

## **WARNING!!**

The attached Gold Medal Manual is for reference only and is not intended for any other purpose. The information contained in these on line manuals is subject to change at any time. Improvements are always being made to Gold Medal equipment and this information may not be the latest available for your purposes. It is critical that you call Gold Medal Products technical service department at 1-800-543-0862 for any questions about machine operations, replacement parts, or any service questions. Neither Gold Medal nor Phil Erb Concessions represent that these on line manuals contain the most current information available for the product represented.

# ASTRO –POP 16 & 20 OZ.

## Instruction Manual

Model #2022,#2023, #2024, #2026, #2026T  
#2023EX, #2024EX, #2026EX



 **GOLD MEDAL**®


**FUNFOOD EQUIPMENT & SUPPLIES**

Cincinnati, OH 45241-4807 USA

# SAFETY SHEET

	<b>⚠ CAUTION</b>
	<p>This equipment is designed and sold for commercial use only. This equipment is not to be used by the consumer in home use. Do not allow direct contact of this equipment by the public when used in food service locations. Only personnel trained and experienced in the equipment operation may operate this equipment.</p> <p>Carefully read all installation instructions before operating the equipment.</p>

	<b>⚠ WARNING</b>
	<p>Always wear safety glasses when servicing this equipment.</p>

	<b>⚠ WARNING</b>
	<p>To avoid serious burns, do NOT touch the kettle while it is hot.</p>

	<b>⚠ WARNING</b>
	<p>Any alterations to this equipment will void the warranty and may cause a dangerous situation. NEVER make alterations to the equipment.</p> <p>Make sure all machine switches are in the OFF position before plugging the equipment into a receptacle.</p>

	<b>⚠ DANGER</b>
	<p>Machine must be properly grounded to prevent electrical shock to personnel.</p> <p>Do NOT immerse the kettle, warmer, or any other part of this equipment in water.</p> <p>Always unplug the equipment before cleaning or servicing.</p>

**NOTE**

The information, specifications and illustrations contained in this manual represent the latest data available at time of publication. Right is reserved to make changes as required at the discretion of Gold Medal Products Company without notice.

## INSTALLATION INSTRUCTIONS

### CHECKING SHIPMENT

The popcorn machine is shipped in a corrugated carton. If you purchased a floor model machine, the base is shipped in another carton. If you purchased a bucket seasoning pump, it too is in a separate carton.

Unpack all cartons and check thoroughly for any damage, which may have occurred during transit. Damage claims should be filed immediately with the transportation company.

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## SPECIFICATIONS

	ASTRO POP – 16OZ #2022, 2023 , 2024	ASTRO POP – 16OZ # 2023EX , 2024EX	ASTRO POP – 20OZ #2026, 2026T	ASTRO POP – 20 OZ #2026EX
HEIGHT	* 46 IN ^ 74IN.	46 IN. 74 IN.	46 IN. 74 IN.	46 IN. 74 IN.
DEPTH	28 IN.	28 IN.	28 IN.	28 IN.
WIDTH	28 IN	28 IN.	28 IN.	28 IN.
SHIPPING WEIGHT	* 220 LBS. ^ 398 LBS	* 220 LBS. ^ 398 LBS	* 220 LBS. ^ 398 LBS	* 220 LBS. ^ 398 LBS
CORN DRAWER CAPACITY (FLOOR MODEL ONLY)	50 LBS.	50 LBS.	50 LBS.	50 LBS.
SIZE OF SEAS. BUCKET (FLOOR MODEL ONLY)	50 LBS.	50 LBS.	50 LBS.	50 LBS.
QUANTITY OF OIL	0-10 OZ.	0-10 OZ.	0-10 OZ.	0-10 OZ.
KETTLE HEAT ELEMENTS (WATTS)	1750	1750	2800	2800
BLOWER WARMER IIT. ELE. (WATTS)	400	400	400	400
WARMER MOTOR (AMPS)	1.12	.59	1.12	.59
AGITATOR MOTOR (AMPS)	.87	.40	2	.40
LIGHTS, FLOOD (WATTS)	75	75	75	75
SEASONING PUMP HEAT ELEMENTS (WATTS)	500	500	500	500
PUMP MOTOR (AMPS)	1.8	.75	2.8	.75
LIGHTS, FLOURESCENT (WATTS)	20	20	20	20
CORN PAN HEAT ELE. (WATTS) 2024, 2024EX	75	75		

\*Counter Model  
^ Floor Model

# OPERATING INSTRUCTIONS

## CONTROLS AND THEIR FUNCTIONS

### LIGHT SWITCH

Flipping this lever to the "ON" position lights all the lights on your popper.

### WARMER SWITCH

Flipping the lever of this switch to the "ON" position energizes the blower, which will freshen any prepped corn you may have left over.

### KETTLE HEAT SWITCH

Moving the lever of this switch to the "ON" position starts the exhaust blower and the agitator in the kettle. The purpose of this agitator is to keep the raw kernels on the bottom of the kettle and to prevent the popped corn from jamming.

### FUSES

The ASTRO POP is equipped with two 20-amp fuses. These protect the entire machine. If a fuse blows out continually, check for loose wires, short circuits, etc.

NOTE: THE FOLLOWING CONTROLS ARE ON FLOOR MODEL ASTRO POP POPPERS ONLY FOR SPECIAL COUNTER MODEL POPPERS EQUIPPED WITH THE BUCKET SEASONING PUMP.

### OIL SYSTEM MASTER SWITCH

Moving the lever of this switch to the "ON" position energizes the electrical circuit of the bucket-seasoning pump. It also supplies the heat element of the pump with 40 watts of electrical power. This "LOW HEAT" will usually keep the oil liquid at average room temperatures. When this switch is in the "ON" position, the red pilot light next to it will be on.

### OIL PUMP BUTTON

After the oil has melted, pressing the red "OIL PUMP BUTTON" for a few seconds will start an automatic pumping cycle, which delivers the proper amount of oil to the kettle. The oil pump pilot light will come on, and remain on while the automatic pumping cycle takes place. When the pilot light comes on, you may release the "OIL PUMP BUTTON".

### TIMER SWITCH

This switch on the bucket seasoning pump control box determines the length of time the heat element of the bucket pump is at "HIGH HEAT". This "HIGH HEAT" is produced by 500 watts of electrical power. Its purpose is to melt the oil quickly. Whenever the timer switch is "ON", the pilot light above it will be on.

## POPPING CORN (FLOOR MODELS)

1. Turn "LIGHTS SWITCH" AND "WARMER SWITCH" ON.

2. Turn "OIL SYSTEM MASTER SWITCH" on.
3. Set the timer switch on the bucket seasoning pump control box for the desired HIGHT HEAT melting time. The length of time you choose depends of the temperature of the oil. Colder oil takes longer to reach 76° F., the melting point. After you have melted the oil, the automatic low heat (energized by having the OIL SYSTEM MASTER SWITCH ON) will usually keep the oil liquid at most room temperatures. Coconut oil will congeal at temperatures below approximately 76°F. In cold areas, turn on the "HIGH HEAT" occasionally for about 5-10 minutes to keep the oil liquid.
4. Turn "KETTLE HEAT" switches on approximately five minutes before you estimate the oil will be melted sufficiently to begin pumping.
5. When the kettle is up to heat, and the oil has melted, press red oil pump button for a few seconds until oil pump pilot light comes on. Proper amount of oil is automatically pumped into the kettle.
6. Turn "KETTLE MOTOR & EXHAUST SWITCH" on.
7. Lift kettle lid and pour in 16 ounces of corn and 4 teaspoons of flavacol (for 16 oz. Astro Pop ). Close lid. ( for 20 oz. Astro Pop, use 20 ounces of corn and 5 teaspoons of Flavacol.)
8. After the corn has popped, rotate the dump handle counterclockwise to disengage the agitator. Keep rotating the handle in this direction to dump the popcorn. There is a stop to prevent the kettle from being rotated too far.
9. Return the kettle to the upright position.
10. Repeat the cycle starting with Item #5 to pop another kettle of corn.
11. On the final kettle of corn, it is a good idea to turn the "KETTLE HEAT" switch off, just as the lids are coerced open by the popping corn. This saves electricity, since there is plenty of heat in the kettle, and also helps eliminate smoke and odor after you have stopped popping.

#### POPPING CORN (COUNTER MODEL)

1. Turn the "LIGHT SWITCH" and 'WARMER SWITCH" on.
2. Turn the " KETTLE HEAT" switch on approximately five minutes before you are ready to pop corn.

3. Turn "KETTLE MOTOR & EXHAUST SWITCH" on.
4. Open the lid and place the oil, the corn, and the salt in the kettle. Close lid.

ASTRO POP 16 --	16 OZ. CORN
	5 1/3 oz. Oil charge
or	1 1/3 Bars
	4 Teaspoons Flavacol
ASTRO POP 20 --	20 oz. Corn
	6 2/3 oz. Oil charge
or	1 2/3 Bars
	5 Teaspoons Flavacol

The popper comes equipped with an 18-ounce corn measure cup. We recommend a flavored and colored coconut oil, as popcorn in coconut oil stays fresher longer. Coconut oil does not leave the black deposits in your kettle like other oils. TASTEE-POP bars, being mostly coconut oil are very handy to use.

5. After the corn has popped, rotate the dump handle counterclockwise to dump the popcorn. There is a stop to prevent the kettle from being rotated too far.
6. Return the kettle to the upright position and rotate the handle clockwise to engage the agitator drive.
7. Repeat the cycle starting with item #4 to pop another kettle of corn.
8. On the final kettle of corn, it is a good idea to turn the "KETTLE HEAT" SWITCH OFF, JUST AS THE LIDS ARE FORCED OPEN BY THE POPPING CORN. This saves electricity, since there is plenty of heat in the kettle, and also helps eliminate smoke and odor after you have stopped popping.



**CAUTION: TO AVOID SERIOUS BURNS DO NOT TOUCH KETTLE WHILE IT IS HOT.**

When you are finished popping, make sure "KETTLE HEAT" and "KETTLE MOTOR" switches are turned "OFF". NEVER LEAVE THE HEAT ON WHEN YOU ARE NOT POPPING. If you place oil in a hot kettle, remember to finish that popping cycle, or turn off the kettle. Exposure to heat starts to break down color and flavor of popcorn oils.

Always wipe the complete exterior of your kettle with a heavy cloth immediately after you finish popping. Oil drippings will come off quite easily at this time, but will burn on and stain if not removed. The sales appeal of a clean and gleaming machine must not be over-looked. Your customers expect it of you.

## CARE AND CLEANING

**CAUTION: UNPLUG YOUR MACHINE BEFORE CLEANING.**

### GLASS PANEL AND CASE

A clean looking, well kept machine is one of the best ways of advertising your popcorn. Take a clean cloth and first wipe excess oil from the glass. Wipe the outside, too. Then, use any glass cleaner this is recommended for cutting grease. We find a wax cleaner such as Johnson's Shine-Up to be good for cleaning the aluminum exterior of your machine.

**Special care should be used when cleaning the Plexiglas doors to prevent scratching them. Use a very soft cloth and a mild soap. Never use a gritty type cleaner or detergent. Special Plexiglas cleaners are available to clean and make the Plexiglas static free. Using a damp cloth, wipe the exposed exterior and interior surfaces at the close of operations for the day.**

### OLD MAID DRAWER

Empty the old maid drawer and wipe clean daily or when it becomes filled.

### BLOWER WARMER UNIT

Every few weeks, remove the corn pan and wash it with hot soapy water. Rinse with clear water and dry before replacing it. Clean out all trash corn from the BLOWER-WARMER assembly, as well as the frame of the machine. You must keep this BLOWER-WARMER Unit clean and free from trash corn for maximum efficiency and long motor life.

### KETTLE

When you are finished popping for a while, wipe the oil off the outside of the kettle and lids. Although the kettle shell is chrome plated, it will become blackened if you allow the oil to bake on. When not popping corn, always turn the 'KETTLE HEAT' switch "OFF".

**CAUTION: NEVER IMMERSE THE ENTIRE KETTLE IN WATER. THIS WILL AUTOMATICALLY VOID THE GUARANTEE AND RUIN THE ELECTRICAL COMPONENTS.**

A clean kettle sells more popcorn and makes more profit. If you did not follow our directions and your kettle has become really black and messy, it is going to require some serious effort on your part to bring it back to like new condition. We recommend the use of Gold Medal "OLD SOAK" cleaner. This is a specially formulated USDA Food approved cleaner used in bakeries for removing burned material from baking pans. You can clean the inside of the kettle by making a solution of OLD SOAK as directed, turn on the kettle heat until it boils, and then let it soak. If you are careful, you may be able to remove the black deposits from the kettle shell without disassembling the kettle. BUT, BE CAREFUL. Remember, do not immerse kettle.

### EXHAUST FILTER

**The purpose of the exhaust filter is to trap the hot oil from the popping operation, while allowing the steam and delicious aroma of the corn to pass. To do this efficiently, the filter must be kept clean. IT SHOULD BE REMOVED AND WASHED IN HOT SOAPY WATER AT LEAST ONCE A WEEK. Remember, to remove all excess water from the filter before reinstalling. If filter is too clogged, soak in "OLD SOAK" or replace. A clogged filter will stall exhaust blower motor and ruin it.**

### BUCKET SEASONING PUMP

**TO REMOVE KETTLE FOR CLEANING: FIRST UNSCREW LOCK RING DO NOT USE PLIERS OR VISE GRIPS. THEN PULL DOWN TO UNPLUG.**

We recommend cleaning the bucket-seasoning pump by cycling a cleaning solution through it. Use a clean, empty seasoning bucket and fill it with hot water and "OLD SOAK" cleaner available from Gold Medal. Use one ounce of OLD SOAK per gallon of hot water.

Make sure the "OIL SYSTEM MASTER" switch is OFF. Disconnect the oil line by means of the quick disconnect coupling. Slide the pump and the bucket of seasoning oil to which it is attached from the cabinet. Remove the pump from the seasoning oil and let excess oil drain off. You must do this when the oil is in the liquid state and not congealed. Wipe as much of the oil from the pump as much you can, and then mount the pump on the bucket containing the cleaning solution. Slide the pump and bucket into the cabinet and reconnect the oil line.

**CAUTION: AVOID TURNING THE PUMP UPSIDE DOWN!!!**

Disconnect the kettle lead in cord and remove the kettle from the cabinet. Place a suitable container inside the popper to catch the cleaning solution after it is cycled through the oil delivery system.

Turn the ‘OIL SYSTEM MASTER’ switch on cycle the pump by means of red ‘‘OIL PUMP’’ button. Continue to cycle until the pump and delivery system are clean. Turn ‘‘OIL SYSTEM MASTER’’ switch off. Remove the pump from the cleaning solution with plain hot water and recycle the pump to flush out the cleaning solution. Remove the pump from the hot water, allow it to drain for a few minutes, then wipe all exposed surfaces dry.

Place the pump into the bucket seasoning oil immediately. Cycle the pump several times to remove any water, which may be inside the internal parts of the pump or delivery system.

**REPLACING BROKEN GLASS**


Should you accidentally break a panel of glass, it can be replaced very easily without disassembling the popper.


1. Remove all loose pieces of glass.
2. Remove all vinyl strips from around the glass to be replaced. To do this, start the vinyl strips out of the channels with a knifepoint or similar tool. Always start at a corner. When enough vinyl protrudes, grasp it with the fingers and carefully pull it out. Set it aside as it must be reused.
3. Carefully remove the rest of the broken glass.
4. Apply decals to the new glass panel.
5. Maneuver the new glass into position. Try not to let the glass slip down into the opening in the extrusion from which the vinyl was removed. The glass should set on the illustration. If the glass does slip down into the opening, it will be necessary to raise the glass. Use suction cups, or a similar device.
6. Replace the vinyl, starting at the bottom edge of the glass. Starting at one corner and working it into the channel inch by inch easily install the vinyl. Apply pressure to the vinyl at point ‘‘A’’ as shown on illustration to force it into the channel. A dull blunt object such as the eraser end of a pencil or a small round piece of wood is an excellent tool.

**NOTE: WE DO NOT SHIP GLASS, OBTAIN FROM LOCAL GLASS SHOP OR HARDWARE STORE. ALWAYS PURCHASE DOUBLE STRENGTH TYPE GLASS.**

Glass sizes: 23 1/16 x 32 3/16 x 1/8 (2022, 2023, 2023EX, 2016)  
 23 1/16 X 28 3/16 X 1/8 (2024, 2024EX)

**MAINTENANCE INSTRUCTIONS**

	<b>⚠ CAUTION</b>
	<p>THE FOLLOWING SECTIONS OF THIS MANUAL ARE INTENDED ONLY FOR QUALIFIED SERVICE PERSONNEL WHO ARE FAMILIAR WITH ELECTRICAL EQUIPMENT. THESE ARE NOT INTENDED FOR THE OPERATOR.</p>

	<b>⚠ WARNING</b>
	<p>Adequate eye protection must be used when servicing this equipment to prevent the possibility of injury.</p>

### ORDERING SPARE PARTS

1. Identify the worn or broken part by checking it with the illustrations and parts list.
2. When ordering parts, include part number, part name, and quantity required.
3. Include you model name and machine serial number (found on nameplate) with your order.
4. Address orders to:

Parts Department  
Gold Medal Products Co.  
10700 Medallion Drive  
Cincinnati, Ohio 45241-4807

or, place orders at:

(800) 543-0862  
(513) 769-7676  
Fax: (513) 769-8500  
E-mail: [info@gmpopcorn.com](mailto:info@gmpopcorn.com)  
[www.gmpopcorn.com](http://www.gmpopcorn.com)

### LUBRICATION GEAR BOX

The gearbox is of heavy-duty construction. It has been filled and sealed at the factory. It should be checked every three months. To check the level of the lubricant in the gearbox, unscrew the cap from the oil level gauge. The gearbox should be maintained at a level 1/16" below the top of the oil level gauge.

To refill, lift hinged lid of oil hole cover and pour lubricant in until it reaches the proper level as observed in the oil level gauge. Then replace the cap on the oil level gauge. Refill with a multi-purpose gear lubricant, S.A.E. 90 weight.

### KETTLE DRIVE MOTOR, BLOWER WARMER MOTOR AND BUCKET SEASONING PUMP MOTOR

Follow manufacturers lubrication instructions as shown on the motor.

### ADJUSTING HEIGHT OF HEATING ELEMENT TO FIT OTHER PAILS

The bucket lid assembly of the pump can be raised or lowered on the Pump mount tube to accommodate buckets of various heights. To do this, loosen the (2) setscrews in the hub of the bucket lid assembly and slide the lid up or down as required. Then retighten the setscrews. The intake port is on the underside of the pump, thus allowing the maximum quantity of oil to be removed from the bucket. The pump is equipped with a filter screen over the intake port to prevent foreign material from being pulled in to the pump. This will protect the pump vanes from any possible damage.

### **PLASTIC PAIL – CAUTION**

A word of CAUTION is in order with respect to the new plastic oil pails now appearing on the market. DO NOT

Adjust the lid assembly so the heating element is too close to the bottom of the pail as the elements could melt a hole in the bottom of the pail, be at least one inch from bottom of plastic pails.

**TO MELT BUCKET PUMP INTO A CONGEALED PAIL OF SEASONING OIL OUTSIDE OF MACHINE CABINET, DISCONNECT OIL LINE ONLY, BY MEANS OF QUICK DISCONNECT COUPLING AND PROPERLY OR OIL WILL LEAK.**

### **ADJUSTING QUANTITY OF OIL DELIVERED**

The oil pump can be adjusted to deliver various quantities of oil up to a maximum of ten ounces per cycle to the kettle. It has been set at the factory to deliver the approximate quantity of oil necessary for the popper it is installed on. To prevent the oil from congealing in the tubing, the line is drained back into the pail between each cycle.

Before you make any changes in the oil settings, first measure the oil that pump is delivering. For best results you should have 1/3 oil to corn. For instance, a twelve-ounce measure of corn requires four ounces of oil – a 14-ounce kettle – 4 2/3 ounces of oil; and 18-ounce kettle – 6 ounces of oil; and 36-ounce kettle requires 12 ounces of oil. Any reduction from these amounts will seriously affect the top quality of your popcorn. The secret to good popcorn is plenty of oil and FLAVACOL salt for more color and flavor. Top quality always pays back more profits.

**Caution:** When measuring the quantity of oil delivered to the kettle, you must allow the oil in the line to drain back into the pail between cycle. You can observe this through the clear plastic oil line tubing. It should take approximately one minute for the oil line to drain.

Should you find it necessary to vary the amount of oil delivered to the kettle to meet your particular needs, the following instructions should be followed:

1. Disconnect the electrical power from the machine to the bucket seasoning pump by means of the special disconnect plug.
2. Take out the two screws and remove the lid from the control box of the pump.
3. The oil timer assembly consists of a timer motor, one nylon cycle cam, one nylon ingredient cam, two slotted head nylon adjustment screws, two switch housings and two switches.
4. The time motor limit switch should not be adjusted, as it has been set at the factory and should require no additional adjustment.
5. The pump motor limit switch controls the length of the time the pump motor runs, and thus the amount of oil delivered to the kettle.
6. To get more oil to the kettle, turn nylon adjustment screw clockwise. This permits the pump motor to run longer, thus pumping more oil.

To get less oil to the kettle, turn the nylon adjustment screw counterclockwise. This shortens the time the pump motor runs, thus pumping less oil.

**CAUTION:** When adjusting the quantity of oil delivered, never turn the adjusting screw more than 1/8 turn at one time. Then, run through a cycle and measure the quantity of oil delivered and readjust it necessary.

## TROUBLE SHOOTING

### LONG POPPING CYCLES:

If your ASTRO POP is slow to attain a decent popping cycle, or never reaches one, it can be the result of several things:

- A. **HEATING ELEMENTS--** One of the heating elements in the kettle may be burned out. This would result in the kettle never reaching the proper operating temperature.
- B. **THERMOSTAT--** A defective thermostat could cause the kettle not to attain the proper operating temperature.
- C. **LOW VOLTAGE--** If the machine is operated on low voltage, this could cause the kettle not to reach the proper operating temperature.
- D. **INADEQUATE SUPPLY LINES--** Inadequately sized electrical supply lines, in addition to being a fire hazard, would also prevent the kettle from properly reaching operating temperature. You should have at least #12 wires running to the wall receptacle into which your ASTRO POP is plugged.
- E. **INFERIOR CORN--** Inferior quality corn would result in longer popping cycles. Use only top quality hybrid popcorn from reputable suppliers. Even then, if you let your corn pick up moisture or dry out, your popping cycles will be slow.



**KETTLE DOES NOT HEAT**

If the kettle does not heat at all, it can be the result of several things. Before you go any further, make sure the kettle lead-in cord is plugged in, and that the fuses are not blown. Make sure all electrical connections are tight.

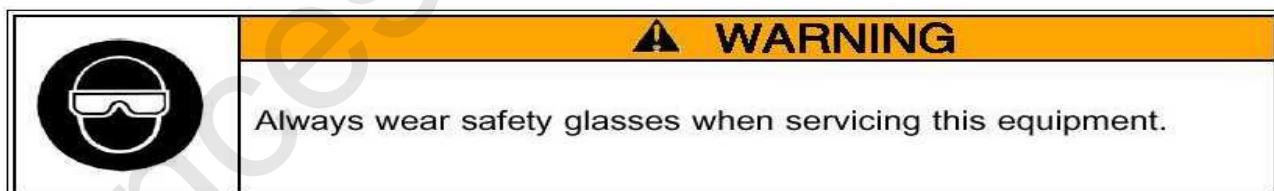
- A. **KETTLE HEAT SWITCH** – Check the current to and from the “KETTLE HEAT” switch, and if the switch is defective and should be replaced. You can also check the thermostat by checking the current to and from it.
- B. **THERMOSTAT**—A defective thermostat would cause the kettle not to heat. A good check is to bypass the thermostat and see if the heating elements will produce heat. If they do, the thermostat is defective and should be replaced. You can also check the thermostat by checking the current to and from it.
- C. **HEATING ELEMENTS**—Normally the heating elements should last through several tons of popcorn, however, elements do burn out. Visual inspection might show a hole burned through the metal sheath in some cases. If no defect is apparent, check the current to the heating elements. If defective, new elements are available from our local Gold Medal Dealer or directly from the factory.

**MOTOR WILL NOT TURN AGITATOR**

If the kettle drive motor will not turn the agitator shaft, when it is engaged, disengage the agitator shaft by turning the dump handle counterclockwise. Look at the drive dog on the gear box output shaft to see if it turns when the “KETTLE MOTOR” switch is “ON”. If the drive dog is turning, there is probably a kernel of popped or unpopped corn wedged between the stir blade and the kettle bottom.

If there is more than 1/32” clearance between the kettle bottom and the stir blades, they should be adjusted. To do this, loosen the set screw in the collar at the top of the crossbar and lower the agitator shaft as necessary. Then re-tighten the set screw in the collar. Now, take up the end play in the agitator shaft by repositioning the collar on the bottom of the kettle crossbar.

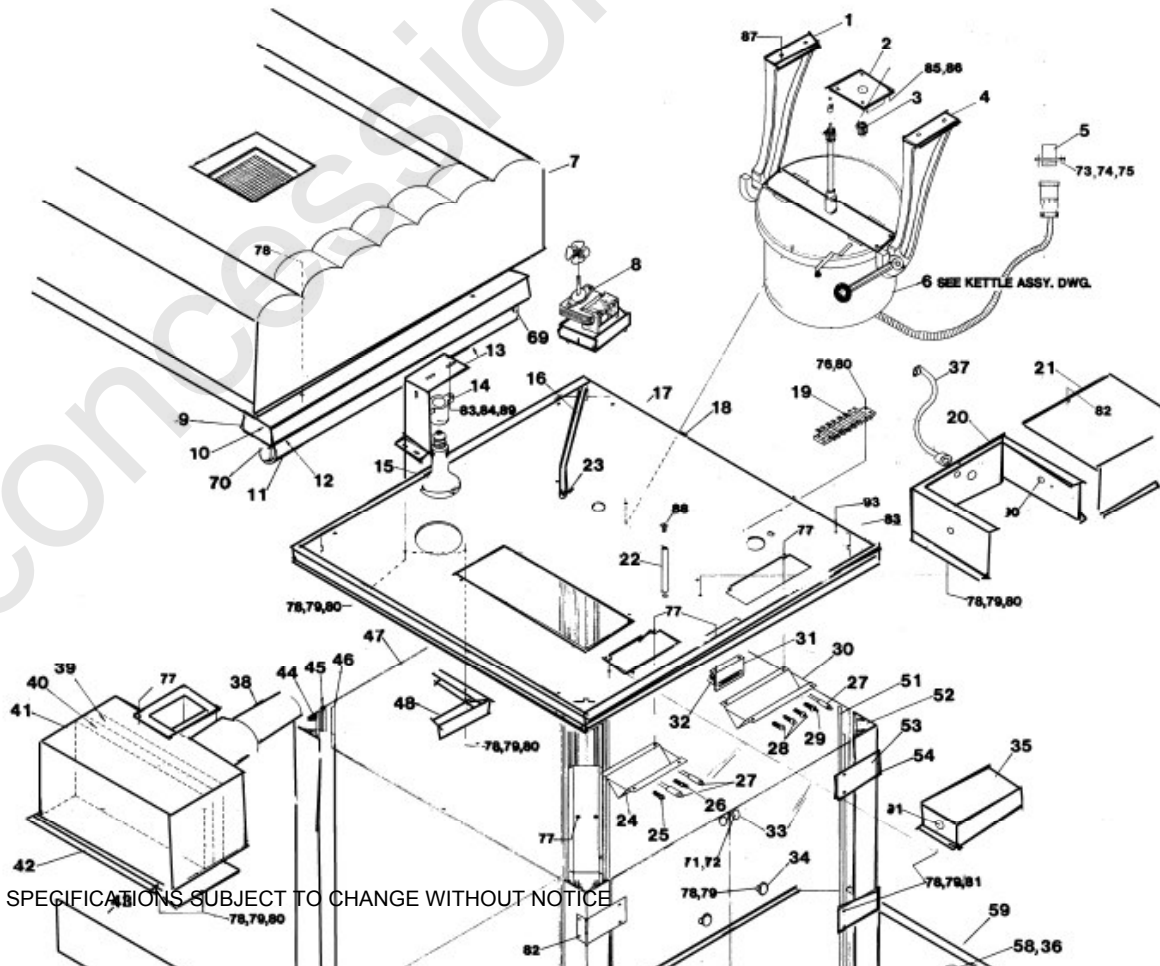
In some very remote cases a drive pin in the gear box can be sheared. If the agitator shaft will not rotate under a load, this is probably your trouble. A quick way to check this is to engage the agitator shaft and then manually try to turn the shaft. If the shaft turns manually, a drive pin in the gear box is sheared. We suggest you return the entire gear box to the factory for repair.

**OIL PUMP DOES NOT DELIVER OIL TO KETTLE**

If the oil pump does not deliver oil to the kettle, it could be the result of several things. However, the first thing to do is check the oil in the bucket to be sure it is liquid. Perhaps you did not allow enough melting time at high heat, or the heating element is defective. The limit switch on the manual high heat timer could also be defective. If the oil is liquid, check the following:

- A. **ELECTRICAL CONNECTIONS**—Check all electrical connections to see that they are clean and tight.

- B. OIL PUMP PUSH BUTTON SWITCH—Check the current to and from the ‘OIL PUMP PUSH BUTTON SWITCH’ with the button depressed, and if the switch is defective, replace it.
- C. TIMER MOTOR LIMIT SWITCH—Check the current to and from the “TIMER MOTOR LIMIT SWITCH”, and if the switch is defective, replace it.
- D. TIMER MOTOR—Check the current to the timer motor, and if the motor is defective, replace it.
- E. PUMP MOTOR LIMIT SWITCH—Check the current to and from the “Pump Motor Limit Switch” and if the switch is defective, replace it.
- F. PUMP MOTOR-- Check the current to the pump motor, and if the motor is defective, replace it.
- G. LOW VOLTAGE-- You must have a properly sized electrical line to the machine to handle the ampere draw. If the line is properly sized, in some remote cases, the voltage supplied by the electric company could be extremely low. If the voltage is found to be low, contact your local electric company. Some symptoms of low voltage are long popping cycles, and pump not cycling with kettle heat on.



SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

**CABINET ASSEMBLY 16 OZ**

<b>REF#</b>	<b>ITEM</b>	<b>2022</b>	<b>2023</b>	<b>2023EX</b>	<b>2024</b>	<b>2024EX</b>
1	HANGER ARM	47262	47262	47262	47262	47262
2	GEAR BLOCK	47065	47065	47065	47065	47065
3	GEAR	47059	47059	47059	47059	47059
4	HANGER ARM	47263	47263	47263	47263	47263
5	KETTLE RECEPTACLE	41160	41160	41160	49219	49219
6	KETTLE ASSY.	2162	2163	2163EX	2163	2163EX
7	DOME	41001	41001	41001	41002	41002
8	DRIVE MOTOR	47183	47183	47028	47183	47028
9	LIGHT ASSY.	41159	41159	41159	41159	41159
10	BALLAST ONLY	41022	41022	41022	41022	41022
11	LIGHT ONLY	39016	39016	39016	39016	39016
12	STARTER FOR LIGHT	41023	41023	41023	41023	41023
13	LIGHT BRACKET	41643	41643	41643	41643	41643
14	LAMP HOLDER	47047	47047	47047	47047	47047
15	LIGHT BULB	41671	41671	41671	41671	41671
16	OIL TUBE	41047	41047	41047	N/A	N/A
17	MOTOR PLATE	41005	41005	41005	41175	41175
18	TOP FRAME ASSY.	41045	41045	41045	41045	41045
19	TERMINAL BLOCK	47208	47208	47208	47208	47208
20	CONTROL BOX COVER	41107	41107	41107	41107	41107
21	CON. BOX TOP COVER	41108	41108	41108	41108	41108
22	DOME SPACER	41184	41184	41184	41184	41184
23	OIL TUBE COLLAR	47225	47225	47225	N/A	N/A
24	SWITCH BOX PUMP	41106	41106	41106	N/A	N/A
25	BUTTON OIL PUMP	41031	41031	41031	N/A	N/A

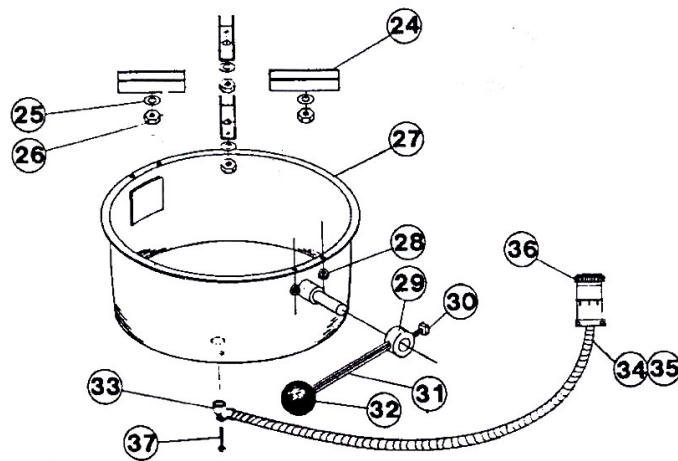
26	SWITCH OIL PUMP	47201	47201	47201	N/A	N/A
27	PILOT LIGHT	41033	41033	41032	41033	41032
28	SWITCH	47202	47202	74087	47202	74087
29	SWITCH	47201	47201	47201	47201	47201
30	SWITCH BOX	41004	41004	41004	41004	41004
31	CATCH BRACKET	77089	77089	77089	77089	77089
32	MAGNETIC CATCH	47561	47561	47561	47561	47561
33	DOOR STRIKER	47237	47237	47237	47237	47237
34	KNOB	41013	41013	41013	41013	41013
35	SWITCH BOX COVER	41109	41109	41109	N/A	N/A
36	LATCH SPACER	47335	47335	47335	N/A	N/A
37	LIGHT CORD	41704	41704	41704	41704	41704
38	BLOWER MOTOR	41015	41015	41015	N/A	N/A
39	CARBON FILTER	41096	41096	41096	41096	41096
40	GREASE FILTER	41095	41095	41095	41095	41095
41	BLOWER BOX	41006	41006	41006	41006	41006
42	AIR CHUTE	41527	41527	41527	41527	41527
43	DECAL REPLACEMENT	41362	41362	41362	41362	41362
44	FRONT CORNER POST	41870	41870	41870	41171	41171
45	RIGID CHANNEL SIDE	41858	41858	41858	47697	47697
46	GLASS RETAINER FR	41765	41765	41765	47598	47598
47	GLASS SLIDE	41190	41190	41190	47421	47421
48	LIGHT ANGLE	47799	47799	47799	47799	47799
49	RIGID CHANNEL BOT	47694	47694	47694	47694	47694
50	CORNER POST LH R	41871	41871	41871	41172	41172
51	GLASS RETAINER R	41766	41766	41766	47592	47592
52	CORNER POST RH R	41872	41872	41872	41173	41173
53	LONG HINGE RIGHT	41351	41351	41351	41351	41351
54	SHORT HINGE RIGHT	41349	41349	41349	41349	41349
55	LONG HINGE LEFT	41352	41352	41352	41352	41352
56	SHORT HINGE LEFT	41350	41350	41350	41350	41350
57	PLEXIGLASS DOOR	41014	41014	41014	41014	41014
58	PAN LATCH ASSY.	47370	47370	47370	N/A	N/A
59	CORN PAN	41102	41102	41102	47721	47721EX
60	PLUG	41717	-----	-----	-----	-----
61	LEAN-IN CORD	41422	47601	42362	47580	42362
62	CORNER COVER	41879	41879	41879	41879	41879
63	DROP PANEL ASSY	41017	41017	41017	41017	41017
64	OLD MAID PAN	41838	41838	41838	41838	41838
65	OLD MAIN GUIDES	77535	77535	77535	77535	77535
66	BOTTOM FROM ASSY	41025	41025	41025	41025	41025
67	RUBBER FEET	41282	41282	41282	41282	41282
68	WARMER ASSY	41062	41062	41062EX	N/A	N/A
69	LIGHT TUBE HOLDER	41020	41020	41020	41020	41020
70	LIGHT TUBE HLDR ST	41021	41021	41021	41021	41021
71	# 6-32 FL. HD. X 3/8	47772	47772	47772	47772	47772
72	# 6-32 ACORN NUT	47701	47701	47701	47701	47701
73	# 6-32 RD. D. X 1/2	47516	47516	47516	47516	47516
74	# 6 IN TOOTH WASHER	76188	76188	76188	76188	76188
75	# 6 - 32 HEX NUT	38005	38005	38005	38005	38005
76	#8 - 32 HEX NUT	49177	49177	49177	49177	49177
77	#8 - 32 PH. HD, X 3/4	74147	74147	74147	74147	74147
78	#8 - 32 PH. X 1/2 ST	89128	89128	89128	89128	89128

79	#8 IN TOOTH WASHER	74150	74150	74150	74150	74150
80	#8 – 32 HEX NUT	74149	74149	74149	74149	74149
81	#8 – 32 ACORN NUT	47702	47702	47702	47702	47702
82	#8 – 32 HX X 3/8 ST	74141	74141	74141	74141	74141
83	#8 – 32 HX X X STAP	74153	74153	74153	74153	74153
84	#8 LOCK NUT	74146	74146	74146	74146	74146
85	#10 X 1 PH. HD.	76022	76022	76022	76022	76022
86	#10 LOCK WASHER	42302	42302	42302	42302	42302
87	¼ -20 X ¾ L.W.	74520	74520	74520	74520	74520
88	TRUSS HD 5/16 X ½	46638	46638	46638	46638	46638
89	RUBBER WASHER	47279	47279	47279	47279	47279
90	STRAIN RELIEF	47236	47236	47236	47236	47236
91	STRAIN RELIEF	47282	47282	47282	47282	47282
92	STRAIN RELIEF	41456	41456	41456	41456	41456
93	RIVETS	15123	15123	15123	15123	15123

REF#	ITEM	2026	2026EX	2026T
1	HANGER ARM	41886	41886	41886
2	GEAR BLOCK	41432	41432	41432
3	GEAR	41380	41380	41380
4	HANGER ARM	41886	41886	41886
5	KETTLE RECEPTACLE	41160	41967	41160
6	KETTLE ASSY.	2153	2153	2153
7	DOME	41209	41500	41209T
8	DRIVE MOTOR	41449	41449	41449
9	LIGHT ASSY.	41159	41159	41159
10	BALLAST ONLY	41022	41022	41022
11	LIGHT ONLY	39016	39016	39016
12	STARTER FOR LIGHT	41023	41023	41023
13	LIGHT BRACKET	41643	41643	41643
14	LAMP HOLDER	47047	47047	47047
15	LIGHT BULB	41671	41671	41671
16	OIL TUBE	41047	41047	41047
17	MOTOR PLATE	41161	41161	41161
18	TOP FRAME ASSY.	41045	41045	41045
19	TERMINAL BLOCK	47208	47208	47208
20	CONTROL BOX COVER	41107	41107	41107
21	CON. BOX TOP COVER	41108	41108	41108
22	DOME SPACER	41431	41431	41431
23	OIL TUBE COLLAR	47225	47225	47225
24	SWITCH BOX PUMP	41106	41106	41106
25	BUTTON OIL PUMP	41031	41031	41031
26	SWITCH OIL PUMP	47201	47201	47201
27	PILOT LIGHT	41033	41033	41033
28	SWITCH	47202	74087	47202
29	SWITCH	47201	47201	47201

30	SWITCH BOX	41004	41004	41004
31	CATCH BRACKET	77089	77089	77089
32	MAGNETIC CATCH	47561	47561	47561
33	DOOR STRIKER	47237	47237	47237
34	KNOB	41013	41013	41013
35	SWITCH BOX COVER	41109	41109	41109
36	LATCH SPACER	47335	47335	47335
37	LIGHT CORD	41704	41704	41704
38	BLOWER MOTOR	41015	41015	41015
39	CARBON FILTER	41096	41096	41096
40	GREASE FILTER	41095	41095	41095
41	BLOWER BOX	41006	41006	41006
42	AIR CHUTE	41527	41527	41527
43	DECAL REPLACEMENT	41362	41362	41362
44	FRONT CORNER POST	41870	41870	41870
45	RIGID CHANNEL SIDE	41858	41858	41858
46	GLASS RETAINER FR	41765	41765	41765
47	GLASS SLIDE	41190	41190	41636T
48	LIGHT ANGLE	47799	47799	47799
49	RIGID CHANNEL BOT	47694	47694	47694
50	CORNER POST LH R	41871	41871	41871
51	GLASS RETAINER R	41766	41766	41766
52	CORNER POST RH R	41872	41872	41872
53	LONG HINGE RIGHT	41351	41351	41351
54	SHORT HINGE RIGHT	41349	41349	41349
55	LONG HINGE LEFT	41352	41352	41352
56	SHORT HINGE LEFT	41350	41350	41350
57	PLEXIGLASS DOOR	41014	41014	41014
58	PAN LATCH ASSY.	47370	47370	47370
59	CORN PAN	41102	41102	41102
60	PLUG	41717	41717	41717
61	LEAN-IN CORD	41471	41471	41471
62	CORNER COVER	41879	41879	41879
63	DROP PANEL ASSY	41017	41017	41017
64	OLD MAID PAN	41838	41838	41838
65	OLD MAIN GUIDES	77535	77535	77535
66	BOTTOM FROM ASSY	41025	41025	41025
67	RUBBER FEET	41282	41282	41282
68	WARMER ASSY	41062	41062EX	41062
69	LIGHT TUBE HOLDER	41020	41020	41020
70	LIGHT TUBE HLDR ST	41021	41021	41021
71	# 6-32 FL. HD. X 3/8	47772	47772	47772
72	# 6-32 ACORN NUT	47701	47701	47701
73	# 6-32 RD. D. X 1/2	47516	47516	47516
74	# 6 IN TOOTH WASHER	76188	76188	76188
75	# 6 - 32 HEX NUT	38005	38005	38005
76	#8 - 32 HEX NUT	49177	49177	49177
77	#8 - 32 PH. HD, X 3/4	74147	74147	74147
78	#8 - 32 PH. X 1/2 ST	89128	89128	89128
79	#8 IN TOOTH WASHER	74150	74150	74150
80	#8 - 32 HEX NUT	74149	74149	74149
81	#8 - 32 ACORN NUT	47702	47702	47702
82	#8 - 32 HX X 3/8 ST	74141	74141	74141

<b>16 OZ KETTLE ASSY.</b>	
Part No.	ASTRO POP OR ECONO
Part Name	DO NOT SCALE PLATING
Material	NONE
Finish	
Quantity	
Manufacturer	GOLD MEDAL PRODUCTS CO. 1400 WINDMILL AVE., WINDMILL, OHIO 43081
Part No.	C-8002



## 16 oz KETTLE ASSY

REV.	DISPOSITION	DATE	BY

### 16 OZ KETTLE ASSY

#### ASTRO KETTLES

NO	PART DESCRIPTION	2162	2163	2163EX
1	C RETAINING RING	47107	47107	47107
2	NEEDLE BEARING	47106	47106	47106
3	SPUR GEAR	47059	47059	47059
4	SET SCREW #10-32	41742	41742	41742
5	COLLAR	47326	47326	47326
6	SET SCREW	47751	47751	47751
7	OIL FUNNEL TUBE	41867	41867	41867
8	THUMB SCREWS	47691	47691	47691
9	WARNING PLATE	47154	47154	47154
10	RIVETS, DRIVE	47774	47774	47774
11	CROSSBAR	41144	41144	41144
12	REAR LID	41120	41120	41120
13	FRONT LID ASSY.	41123	41123	41123
14	KNOB - FOR LID	47120	47120	47120
15	SCREW - FOR KNOB	74141	74141	74141
16	WASHER #8	74150	74150	74150
17	AGITATOR SHAFT	41093	41093	41093
18	KETTLE PLATED	41069	41069	41069
19	HEAT PLATE	41127	41127	41127
20	THERMOSTAT	82219	82219	82219
21	RETAINING NUT	41434	41434	41434
22	HEAT ELEMENT SMALL	41155	41155	41155
23	HEAT ELEMENT LARGE	41183	41183	41183
24	ELEMENT RETAINER	41878	41878	41878
25	WASHER	76079	76079	76079
26	NUT 1/4-20	74133	74133	74133
27	KETTLE SHELL	41081	41081	41081
28	NUT 1/4-20	74133	74133	74133
29	DUMP HANDLE COLLAR	47325	47325	47325

30	DUMP HANDLE SCREW	47725	47725	47725
31	DUMP HANDLE SHAFT	47707	47707	47707
32	DUMP HANDLE KNOB	47110	47110	47110
33	90 DEGREE EL	46241	46241	46241
34	CONDUIT	82107-24	82107-24	82107-24
35	CONDUIT BUSHING	82135	82135	82135
36	PLUG	41145	41145	41145
37	SCREW LONG	74153	74153	74153

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