycle

SPECIFICATIONS:

MODEL DIL20CP	DIPLOMAT 20 OZ. ELECTRIC COUNTER MODEL
Capacity:	20 oz. All-Steel Kettle, 400 one-ounce servings per hour
Electrical:	4200 watts
Dimensions:	28"D x 36"W x 45-1/2"H - - - - 71 cm D x 91 cm W x 116 cm H
Net Weight:	189 lbs. (86 kg.)
MODEL DIL32CP	DIPLOMAT 32 OZ. ELECTRIC COUNTER MODEL
Capacity:	32 oz. All-Steel Kettle, 640 one-ounce servings per hour
Electrical:	5100 watts
Dimensions:	28"D x 36"W x 45-1/2" H - - - - 71 cm D x 91 cm W x 116 cm H
Net Weight:	189 lbs. (86 kg.)
MODEL DIL20FP	DIPLOMAT 20 OZ. ELECTRIC FLOOR MODEL
Capacity:	20 oz. All-Steel Kettle, 400 one-ounce servings per hour
Electrical:	4200 watts
Dimensions:	28"D x 36"W x 74"H - - - - 71 cm D x 91 cm W x 188 cm H
Net Weight:	390 lbs. (177 kg.)
MODEL DIL32FP	DIPLOMAT 32 OZ. ELECTRIC FLOOR MODEL
Capacity:	32 oz. All-Steel Kettle, 640 one-ounce servings per hour
Electrical:	5100 watts
Dimensions:	28"D x 36"W x 74"H - - - - 71 cm D x 91 cm W x 188 cm H
Net Weight:	390 lbs. (177 kg.)

MODEL DIL205	DIPLOMAT 20 OZ. ELECTRIC FLOOR MODEL 5'
Capacity:	20 oz. All-Steel Kettle, 400 one-ounce servings per hour
Electrical:	5960 watts
Dimensions:	24"D x 60"W x 73-1/4" H - - - 61 cm D x 154 cmW x 186 cm H
Net Weight:	425 lbs. (193 kg.)
MODEL DIL325	DIPLOMAT 32 OZ. ELECTRIC FLOOR MODEL 5'
Capacity:	32 oz. All-Steel Kettle, 640 one-ounce servings per hour
Electrical:	6800 watts
Dimensions:	24"D x 60"W x 73-1/4" H - - - 61 cm D x 154 cmW x 186 cm H
Net Weight:	425 lbs. (193 kg.)
MODEL TDIL326	TWIN DIPLOMAT 32 OZ. ELECTRIC FLOOR MODEL 6'
Capacity:	2 - 32 oz. All-Steel Kettles, 640 one-ounce servings per hour, per popper
Electrical:	First Popper 6800 watts - Second Popper 5100 watts
Dimensions:	28"D x 72"W x 73"H - - - - 71 cm D x 183 cm W x 186 cm H
Net Weight:	610 lbs. (277 kg.)

V PRINCIPLES OF POPCORN MACHINE OPERATION

Theory And Observations Of Popcorn Machine Operation

1. The efficient production of popcorn requires the presence of popcorn kernels, heat, and oil. The purpose of the oil is to distribute the heat throughout kernels evenly and quickly. If the heat is not distributed evenly and quickly, the kernels may burn instead of pop.



2. In order to pop corn in oil, the kettle, oil and parts near the heating elements are necessarily and unavoidably heated to temperatures high enough to pop popcorn. The temperature control uses a sensing element located inside the kettle to maintain the kettle at an operating temperature of approximately 410° F(210°C). Contact with these surfaces will burn and scald you. Do not touch the kettle, oil or parts in the direct vicinity of the heating elements.

3. The kettle is provided with an agitator to assist in the quick and even distribution of heat throughout the kernels.



4. The oil is heated to high temperatures in a kettle provided with electric heating elements to reach proper popping temperature. An operator is required in the vicinity of the kettle only when handling corn or dumping popped corn from the kettle. Neither of these operations requires direct contact with the kettle. Direct contact with the hot oil, kettle, or heating elements could result in serious burns or scalds. Keep away from the kettle whenever possible. Use the handle when dumping the kettle, and use the provided cups when necessary to measure corn, oil and salt.
5. As the popcorn pops, it will push the lid open and discharge into the cabinet. When the corn finishes popping, the corn remaining in the kettle can be removed by holding the kettle handle in your right hand and rotating down in a clockwise direction to dump the kettle.
6. Your Diplomat model Cretors popcorn popper is equipped for a pump, which, when properly adjusted, automatically delivers the proper amount of oil to the popping kettle.
7. A cornditioner is provided consisting of a blower and heating element. The cornditioner circulates hot air through the corn stored in the popcorn case to keep the product hot and crisp.
8. A two stage filter system traps odor and smoke produced by popping corn.

VI THE LOGIC OPTION

The Logic Option uses integrated microprocessor control to simplify and increase the safety of operating a popcorn machine. The Logic Option simplifies the operation by providing a single button to push to begin a popping cycle. The Logic option also turns off kettle heat at the end of the popping cycle. The heat remains off until "start" is pressed again. The LCD display, allows the operator to view instructions and comments in four languages: Spanish, German, French or English. The LCD display gives specific feedback to the operators, managers, and service personnel.

Cretors recommends depressing the "Kettle Preheat" button prior to the first popping cycle. Operation is as simple as loading your corn and salt in the kettle and pressing the "START" button. When the "START" button is pressed, the pre-set oil amount will dispense into the kettle and the popping cycle will begin. The "START" button is then locked out for two minutes to prevent accidental double charging of oil. The popping cycle will continue until the kettle reaches the temperature set point or a programmed time limit is reached. At that time, a beeper sounds for two minutes. This audible warning signals the operator that the kettle is ready to be dumped. Depressing the "KETTLE PREHEAT" button will turn off the beeper. The beeper will also be deactivated by depressing the "START" button, after the popped corn is dumped and raw corn and salt are added again. If the operator is not available to dump the kettle, the kettle heat will automatically shut off. The agitator and the exhaust will remain on for twenty minutes or until the "START" or "STOP" buttons are pressed. This reduces any chance of burning corn and eliminates possible odors.

In addition to ease of start-up and normal operation, the Logic Option serves as a backup to perform functions that the operator may forget.

For those operators who pop both salted and sugar popcorn, there is menu to set your kettle temperature set point for each mode. To switch back and forth between corn type, simply press the "Program" button for 5 seconds and use the arrow key to change modes.

Safety Features:

If the 'Start' button (indicating another popping cycle has been started) is not pressed for nine minutes, the kettle heat is automatically shut off.

Additionally, if Logic II detects the kettle temperature rises to an unsafe level (exceeds 570°F/ 298°C) a dangerous situation exists. The Logic Option will: Sound an alarm, disable the oil pump, and shut off all auxiliary components, except exhaust. If exhaust was 'OFF', it is turned "ON". This continues until power is removed or kettle temperature goes below set point. If high temperature alarm is detected more than once in an eight hour period, the controller reverts to a "CALL FOR SERVICE" mode (**non-operating**). A technician must be called to evaluate and reset the system.

If the logic board detects the thermocouple is damaged or disconnected, the LCD display shows "CALL FOR SERVICE" "T-COUPLE FAILURE" and all outputs, except exhaust, lights and conditioner are disabled until the condition is fixed.

Logic Option Switches and Controls

There are nine keys on the touch panel. The left side buttons are used for accessing and maneuvering through various menus and options. The right side buttons turn on the kettle pre-heat program, starts the cleaning cycle, turns on the cabinet light, corditioner, and sign and one to turn the oil heater on and off.

PROGRAM	-Select SALT versus SUGAR modes, Enter programming mode,turn exhaust ON/OFF
STOP	-Emergency stop (stops everything except for Oil heat. Oil heat is turned ON/OFF by pressing The oil heat button only) Stops current cook or clean sequence Restores controller to standby condition
UP/DOWN	-Used to increment or decrement parameters and to scroll through menu selections
START (with LED)	-Used to initiate cooking sequence
KETTLE PREHEAT (with LED)	-Pressed before initial cooking sequence of a cold machine. Maintains kettle temperature at 190°F for 45 minute -Turns off audible alarm.
OIL HEAT (with LED)	-Turns oil pump heat ON/OFF
CABINET (with LED)	-Turns ON/OFF cornditioner blower, heater and all lights, including sign.
CLEAN (with LED)	-Initiates "CLEAN CYCLE" (See Clean cycle)
LED INDICATORS	-(Light Emitting Diodes) Indicate switch condition. (ON/OFF or SPECIAL CYCLE)

Logic Option Microprocessor Control Functions

All machine functions are controlled with the touch pad. If equipped, the LED on the switch is lit when the switch is activated. When a switch is pressed it will "BEEP" to let the operator know that the microprocessor will perform the desired function. A two tone "BEEP" indicates that the desired function will not or cannot be performed. The switches activate the following functions:

1. START

Begins the AUTO CYCLE process. Press START key, auto pop cycle process begins. Kettle heater relay will energize and Start LED will light. Agitator relay will energize for twenty minutes. Exhaust relay will energize for twenty minutes. Pump relay is energized until programmed time setting is reached. Start key is locked out from further activation for two minutes.

LCD displays "POPPING CYCLE" on top line and shows running time (count-up) of cycle (cycle consists of KETTLE HEATER on time) on bottom line "xMIN xx SECONDS."

When temperature setpoint is reached or programmed time limit is reached:

Kettle heat relay is deactivated.

Start key LED blinks on/off and beeper sounds for two minutes once

Beeper can be silenced by pushing the PREHEAT key.

Cycle is recorded in memory.

Start key LED is de-activated.

NOTE: If the START key is pressed at any time after the two minutes safety delay, the buzzer will be de-energized and a new popping cycle will begin. Also, if the temperature is already above the setpoint at the time of the START key being pressed, the controller will recognize this and compensate for it by giving the kettle heater some time to equalize before energizing.

2. CABINET

Press CABINET key to turn on Cornditioner and lights. These items will remain on until turned off or Stop is pressed. CABINET key LED will light as long as this circuit is activated.

3. Press OIL HEAT key and oil pump heater relay will energize and OIL HEAT key LED will light depending on setting:

7700 Model Relay energizes full power "on" for 20 minuets, then reverts to a 10% duty cycle (3 min. on/30 min. off). Oil Heat switch can be pressed to terminate cycle. LED flickers for 20 minutes, then blinks 50% on/off until Oil Heat switch is pressed to turn off.

7900 Model Relay energizes full power on until Oil Heat switch is press to turn off. LED 100% on until Oil Heat switch is pressed to turn off.

4. KETTLE PRE-HEAT:

Press KETTLE PREHEAT key, KETTLE PREHEAT key LED will light.

The LCD displays "KETTLE PRE HEAT"

Kettle heater relay is energized and is controlled at 190°F.

Once kettle reaches set point, the LCD displays "READY - ADD CORN, press START."

If Start key is not pressed within 45 minutes, kettle pre-heat cycle is terminated.

KETTLE PREHEAT key LED is de-activated.

If Start key is pressed within 45 minutes, kettle pre-heat cycle is terminated and KETTLE PREHEAT key must be pressed again to initiate pre-heat operation.

Kettle preheat cycle can also be terminated by pressing KETTLE PREHEAT or STOP key.

5. SAFETY SITUATION:

If kettle temperature sensor exceeds 570°F, all outputs except that exhaust relay are disabled until normal conditions are restored. If high temperature alarm is detected more than once per 8 hours, controller reverts to a "CALL FOR SERVICE" mode (non-operating) and must be reset by a technician.

5. CLEAN CYCLE:

Press CLEAN key, CLEAN key LED will light.

When clean cycle is selected, normal operation (including pump and conditioner), pre-heat operations are disabled, cabinet lights remain on.

Kettle heater relay is energized and controlled at 190°F for a total of 15 minutes from the start of the clean cycle, then is de-energized (end of Clean cycle). Agitator relay is energized at the start of the clean cycle and is de-energized when temperature falls below 150°F. End of clean cycle is signaled by five beeps.

Clean LED is 100% on until end of clean cycle, then 50% on/off until CLEAN key is pressed to take machine out of Clean cycle and return to normal operation. LCD display shows time left in clean cycle (count-down). Cleaning cycle is recorded in memory (incomplete cycles are not counted).

CLEAN key LED will de-activate. Cleaning works best when used in conjunction with the Cretor's cleaning kit and supplies. See "Sanitation Instructions."

DATA LOGGING FEATURES (Management)

Logic II is designed to keep track of daily activities. These activities include: the number of popping cycles in salt mode, the number of popping cycles in sugar mode, the average time it took to pop a batch of corn, the amount of oil used that day, and the number of cleaning cycles performed. It also records and displays the weekly average of each of these items. It keeps a running total for the last seven consecutive days (24 hour periods) and allows both on screen viewing and allows the data to be downloaded via an on-board RS232 port (computer downloading). This data will (can) be easily downloaded into a spreadsheet for regular reports. Below is a description of the data as it is displayed. To enter into the "Data Retrieval Mode", press and hold the ↑ + ↓ buttons to scroll through the data. Press the arrow keys each time to move slowly, or hold the key for faster scrolling.

Example of data displayed:

WEEK TOTAL:

SALT CYCLES 476 - Displays the number of popping cycles in the salt mode for the last seven days.

SALT AVE 180 - Displays, in seconds, the average time it took to pop a batch of popcorn in the salt mode. This is a seven day average.

SUGAR CYCLES 12 - Displays the total number of popping cycles in sugar mode for the last seven days.

SUGAR AVE 178 - Displays, in seconds, the average time it took to pop a batch of popcorn in sugar mode. This is a seven day average.

OIL USAGE 1079 - Displays the total number of seconds the pump ran for the week. It can be verified by placing a measuring cup under the dispense tube and press "Start".

CLEAN CYCLES 7 - Displays the total number of completed cleaning cycles performed during the last seven days.

After displaying the weekly totals, the LCD will display the daily totals.

ON-SITE DATA RETRIEVAL VIA RS232 CONNECTION (Management):

To export the information from logic, do the following:

- Make (buy) the cable.
- Connect to com1(or com2) on computer.
- Go to:
 - Start programs accessories, HyperTerminal
 - New Connection (or hyperterm.exe)

Setting up HyperTerminal:

- Give it a name (logic test)
 - Connect using drop down. Select direct com1 (if using com1)
- Set up port settings
 - Bits per second (baud) = 9600
 - Data bits = 8
 - Parity = 0
 - Stop bits = 1
 - Flow control = NONE

Once you have hit OK, it will then attempt to open the port. If you get "FAILED TO OPEN COM" error, make sure you have the correct com port selected. You will know that the com port opened successfully if a clock indicating "connected" is counting.

To download the data from Logic to a text file:

With HyperTerminal running, and connected, got to:

Transfer drop down menu, then to capture text.

This will bring up a text box asking for a location and a file name (for example c:\logic.txt). Be sure to include the drive letter (in this case c:\) and a file name ending with .txt.

Click start.

While holding down the CONTROL button, hit the letter E. You should then see some text scroll the display. You will also find that the file you specified above now exists on your computer. This file can then be imported into the spreadsheet of your choice.

And example of the outputted data is shown here:

```
2,353,0,0,42,0,
0,0,5,275,120,0,
6,253,5,356,400,2,
8,222,0,0,388,0,
0,0,1,480,30,1,
2,353,0,0,24,1,
78,253,0,0,900,1,
```

The significance of this data is as follows:

Sugar cycles (day 1), salt cycles (day 1), sugar cycles(day 1), sugar avg. (day 1), oil usage (day 1), clean cycles (day 1),
 Sugar cycles (day 2), salt cycles (day 2), sugar cycles(day 2), sugar avg. (day 2), oil usage (day 2), clean cycles (day 2),
 Sugar cycles (day 3), salt cycles (day 3), sugar cycles(day 3), sugar avg. (day 3), oil usage (day 3), clean cycles (day 3),
 Sugar cycles (day 4), salt cycles (day 4), sugar cycles(day 4), sugar avg. (day 4), oil usage (day 4), clean cycles (day 4),
 Sugar cycles (day 5), salt cycles (day 5), sugar cycles(day 5), sugar avg. (day 5), oil usage (day 5), clean cycles (day 5),
 Sugar cycles (day 6), salt cycles (day 6), sugar cycles(day 6), sugar avg. (day 6), oil usage (day 6), clean cycles (day 6),
 Sugar cycles (day 7), salt cycles (day 7), sugar cycles(day 7), sugar avg. (day 7), oil usage (day 7), clean cycles (day 7),

In summary, Logic II is the second generation of Cretors microprocessor control systems for the Diplomat, Headliner and the President model popcorn machines. When Logic II is added to one of these Cretors popcorn machines, the following features are incorporated into its normal operation:

- LCD readout with real time feedback.
- Choice of four languages for feedback, Spanish, English, French or German.
- One touch "START" button to begin popping cycle.
- Audible alarm to alert operator when corn is finished popping.
- Automatic heat shut down when popping.
- Data logging feature to keep track of pertinent data.
- RS232 port on board to allow transfer of data to lap top computer (or view data via the LCD display).
- Switch from Slated corn to Sugar corn mode with the touch of a few buttons.
- On board diagnostic program for servicing, if required.
- On touch "CLEAN" button to begin clean cycle.
- Full fuse protection against voltage variations.
- Two methods of setting your oil amount.

X OPERATING INSTRUCTIONS



1. Do not attempt to operate your Cretors popcorn machine until you have read and understood this manual. Failure to do so may result in serious injury or death.



2. Do not attempt to operate your Cretors popcorn machine unless the installation instructions have been strictly adhered to. Failure to do so may result in serious injury or death.



3. Operate your popcorn machine only if it is in sanitary condition (SANITATION INSTRUCTIONS). Failure to do so may result in illness to your customers.

5. To operate your Cretors popcorn popping machine:

- A. Fill the corn drawer with corn (models DIL20FP, DIL32FP, DIL205, DIL325, TDIL326).
- B. Fill the salt box and hang it on the inside edge of the corn drawer.
- C. Connect and adjust the pump as explained in the installation instructions and preheat the popping oil until liquid, if necessary.
- D. Fill the corn measure with corn and the salt measure with salt, and empty these into the kettle. When making sugar corn, add the correct amount of sugar, rather than salt.



- E. Close the kettle lid by pulling the knob down. Avoid contact with the kettle. Contact with a hot popping kettle may result in serious burns or scalds.



CAUTION! Always add corn to the kettle before pressing the 'START' button or adding oil. Failure to do so may result in the oil being heated too rapidly resulting in a fire.

- F. Press the 'START' button. Pressing the 'START' button will: Turn 'ON' the agitator, turn 'ON' the exhaust fan, turn 'ON' the kettle heat, and pump the correct amount of oil into the kettle.



NOTE: After the first popping the kettle is hot. Avoid contact with the kettle when adding corn or salt. Failure to do so may result in serious burns or scalds.

Measuring instruments have been provided to accurately measure the proper amounts of popcorn, salt and oil. The correct amount for each popping is:

SALTED CORN

<u>Kettle Size</u>	<u>VOLUMETRIC MEASURE</u>		
	<u>Corn</u>	<u>Oil</u>	<u>Salt</u>
20 oz.	20 oz. 591 ml	6.5 oz. 192 ml	2 tsp.
32 oz.	36.5 oz. 1083 ml	12.25 oz. 360 ml	3 tsp.

SUGAR CORN

<u>Kettle Size</u>	<u>VOLUMETRIC MEASURE</u>		
	<u>Corn</u>	<u>Oil</u>	<u>Sugar</u>
20 oz.	12 oz. 351 ml	4.25 oz. 122 ml	8.25 oz. 245 ml
32 oz.	19.5 oz. 577 ml	7.5 oz. 225 ml	15.25 oz. 451 ml

- G. As the corn pops, it will push the lid open. When the lid has moved about one and one-half inches, it will open completely, allowing the corn to discharge from the kettle. When the corn finishes popping, dump the kettle by pulling the large black handle down as far as it will go. Then when the pan is empty, return the handle to its upright position.



Avoid contact with the kettle when dumping popped corn. Failure to do so may result in serious burns or scalds.

- H. When the oil container is empty, replace with new full container of oil.
- I. Repeat steps D - G as desired, adding corn to the corn drawer and salt to the salt box as necessary.

NOTE: The ideal time for maximum volume is between 2-3/4 to 3-1/2 minutes from the time the corn is placed into the kettle until the time it is dumped. Check the popping time after several popping cycles. Reduce the charge of raw corn if the time is more than 3-1/2 minutes and increase the charge if the time is less than 2-1/2 minutes per popping.

- J. Follow the recommended sanitation procedures.

XI SANITATION INSTRUCTIONS



Be certain the machine is turned off and power is unplugged before sanitizing this machine unless a specific cleaning procedure requires power to the machine. Failure to do so could result in injury or death.



Do not clean heated surfaces until they have been given sufficient time to cool. Failure to do so may result in serious burns or scalds.

1. Popping Kettle



A. Do not immerse an assembled pan in water. This will damage the electrical components and may cause short circuits resulting in electrical shock hazard if power is applied.

B. Do not use steel wool or other similar abrasives to clean the kettle as they will ruin the kettle by removing the nickel plating.



C. Do not attempt to clean the kettle with power connected unless you are boiling the "CKC" cleaning compound to clean the inside of the kettle in step G.



D. Do not attempt to clean a hot kettle. Failure to do so may result in serious burns or scalds.

E. The kettle has a polished nickel finish and is very easy to clean if oil is not allowed to burn on it. After the final popping, the best practice is to wait until the oil just begins to solidify, then take a cotton towel or absorbent rag and wipe the kettle. Once the oil is allowed to completely solidified, it can become more difficult to remove. We recommend coconut oil for your Cretors popper; it will not stick or burn as easily as other oils.

F. The outside of the kettle should be used cleaned with Cretors Outside Kettle Cleaner "COC" periodically to remove popping oil that may become baked on.

G. Clean the interior of the kettle every week with "CKC" cleaning compound. This will prevent the accumulation of carbon on the bottom and internal sides of the kettle. When using "CKC" cleaning compound in the kettle, do not fill the kettle with more than 3/4" high of water inside the kettle. If the kettle has been overheated or oils that tend to carbonize are used, the normal cleaning procedures may not suffice. Increase frequency as needed.

H. Press CLEAN key, CLEAN key LED will light.

When clean cycle is selected, normal operation (including pump and conditioner), pre-heat operations are disabled, cabinet lights remain on.

Kettle heater relay is energized and controlled at 190°F for a total of 15 minutes from the start of the clean cycle, then is de-energized (end of Clean cycle). Agitator relay is energized at the start of the clean cycle and is de-energized when temperature falls below 150°F. End of clean cycle is signaled by five beeps.

Clean LED is 100% on until end of clean cycle, then 50% on/off until CLEAN key is pressed to take machine out of Clean cycle and return to normal operation. LCD display shows time left in clean cycle (count-down). Cleaning cycle is recorded in memory (incomplete cycles are not counted).

CLEAN key LED will de-activate. Cleaning works best when used in conjunction with the Cretor's cleaning kit and supplies. See "Sanitation Instructions."

- I. The agitator assembly is disassembled by removing the spring pin going through the top of the stirrer blade. Lift off the stirrer blade.
- J. Clean all parts thoroughly, making sure to use Cretor's Kettle Cleaner. Do not use any harsh abrasives or cleaning material.
- K. Reassemble in reverse order, following the directions above.

2. Cabinet



- A. Remove and empty the waste clean-out drawer daily or whenever it is full. Under heavy use this may need to be done more often. Failure to empty the drawer and clean cabinet may result in a fire hazard due to restricted air flow.
- B. The cabinet glass and cabinet base can be cleaned with any good grade glass or household cleaner suitable for glass and plastic surfaces. The inside of the cabinet can be cleaned with the same cleaner as the outside, if it is the type that has a cleaning agent to cut the oil remaining from the popping operation, and it is acceptable for food contact surfaces.
- C. The popper case bottom of the 36" (DIL---P) cabinet should be removed at least weekly or more often if needed, to thoroughly clean the air chamber beneath of salt and small bits of corn which come through the air holes. The corn and scraps may be swept into the clean-out drawer and then removed.
- D. Remove and empty the clean-out drawer daily. Heavy or continual use of the machine will require more frequent cleaning.
- E. The popper case bottom of the 60" (DIL--5) and 72" (TDIL--6) cabinets should be removed at least weekly or more often if needed to thoroughly clean the air chamber beneath of salt and small bits of corn which come through the air holes. The corn and scraps may be swept into the hot air well in the center of the bin.

- F. Remove the clean-out drawer from under the popper case bottom and slide it under the hot air well; then pull out and clean out slide. The scrap will fall into the scrap drawer. When through, replace the clean out slide and the clean-out drawer.

3. Pump

SETTING CORRECT OIL VOLUME (MANAGEMENT LEVEL ACCESS)

To adjust the amount of oil dispensed into the kettle, press and hold "Kettle Preheat" button for three seconds. The LCD will read "OIL AMOUNT PROGRAM". Press and hold the "START" button until desired amount of oil has dispensed (use a measuring cup). The controller will "learn" the associated time needed to dispense your desired oil amount. **NOTE: "Topping Off" will cause erroneous oil dispense time to be recorded. Oil dispense time must be "learned" from one uninterrupted dispense sequence.**

The amount of oil can also be set in one of the Management Level Access menus. Adjust the pump time, in seconds, to obtain the desired oil volume. This is similar to adjusting the dip-switches only it is all accomplished from the touch pad and LCD screen.



Be certain the machine is turned off and power is unplugged before sanitizing this machine unless a specific cleaning procedure requires power to the machine. Failure to do so could result in injury or death.

Do not clean heated surfaces until they have been given sufficient time to cool. Failure to do so may result in serious burns or scalds.

7700-L PUMP

The pump is most easily cleaned by using two empty popping oil pails or buckets that have been thoroughly cleaned of oil. The cleaning procedure is:

- A. Fill one pail 1/2 full of hot water and mix in 1/2 package of CKC (Cretors Kettle Cleaner).
- B. Put the pump on the pail and turn on the heat timer to 20 minutes and leave until the water is hot.
- C. Unplug the pump and hold the pump over the pail. Clean the outside of the pump and heating element. Do not immerse the pump motor or get the top plate and motor wet. Put the pump on the pail again, and reconnect the electrical power supply and oil line.
- D. Put the kettle in the dump position, and place a container under the oil discharge tube to catch the cleaning water.
- E. Cycle the pump several times catching the cleaning water in the empty container.
- F. Disconnect the pump. Take the pump to a sink and thoroughly rinse the pump and heat element.



Do not get the top of the pump wet. Electrical shorts and a shock hazard, which can cause injury may result if the wires inside the top of the pump get wet.

- G. Take a second pail and fill it with clean water. If only one pail is available, empty the soapy water from the pail, rinse it completely and fill it with clean water.
- H. Reconnect the pump, and cycle it several times to thoroughly rinse the inside of the pump and oil lines.
- I. Allow the pump and oil lines to drain.
- J. After system is cleaned, the pump must be filled with oil by cycling the pump until oil is discharged from the oil tube over the kettle. This will prevent any damage to the steel components of the pump. Never leave water in the pump or oil lines.

7900-L PUMP

The design of the 7900 pump is a closed system and should remain aseptic.

If you believe your pump system to be contaminated, then you will need to clean the system. The pump is most easily cleaned by the following steps:

- A. Remove the Bag-in-Box connector.
- B. Place the end of the oil tube into a pail of hot soapy water.
- C. Cycle pump sufficiently to flush system. Be sure to have a container to catch the water at the discharge tube above the kettle.
- D. Change the oil tube to clean hot water and cycle pump to flush soapy water from system.
- E. Reinstall Bag-in-Box connector to the oil tube and reconnect to a bag of oil.
- F. After system is cleaned, the pump must be filled with oil by cycling the pump until oil is discharged from the oil tube over the kettle. This will prevent any damage to the steel components of the pump. Never leave water in the pump or oil lines.

To Clean Bag-in-Box Connector

- A. Remove from tubing.
- B. Remove probe body from clamp by spreading clamp body tabs and sliding probe body out.
- C. Remove probe spout adapter from probe body by unscrewing stem from probe body.

- D. Remove seal body and spring from stem and nut assembly by unsnapping seal body from stem.
- E. Clean all parts in accordance to NSF and local requirements. (Hot, soapy water, rinse, and dry). Do not use petroleum based cleaning agents or abrasive cleaners. Damage to sealing surfaces may occur and jeopardize the sanitary integrity of the connector.
- F. Inspect the three "O" rings for damage or imbedded particles. Replace as required.
- G. Reassemble by reversing steps A - D.

SAFETY FIRST



The information in this manual is essential for the safe installation and maintenance of your Cretors popcorn machine. The manual must be read and understood before installing, operating or maintaining this equipment, or equivalent training must be provided.



"The employer shall instruct each employee in the recognition and avoidance of unsafe conditions and the regulations applicable to his work environment to control or eliminate any hazards or other exposure to illness or injury". Ref.: 29 CFR 1926.20 (b)(4)(a)(2)



It is understood that safety rules within individual companies vary. If a conflict exists between the safety procedures contained in this manual and the rules of a using company, the more stringent rule should take precedence.

This manual is filled with time-saving and money-saving information regarding your Cretors popcorn popper. There is nothing, however, more important than the safety aids and warnings found throughout this document.

If you have any questions, contact your local dealer and if there are any additional questions, feel free to contact the Customer Service Department at C. Cretors and Company.

Additional copies of this manual can be obtained from C. Cretors and Company at the address listed below. Please provide model and serial number when requesting additional copies of this manual. There will be a nominal charge for additional copies.

Cretors guarantees this machine to be free of defects in parts, materials and workmanship for two years. Please take this time to fill out the factory registration card and return it to the factory to activate your warranty. If you have any questions concerning the Cretors' warranty, please contact your local dealer or the Customer Service department at C. Cretors and Company.



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