



IMPORTANT FOR FUTURE REFERENCE

Please complete this information and retain this manual for the life of the equipment:

Model #: _____

Serial #: _____

Date Purchased: _____

ENGLISH

Installation & Operation Manual

**For Gas Fryers Covering Models
20, 24, 26 and 34**



TO THE PURCHASER, OWNER AND STORE MANAGER

Please review these warnings prior to posting them in a prominent location for reference.

TO THE PURCHASER

Post in a prominent location the instructions to be followed in the event that an operator smells gas. Obtain this information from your local gas supplier.

WARNING

DO NOT store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

WARNING

Improper installation, alteration, service or maintenance can cause property damage, injury or death. Read the installation, operating and maintenance instructions thoroughly before installing or servicing this appliance.

WARNING

Installation, maintenance and repairs should be performed by a Pitco Authorized Service and Parts (ASAP) company technician or other qualified personnel. Installation, maintenance or repairs by an unauthorized and unqualified personnel will void the warranty.

WARNING

Installation and all connections must be made according to national and local regulations and codes in force.

WARNING

During the warranty period if a customer elects to use a non-original part or modifies an original part purchased from Pitco and/or its Authorized Service and Parts (ASAP) companies, this warranty will be void. In addition, Pitco and its affiliates will not be liable for any claims, damages or expenses incurred by the customer which arises directly or indirectly, in whole or in part, due to the installation of any modified part and/or received from an unauthorized service center.

WARNING

This appliance, when installed, must be electrically grounded in accordance with local codes, or in the absence of local codes, with the National Electrical Code, ANSI/NFPA 70, or the Canadian Electrical Code, CSA C22.2, as applicable.

WARNING

Adequate means must be provided to LIMIT the movement of this appliance without depending on the gas or electrical cord connection. Single appliances equipped with legs must be stabilized by installing anchor straps. All appliances equipped with casters must be stabilized by installing restraining chains.

WARNING

An appliance equipped with casters and a flexible gas line must be connected to the gas supply with a quick disconnect device. This quick disconnect must comply with ANSI Z24.41.

WARNING

DO NOT alter or remove structural material on the appliance to accommodate placement under a ventilation hood.

WARNING

This appliance is intended for professional use only and should be operated by fully trained and qualified personnel.

WARNING

If the appliance is equipped with a power cord and it is damaged, it must be replaced by a Pitco Authorized Service and Parts (ASAP) company technician, or a similarly qualified person in order to avoid a hazard.

WARNING

The power supply must be disconnected before servicing, maintaining or cleaning this appliance.

WARNING

The appliance is NOT jet stream approved. DO NOT clean the appliance with a water jet.

WARNING

DO NOT attempt to move this appliance or transfer hot liquids from one container to another when the unit is at operating temperature or filled with hot liquids. Serious personal injury could result if skin comes in contact with the hot surfaces or liquids.

WARNING

DO NOT sit or stand on this appliance. The appliance's front panel, tank, splash back, tank cover, workshelf, drain board is not a step. Serious injury could result from slipping, falling or contact with hot liquids.

WARNING

NEVER use the appliance as a step for cleaning or accessing the ventilation hood. Serious injury could result from slips, trips or from contacting hot liquids.

WARNING

The oil/shortening level should NOT fall below the minimum indicated level line at any time. The use of old shortening can be dangerous as it will have a reduced flash point and be more prone to surge boiling.

WARNING

The particles, crumbs and cracklings from the crumb tray/catch (if supplied) in a filtering system must be emptied into a fireproof container at the end of the frying operation each day. Some food particles can spontaneously combust into flames if left soaking in certain oil/shortening materials.

WARNING

Completely shut the appliance down when shortening/oil is being drained from the appliance. This will prevent the appliance from heating up during the draining and filling process. Serious injury can occur.

WARNING

This appliance is intended for indoor use only.

WARNING

DO NOT operate appliance unless all panels and access covers are attached correctly.

WARNING

It is recommended that this appliance be inspected by a qualified service technician for proper performance and operation on a yearly basis.

WARNING

There is an open flame inside this appliance. The unit may get hot enough to set nearby materials on fire. Keep the area around the appliance free from combustibles.

WARNING

DO NOT supply the appliance with a gas that is not indicated on the data plate. If you need to convert the appliance to another type of fuel, contact your dealer.

WARNING

DO NOT use an open flame to check for gas leaks!

WARNING

If gas flow to appliance is interrupted, or pilots extinguish, wait 5 minutes before attempting to relight the pilot to allow any residual gas in appliance to dissipate.

WARNING

Ensure that the appliance can get enough air to keep the flame burning correctly. If the flame is starved for air, it can give off a dangerous carbon monoxide gas. Carbon monoxide is a clear odorless gas that can cause suffocation.

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1 INSTALLATION**1.1 CHECKING YOUR NEW APPLIANCE**

Your new Pitco appliance has been carefully packed into one crate. Every effort has been made to ensure that it is delivered to you in perfect condition. As you unpack your new appliance, inspect each of the pieces for damage. If something is damaged, **DO NOT** sign the bill of lading. Contact the shipper immediately; the shipper is only responsible for 15 days after delivery. As you unpack the appliance and its accessories be careful to keep the weight of the appliance evenly distributed.

Locate your Pitco model number and serial number on the inner door of the appliance and the find the date purchased. Write this information on the front cover of this manual for future reference.

If you have completed the above steps that are applicable to the appliance you purchased, the appliance is now ready to be installed. Although it may be possible for you to install and set up your new appliance, it is **STRONGLY** recommended that you have this done by qualified professionals. A qualified professional will ensure that the installation is safe and meets local building and fire codes.

WARNING
DO NOT sit or stand on this appliance. The appliance's front panel, tank, splash back, tank cover, work shelf, drain board is not a step. Serious injury could result from slipping, falling or contact with hot liquids.

1.2 INSTALLATION CLEARANCES

The clearances shown below are for combustible and non-combustible installations and will allow for safe and proper operation of your appliance.

	Combustible Construction Inches (centimeters)	Non Combustible Construction Inches (centimeters)
Back	6.0" (15.24cm)	0.0" (0.0cm)
Sides	6.0" (15.24cm)	0.0" (0.0cm)
Counter	6.0" (15.24cm)	6.0" (15.24cm)

In addition to the above clearances there must also be at least 16 inches (40.64cm) of aisle space in front of the unit.

<p style="text-align: center;">WARNING</p> <p>DO NOT obstruct the flow of ventilation, or air openings around the appliance. Adequate clearance around the appliance is necessary for servicing and proper component ventilation. Ensure that you meet the minimum clearance requirements specified in this manual.</p>	<p style="text-align: center;">WARNING</p> <p>DO NOT install this appliance next to a water cooker without an appropriate splash guard. A splash over of water into the hot oil may cause a flash fire.</p>
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CAUTION

To prevent equipment damage and/or personal injury, do not tilt the appliance onto any two of its casters or legs, or pull the appliance by the splash back.

1.3 LEG/CASTER INSTALLATION AND LEVELING

When you receive your appliance it is completely assembled with the possible exception of the legs (or casters). This appliance must be installed with legs or casters or sealed to a base; it cannot be curb mounted. Curb mounting will seriously inhibit this appliance's ability to effect proper component ventilation. The legs/casters must be installed before connecting the appliance to the power supply. The legs provide the necessary height to meet sanitation requirements and assure adequate air supply to the combustion system and for electrical component ventilation. Use the following procedure.

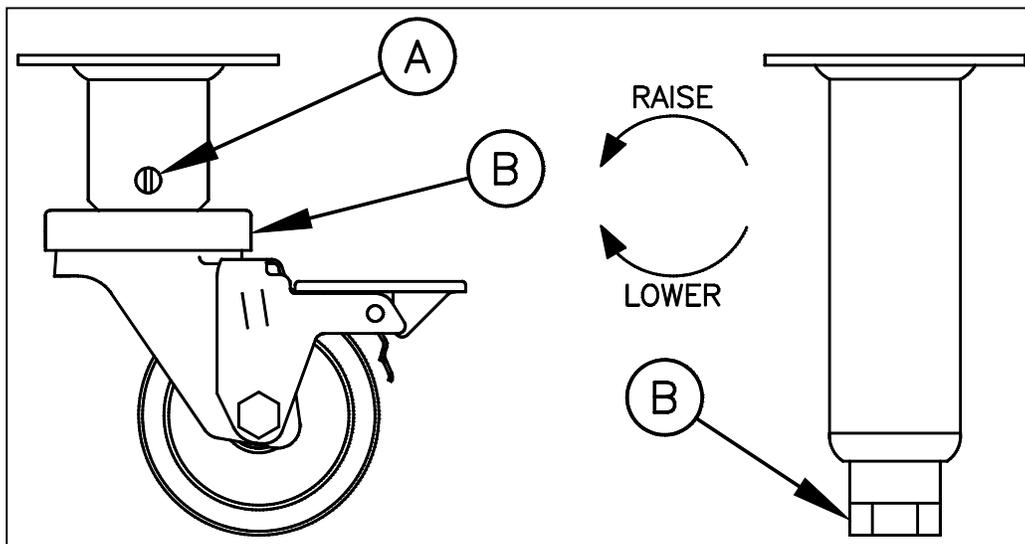
WARNING
This appliance must be installed with the legs or casters provided by the manufacturer.

Required tools: 7/16 " wrench and socket and a large pair of water pump pliers.

1. Lay the appliance on its back, being careful not to damage the splash back by pulling on it. Protect the outside of the appliance with cardboard or a drop cloth when laying it down.
2. Attach each leg/caster with the hex head screws and nuts supplied. Each leg/caster requires four ¼-20 x 5/8" hex head screws and nuts. Insure that all screws are tight.
3. Mount the screws from the inside of the appliance with the nut on the outside (bottom) of the appliance. The nuts have lock washers attached to them, therefore it is not necessary to use separate lock washers.

WARNING
DO NOT install legs or casters, or perform leveling procedure when appliance is in operation or full of hot liquids. Serious injury could result.

4. When all four legs/casters are securely mounted, stand the unit up, being careful not to put too much weight on any one leg. Adjust the height and level the appliance by adjusting the leveling devices (B) with water pump pliers. On casters, loosen 2 screws (A) before leveling, make your height adjustments, then retighten.



1.4 GAS CONNECTION

Your appliance will give you peak performance when the gas supply line is of sufficient size to provide the correct gas flow. The gas line must be installed to meet the local building codes or National Fuel Gas Code ANS Z223.1 and NFPA 54 (latest editions). In Canada, install the appliance in accordance with CSA B149.1 or .2 and local codes. Gas line sizing requirements can be determined by a qualified installation professional, your local gas company or by referring to the National Gas Fuel Code, Appendix C, Table C-4 (for natural gas) and Table C-16 (for propane). The gas line needs to be large enough to supply the necessary amount of fuel to all appliances without losing pressure to any appliance. A properly sized and installed gas line will deliver a supply pressure between 7.0" W.C. (17.4mbars, 1.74kPa) and 10.0"W.C. (24.9mbars, 2.49kPa) natural gas or between 11.0"W.C. (27.4mbars, 2.74kPa) and 13.0" W.C. (32.4mbars, 3.25kPa) propane to all appliances connected to the supply line, operating simultaneously at full demand. The pressure at the gas valve shall not exceed ½ PSI.

Each appliance is equipped to operate on one certain fuel type. The type of fuel with which the appliance is intended to operate is stamped on the data plate, which is attached to the inside of the door.

WARNING

NEVER supply the appliance with a gas other than the one that is indicated on the data plate. Using the incorrect gas type will cause improper operation and could result in serious injury or death. If you need to convert the appliance to another type of fuel, contact the dealer you purchased it from.

NOTICE

NEVER use an adapter to make a smaller gas supply line fit the appliance connection. This may not allow proper gas flow for optimum burner operation, resulting in poor performance and improper operation.

1.5 QUICK DISCONNECT CONNECTION

Gas appliances equipped with casters must be installed with connectors that comply with the Standard for Movable Gas Appliances, ANSI Z21.69 • CSA 6.16 latest edition. This connection should include a quick disconnect device that complies with the Standard for Quick Disconnect Devices for Use With Gas Fuel, ANSI Z21.41 • CSA 6.9 latest edition. When installing a quick disconnect you must also install adequate means for limiting the movement of the appliance without depending on the connector and quick-disconnect device or it's associated piping to limit the movement of the appliance. The restraining device should be attached to the appliance on the back panel.

1.6 FUEL SUPPLY LINE LEAK AND PRESSURE TESTING

The fuel supply system must be tested before the appliance is used. If the fuel line is going to be tested at a pressure greater than ½ PISG (3.45 kPa), insure that that appliance is disconnected from the fuel line. If the fuel line is to be tested at a pressure equal to or less than ½ PSIG (3.45 kPa), the appliance can be connected during the test, but the unit's gas valve must be shut. Test all gas line connections for leaks with a solution of soap and water when pressure is applied.

1.7 HEAT DEFLECTOR

If the appliance requires a heat deflector, you will find a removable label at the rear top edge of the unit. This label has instructions for positioning and installation of the heat deflector. Refer to the label and the instructions below to install the deflector.

- a. Remove the two self-drilling screws from the top, back area of the appliance.
- b. Position the heat deflector so that the angled portion of the deflector is facing toward the front of appliance. Secure the heat deflector to the back of the unit using the two previously removed fasteners.

- c. When properly installed the angled section of the heat deflector will extend over the flue opening to redirect the heat. It **SHOULD NOT** cover the flue opening. Never allow anything to block the flue opening; this will cause the appliance to over heat and inhibit proper combustion, which could produce dangerous gases

1.8 SPLASH BACK

- a. Lift the splash back assembly and place it over the opening at the back of the tank. Make sure that the front of the splash back faces forward.
- b. Using the four supplied countersink screws, attach the splash back to the cabinet sides.

1.9 DRAIN BOARD

While the drain board is being held in place, slide the pivot rod through the hose in the bottom of the drain board. The end of the rod should locate in the hole in the splash back. The front end is attached to the top of the tank using the bolt and washer provided.

1.10 ELECTRICAL CONNECTIONS

It is advised that this power supply be plugged into a wall receptacle that is controlled by the ventilation control. This will prevent the appliance from being operated without the ventilator on. If your appliance requires an electrical connection, the power requirements are listed below.

	North America	International
Input Voltage	120 VAC, 50/60 Hz	220, 230 or 240 VAC 50/60 Hz
Current per unit	0.7 Amp	0.4 Amp
Filter Current	7.5 Amp	4.2 Amp
Heat Tape	0.4 Amp	0.2 Amp

CAUTION

Connecting the appliance to the wrong power supply may damage the appliance and void the warranty.

WARNING

This appliance must be connected to a power supply having the same voltage and phase as specified on the data plate located on the inside of the appliance door.

WARNING

DO NOT attempt to connect the appliance to an electrical supply other than that indicated on the data plate. Electrical connection should be performed by qualified personnel.

WARNING

The electrical connection used by this appliance must comply with local codes. If there are no local codes that apply, refer to the National Electrical Code (NEC), ANSI/NFPA 70 for installation in the US. In Canada, refer to CSA Standard C22.2 and local codes. In all other cases, refer to local and national codes and regulations.

WARNING

The appliance must be grounded in accordance with local code; if there is no local code, comply with the NEC and ANSI/NFPA No. 70 latest edition (for US and Canadian installations). In all other cases, refer to local and national codes and regulations. To comply with European requirements, European models are equipped with an equalization-bonding clamp. An equalization bonding lead must be connected to this clamp to provide sufficient protection against potential difference. This clamp, located on the rear of the appliance is marked with the following universal symbol. 

WARNING

This equipment must be installed so that the plug is accessible unless other means for disconnection from the power supply (e.g. a circuit breaker) is provided.

WARNING

All copper wiring for this appliance must be made in accordance with the wiring diagram(s) located on the appliance.

WARNING

If your appliance uses line current, it is equipped with an oil proof, electrical supply cord with a three-prong safety plug. This is to protect operators from electrical shock hazard in the event of an equipment malfunction. **DO NOT** cut or remove the grounding (third) prong from this plug; it should be plugged into a properly grounded three-prong receptacle.

1.11 VENTILATION AND FIRE SAFETY SYSTEMS

Your new appliance must have proper ventilation to function safely and properly. Exhaust gas temperatures can reach as high as 1100 °F (593 °C). Therefore, it is very important to install a fire safety system. Your ventilation system should be designed to allow for easy cleaning. Frequent cleaning and proper maintenance of the ventilation system and the appliance will reduce the chances of fire. Ventilation and fire safety systems must comply to local and national codes. Refer to ANSI Z83.11• CSA 1.8 for a list of reference documents that will provide guidance on ventilation and fire safety systems. For installations in U.S. and Canada, additional information can be obtained from CSA International, 8501 East Pleasant Valley Road, Cleveland, OH, 44131 or visit their website at www.csa-international.org.

It is essential that the appliance be operated only when adequate ventilation is provided. Your ventilation hood should be properly maintained. A qualified installation professional should ensure that the hood is operating properly in conjunction with the appliance. Inadequate ventilation may not properly evacuate appliance all emissions. Excessive or unbalanced ventilation may cause drafts, which could interfere with proper operation of the pilot and burners. Leave at least 18 inches (45.72cm) of open space between the flue of the appliance and the intake of the exhaust hood.

WARNING

Ensure that your ventilation system does not cause a down draft at the appliance's flue opening. A down draft will not allow the appliance to exhaust properly and will cause overheating, which may cause permanent damage. Damage caused by down drafts will not be covered by the warranty. **NEVER** allow anything to obstruct the flow of combustibles or ventilation exiting the appliance. **NEVER** place anything on top of the flue area, or block the flue in any way. Never place a grease condensating drip pan over the flue opening.

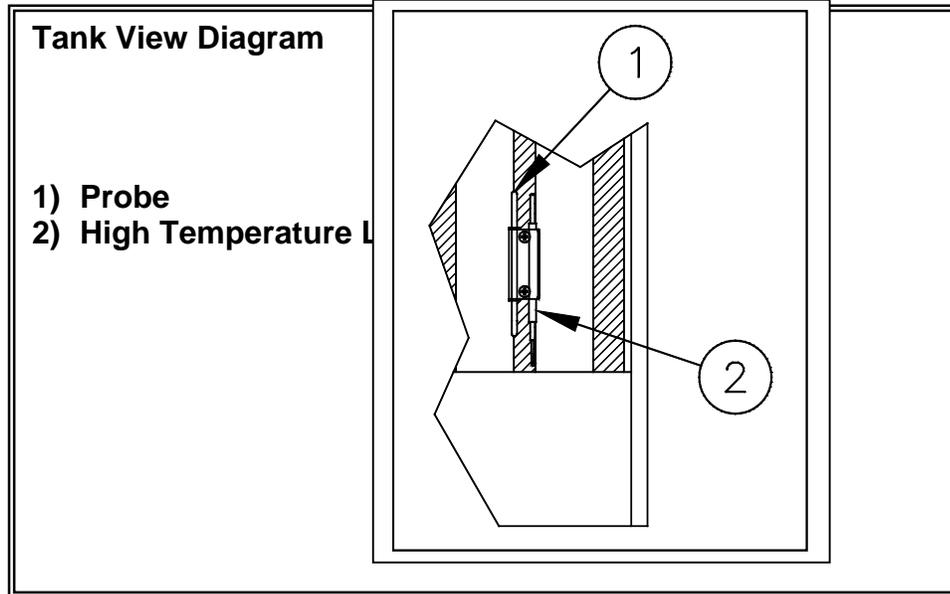
WARNING

NEVER connect the ventilation blower or hood directly to the flue of this appliance. The resulting increased flow of air through the combustion system will cause improper operation, poor temperature recovery, poor ignition and could extinguish the pilot.

1.12 INSPECTION

Before you begin filling and adjusting the appliance, perform the following visual checks:

- ✓ After the appliance is in its permanent location, check the levelness. Any additional leveling that is necessary can be performed as previously described.
- ✓ Ensure that the probe and high temperature limit is in place and secure. Check the high limit bulb mounting screws to ensure that they are tight.
- ✓ Review the installation portion of this manual and ensure that all steps have been followed and executed properly.



1.13 INITIAL ADJUSTMENTS

After your appliance has been properly installed as described in the installation section of this manual, it will need to be adjusted to ensure that it will perform as designed. A qualified person must perform these adjustments.

To perform these adjustments the following tools will be needed:

- Manometer
- Digital Thermometer (Temperature Probe)
- DC Microammeter
- DC Voltmeter

1.13.1 FILLING THE APPLIANCE

Refer to the following procedure to fill the cook tank prior to operation.

1. Ensure that the drain valve is closed.
2. Fill the tank with oil/shortening until the oil/shortening reaches the level line(s). Never let the oil/shortening level go below the MIN LEVEL mark stamped on the tank.

WARNING

Oil/shortening must completely cover the heat tubes at all times while appliance is on.

CAUTION

This appliance is not designed for cooking with water. Fill with oil/shortening only.

WARNING

During operation there is an open flame inside this appliance. The unit may get hot enough to set near by materials on fire. Keep the area around the appliance free from combustibles.

1.13.2 LIGHTING INSTRUCTIONS

For manual pilots, refer to the following instructions.

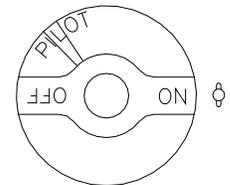
WARNING
If pilot extinguishes, wait 5 minutes before attempting to relight the pilot to allow any built up gas to dissipate.

- a. Open gas supply valves to the appliance.
- b. Turn the thermostat control knob counterclockwise to the OFF position.
- c. Turn the gas valve knob to the PILOT position and push in on the knob. Hold the knob in for approximately one minute to purge the air out of the line. Hold a flame to the pilot until the pilot ignites; this may take a little while the first time you light the pilot because of the air in the lines. Once lit, hold the knob in for approximately one minute and then release.



- d. If the pilot goes out, wait 5 minutes and repeat step C. If after three tries the pilot will not remain lit, refer to the operator troubleshooting section of this manual.

- e. Once a pilot flame has been established, turn the gas valve knob counterclockwise to the ON position.



- f. Set the thermostat control knob to the desired temperature setting. The main burners will ignite and be controlled by the thermostat.

For Electronic Pilot refer to the following instructions.

NOTE: There is nothing to manually light on the electronic ignition system. Pilot ignition is performed and controlled by the electronic ignition system.

- a. Open the gas supply valves to the appliance.
- b. Turn the thermostat control knob counterclockwise to the OFF position.
- c. Turn the gas valve knob to the ON position.
- d. Turn the appliance ON/OFF/TEST switch to the ON position. If the appliance is equipped with the optional melt cycle place the switch in the MELT ON position.
- e. Turn the thermostat to the desired temperature setting. The main burners will light and be controlled by the thermostat.
- f. The POWER ON light will come on and remain on as long as the power switch is in the ON position. The HEATING light will be illuminated when the main burners are on.

1.13.3 PILOT FLAME ADJUSTMENT

For manual pilots, refer to the following instructions. Perform this procedure once the pilot is lit.

NOTE: This procedure requires a DC millivolt meter set to a scale of 0-1000 mV. Using test leads with sharp probes will help in taking the required readings.

1. Locate the thermopile wires coming from the thermostat/limit box going to the gas valve. The wire size decreases near the gas valve connections.
2. Using the positive (+) test probe, connect the probe to the high limit wire terminal. On UFM systems, pierce the high limit wire insulation, with the tip of the test lead probe, at the gas valve safety magnet connection.
3. Connect the negative (-) test probe to the pilot tubing.
4. Remove the cap screw located below the pilot tubing on the gas valve. The pilot flame adjustment screw is recessed behind this. Turning the pilot flame adjustment screw clockwise lowers the pilot flame and millivolt output. Turning the pilot flame adjustment screw counter-clockwise increases the pilot flame size and millivolt output.
5. While monitoring the DC millivolt meter, rotate the pilot flame adjustment screw in the direction necessary to achieve a reading of $400 \pm 50\text{mV}$.

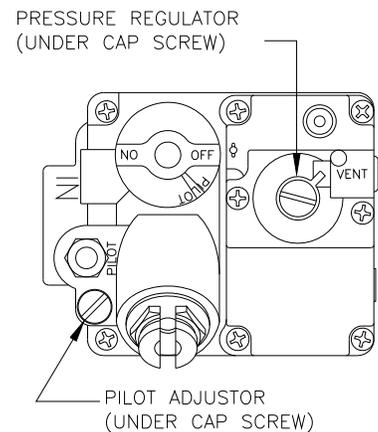
Note
Allow 3 to 5 minutes between flame adjustments to allow the reading to stabilize.

6. Replace the cap screw.

For electronic pilots, refer to the following instructions. Perform this procedure with the pilot lit

Note: This procedure requires the use of a DC milliammeter.

1. Connect the DC milliammeter between the flame sensor terminal and the flame sensor lead. Observe proper polarity: if the meter needle goes below 0, reverse the leads. The current reading must be 0.15 mA or greater.
2. Adjust the current reading to the required level by adjusting the pilot flame. Remove the cap screw to expose the pilot adjustment screw. Turning the pilot adjustment screw clockwise will decrease the size of the pilot flame and flame sense current. Turning the pilot adjustment screw counterclockwise will increase the pilot flame size and the flame sense current.
3. Rotate the screw in the direction needed to achieve a reading of 0.15 mA or greater.



Note
Allow 3 to 5 minutes between flame adjustments to allow the reading to stabilize.

4. Once the pilot flame has been adjusted properly, replace the cap screw and remove the milliammeter.

1.13.4 MAIN BURNER SYSTEM ADJUSTMENT

For the main burners to operate the gas supply valve must be open and the thermostat must be turned on. The main power switch must be on. The main burners receive gas from the main gas supply through the thermostatically controlled valve. When the water temperature drops below the preset temperature the gas control valve opens.

The main burners must be adjusted to deliver optimum flame. Refer to the following procedure to adjust the main burners.

1. Ensure that the main gas valve is shut off, remove the manifold pressure tap plug and connect an accurate pressure gauge (range of 0-16 "W.C. (39.85 mbar, 3.98 kPa) in 0.1" (.25 mbar, .02 kPa) increments) or manometer.
2. Turn on this and all appliances connected to the gas supply line and light their main burners. The pressure reading of the installed pressure gauge should not drop from the required installation pressure. Any loss of pressure below the minimum indicates inadequate supply line installation, which will cause poor performance of all appliances during peak usage.
3. The burner pressure should be the same, ± 0.1 " W.C. (.25 mbar, .02 kPa), as that marked on the data plate on the inside door of the appliance. If the pressure is correct, go to step 6, if it is not, adjust the pressure as outlined in step 4.
4. To adjust the pressure, remove the regulator adjustment screw cap and, with a flat head screwdriver, adjust the regulator screw until the proper burner pressure is reached. Turning the screw clockwise will increase the burner pressure. Turning the screw counterclockwise will decrease the burner pressure.
5. When the pressure is correct, replace the regulator adjustment screw cover.
6. Turn off the ALL appliances, shut the main gas valve to your Pitco appliance and remove the pressure gauge. Apply pipe joint compound to the manifold pressure tap plug and reinstall it.

CAUTION

Be careful not to disturb the probe and high temperature limit during operation and cleaning of this appliance.

1.14 INITIAL CLEANING

When your appliance is shipped, many of its parts are covered with a thin coat of oil for protection. Before the appliance is ready for cooking it must be cleaned. This will remove the oil coating and any foreign matter that may have accumulated during storage and shipment. Refer to the following procedure to clean the appliance.

CAUTION

DO NOT leave the appliance unattended during cleaning. Never let the liquid level go below the or heat tube.

1. Read the "operation" section of this manual prior to filling or operating the appliance.
2. The following steps should be followed using a grease dissolving commercial cleaner.

WARNING

Use a commercial grade cleaner formulated to effectively clean and sanitize food contact surfaces. Read the directions and precautionary statements before use. Particular attention must be paid to the concentration of cleaner and the length of time the cleaner remains on the food contact surfaces.

3. Following the manufacturer's directions, clean the tank interior and all other food contact surfaces.
4. When cleaning is complete, rinse the inside of the tank thoroughly with cool water. Continue to rinse the tank until the cleaner has been completely and thoroughly rinsed from the tank.
5. Using a clean dry cloth, wipe out all of the water.
6. Repeat the previous steps to clean the filter pan if equipped.

2 OPERATION

An operator's manual for your appliance's specific control type should be included with this manual. Refer to that manual prior to operating this appliance.

2.1 FILLING THE COOKER TANK

Both liquid and solid shortening can be used in this appliance, but liquid is preferred. If solid shortening is used it is recommended that you melt the shortening before adding it to the appliance. You can melt solid shortening in the appliance, but you must be very careful not to scorch the shortening.

CAUTION
This appliance is NOT designed for cooking with water. Fill with oil or shortening only.

2.1.1 FILLING THE TANK WITH LIQUID SHORTENING

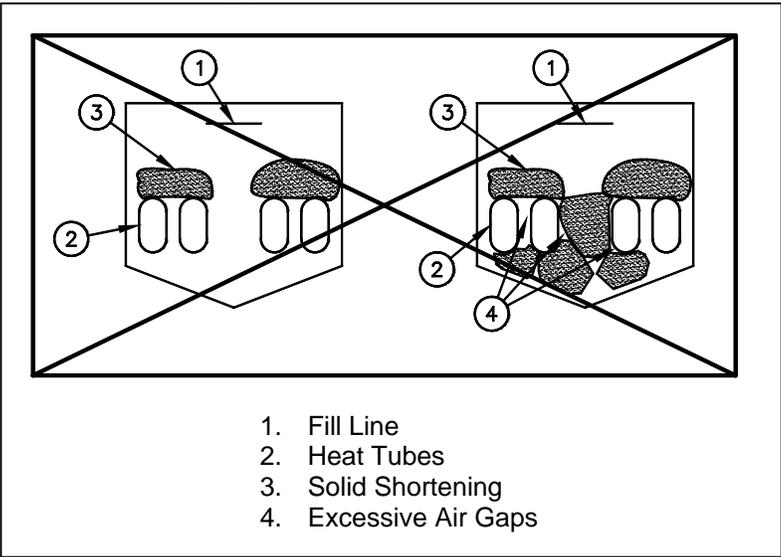
To fill the tank with liquid shortening refer to the following procedure.

1. Ensure that the drain valve is completely closed and that there is no residual moisture in the tank.
2. Fill the tank with oil. You may fill the tank to the "MIN LEVEL" mark or slightly below the nominal level mark: the oil will expand slightly when it heats up, raising the level slightly.

2.1.2 FILLING THE TANK WITH SOLID SHORTENING

To fill the tank with solid shortening refer to the following procedure.

WARNING
NEVER melt blocks of solid shortening on top of the heat tubes. This will cause a fire and could result in personal injury.



1. Remove the tank rack.
2. Cut the solid shortening into cubes no larger than one inch. ALWAYS pack the shortening below, between, and on top of the burner tubes. Do NOT leave any large air gaps. Use care when packing the solid shortening into the tank. Do NOT bend or break the temperature or high limit sensor probes. If these are damaged the appliance will not function properly.
3. Once the appliance tank is firmly packed with shortening, the shortening must be melted. Melt the shortening by using the solid melt cycle in the fryer's computer control. In solid melt cycle mode the computer will cycle the heat on and off to slowly melt the shortening.

WARNING
Oil/shortening must completely cover the heat tubes at all times while appliance is on.

2.2 APPLIANCE START UP

Refer to the following procedure to start the appliance prior to operation.

1. Ensure that the drain valve is closed.
2. Fill the cook tank with oil/shortening. (See section 2.1 "Filling the Cook Tank")
3. Light the appliance. (See "Lighting Instructions" section 1.13.2)

WARNING
NEVER operate the appliance with an empty fry tank. It will void the warranty.

4. Turn the controller on.
5. The appliance is now on and heating the oil/shortening in the cook tank.

WARNING
Oil/shortening level should NOT be allowed to fall below the minimum indicated level line at any time. Dry firing of the fry tank will shorten tank service life and will void your warranty.

2.3 APPLIANCE SHUTDOWN

There are two shutdown modes of appliance operation: STANDBY and COMPLETE. The standby mode removes the ability of the appliances main burners to operate. Complete shutdown turns off the gas supply to the appliance. Refer to the following procedures to enter the appropriate shutdown mode.

2.3.1 STANDBY MODE

Solid State Thermostat:

Turn the I/O (ON/OFF) switch to the I (OFF) position

1. Turn the knob on the gas valve clockwise to the PILOT position. (non-matchless ignition only)

WARNING
NEVER leave the appliance in standby mode for prolonged periods or overnight.

2.3.2 COMPLETE SHUTDOWN

1. Turn the temperature controller OFF.
2. Turn the ON/OFF knob on the gas valve clockwise to the OFF position.
3. The appliance is now completely shut down and can be cleaned if desired.

3 PREVENTATIVE MAINTENANCE

3.1 APPLIANCE INSPECTION

- ✓ Check that the high temperature limit and temperature probe is in the correct position and secured in place.
- ✓ Check that wires and cords are not frayed or loose in and out of the cabinet.
- ✓ Check around the appliance for loose parts or accessories that need to be secured or other foreign items (ex: Aerosol cans) that should be removed from the area.
- ✓ Check for oil/shortening leaks around the in and out of the cabinet and around the appliance.

3.2 CLEANING THE CABINET

1. Wipe any spilled oil/shortening, dust and lint from the cabinet exterior with a clean cloth. Use a nonabrasive pad for tougher stains if needed.
2. Cleaning the interior cabinet requires a clean cloth to remove any oil/shortening, dust, lint or filter powder (i.e.: Magnesol) from the interior of the cabinet.

3.3 WEEKLY PREVENTATIVE MAINTENANCE

Performing the preventative maintenance steps above on a daily basis will keep your equipment clean and safe. On a weekly basis these additional steps should be performed.

1. Turn the fryer off. Allow the oil/shortening to cool to before pulling the fryer away from the hood. Hint: This maintenance may be ideal to perform on the day the oil/shortening is being changed so no oil/shortening is present in the tank or filter.
2. Turn the gas supply off and disconnect the power cord(s), gas hose and retention lanyard.
3. Wearing your protective gear, pull the fryer away from the hood.
4. Check that vent hood drip cup is empty and not dripping oil/shortening into the flue.
5. Check that the hood baffles are clean and not dripping oil/shortening into the flue.
6. Clean the fryer sides, back and the flue area, it may be necessary to use a non-abrasive pad to scour and a putty knife to scrape the oil/shortening buildup. With a clean damp cloth and food grade detergent wipe the area clean.
7. Wipe up any excessive oil/shortening on the power cord(s) and gas hose with a dry cloth.
8. Check flue pipe for any foreign debris/object and remove if found
9. Reattach power cord(s), gas hose retention lanyard and push fryer back under the hood.

3.4 MONTHLY AND QUARTERLY PREVENTATIVE MAINTENANCE

Food debris and oil/shortening can buildup inside the tank. Performing the monthly and quarterly preventative maintenance steps will keep your equipment safe and at peak performance. If you are producing high quantities of fried food and/or frying heavily battered food, it may be necessary to perform these activities more frequently.

3.5 ANNUAL/PERIODIC PREVENTATIVE MAINTENANCE AND INSPECTION

This section should ONLY be performed by a qualified service technician as part of a regular kitchen maintenance program. This inspection should take place a minimum of once a year by an Authorized Service Technician recommended by Pitco.

WARNING

The power supply must be disconnected before cleaning and servicing this appliance!

3.5.1 TEMPERATURE PROBE & HIGH LIMIT PROBE

- ✓ Verify probes are in good working condition. Check for damage and that the fasteners are tightly secured to the tank.
- ✓ Verify compression fittings are leak free.
- ✓ Check wiring for loose electrical connections.

3.5.2 CONTROLLER

Perform the following inspection if the appliance is equipped with a temperature controller.

- ✓ Verify that the controller is in good mechanical condition. Check all lights, displays and switches to assure that they are working properly. Examine overlay for damage that could allow moisture to enter.
- ✓ Check for loose electrical connections.
- ✓ Verify cooking temperatures. Check temperature 1" above controller probe, if necessary check probe resistance.

3.5.3 CONTROL BOX & ELECTRICAL COMPONENTS

- ✓ Verify that all components (transformer, terminal block, relays, drain switches, etc...) are in good condition. Verify that wires are tight and in good condition.
- ✓ Verify enclosures are free of leaks. Check for oil or water stains and damp or wet surfaces.
- ✓ Verify that the covers and panels are in tact and provide a safe condition. Check for loose parts.
- ✓ Verify power cord is in good condition. Check for frayed or exposed wires. Verify that the insulation is in good condition and the attachment to the appliance is tight.

3.5.4 TANK

- ✓ Verify that the tank is in good condition. Check for grease build up and inspect for signs of corrosion. Verify that tank is leak free.

3.5.5 DRAIN SYSTEM & FILTER SYSTEM (IF EQUIPPED)

- ✓ Verify that drain valve is in good condition. Check for leaks in the seal area and fitting region.
- ✓ Verify that drain and return lines are leak free, kink free and in good condition. Check for grease build up and debris blockage. Verify that the clamps and connections are securely tightened.

3.5.6 VENTILATION HOOD

- ✓ Proper ventilation hood operation is very important for the correct operation of this appliance and the safety of personnel. The ventilation hood should be inspected at the time of installation of this appliance to insure that it will operate properly in conjunction with the appliance. A regular schedule of examination, in accordance with ANSI/NFPA 96 latest edition and/or local codes must be followed.

3.5.7 TEMPERATURE CHECK

- ✓ Use a high grade pyrometer or digital thermometer suitable for temperature up to 380°F. Place the thermometer in the oil above the tip of the fryer's temperature probe with in 1". Be sure not to touch the heat tube since this will measure incorrect temperatures.

4 TROUBLESHOOTING

4.1 POWER FAILURE

If electric power is removed for any reason, the appliance will shut down.

Gas models: Wait five minutes after the power is restored before attempting to restart the appliance. This will allow time for any gas that may have accumulated in the burner or tubes to dissipate.

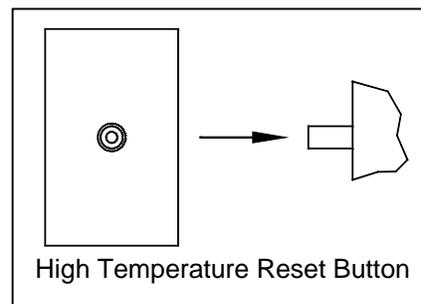
To restart the appliance, follow the appliance start up procedure in section 2.2.

CAUTION
DO NOT attempt to operate this appliance during a power outage.

4.2 HIGH TEMPERATURE LIMIT

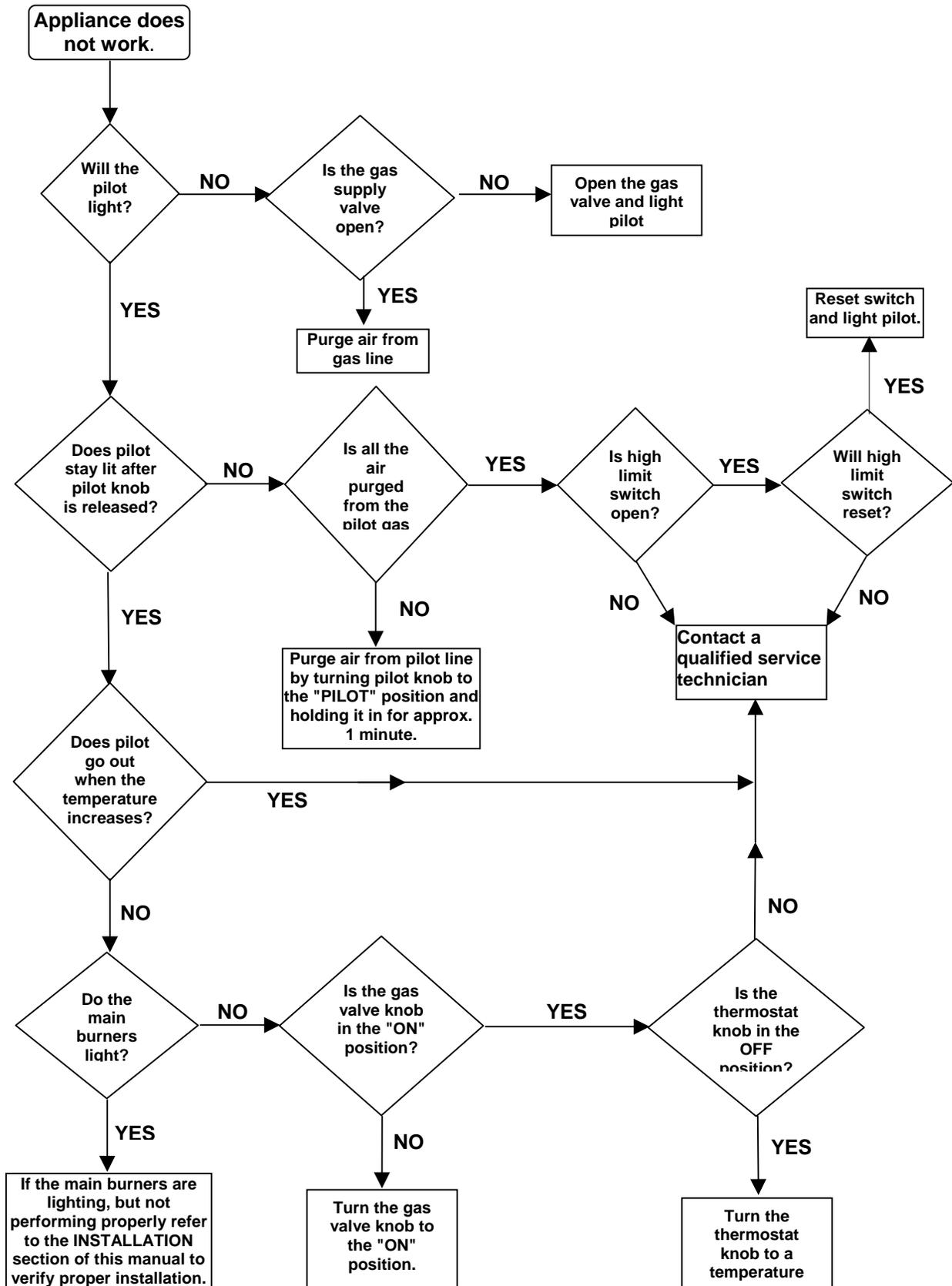
This appliance is equipped with a high temperature limit switch. The high temperature limit switch will stop the appliance from functioning if the internal cook tank reaches an unsafe temperature. In the event that the high temperature limit has tripped, Please refer to the following procedure to reset the switch.

- a. Turn the appliance off.
- b. Allow the appliance ample time to cool to room temperature.
- c. Add oil/shortening to the cook tank as needed.
- d. Press the high temperature reset button if equipped.
- e. The high limit switch is now reset and the appliance is ready for start up.
- f. Repeat steps from section 3.5.7.



WARNING
DO NOT add oil/shortening to the tank until it has been given ample time to cool down. Failure to do so may result in damage to the appliance and/or injury to the operator.

TROUBLESHOOTING Chart's 4.2.1 FRYER TROUBLESHOOTING CHART



Fryer Troubleshooting (cont.)

4.2.2 PROBLEM-SOLVING SHORTENING

Frying oil - Problem-Solving			
Problem	Possible Cause	Solution	
Fried Product greasy:	Old or broken down frying oil.	Change frying oil.	
	Frying oil temperature not at 350° F., when product was fried.	Be sure frying oil temperature is at 350° F., when product is fried.	
	Fried product not drained after frying.	Drain product properly after frying.	
Product too dark or burnt taste:	Frying oil temperature is too hot, above 350° F.	Use a temperature probe to measure frying oil temperature. Temperature should be 350° F., +/- 2°F. If temperature is above 350° F., contact maintenance.	
	Temperature probe is damaged.	Use a thermometer to measure frying oil temperature. Temperature should be 350° F., +/- 2° F. Contact maintenance.	
	Old or broken down frying oil.	Change frying oil.	
	Breaded product not at frozen temperature when fried.	Fry product immediately out of freezer.	
	Cook time too long.		Verify correct product button was pressed.
			Verify cook time setting for product is correct.
Product is too light or product not fully cooked:	Temperature probe is damaged.	Use a thermometer to measure frying oil temperature. Temperature should be 350° F. +/- 2° F.	
	Frying oil temperature is not hot enough – below 350° F.	If temperature is below 350° F., contact maintenance.	
	Cook time too short.		Verify correct product button was pressed.
			Verify cook time setting for product is correct.
	Removed product before cook time complete	Wait for fryer to beep to signal completed cook time.	

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