



We invented the popcorn machine
THEN JUST KEPT GOING!

176 MITTEL DRIVE, WOOD DALE, IL 60191

7700 PUMP MANUAL

**Models 7700RCA, 7700SCA, 7700SSA
7700-E, 7700SCE, 7700SSE,
7700-XXX-X**

**120Volt,
Single Phase, 50 Hz**

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



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

**C. CRETORS AND COMPANY
176 MITTEL DRIVE
WOOD DALE, IL 60191
PHONE: (773)588-1690, (800)228-1885, FAX(847) 616-6970**

SAFETY FIRST



The information in this manual is essential for the safe installation and maintenance of your Cretors oil pumps. 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.

I INTRODUCTION

This manual contains information regarding your Cretors oil pumps. 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 800/228-1885. Always have the 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 oil pumps.



This manual should be kept available to operating and maintenance 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 OIL PUMPS:

MODEL	7700 / 7700 RCA-X AUTOMATIC OIL PUMP MODEL
Capacity:	To be used on a 50 lb. Pail of oil
Electrical:	120 Volt, Single Phase, 60 Cycle, 700 Watts, 5.8 amps
Dimensions:	14-1/2" D x 14-1/2" W x 25" H (shipping)
Net Weight:	12 lbs.
Shipping Weight:	20 lbs.

MODEL	7700-SC / 7700SCA-X AUTOMATIC OIL PUMP MODEL
Capacity:	To be used on a 50 lb. Pail of oil
Electrical:	120 Volt, Single Phase, 60 Cycle, 700 Watts, 5.8 amps
Dimensions:	14-1/2" D x 14-1/2" W x 25" H (shipping)
Net Weight:	12 lbs.
Shipping Weight:	20 lbs.

MODEL	7700-E / 7700RCE-X AUTOMATIC OIL PUMP MODEL
Capacity:	To be used on a 50 lb. Pail of oil
Electrical:	230 Volts, 50 cycle, single phase, 700 Watts, 3.1 amps
Dimensions:	14-1/2" D x 14-1/2" W x 25" H (shipping)
Net Weight:	12 lbs.
Shipping Weight:	20 lbs.

MODEL	7700-SC-E / 7700SCE-X AUTOMATIC OIL PUMP MODEL
Capacity:	To be used on a 50 lb. Pail of oil
Electrical:	230 Volts, 50 cycle, single phase, 700 Watts, 3.1 amps
Dimensions:	14-1/2" D x 14-1/2" W x 25" H (shipping)
Net Weight:	12 lbs.
Shipping Weight:	20 lbs.

MODEL	7700-L / 7700SSA-X AUTOMATIC LOGIC/ SALT/SUGAR OIL PUMP MODEL
Capacity:	To be used on a 50 lb. Pail of oil
Electrical:	120 Volt, Single Phase, 60 Cycle, 700 Watts, 5.8 amps
Dimensions:	14-1/2" D x 14-1/2" W x 25" H (shipping)
Net Weight:	12 lbs.
Shipping Weight:	20 lbs.

MODEL	7700-E-L / 7700SSE-X AUTOMATIC LOGIC / SALT/SUGAR OIL PUMP MODEL
Capacity:	To be used on a 50 lb. Pail of oil
Electrical:	230 Volts, 50 cycle, single phase, 700 Watts, 3.1 amps
Dimensions:	14-1/2" D x 14-1/2" W x 25" H (shipping)
Net Weight:	12 lbs.
Shipping Weight:	20 lbs.

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 is controlled using a thermostat located inside the kettle to maintain the kettle at an operating temperature between 380-420°F.

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 7700 model Cretors oil pump, which when properly adjusted, automatically delivers the proper amount of oil to the popping kettle.
7. A Cretors Hot rod is available to assist in the melting of solidified oil.

VI CONTROL SWITCH

Time Heat Switch	-turns on the heat element
Indicator light	-indicates operation of the heat element
Push button	-activates timer and motor to dispense oil
Power switch	-turns on the power to oil pump on self-contained unit

VII INSTALLATION INSTRUCTIONS

A. Location

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

B. Power Supply

Determine the required power supply.



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



C. Cretors & Co. recommends dedicated circuits for popcorn machines. The 7700-SC model pump requires a 15 amp circuit. Check your local electrical codes regarding cut-off requirements.



Make certain your popcorn machine and oil pump is properly grounded. Failure to do so may result in damage to your equipment or present a shock hazard.

C. Connecting oil pump to power source



Make certain that power supply circuit breakers are in the off position. Make certain all switches on the machine are in the off position before plugging in your 7700 model Cretors oil pumps.



Perform work only on de-energized circuits. Failure to do so may lead to electrical shock resulting in personal injury or death.

- D.** Plug your machine and oil pump into the correct type of outlet, turn on the circuit breaker and then turn on the machine switches. If the motor groans, the receptacle in the 8 108 485 115 been improperly wired. Contact an Electrician.

Make certain all switches are in the off position before plugging in your Cretors popcorn machine and oil pump.

E. Pump Installation

Cretors oil pump and Hot Rod are intended for use in standard steel pails only. The following instructions assume the presence of a Deluxe or Economy base.

1. Make certain the pump switch on the control panel is in the OFF position.
2. Inserting the pump into the pail
Place the pump on top of the oil and center in the pail. If the oil is solid, the pump can be rotated clockwise/counterclockwise 90°, and the metal “blade” on the bottom of the pump will cut into the hard oil. Connect the power supply cord to the pump. The special connector will only plug in one way and it may be necessary to rotate it in order to insert it completely.

Turn on the auxiliary and pump switches and set the time heat switch to 20 or 30 minutes and allow the pump to melt itself into the oil. Proceed to step 3.



Do not overheat the oil in the pail. Once the oil is liquefied, it is not necessary to continue heating the oil. If the heat timer is continually restarted, the oil will become too hot and damage the oil tubing, becoming a source of leaks, and the hot pail a source of burns.



If any oil should spill or leak, be sure to promptly and thoroughly clean the exposed area. Failure to do so may result in a slipping hazard resulting in serious injury or death.

3. Connect the pump to the oil delivery tube by pushing the quick connect socket at the end of the delivery hose, onto the quick disconnect plug mounted on the support cover. When the plug is fully inserted, the spring will snap into place and hold the connector securely.
4. Make certain the oil delivery hose contains no low spots. Oil may solidify in such low spots and clog the hose.

F. Pump Adjustment



Make sure that the popper heat switch is off during pump adjustments. This is to avoid touching a hot kettle, which may result in serious burns.

1. To check the output adjustment, place the kettle in the dump position and hold the oil measure cup under the oil delivery tube.



Never hold the oil measure cup under the oil delivery tube if the kettle is hot. This may result in serious burns or injuries.

2. Press the delivery button and wait for the pump to cycle. Dispose of the oil, and cycle the pump again. To obtain accurate readings, let the oil drain back to the pail as it would between popping. Observe the oil in the tube to confirm that the oil has drained back to the pail.
3. After three cycles, the amount of delivered will be consistent. Check this amount with the measuring cup. Below is a good starting point to set the timer for an approximate amount of oil to be delivered. Each machine may vary.

MACHINES	AMOUNT OF OIL	SET TIMER TO "X" SECONDS
PT14	4.5 oz.	3 seconds
MR16	5.5 oz.	4 seconds
EG20, DI20, PR20	7.5 oz.	5 seconds
EG32, DI32, PR32, GG32	11 oz.	9 seconds
DI48		
EG48, DI48, PR48,	16 oz.	12 seconds
EG60, DI60, GG60	20 oz.	16 seconds

*Recommended pump timer settings. Machines may differ slightly.

4. If the amount of oil is not correct, it may be adjusted. To adjust the pump:
 - a. Turn off the pump switch
 - b. Put the pail step in place
 - c. Disconnect oil hose
 - d. Move pail out of cabinet onto pail step. (Use a slight lifting and pulling motion)

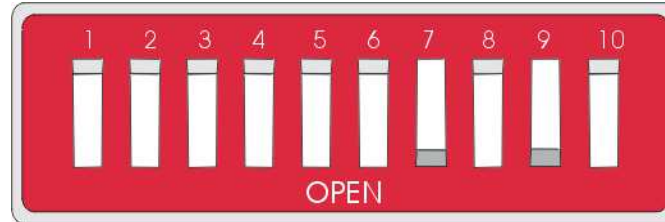


Make sure you brace the pail step against the cabinet to avoid sliding it off the base of the cabinet when pulling the pail across it. Use proper moving techniques to avoid injury to back.

- e. To set the oil quantity delivery:
 - Remove the snap out plug on top of the switch box, which is on the top of the pump, to expose the timer.
 - Check to make sure the timer has good contact by pushing down lightly on timer, making certain not to push any of the switches.
 - Switches 1 through 10 are each assigned a certain amount of seconds of delay time. Each successive switch is double the amount of delay time for the switch before it. The amounts of delay time are written at the top, along the "OPEN"/"OFF" line (i.e. 1,2,4,8, etc).
 - The switch must be in the UP position along the "OPEN"/"OFF" line for the delay time to apply. An example of this for three seconds would have the switch corresponding to the 1 on the "OPEN"/"OFF" line up along with the switch corresponding to the 2 on the "OPEN"/"OFF" line.
 - For Salt/sugar pumps, the oil time is adjusted through the timers located in the popper the same way.

- For Logic pumps, the oil time is adjusted through the Logic board. Please refer to your machine manual.

To turn the dip switches ON the dip switch needs to be pressed down to the number side opposite of the open side.



Switch #1	= 1 seconds
#2	= 2 seconds
#3	= 4 seconds
#4	= 8 seconds
#5	= 16 seconds

Example: If you turn #3 and #4 on, the time delay will be 12 seconds.

- Install snap out plug (which was removed in first step in section e).



Move pail back into cabinet. Use proper moving techniques to avoid injury to back.

- Connect oil hose by snapping in place.
- Remove pail step and place in bottom of cabinet for easy access in future.
- Turn on the pump switch and re-check the oil output using steps 1 thru 4 in the Pump Adjustment section.

VIII OPERATING INSTRUCTIONS



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



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



Operate your popcorn machine and oil pump only if it is in sanitary condition. Failure to do so may result in illness to your customers.



Always turn off the kettle heat switch when no popping corn. Failure to do so will cause oil to stain the kettle, possibly resulting in an unsanitary condition. It may also cause a “flash” fire if oil is added to a kettle left unattended with the heat on, resulting in serious burns or death.

To operate your Cretors 7700 oil pump:

1. Turn on pump switch



NOTE: Avoid contact with the kettle when adding corn or salt. **ALWAYS ADD CORN TO THE KETTLE BEFORE ADDING OIL. FAILURE TO DO SO MAY RESULT IN THE OIL BEING HEATED TOO RAPIDLY RESULTING IN A FIRE.**

2. Push the oil pump button which will provide the correct amount of oil based on previously setting and testing the timer.
3. When the oil bucket is empty, insert the oil pump into a new bucket as described in the Installation Section.



Follow the recommended sanitation procedures.

IX TROUBLE SHOOTING AND SERVICE INSTRUCTIONS



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

1. Nothing works:
QUESTION: Is the pump plugged in?
QUESTION: Is the machine plugged in?
2. Pump not heating:
a. No indicator light or heat – check heat timer
b. Indicator light, but no heat – check element
3. Heat will not go off:
Bad heat timer – replace.
4. Motor hums, but will not turn:
a. Hard oil – melt oil

- b. Drive shaft does not turn freely – may have been dropped on element causing discharge tube to jam into pump gears – clear jam
 - c. Motor bad – replace
- 5. Pump runs all the time:
 - a. Timer set incorrectly – rest (See Pump Adjustment)
 - b. Bad timer – replace
- 6. Solid oil in pail:

Melt the oil in the pail by turning the time heat switch (2012) on the pump. For Logic, press “Oil Heat” button on Logic board. Make sure Logic is set for 7700 Pump.
- 7. Motor runs, but does not dispense oil:
 - a. Check for oil in the pail – refill
 - b. Discharge tube (2566) pulled out of pump body
 - c. Solid oil in line – the oil in the tube may be melted with a rag soaked in hot water and wrapped around tube. A hair dryer may also be used to heat the tube

X 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.

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:

1. Fill one pail ½ full of hot water and mix in ½ package of CKC (Cretors Kettle Cleaner).
2. Put the pump on the pail and turn on the heat timer to 20 minutes and leave until the water is hot.
3. 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.
4. Put the kettle in the dump position, and place a container under the oil discharge tube to catch the cleaning water.
5. Cycle the pump several times catching the cleaning water in the empty container.
6. 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, from the result of the wires inside the top of the pump getting wet.

7. 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.
8. Reconnect the pump, and cycle it several times to thoroughly rinse the inside of the pump and oil lines.
9. Allow the pump and oil lines to drain.
10. After draining pump and oil lines, reconnect the pump and cycle oil once to prevent rust in the pump.

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

If you have any questions, feel free to contact our Customer Service at 800/228-1885.

Additional copies of this manual can be obtained from Customer Service.

Cretors warranties this machine to be free of defects in parts, materials and workmanship for two years. Please fill out and return the registration card to activate your warranty. If you have questions concerning the warranty, please contact Customer Service at 800/228-1885.

