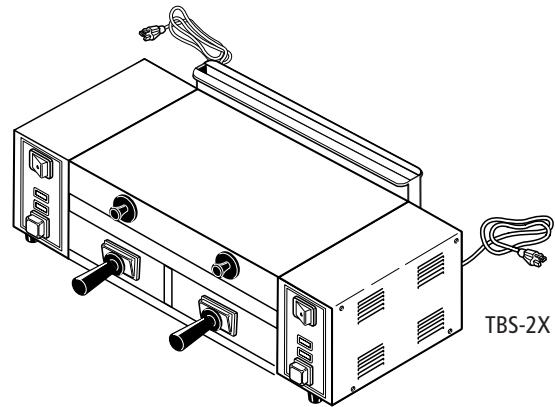


TBS-1X



TBS-2X

Taco Bell Steamer

TBS-1X & TBS-2X

owner's manual

Manufacturing Numbers:

9100400, 9100402, 9100410 & 9100412

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IMPORTANT

A.J. Antunes & Co. reserves the right to change specifications and product design without notice. Such revisions do not entitle the buyer to corresponding changes, improvements, additions or replacements for previously purchased equipment.

IMPORTANT

Keep these instructions for future reference. If the unit changes ownership, be sure this manual accompanies the equipment.

GENERAL

The Taco Bell Steamer produces steam using plain tap water for quick heating and reconstituting of food items. Simple push-button action delivers a fully adjustable impulse of steam. Because the amount of steam is consistent, it removes the guesswork and produces a uniform finished product from one operator to another.

This manual provides the safety, installation, and operating procedures for the Taco Bell Steamer. We recommend that all information contained in this manual be read prior to installing and operating the unit.

Your Taco Bell Steamer is manufactured from the finest materials available and assembled to Roundup's strict quality standards. This unit has been tested at the factory to ensure dependable trouble-free operation.

WARRANTY INFORMATION

Please read the full text of the Limited Warranty printed on the back cover of this manual.

If the unit arrives damaged, contact the carrier immediately and file a damage claim with them. Save all packing materials when filing a claim. Freight damage claims are the responsibility of the purchaser and are not covered under warranty.

- The warranty does NOT extend to:
- Damages caused in shipment or damage as result of improper use.
- Installation of electrical service.
- Installation of plumbing or water supply, or water pressure regulator (if applicable).
- Calibration, adjustment, or maintenance.
- Normal maintenance as outlined in this manual.
- Consumable parts such as gaskets, rubber feet, labels, O-rings, etc.
- Malfunction resulting from improper maintenance or improper/incorrect voltage supply.
- Damage caused by abuse or careless handling.
- Damage from moisture into electrical components.
- Damage from tampering with, removal of, or changing any preset control or safety device.

SERVICE/TECHNICAL ASSISTANCE

If you experience any problems with the installation or operation of your unit, contact your local Roundup Authorized Service Agency.

Fill in the information below and have it handy when calling your Authorized Service Agency for assistance. The serial number is on the specification plate located on the rear of the unit.

Purchased From

Date of Purchase

Model Number

Serial Number

Manufacturing Number

Use only genuine Roundup replacement parts in this unit. Use of replacement parts other than those supplied by the manufacturer will void the warranty. Your Authorized Service Agency has been factory trained and has a complete supply of parts for this unit.

Visit www.ajantunes.com or contact the factory at 1-630-784-1000 to locate your nearest Authorized Service Agency.

Refer to the service agency directory packaged with your manual and fill in the information below.

Authorized Service Agency

Name

Phone Number

Address

IMPORTANT SAFETY INFORMATION

Use the following guidelines for safe operation of the unit.

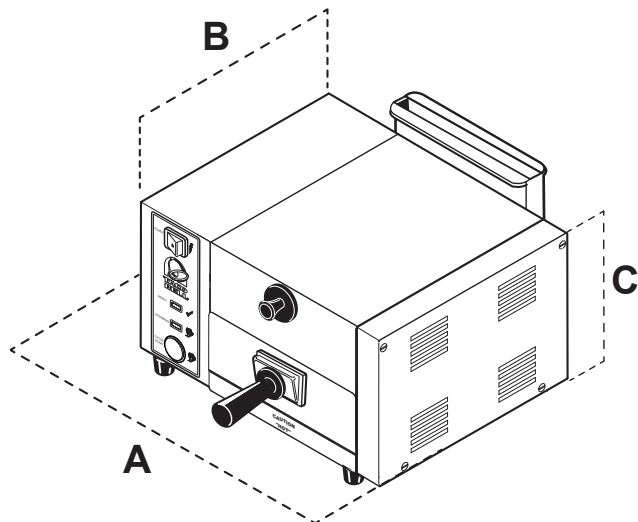
- Read all instructions before using equipment.
- For your safety, the equipment is furnished with a properly grounded cord connector. Do not attempt to defeat the grounded connector.
- Install or locate the equipment only for its intended use as described in this manual. Do not use corrosive chemicals in this equipment.
- Do not operate this equipment if it has a damaged cord or plug, if it is not working properly, or if it has been damaged or dropped.
- This equipment should be serviced by qualified personnel only. Contact your nearest Authorized Service Agency for adjustment or repair.
- Do not block or cover any openings on the unit.
- Do not immerse cord or plug in water.
- Keep cord away from heated surfaces.
- Do not allow cord to hang over edge of table or counter.
- Turn the power off, unplug the power cord, and allow unit to cool down before performing any service or maintenance on the unit.
- The procedures in this manual may include the use of chemical products. These chemical products will be highlighted with bold face letters followed by the abbreviated HCS (Hazard Communication Standard). See Hazard Communication Standard manual for the appropriated Material Safety Data Sheets (MSDS).
- The equipment should be grounded according to local electrical codes to prevent the possibility of electrical shock. It requires a grounded receptacle with separate electrical lines, protected by fuses or circuit breaker of the proper rating.
- All electrical connections must be in accordance with local electrical codes and any other applicable codes.
- Do not clean this appliance with a water jet.

WARNINGS

Be advised of the following warnings when operating and performing maintenance on this unit.

- If the supply cord is damaged, it must be replaced by the manufacturer or its service agent or a similarly qualified person in order to avoid a hazard.
 - Do not modify the power supply cord plug. If it does not fit the outlet, have a proper outlet installed by a qualified electrician.
 - Do not use an extension cord with this appliance.
 - Electrical ground is required on this appliance.
 - Check with a qualified electrician if you are in doubt as to whether the appliance is properly grounded.
 - If a chemical cleaner is used, be sure it is safe to use on cast aluminum. Observe all precautions and warnings on product label.
 - Inspection, testing, and repair of electrical equipment should only be performed by qualified service personnel.
 - This equipment is to be installed to comply with the basic plumbing code of the Building Officials and Code Administrators, Inc. (BOCA) and the Food Service Sanitation Manual of the Food and Drug Administration (FDA).
 - On direct water hook-up units, water pressure must not exceed 30 psi (2.1 kg/cm² or 207 kPa). Higher water pressures will cause poor performance, excessive condensation, and flooding of the Steam Generator. To reduce water pressure, install a water pressure regulator and set water pressure to 20–30 psi (1.4–2.1 kg/cm² or 138–207 kPa). Contact your equipment supplier to purchase a Water Pressure Regulator.
 - To ensure proper steaming characteristics, some calcium/mineral deposits must be present on the generator surface. If, during cleaning, the surface does become free of calcium/mineral deposits, add plain tap water to the surface and allow it to boil off. This may have to be repeated several times to ensure proper steaming characteristics by creating a thin layer of deposits on the surface.
- Do not use a sanitizing solution or abrasive materials. The use of these may cause damage to the stainless steel finish.
 - Chlorides or phosphates in cleaning agents (e.g. bleach, sanitizers, degreasers or detergents) could cause permanent damage to stainless steel equipment. The damage is usually in the form of discoloration, dulling of metal surface finish, pits, voids, holes, or cracks. This damage is permanent and not covered by warranty.
 - The following tips are recommended for maintenance of your stainless steel equipment:
 - Always use soft, damp cloth for cleaning, rinse with clear water and wipe dry. When required, always rub in direction of metal polish lines.
 - Routine cleaning should be done daily with soap, ammonia detergent, and water.
 - Stains and spots should be sponged using a vinegar solution.
 - Finger marks and smears should be rubbed off using soap and water.
 - Hard water spots should be removed using a vinegar solution.

SPECIFICATIONS



| Model No. | Width (A) | Depth (B) | Height (C) |
|-----------|--------------------|------------------|-------------------|
| TBS-1X | 14.15" (359 mm) | 9.7" (246 mm) | 13.4" (340 mm) |
| TBS-2X | 25.75" (654 mm) | 9.7" (246 mm) | 13.4" (340 mm) |



| Model No. | Volts | Watts | Amps | Hertz | Plug Description |
|--|---------|-------|---------|-------|--|
| TBS-1X 9100410 TBS-2X 9100400 (per side) | 208 | 3300 | 15.9 | 50/60 | 6-20P Non-Locking 20 Amp., 250 VAC. |
| TBS-1x 9100412 TBS-1X 9100402 (per side) | 220-240 | 3300 | 13.8-15 | 50/60 | |

SHIPPING WEIGHT

| | |
|---------------|------------------|
| TBS-1X Series | 36 lbs (16.3 kg) |
| TBS-2X Series | 62 lbs (28.1 kg) |

CAPACITIES

| | |
|---------------|------------------------|
| TBS-1X Series | One Taco Bell Product |
| TBS-2X Series | Two Taco Bell Products |

| Model & Mfg. No. | Agency Approvals |
|------------------|---|
| TBS-1X TBS-2X |   |

UNPACKING

1. Remove unit and all packing materials from shipping carton.
2. The box should contain the following
 - Taco Bell Steamer
 - Handle & Handle Guard (Qty. 2 for TBS-2X)
 - Water Quick Disconnect Kit (Qty. 2 for TBS-2X)
 - Water Measuring & Calibration Kit

NOTE: If any parts are missing or damaged, contact Antunes Technical Service IMMEDIATELY at 1-877-392-7854 or 1-630-784-1000.

3. Remove all packing materials and protective coverings from the unit.
4. Remove and wash the Spatula(s) and Liner(s) (Figure 1) in soap and water. Rinse with clean hot water and allow to air dry.
5. Wipe all surfaces of the unit with a hot damp cloth.

NOTE: Do NOT use a dripping wet cloth. Wring out before use.

6. Assemble the Handle and Handle Guard to the Spatula(s) (Figure 1).
7. Re-install Spatula(s).

EQUIPMENT SETUP

GENERAL

When placing the unit into service, pay attention to the following guidelines:

- Make sure the power is off and the unit is at room temperature.
- Do NOT block or cover any openings on the unit.
- Do NOT immerse cord or plug in water.
- Keep cord away from heated surfaces.
- Do NOT allow cord to hang over edge of table or counter.

ELECTRICAL

1. Place the unit on a sturdy, level table or other work surface. Make sure the power is off.
2. Connect the unit to the power supply.

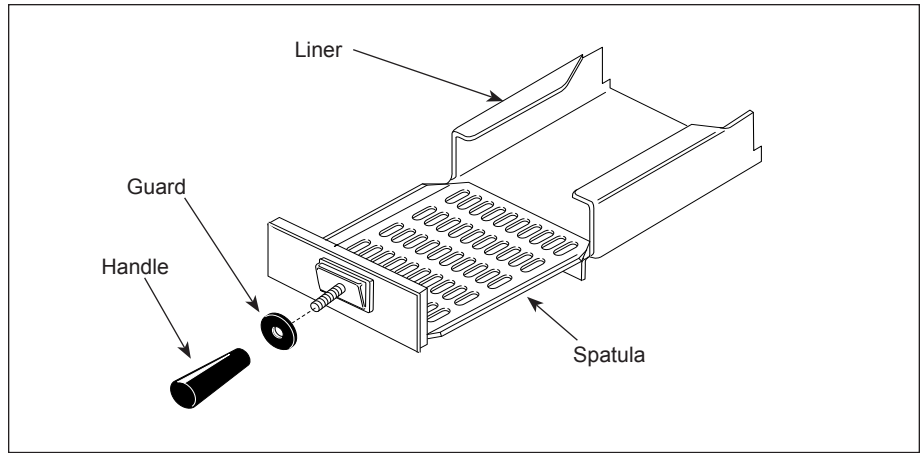


Figure 1. Spatula Assembly

CAUTION
The TBS-2X has two power cords. Connect each plug to a receptacle that is connected to an individual circuit.

CAUTION
All electrical connections must be in accordance with local electrical codes and any other applicable codes.

CAUTION
Water pressure must not exceed 30 psi (2.1 kg/cm² or 207 kPa). Higher water pressures may cause poor performance or flooding. To reduce water pressure, install a water pressure regulator, and set water pressure to 20–25 psi (1.4–1.7 kg/cm² or 138–172 kPa).

PLUMBING

NOTE: Taco Bell Corporation REQUIRES installation of a Water Demineralizer system for supplying water to this equipment. To purchase the water filtration system, contact the approved equipment distributor.

NOTE: Flexible Tubing (not supplied) for water hookup should be a minimum 1/4" (6.5 mm) I.D.

1. Connect the Flexible Tubing to the Quick Disconnect Insert using the supplied hose clamp.
2. Push the Quick Disconnect Insert into the female fitting on the back of the unit until it clicks (Figure 2).

NOTE: The TBS-2X has two fittings on the back of the unit; one for each side.

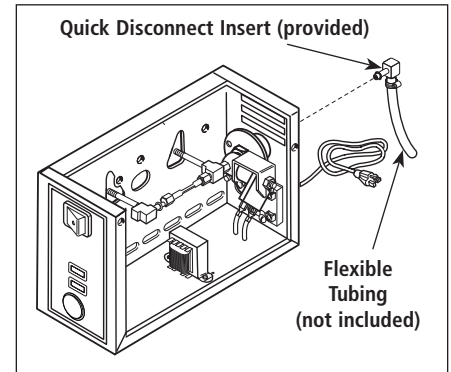


Figure 2. Connecting Water Supply (back of unit)

WARNING
ELECTRICAL SHOCK HAZARD.
Be sure to read all information and follow all safety procedures in the important safety information section of this manual before performing any of these steps.

CAUTION
This equipment is to be installed to comply with the basic plumbing code of the Building Officials and Code Administrators, Inc. (BOCA) and the Food Service Sanitation Manual of the Food and Drug Administration (FDA).

CAUTION
Connect this unit to cold water supply line only. Connecting this unit to a hot water supply line will void the warranty.

INSTALLATION

CALIBRATION

A Water Measuring and Calibration Kit is supplied with your unit and consists of:

- Two 24" Tubes
- One Measuring Cup

⚠ CAUTION ⚠

This procedure exposes hot surfaces. Use extreme care when performing procedure as to avoid personal injury.

1. Turn the power off and allow the unit to cool down before proceeding.
2. Remove the Top Cover, Generator Cover, and Diffuser Plate (Figure 3).
3. Insert the slanted end of the Calibration Tube into Steam Generator hole and push in fully (Figure 4).

NOTE: If tube will not push in easily, the hole could be clogged with mineral deposits. Use a flat-bladed screwdriver to clear deposits out of the holes.

4. Put other end of Calibration Tubes into the Calibration Cup (Figure 4).
5. Turn the power on.
6. Press the **CYCLE START** button and run two complete cycles to purge all air from the tubes.

NOTES: Water may come out of the Calibration Tubes with force. Hold the tubes and cup firmly.

7. Empty all water from the cup, then reinsert the tubes back into the cup.
8. Press the **CYCLE START** button to run one cycle. The cup should contain 0.8 oz (25 ml or 25 cc) water. If the cup contains more or less than this amount, proceed to Step 9.
9. With the unit positioned at the edge of its location surface (Edge of the counter, table, etc.) slide the steamer forward approximately 3" to expose the Water Volume Control on the button of the unit (Figure 5).
10. Using a small screwdriver (Figure 5), carefully and slowly adjust the control clockwise to increase or counterclockwise to decrease the amount of water volume used per cycle.
11. Repeat steps 7 through 10 until the proper amount of water level in the cup is achieved.

NOTE: If steamer does not steam properly after calibration, refer to the Troubleshooting section of this manual.

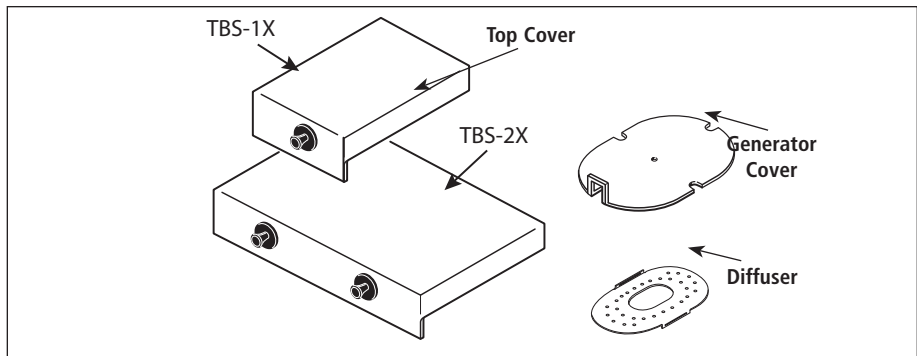


Figure 3. Steamer Components

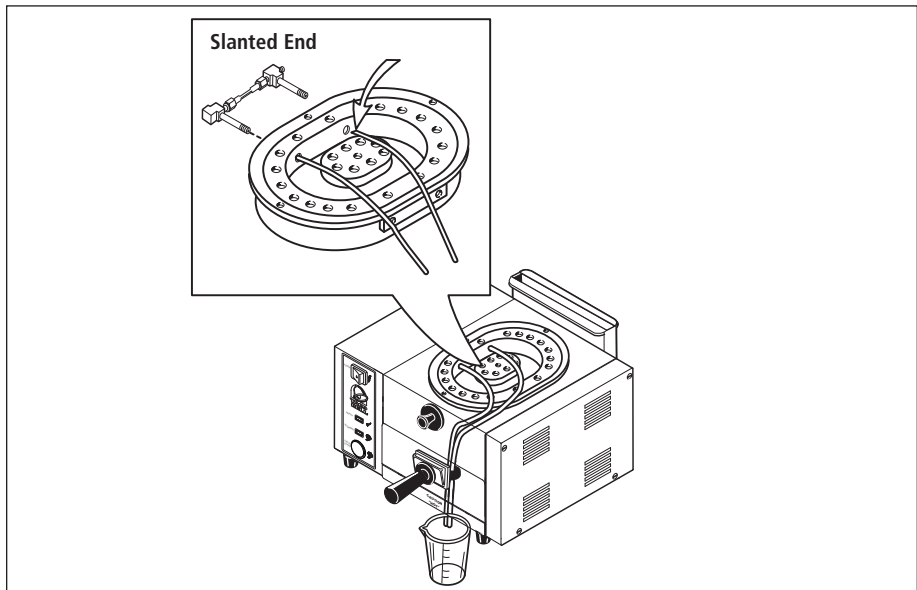


Figure 4. Calibration Tube and Cup

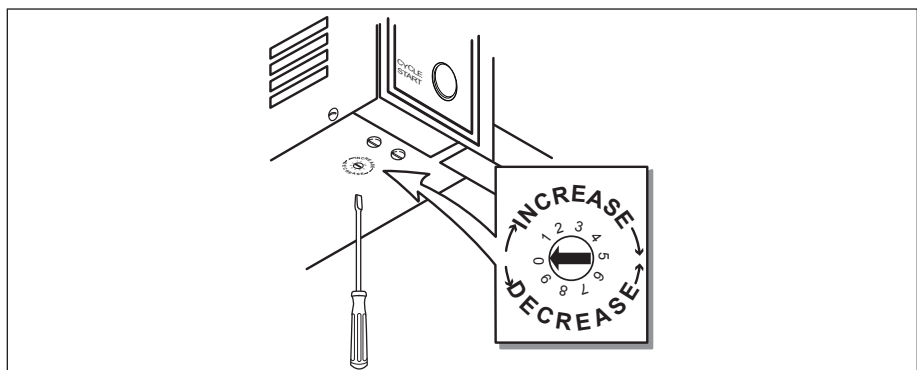


Figure 5. Water Volume Adjustment

NOTE: If the Calibration Kit is missing, use the Calibration Chart (Figure 11) to figure the approximate volume. Turn the water volume control to 0. Determine your water pressure and locate it on the chart (left side), then look to the right to find the volume closest to 0.8 oz. (25 ml or 25 cc). Turn adjustment clockwise to setting shown at top of chart.

OPERATING INSTRUCTIONS

NOTE: Steam generator must be calibrated before initial use. See the section titled Calibration in the Installation section of this manual.

1. Turn the power on and allow the unit to preheat for approximately 20-30 minutes (Figure 6).

NOTE: The Green Ready Light (Figure 6) will flash during warm-up. The flashing light will become steady when the unit is up to temperature. If the Green Ready Light continues to flash after warm-up, or starts to flash during operation, see the Troubleshooting section in this manual.

NOTE: Do NOT push the CYCLE START button during warm-up. The flashing Green Ready Light indicates unit is not up to temperature. If the CYCLE START button is pressed while the green light is flashing, nothing will happen.

2. Pull out the Spatula and place the product to be steamed onto the Spatula.
3. Push the Spatula fully into the steamer.
4. Press and release the **CYCLE START** button. The Green Ready Light will go out and the Yellow Steaming Light will come on and remain lit for the entire steaming cycle.
5. At the end of the steaming cycle (approximately 7 seconds), an audible signal will sound for 3 seconds and the Green Ready Light will come back on, indicating the product is ready to be served.
6. Carefully remove the steamed product.

⚠ WARNING ⚠

To avoid injury, use caution when pulling the Spatula out from unit. Be sure to allow steam to escape before putting hands or face over the steamer.

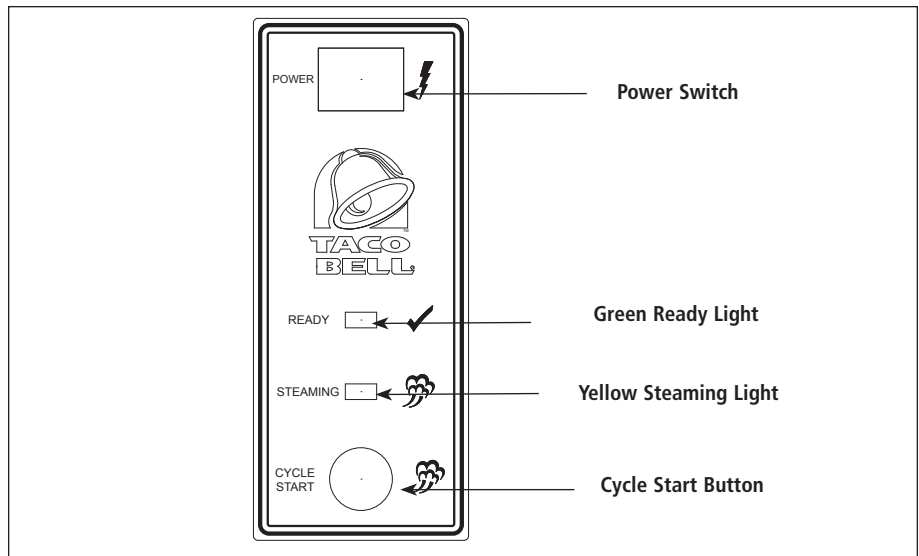


Figure 6. TBS-1X Operating Controls

HI-LIMIT THERMOSTAT

A hi-limit thermostat will turn off electrical power to the generator and Transformer circuits if the unit overheats. Turn unit off and allow to cool; the hi-limit thermostat will automatically reset when the unit cools down. If the unit continues to shut off due to overheating, contact your Roundup Authorized Service Agency.

⚠ WARNING ⚠

Turn the power off, unplug the power cord, and allow the unit to cool down before performing any service or maintenance. The TBS-2X has two power cords. Make sure both power cords are unplugged.

⚠ CAUTION ⚠

Chlorides or phosphates in cleaning agents (e.g. bleach, sanitizers, degreasers or detergents) could cause permanent damage to stainless steel equipment. The damage is usually in the form of discoloration, dulling of metal surface finish, pits, voids, holes, or cracks. This damage is permanent and NOT covered by warranty. The following tips are recommended for maintenance of your stainless steel equipment:

- Always use soft, damp cloth for cleaning, rinse with clear water and wipe dry. When required, always rub in direction of metal polish lines.
- Routine cleaning should be done daily using soap, detergent, and water.
- Stains and spots should be removed using a vinegar solution.
- Finger marks and smears should be rubbed off using soap and water.
- Hard water spots should be removed using a vinegar solution.

⚠ CAUTION ⚠

Do NOT use a sanitizing solution or abrasive materials. The use of these may cause damage to the stainless steel finish.

⚠ CAUTION ⚠

If a chemical cleaner is used, be sure it is safe to use on cast aluminum. Observe all precautions and warnings on product label.

DAILY CLEANING

1. Turn the power off, unplug the power cord(s), and allow the unit to cool down before proceeding.
2. Check the Water Quick Disconnect Fitting and all hose clamp connections for leakage. If leakage is apparent, tighten all clamps or replace part if required.
3. Remove the Top Cover, Spatula(s), and Liner(s) (Figure 7).
4. Remove Chimney from rear of unit by sliding upward and away from unit (Figure 7).
5. Clean the Top Cover, Spatula(s), Liner(s), and Chimney in hot soapy water, rinse in clear water, and wipe dry.
6. Clean the chamber(s) of any product spills.
7. Clean entire unit with a clean, hot, damp cloth (not dripping wet) and wipe dry.
8. Re-install Chimney, Liner(s), Spatula(s), and Top Cover.

MONTHLY MAINTENANCE

Your steamer utilizes an open steam Generator. Water sprayed onto the Generator surface flashes into steam immediately, but the minerals in the water do not steam; they stay on the Generator surface. A small amount of mineral deposits are needed for proper operation, but a build-up of excessive mineral deposits causes poor steaming efficiency and excessive moisture (wet steam) and will eventually severely hinder the steaming action.

CLEANING STEAM GENERATOR

1. Turn the power off, unplug the power cord(s), and allow the unit to cool down before proceeding.
2. Remove Top Cover from unit.
3. Remove Wing Nut and Generator Cover (Figure 7).
4. Remove Steam Diffuser.
5. Examine all Steam Ports (Figure 7). If mineral deposits have formed, place a flat blade screwdriver or wire brush into openings. Use a twisting motion to scrape openings clean.

NOTE: If the mineral deposits come off in flakes or in layers, build-up is excessive.

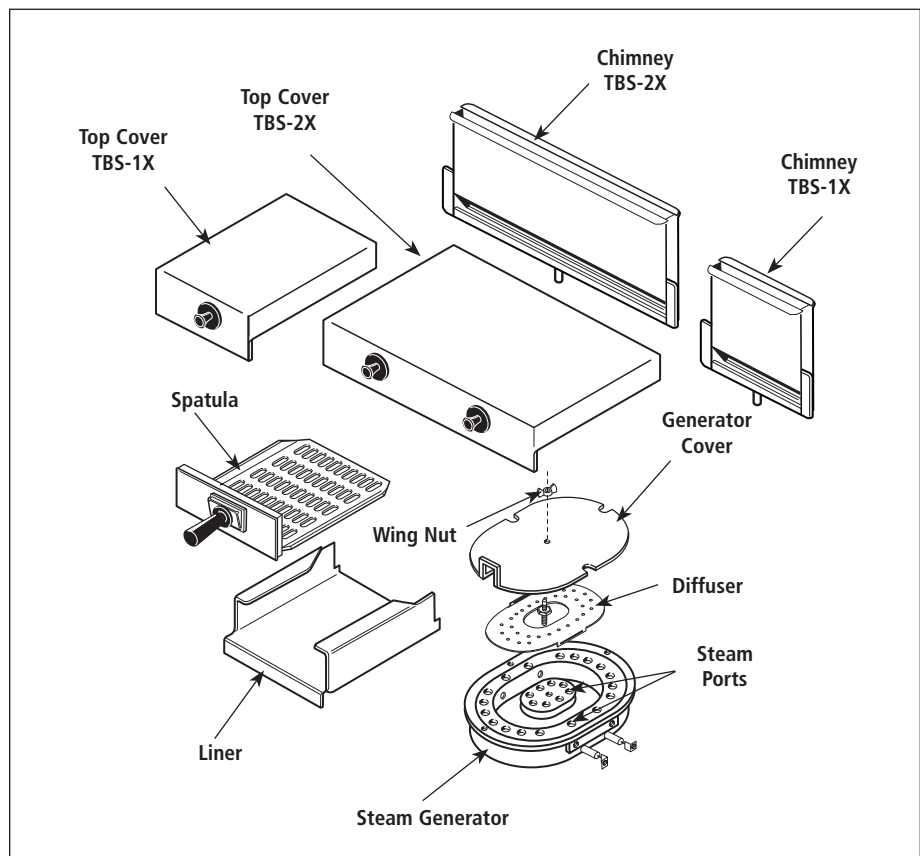


Figure 7. Steamer Components

6. Use a brass or stainless steel wire brush and small scraper to loosen and remove excessive deposits from the Generator surface. If deposits are still excessive and/or difficult to remove, go to Step 7.
7. Pour delimer solution (not supplied) onto the Generator surface. Be sure to follow the delimer manufacturer's directions for proper mixture and use; it must be safe to be used on aluminum.

⚠ CAUTION ⚠

If a chemical cleaner/delimer is used, be sure it is safe to use on cast aluminum. Observe all precautions and warnings on the product label.

8. Remove the delimer solution from the Generator and rinse with clear water to remove traces of delimer.
9. Clean the following parts in hot, detergent water, then rinse in clear water and wipe dry:
 - Spatula • Chimney • Top Cover
 - Liner • Diffuser • Generator Cover
10. Clean Steam Chamber of any product spills.
11. Clean unit surface with a hot, clean, damp cloth (not dripping wet) and wipe dry.
12. Re-install all parts and fasten the Generator Cover.

NOTE: To ensure proper steaming characteristics, some mineral deposits must be present on the Generator surface. If during cleaning, the surface does become free of mineral deposits (bare aluminum), add plain tap water to surface and allow to boil off.

NOTE: In soft water areas, it may be necessary to add a small amount of lime to Generator surface to season it. This will ensure proper steaming characteristics by producing a thin coating of mineral deposits on the surface. Seasoning mixture consists of 75 ml baking soda, 75 ml lime, and 1 gallon water. Pour 1/4" deep of seasoning mixture onto hot Generator. After mixture is converted to steam, the remaining loose powder can be removed.

13. Plug in power cord(s) and water line(s).

CALIBRATION

A Water Measuring and Calibration Kit is supplied with your unit and consists of the following items:

- Two 24" Tubes
- One Measuring Cup

⚠ CAUTION ⚠

This procedure exposes hot surfaces. Use extreme care when performing procedure as to avoid personal injury.

1. Turn the power off and allow the unit to cool down before proceeding.
2. Remove the Top Cover, Generator Cover, and Diffuser Plate (Figure 3).
3. Insert the slanted end of the Calibration Tube into Steam Generator hole and push in fully (Figure 8).

NOTE: If tube will not push in easily, the hole could be clogged with mineral deposits. Use a flat-bladed screwdriver to clear deposits out of the holes.

4. Put other end of Calibration Tubes into the Calibration Cup (Figure 9).
5. Turn the power on.
6. Press the Cycle Start button and run two complete cycles to purge all air from the tubes.

NOTES: Water may come out of the Calibration Tubes with force. Hold the tubes and cup firmly.

7. Empty all water from the cup, then reinsert the tubes back into the cup.
8. Press the Cycle Start button to run one cycle. The cup should contain 0.8 oz (25 ml or 25 cc) water. If the cup contains more or less than this amount, proceed to Step 9.
9. With the unit positioned at the edge of its location surface (Edge of the counter, table, etc.) slide the steamer forward approximately 3" to expose the Water Volume Control on the button of the unit (Figure 10).
10. Using a small screwdriver (Figure 10), carefully and slowly adjust the control clockwise to increase or counterclockwise to decrease the amount of water volume used per cycle.
11. Repeat steps 7 through 10 until the proper amount of water level in the cup is achieved.

NOTE: If steamer does not steam properly after calibration, refer to the Troubleshooting section of this manual.

NOTE: If the Calibration Kit is missing, use the Calibration Chart (Figure 11) to figure the approximate volume. Turn the water volume control to 0. Determine your water pressure and locate it on the chart (left side), then look to the right to find the volume closest to 0.8 oz. (25 ml or 25 cc). Turn adjustment clockwise to setting shown at top of chart.

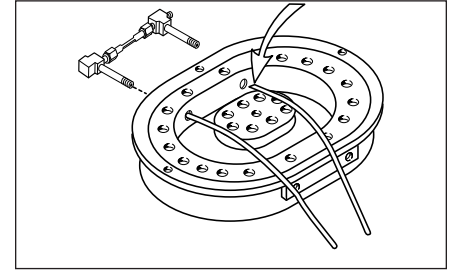


Figure 8. Installing Calibration Tubes

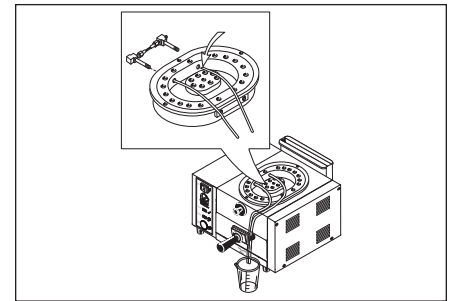


Figure 9. Water Measurement

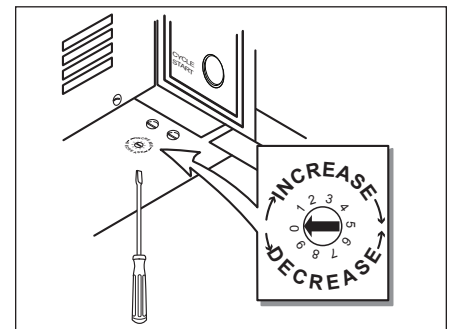


Figure 10. Water Volume Adjustment

| AT 20 PSI (recommended) | Setting Number | Amount of Water used at Setting |
|-------------------------|----------------|---------------------------------|
| | 1 | 20 ml |
| | 2 | 21 ml |
| | 3 | 22 ml |
| | 4 | 23 ml |
| | 5 | 24 ml |
| | 6 | 25 ml (Default Setting) |
| | 7 | 26 ml |
| | 8 | 27 ml |
| | 9 | 28 ml |
| 0 | 29 ml | |

Figure 11. Calibration Chart

TROUBLESHOOTING

WARNING

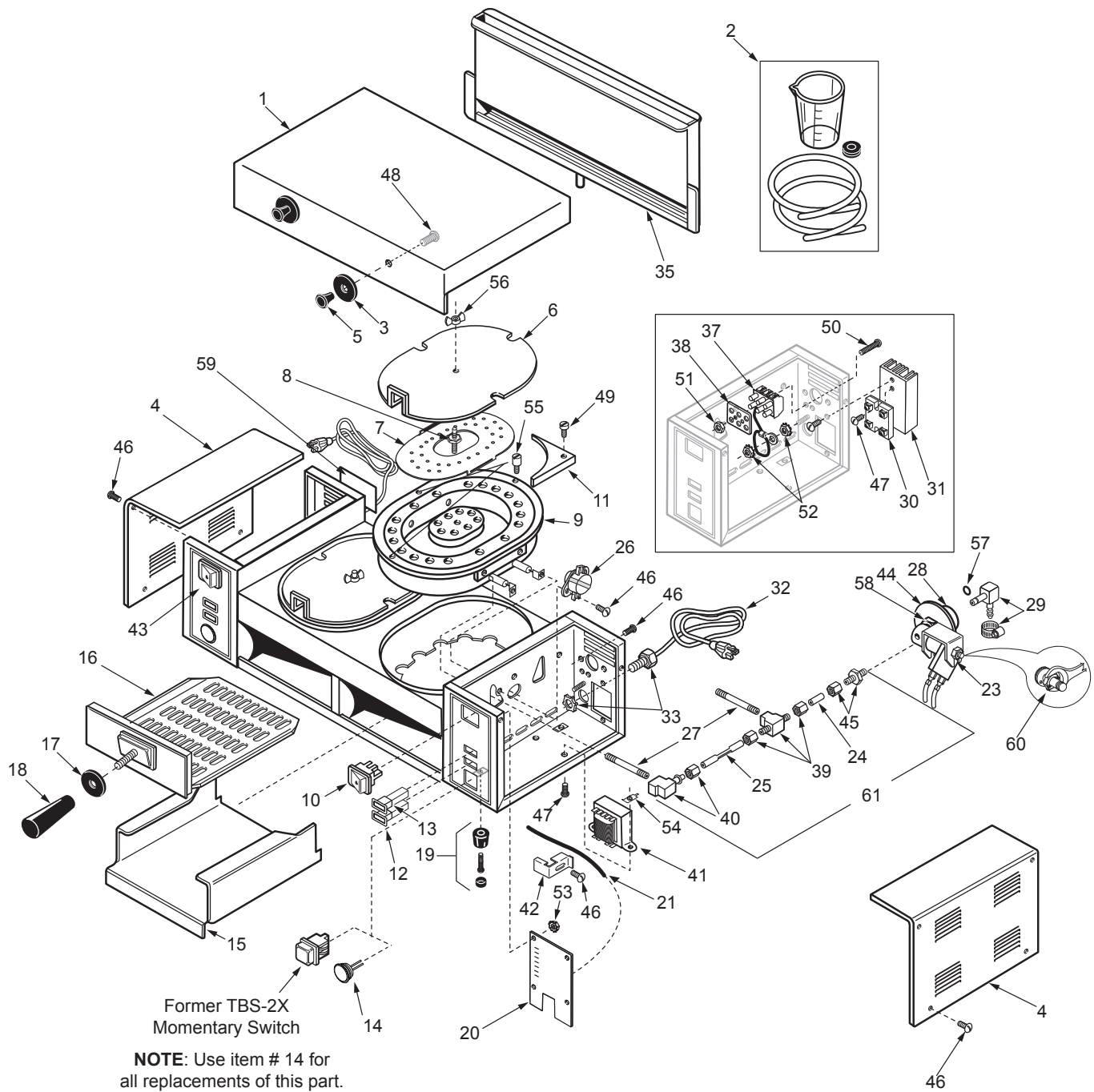
To avoid possible personal injury and/or damage to the unit, inspection, test, and repair of electrical equipment should be performed by qualified service personnel. The unit should be unplugged when servicing, except when electrical tests are required. Use extreme care during electrical circuit tests. Live circuits will be exposed. If the troubleshooting steps listed do not solve your machine problem, contact an Authorized Service Agency for further assistance.

| Problem | Possible Cause | Corrective Action |
|--|--|---|
| Unit steams, but requires 2 or more cycles to melt cheese. | Generator surface temperature is too low. | Verify Generator surface temperature to be 380°F–420°F. |
| | Insufficient or excessive calcium deposits on Generator surface. | Verify Generator surface has a thin calcium coating for proper steaming. Refer to the Maintenance section of this manual. |
| | Generator Cover is warped or loose. | Verify that the Generator Cover Wing Nut is tight. If noticeable steam escapes around the Generator Cover, replace the Generator Cover. |
| | Low water pressure. | Verify Water Pressure regulator is set to 20–30 psi. Adjust accordingly. |
| | Water Volume Adjustment is set too low. | Calibrate unit for proper water volume. Refer to the Maintenance section of this manual. |
| | Generator Steam Ports are restricted. | Verify that the Steam Ports are not restricted. Clean accordingly. |
| | Generator surface is bare. | Generator surface must have a thin calcium coating for proper steaming. Refer to the Maintenance section of this manual. |
| Unit heats but does not steam. | Low or no water pressure in water line. | Remove the Quick Disconnect Insert from the rear of the unit. While holding into an empty cup, press the white plastic tip. Strong steady water flow should be noted. If so, re-engage firmly into the unit. If not present, or low pressure, contact your maintenance person or plumber. |
| | Solenoid Valve Coil is open. | Verify that there are 8-20 Ohms on the coil. |
| | Control Board inoperable or problematic. | Verify 24 VAC to Solenoid Valve Coil when the Cycle Start button is pushed. NOTE: Wires must be left attached to valve and voltage is only read for a split second. If there is no voltage, replace the Control Board |
| | Quick Disconnect is not fully engaged at rear of unit or is damaged. | Remove and re-engage the Quick Disconnect firmly until a click is heard. Replace if damaged. |
| | Cycle Start button inoperable. | Verify continuity when the button is pressed. If there is no continuity replace the button. |
| Excessive condensation in Food Compartment. | Water pressure is too high. | Verify Water Pressure Regulator is set to 20–30 psi. Adjust accordingly. |
| | Water Volume Adjustment is set too high. | Calibrate unit for proper water volume. Refer to the Maintenance section of this manual. |

TROUBLESHOOTING (continued)

| Problem | Possible Cause | Corrective Action |
|---|--|--|
| Unit only leaks water when powered off. | Solenoid Valve is leaking due to debris trapped within its plunger and seat. | Disassemble the Solenoid Valve and clean out the plunger. Reassemble and test. If the a leak is still present, replace the Solenoid Valve. |
| | Solenoid Valve is installed incorrectly. | If the Solenoid Valve was replaced, verify that the "IN" and "OUT" labels on the valve correspond to the water flow. |
| Unit only leaks water when powered on. | Control Board inoperable or problematic. | If 24 VAC is measured across the Solenoid Valve Coil for over 2 seconds (with wires still attached to the coil), replace the Control Board. |
| No heat and the Green Ready Light flashes continuously. | Generator is open. | Verify that there are 13 Ohms for a 208 volt generator and 17.5 Ohms for a 240 volt generator (plus or minus 1 Ohm). Replace if the generator fails test. |
| | Solid State Relay not closing. | Verify that there is 7-10 VDC on relay terminals 3 (+) 4(-). If present, check for line voltage across relay terminals 1 and 2. If present, replace the relay. |
| | Control Board inoperable or problematic. | Verify that there is 7-10 VDC on terminals T5 & T3. If not present, replace the Control Board. |
| | Loose, burnt, or broken wires in heater circuit. | Repair or replace wires. |
| | Circuit is wired incorrectly. | Verify that all wiring matches the Wiring Diagram in this manual. |
| Unit does not operate, power switch is on, but light is off. | Unit unplugged. | Plug Power Cord into the appropriate outlet. |
| | Circuit breaker is off. | Reset the circuit breaker. |
| | Power Cord defective or inoperable. | Check for continuity. |
| | Power Switch defective or inoperable. | |
| Green Ready Light and Yellow Steaming Light turn on and off intermittently. | Hi-Limit is tripping because of an over-heating Generator. | Verify that the generator surface temperature is between 380°F–420°F. If the temperature is above 420°F, contact your maintenance person or Authorized Service Agency. |
| | Hi-Limit is tripping prematurely. | If the Hi-Limit trips within 380°F–420°F, replace the Hi-Limit thermostat. |

REPLACEMENT PARTS



NOTE: This Exploded View displays the TBS-2X. The TBS-1X is virtually the same except with half the components. Refer to the next page for a Parts List that details the types of parts used in each unit as well as the number of parts used in that unit.

REPLACEMENT PARTS – TBS-1X & TBS-2X

| Item | Part No. | Description | Qty. | |
|------|-----------|--|--------|--------|
| | | | TBS-1X | TBS-2X |
| 1 | 0011229 | Top Cover Assy. | 1 | |
| | 0011198 | Top Cover Assy. | 1 | |
| 2 | 7000150 | Calibration Kit | 1 | 1 |
| 3 | 2100250 | Guard, Knob, Top Cover | 1 | 2 |
| 4 | 0503087 | Cover, Control Housing | 1 | |
| 2 | 0503226 | Cover, End Housing | 1 | |
| 5 | 2100247 | Knob | 1 | 2 |
| 6 | 0503085 | Cover, Generator | 1 | 2 |
| 7 | 0503592 | Diffuser | 1 | 2 |
| 8 | 0300129 | Stud | 1 | 2 |
| 9 | 7000430 | Generator Kit, (Incl. #7, 8, 49, 56, & Qty. 3 of #55 & Qty 2 of #27) | 1 | 2 |
| 10 | 4010137 | Power Switch | 1 | 2 |
| 11 | 0021110 | Corner Filler | 4 | 4 |
| 12 | 4060363 | Indicator Light, Yellow, (Steaming Light) | 1 | 2 |
| 13 | 4060362 | Indicator Light, Green (Ready Light) | 1 | 2 |
| 14 | 7000841** | Piezo Switch Kit, Cycle Start | | 2 |
| 15 | 0503315 | Liner, Cavity | 1 | 2 |
| 16 | 0020341 | Spatula | 1 | 2 |
| 17 | 2100249 | Guard, Handle | 1 | 2 |
| 18 | 2100107 | Handle | 1 | 2 |
| 19 | 210K230 | Bumper Recess 1" Leg Kit (Incl. parts for 4 legs) | 1 | 1 |
| | 210K123 | 4" Leg Kit (Incl. 1 leg) | 4 | 4 |
| | 210K134 | 4" Leg Kit (Incl. 4 legs) | 1 | 1 |
| 20 | 4070113 | Control Board | 1 | 2 |
| 21 | 4050135 | Thermocouple Assy. | 1 | 2 |
| 23 | 4040145 | Solenoid Valve, 24 VAC | 1 | 2 |
| 24 | 2000202 | Tube, Inlet | 1 | 2 |
| 25 | 2000203 | Tube, Restrictor | 1 | 2 |
| 26 | 4030222 | Hi-limit Thermostat | 1 | 2 |
| 27 | 2190107 | Pipe (see Note 2) | 2 | 4 |
| 28 | 2080117 | Connector, Quick Disconnect Female | 1 | 2 |
| 29 | 7000139 | Connector, Quick Disconnect Male | 1 | 2 |
| 30 | 405K125 | Relay, Solid State | 1 | 2 |
| 31 | 4050180 | Heat Sink | 1 | 2 |
| 32 | 0700452 | Power Cord | 1 | 2 |
| 33 | 040K251 | Strain Relief | 1 | 2 |

| Item | Part No. | Description | Qty. | |
|------|----------|---|--------|--------|
| | | | TBS-1X | TBS-2X |
| 35 | 0021133 | Chimney | 1 | 1 |
| | 0021136 | Chimney | 1 | 1 |
| 36 | 0700554 | Wire Set (not shown) | 1 | 2 |
| 37 | 7000136 | Terminal Block Kit (Includes #38, 50, & 51) | 1 | 2 |
| 38 | 100P967 | Label, Marking | 1 | 2 |
| 39 | 2040146 | Tee, Female | 1 | 2 |
| 40 | 2040145 | Elbow, Female | 1 | 2 |
| 41 | 7000319 | Transformer | 1 | 2 |
| 42 | 0503093 | Retainer, Thermocouple | 1 | 2 |
| 43 | 1000975 | Label, Control Panel TBS-2X Units | | 2 |
| | 1001441 | Label, Control Panel TBS-1X Units | 1 | |
| 44 | 0503171 | Bracket, Mounting | 1 | 2 |
| 45 | 2040103 | Valve Connector | 1 | 2 |
| 46 | 308P103* | Screw, #8-32 x 1/4" | 1 | 1 |
| 47 | 308P105* | Screw, #8-32 x 1/2" | 1 | 1 |
| 48 | 308P104* | Screw, #8-32 x 3/8" | 1 | 1 |
| 49 | 306P136* | Screw, #8-32 x 5/8" | 1 | 1 |
| 50 | 306P123* | Screw, Stainless Steel, #6-32 x 7/8" | 1 | 1 |
| 51 | 306P101* | Nut, Hex, #6-32 | 1 | 1 |
| 52 | 308P143* | Nut, Hex, KEPS, #8-32 | 1 | 1 |
| 53 | 3048105* | Nut, Hex, Zinc, #4-40 | 1 | 1 |
| 54 | 300P102* | Nut, Tinnerman, #8-32 | 1 | 1 |
| 55 | 306P134 | Screw, #6-32 x 3/8" | 3 | 3 |
| 56 | 325P170* | Wingnut, Cast Iron, 1/4"-20 | 1 | 1 |
| 57 | 020P117* | O-ring | 1 | 1 |
| 58 | 362P102* | Lock Washer, Toothed | 1 | 1 |
| 60 | 7000299 | Nut (3-Pak) See Note 1 | 1 | 1 |
| 61 | 7000695 | Water Fitting Kit (Incl. #24, 25, 39, 40, & 45) | 1 | 2 |

* Only available in packages of 10.

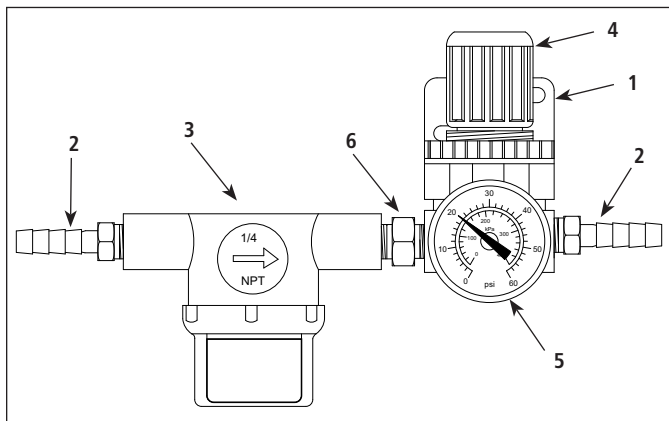
NOTE 1: This special wrench nut is required to separate the stem from the solenoid valve on older solenoid valves

NOTE 2: Always use thread seal tape on threads and tighten until very snug.

**** Part # 14 should be ordered for replacement of the TBS-2X Cycle Start button and for the TBS-1X Cycle Start Button.**

REPLACEMENT PARTS – TBS-1X & TBS-2X (continued)

OPTIONAL WATER PRESSURE REGULATOR KIT (P/N 7000314)

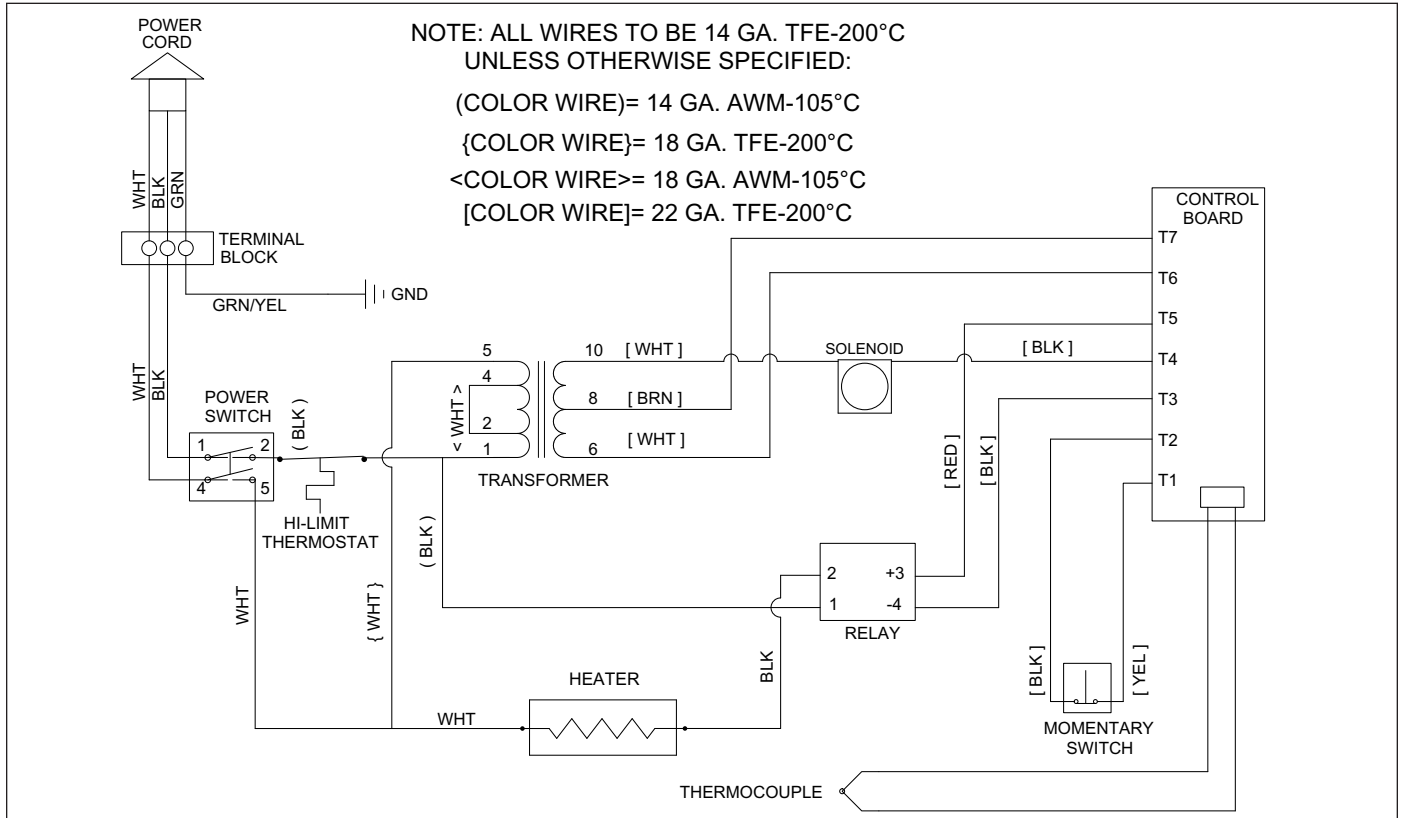


General: This kit protects your equipment from any foreign debris in the water line that could get into the food, damage the unit's solenoid (causing the unit to leak or flood) and also prevents excessive and/or fluctuation water pressure from interfering with the equipment's proper and consistent operation.

The 7000314 Regulator Kit consists of the following items:

| Ref. | Part No. | Description | Qty. |
|------|----------|----------------------------------|------|
| 1 | 0503849 | Bracket | 1 |
| 2 | 2040130 | Male Adapter, Barbed - 1/4" | 2 |
| 3 | 2090127 | Strainer - 1/4 NPT | 1 |
| 4 | 2170113 | Regulator, Pressure | 1 |
| 5 | 2170114 | Gauge, Water Pressure | 1 |
| 6 | 2190129 | Nipple, 1/4 NPT x 1/4" NPT | 1 |
| 7 | 2110104 | Clamp, Worm Drive (not shown) | 2 |
| 8 | 1010790 | Instruction Sheet (not shown) | 1 |

WIRING DIAGRAM



LIMITED WARRANTY

Equipment manufactured by Roundup Food Equipment Division of A.J. Antunes & Co. has been constructed of the finest materials available and manufactured to high quality standards. These units are warranted to be free from electrical and mechanical defects for a period of one (1) year from date of purchase under normal use and service, and when installed in accordance with manufacturer's recommendations. To insure continued operation of the units, follow the maintenance procedures outlined in the Owner's Manual. During the first 12 months, electro-mechanical parts, non-overtime labor, and travel expenses up to 2 hours (100 miles/160 km), round trip from the nearest Authorized Service Center are covered.

1. This warranty does not cover cost of installation, defects caused by improper storage or handling prior to placing of the Equipment. This warranty does not cover overtime charges or work done by unauthorized service agencies or personnel. This warranty does not cover normal maintenance, calibration, or regular adjustments as specified in operating and maintenance instructions of this manual, and/or labor involved in moving adjacent objects to gain access to the equipment. This warranty does not cover consumable/wear items. This warranty does not cover damage to the Load Cell or Load Cell Assembly due to abuse, misuse, dropping of unit/shock loads or exceeding maximum weight capacity (4 lbs). This warranty does not cover water contamination problems such as foreign material in water lines or inside solenoid valves. It does not cover water pressure problems or failures resulting from improper/incorrect voltage supply. This warranty does not cover Travel Time & Mileage in excess of 2 hours (100 miles/160 km) round trip from the nearest authorized service agency.
2. Roundup reserves the right to make changes in design or add any improvements on any product. The right is always reserved to modify equipment because of factors beyond our control and government regulations. Changes to update equipment do not constitute a warranty charge.
3. If shipment is damaged in transit, the purchaser should make a claim directly upon the carrier. Careful inspection should be made of the shipment as soon as it arrives and visible damage should be noted upon the carrier's receipt. Damage should be reported to the carrier. This damage is not covered under this warranty.
4. Warranty charges do not include freight or foreign, excise, municipal or other sales or use taxes. All such freight and taxes are the responsibility of the purchaser.
5. THIS WARRANTY IS EXCLUSIVE AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OR MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, EACH OF WHICH IS HEREBY EXPRESSLY DISCLAIMED. THE REMEDIES DESCRIBED ABOVE ARE EXCLUSIVE AND IN NO EVENT SHALL ROUNDUP BE LIABLE FOR SPECIAL CONSEQUENTIAL OR INCIDENTAL DAMAGES FOR THE BREACH OR DELAY IN PERFORMANCE OF THIS WARRANTY.



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