

OPERATOR'S MANUAL



Model C709 & C717 Heat Treatment Soft Serve Freezers

Original Operating Instructions

062080-M

2/4/05 (Original Publication)
(Updated 8/3/15)

Complete this page for quick reference when service is required:

Taylor Distributor: _____

Address: _____

Phone: _____

Fax: _____

E-mail: _____

Service: _____

Parts: _____

Date of Installation: _____

Information found on the data label:

Model Number: _____

Serial Number: _____

Electrical Specs: Voltage _____ Cycle _____

Phase _____

Maximum Fuse Size: _____ A

Minimum Wire Ampacity: _____ A

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062080-M

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Taylor Company
a division of Carrier Commercial Refrigeration, Inc.
750 N. Blackhawk Blvd.
Rockton, IL 61072

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Note: Continuing research results in steady improvements; therefore, information in this manual is subject to change without notice.

Note: Only instructions originating from the factory or its authorized translation representative(s) are considered to be the original set of instructions.

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Section 1

To the Installer

The following information has been included in the manual as safety and regulatory guidelines. For complete installation instructions, please see the Installation Checklist.

Installer Safety



In all areas of the world, equipment should be installed in accordance with existing local codes. Please contact your local authorities if you have any questions.

Care should be taken to ensure that all basic safety practices are followed during the installation and servicing activities related to the installation and service of Taylor equipment.

- Only authorized Taylor service personnel should perform installation and repairs on the equipment.
- Authorized service personnel should consult OSHA Standard 29CFR1910.147 or the applicable code of the local area for the industry standards on lockout/tagout procedures before beginning any installation or repairs.
- Authorized service personnel must ensure that the proper PPE is available and worn when required during installation and service.
- Authorized service personnel must remove all metal jewelry, rings, and watches before working on electrical equipment.



The main power supply(s) to the freezer must be disconnected prior to performing any repairs. Failure to follow this instruction may result in personal injury or death from electrical shock or hazardous moving parts as well as poor performance or damage to the equipment.

Note: All repairs must be performed by an authorized Taylor Service Technician.



This unit has many sharp edges that can cause severe injuries.

Site Preparation

Review the area where the unit will be installed before uncrating the unit. Make sure all possible hazards to the user or equipment have been addressed.

For Indoor Use Only: This unit is designed to operate indoors, under normal ambient temperatures of 70°-75°F (21°-24°C). The freezer has successfully performed in high ambient temperatures of 104° (40°C) at reduced capacities.



This unit must **NOT** be installed in an area where a water jet or hose can be used. **NEVER** use a water jet or hose to rinse or clean the unit. Failure to follow this instruction may result in electrocution.



This unit must be installed on a level surface to avoid the hazard of tipping. Extreme care should be taken in moving this equipment for any reason. Two or more persons are required to safely move this unit. Failure to comply may result in personal injury or equipment damage.

Uncrate the unit and inspect it for damage. Report any damage to your Taylor Distributor.

This piece of equipment is made in the USA and has USA sizes of hardware. All metric conversions are approximate and vary in size.

Air Cooled Units

DO NOT obstruct air intake and discharge openings:

C709: A minimum of 6" (152 mm) air space is required on both sides and 0" on the rear.

C717: A minimum of 3" (76 mm) air space is required around all sides. Install the deflector provided to prevent recirculation of warm air.

This will allow for adequate air flow across the condenser. Failure to allow adequate clearance can reduce the refrigeration capacity of the freezer and possibly cause permanent damage to the compressor.

Water Connections (Water Cooled Units Only)

An adequate cold water supply must be provided with a hand shut-off valve. On the underside of the base pan or on the right side, two 3/8" I.P.S. water connections for inlet and outlet are provided for easy hook-up. 1/2" inside diameter water lines should be connected to the machine. (Flexible lines are recommended, if local codes permit.) Depending on local water conditions, it may be advisable to install a water strainer to prevent foreign substances from clogging the automatic water valve. There will be only one water "in" and one water "out" connection. DO NOT install a hand shut-off valve on the water "out" line! Water should always flow in this order: first, through the automatic water valve; second, through the condenser; and third, through the outlet fitting to an **open trap drain**.



A back flow prevention device is required on the incoming water connection side. Please refer to the applicable National, State, and local codes for determining the proper configuration.

Electrical Connections

In the United States, this equipment is intended to be installed in accordance with the National Electrical Code (NEC), ANSI/NFPA 70-1987. The purpose of the NEC code is the practical safeguarding of persons and property from hazards arising from the use of electricity. This code contains provisions considered necessary for safety. Compliance therewith and proper maintenance will result in an installation essentially free from hazard!

In all other areas of the world, equipment should be installed in accordance with the existing local codes. Please contact your local authorities.



FOLLOW YOUR LOCAL ELECTRICAL CODES!

Each unit requires one power supply for each data label on the unit. Check the data label(s) on the freezer for branch circuit overcurrent protection or fuse, circuit ampacity, and other electrical specifications. Refer to the wiring diagram provided

inside of the electrical box for proper power connections.



CAUTION: THIS EQUIPMENT MUST BE PROPERLY GROUNDED! FAILURE TO DO SO CAN RESULT IN SEVERE PERSONAL INJURY FROM ELECTRICAL SHOCK!



This unit is provided with an equipotential grounding lug that is to be properly attached to the rear of the frame by the authorized installer. The installation location is marked by the equipotential bonding symbol (5021 of IEC 60417-1) on both the removable panel and the equipment's frame.



- Stationary appliances which are not equipped with a power cord and a plug or another device to disconnect the appliance from the power source must have an all-pole disconnecting device with a contact gap of at least 3 mm installed in the external installation.
- Appliances that are permanently connected to fixed wiring and for which leakage currents may exceed 10 mA, particularly when disconnected or not used for long periods, or during initial installation, shall have protective devices such as a GFI, to protect against the leakage of current, installed by the authorized personnel to the local codes.
- Supply cords used with this unit shall be oil-resistant, sheathed flexible cable not lighter than ordinary polychloroprene or other equivalent synthetic elastomer-sheathed cord (Code designation 60245 IEC 57) installed with the proper cord anchorage to relieve conductors from strain, including twisting, at the terminals and protect the insulation of the conductors from abrasion.

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

Beater Rotation



Beater rotation must be clockwise as viewed looking into the freezing cylinder.



Note: The following procedures should be performed by a trained service technician.

To correct rotation on a three-phase unit, interchange any two incoming power supply lines at freezer main terminal block only.

To correct rotation on a single-phase unit, change the leads inside the beater motor. (Follow diagram printed on motor.)

Electrical connections are made directly to the terminal block provided behind the lower front panel.

Refrigerant



In consideration of our environment, Taylor proudly uses only earth friendly HFC refrigerants. The HFC refrigerant used in this unit is R404A. This refrigerant is generally considered non-toxic and non-flammable, with an Ozone Depleting Potential (ODP) of zero (0).

However, any gas under pressure is potentially hazardous and must be handled with caution.

NEVER fill any refrigerant cylinder completely with liquid. Filling the cylinder to approximately 80% will allow for normal expansion.



Use only R404A refrigerant that conforms to the AHRI standard 700 specification. The use of any other refrigerant may expose users and operators to unexpected safety hazards.



Refrigerant liquid sprayed onto the skin may cause serious damage to tissue. Keep eyes and skin protected. If refrigerant burns should occur, flush immediately with cold water. If burns are severe, apply ice packs and contact a physician immediately.



Taylor reminds technicians to be cautious of government laws regarding refrigerant recovery, recycling, and reclaiming systems. If you have any questions regarding these laws, please contact the factory Service Department.



WARNING: R404A refrigerant used in conjunction with polyolester oils is extremely moisture absorbent. When opening a refrigeration system, the maximum time the system is open must not exceed 15 minutes. Cap all open tubing to prevent humid air or water from being absorbed by the oil.

Section 2

To the Operator

Your freezer has been carefully engineered and manufactured to give you dependable operation. When properly operated and cared for, it will produce a consistent, quality product. Like all mechanical products, cleaning and maintenance will be required. A minimum amount of care and attention is necessary if the operating procedures outlined in this manual are followed closely.



This Operator's Manual should be read before operating or performing any maintenance on your equipment.

Your Taylor freezer will NOT eventually compensate for and correct any errors during the set-up or filling operations. Thus, the initial assembly and priming procedures are of extreme importance. It is strongly recommended that personnel responsible for the equipment's operation, both assembly and disassembly, go through these procedures together in order to be properly trained and to make sure that no confusion exists.

In the event you should require technical assistance, please contact your local authorized Taylor Distributor.

Note: Your Taylor warranty is valid only if the parts are authorized Taylor parts, purchased from the local authorized Taylor Distributor, and only if all required service work is provided by an authorized Taylor service technician. Taylor reserves the right to deny warranty claims on units or parts if non-Taylor approved parts or incorrect refrigerant were installed in the unit, system modifications were performed beyond factory recommendations, or it is determined that the failure was caused by abuse, misuse, neglect, or failure to follow all operating instructions. For full details of your Taylor Warranty, please see the Limited Warranty section in this manual.

Note: Constant research results in steady improvements; therefore, information in this manual is subject to change without notice.



If the crossed out wheeled bin symbol is affixed to this product, it signifies that this product is

compliant with the EU Directive as well as other similar legislation in effect after August 13, 2005. Therefore, it must be collected separately after its use is completed, and cannot be disposed as unsorted municipal waste. The user is responsible for returning the product to the appropriate collection facility, as specified by your local code.

For additional information regarding applicable local laws, please contact the municipal facility and/or local distributor.

Compressor Warranty Disclaimer

The refrigeration compressor(s) on this unit are warranted for the term stated in the Limited Warranty section in this manual. However, due to the Montreal Protocol and the U.S. Clean Air Act Amendments of 1990, many new refrigerants are being tested and developed, thus seeking their way into the service industry. Some of these new refrigerants are being advertised as drop-in replacements for numerous applications. It should be noted that in the event of ordinary service to this unit's refrigeration system, **only the refrigerant specified on the affixed data label should be used.** The unauthorized use of alternate refrigerants will void your Taylor compressor warranty. It is the unit owner's responsibility to make this fact known to any technician he employs.

It should also be noted that Taylor does not warrant the refrigerant used in its equipment. For example, if the refrigerant is lost during the course of ordinary service to this machine, Taylor has no obligation to either supply or provide its replacement either at billable or unbillable terms. Taylor does have the obligation to recommend a suitable replacement if the original refrigerant is banned, obsoleted, or no longer available during the five year warranty of the compressor.

Taylor will continue to monitor the industry and test new alternates as they are being developed. Should a new alternate prove, through our testing, that it would be accepted as a drop-in replacement, then the above disclaimer would become null and void. To find out the current status of an alternate refrigerant as it relates to your compressor warranty, call the local Taylor Distributor or the Taylor Factory. Be prepared to provide the Model/Serial Number of the unit in question.

We, at Taylor Company, are concerned about the safety of the operator when he or she comes in contact with the freezer and its parts. Taylor has gone to extreme efforts to design and manufacture built-in safety features to protect both you and the service technician. As an example, warning labels have been attached to the freezer to further point out safety precautions to the operator.



IMPORTANT - Failure to adhere to the following safety precautions may result in severe personal injury or death. Failure to comply with these warnings may damage the machine and its components. Component damage will result in part replacement expense and service repair expense.



DO NOT operate the freezer without reading this Operator Manual. Failure to follow this instruction may result in equipment damage, poor freezer performance, health hazards, or personal injury.



This appliance is to be used only by trained personnel. It is not intended for use by children or people with reduced physical, sensory, or mental capabilities, or lack of experience and knowledge, unless given supervision or instruction concerning the use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.



This unit is provided with an equipotential grounding lug that is to be properly attached to the rear of the frame by the authorized installer. The installation location is marked by the equipotential bonding symbol (5021 of IEC 60417-1) on both the removable panel and the equipment's frame.



DO NOT use a water jet to clean or rinse the freezer. Failure to follow these instructions may result in serious electrical shock.



- **DO NOT** operate the freezer unless it is properly grounded.
- **DO NOT** operate the freezer with larger fuses than specified on the data label.
- All repairs must be performed by an authorized Taylor service technician.
- The main power supplies to the machine must be disconnected prior to performing any repairs.
- For Cord Connected Units: Only Taylor authorized service technicians or licensed electricians may install a plug or replacement cord on these units.
- Stationary appliances which are not equipped with a power cord and a plug or another device to disconnect the appliance from the power source must have an all-pole disconnecting device with a contact gap of at least 3 mm installed in the external installation.
- Appliances that are permanently connected to fixed wiring and for which leakage currents may exceed 10 mA, particularly when disconnected or not used for long periods, or during initial installation, shall have protective devices such as a GFI, to protect against the leakage of current, installed by the authorized personnel to the local codes.

- Supply cords used with this unit shall be oil-resistant, sheathed flexible cable not lighter than ordinary polychloroprene or other equivalent synthetic elastomer-sheathed cord (Code designation 60245 IEC 57) installed with the proper cord anchorage to relieve conductors from strain, including twisting, at the terminals and protect the insulation of the conductors from abrasion.

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

Failure to follow these instructions may result in electrocution. Contact your local authorized Taylor Distributor for service.



- **DO NOT** allow untrained personnel to operate this machine.
- **DO NOT** operate the freezer unless all service panels and access doors are restrained with screws.
- **DO NOT** remove any internal operating parts (example: freezer door, beater, scraper blades, etc.) unless all control switches are in the OFF position.

Failure to follow these instructions may result in severe personal injury from hazardous moving parts.



This unit has many sharp edges that can cause severe injuries.

- **DO NOT** put objects or fingers in the door spout. This may contaminate the product and cause severe personal injury from blade contact.
- **USE EXTREME CAUTION** when removing the beater assembly. The scraper blades are very sharp.
- **CAUTION-SHARP EDGES:** Two people are required to handle the cup/cone dispenser. Protective gloves must be worn and the mounting holes must NOT be used to lift or hold the dispenser. Failure to follow this instruction can result in personal injury to fingers or equipment damage.



Access to the service area of the unit is restricted to persons having knowledge and practical experience with the appliance, in particular as far as safety and hygiene are concerned.



This freezer must be placed on a level surface. Failure to comply may result in personal injury or equipment damage.



Cleaning and sanitizing schedules are governed by your state or local regulatory agencies and must be followed accordingly. Please refer to the cleaning section of this manual for the proper procedure to clean this unit.

DO NOT run the unit without product. Failure to follow this instruction can result in damage to the unit.



This machine is designed to maintain product temperature under 41°F (5°C). Any product being added to this machine must be below 41°F (5°C). Failure to follow this instruction may result in health hazards and poor freezer performance.

DO NOT run the machine without product. Failure to follow this instruction can result in damage to the machine.

DO NOT obstruct air intake and discharge openings:

C709: A minimum of 6" (152 mm) air space is required on both sides and 0" on the rear.

C717: A minimum of 3" (76 mm) air space is required around all sides. Install the deflector provided to prevent recirculation of warm air.

Failure to follow these instructions may cause poor freezer performance and damage to the machine.

For Indoor Use Only: This unit is designed to operate indoors, under normal ambient temperatures of 70° - 75°F (21° - 24°C). The freezer has successfully performed in high ambient temperatures of 104°(40°C) at reduced capacities.

NOISE LEVEL: Airborne noise emission does not exceed 78 dB(A) when measured at a distance of 1.0 meter from the surface of the machine and at a height of 1.6 meters from the floor.

Section 4

Operator Parts Identification

Model C709

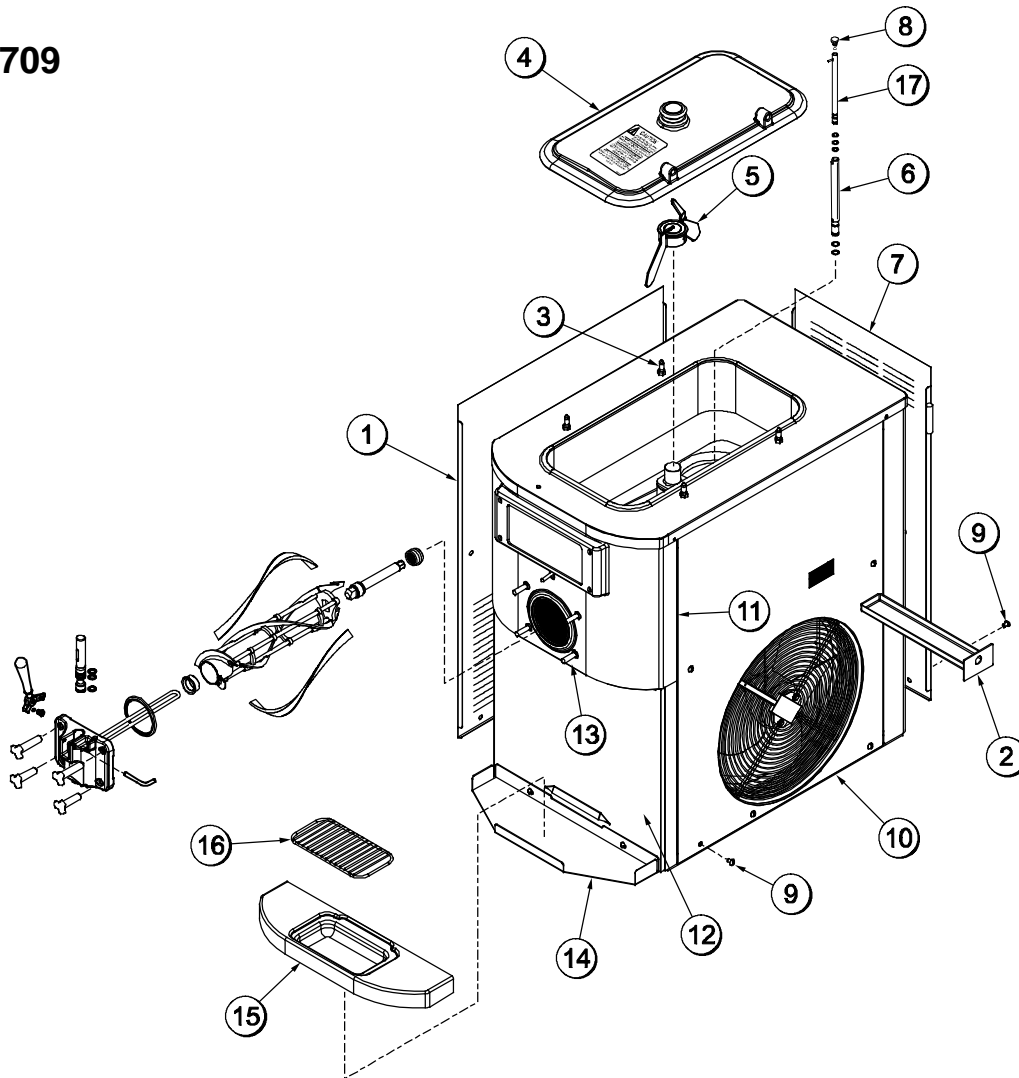


Figure 1

ITEM	DESCRIPTION	PART NO.
1	PANEL-SIDE-LEFT	056963-SP1
2	PAN-DRIP 11-5/8 LONG	027503
3	PIN-RETAINING-HOPPER CVR	043934
4	KIT A.-COVER-HOPPER	X65368
5	BLADE A.-AGITATOR	X56591
6	TUBE A.-FEED-OUTER-HT	X34641
7	PANEL-REAR	056077-SP1
8	ORIFICE	022465-100
9	SCREW-1/4-20X3/8 RHM-SS	011694

ITEM	DESCRIPTION	PART NO.
10	PANEL A.-SIDE-RIGHT	X57871
11	PANEL A.-FRONT-UPPER	X59423
12	PANEL A.-FRONT-LOWER	X58955
13	STUD-NOSE CONE	055987
14	SHELF-TRAY-DRIP	056076
15	TRAY-DRIP	056858
16	SHIELD-SPLASH	049203
17	TUBE A.-FEED-SC-INNER	X32824-2

Model C709 Single Spout Door and Beater Assembly

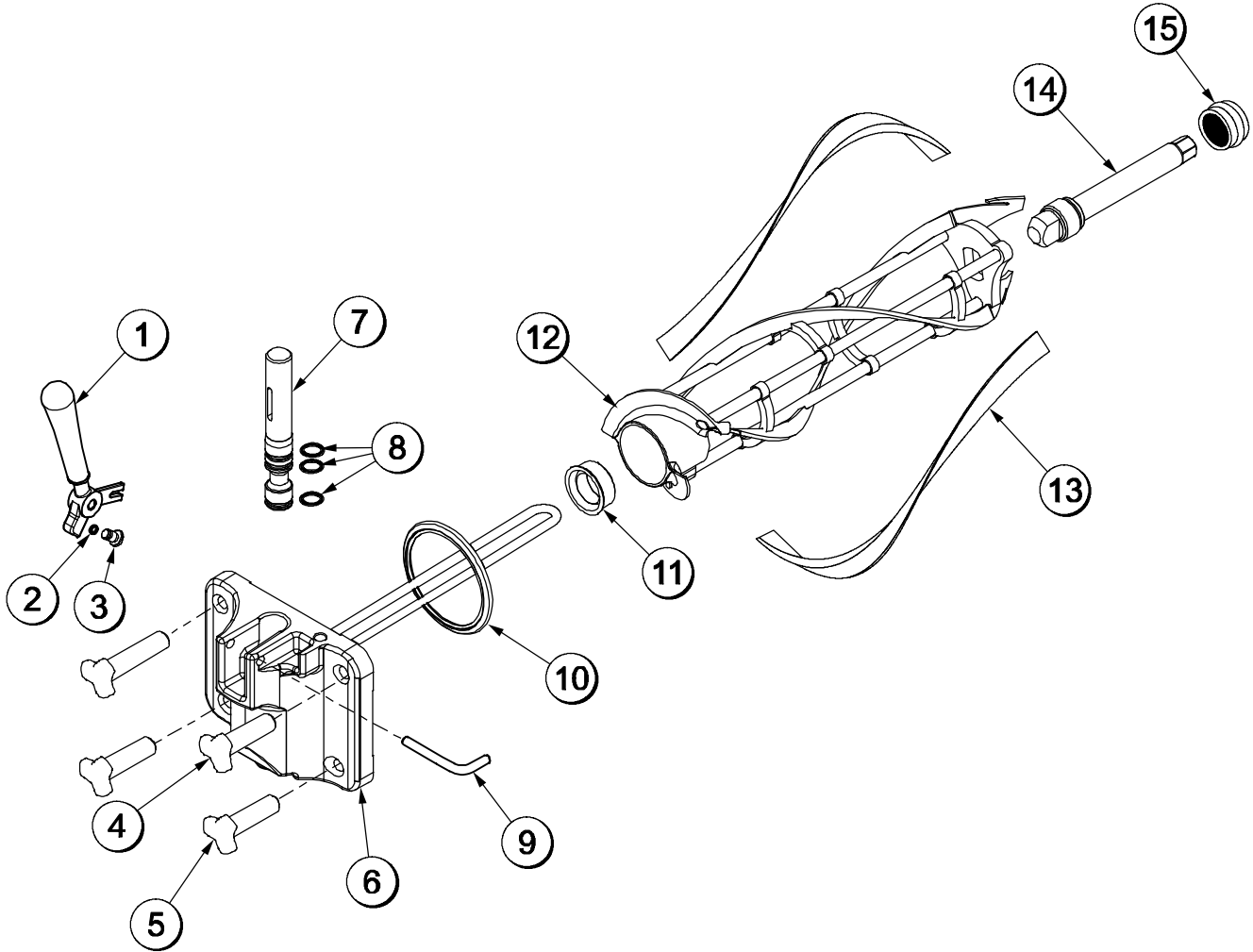


Figure 2

ITEM	DESCRIPTION	PART NO.
1	HANDLE A.-DRAW-WELDED	X56246
2	O-RING-1/4 OD X .070W 50	015872
3	SCREW-ADJUSTMT-5/16-24	056332
4	NUT-STUD BLACK 3.250"	058765
5	NUT-STUD BLACK 2.563"	058764
6	DOOR A.-W/BAFFLE	X57332-SER
7	VALVE A.-DRAW	X55820
8	O-RING-DRAW VALVE-S.S.	014402

ITEM	DESCRIPTION	PART NO.
9	PIN-HANDLE-SS	055819
10	GASKET-DOOR HT 4"-DBL	048926
11	BEARING-FRONT	050216
12	BEATER A.-3.4 QT HELICORE	X31761
13	BLADE-SCRAPER-PLASTIC	035174
14	SHAFT-BEATER	056078
15	SEAL-DRIVE SHAFT	032560

Model C717

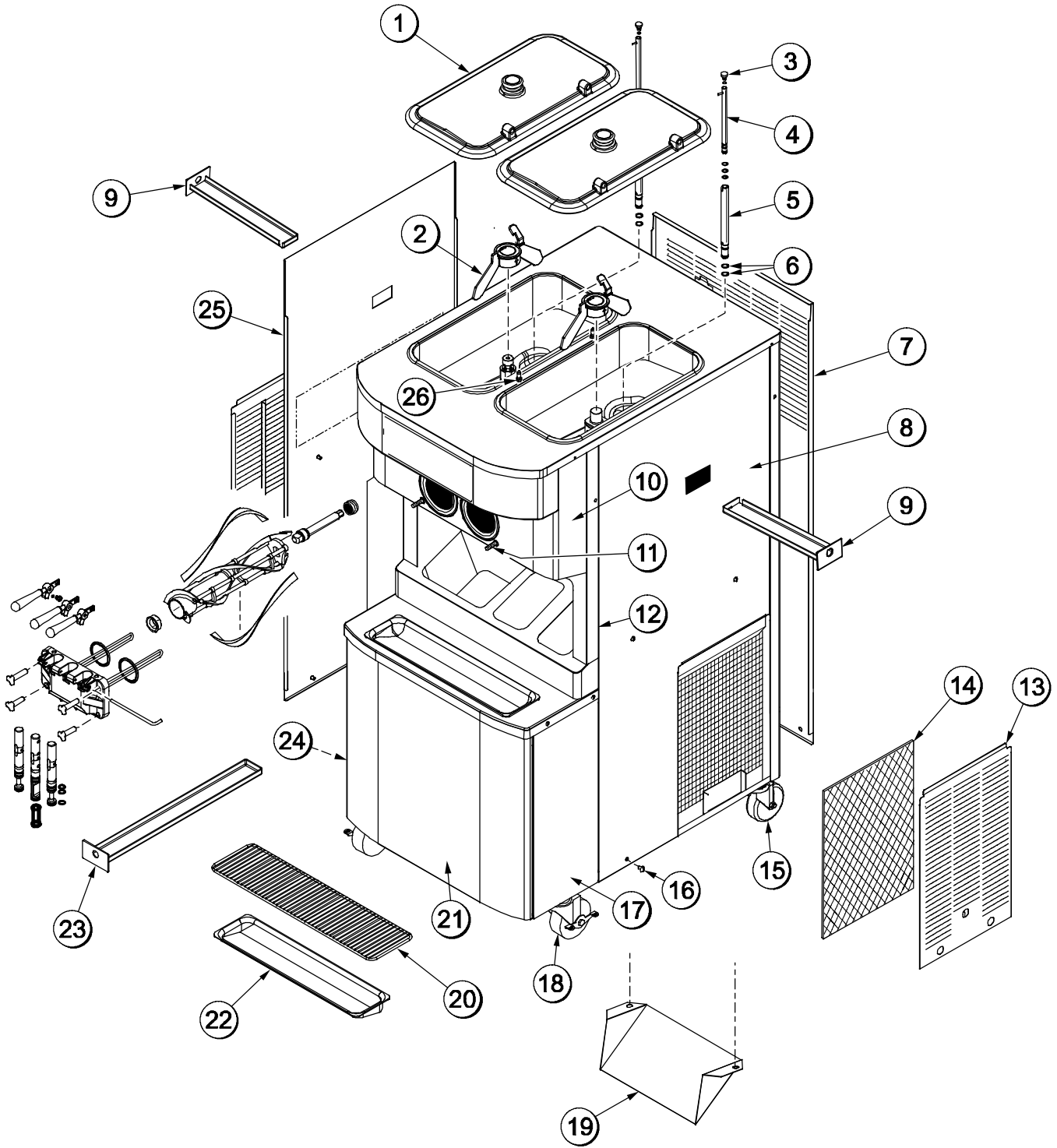


Figure 3

Model C717 Exploded View Parts Identification

ITEM	DESCRIPTION	PART NO.
1	COVER-HOPPER	053809-1
2	BLADE A.-AGITATOR	X56591
3	ORIFICE	022465-100
4	TUBE A.-FEED-SC-INNER-3/16	X32824-3
5	TUBE A.-FEED-OUTER-HT	X34641
6	O-RING-.643 OD X .077 W	018572
7	PANEL-REAR	059917
8	PANEL-SIDE*RIGHT	059907
9	PAN-DRIP 12.5	059736
10	PANEL A.-FRONT (MIDDLE)	X63879
11	PANEL A.-FRONT (UPPER)	X59836
12	STUD-NOSE CONE	055987
13	FILTER-AIR-POLY-FLO	052779-11

ITEM	DESCRIPTION	PART NO.
14	PANEL A.-FILTER-LOUVERED	X59928
15	CASTER-4" SWV 3/4-10 STEM	044106
16	SCREW-1/4-20 X 3/8 RHM-SS	011694
17	PANEL-CORNER-FRONT R.	063087
18	CASTER-4" SWV 3/4-10 STEM W/BRAKE	046437
19	DEFLECTOR-BLOWER	059929
20	SHIELD-SPLASH-WIRE-19-3/4 L	033813
21	PANEL A.-FRONT LOWER	X59854-SER
22	TRAY-DRIP-19-5/8 L X 4-7/8	033812
23	PAN-DRIP 19-1/2 LONG	035034
24	PANEL-CORNER-FRONT-LEFT	063088
25	PANEL-SIDE-LEFT	059906
26	PIN-RETAINING-HOPPER CVR	043934

Model C717 Three Spout Door and Beater Assembly

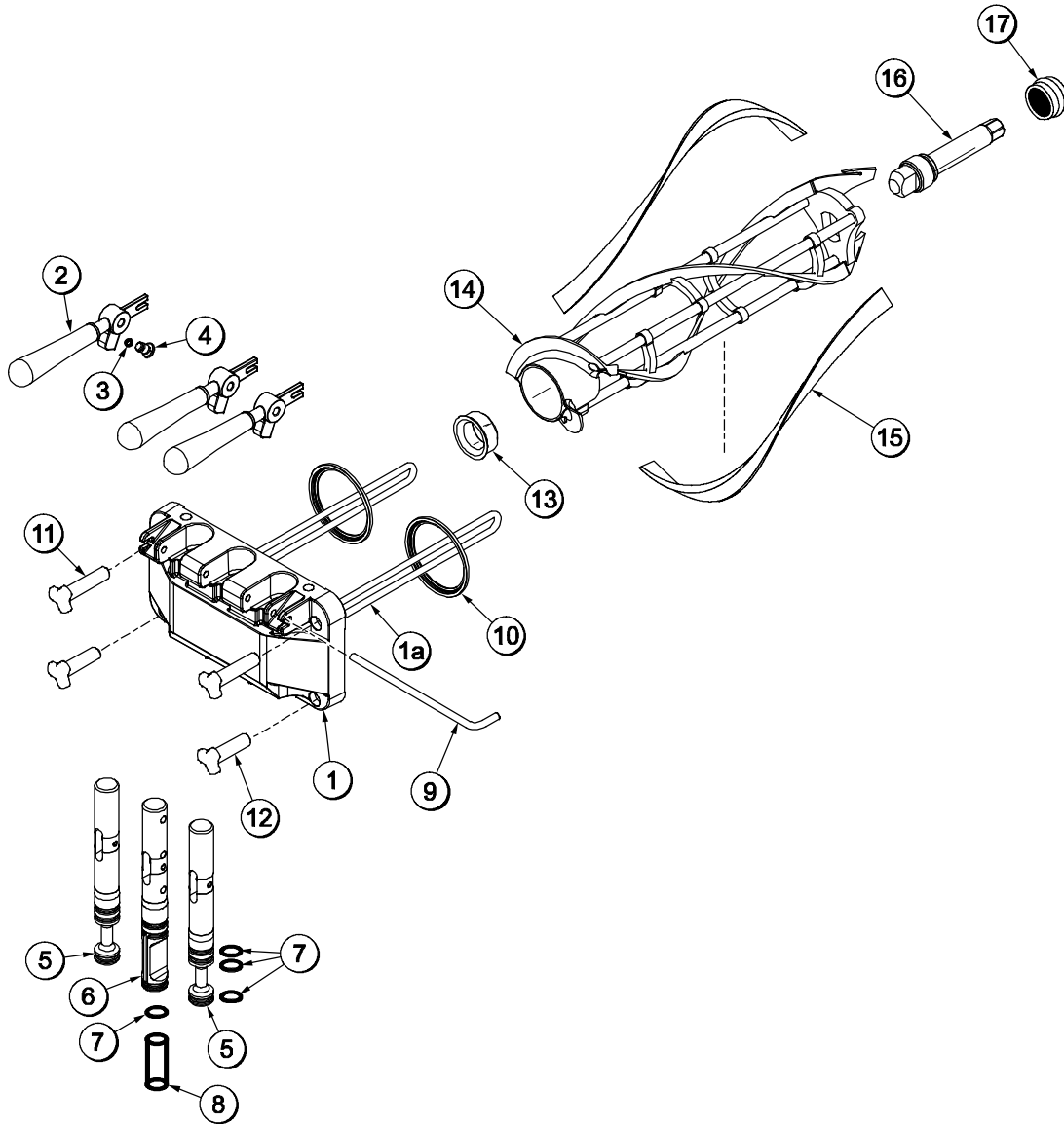


Figure 4

ITEM	DESCRIPTION	PART NO.
1	DOOR A.-3SPT*HT*LG BAF	X59923-SER
1a	BAFFLE A.-LONG 4 IN W/RAD	X50882
2	HANDLE A.-DRAW-WELDED	X56421-1
3	O-RING-1/4 OD X .070W 50	015872
4	SCREW-ADJUSTMENT-5/16-24	056332
5	VALVE A.-DRAW-L&R	X59888
6	VALVE A.-DRAW-CENTER	X59890
7	O-RING-7/8 OD X .103W	014402
8	SEAL-DRAW VALVE	034698

ITEM	DESCRIPTION	PART NO.
9	PIN-HANDLE-TWIN	059894
10	GASKET-DOOR HT 4"-DOUBLE	048926
11	NUT-STUD BLACK 3.250 LONG	058765
12	NUT-STUD BLACK 2.563 LONG	058764
13	BEARING-FRONT	050216
14	BEATER A.-3.4QT-HELICORE	X31761
15	BLADE-SCRAPER-PLASTIC	035174
16	SHAFT-BEATER	032564
17	SEAL-DRIVE SHAFT	032560

Feed Tube Assembly

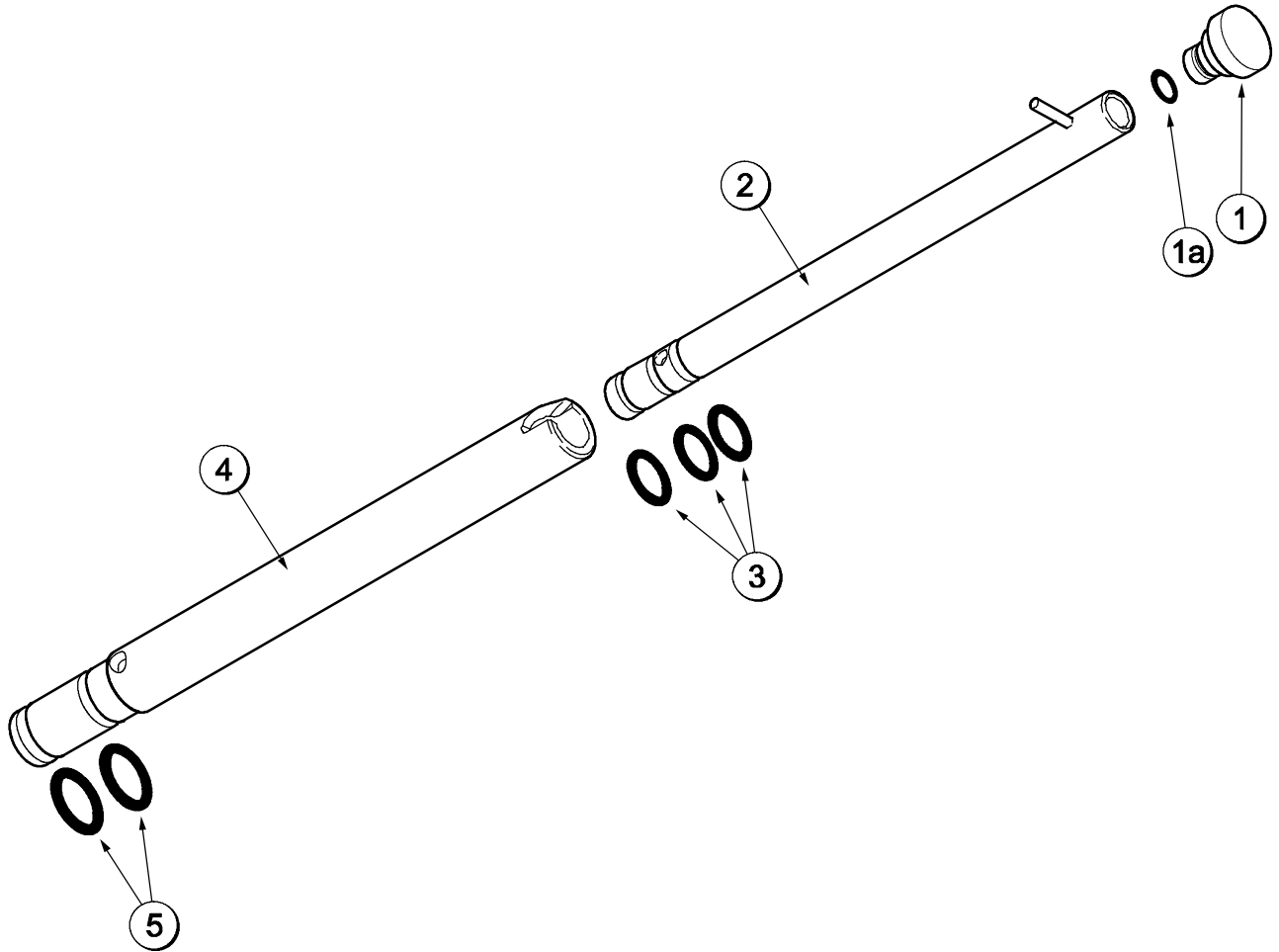


Figure 5

ITEM	DESCRIPTION	PART NO.
1	AIR ORIFICE	022465-100
1a	O-RING	016137
2	TUBE A.-FEED-SC-INNER (C709)	X32824-2
	TUBE A.-FEED-SC-INNER (C717)	X32824-3

ITEM	DESCRIPTION	PART NO.
3	O-RING - .291 ID x .080 W	018550
4	TUBE A.-FEED-OUTER-HT	X34641
5	O-RING- .643 OD x .077 W	018572

Accessories

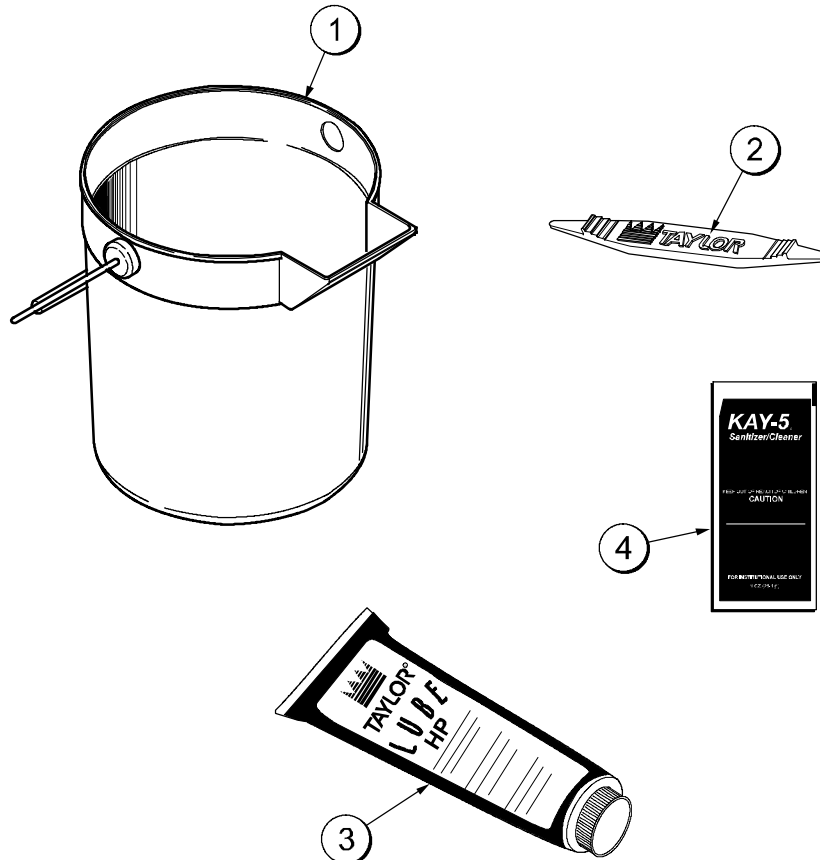


Figure 6

ITEM	DESCRIPTION	PART NO.
1	PAIL-10 QT.	013163
2	TOOL-O-RING REMOVAL	048260-WHT
3	LUBRICANT-TAYLOR HI-PERF	048232

ITEM	DESCRIPTION	PART NO.
*4	SANITIZER KAY-5 25 PACKS	SEE NOTE
**5	KIT A.-TUNE-UP (C709)	X49463-92
	KIT A.-TUNE-UP (C717)	X49463-79

***Note:** A sample container of sanitizer is sent with the unit. For reorders, order Kay-5 part no. 041082 (200 packs) or Stera Sheen part no. 055492 (100 2 oz. packs).

**Not Shown

Brushes

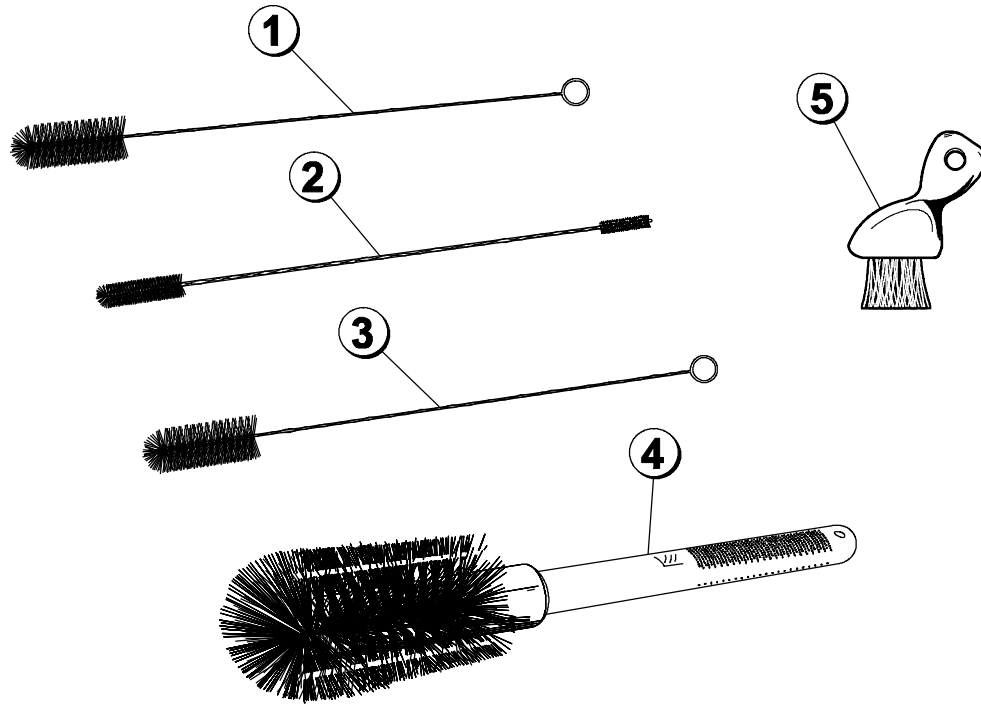


Figure 7

ITEM	DESCRIPTION	PART NO.
1	BRUSH-REAR BRG 1" D X 2" L	013071
2	BRUSH-DOUBLE ENDED	013072
3	BRUSH-DRAW VALVE 1"OD X 2	013073

ITEM	DESCRIPTION	PART NO.
4	BRUSH-MIX PUMP BODY 3" X 7"	023316
5	BRUSH-END-DOOR-SPOUT-SS	039719

Section 5

Important: To the Operator

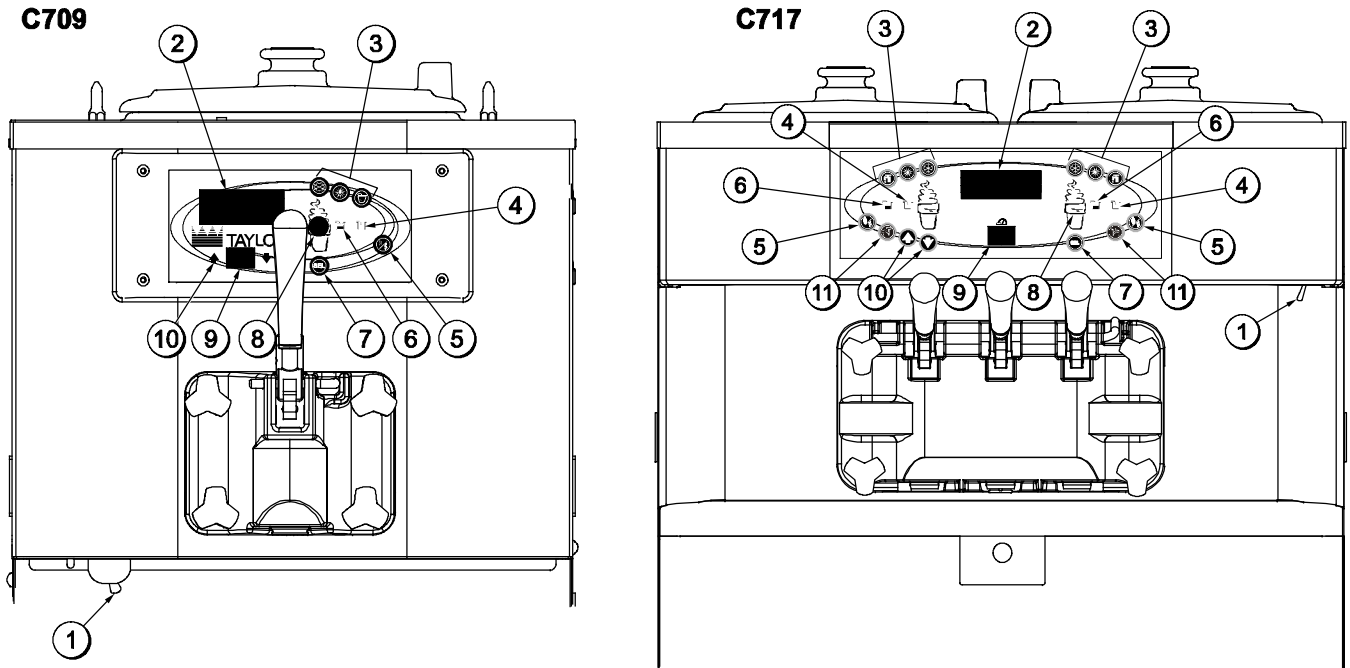


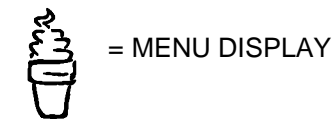
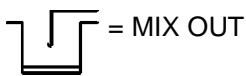
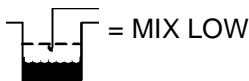
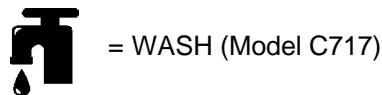
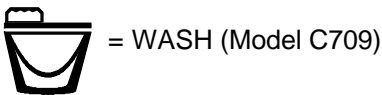
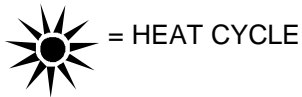
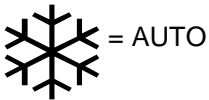
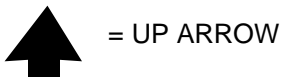
Figure 8

ITEM	DESCRIPTION
1	POWER SWITCH
2	LIQUID CRYSTAL DISPLAY
3	KEYPADS
4	MIX OUT INDICATOR
5	STANDBY KEY
6	MIX LOW INDICATOR
7	SELECT KEY
8	SERVICE MENU KEY
9	BRUSH CLEAN COUNTER
10	ARROW KEYS
11	TOPPING HEATER KEY

Symbol Definitions

To better communicate in the International arena, symbols have replaced words on many of our operator switches, function, and fault indicators. Your Taylor equipment is designed with these International symbols.

The following chart identifies the symbol definitions.



Power Switch

When placed in the ON position, the power switch allows control panel operation.

Fluorescent Display

The fluorescent display is located on the front control panel. During normal operation the display is blank. The display is used to show menu options and notifies the operator if a fault is detected. On International models, the display will indicate the temperature of the mix in the hopper.

Indicator Lights

MIX LOW - When the MIX LOW key is illuminated, the mix hopper has a low supply of mix and should be refilled as soon as possible.

MIX OUT - When the MIX OUT key is illuminated, the mix hopper has been almost completely exhausted and has an insufficient supply of mix to operate the freezer. At this time, the AUTO mode is locked out and the freezer will be placed in the STANDBY mode. To initiate the refrigeration system, add mix to the mix hopper and touch the AUTO key . The freezer will automatically begin operation.

HEAT MODE - When the HEAT MODE key is illuminated, the freezer is in the process of a heat cycle. If enabled, the HEAT key can be pressed to start a heat cycle. If disabled, the HEAT key is inoperable. By default, the HEAT key is enabled.

BRUSH CLEAN COUNTER - When the BRUSH CLEAN COUNTER display has counted down to "1", the machine must be disassembled and brush cleaned within 24 hours.

Standby Key


The Standby feature maintains product temperatures in both the hopper and the freezing cylinder below 40°F (4.4°C). This feature is useful during long "No Sale" periods to prevent over beating and product breakdown.

If enabled, the Standby key can be pressed to place the unit in the Standby mode. If disabled, the Standby key is inoperable.



Remove the air orifice and turn the inner feed tube so the pin rests on top of the outer feed tube. When STANDBY is selected, the STANDBY key is

illuminates, indicating the Standby feature has been activated. In the STANDBY mode, the WASH and AUTO functions are automatically cancelled.


IMPORTANT: Make sure the level of mix in the hopper is below the mix delivery hole in the feed tube. Failure to follow this instruction may result in lower product quality when normal operation is resumed.

To resume normal operation, press the AUTO key . When the unit cycles off, the product in the freezing cylinder will be at serving viscosity. At this time, turn the inner feed tube so the pin fits into the groove of the outer feed tube. Install the air orifice.

Wash Key

The WASH key  (Model C709) or  (Model C717) will illuminate when it is touched. This indicates beater motor operation. The STANDBY or AUTO modes must be cancelled first to activate the Wash mode.


Auto Key

The AUTO key  will illuminate when it is touched. This indicates that the refrigeration system has been activated. In the AUTO mode, the WASH or STANDBY functions are automatically cancelled.

Note: An indicating light and an audible tone will sound whenever a mode of operation has been selected. To cancel any function, touch the key again. The light and the mode of operation will shut off.

Reset Mechanism



The C709 reset button is located in the service panel on the left side of the machine. The C717 reset buttons are located in the rear panel of the machine.

Reset button(s) protect the beater motor(s) from an overload condition. Should an overload occur, the reset mechanism will trip. To properly reset the freezer, place the power switch in the OFF position. Press the reset button firmly. Turn the power switch to the ON position. Touch the WASH key  and observe the freezer's performance.

Note: To clear the fault, refer to page 23.



WARNING: Do not use metal objects to press the reset button. Failure to comply may result in severe personal injury or death.

If the beater motor is turning properly, touch the WASH key  to cancel the cycle. Touch the AUTO key  to resume normal operation. If the freezer shuts down again, contact your authorized service technician.

Adjustable Draw Handle

These units feature an adjustable draw handle(s) to provide the best portion control, giving a better, consistent quality to your product and controlling costs. The draw handle(s) should be adjusted to provide a flow rate of 5 to 7-1/2 oz. (142 to 213 g.) of product by weight per 10 seconds. To INCREASE the flow rate, turn the screw CLOCKWISE, and COUNTERCLOCKWISE to DECREASE the flow rate.

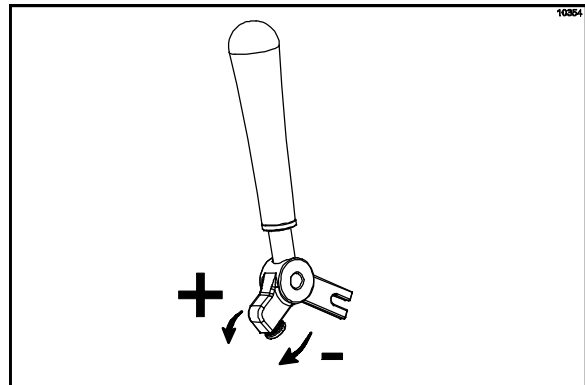


Figure 9

Operating Screen Descriptions

The fluorescent display located in the center of the control panel is normally blank during the daily operation of the machine. The display is activated when the SEL key or the Manager's Menu is selected. The display screen will also alert the operator of specific faults detected by the control.

Note: The displays illustrated in this section are those seen on the Models C709. The Model C717 displays may vary slightly.

Power Up Memory (Initializing)

The seven segment display should display "00" during the initializing sequence.

When the machine is powered, the control system will initialize to perform a system check. The screen will display "INITIALIZING". There will be four types of data the system will check: LANGUAGE, SYSTEM DATA, CONFIG DATA, and LOCKOUT DATA.

Language Initialization

The UVC platform supports multiple languages by keeping specific strings in battery backed RAM. After power-up or a CPU reset, the strings are tested to see if the language strings are present and not corrupted. If the strings are present and not corrupted, initialization continues. Otherwise, the operator is prompted to select a language. While language strings are being checked for integrity, the following screen is displayed.



Figure 10

Note: If there is a language initialization fault, the machine will force a language selection prior to the initializing sequence. The standard menu LED's should light, as if it were in a menu. If a language has been selected, the unit is powered down, the machine should not ask for a language unless there is another language initialization fault. English is the factory default setting.

System Data

System data is protected separately from the rest of the data in memory. System data includes variables that change frequently such as the mode the machine is in, lockout status, serving counters, fault codes, and others. While System Data is being checked the following screen is displayed.



Figure 11

If the System Data is corrupted, the machine is set to OFF, the serving counters are set to zero, and the faults are cleared. A "SYSTEM CRC ERR" fault is set and displayed on the VFD. An acknowledgement (SEL key) is required.

Configuration Data

Configuration data is separate from the rest of the data in the memory. Configuration data is information entered through operator and service menus. While Configuration Data is being checked the following screen is displayed.



Figure 12

If Configuration data is corrupted, all user and service settings are set to defaults. A "CONFIG CRC ERR" fault is set and displayed on the VFD. The system will continue to operate in its previous mode but according to default settings.

Lockout Data

Lockout data is protected separately from the rest of the data in the memory. While the Lockout Data is being checked, the following screen is displayed.



Figure 13

If Lockout Data is corrupted, all lockout history data is cleared. A "LOCKOUT CRC ERR" fault is displayed.

After the memory integrity has been tested, the Safety Timeout screen will be displayed.

Heat Cycle Data

Heat cycle data is checked separately from the rest of the data in memory. Each individual Heat Cycle Data record is monitored for corruption individually. At the start of a heat cycle, the next Heat Cycle data record is cleared and data for the heat cycle is written to it. The current Heat Cycle Data is displayed as the first heat cycle record in the HEAT CYCLE DATA menu option.

The heat cycle data records are checked for integrity when the record is accessed, presently only through the HEAT CYCLE DATA menu option.

Once the system has initialized, the number of days until brush cleaning is required is indicated on the control panel. The SAFETY TIMEOUT screen will be displayed with the alarm on for 60 seconds or until any control key is touched.

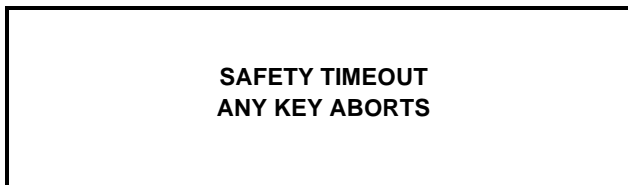


Figure 14

Power Switch OFF

After the safety timeout has been completed and the power switch is OFF, the following screen is displayed.

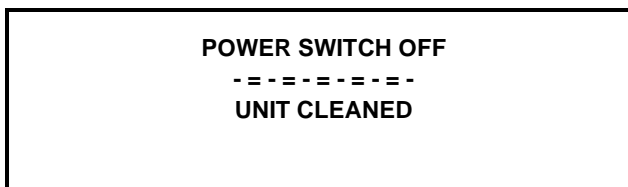


Figure 15

Power Switch ON

When the power switch is placed in the ON position, the control panel touch keys become operative. The fluorescent display will be either blank or indicate that the unit has been cleaned.

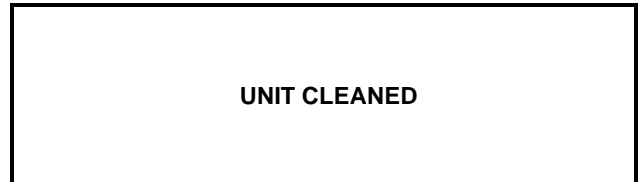


Figure 16

International Models Only:

Some International models will continuously display the temperature of the mix hopper when the power switch is in the ON position.

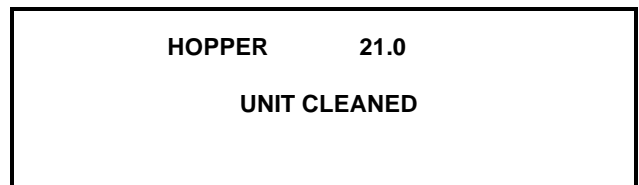


Figure 17

If the control is set for international configuration, the following screen will appear when the heat key is touched.



Figure 18

Use the up or down arrow key to move the cursor to "YES". Touch the SEL key to immediately start a heat cycle.

Note: The machine must be in AUTO or STANDBY and have sufficient mix in the hopper before the machine can successfully enter the HEAT mode of operation.

Heat Cycle

The HEAT key on the control panel is illuminated throughout the heat treatment cycle. Two warning messages will be displayed on the screen. "DO NOT DRAW" will be displayed when the mix temperature is below 130°F (54.4°C).



Figure 19

When the temperature of the mix is above 130°F (54.4°C) the screen will display a message indicating that HOT PRODUCT is in the machine.



Figure 20



DO NOT attempt to draw product or disassemble the unit during the HEAT cycle. The product is hot and under extreme pressure.

In the HEAT cycle, the mix temperature in the hopper and freezing cylinder must be raised to 151°F (66.1°C) within 90 minutes.

When the heating phase is complete, the freezer goes into the holding phase of the cycle. The holding phase will keep the temperature above 151°F (66.1°C) for a minimum of 35 minutes.

The final phase of the heat treatment cycle is the cooling phase. The freezer must cool the mix below 41°F (5°C) within 90 minutes for UVC3 units or 120 minutes for UVC4 units.

When the entire heat cycle has been completed, the HEAT key will no longer be illuminated. The machine will enter the STANDBY mode (STANDBY key illuminates). The machine can be placed in AUTO or left in STANDBY.

To comply with health codes, heat treatment system freezers **must** complete a heat treatment cycle daily and **must** be disassembled and brush cleaned according to the frequency specified by your Federal, State, or local regulatory agencies. Please consult your governing Food Code to determine the maximum number of days allowed between brush clean cycles.

Brush cleaning is the normal disassembly and cleaning procedure found in the Operator Manual. Failure to follow these guidelines will cause the control to lock the freezer out of the AUTO mode.

If the Heat Treatment Cycle fails, the screen will display a failure message and return the freezer to the STANDBY mode.

Always comply with local guidelines for the maximum number of days allowed between brush clean cycles.

Freezer Locks

There are two types of freezer lock conditions that can occur: Hard Lock or Soft Lock. A Hard Lock requires the machine be disassembled and brush cleaned. A Soft Lock can be corrected by either disassembling and brush cleaning the machine, or by starting another heat treatment cycle.

Hardlock

There are two causes of a hard lock failure. The freezer will hardlock if either the Brush Clean Timer has elapsed or if a Thermistor Failure (Freezing Cylinder or Hopper) occurred during a Heat cycle.

1. The following screen will be displayed if a Brush Clean Cycle Time has occurred.

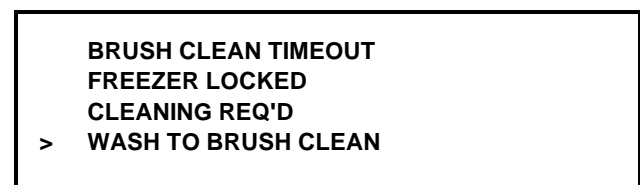


Figure 21

Touching the SEL key will display the following screen.



Figure 22

- The following screen will display if there has been a thermistor failure (freezing cylinder or hopper) during the heat treatment process.

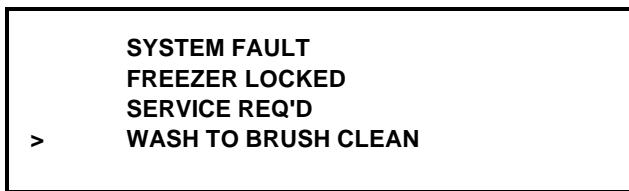


Figure 23

Touching the SEL key will indicate which thermistor caused the Hard Lock.

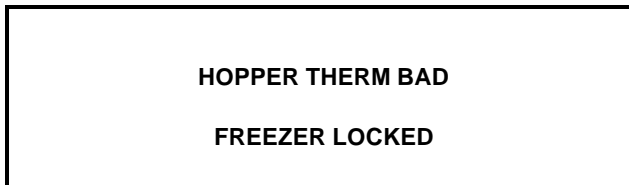


Figure 24

If the machine has hard locked and an attempt is made to enter AUTO, the machine will enter the STANDBY mode and display the following message.

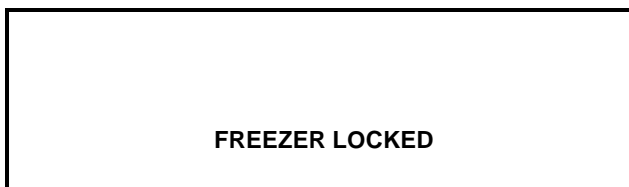


Figure 25

To restore the message that identified the reason for the hard lock, turn the power switch OFF for five seconds and then return the power switch to the ON position. The original message with the reason for the Hard Lock will be displayed.

The FREEZER LOCKED message will remain on the display until the brush clean requirements are fulfilled. The freezer must be disassembled in order to activate the five minute timer on the display

screen. Once the timer counts down to zero, the lockout is cleared.

Soft Lock

If a heat treatment cycle has not been initiated within the last 24 hours, a soft lock failure will occur. A soft lock allows the operator to correct the cause of the soft lock. The operator has the option of either starting another heat cycle or brush cleaning the machine. When a soft lock occurs, the machine will go into the STANDBY mode. The following message is displayed on the screen. The reason for the soft lock is indicated on the second line.

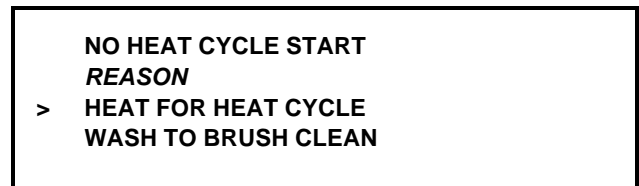


Figure 26

If the reason for the soft lock has been corrected, selecting HEAT CYCLE initiates a Heat Cycle immediately. Selecting BRUSH CLEAN when the previous message is displayed will hard lock the machine and brush cleaning will be necessary.

Following are the variable messages for soft lock failures that appear on the second line of the screen.

POWER SWITCH OFF	Power switch was in the OFF position.
MIX OUT PRESENT	There was a mix out condition present.
AUTO OR STANDBY OFF	The machine was not in the AUTO or STANDBY mode.
NO HEAT CYCLE TRIED	A heat treatment cycle was not attempted in the last 24 hours. (AUTO HEAT TIME was advanced or a power loss was experienced at the time the cycle was to occur.)

If the following screen appears, a soft lock has occurred during the heat treatment cycle.

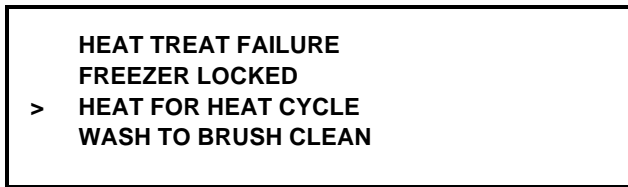


Figure 27

A soft lock can also occur any time during operation when the hopper or freezing cylinder temperature rises above 59°F (15°C), the temperature rises and remains above 45°F(7°C) for more than one hour, or the temperature rises and remains above 41°F(5°C) for more than four hours.

If a PRODUCT OVER TEMPERATURE condition occurs during operation, the following screen will appear.

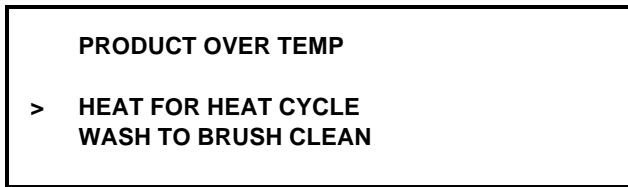


Figure 28

When one of these messages appears, automatic freezer operation cannot take place until the freezer is disassembled and brush cleaned, or has completed a heat treatment cycle.

Once the freezer is unlocked by starting a heat treatment cycle the HEAT key will illuminate and the following message will be displayed on the screen.



Figure 29

If BRUSH CLEAN is selected to clear the lockout by brush cleaning the machine, the FREEZER LOCKED message will remain on the display until the brush clean requirements are fulfilled. The freezer must be disassembled in order to activate the five minute timer on the display screen. Once the timer counts down to zero, the lockout is cleared.



Figure 30

To restore the message that identified the reason for the soft lock, turn the power switch OFF for five seconds, and then return the power switch to the ON position. The original message with the reason for the soft lock will be displayed.

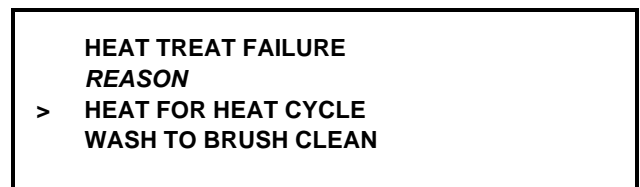


Figure 31

Note: A record of Heat Cycle Data and Lock Out History can be found in the Manager's Menu.

Manager's Menu

The Manager's Menu is used to enter the operator function displays. To access the Menu, touch the center of the CONE key on the control panel. The arrow keys, the SEL key and the CONE key will be lit when the ACCESS CODE screen is displayed.

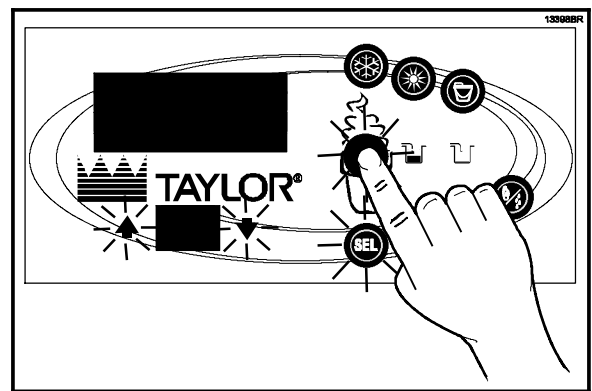


Figure 32

In the Menu program, the arrow keys and the SEL key will function as menu keys.

- **UP ARROW** - increases the value above the cursor and is used to scroll upward in text displays.
- **DOWN ARROW** - decreases the value above the cursor and is used to scroll downward in text displays.
- **SEL** - advances the cursor position to the right and is used to select menu options.

There is a two minute time-out in effect during the Manager's Menu. While in the Manager's Menu, if no activity occurs within a two minute period, the display will exit to the Main Menu. There is one exception to this time-out, and that is the Current Conditions Display.

Note: The machine will continue operation in the mode it was in when the Menu was selected. However, the control keys will not be lit and are non-functional when the Manager's Menu is displayed. The control keys are functional in the Manager's Menu when the CURRENT CONDITIONS screen is displayed.

Entering Access Code

With the ACCESS CODE screen on the display, use the SEL key to set the first code number in the cursor position. When the correct number is selected, touch the SEL key to move the cursor to the next number position.

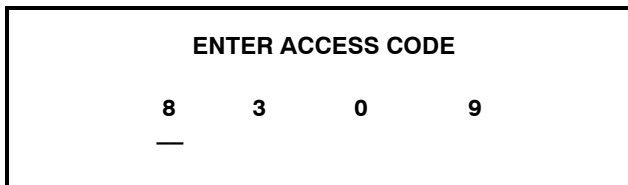


Figure 33

Continue to enter the proper access code numbers (8309) until all four numbers are displayed, then touch the SEL key. The Manager's Menu list will display on the screen, provided the correct access code is entered.

If an incorrect number is entered for the access code, the display will exit the Menu program when the SEL key is touched.

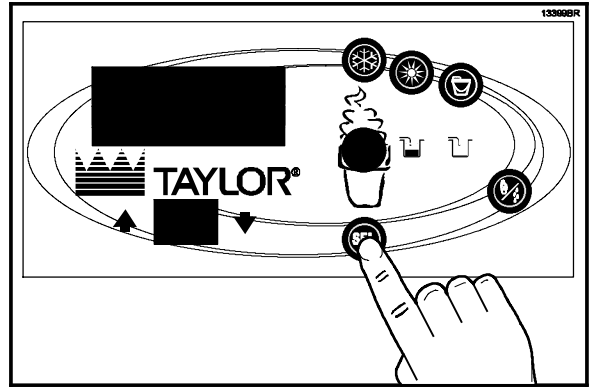


Figure 34

Manager Menu Options

With the ACCESS CODE screen on the display use the SEL key to set the first code number in the cursor position. When the correct number is selected, touch the SEL key to move the cursor to the next number position.

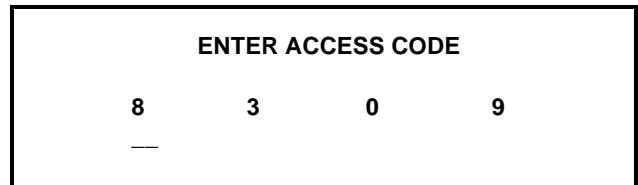


Figure 35

Continue to enter the proper access code numbers (8309) until all four numbers are displayed, then touch the SEL key. The Manager's menu list will display on the screen provided the correct access code is entered.

If an incorrect number is entered for the access code, the display will exit the Menu program when the SEL key is selected.

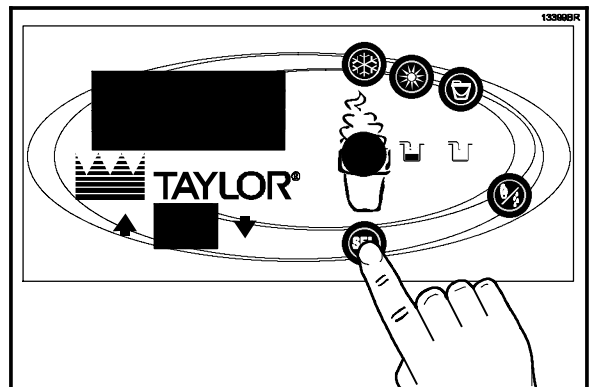



Figure 36

Menu Options

Touch the ARROW keys to move up or down through the Menu. Select a Menu option by touching the SEL key. Exit the Menu program by selecting EXIT FROM MENU or touch the CONE key .

The following menu options are listed in the Manager's Menu.

EXIT FROM MENU
 SERVINGS COUNTER
 SET CLOCK
 AUTO HEAT TIME
 AUTO START TIME
 AUTO STANDBY TIME
 AGITATOR OPERATION
 MIX LEVEL AUDIBLE
 FAULT DESCRIPTION
 FAULT HISTORY
 LOCKOUT HISTORY
 HEAT CYCLE SUMMARY
 HEAT CYCLE DATA
 SYSTEM INFORMATION
 CURRENT CONDITIONS

Selecting "EXIT FROM MENU" will exit the Manager's Menu and return the control panel keys to normal operation.

The SERVINGS COUNTER option is used to check or reset the number of servings dispensed from the machine. The screen will automatically reset to zero when the machine is brush cleaned.

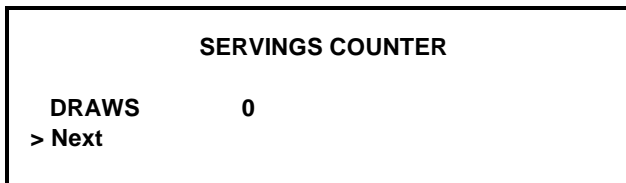


Figure 37

Reset the SERVINGS COUNTER by selecting the SEL key to advance to the next screen. Select the UP arrow key to move the arrow (>) to YES and press the SEL key. The servings counter will reset to zero and exit back to the Manager Menu.

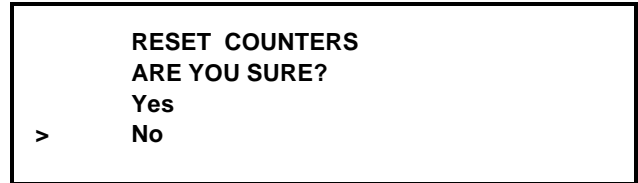


Figure 38

The SET CLOCK option allows the Manager to adjust the control clock date and time. The date and time may only be changed after the freezer has been manually cleaned, but before it has been placed in the AUTO or STANDBY mode. The following message will be displayed if the SET CLOCK option is selected when the machine is not in a brush clean state.

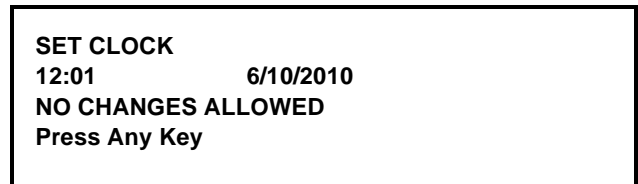


Figure 39

If the unit is in a brush clean state, pressing the SEL key will display the following screen. Touch the UP arrow key to move the arrow from "Exit" to "Change" and then touch the SEL key to select the Change option.

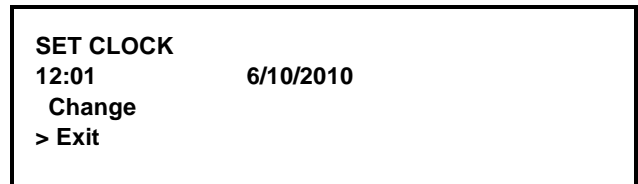


Figure 40

With the cursor under the hour position, change the time by touching the UP or DOWN arrow keys. Move the cursor to the minutes by touching the SEL key. Once the correct minutes are entered, touch the SEL key to advance the cursor to the month.

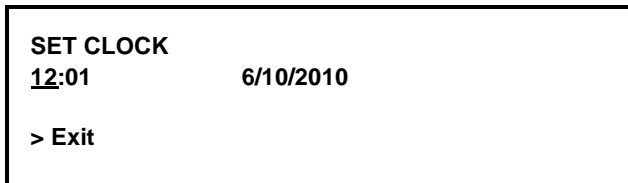


Figure 41

Enter the correct month, day, and year. After they have been entered, touch the SEL key to advance to the DAYLIGHT SAVING TIME (DST) screen.



Figure 42

Pressing the UP or DOWN arrow keys will move the arrow to "Enable" or "Disable". Pressing the SEL key next to "Disable" selects that option and returns to the Manager Menu. Pressing the SEL key next to "Enable" selects that option and displays the second screen.

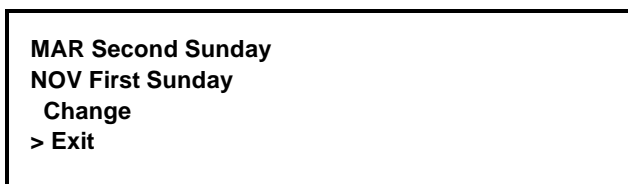


Figure 43

If the correct Sunday for the time change is not displayed, then "Change" should be selected. Pressing the SEL key with the arrow next to "Change" displays the third screen. Press the UP or DOWN key to move the arrow to the appropriate month for the start of DST.

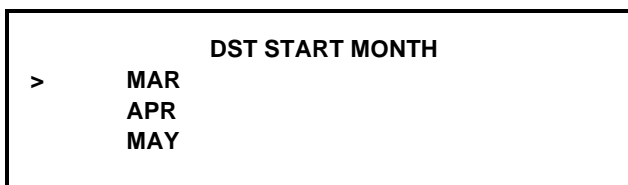


Figure 44

Pressing the SEL key with the arrow next to the appropriate month will display the following screen.



Figure 45

Pressing the UP or DOWN key will move the arrow to the appropriate week for the start of DST. Pressing the SEL key next to the appropriate week will display the following screen. Press the UP or DOWN key to move the arrow to the appropriate month for the end of DST.



Figure 46

Pressing the SEL key next to the appropriate month will display the following screen. Press the UP or DOWN key to move the arrow to the appropriate week for the end of DST.

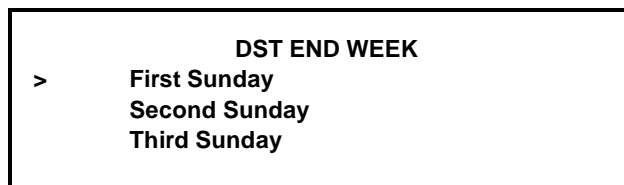


Figure 47

Pressing the SEL key with the arrow by the appropriate week will select that setting and return to the Manager Menu.

The AUTO HEAT TIME screen allows the Manager to set the time of day in which the heat treatment cycle will start if the machine is in AUTO or STANDBY.



Figure 48

To set the AUTO HEAT TIME select the UP arrow key to move the arrow to "Change". Then touch the SEL key. The screen will display the time with the cursor under the hour position.

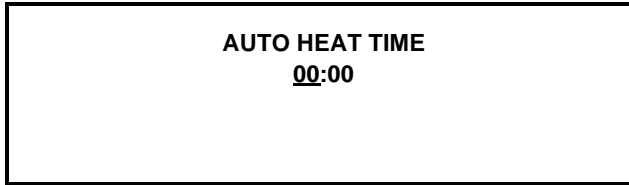


Figure 49

Select the arrow keys to increase or decrease the hour to the desired setting. Then move the cursor to the minutes position by touching the SEL key. Adjust the setting for minutes, then select the SEL key to save the setting and return to the AUTO HEAT TIME screen. Select the SEL key to exit the screen and return to the Menu.

The AUTO START TIME option allows the Manager to set the time of day at which the machine automatically enters the AUTO mode from the STANDBY mode. The machine must be in the STANDBY mode without a freezer lock condition in order to AUTO start at the programmable time. The AUTO START TIME can also be Disabled and require starting the AUTO mode manually.

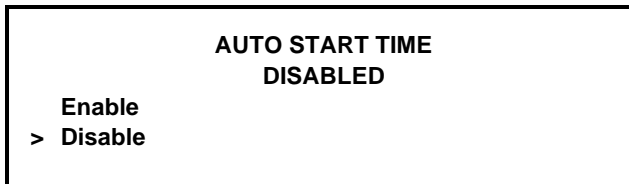


Figure 50

Enable the AUTO START TIME by selecting the UP arrow key to move the arrow up to "Enable". Touch the SEL key to advance to the next screen.

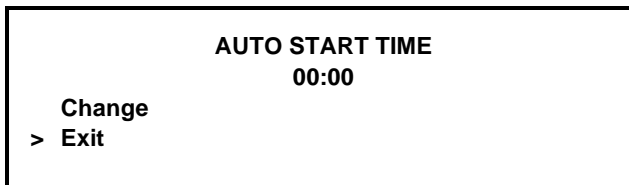


Figure 51

Program the AUTO START TIME by selecting the UP arrow key to move the arrow to "Change". Touch the SEL key to advance to the next screen.



Figure 52

Use the arrow keys to program the AUTO START TIME by increasing or decreasing the hour setting above the cursor. Touch the SEL key to advance the cursor and program the minutes setting. Select the SEL key to return to the previous screen with the new time setting displayed. Select the SEL key to exit the screen and return to the Menu.

The AUTO STANDBY TIME option allows the Manager to set the time of day at which the machine automatically enters the STANDBY mode from the AUTO mode. This allows power saving during slow sales. By default, this feature is disabled.

Enable the AUTO STANDBY TIME by touching the UP arrow key to move the arrow up to "Enable". Touch the SEL key to advance to the next screen.



Figure 53

Program the AUTO STANDBY TIME by touching the UP arrow key to move the arrow to "Change". Touch the SEL key to advance to the next screen.

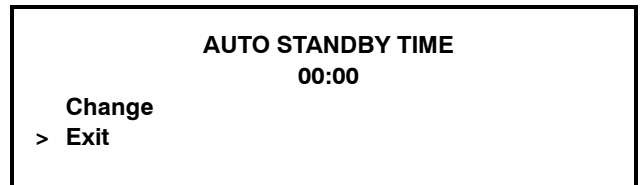


Figure 54

Use the arrow keys to program the AUTO STANDBY TIME by increasing or decreasing the hour setting above the cursor. Touch the SEL key to advance the cursor and program the minutes setting. Touch the SEL key to return to the previous screen with the new time setting displayed. Touch the SEL key to exit the screen and return to the Menu.

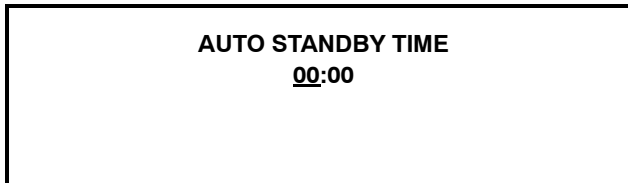


Figure 55

The AGITATOR OPERATION option allows the Manager to select either continuous or intermittent agitator operation.

Agitator operation may be set to operate in the standard mode or “with Hopper Refrig.” In the standard mode, the agitator operates during AUTO, STANDBY, and Heat Treat. In the “with Hopper Refrig” mode, it runs only when the hopper is refrigerating and during the Heat, Hold, and Soak phases of a heat cycle and the Cool phase of a heat cycle if the hopper is refrigerating. The default is “standard” operation.

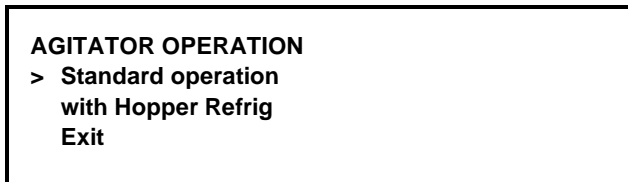


Figure 56

Use the arrow keys to move to the desired operation and touch the SEL key to accept the selection.

The MIX LEVEL AUDIBLE option, when enabled, will alert the operator with an audible tone when there is mix low or mix out condition. The following screen is displayed upon selecting this option.



Figure 57

Disable the audible tone feature by selecting the DOWN arrow key to move the arrow to Disable. Select the SEL key to save the new setting and return to the Menu. The control panel icons for Mix Low and Mix Out will light as the mix level drops in the hopper, but the audible tone will be disabled.

The FAULT DESCRIPTION screen will indicate if there is a fault with the freezer and where the fault occurred. When no faults are detected, the following screen will be displayed.

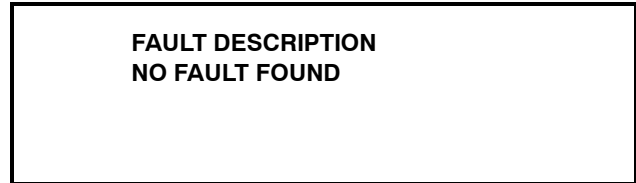


Figure 58

Touch the SEL key to display the next fault found or return to the Manager Menu if no other faults exist. Touching the SEL key any time faults are displayed will clear the faults, if corrected, upon returning to the Menu screen.

Listed below are the variable messages which will appear, along with an explanation for the corrective action.

NO FAULT FOUND - There was no fault found in the freezer. Nothing will appear on the screen after this variable message appears.

BEATER OVERLOAD - Place the power switch in the OFF position. Wait 5 minutes for the machine to cool. Press the beater reset button firmly. Place the power switch in the ON position and restart in AUTO.

COMPRESSOR HPCO - Place the power switch in the OFF position. Wait 5 minutes for the machine to cool. Place the power switch in the ON position and restart in AUTO.

HOPPER THERMISTOR FAIL* - Place the power switch in the OFF position. Call your authorized service technician.

BARREL THERMISTOR FAIL* - Place the power switch in the OFF position. Call your authorized service technician.

***Note:** Three codes have been set up to assist in diagnosing bad thermistor probes. If a probe has shorted, “SHRT” will display for its respective machine location. If the probe is open, “OPEN” will display. If the actual probe environment exceeds 200°F (93°C), the respective screen display location

will read "OVER", indicating the temperature is "out of range".

COMP ON TOO LONG - The compressor run time exceeded the 11 minute timer. Replace the scraper blades during the next brush cleaning. If that doesn't resolve the fault, call your authorized service technician.

The FAULT HISTORY screen will display up to 100 faults that have occurred. The most recent fault is displayed on screen 1. The date, time, and fault description is displayed on each screen.

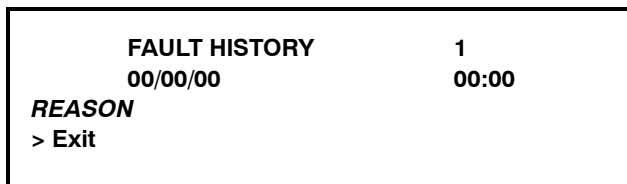


Figure 59

The LOCKOUT HISTORY screen displays a history of the last 100 soft locks, hard locks, brush clean dates, or aborted heat cycles. Page numbers are indicated in the upper right hand corner. Page 1 always contains the most recent failure.

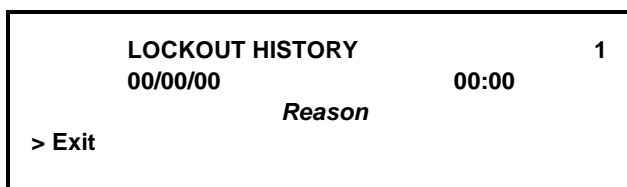


Figure 60

The second line of the screen displays the date and time a failure occurs. The third line indicates the reason for a failure, or will indicate if a successful brush cleaning has occurred. Some failures occur with multiple reasons. When this occurs, a page will be generated for each reason.

Use the arrow keys to advance forward or backward to view each screen. Listed below are the variable messages that may appear.

Faults Occurring Entering a Heat Treatment Cycle:

POWER SWITCH OFF - The power switch is OFF.

AUTO OR STBY OFF - The control was not in the AUTO or STANDBY mode.

MIX OUT FAILURE - A mix out condition was present.

NO HEAT CYCLE TRIED - The Auto Heat Time was set to attempt a heat cycle more than 24 hours after the last successful heat cycle.

Faults Occurring While in Heat Mode:

HEAT MODE FAILURE - The maximum allowable heat mode time exceeded 90 minutes.

COOL MODE FAILURE - The maximum allowable cool mode time exceeded 90 minutes.

TOTAL TIME FAILURE - The maximum allowable total heat treatment time exceeded 4 hours.

BRUSH CLEAN TIMEOUT - The total days in operation exceeded the brush clean cycle setting.

POWER SWITCH OFF - The power switch was turned OFF during the heat cycle.

POWER FAIL IN H/C - A power failure occurred during the heat treatment cycle.

MIX LOW FAILURE - The mix level in the hopper is too low for a successful heat cycle.

BEATER OVLD H/C - The overload tripped for the beater motor.

BRL THERM FAIL - The thermistor sensor for the freezing cylinder failed.

HOPPER THERM FAIL - The thermistor sensor for the hopper failed.

HPCO H/C - The side high pressure switch opened during the heat treatment cycle.

Faults Occurring While in AUTO Mode:

HPR>45F (7C) AFTER 1 HR - The mix temperature in the hopper was above 45°F (7°C) more than one hour.

BRL>45F (7C) AFTER 1 HR - The mix temperature in the freezing cylinder was above 45°F (7°C) more than one hour.

HPR>41F (5C) AFTER 4 HR - The mix temperature in the hopper was above 41°F (5°C) more than four hours.

BRL>41F (5C) AFTER 4 HR - The mix temperature in the freezing cylinder was above 41°F (5°C) more than four hours.

HPR>41F (5C) AFTER PF - The mix temperature in the hopper was above 41°F (5°C) more than four hours following a power failure.

BRL>41F (5C) AFTER PF - The mix temperature in the freezing cylinder was above 41°F (5°C) more than four hours following a power failure.

HPR>59F (15C) - The mix temperature in the hopper exceeded 59°F (15°C).

BRL>59F (15C) - The mix temperature in the freezing cylinder exceeded 59°F (15°C).

The HEAT CYCLE SUMMARY screen displays the hours since the last heat cycle, the hours since the product temperature was above 150°F (65.6°C), and the number of heat cycles completed since the last brush clean date.

HEAT CYCLE SUMMARY	
HRS SINCE HC	0
HRS SINCE 150	0
HRS SINCE BC	0

Figure 61

The HEAT CYCLE DATA screen displays critical times and temperatures for 366 heat treatment cycles. Entering this option will display the first screen.

HEAT TREAT CYCLE		
00/00	00:00	00:00
NO FAULT FOUND		
		1

Figure 62

When in a heat cycle, a new record is created with the current heat cycle data. Upon completion of the current heat cycle, this data is permanently stored as record 1 and all other data records are shifted back one. Record one contains the most recently completed heat cycle. Pressing the UP key will cycle the data pages from most recent to oldest. Pressing the DOWN key cycles from oldest to most recent.

Line 2 displays the month and day the heat cycle was started, and the start time and end times of the heat cycle.

Line 3 displays the heat cycle failure message if one exists. If no faults were found during the heat cycle, the screen will display "NO FAULT FOUND."

Line 4 displays the page number.

Pressing the UP arrow key will display a separate screen for each side of the machine.

H:	42.0	B:	25.0	PS
HEAT	OVER	COOL	PEAK	
0:02	0:00	h	0:00	42.0
0:02	0:00	b	0:00	25.0

Figure 63

Line 1 displays the hopper and barrel temperatures recorded when the heat cycle ended. The two characters on this line indicate the heat cycle failure code, if a failure occurred.

Line 2 displays the heading for each time and temperature.

Line 3 displays the time spent in the Heat and Cool phases for the hopper and the peak hopper temperature through the entire heat cycle. It also displays the amount of time that the hopper was greater than the Hold temperature.

Line 4 displays the time spent in the Heat and Cool phases for the barrel and the peak barrel temperature through the entire heat cycle. It also displays the amount of time that the barrel was greater than the Hold temperature.

Pressing the SEL or MENU key returns the display to the menu screen.

Listed below are variable failure code messages which could appear on line 2.

- HT Heat Time Too Long
Mix temperature did not rise above 151°F (66.1°C) in less than 90 minutes.
- CL Cool Time Too Long
Mix temperature in the hopper and freezing cylinder did not fall below 41°F (5°C) in less than 120 minutes.
- TT Total Time Too Long
The heat treatment cycle must be completed in no more than 4 hours.
- MO Mix Out Condition
A mix out condition was detected at the start or during the heat cycle.
- ML Mix Low Condition
The Heat Phase or Cool Phase time was exceeded and a mix low condition was present.
- BO Beater Overload Condition
A beater overload occurred during the heat cycle.
- PF Power Failure
A power failure caused the Heat Phase, Cool Phase, or Total Cycle Time to exceed the maximum allowed time. If a power failure occurs, but the heat treatment cycle does not fail, an asterisk(*) will appear on the third line of the display.
- PS Power Switch OFF
The power switch was placed into the OFF position during the heat cycle.
- TH Thermistor Switch OFF
A thermistor probe has failed.
- RC Record Cleared
Data has not been written to the page or cleared due to corrupt data.
- OP Operator Abort
Indicates the heat cycle was aborted in the OPERATOR ABORT option in the Service Menu.
- PD Product Door Not in Place
A product door is not in place or is loose.

The SYSTEM INFORMATION is displayed on four separate screens. The first screen contains the control and software version installed in the machine.

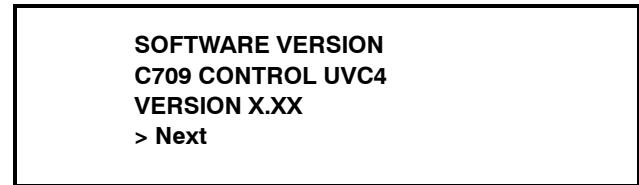


Figure 64

Touch the SEL key to advance to the next system information screen containing the software language version.

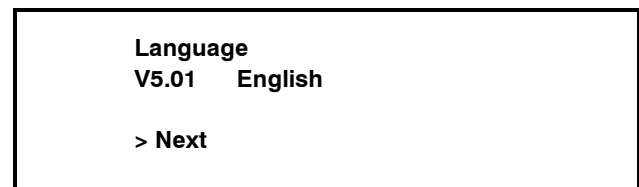


Figure 65

Touch the SEL key to advance to the next screen.

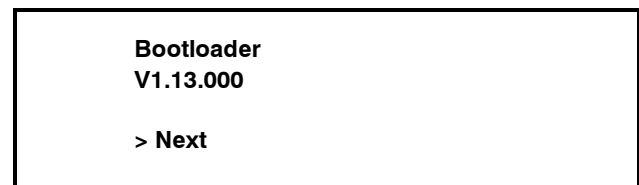


Figure 66

Touch the SEL key to advance to the system information screen containing the model bill of material and machine serial number. Touching the SEL key again will return to the Menu list.

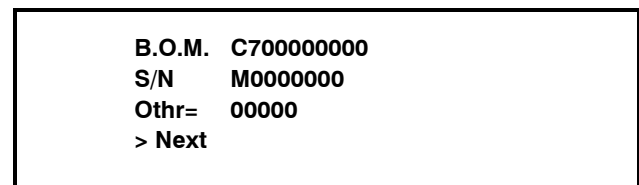


Figure 67

The CURRENT CONDITIONS screen provides the viscosity readings for the product when the machine is running, and the hopper and the freezing cylinder temperatures for the machine.

VISC	0.0
HOPPER	41.0
BARREL	41.0

Figure 68

CURRENT CONDITIONS is the only Menu screen that will return the control panel keys to normal operation. The Menu keys will not be lit when this option is selected but the panel touch keys are fully functional. Exit the CURRENT CONDITIONS screen and return to the Menu by touching the SEL key.

Section 6

Operating Procedures

The C709 machine stores mix in a hopper. It has a 3.4 quart (3.2 liter) capacity freezing cylinder with a single spout door.

The C717 machine stores mix in two hoppers. It has two 3.4 quart (3.2 liter) capacity freezing cylinders with a three spout door.

We begin our instructions at the point where we enter the store in the morning and find the parts disassembled and laid out to air dry from the previous night's cleaning.

These opening procedures will show you how to assemble these parts into the freezer, sanitize them, and prime the freezer with fresh mix in preparation to serve your first portion.

If you are disassembling the machine for the first time or need information to get to this starting point in our instructions, turn to page 45, "Disassembly", and start there.

Assembly

Note: When lubricating parts, use an approved food grade lubricant (example: Taylor Lube).



MAKE SURE POWER SWITCH IS IN THE "OFF" POSITION! Failure to follow this instruction may result in severe personal injury from hazardous moving parts.

Step 1

Before installing the beater drive shaft, lubricate the groove on the beater drive shaft. Slide the beater drive shaft boot seal over the small end of the beater drive shaft and engage into the groove on the shaft. Heavily lubricate the inside portion of the boot seal and also lubricate the flat end of the boot seal that comes in contact with the rear shell bearing. Apply an even coat of lubricant to the shaft. **DO NOT** lubricate the hex end.

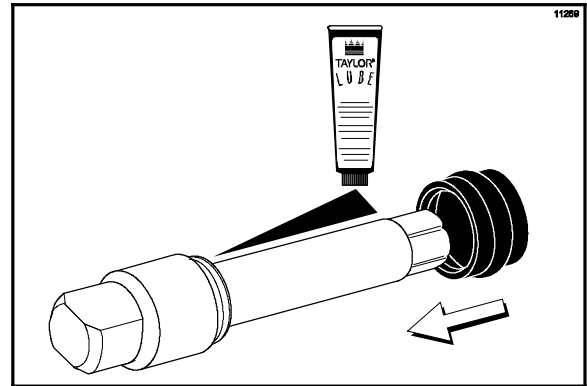


Figure 69

Note: To ensure the mix does not leak out of the back of the freezing cylinder, the middle section of the boot seal should be convex or extend out from the seal. If the middle section of the boot seal is concave or extending into the middle of the seal, turn the seal inside out.

Step 2

Insert the beater drive shaft through the rear shell bearing in the freezing cylinder and engage the hex end firmly into the drive coupling.

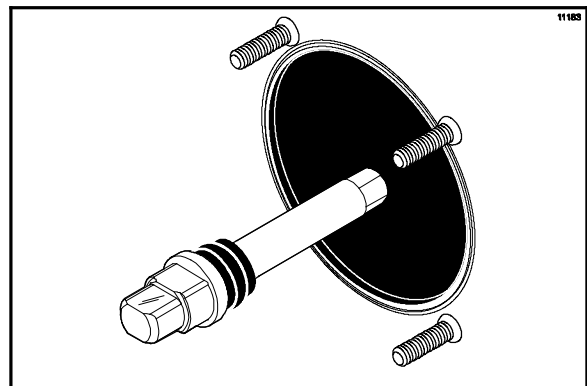


Figure 70

Step 3

Take one of the scraper blades and slip it under the hook at the front of the beater. Wrap the blade around the beater following the helix and pushing the blade down onto the helix as you wrap. At the back end of the beater, slip the blade under the hook. **Repeat this step** for the second scraper blade.

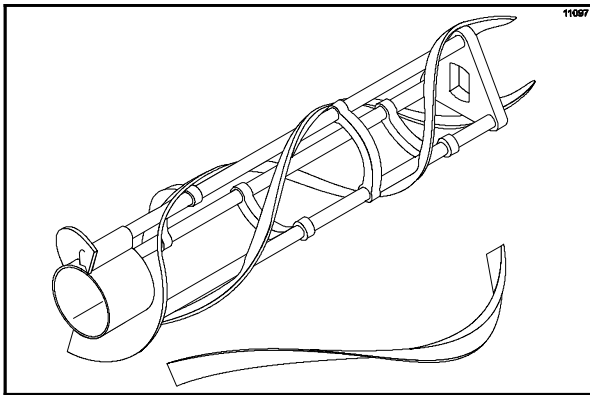


Figure 71



USE EXTREME CAUTION when handling the beater assembly. The scraper blades are very sharp and may cause injury.

Step 4

Holding the beater securely, slide the beater one third of the way into the freezing cylinder. Looking into the freezing cylinder, align the hole at the rear of the beater with the flats on the end of the drive shaft.

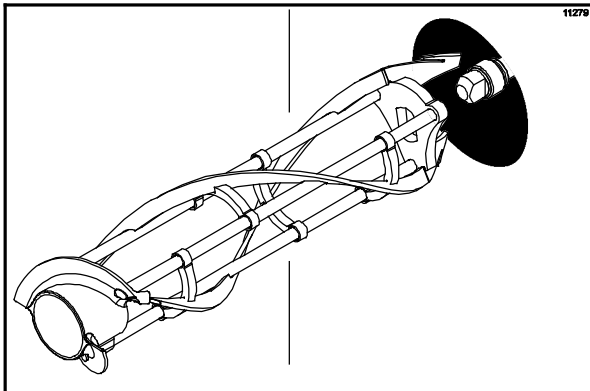


Figure 72

Step 5

Slide the beater the remainder of the way into the freezing cylinder and over the end of the drive shaft. The beater should fit snugly, but not so tightly that the beater cannot be turned slightly to engage the drive shaft. If the beater slides in too easily with little or no resistance, there will not be enough force against the beater to hold the blades in place.

Repeat these steps for the other side of the C717.

Freezer Door Assembly

The assembly of the C709 freezer door is different from the C717 freezer door. Please follow the appropriate instructions for your machine.

Model C709 Freezer Door Assembly

Step 1

Place the door gasket into the groove on the back of the freezer door. Slide the front bearing over the baffle rod so the flanged edge is against the door. **DO NOT lubricate the gasket or bearing.** (See Figure 73.)

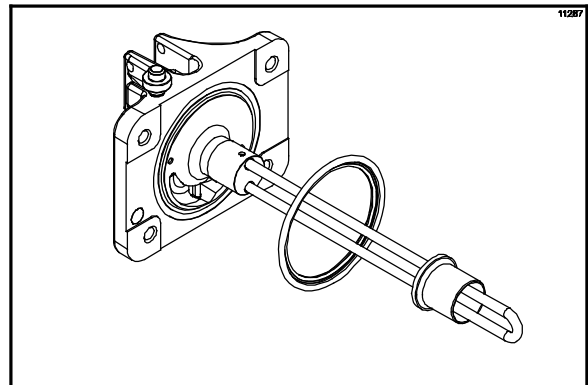


Figure 73

Model C709 Freezer Door Assembly (Cont'd.)

Step 2

Slide the three o-rings into the grooves on the draw valve and lubricate. (See Figure 74.)

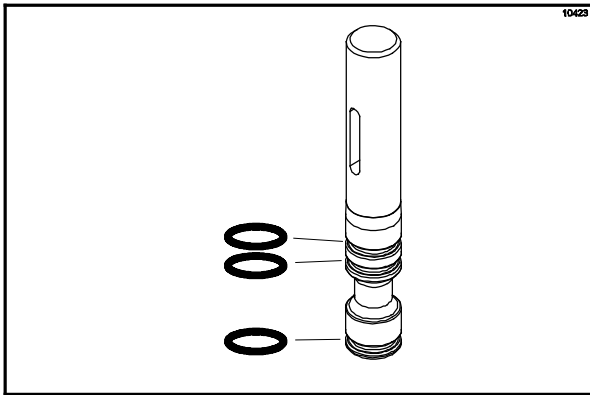


Figure 74

Step 3

Lightly lubricate the inside of the top of the freezer door valve cavity. (See Figure 75.)

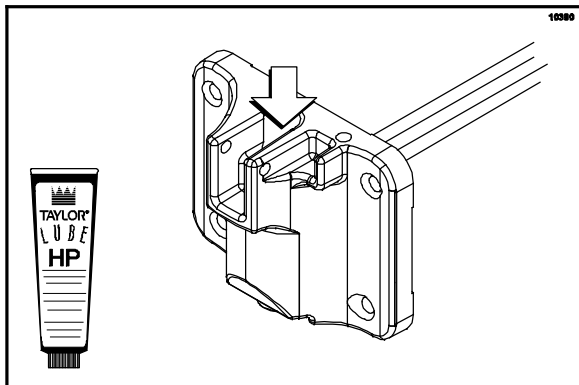


Figure 75

Step 4

Insert the draw valve from the top, with the draw handle slot facing forward. (See Figure 76.)

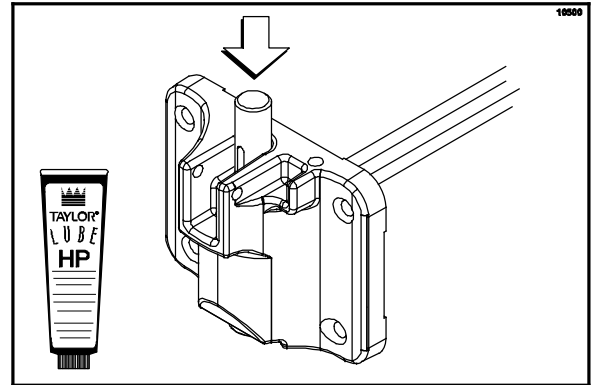


Figure 76

Step 5

Insert the baffle rod through the beater in the freezing cylinder. With the door seated on the freezer studs, install the handscrews, with the longer ones on top. Tighten equally in a criss-cross pattern to insure the door is snug. (See Figure 77.)

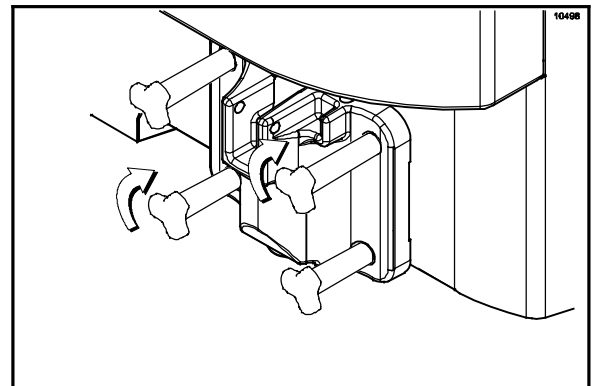


Figure 77

Step 6

Position the draw handle with the adjustment screw facing down. Slide the fork of the draw handle into the slot of the draw valve. Secure with pivot pin. (See Figure 78.)

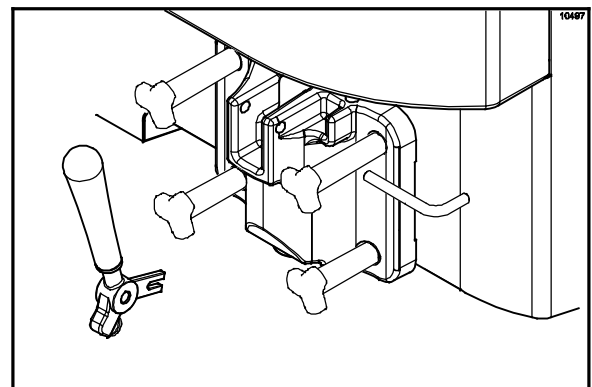


Figure 78

Model C709 Freezer Door Assembly (Cont'd.)

Note: The C709 features an adjustable draw handle to provide portion control, giving a better consistent quality to your product and controlling costs.

The draw handle should be adjusted to provide a flow rate of 5 to 7-1/2 oz. (142 g. to 213 g.) of product by weight per 10 seconds. To INCREASE the flow rate, turn the adjustment screw CLOCKWISE. Turn the adjustment screw COUNTER-CLOCKWISE to DECREASE the flow rate.

Step 7

Slide the two drip pans into the holes in the left and right panels. (See Figure 79.)

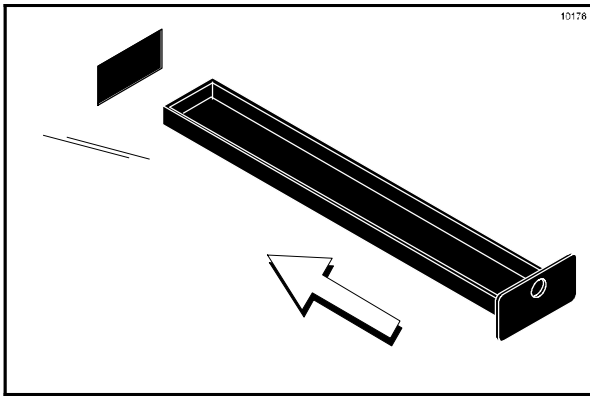


Figure 79

Step 8

Install the front drip tray and splash shield under the door spout. (See Figure 80.)

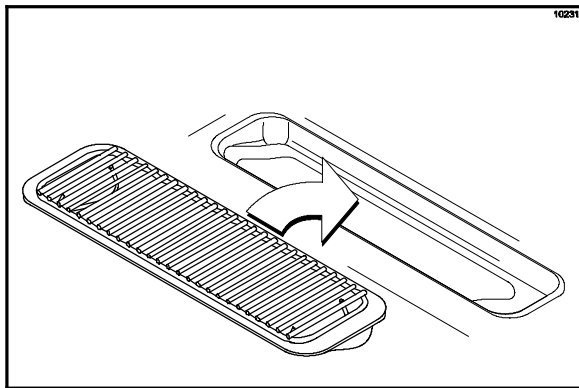


Figure 80

Model C717 Freezer Door Assembly

Step 1

Place the door gaskets into the grooves on the back of the freezer door.

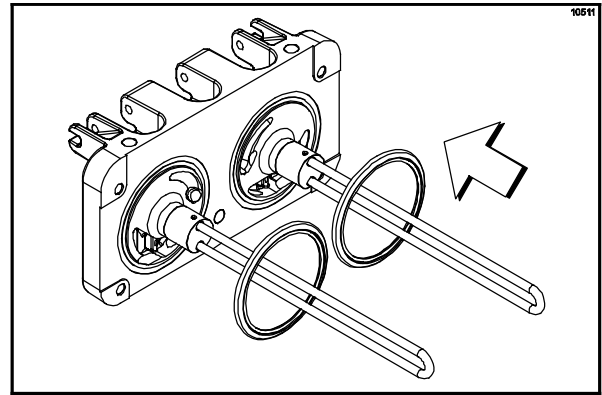


Figure 81

Step 2

Slide the front bearings over the baffle rods. The flanged edges should be against the door. **DO NOT lubricate the gaskets or bearings.**

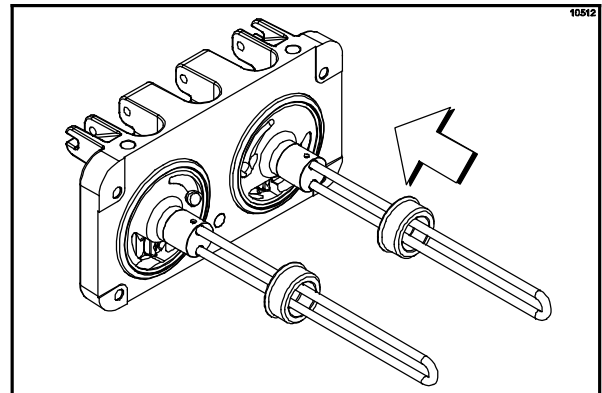


Figure 82

Step 3

Insert the baffle rods through the beaters in the freezing cylinders. With the door seated on the freezer studs, install the handscrews, with the longer ones on top. Tighten equally in a criss-cross pattern to insure the door is snug.

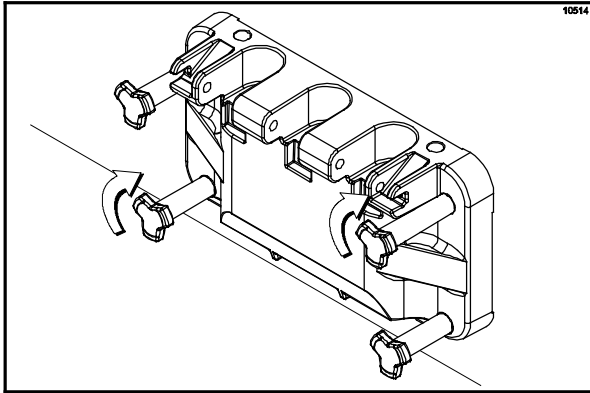


Figure 83

Step 4

Slide the three o-rings into the grooves of each standard draw valve. Slide the H-ring and o-ring into the grooves of the center draw valve. Lubricate the H-ring and o-rings.

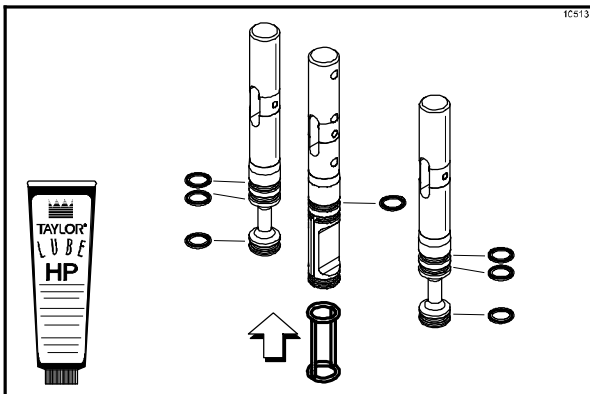


Figure 84

Step 5

Lubricate the inside of the freezer door spouts, top and bottom.

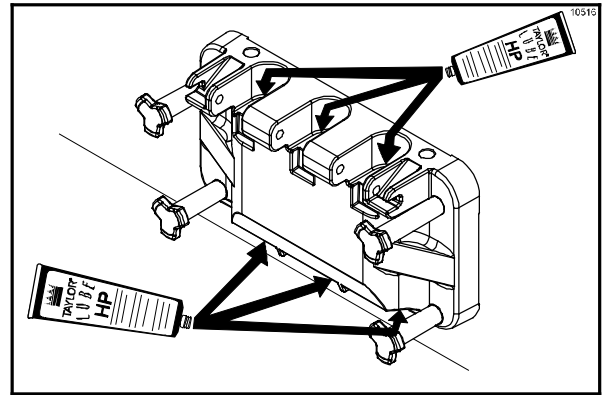


Figure 85

Step 6

Insert the draw valves from the bottom until the slot in each draw valve comes into view.

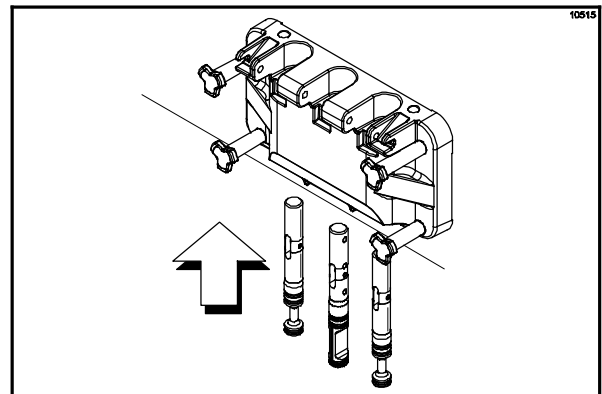


Figure 86

Step 7

Position each draw handle with the adjustment screw facing down. Slide the fork of each draw handle into the slot of each draw valve, starting from the right.

Model C717 Freezer Door Assembly (Cont'd.)

Step 8

Slide the pivot pin through the draw handles as the handles are inserted into the draw valves.

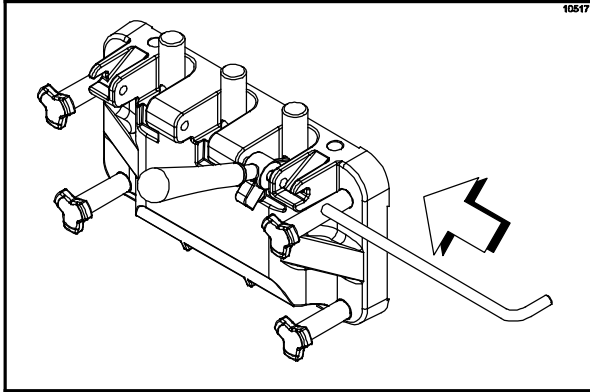


Figure 87

Note: This freezer features adjustable draw handles to provide portion control, giving a better consistent quality to your product and controlling costs. The draw handles should be adjusted to provide a flow rate of 5 to 7-1/2 oz. (142 g. to 213 g.) of product by weight per 10 seconds.

To INCREASE the flow rate, turn the adjustment screw CLOCKWISE. To DECREASE the flow rate, turn the adjustment screw COUNTER-CLOCKWISE.

Step 9

Snap the design caps over the bottom of the door spouts.

Step 10

Slide the long drip pan into the hole in the front panel. Slide the other two drip pans into the holes in the side panels. (See Figure 88.)

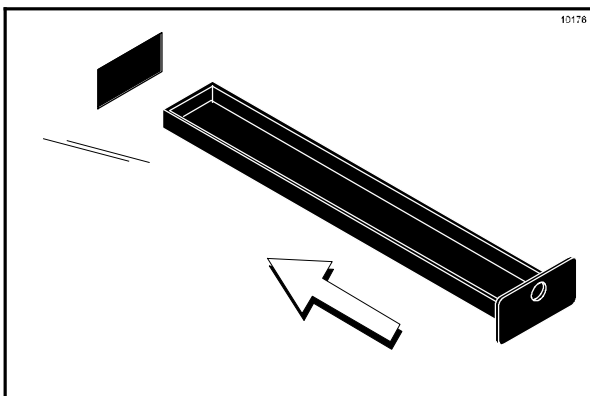


Figure 88

Step 11

Install the front drip tray and splash shield under the door spouts. (See Figure 89.)

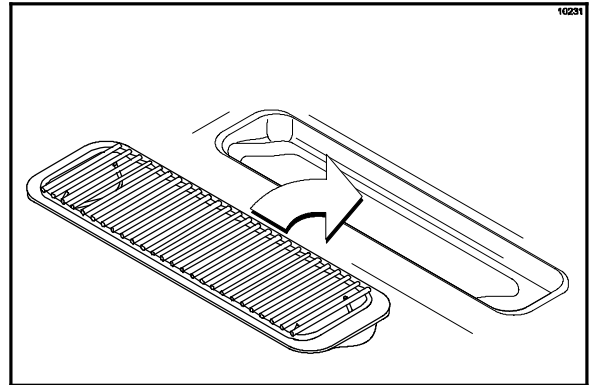


Figure 89

Feed Tube Assembly

Step 1

Slide the three o-rings into the grooves of the inner feed tube.

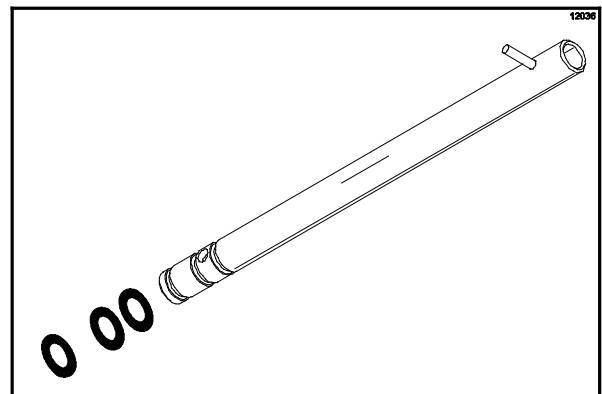


Figure 90

Step 2

Slide the two o-rings into the grooves of the outer feed tube.

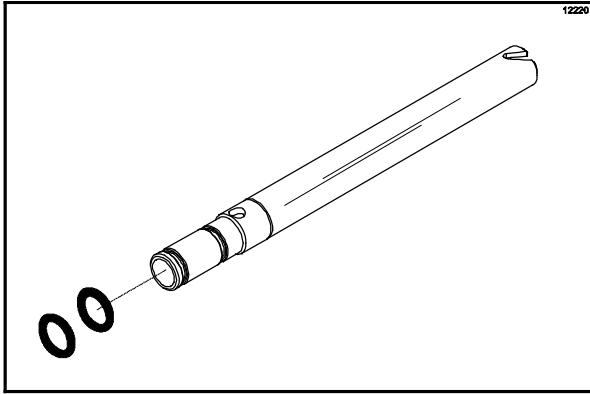


Figure 91

Step 3

Slide the small o-ring into the groove of the air orifice.

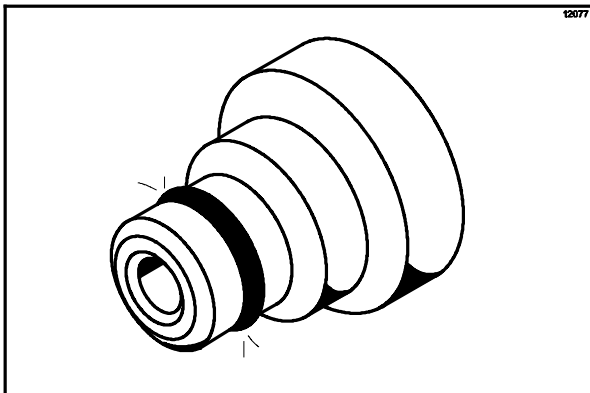


Figure 92

Note: Make sure the hole in the air orifice is clean and is not clogged. If the hole in the air orifice should become clogged, use soap and hot water to clear the hole. **Do not enlarge the hole in the air orifice.**

Step 4

Lay the inner feed tube, the outer feed tube, and the agitator in the bottom of the mix hopper for sanitizing.

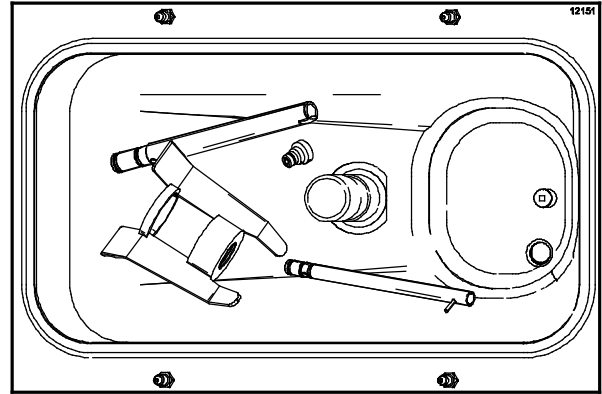


Figure 93

Repeat Steps 1 through 4 for the other side of the C717.

Sanitizing

Step 1

Prepare an approved 100 PPM sanitizing solution (examples: 2- 1/2 gal. [9.5 liters] of Kay- 5® or 2 gal. [7.6 liters] of Stera- Sheen®). **USE WARM WATER AND FOLLOW THE MANUFACTURER'S SPECIFICATIONS.**

Step 2

Pour the sanitizing solution over all the parts in the bottom of the mix hopper and allow it to flow into the freezing cylinder.

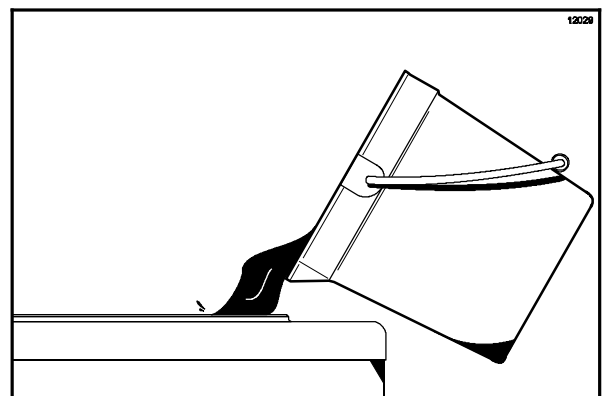


Figure 94

Note: You have just sanitized the mix hopper and parts; therefore, be sure your hands are clean and sanitized before going on in these instructions.


Step 3

While the solution is flowing into the freezing cylinder, take particular care to brush-clean the mix level sensing probe on the bottom of the hopper, the mix hopper, the mix inlet hole, and the feed tubes.

Step 4

Place the power switch in the ON position.

Step 5

Touch the WASH key  and allow the sanitizing solution in the freezing cylinder to agitate for five minutes.

Step 6

With a pail beneath the door spout(s), open close the draw valve six times. Then open the draw valve and draw off the sanitizing solution.

Step 7

Touch the WASH key  and close the draw valve.

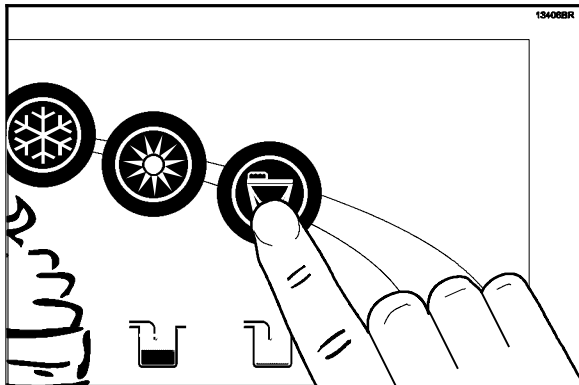


Figure 95

Note: Be sure your hands are clean and sanitized before going on in these instructions.

Step 8

Lubricate the o-rings on the inner and outer feed tubes. **DO NOT** lubricate the o-ring on the air orifice. Place the inner feed tube inside the outer feed tube.

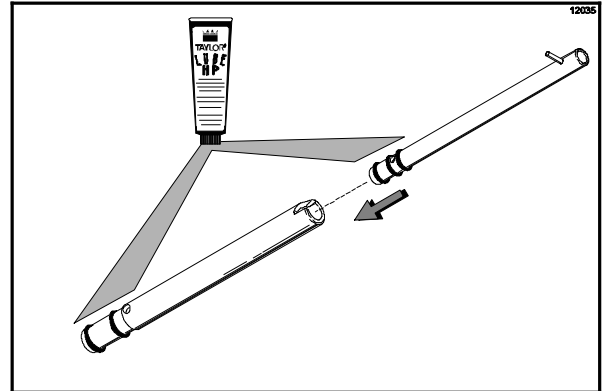


Figure 96

Step 9

Install the air orifice into the hole in the top of the inner feed tube.

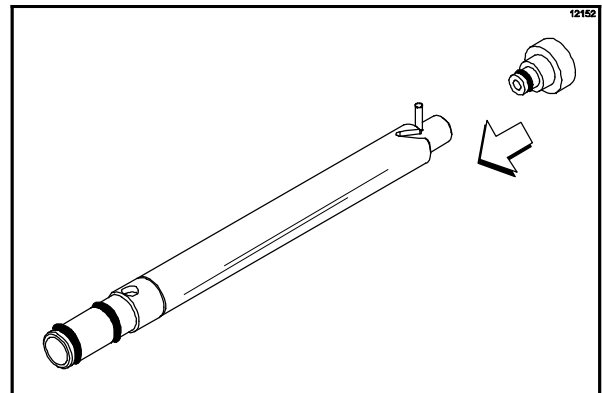


Figure 97

Note: Make sure the hole in the air orifice is clean and is not clogged. If the hole in the air orifice should become clogged, use soap and hot water to clear the hole. **Do not enlarge the hole in the air orifice.**

Step 10

Stand the assembled feed tube in the corner of the mix hopper and place the agitator on the agitator housing.

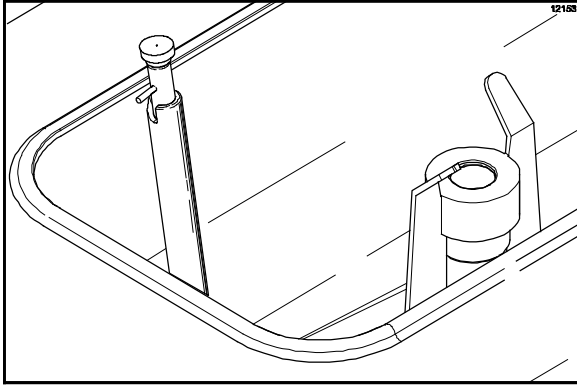


Figure 98

Step 11

Return to the freezer with a small amount of sanitizing solution. Dip the door spout brush into the sanitizing solution and brush clean the door spout and bottom of the draw valve.

Note: To assure sanitary conditions are maintained, brush clean each item for a total of 60 seconds, repeatedly dipping the brush in sanitizing solution.

Repeat these steps for the other side of the C717.

Priming

Note: Use only FRESH MIX when priming the freezer.

Step 1

With a pail beneath the door spout(s), open the draw valve. Pour 2-1/2 gallons (9.5 liters) of FRESH mix into the mix hopper and allow it to flow into the freezing cylinder. This will force out any remaining sanitizing solution. When full strength mix is flowing from the door spout, close the draw valve.

Step 2

When mix stops bubbling down into the freezing cylinder, install the assembled feed tubes in the mix inlet hole.

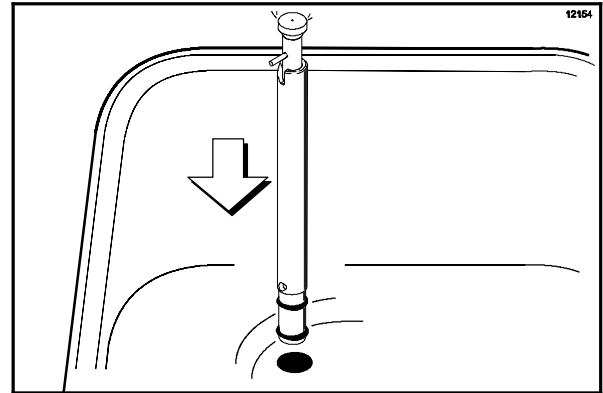


Figure 99

The pin on the inner feed tube should be turned and positioned at the bottom of the notch in the outer feed tube. This will align the holes in the feed tubes and allow mix and air to enter the freezing cylinder.

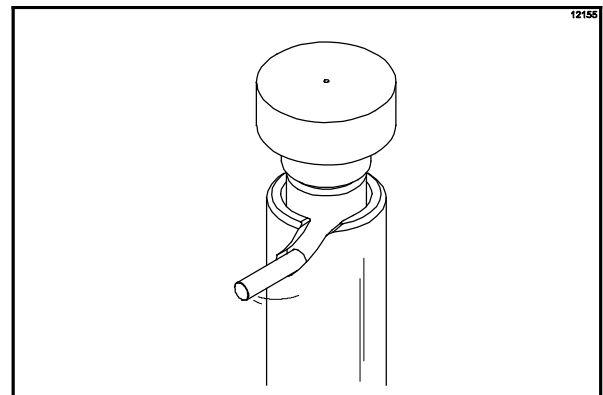


Figure 100

Step 3

Select the AUTO key .

Step 4

Fill the hopper with fresh mix and place the mix hopper cover in position.

Repeat these steps for the other side of the C717.



Daily Closing Procedures

This procedure must be performed once daily!

The function of the Heat Treatment Cycle is to destroy bacteria by raising the temperature of the mix in the freezing cylinder and the hopper to a specified temperature for a specified period of time, and then bringing the temperature back down low enough to retard spoilage.

The Heat Treatment Cycle will start at the time designated in the Auto Heat Time.

IMPORTANT: The level of mix in the mix hopper(s) must be up to the fill line on the agitator paddle(s). (The mix low light must not be on.) **Note:** If the BRUSH CLEAN COUNTER display has counted down to one day, do not add mix. The machine must be disassembled and brush cleaned within 24 hours.

The freezer must be in the AUTO (AUTO key  illuminated) or in the STANDBY mode (STANDBY key  illuminated) before the HEAT cycle may be started.

Step 1

Remove the hopper cover(s), drip pan(s), front drip tray, and the splash shield. Take them to the sink for cleaning and sanitizing.

MAKE SURE YOUR HANDS ARE CLEAN AND SANITIZED BEFORE PERFORMING THESE NEXT STEPS.

Step 2

Remove the air orifice(s), the feed tube assembly(ies), and the agitator(s) from the mix hopper(s). Take these parts to the sink for cleaning and sanitizing.

Step 3

Rinse these parts in cool, clean water.

Step 4

Prepare a small amount of an approved 100 PPM cleaning/sanitizing solution (examples: Kay-5® or Stera-Sheen®). USE WARM WATER AND FOLLOW THE MANUFACTURER'S SPECIFICATIONS. Brush clean the parts.

Step 5

Place the front drip tray, splash shield, and air orifice(s) on a clean, dry surface to air-dry overnight or until the heating cycle is complete.

Step 6

Prepare a small amount of an approved 100 PPM cleaning/sanitizing solution (examples: Kay-5® or Stera-Sheen®). USE WARM WATER AND FOLLOW THE MANUFACTURER'S SPECIFICATIONS. Sanitize the drip pans, feed tube assembly(ies), agitator(s) and hopper cover(s).

Step 7

Install the agitator(s) back onto the agitator drive shaft housing(s).

CAUTION: Be sure agitator(s) are installed and switch is in the AUTO or STANDBY mode or the unit will not have a successful heat cycle.

Step 8

Install the feed tube assembly(ies). Lift and turn the inner feed tube of each assembled feed tube so the pin rests on top of the outer feed tube. This will close the hole in the assembled feed tubes, preventing mix in the hopper(s) from entering the freezing cylinder(s) during the Heating and Standby process.

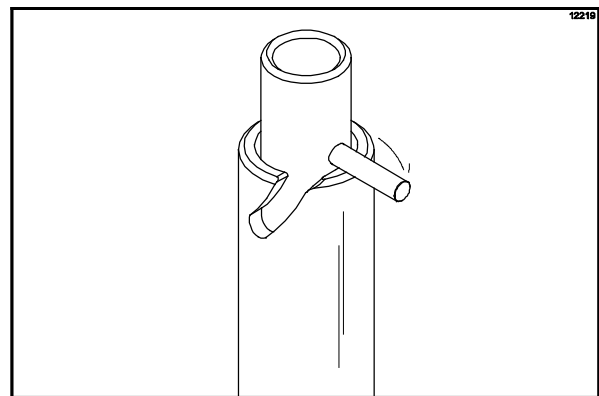


Figure 101

Step 9

Replace the hopper cover(s) and install the drip pans.

Step 10

Return to the freezer with a small amount of cleaning solution. Dip the door spout brush into the cleaning solution and brush clean the door spout(s) and bottom of the draw valve(s).

Note: To assure sanitary conditions are maintained, brush each item for a total of 60 seconds, repeatedly dipping the brush in cleaning solution.

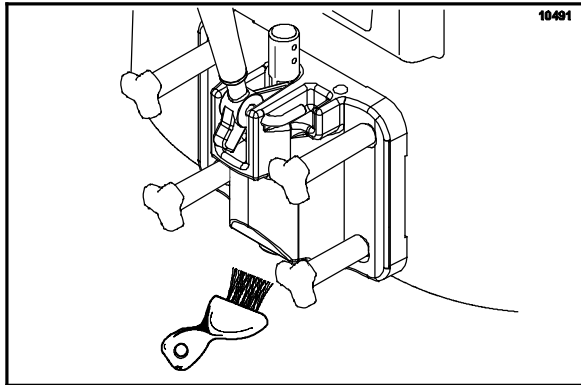




Figure 102

Step 11

Using a clean, sanitized towel, wipe down the freezer door, front panel, the area around the bottom of the freezer door, and any other areas that demonstrate a build-up of either moisture or food substance.

The heat cycle will start when the clock on the machine reaches the AUTO HEAT TIME set in the Manager's Menu.


There are 3 phases of the heat cycle: Heating, Holding and Cooling. Each phase has a time limit. If any one of the three phases fail to reach the proper temperatures within the time limit, the cycle will automatically abort and return to the STANDBY mode.

A failure message will appear on the fluorescent display to inform the operator that the machine did not successfully complete the heat treatment cycle. The product may not be safe to serve. The freezer will be locked out (softlock) of the AUTO mode. The operator will be given the option of selecting the HEAT key  which will begin a new heat cycle, or touching the WASH key  which will place the freezer into the OFF mode to allow a brush clean of the machine.

Note: Once the heating cycle has started, it cannot be interrupted. The heating cycle will take a maximum of 4 hours to complete with full hoppers.



DO NOT attempt to draw product or disassemble the machine during the HEAT cycle. The product is hot and under extreme pressure.

When the heating cycle is complete, the control will return to the STANDBY mode. The STANDBY key(s)  will be illuminated.

Daily Opening Procedures

Before performing the opening procedures, check the display panel for any error messages. Normally the display is blank unless an operational fault has occurred. If a fault has been detected, investigate the cause and follow the instructions on the display before proceeding with the opening procedures. (See Failure Messages, starting on page 28.)

Set-Up - Complete The Following

Make sure your hands are clean and sanitized before performing these next steps.

Step 1

Prepare a small amount of an approved 100 PPM sanitizing solution (examples: Kay-5® or Stera-Sheen®). USE WARM WATER AND FOLLOW THE MANUFACTURER'S SPECIFICATIONS.

Step 2

Sanitize the air orifice(s), front drip tray and splash shield in this solution.

Step 3

Return to the freezer with a small amount of sanitizing solution. Dip the door spout brush into the sanitizing solution and brush clean the door spout(s) and bottom of the draw valve(s).

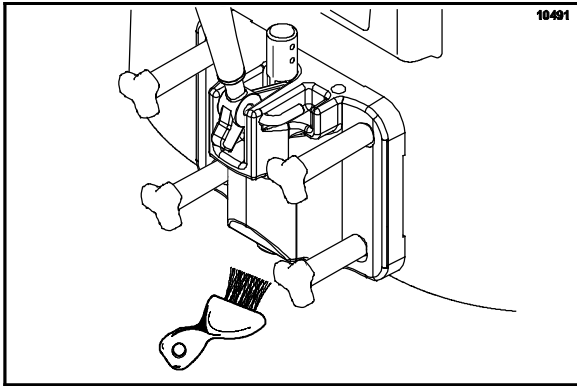



Figure 103

Note: To assure sanitary conditions are maintained, brush clean each item for a total of 60 seconds, repeatedly dipping the brush in sanitizing solution.

Step 4

Using a clean, sanitized towel, wipe down the freezer door, front panel, the area around the bottom of the freezer door, and any other areas that demonstrate a build-up of either moisture or food substance. Install the front drip tray and the splash shield.

Step 5

When ready to resume normal operation, touch the AUTO key . When the unit cycles off, the product in the freezing cylinder will be at serving viscosity.

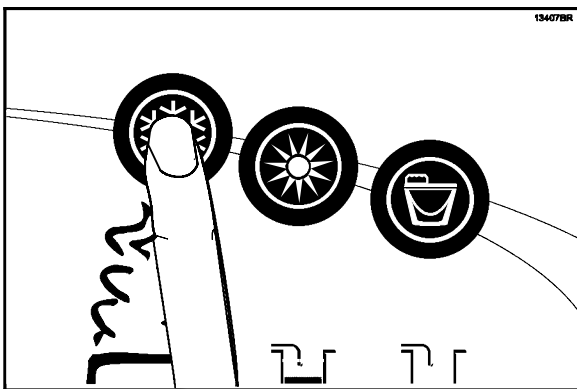


Figure 104

Step 6

Lift the hopper cover(s). Turn the inner feed tube of each assembled feed tube so the pin rests at the bottom of the notch of the outer feed tube. Install the air orifice(s).

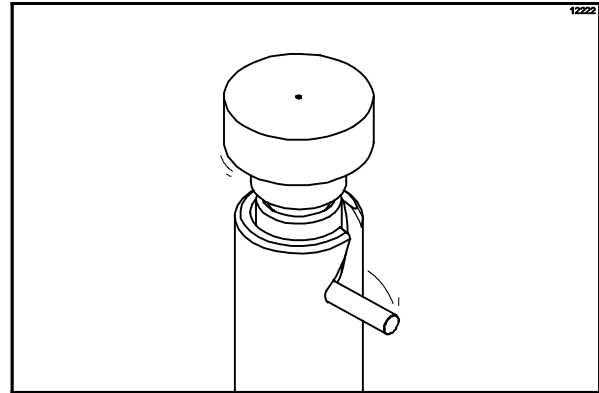


Figure 105

The control has a feature in the Manager's Menu to enable or disable the AUTO START feature. When AUTO START is enabled, the machine will automatically exit the STANDBY mode and start the machine in the AUTO mode at a designated time each day.

Note: This procedure should be performed 15 minutes prior to serving product.

Manual Brush Cleaning

These procedures must be completed according to the frequency specified by your Federal, State, or local regulatory agencies. Please consult your governing Food Code to determine the maximum number of days allowed between brush clean cycles.



To disassemble the machines, the following items will be needed:

- Two cleaning and sanitizing pails
- Sanitizer/Cleaner
- Necessary brushes (provided with freezer)
- Single service towels

Draining Product From The Freezing Cylinder

Step 1

Press the AUTO key ❄️, cancelling compressor and beater motor operation.

Step 2

Remove the hopper cover, the agitator paddle, and the assembled feed tube. Take these parts to the sink for cleaning.

Step 3

With a pail beneath the door spout(s), touch the WASH key 🧼/🚰 and open the draw valve.

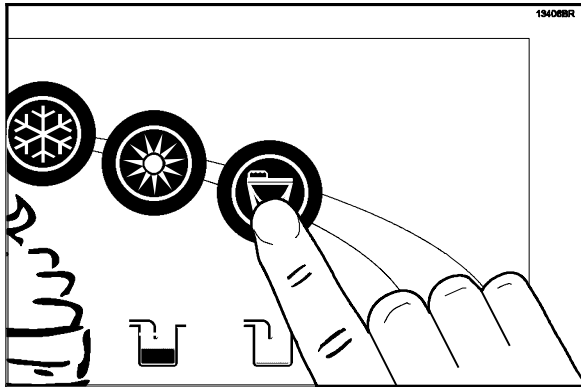


Figure 106

Drain the product from the freezing cylinder and the mix hopper and properly dispose of the mix.

Step 4

When the flow of product stops, touch the WASH key 🧼/🚰, cancelling the Wash mode. Close the draw valve.

Repeat these steps for the other side of the C717.

Rinsing

Step 1

Pour two gallons (7.6 liters) of cool, clean water into the mix hopper. With the white hopper brush, scrub the mix hopper, mix level sensing probes and the outside of the agitator drive shaft housing. Using the double ended brush, brush clean the mix inlet hole.

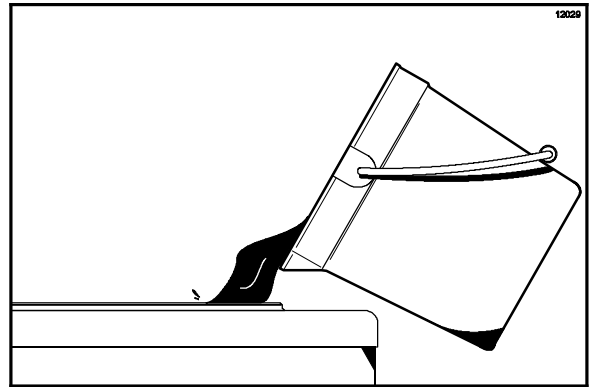


Figure 107

Note: Do not brush clean the mix inlet hole while the machine is in the Wash mode.

Step 2

With a pail beneath the door spout(s), touch the WASH key 🧼/🚰.

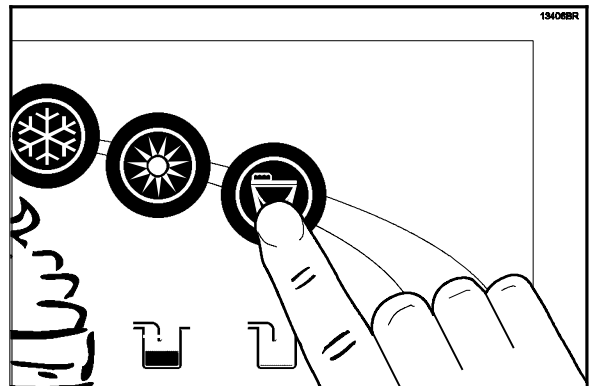



Figure 108

Step 3

Open the draw valve on the freezer door. Drain all the rinse water from the door spout, close the draw valve and touch the WASH key,  cancelling the Wash mode.

Step 4

Repeat this procedure using clean, warm water, until the water being discharged is clear.

Repeat these steps for the other side of the C717.

Hopper Cleaning

Step 1

Prepare an approved 100 PPM cleaning solution (examples: 2-1/2 gal. [9.5 liters] of Kay-5® or 2 gal. [7.6 liters] of Stera-Sheen®). USE WARM WATER AND FOLLOW THE MANUFACTURER'S SPECIFICATIONS.


Step 2

Pour the solution into the hopper and allow it to flow into the freezing cylinder.

Step 3

Using the white hopper brush, clean the mix hopper, mix level sensing probes and the outside of the agitator drive shaft housing. Using the double ended brush, clean the mix inlet hole. (**Note:** Do not brush clean the mix inlet hole while the machine is in the Wash mode.)

Step 4

Touch the WASH key . This will cause the cleaning solution in the freezing cylinder to come in contact with all areas of the freezing cylinder.


Step 5

Place an empty pail beneath the door spout(s).

Step 6

Open the draw valve on the freezer door and draw off all the solution.

Step 7

Once the cleaning solution stops flowing from the door spout, close the draw valve and touch the WASH key , cancelling the Wash mode.

Repeat these steps for the other side of the C717.

Disassembly

Note: Failure to remove the parts specified below for brush cleaning and lubrication will result in damage to the machine. These parts must be removed within the maximum number of days allowed between brush clean cycles or the machine will hard lock and will not operate.

Step 1

Be sure the power switch is in the OFF position.

Step 2

Remove the handscrews, freezer door, beater and scraper blades, and drive shaft with drive shaft seal from the freezing cylinder.

Step 3

Remove the scraper blades.

Step 4

Remove the drive shaft seal from the drive shaft.

Step 5

Remove the freezer door gasket, front bearing, pivot pin, draw handle, and draw valve. Remove the three o-rings from the draw valve.

Step 6

Remove the front drip tray and splash shield.

Step 7

Remove all drip pans and take them to the sink for cleaning.

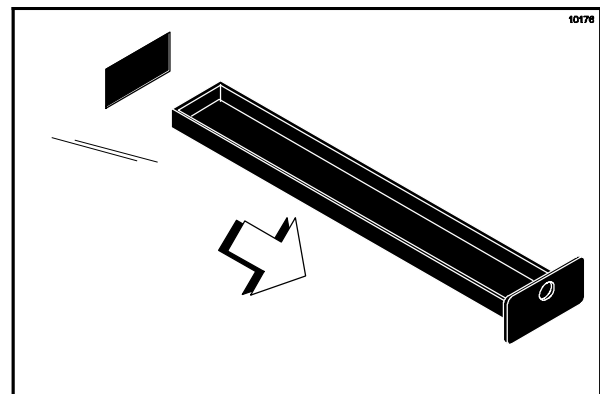


Figure 109

Note: If the drip pans are filled with an excessive amount of mix, it is an indication that the drive shaft seal(s), or o-ring(s) should be replaced or properly lubricated.

Repeat these steps for the other side of the C717.

Brush Cleaning

Step 1

Prepare an approved 100 PPM cleaning solution (examples: 2-1/2 gal. [9.5 liters] of Kay-5® or 2 gal. [7.6 liters] of Stera-Sheen®). USE WARM WATER AND FOLLOW THE MANUFACTURER'S SPECIFICATIONS. Make sure all brushes provided with the freezer are available for brush cleaning.

Step 2

Remove all o-rings.

Step 3

Thoroughly brush clean all disassembled parts in the cleaning solution, making sure all lubricant and mix film is removed. Be sure to brush all surfaces and holes, especially the draw valve hole in the freezer door.

Step 4

Rinse all parts with clean, warm water. Place the parts on a clean, dry surface to air dry overnight.

Step 5

Return to the freezer with a small amount of cleaning solution. Using the black brush, clean the rear shell bearing at the back of the freezing cylinder.

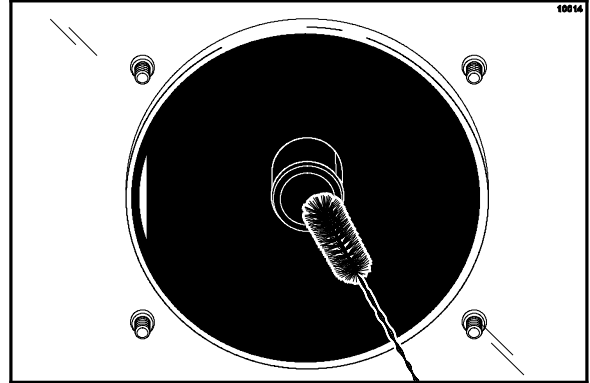


Figure 110

Repeat these steps for the other side of the C717.

Step 6

Wipe all exterior surfaces of the freezer with a clean, sanitized towel.

Section 7 Important: Operator Checklist

During Brush Cleaning and Sanitizing



ALWAYS FOLLOW LOCAL HEALTH CODES.

Cleaning and sanitizing schedules are governed by your Federal, State or local regulatory agencies and must be followed accordingly.

Please consult your governing Food Code to determine the maximum number of days allowed between brush clean cycles.

The following check points should be stressed during the cleaning and sanitizing operations.

Troubleshooting Bacterial Count

- 1. Thoroughly clean and sanitize the machine regularly, including complete disassembly and brush cleaning.
- 2. Use all brushes supplied for thorough cleaning. The brushes are specially designed to reach all mix passageways.
- 3. Use the white bristle brush to clean the mix inlet hole which extends from the mix hopper down to the rear of the freezing cylinder.
- 4. Use the black bristle brush to thoroughly clean the rear shell bearing located at the rear of the freezing cylinder. Be sure there is a generous amount of cleaning solution on the brush.
- 5. Properly prepare the cleaning and sanitizing solutions. Read and follow the label directions carefully. Too strong of a solution may damage the parts and too weak of a solution will not do an adequate job of cleaning or sanitizing.
- 6. The temperature of the mix in the mix hopper and walk-in cooler should be below 40°F (4.4°C).

Regular Maintenance Checks

- 1. Replace scraper blades that are nicked or damaged. Before installing the beater assembly, be certain that scraper blades are properly attached to the helix.
- 2. Check the rear shell bearing for signs of wear (excessive mix leakage in rear drip pan) and be certain it is properly cleaned.
- 3. Using a screwdriver and cloth towel, keep the rear shell bearing and the female hex drive socket clean and free of lubricant and mix deposits.
- 4. Dispose of o-rings and seals if they are worn, torn, or fit too loosely, and replace with new ones.
- 5. Follow all lubricating procedures as outlined in "Assembly".
- 6. If your machine is air cooled, check the condensers for an accumulation of dirt and lint. Dirty condensers will reduce the efficiency and capacity of the machine. Condensers should be cleaned **monthly** with a soft brush. **Never** use screwdrivers or other metal probes to clean between the fins.
Note: For machines equipped with an air filter, it will be necessary to vacuum clean the filters on a monthly schedule.



WARNING! Always disconnect electrical power prior to cleaning the condenser. Failure to follow this instruction may result in electrocution.

- 7. If your machine is equipped with an auxiliary refrigeration system, check the auxiliary condenser for accumulation of dirt and lint. Dirty condensers will reduce the refrigeration capacity of the mix hopper. Condensers must be cleaned **monthly** with a soft brush. **Never** use screwdrivers or other metal probes to clean between the fins.



WARNING! Always disconnect electrical power prior to cleaning the condenser. Failure to follow this instruction may result in electrocution.

- 8. If your machine is water cooled, check the water lines for kinks or leaks. Kinks can occur when the machine is moved back and forth for cleaning or maintenance purposes. Deteriorated or cracked water lines should be replaced only by an authorized Taylor distributor.

Winter Storage

If the place of business is to be closed during the winter months, it is important to protect the freezer by following certain precautions, particularly if the building is subject to freezing conditions.

Disconnect the freezer from the main power source to prevent possible electrical damage.

On water cooled freezers, disconnect the water supply. Relieve pressure on the spring in the water valve. Use air pressure on the outlet side to blow out any water remaining in the condenser. **This is extremely important.** Failure to follow this procedure may cause severe and costly damage to the refrigeration system.

Your local Taylor Distributor can perform this winter storage service for you.

Wrap detachable parts of the freezer such as beater, blades, drive shaft, and freezer door, and place them in a protected dry place. Rubber trim parts and gaskets can be protected by wrapping them with moisture-proof paper. All parts should be thoroughly cleaned of dried mix or lubrication which attract mice and other vermin.

It is recommended that an authorized service technician perform winter storage draining, to insure all water has been removed. This will guard against freezing and rupturing of the components.

Section 8

Troubleshooting Guide

PROBLEM	PROBABLE CAUSE	REMEDY	PAGE REF.
1. Soft lock message appears on display.	a. More than 24 hours since the last HEAT cycle.	a. The freezer must go through a HEAT cycle every 24 hours. The freezer must now be disassembled and brush cleaned or placed in a heat cycle.	21
	b. The power switch is in the OFF position.	b. The power switch must be in the ON position. The freezer must now be disassembled and brush cleaned or placed in a heat cycle.	21
	c. The freezer is not in the AUTO or STANDBY mode when the heat cycle was programmed to start.	c. The freezer must be in the AUTO or STANDBY mode. The freezer must now be disassembled and brush cleaned or placed in a heat cycle.	21
	d. Mix out condition.	d. Level of mix in hopper must be up to fill line on agitator paddle. The freezer must now be disassembled and brush cleaned or placed in a heat cycle.	21
	e. The agitator is not installed.	e. The agitator must be cleaned and installed before starting the HEAT cycle. The freezer must now be disassembled and brush cleaned or placed in a heat cycle.	41
	f. There was a power failure.	f. Check fault messages and product temperature. Disassemble and brush clean, or initiate a heat treatment cycle.	28
2. Hard lock message appears on display.	a. Brush clean interval exceeded.	a. The freezer must be disassembled and brush cleaned within 24 hours when the counter indicates one day remaining.	20
	b. A barrel or hopper thermistor is faulty.	b. Call an authorized service technician.	- - -

PROBLEM	PROBABLE CAUSE	REMEDY	PAGE REF.
3. No product is being dispensed.	a. Low on mix. The MIX OUT light is on.	a. Add mix to the mix hopper. Return to AUTO mode.	40
	b. The power switch is in the OFF position.	b. Place the power switch to ON and select AUTO.	39
	c. The circuit breaker is off or the fuse is blown.	c. Turn the breaker on, or replace the fuse.	- - -
	d. Beater motor is out on reset, BEATER OVERLOAD message displayed.	d. Turn the machine off. Press the reset button. Restart the machine in AUTO.	- - -
	e. Machine not in AUTO mode.	e. Select AUTO and allow machine to cycle off before drawing product.	43
	f. Feed tube not properly installed.	f. Make sure feed tube is properly installed.	40
	g. Freeze-up in mix inlet hole.	g. Call an authorized service technician.	- - -
	h. The beater is rotating counterclockwise when observed from the operator end.	h. Contact service technician to correct rotation.	- - -
4. The product is too soft.	a. Draw rate is set too fast.	a. Adjust draw rate of 5 to 7 1/2 oz. (142 g. to 213 g.) of product by weight in 10 seconds.	34
	b. Not enough air space around unit. (Air cooled units)	b. Allow for adequate air flow across the condenser.	1
	c. Worn scraper blades.	c. Replace regularly.	53
	d. Dirty condenser (A/C)	d. Clean monthly.	47
	e. Mix is out of date.	e. Use only fresh mix.	- - -
	f. Loss of water. (W/C)	f. Locate cause of water loss and correct.	48
	g. Viscosity needs adjustment.	a. Contact service technician.	- - -

PROBLEM	PROBABLE CAUSE	REMEDY	PAGE REF.
5. The product is too thick.	a. Freezing cylinder not primed correctly.	a. Drain the freezing cylinder and reprime the machine.	40
	b. The viscosity control is set too cold.	b. Call an authorized service technician.	---
	c. Freeze-up in mix inlet hole.	c. Call an authorized service technician.	---
6. The mix in the hopper is too warm.	a. Hopper cover is not in position.	a. Clean and sanitize hopper cover and place in position.	40
	b. The agitator is not installed.	b. Clean and sanitize the agitator and install.	41
	c. The hopper temperature is out of adjustment.	c. Call an authorized service technician.	---
7. The mix in the hopper is too cold.	a. The hopper temperature is out of adjustment.	a. Call an authorized service technician.	---
8. Mix Low and Mix Out probes are not functioning.	a. Milkstone build-up in the hopper.	a. Clean hopper(s) thoroughly.	39
9. Product is collecting on top of the freezer door.	a. The top o-ring on draw valve is improperly lubricated or worn.	a. Lubricate properly or replace the o-ring.	36
10. Excessive mix leakage from door spout.	a. Missing or worn draw valve o-rings.	a. Install or replace regularly.	36/ 53
	b. Inadequate lubrication of draw valve o-rings.	b. Lubricate properly.	34/ 36
	c. Wrong type of lubricant is being used (example: petroleum base lubricant).	c. Use the proper lubricant (example: Taylor Lube).	32
11. Excessive mix leakage into the rear drip pan.	a. Missing or worn seal on drive shaft.	a. Install or replace regularly.	32/ 53
	b. The drive shaft seal is installed inside-out.	b. Install correctly.	32
	c. Improper lubrication of drive shaft and/or seal.	a. Lubricate properly.	32
	d. The drive shaft and beater assembly work forward.	b. Call authorized service technician.	---
	e. Worn rear shell bearing.	c. Call authorized service technician.	---
	f. Gear box out of alignment.	d. Call authorized service technician.	---

PROBLEM	PROBABLE CAUSE	REMEDY	PAGE REF.
12. The drive shaft is stuck in the drive coupling.	a. Mix and lubricant collected in drive coupling.	a. Brush clean the rear shell bearing area regularly.	46
	b. Rounded corners of drive shaft, drive coupling, or both.	b. Call an authorized service technician.	- - -
	c. Gear box is out of alignment.	c. Call an authorized service technician.	- - -
13. The freezing cylinder walls are scored.	a. Missing or worn front bearing and scraper blades.	a. Install or replace the front bearing and scraper blades.	33
	b. The baffle rod on the freezer door is broken.	b. Replace freezer door.	33
	c. Beater assembly is bent.	c. Replace beater assembly.	33
	d. Gear box is out of alignment.	d. Call an authorized service technician.	- - -
14. The product makes a popping sound when drawn.	a. Draw rate is set too fast.	a. Adjust draw rate of 5 to 7 1/2 oz. (142 g. to 213 g.) of product by weight in 10 seconds.	34
	b. Freezing cylinder not primed correctly.	b. Drain the freezing cylinder and reprime the machine.	40
15. No control panel functions with power switch ON.	a. Machine is unplugged.	a. Plug into wall receptacle.	- - -
	b. Circuit breaker OFF or blown fuse.	b. Turn the breaker ON or replace the fuse.	- - -
16. No freezer operation after pressing the AUTO key.	a. Unit is unplugged.	a. Plug into wall receptacle.	- - -
	b. The circuit breaker is off or the fuse is blown.	b. Turn the breaker on, or replace the fuse.	- - -
	c. The beater motor is out on reset.	c. Reset the freezer.	17
17. Product is not feeding into the freezing cylinder.	a. Inadequate level of mix in the mix hopper.	a. Fill the mix hopper with mix.	40
	b. The mix inlet hole is frozen up.	b. The mix hopper temperature needs adjustment. Call service technician.	- - -

Section 9

Parts Replacement Schedule

PART DESCRIPTION	EVERY 3 MONTHS	EVERY 6 MONTHS	ANNUALLY
Scraper Blades	X		
Drive Shaft Seal	X		
Freezer Door Gasket	X		
Front Bearing	X		
Draw Valve O-Ring	X		
Mix Feed Tube O-Ring	X		
Air Orifice O-Ring	X		
White Bristle Brush, 3" x 7"		Inspect & Replace if Necessary	Minimum
White Bristle Brush, 1" x 2"		Inspect & Replace if Necessary	Minimum
Black Bristle Brush, 1" x 2"		Inspect & Replace if Necessary	Minimum
Double-Ended Brush		Inspect & Replace if Necessary	Minimum
Yellow Bristle Brush		Inspect & Replace if Necessary	Minimum

Section 10 Limited Warranty on Equipment

TAYLOR COMPANY LIMITED WARRANTY ON FREEZERS

Taylor Company, a division of Carrier Commercial Refrigeration, Inc. ("Taylor") is pleased to provide this limited warranty on new Taylor-branded freezer equipment available from Taylor to the market generally (the "Product") to the original purchaser only.

LIMITED WARRANTY

Taylor warrants the Product against failure due to defect in materials or workmanship under normal use and service as follows. All warranty periods begin on the date of original Product installation. If a part fails due to defect during the applicable warranty period, Taylor, through an authorized Taylor distributor or service agency, will provide a new or re-manufactured part, at Taylor's option, to replace the failed defective part at no charge for the part. Except as otherwise stated herein, these are Taylor's exclusive obligations under this limited warranty for a Product failure. This limited warranty is subject to all provisions, conditions, limitations and exclusions listed below and on the reverse (if any) of this document.

Product	Part	Limited Warranty Period
Soft Serve	Insulated shell assembly	Five (5) years
Frozen Yogurt Shakes	Refrigeration compressor (except service valve)	Five (5) years
Smoothies	Beater motors	Two (2) years
Frozen Beverage	Beater drive gear	Two (2) years
Batch Desserts	Printed circuit boards and Softech controls beginning with serial number H8024200	Two (2) years
	Parts not otherwise listed in this table or excluded below	One (1) year

LIMITED WARRANTY CONDITIONS

1. If the date of original installation of the Product cannot be verified, then the limited warranty period begins ninety (90) days from the date of Product manufacture (as indicated by the Product serial number). Proof of purchase may be required at time of service.
2. This limited warranty is valid only if the Product is installed and all required service work on the Product is performed by an authorized Taylor distributor or service agency, and only if genuine, new Taylor parts are used.
3. Installation, use, care, and maintenance must be normal and in accordance with all instructions contained in the Taylor Operator's Manual.
4. Defective parts must be returned to the authorized Taylor distributor or service agency for credit.
5. The use of any refrigerant other than that specified on the Product's data label will void this limited warranty.

LIMITED WARRANTY EXCEPTIONS

This limited warranty does **not** cover:

1. Labor or other costs incurred for diagnosing, repairing, removing, installing, shipping, servicing or handling of defective parts, replacement parts, or new Products.
2. Normal maintenance, cleaning and lubrication as outlined in the Taylor Operator's Manual, including cleaning of condensers.

3. Replacement of wear items designated as Class "000" parts in the Taylor Operator's Manual.
4. External hoses, electrical power supplies, and machine grounding.
5. Parts not supplied or designated by Taylor, or damages resulting from their use.
6. Return trips or waiting time required because a service technician is prevented from beginning warranty service work promptly upon arrival.
7. Failure, damage or repairs due to faulty installation, misapplication, abuse, no or improper servicing, unauthorized alteration or improper operation or use as indicated in the Taylor Operator's Manual, including but not limited to the failure to use proper assembly and cleaning techniques, tools, or approved cleaning supplies.
8. Failure, damage or repairs due to theft, vandalism, wind, rain, flood, high water, water, lightning, earthquake or any other natural disaster, fire, corrosive environments, insect or rodent infestation, or other casualty, accident or condition beyond the reasonable control of Taylor; operation above or below the electrical or water supply specification of the Product; or components repaired or altered in any way so as, in the judgment of the Manufacturer, to adversely affect performance, or normal wear or deterioration.
9. Any Product purchased over the Internet.
10. Failure to start due to voltage conditions, blown fuses, open circuit breakers, or damages due to the inadequacy or interruption of electrical service.
11. Electricity or fuel costs, or increases in electricity or fuel costs from any reason whatsoever.
12. Damages resulting from the use of any refrigerant other than that specified on the Product's data label will void this limited warranty.
13. Any cost to replace, refill or dispose of refrigerant, including the cost of refrigerant.
14. **ANY SPECIAL, INDIRECT OR CONSEQUENTIAL PROPERTY OR COMMERCIAL DAMAGE OF ANY NATURE WHATSOEVER.** Some jurisdictions do not allow the exclusion of incidental or consequential damages, so this limitation may not apply to you.

This limited warranty gives you specific legal rights, and you may also have other rights which vary from jurisdiction to jurisdiction.

LIMITATION OF WARRANTY

THIS LIMITED WARRANTY IS EXCLUSIVE AND IS IN LIEU OF ALL OTHER WARRANTIES, CONDITIONS AND/OR REMEDIES UNDER THE LAW, INCLUDING ANY IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. THE ORIGINAL OWNER'S SOLE REMEDY WITH RESPECT TO ANY PRODUCTS SHALL BE REPAIR OR REPLACEMENT OF DEFECTIVE COMPONENTS UNDER THE TERMS OF THIS LIMITED WARRANTY. ALL RIGHTS TO CONSEQUENTIAL OR INCIDENTAL DAMAGES (INCLUDING CLAIMS FOR LOST SALES, LOST PROFITS, PRODUCT LOSS, PROPERTY DAMAGES OR SERVICE EXPENSES) ARE EXPRESSLY EXCLUDED. THE EXPRESS WARRANTIES MADE IN THIS LIMITED WARRANTY MAY NOT BE ALTERED, ENLARGED, OR CHANGED BY ANY DISTRIBUTOR, DEALER, OR OTHER PERSON, WHATSOEVER.

LEGAL REMEDIES

The owner **must** notify Taylor in writing, by certified or registered letter to the following address, of any defect or complaint with the Product, stating the defect or complaint and a specific request for repair, replacement, or other correction of the Product under warranty, mailed at least thirty (30) days before pursuing any legal rights or remedies.

Taylor Company
a division of Carrier Commercial Refrigeration, Inc.
750 N. Blackhawk Blvd.
Rockton, IL 61072, U.S.A.

Section 11

Limited Warranty on Parts

TAYLOR COMPANY LIMITED WARRANTY ON TAYLOR GENUINE PARTS

Taylor Company, a division of Carrier Commercial Refrigeration, Inc. ("Taylor") is pleased to provide this limited warranty on new Taylor genuine replacement components and parts available from Taylor to the market generally (the "Parts") to the original purchaser only.

LIMITED WARRANTY

Taylor warrants the Parts against failure due to defect in materials or workmanship under normal use and service as follows. All warranty periods begin on the date of original installation of the Part in the Taylor unit. If a Part fails due to defect during the applicable warranty period, Taylor, through an authorized Taylor distributor or service agency, will provide a new or re-manufactured Part, at Taylor's option, to replace the failed defective Part at no charge for the Part. Except as otherwise stated herein, these are Taylor's exclusive obligations under this limited warranty for a Part failure. This limited warranty is subject to all provisions, conditions, limitations and exclusions listed below and on the reverse (if any) of this document.

Part's Warranty Class Code or Part	Limited Warranty Period
Class 103 Parts ¹	Three (3) months
Class 212 Parts ²	Twelve (12) months
Class 512 Parts	Twelve (12) months
Class 000 Parts	No warranty
Taylor Part #072454 (Motor-24VDC *C832/C842*)	Four (4) years

LIMITED WARRANTY CONDITIONS

1. If the date of original installation of the Part cannot be otherwise verified, proof of purchase may be required at time of service.
2. This limited warranty is valid only if the Part is installed and all required service work in connection with the Part is performed by an authorized Taylor distributor or service agency.
3. The limited warranty applies only to Parts remaining in use by their original owner at their original installation location in the unit of original installation.
4. Installation, use, care, and maintenance must be normal and in accordance with all instructions contained in the Taylor Operator's Manual.
5. Defective Parts must be returned to the authorized Taylor distributor or service agency for credit.
6. This warranty is not intended to shorten the length of any warranty coverage provided pursuant to a separate Taylor Limited Warranty on freezer or grill equipment.
7. The use of any refrigerant other than that specified for the unit in which the Part is installed will void this limited warranty.

^{1, 2} Except that Taylor Part #032129SER2 (Compressor-Air-230V SERV) and Taylor Part #075506SER1 (Compressor-Air-115V 60HZ) shall have a limited warranty period of twelve (12) months when used in Taylor freezer equipment and a limited warranty period of two (2) years when used in Taylor grill equipment.

LIMITED WARRANTY EXCEPTIONS

This limited warranty does **not** cover:

1. Labor or other costs incurred for diagnosing, repairing, removing, installing, shipping, servicing or handling of defective Parts, replacement Parts, or new Parts.
2. Normal maintenance, cleaning and lubrication as outlined in the Taylor Operator's Manual, including cleaning of condensers or carbon and grease buildup.
3. Required service, whether cleaning or general repairs, to return the cooking surface assemblies, including the upper platen and lower plate, to an operational condition to achieve proper cooking or allow proper assembly of release sheets and clips as a result of grease build-up on the cooking surfaces, including but not limited to the platen and plate, sides of the shroud or top of the shroud.
4. Replacement of cooking surfaces, including the upper platen and lower plate, due to pitting or corrosion (or in the case of the upper platen, due to loss of plating) as a result of damage due to the impact of spatulas or other small wares used during the cooking process or as a result of the use of cleaners, cleaning materials or cleaning processes not approved for use by Taylor.
5. Replacement of wear items designated as Class "000" Parts in the Taylor Operator's Manual, as well as any release sheets and clips for the Product's upper platen assembly.
6. External hoses, electrical power supplies, and machine grounding.
7. Parts not supplied or designated by Taylor, or damages resulting from their use.
8. Return trips or waiting time required because a service technician is prevented from beginning warranty service work promptly upon arrival.
9. Failure, damage or repairs due to faulty installation, misapplication, abuse, no or improper servicing, unauthorized alteration or improper operation or use as indicated in the Taylor Operator's Manual, including but not limited to the failure to use proper assembly and cleaning techniques, tools, or approved cleaning supplies.
10. Failure, damage or repairs due to theft, vandalism, wind, rain, flood, high water, water, lightning, earthquake or any other natural disaster, fire, corrosive environments, insect or rodent infestation, or other casualty, accident or condition beyond the reasonable control of Taylor; operation above or below the gas, electrical or water supply specification of the unit in which a part is installed; or Parts or the units in which they are installed repaired or altered in any way so as, in the judgment of Taylor, to adversely affect performance, or normal wear or deterioration.
11. Any Part purchased over the Internet.
12. Failure to start due to voltage conditions, blown fuses, open circuit breakers, or damages due to the inadequacy or interruption of electrical service.
13. Electricity, gas or other fuel costs, or increases in electricity or fuel costs from any reason whatsoever.
14. Damages resulting from the use of any refrigerant other than that specified for the unit in which the Part is installed will void this limited warranty.
15. Any cost to replace, refill or dispose of refrigerant, including the cost of refrigerant.
16. **ANY SPECIAL, INDIRECT OR CONSEQUENTIAL PROPERTY OR COMMERCIAL DAMAGE OF ANY NATURE WHATSOEVER.** Some jurisdictions do not allow the exclusion of incidental or consequential damages, so this limitation may not apply to you.

This limited warranty gives you specific legal rights, and you may also have other rights which vary from jurisdiction to jurisdiction.

LIMITATION OF WARRANTY

THIS LIMITED WARRANTY IS EXCLUSIVE AND IS IN LIEU OF ALL OTHER WARRANTIES, CONDITIONS AND/OR REMEDIES UNDER THE LAW, INCLUDING ANY IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. THE ORIGINAL OWNER'S SOLE REMEDY WITH RESPECT TO ANY PRODUCTS SHALL BE REPAIR OR REPLACEMENT OF DEFECTIVE PARTS UNDER THE TERMS OF THIS LIMITED WARRANTY. ALL RIGHTS TO CONSEQUENTIAL OR INCIDENTAL DAMAGES (INCLUDING CLAIMS FOR LOST SALES, LOST PROFITS, PRODUCT LOSS, PROPERTY DAMAGES OR SERVICE EXPENSES) ARE EXPRESSLY EXCLUDED. THE EXPRESS WARRANTIES MADE IN THIS LIMITED WARRANTY MAY NOT BE ALTERED, ENLARGED, OR CHANGED BY ANY DISTRIBUTOR, DEALER, OR OTHER PERSON, WHATSOEVER.

LEGAL REMEDIES

The owner **must** notify Taylor in writing, by certified or registered letter to the following address, of any defect or complaint with the Part, stating the defect or complaint and a specific request for repair, replacement, or other correction of the Part under warranty, mailed at least thirty (30) days before pursuing any legal rights or remedies.

Taylor Company
a division of Carrier Commercial Refrigeration, Inc.
750 N. Blackhawk Blvd.
Rockton, IL 61072, U.S.A.