

Model C713 Operator Training



Introduction



Welcome ^{to} Model C713 Operator Training



Consistency/Capacity

The way we measure capacity is by how many servings can be drawn before the machine needs time to recover the mix to the proper viscosity.

The C713 can handle the following impact servings:

35- 3.5 oz. Sundaes

Note: The machine needs 1-2 minutes of recovery time after this level of impact servings.

Impact Servings:



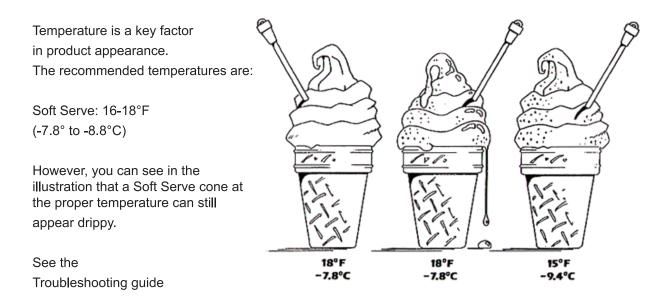
Impact Servings: How many servings can be drawn before the product becomes soft (unservable)?

Recovery Time: 1 - 2 minutes

Note: The soft serve draw rate is critical. The rate must be 5 - 7.5 oz. (150 - 225 g.) per 10 seconds.



Temperature



A seven minute freeze-down time is necessary to make frozen product (18° F/-7.8° C) from liquid mix (40° F/4.4°C).

Once the product is frozen, subsequent refrigeration cycles are necessary. The machine will cease refrigeration for 10 minutes to maintain servable product during the day.

Product that is overbeaten is "broken down." Broken down product is caused by longer than normal freeze times.

Longer than normal freeze times can be caused by: Worn scraper blades Insufficient air space around the freezer Dirty condensers or air filters Loss of refrigerant (refrigerant leak)



Troubleshooting (Product)

The product is too soft

Cause: Draw rate is set too fast. Remedy: Adjust draw rate of 5 to 7.5 oz. (142-213 g) of product by weight in 10 seconds.

The product is too thick.

Cause: Freezing cylinder not primed correctly. Remedy: Drain the freezing cylinder and reprime the machine.

Cause: The viscosity control is set too cold. Remedy: Call an authorized service technician.

Cause: Freeze-up in mix inlet hole. Remedy: Call an authorized service technician.

Cause: Mix feed tube is installed incorrectly or the air orifice is not installed. Remedy: Brush clean the machine and be sure to install feed tube following the procedures in the Taylor Operator's Manual.

The product is broken down.

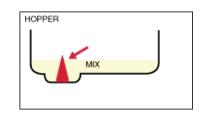
Cause: The machine is running too long. Remedy: Replace worn scraper blades, clean air filter, and clean air cooled condensers. Verify that there is proper air space around the freezer. Call a service technician to check the level of refrigerant.



Mix Low



The Cause



Solution

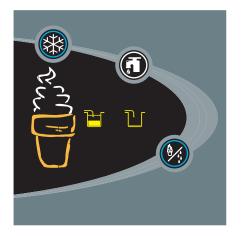
Open the hopper lid and fill the hopper with new mix. The indicator light will turn off after the mix covers the top sensor.

Make sure the mix low indicators on the front of the machine are off to assure successful operation and product dispensing.

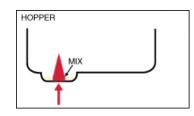
Milkstone build-up can cause an erroneous mix low indication.



Mix Out



The Cause



Solution

Open the hopper lid and fill the hopper with new mix. The mix out indicator light will turn off after the mix covers the bottom sensor. The mix low indicator light will turn off after the mix covers the top sensor.

Note: There may be a beeping sound when a mix light is lit.

When the machine experiences a mix out condition, the machine enters the STANDBY mode of operation.



Brush Clean Counter



The Brush Clean Counter will display the number of hours since the freezer was last brush cleaned.

After hour 99, the brush clean counter will change to a letter and a number (example: A0, A1...B0, B1, etc.).



Hard Locks

FREEZER LOCKED

Hard locks are designed to insure product safety. The machine will go into this mode when the product mix quality becomes compromised.

Hard locks require that the machine be brush cleaned before it can return to the AUTO mode of operation.

Typical Reasons:

HPR>41F (5C) AFTER 4 HR - The mix temperature in the hopper was above $41^{\circ}F$ (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 $41^{\circ}F$ (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>45F (7C) AFTER 1 HR - The mix temperature in the hopper was above $45^{\circ}F$ (7°C) more than one hour.

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

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).

Solution:

Turn off machine, disassemble and clean.



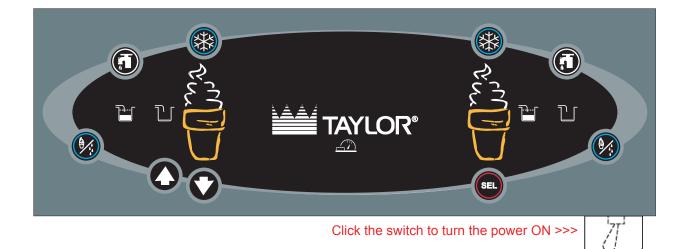
Accessing Data



INTERACTIVE MODULE: Move your mouse across the panel to learn what each part does.

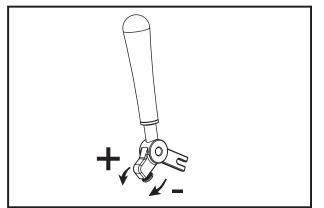


Menu Simulator





Calibration: Draw Handle



Use the screw on the draw handle to control the speed of product dispensing. For optimum product quality the rate of dispensing should be 5 to 7.5 oz (142-213 g) in a 10 sec. draw. If the dispensing rate is set higher or lower, the risk is poor product quality and potential damage to the machine.

To increase the flow rate, turn the screw clockwise, and counter-clockwise to decrease the flow rate.

The draw handle adjustment knob is intended to slow the product delivery speed.



Freezing Cylinder Assembly

Step 1

Before installing the beater drive shaft, lubricate the groove on the beater drive shaft.

Step 2

Slide the beater drive shaft boot seal over the small end of the beater drive shaft and engage into the groove on the shaft.

Step 3

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.

Step 4

Apply an even coat of lubricant to the shaft. DO NOT lubricate the hex end.

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 5

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

Step 6

Before installing the beater assembly, check the scraper blades. If they are in good condition, 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.

Step 7

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

Step 8

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.

Make sure the beater assembly is in position over the drive shaft. Turn the beater slightly to be certain that the beater is properly seated. When in position, the beater will not protrude beyond the front of the freezing cylinder.

Step 9

Repeat these steps for the other side of the machine.



Freezing Cylinder Assembly

Step 10

To assemble the freezer door, place the door gaskets into the grooves on the back of the freezer door. Slide the front bearings over the baffle rods. The flanged edges should be against the door. DO NOT lubricate the gaskets or bearings.

Step 11

Slide the two o-rings into the grooves on each prime plug. Apply an even coat of Taylor Lube to the o-rings and shafts.

Step 12

Insert the prime plugs into the holes in the top of the freezer door and push down.

Step 13

To install the freezer door, insert the baffle rods through the beaters in the freezing cylinders.

With the door seated on the freezer studs, install the handscrews. Use the long handscrews on the top and the short handscrews on the bottom. Tighten them equally in a criss-cross pattern to insure the door is snug.

Step 14

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.

Step 15

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

Step 16

Insert the draw valves from the bottom until the slot in the draw valves come into view.

Step 17

Slide the fork of the draw handles in the slot of the draw valves, starting from the right. Slide the pivot pin through each draw handle as they are inserted into the draw valves.

Note: This freezer features three adjustable draw handles 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 18

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

Step 19

Slide the two drip pans into the holes in the side panels.

Step 20

Install the front drip tray and splash shield under the door spouts.

Step 21

Slide two o-rings on one end of the feed tube. Slide two o-rings on the other end of the feed tube.

Step 22

Slide the small o-ring into the groove of the air orifice. Do not lubricate the o-ring.

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 23

Install the air orifice into the hole in the top of the feed tube (end without the small hole on the side).

Step 24

Lay the feed tube (with the air orifice installed) in the bottom of the mix hopper for sanitizing.

Step 25

Repeat steps 21 through 24 for the other side of the machine.



Freezing Cylinder: Reset



If the mix gets too cold, the reset button will "trip" to protect the beater motor. This could be caused by insufficient mix in the freezing cylinder. If this occurs, inspect the feed tube to verify that it is properly assembled.



Freezing Cylinder: Checklist

- 1. Replace scraper blades that are nicked or damaged. Before installing beater, be certain that scraper blades are properly attached.
- 2. Check rear shell bearing for signs of wear (excessive mix leakage in side drip pan) and be certain it is properly cleaned.
- 3. Using a brush 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"
- Check the condenser and filters for accumulation of dirt and lint. A dirty condenser or filter will reduce the efficiency and capacity of the machine. The condenser should be cleaned monthly with a soft brush. The filter should be cleaned weekly.
- 7. On water cooled units, 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 mechanic.



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.

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

Pour the sanitizing solution into the mix hopper.

Step 4

Brush the exposed sides of the hopper.

Step 5

Place the power switch in the ON position.

Step 6

Touch the WASH symbol. This will cause the sanitizing solution in the freezing cylinder to be agitated.

Step 7

With an empty pail beneath the door spouts, raise the prime plug.

Step 8

When a steady stream of sanitizing solution is flowing from the prime plug opening in the bottom of the freezer door, open the draw valve. Momentarily open the center draw valve to sanitize the center door spout. Draw off the remaining sanitizing solution.

Step 9

Once the sanitizer stops flowing from the door spout, touch the WASH symbol and close the draw valve.

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

Step 10

Lubricate the feed tube o-rings on the end with the small hole on the side. Stand the feed tube in the corner of the hopper.

Step 11

Repeat these steps for the other side of the machine.



Priming

Note: Use only FRESH MIX when priming the freezer.

Step 1

Place an empty mix pail beneath the door spouts. With the prime plug in the UP position, pour 2-1/2 gallons (9.5 liters) of FRESH mix into the mix hopper and allow it to flow into the freezing cylinder. Open the draw valve to remove all sanitizing solution. When only fresh mix is flowing, close the draw valve.

Step 2

Once a steady stream of mix starts to flow from the prime plug opening in the bottom of the freezer door, push the prime plug down.

Step 3

Install the end of the feed tube with the hole in it into the mix inlet hole in the mix hopper. Make sure the air orifice is installed in the feed tube.

Step 4

Select the AUTO symbol.

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

Repeat these steps for the other side of the machine.



Draining Product

Step 1

Remove the hopper cover and the feed tube. Take them to the sink for cleaning.

Step 2

With a pail beneath the door spouts, touch the WASH symbol and open the draw valve.

Step 3

If local health codes permit the use of rerun, place a sanitized, NSF approved stainless steel rerun container beneath the door spout. Press the WASH key and open the draw valve. Drain the remaining product from the freezing cylinder and mix hopper. When the flow of product stops, press the WASH key and close the draw valve. Place the sanitized lid on the rerun container and place it in the walk-in cooler.

Note: If local health codes DO NOT permit the use of rerun, the product must be discarded. Follow the instructions in the previous step, except drain the product into a mix pail and properly discard the mix.



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 and the mix level sensing probe. Using the double ended brush, brush clean the mix inlet hole.

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

Step 2

With a mix pail beneath the door spout, raise the prime plug and touch the WASH symbol.

Step 3

When a steady stream of rinse water is flowing from the prime plug opening in the bottom of the freezer door, open the draw valve.

Step 4

Drain all the rinse water from the door spout. Close the draw valve, and touch the WASH symbol, cancelling the Wash mode.

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

Repeat these steps for the other side of the machine.



Hopper Cleaning

Note: Failure to follow these steps will result in milk-stone build-up.

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

Push the prime plug down. Pour the cleaning solution into the hopper and allow it to flow into the freezing cylinder.

Step 3

Using the white hopper brush, clean the mix hopper and the mix level sensing probes. 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 symbol. 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 spouts and raise the prime plug.

Step 6

When a steady stream of cleaning solution is flowing from the prime plug opening in the bottom of the freezer door, open the draw valve. 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 symbol, cancelling the Wash mode.

Repeat these steps on the other side of the machine.



Disassembly

Step 1

Place the power switch 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 from the beater assembly.

Step 4

Remove the drive shaft seal from the drive shaft.

Step 5

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

Repeat these steps on the other side of the machine.

Step 6

Remove the front drip tray and splash shield.

Step 7

Remove all drip pans. Take them to the sink for cleaning.

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



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

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 holes in the freezer door.

Step 3

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

Step 4

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.

Repeat these steps on the other side of the machine.

Step 5

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



Troubleshooting: Hopper

The mix in the hopper is too cold.

Cause: The hopper temperature is out of adjustment. Remedy: Call an authorized service technician.

The mix in the hopper is too warm.

Cause: Hopper cover is not in position. Remedy: Clean and sanitize hopper cover and place in position.

Cause: The hopper temperature is out of adjustment. Remedy: Call an authorized service technician.

Mix Low and Mix Out probes are not functioning.

Cause: Milkstone build-up in the hopper. Remedy: Clean hoppers thoroughly.



Troubleshooting: LCD

No control panel functions with power switch ON.

Cause: Machine is unplugged. Remedy: Plug into wall receptacle.

Cause: Circuit breaker is OFF or blown fuse. Remedy: Turn the circuit breaker ON or replace the fuse.



Troubleshooting: Cylinder

Freezing cylinder walls are scored.

Cause: Missing or worn front bearing and scraper blades. Remedy: Install or replace the front bearing and scraper blades.

Cause: Broken freezer door baffle rod. Remedy: Replace freezer door.

Cause: Beater assembly is bent. Remedy: Replace beater assembly.

Cause: Gear box is out of alignment. Remedy: Call an authorized service technician.

The drive shaft is stuck in the drive coupling.

Cause: Mix and lubricant collected in drive coupling. Remedy: Brush clean the shell bearing area regularly.

Cause: Rounded corners of drive shaft, drive coupling, or both. Remedy: Call an authorized service technician.

Cause: Gear box is out of alignment. Remedy: Call an authorized service technician.



Troubleshooting: Door

No product is being dispensed.

Cause: Low on mix. The MIX OUT light is on.

Remedy: Add mix to the mix hopper. Return to AUTO mode.

Cause: The power switch is in the OFF position.

Remedy: Place the power switch in the ON position and select AUTO.

Cause: Beater motor is out on reset, BEATER OVERLOAD message displayed.

Remedy: Turn the machine off. Press the reset button. Restart the machine in AUTO.

Cause: Machine not in AUTO mode. Remedy: Select AUTO and allow machine to cycle off before drawing product.

Cause: The feed tube is not properly installed.

Remedy: Make sure the feed tube is properly installed.

Cause: Freeze-up in mix inlet hole. Remedy: Call an authorized service technician.

Product is collecting on top of the freezer door.

Cause: The top o-ring on draw valve is improperly lubricated or worn. Remedy: Lubricate properly or replace the o-ring.

Excessive mix leakage from the bottom of the door spout.

Cause: Bottom o-ring on draw valve is improperly lubricated or worn. Remedy: Lubricate properly or replace the o-ring.



Troubleshooting: Drip Pan

Excessive mix leakage into the rear drip pan

Cause: The seal on the drive shaft is improperly lubricated or worn. Remedy: Lubricate properly or replace the seal.

Cause: The drive shaft seal is installed inside-out. Remedy: Install correctly.

Cause: Inadequate lubrication of the drive shaft. Remedy: Lubricate properly.

Cause: The drive shaft and beater assembly work forward. Remedy: Call an authorized service technician.

Cause: Worn rear shell bearing. Remedy: Call an authorized service





Troubleshooting: Product

The product is too soft

Cause: Draw rate is set too fast. Remedy: Adjust draw rate of 5 to 7.5 oz. (142-213 g) of product by weight in 10 seconds.

The product is too thick.

Cause: Freezing cylinder not primed correctly. Remedy: Drain the freezing cylinder and reprime the machine.

Cause: The viscosity control is set too cold. Remedy: Call an authorized service technician.

Cause: Freeze-up in mix inlet hole. Remedy: Call an authorized service technician.

Cause: Mix feed tube is installed incorrectly or the air orifice is not installed. Remedy: Brush clean the machine and be sure to install feed tube following the procedures in the Taylor Operator's Manual.

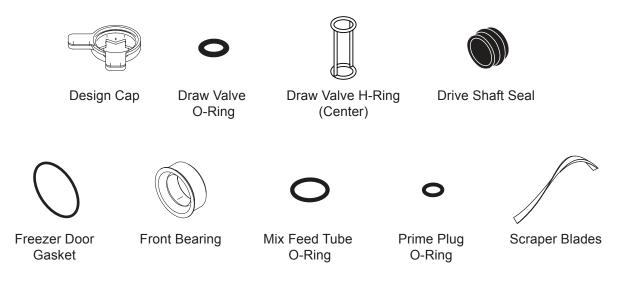
The product is broken down.

Cause: The machine is running too long. Remedy: Replace worn scraper blades, clean air filter, and clean air cooled condensers. Verify that there is proper air space around the freezer. Call a service technician to check the level of refrigerant.



Three Months Parts Replacement

Every 3 months replace the following:



Refer to the Taylor Operator Manual or local Taylor Distributor for part numbers.

Note: For air cooled units, condensers should be cleaned monthly with a soft brush.

Most of the listed parts are included in the tune-up kit.



Six Months Parts Replacement

Every 6 months inspect & replace if necessary the following:



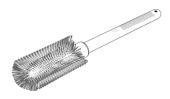




Black Bristle Brush, 1" x 2"

Double-Ended Brush

White Bristle Brush, 1" x 2"



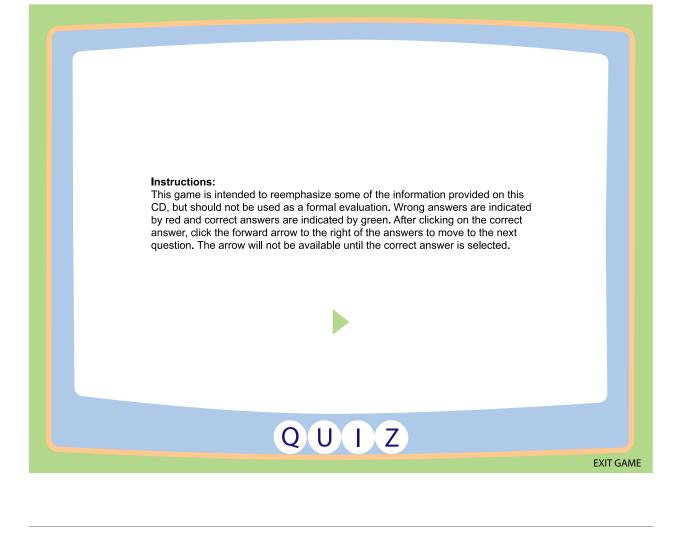
White Bristle Brush, 3" x 7"













| Scote 受力 What will worn scraper blades cause? |
|--|
| A Long running refrigeration times B The mix to become broken down |
| |
| C The freezer to be unable to keep up with customer needs |
| |
| |
| QUIZ |
| EXIT GAI |





| A Product will have incorrect air to mix ratio B The product will freeze too stiff |
|--|
| C No product will dispense D All of the above |
| QUIZ |





| Solution What is the cause when a rear drip pan fills with an excessive amount of mix? |
|--|
| A Worn rear shell bearing B Incorrect lubricating procedures |
| |
| |
| C Worn, damaged or incorrect drive D All of the above |
| |
| |
| |
| QUIZ |
| EXIT GAME |





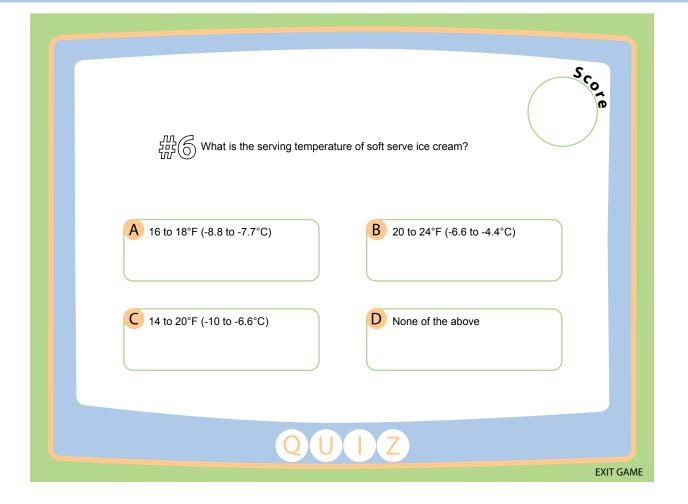
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|--|------|
| A Every 4 months B Every 3 months or as needed | |
| C Never D None of the above | |
| QUIZ | SAME |





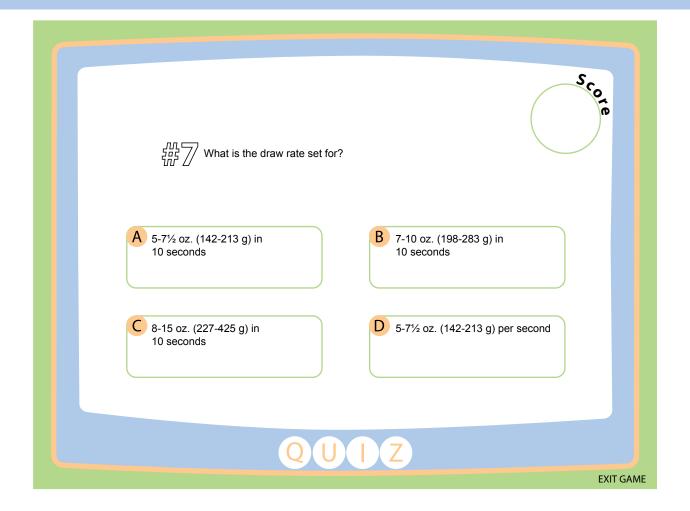
| 野 If the mix out light on the control is lit, what mode will the freezer be in? |
|--|
| A Auto B Wash |
| C Heat D Standby |
| QUIZ |















| What is the term "broken down product" We used to describe? | |
|--|------|
| A Un-servable product B Over-beaten product | |
| C Wet appearing, soft product D All of the above | |
| QUIZ | |
| | GAME |





| How often should tune up kits be installed? | |
|---|------|
| A Monthly B Every 3 months | |
| C Yearly D None of the above | |
| QUIZ | iAME |

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|------|------|
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| デロの What is the access code for entering the operator's menu? | |
|---|------|
| A 7348 B 8309 | |
| C 1234 D None of the above | |
| QUIZ | GAME |







