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**3243 North California Avenue, Chicago, IL 60618**

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# **T-3000 POPCORN MACHINE SERVICE MANUAL**

**120 Volt,  
Single Phase, 60 Hz**

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



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

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## 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, 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.

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## 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 back cover of this manual. Always have the model and serial number of your machine available to assist in obtaining the correct information.

<b>MODEL T-3000</b>	<b>T-3000 12 OZ. ELECTRIC COUNTER MODEL</b>
Capacity:	12 oz. All-Steel Kettle, 280 one-ounce servings per hour
Electrical:	1800 watts
Dimensions:	21-1/2"D x 24-1/2"W x 34.5" H - - - - 54.6 cm D x 62.2 cm W x 87.6 cm H
Net Weight:	85lbs. (35.6 kg.)

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## 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.



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## III PURPOSE OF MANUAL



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



This manual should be kept available to maintenance personnel.



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

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## IV INSTALLATION INSTRUCTIONS

### 1. Location

Choose a location for your Cretors popcorn machine to maximize the ease of operation procedures. Check your local building and fire codes for location restrictions.

### 2. Power Supply

Check the nameplate to determine the required power supply.

If the supply cord is damaged, it must be replaced by Cretors', or by a Cretors' approved service agent, or a similarly qualified person in order to avoid a hazard.



Connect your popcorn popper only to the correct power source. Failure to do so may result in personal injury or death and may damage your machine.

C. Cretors and Company recommends dedicated circuits for the T-3000 popcorn machine to avoid a voltage drop in the supply wire.



Make certain the Rocker Switches on the popcorn popper are in the 'OFF' position when plugging into power source. Failure to do so may result in damage to your machine or present a shock hazard.

### **3. Connecting Machine to Power Supply**



- A. Perform work only on de-energized circuits. Failure to do so may lead to electrical shock resulting in personal injury or death.
- B. Make certain that power supply circuit breakers are in the 'OFF' position.
- C. Push the plug completely into the receptacle. If the cord has a twist lock plug be sure to turn to lock in position. Turn 'ON' the power supply circuit breakers and then turn 'ON' the machine Rocker Switch.

## V SERVICE INSTRUCTIONS



In the case of improper service, qualified personnel only should perform the following diagnostic checks, and, if necessary, corresponding adjustments and repairs. Many of the following procedures present an electrical shock hazard and can cause serious injury or death.

### 1. Parts

When ordering parts, refer to the attached parts diagram. Always supply the serial number, model number, and voltage of your T-3000 popcorn machine.

If the supply cord is damaged, it must be replaced by Cretors', or by a Cretors' approved service agent, or a similarly qualified person in order to avoid a hazard.

### THERMOSTAT OPERATION

- A. The thermostat is installed as a safety device to prevent overheating of the kettle if the machine should be left unattended momentarily while in operation. The operation of the thermostat is indicated by the kettle indicator light. The thermostat is located in the kettle. The indicator light should stay on for most of the popping cycle. The indicator light should go off 10-20 seconds before the corn finishes popping and the kettle is dumped. If the indicator light goes out 30 seconds or more before the corn finishes popping, the thermostat may be set too low and be in need of adjustment.



**CAUTION!** If the corn has dried out, it may not finish popping at normal temperature, and the light may appear to go out early. **DO NOT ADJUST KETTLE TEMPERATURE BASED ON POOR QUALITY CORN.**



**CAUTION!** Do not cover ventilation holes on top of machine.



- B. If set too high (over 500°F 260°C), the thermostat can cause a serious fire hazard.

- C. Repair part thermostats shipped from the factory have been factory adjusted to switch off the current to the heating elements when the kettle temperature reaches 465° F (240°C). The factory setting should prove satisfactory; however, each

thermostat must be checked after installation to confirm correct operation. To adjust the thermostat, perform the following operations:

## THERMOSTAT ADJUSTMENT

- A. Locate the plugged thermostat adjustment hole on the bottom of the kettle retainer and remove the plug.
- B. Turn 'ON' the kettle heat.
- C. Locate pyrometer over thermostat.
- D. Set temperature so that the power to heat elements is cut off at the correct temperature.

KETTLE  
12 OZ.

SALTED CORN  
465° F. (240° C)

SUGAR CORN  
390° F. (193° C)

- E. To adjust thermostat, insert a flat blade screwdriver into the slotted adjustment screw and turn COUNTER- CLOCKWISE to raise the temperature or CLOCKWISE to lower the temperature.
- F. Do not adjust more than one-quarter turn at a time. Check temperature after each one-quarter turn adjustment.
- G. If no pyrometer is available, the thermostat may be adjusted by observing the operation of the indicator light as described in the Thermostat Operation section. Adjust the thermostat so that the kettle heat is turned off 10 to 20 seconds before the corn finishes popping and the kettle is dumped



CAUTION If the corn has dried out, it may not finish popping at normal temperature, and the light may appear to go out early. DO NOT ADJUST KETTLE TEMPERATURE BASED ON POOR QUALITY CORN.



CAUTION Do not adjust the temperature so high that the pan smokes at the end of the popping cycle. If set too high (over 500°F or 260°C), the kettle can become a serious fire hazard.

- H. Your final setting should allow the indicator light to cycle off 10 to 20 seconds prior to dumping the kettle.
- I. Observe two or three cycles of correct operation to be certain everything is working correctly.

## 2. Kettle Removal

To remove the kettle assembly, perform the following operations:

- A) Unplug the popcorn machine from the power supply.
- B) Unplug the kettle from the top of the machine by twisting and pulling the plug out of the receptacle.
- C) Remove the kettle retaining spring to release the kettle.



- D) Use proper lifting techniques when removing the kettle assembly to avoid injury to back.
- E) Slide kettle away from you towards the front of the machine.
- F) Turn the kettle upside down and remove the screws that clamp the flexible conduit where it enters the pan.
- G) Remove the nuts on the retainer.
- H) Lift the retainer off the kettle and feed cable in through fitting. If carbon has formed, careful tapping with a wood or other soft faced hammer around the edge of the retainer will break it loose.
- I) When removing nuts and spacers from the threaded studs on the bottom of the pan, do not wipe off the silver lubricant. Without this lubricant (NEVER SEEZ) the nuts may freeze on the studs and cause the studs to break when the nuts are turned, in an attempt to remove them.

### 3. Level Kettle

- A) The kettle level adjustment is made by removing the Dump Column Cover to gain access to the leveling arm.
- B) Loosen the two screws holding the leveling arm in place. Hold leveling arm tight against the tension spring and move kettle up or down until the kettle is level; then tighten screws.

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## VI TROUBLE SHOOTING

### 1. Problem - Popping is slow

QUESTION: Were the correct amounts of corn and oil used?

Refer to the chart in the Operating Section for the correct quantities.



**QUESTION:** Does the kettle indicator light go out more than 30 seconds before the corn finishes popping?

**YES!** Temperature set too low - See Service Instruction section on how to adjust temperature.

**NO!**

- A. Voltage may be low - check voltage at circuit breaker with kettle heat 'ON'. Extension cords or inadequate wiring will provide full voltage, if no load is applied. Once the kettle heat and auxiliaries are turned on, the voltage may drop 5 to 10 volts.
- B. Check the amperage draw of the heating elements, by using a clamp-on ammeter. Determine whether or not a heating element has failed by performing the following procedure:
  - a. Remove the top of the machine by removing the screws on the sides and lifting the top off.
  - b. Turn 'ON' the kettle heat.

Place the ammeter around the blue or brown lead to the popper kettle. The following current draws are normal:

<u>Kettle</u>	<u>Wire Color</u>	<u>Elements</u>	<u>120V Amps</u>
12 oz.	brown blue	5801-A	12.5 amps

<u>Kettle</u>	<u>Wire Color</u>	<u>Elements</u>	<u>230V. Amps</u>
12 oz.	brown blue	5801-E	6.52 amps

A low reading indicates a problem in the kettle. The heat element may not be functioning properly. If the element is not functioning, the possible causes are either that the element has burned out or a lead wire has burned off one of the element terminals due to a loose connection. In either case the kettle must be removed and the problem identified. See service section for kettle removal instructions.

- a) Remove kettle (see Service Section for removal instructions)
- b) Check for short circuits inside the kettle.
- c) If wires must be replaced, be sure to use nickel wire supplied by Cretors. Conventional copper or "stove" wire will have limited life.

- d) Make a visual check for broken, loose, burned or heat damaged wires. If there are no obvious broken or loose wires shorting out on the kettle, the elements must be checked.
- e) Perform a continuity and ohm test on the elements. It is possible that one of the elements has burned through its insulation and casing and is shorting out directly to the kettle bottom.

### Continuity & ohm test

Remove the nickel wires that are connected to the electrical terminals on the heat element.  
Check element between the following points:

Terminal to terminal	1.	Ohm Reading for 120V - $9.6\Omega$ 240V - $38.40\Omega$
	2.	No continuity-burned element; replace.
First terminal to element case	1.	Continuity to case from terminal indicates a grounded element; replace.
	2.	No continuity - functioning properly
Second terminal to element case	1.	Continuity to case from terminal indicates a grounded element; replace.
	2.	No continuity - functioning properly

Replace failed heat element with an identical unit available from your local dealer or from Cretors. Reassemble and reinstall kettle assembly onto the machine.

### 1. Problem - Kettle will not heat

QUESTION: Do any of the other components work - motor, light, etc.?

NO! Check power supply:

- A. Is it plugged in?
- B. Is the receptacle live?
- C. Is machine plugged into the proper voltage? Measure with voltmeter and compare to specification on nameplate of machine.



Do not attempt electrical repairs on the power supply circuit unless you are qualified to do so. The electrical shock associated with line voltages can cause serious injury or death.

YES!

- A. Problem is in machine.



The following procedures are performed with the power 'ON'. As with any electrical repairs, there is a shock hazard present.

- A) Check the amperage draw of the heating element by using a clamp-on ammeter. Check to determine whether or not the heating element has failed or thermostat is closed or open.
- B) At room temperature, the thermostat should be calling for heat and you should get a full amp draw. (Check Trouble Shooting Section for amp draw.)

### **3. Problem - Corn Burns**

QUESTION: Is the agitator working?

YES!

- A. Check to be certain the agitator blade and weight are free to move on the bottom of the shaft.
- B. Check to be certain the stirrer blade is on the bottom of the pan and is stirring the corn.
- C. Were the correct amounts of corn and oil used? See Operation Section for correct amounts.
- D. Temperature set too high? - adjust temperature.

NO!

- A. Check motor connections - loose wire.
- B. Motor bad - replace.

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## VII SANITATION INSTRUCTIONS



Be certain the machine is turned 'OFF' and power is unplugged before sanitizing this 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.

### 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 F.



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. A thorough cleaning every week with "CKC" cleaning compound is recommended. This will prevent the accumulation of carbon on the bottom and internal sides of the kettle. When boiling the "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.

G. Cretors Outside Kettle Cleaner "COC" should be used periodically to remove popping oil that may become baked to the outside of the kettle. The kettle agitator assembly should be removed weekly for thorough cleaning.

- H. The stirrer blade is disassembled by removing the lifting cover, pulling up the counterweight and then lifting the stirrer blade and pulling out. Pull down the counterweight and cover until they come off of agitator shaft.
- I. Clean all parts thoroughly, making sure to use Cretors Kettle Cleaner. Do not use any harsh abrasives or cleaning material.
- J. Reassemble in reverse order, following the directions above.

## 2. Cabinet



- A. Remove and empty the waste clean-out drawer (#2689) daily or whenever it is full. Under heavy use this may need to be done more often
- B. The cabinet glass 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. Do not soak unit with water. Avoid wetting of inside of electrical enclosure.
- C. The doors can be cleaned with Cretors' Plastic Clean and Shine. This product is specially formulated to clean plastic doors. Do not use cleaners that have ammonia or alcohol. The use of these cleaners will cause the doors to become brittle and crack.

## 3. Under Cabinet

The area underneath the machine should be cleaned as required. To reduce the overall weight of the machines remove the kettle assembly, by performing the following operations:

- A) Unplug the popcorn machine from the power supply.
- B) Unplug the kettle from the top of the machine by twisting and pulling the plug out of the receptacle.
- C) Remove the kettle retaining spring to release the kettle.



- D) Use proper lifting techniques when removing the kettle assembly to avoid injury to back.
- J) Slide kettle away from you towards the front of the machine.
- F) Re-install pan in reverse order, making sure pan mounting bracket catches in the slots cut in the tubing.

- G) This appliance should not be cleaned with a water jet.

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This manual is filled with time-saving and money-saving information regarding your Cretors machine. 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 one year. 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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