Winco® SPECTRUM™

GAS FLOOR EQUIPMENT
DEEP FRYERS

Operating Instruction Manual

Model	Description	Burner(s)	Total BTU	Unit Dimensions	Unit Weight	Shipping Dimensions	Ship Weight
NGGF-40-NG	40lb, 3-tube, Natural Gas	3	90,000	15.5" x 30.7" x 44.6" (394 x 779 x 1133 mm)	125.7 lbs (57 kg)	16.6" x 32.3" x 33.5" (420 x 820 x 850 mm)	145 lbs (66 kg)
NGGF-40-LP	40lb, 3-tube, Liquid Propane						
NGGF-50-NG	50lb, 4-tube, Natural Gas	4	120,000		138.6 lbs (63 kg)		156 lbs (71 kg)
NGGF-50-LP	50lb, 4-tube, Liquid Propane						
NGGF-70-NG	70lb, 5-tube, Natural Gas	5	150,000	21" x 33.8" x 44.6" (534 x 858 x 1133 mm)	182.6 lbs (83 kg)	22.5" x 36.3" x 33.5" (570 x 920 x 850 mm)	204 lbs (93 kg)
NGGF-70-LP	70lb, 5-tube, Liquid Propane						

BEFORE OPERATING ANY EQUIPMENT, READ AND FAMILIARIZE YOURSELF WITH THESE USE AND SAFETY INSTRUCTIONS

Congratulations on your purchase of this Winco SPECTRUM™ equipment. When used as intended, and with proper care and maintenance, you are sure to experience years of reliable operation from this equipment. To ensure best results, it is important that you read and follow the instructions in this manual carefully. ***It is important to keep these instructions in a safe place for future reference.***

Form No. NGGF Manual - 08/2025

GAS DEEP FRYER

Important For Future Reference

Please complete this information and retain this manual for the life of the equipment. For Service and/or parts, this information is required.

Model Number	Serial Number	Date Purchased

WARNING: For your safety, do not store or use gasoline or other flammable vapors or liquids in the vicinity of this or any other appliances. Keep the area free and clear of combustibles. (See ANSI Z83. 14B, 1991).

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

WARNING: Instructions must be posted in a prominent location. All safety precautions must be taken in the event the user smells gas. Safety information can be obtained from your local gas supplier.

CAUTION: These models are designed, built, and sold for commercial use only. If these models are positioned so the general public can use the equipment, make sure that cautions, warnings, and operating instructions are clearly posted near each unit so that anyone using the equipment will use it correctly and not injure themselves or harm the equipment.

WARNING: A factory authorized agent should handle all maintenance and repair.
Before doing any maintenance or repair, contact your authorized service representative.

GAS PRESSURE

The appliance and its individual shutoff valve (to be supplied by user) must be disconnected from the gas supply piping system during any pressure testing of that system at test pressures in excess of ½ psi (3.45 kPa).

The appliance must be isolated from the gas supply piping system by closing its individual manual shut-off valve during any pressure testing of the gas supply piping system at test pressures equal to or less than ½ psi (3.45 kPa).

Table of Contents

Introduction

Congratulations on the purchase of your SPECTRUM™ machine. Please take time to carefully read through this manual to ensure the machine is operated and maintained properly, to ensure the best possible performance from the product for many years.

SPECTRUM will not accept liability for the following if:

- The instructions in this manual have not been followed correctly.
- Non-authorized personnel have tampered with the machine.
- Non-original spare parts are used.
- The machine has not been handled and cleaned correctly.
- There is any use damage to the unit.

LOCATION OF DATA PLATE

The data plate is located on the rear or side panel.

IMMEDIATELY INSPECT FOR SHIPPING DAMAGE

All containers should be examined for damage before and during unloading. The freight carrier has assumed responsibility for its safe transit and delivery.

If equipment is received damaged, either apparent or concealed, a claim must be made with the delivering carrier.

A. Apparent damage or loss must be noted on the freight bill at the time of delivery. It must then be signed by the carrier representative (Driver). If this is not done, the carrier may refuse the claim. The carrier can supply the necessary forms.

B. If concealed damage or loss is not apparent until after equipment is uncrated, a request for inspection must be made to the carrier within 15 days. The carrier should arrange an inspection. Be certain to keep all contents and packaging material.

Installation should be performed by a qualified installer who thoroughly read, understands and follows these instructions.

If you have questions concerning the installation, operation, maintenance or service of this product, please contact WINCO®.

Please keep this manual in a safe place for future use!

Safety Precautions

DANGER: This symbol warns of imminent hazard which will result in serious injury or death.

WARNING: This symbol refers to a potential hazard or unsafe practice, which could result in serious injury or death.

CAUTION: This symbol refers to a potential hazard or unsafe practice, which could result in minor or moderate injury or product or property damage.

NOTICE: This symbol refers to information that needs special attention or must be fully understood even though not dangerous.

NOTICE: This product is intended for commercial use only. Not for household use.

NOTICE: Local codes regarding installation vary greatly from one area to another. The National Fire Protection Association, Inc., states in its NFPA 96 latest edition that local codes are "Authority Having Jurisdiction" when it comes to requirement for installation of equipment. Therefore, installation should comply with all local codes.

Package Contents

All units come with the following:

- (1) Deep Fryer
- (2) Locking Casters
- (2) Non-Locking Casters

SPECTRUM™ prides itself on quality and service, ensuring that at the time of packing, all products are supplied fully functional and free of damage. Should you find any damage as a result of freight, please contact your SPECTRUM dealer immediately.

Unpacking the Equipment

DISPOSE OF ALL PACKAGING MATERIALS IN AN ENVIRONMENTALLY RESPONSIBLE MANNER.

1. Remove all packing materials and tape, as well as any protective plastic and cardboard, from the unit.
2. Clean any glue residue left over from the plastic or tape.
3. ENSURE THAT THE COUNTERTOP WILL SUPPORT THE WEIGHT OF GRIDDLE.
4. Place the unit in the desired position and height.

SAVE THE ORIGINAL BOX AND PACKAGING FOR USE IN PACKAGING AND SHIPPING THE EQUIPMENT IF SERVICES ARE NEEDED.

NOTE

Please remember that this manual and the warning labels do not replace the need to be alert, to properly train and supervise operators, and to use common sense when using this equipment.

Installation

These instructions should be followed at all times. Failure to follow these instructions could result in injury to yourself and others.

Although it is possible for you to install and set up your new fryer, it is STRONGLY recommended that you have it done by qualified professionals. The professionals that install your new fryer will know the local building codes and ensure that your installation is safe.

WARNING: THE FRYER MUST BE PROPERLY RESTRAINED TO PREVENT MOVEMENT OR TIPPING. THIS RESTRAINT MUST PREVENT THE FRYER FROM MOVEMENTS THAT WOULD SPLASH HOT LIQUIDS ON PERSONNEL. THIS RESTRAINT MAY BE ANY MEANS (ALCOVE INSTALLATION, ADEQUATE TIES, OR BATTERY INSTALLATION).

INSTALLATION CODES AND STANDARDS

The gas equipment must be installed in accordance with:

In the United States of America:

1. State and local codes.
2. National Fuel Gas Code, ANSI -Z223.1/N FPA #54 (latest edition). This shall include but not be limited to: NFPA #54 Section 10.3.5.2 for Venting. Copies may be obtained from The American Gas Association Accredited Standards Committee Z223, @ 400 N. Capital St. NW, Washington, DC 20001 or the Secretary Standards Council, NFPA, 1 Batterymarch Park Quincy, MA 02169-7471

NOTE: In the Commonwealth of Massachusetts

All gas appliances vented through a ventilation hood or exhaust system equipped with a damper or with a power means of exhaust shall comply with 248 CMR.

3. NFPA Standard # 96 Vapor Removal from Cooking Equipment, latest edition, available from the National Fire Protection Association, Batterymarch Park , Quincy, MA 022 69.

In Canada:

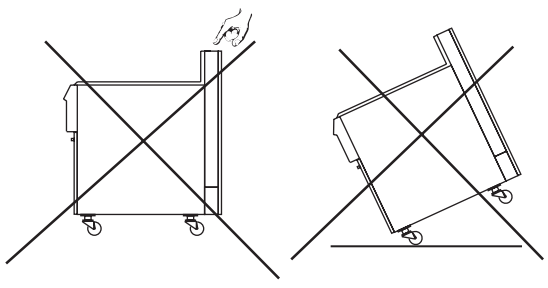
4. Local codes.
5. CAN/C SA-B 149.1 Natural Gas Installation (latest edition)
6. CAN/C SA-B 149.2 Propane Installation Code (latest edition), available from the Canadian Gas Association, 178 Rexdale Blvd., Etobicoke, Ontario, Canada M9W 1R3

INSTALLATION CLEARANCES

	Combustible Construction	Non-Combustible Construction
Back	6"	0"
Sides	6"	0"
Floor -Combustible	6"	6"

TO REDUCE RISK OF INJURY OR DAMAGE TO THE UNIT:

1. Read this manual thoroughly before installation and operation. DO NOT proceed with installation and operation if you have any questions or do not understand anything in this manual. Contact your representative or the manufacturer first.
2. Remove the equipment from the packaging. Be certain that all protective plastics and residues are thoroughly cleaned from its surface.
   As you unpack the fryer and it's accessories be careful to keep the weight of the fryer evenly distributed.
   CAUTION: To prevent equipment damage, don't tilt the fryer onto any two of it's casters or pull the unit by the flue vents.
3. Place the equipment on a firm level surface. Local standards and regulations should be consulted in order to abide by standards set in relation to positioning, spacing, and ventilation.
4. Ensure gas supply and gas type, as shown on unit nameplate, agree.



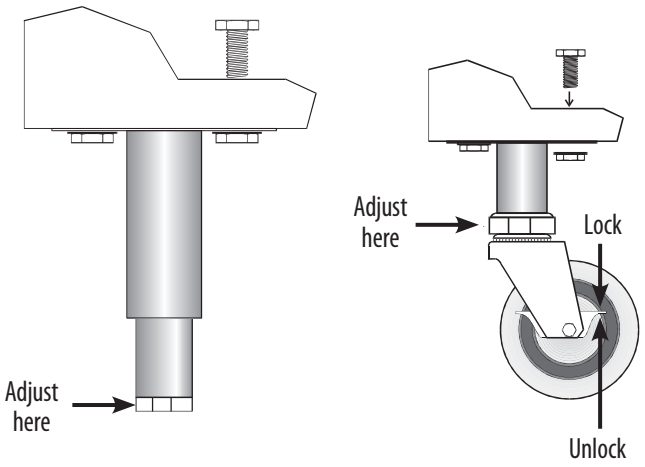
Installation (continued)

ASSEMBLY AND LEVELING:

The Fryer must not be operated without the legs or casters attached. The legs or casters must be installed to provide the necessary height to meet sanitation requirements and assure adequate air supply to the burner.

Install the legs and leveling to the fryer with a 7/16" wrench, socket, and a large pair of water pump pliers.

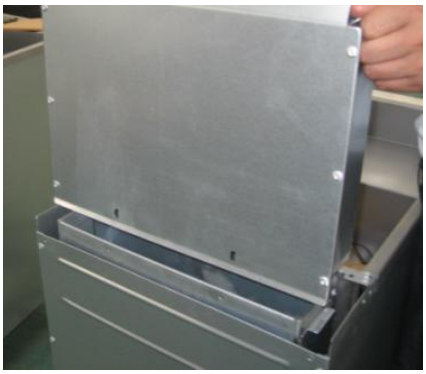
1. Lay the fryer on its side being careful not to damage the flue by pulling on it. Protect the outside of the fryer with cardboard or a drop cloth when laying it down.
2. Attach each leg/caster with the hex screws supplied with the fryer. Each leg/caster requires four 1/4-20 x 5/8" screws.
   Note: Install locking casters on the front of the fryer.
3. Mount the screws from the inside of the fryer with the nut on the outside. The nuts have lock washers attached to them.
4. When all four legs/casters are mounted, stand the unit up being careful not to put too much weight on any one leg/caster. Adjust the height and level the fryer by adjusting the leveling devices on the leg/caster with the water pump pliers.
5. On units with casters, move the fryer to the desired location and lock the wheels using the locking devices on the sides of the casters.

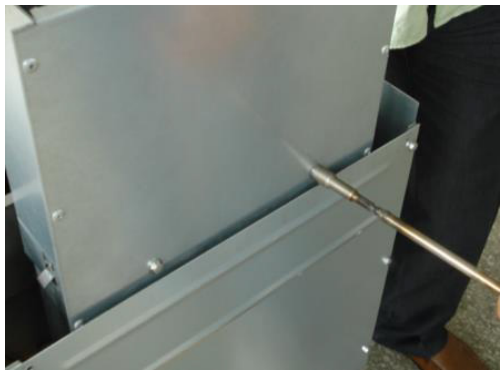


FLUE INSTALLATION

1. Unpack the flue box and flue wrap, located undeneath the tank.

2. Slide the flue box over the flue and secure it with the two self-tapping screws using a 5/16" socket.

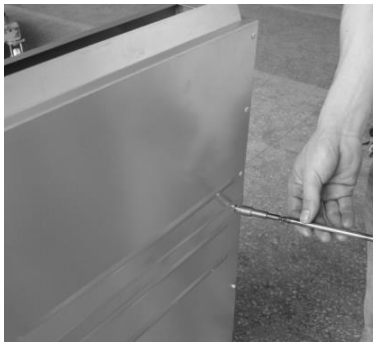




FLUE INSTALLATION (continued)

3. Slide the flue wrap over the flue.

4. Secure it with four self-tapping screws two on the back and one on each side using a 5/16″ socket.



GAS CONNECTION

WARNING : NEVER supply the fryer with a gas that is not indicated on the serial plate. Using the incorrect gas type will cause improper operation. If you need to convert the fryer to another type of fuel, contact your dealer.

Fuel Types - Each fryer is equipped to work with one type of fuel. The type of fuel with which the appliance is intended to operate is stamped on the serial plate.

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

Gas Line Connection - Connect the fryer to the gas supply line with a connector that complies with the Standard for Connectors for Movable Gas Appliances (ANSI Z21.69-Latest Edition). If you are installing a fryer with casters use a quick disconnect. Connect the gas line to the fryer using a pipe joint sealant that is resistant to liquefied petroleum. If the fryer was disconnected during the fuel line testing, use a solution of soap and water to leak test the new connection.

NOTICE : NEVER use an adaptor to make a smaller gas supply line fit the cooker connection. This may not allow proper gas flow for optimum burner operation, resulting in poor cooker performance.

Quick Disconnect Gas Connection - Gas fryers equipped with casters must be installed with connectors that comply with the Standard for Connectors for Movable Gas Appliances, ANSI Z21.69-Latest Edition, and Addenda Z21.69A-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-Latest Edition. When installing a quick disconnect you must also install a means for limiting the movement of the fryer. This device will prevent the gas line or the quick disconnect from being strained. The restraining device should be attached to the cooker on the back panel. The quick disconnect, hose, and restraining device can be obtained from your dealer.

Fuel Supply Line Leak and Pressure Testing - The fuel supply system must be tested before the fryer is used. If the fuel line is going to be tested at a pressure greater than (>)1/2 PSIG (3.45 kPa), make sure that the fryer is disconnected from the fuel line. If the fuel line is to be tested at a pressure equal to or less than (<) 1/2 PSIG (3.45 kPa), the fryer can be connected 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.

Installation (continued)

VENTILATION AND FIRE SAFETY SYSTEMS

The fryer must have proper ventilation to function safely and properly. Exhaust gas temperatures can reach as high as 1200°F. Therefore, it is very important to install a fire safety system. The ventilation system should be designed to allow for easy cleaning. Frequent cleaning of the ventilation system and the fryer will reduce the chances of fire. Additional information can be obtained from the American Gas Association, 8501 East Pleasant Valley Road, Cleveland, OH 44131.

Excessive ventilation causes drafts, which will interfere with the proper operation of the pilot and the burner. Leave at least 18 inches of open space between the fryer's flue vent opening and the intake of the exhaust hood.

CAUTION : Ensure that your ventilation system does not cause a down draft at the fryer's flue opening. Down drafts will not allow the fryer to exhaust properly and will cause overheating which may cause permanent damage. Damage caused by down drafts will not be covered under equipment warranty. NEVER allow anything to obstruct the flow of combustibles or ventilation exiting from the fryer flue. DO NOT put anything on top of the flue area.

NOTICE : NEVER connect the blower directly to the flue openings. The direct flow of air will cause poor temperature recovery, poor ignition, inefficient operation of the fryer, and could extinguish the pilot.

INITIAL ADJUSTMENTS

After the fryer has been installed, it needs to be adjusted to ensure that it will perform as designed. These adjustments must be performed by a qualified person. To perform these adjustment the following tools will be needed: Manometer (low pressure gauge), Digital Thermometer (Temperature probe), and DC Millivolt Meter

VISUAL CHECKS

After the fryer is in its permanent location, lock the casters and check for levelness. Perform any additional leveling that is necessary.

BURNER IGNITION SYSTEMS

CAUTION : Before proceeding, fill the fryer with water. Water is used during installation adjustments because it will not exceed 212°F (100°C), allowing sufficient time for safe calibration. Do not allow the water level to fall below the MIN LEVEL mark located at the rear of the tank.

WARNING : The fryer contains an open flame and can reach temperatures high enough to ignite nearby materials. Keep the area surrounding the fryer clear of all combustible materials.

GAS FRYER ELEVATION

Gas Type	Size at Sea Level	2,000'	3,500'	4,000'	5,000'	6,000'	7,000'	8,000'	9,000'	10,000'
Natural	39	40	41	41	42	42	43	43	44	44
LP	52	52	53	53	53	53	53	54	54	54

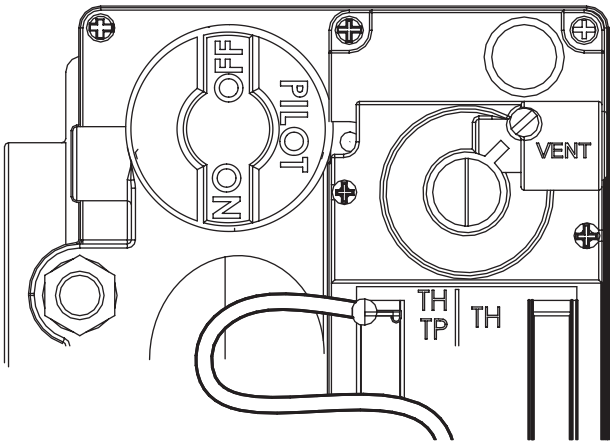
Operation

LIGHT THE PILOT BURNER

CAUTION: IF YOU SMELL GAS DURING THE LIGHTING PROCEDURE, IMMEDIATELY SHUT OFF THE GAS SUPPLY UNTIL THE LEAK HAS BEEN CORRECTED.

Open the burner compartment door and do the following:

1. Turn thermostat to "OFF"
2. Press down the knob of the combination gas valve, turn it counterclockwise to the "PILOT" position (shown), and continue to press the knob down.



3. While pressing the knob down, use a lit match to ignite the pilot. Continue to press the knob down for about 30 seconds. If the pilot does not stay lit when the knob is released, repeat the lighting procedure and keep the knob down longer. Adjustment of pilot flame may be necessary.
4. When the pilot stays lit, turn the knob counterclockwise to the "ON" position. Do not press down on the knob in this step.
5. Do NOT turn the thermostat "ON" until the fryer is filled with oil or solid shortening.
6. Once the fryer is filled with shortening, set the thermostat to the desired temperature.

PILOT FLAME ADJUSTMENT

The pilot flame should be adjusted to produce the proper millivolt output from the pilot sensing device. Millivolt output for the thermopile should be between 300 and 500 millivolts. This procedure is only necessary on the manual pilot ignition system. Figure 1-1 shows the pilot assembly with examples of the incorrect and correct pilot size. Example A illustrates a pilot flame size that is too small to produce sufficient millivolt output. Example B is the correct size for proper millivolt output.

1. This test requires a DC millivolt meter set to a scale of 0-1000mv.
2. Locate the thermopile wires coming from the thermostat/High Limit box going to the gas shut off valve. The wire insulation size decreases near the gas valve connections.
3. Connect the negative (-) test probe to pilot bracket.
4. Connect the positive (+) test probe to one of the High Limit terminal connections
5. Remove the pilot flame adjustment cover.
6. Turning the flame adjusting screw clockwise lowers the flame and the millivolt output. Turning the screw counterclockwise increases flame size and millivolt output.
7. Rotate the screw in the direction to achieve a reading of 400 ±50 mv for thermopiles. NOTICE : Allow 3 to 5 minutes between flame adjustments to allow the reading to settle.
8. Replace the pilot flame adjusting screw cover.

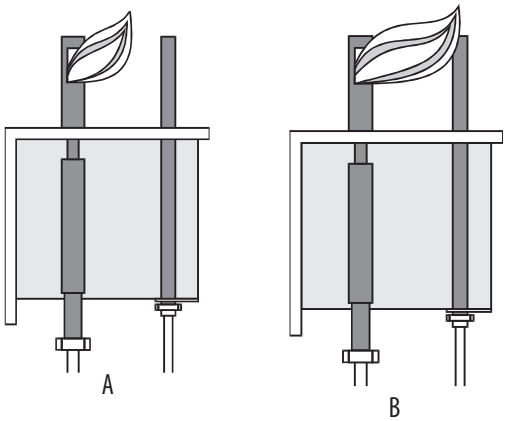


Figure 1-1

Operation (continued)

MAIN BURNER SYSTEM

For the burners to work, the gas supply valve must be open. The main burner receives gas from the main gas supply through the thermostatically controlled valve. When the thermostat is turned up the gas control valve opens. The pilot ignites the burners. The burner flame should be adjusted at the air collar (at the bottom of the burner) so the the flame are a soft blue color without lifting off the face of the burner.

- Gas Line Requirements - A properly installed gas supply system will deliver 7.0 ±2.0" w.c. natural gas (12.0 ±2.0" w.c. LP) to all appliances connected to the line, operating at full demand.
- Burner Adjustment - The burners must be adjusted to deliver optimum flame. Adjust the burner flame using the following procedure.
    1. Ensure that the Unitrol valve knob is in the OFF position. Remove the manifold pressure tap plug and connect an accurate pressure gauge (range of 0-16" w.c. in 0.1" increments) or manometer.
    2. Light the pilot burner (see 1-2) for the unit being tested and adjust the thermostat to light the main burners.
    3. The installed pressure gauge reading should be the same, ±0.1", as that marked on the data plate inside the door. If the pressure is correct go to the next step, if not, adjust the pressure.
    4. To adjust the pressure, remove the regulator adjustment screw cover (Figure 1-3). Use a flat tip screwdriver to adjust the screw until the proper pressure is reached. Turning the screw clockwise will increase the pressure, counterclockwise will decrease the pressure.
    5. When the pressure is correct, install the regulator adjustment screw cover.
    6. To remove the pressure gauge, turn gas control valve to OFF. Remove the gauge and install the pressure tap plug.
    7. Now that the pressure is set for proper operation, set the main burner flame. Unlock the air collars by loosening the set screw for the collars. See Figure 5. Turn the Unitrol valve knob to ON and turn thermostat to light the main burners.
    8. Adjust the shape and size by raising or lowering the air collars to achieve a soft blue flame with well defined inner cones.
    9. When the flames have been properly adjusted, lock the collars in place with the set screw provided.

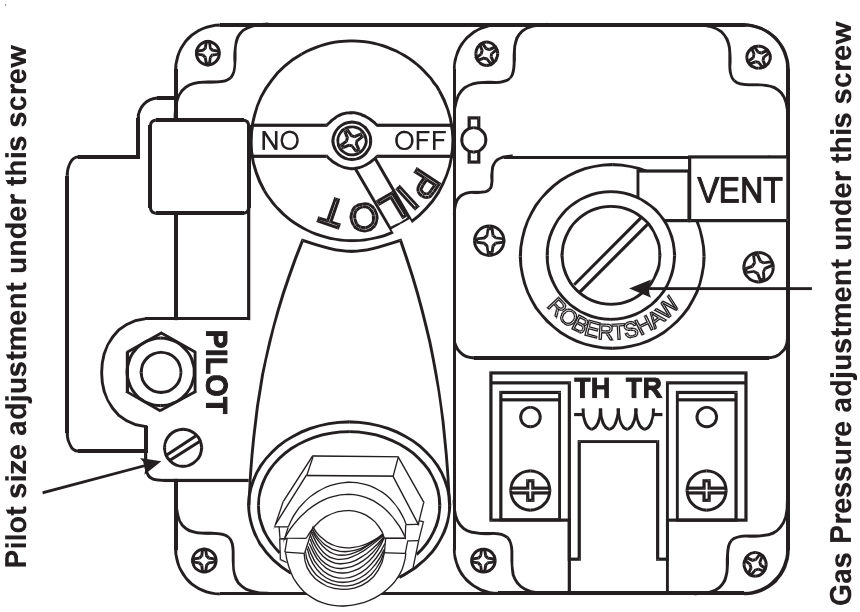


Figure 1-2

Gas Valve Showing Location of the Pressure Regulator and Pilot Adjusters

Operation (continued)

INITIAL CLEANING BEFORE FIRST USE

When the fryer is shipped, many of its parts are covered with a thin coat of oil for protection. Before the fryer 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. T

1. Fill the tank with water and add one packet of fryer cleaner or a mild detergent.
2. Turn the fryer on and set the thermostat to 200°F. Allow the fryer to heat for 15 minutes.
   NOTICE : Do not leave the fryer unattended during cleaning. Never let the water level go below the "Min Level" mark on the back of the tank.
3. Using the fryer cleaning brush, scrub the inside of the fryer to remove protective coating.
4. When cleaning is complete, turn off the fryer main burners and turn the Unitrol valve knob to the PILOT position. Drain the water into a container suitable for hot water and dispose of it.
5. When the tank has cooled, rinse it thoroughly with cool water. Continue to rinse the tank until the cleaner has been rinsed, thoroughly from the tank.
6. Using a clean dry cloth, wipe out all of the water. Be very thorough removing the water, because any residual water will cause hot oil to splatter out of the fryer.
   CAUTION : Mild steel tanks must be wiped down/coated with oil to keep the tank from rusting.
7. Now that the tank is clean, you are ready to fill and operate the fryer.

THERMOSTAT CALIBRATION CHECK

Thermostat calibration requires that the temperature of the fryer be raised above boiling. Therefore, you will need to drain the water from the fryer and fill it with oil. Before removing the water, perform the initial cleaning of the fryer. Cleaning the fryer now will prevent you from having to drain the oil and refill with water later.

Fill the fryer with oil. To perform the calibration check detailed below you will need a digital thermometer.

1. Place the tip of the thermometer in the shortening approximately 1" above the temperature sensors.
2. Set the thermostat at 325°F and wait for the temperature reading on the thermometer to rise. As the temperature rises toward 325°F watch the thermometer closely.
3. If the shortening temperature reaches 350°F and the burners DO NOT turn off, turn the thermostat down. Keep lowering the thermostat setting until the burners go out.
   CAUTION : If the burners do not turn off at the lowest thermostat setting, the thermostat could be defective. Contact your representative immediately.
4. Let the fryer cycle 4 to 6 times before checking the temperature. Compare the thermometer temperature against the thermostat setting. If the values are more than 5°F apart, calibrate the thermostat using the appropriate calibration procedure in this manual.

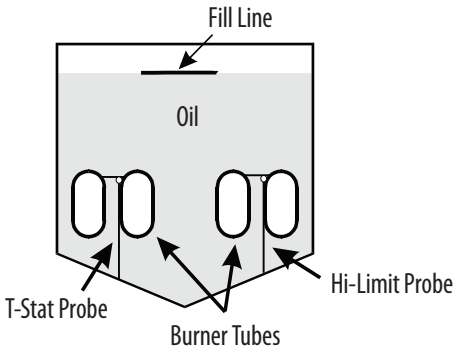
THERMOSTAT CALIBRATION

1. Place the tip of the thermometer in the shortening approximately 1" above the temperature sensors.
2. Set the Thermostat to 325°F and wait for the temperature reading on the thermometer to rise.
3. Let the fryer cycle 4 to 6 times to ensure that the temperature has stabilized. Compare the thermometer temperature against the thermostat setting. If the values are more than 5°F apart, calibrate the thermostat using the appropriate calibration procedure.

Operation (continued)

FILLING THE FRYER WITH OIL

1. Make sure the drain valve is completely closed.
2. Fill the fryer with oil to the "Oil Level" line marked on the back of the tank.



CAUTION: The fryer has been installed using restraining devices to prevent accidental tipping or movement. Do not attempt to move the fryer when it has hot liquid in it. Splashing hot liquids can cause severe burns.

WARNING: Water and oil DO NOT mix. Keep liquids away from hot oil. Dropping liquid frozen food into the hot oil will cause violent boiling.

FRYER START-UP

DO NOT START FRYER WITHOUT FILLING WITH OIL!

1. Light the pilot light.
2. Turn the temperature control knob (thermostat) to the desired temperature setting. This knob is located behind the front doors or on the front control panel.
3. The main burners will light.

FRYER SHUT-DOWN

There are two shutdown modes of fryer operation, STANDBY and COMPLETE. The standby mode removes the ability for the fryer's main burners to cycle. Complete shutdown turns off the gas supply to the fryer. Shut down the fryer by:

STANDBY — Turn the thermostat to OFF. Turn the gas valve clockwise to the PILOT position. The cooker is now in Standby and can remain this way for only brief periods of time. NEVER leave the cooker in standby overnight.

COMPLETE — To completely shut down the cooker, push and turn the gas valve counterclockwise to the OFF position. The fryer is now completely shut down and can be cleaned and filtered.

RELIGHTING

WARNING: In the event of a main burner ignition failure, a five minute purge period must be observed prior to re-establishing the ignition source.

1. Shut off all gas.
2. Wait five minutes.
3. Follow the “Lighting” procedure described on page 9.

HIGH LIMIT CONTROL

Gas floor model fryers are equipped with a secondary heat control that prevents the oil temperature from rising above 450°F. (Because of the accuracy tolerance of the sensor, the oil temperature may reach as high as 475°F.)

In the event the fryer shuts down due to this condition, the oil must be cooled to below 400°F before the pilot burner can be re-ignited. When the oil has cooled, use the “Lighting” procedure on page 9 to place the fryer back in operation. If the problem persists, contact your local Service Representative or the Service Department.

Operation (continued)

DRAINING AND FILTERING

DANGER : Draining and filtering of cooking oil must be accomplished with care to avoid the possibility of a serious burn caused by careless handling. It is recommended that elbow-length, heat-resistant rubber gloves be worn when draining or filtering cooking oil.

Cooking oil should be filtered at least twice daily and more often if a heavy volume of breaded product is fried. Filtering will greatly increase the life of the cooking oil and will produce a higher quality product.

NOTE: When using a portable filtration unit, refer to the unit manufacturer's operating instructions for the proper filtering procedures.

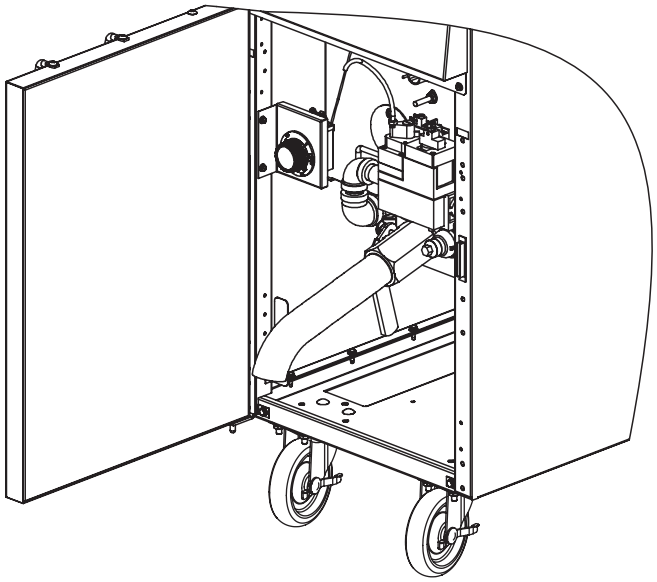
The following procedure is recommended to drain and filter your cooking oil when a portable filtration unit is not available.

DANGER : NEVER attempt to drain cooking oil from the fryer with the burner lit! Doing so may result in a flash fire if the oil splashes onto the burner. Also, applying burner heat to an empty frypot will severely damage the frypot and void the warranty.

1. Rotate the gas valve knob to the PILOT or OFF position. Screw the drain extension supplied with the fryer securely into the drain valve, making sure the opening is pointing down (see illustration below).

   NOTE: If draining the fryer to dispose of the oil, it is recommended to use a wheeled disposal unit equipped with a pump. When using a disposal unit, follow the unit manufacturer's instructions.
2. Position a metal container with a sealable cover under the drain extension. The metal container must be capable of withstanding the hot cooking oil without leaking. It is recommended that a filter cone holder and filter cone be used when a portable filtration unit is not available. If you are using a filter cone holder and filter cone, be sure that the cone holder rests securely on the metal container.
3. Open the drain valve slowly to avoid splattering.
4. If the drain valve becomes clogged with food particles, use a cleanout rod to clear the valve by inserting it into the drain opening from the INSIDE of the frypot.

   DANGER:
   NEVER attempt to clear a clogged valve from the front of the valve! Hot oil will rush out creating the potential for severe burns.
   DO NOT hammer on the drain valve with the rod or other objects. Damage to the ball inside will result in leaks and will void the warranty.
5. The drained oil should be allowed to cool to 100°F (38°C) or lower before transporting the container and removing the drain extension. Cooking oil at a temperature of 140°F (60°C) or higher will result in severe burns if it comes in contact with your skin.
6. After draining the cooking oil, clean all food particles and residual oil from the frypot before refilling. Be careful! The residual oil remains hot enough to cause severe burns if it comes in contact with your skin.
7. Close the drain valve and refill the frypot with clean, filtered cooking oil to the lower oil level line.



Routine Cleaning and Maintenance

To maintain the appearance and increase the service life, clean the equipment daily.

Clean all surfaces before using the appliance. Also clean after each day's operation; however, the unit may require more frequent cleaning, depending on the volume of production.

DAILY CLEANING

THE FRYER SHOULD BE CLEANED EVERY DAY TO MAINTAIN PEAK PERFORMANCE AND APPEARANCE. PERFORM THE PROCEDURES BELOW DAILY:

1. Wipe off any oil that spills onto the exterior of the fryer using a clean, soft cloth while the oil is still warm.
2. Use warm water with a mild detergent to clean all surfaces. Be careful not to allow water or detergent to enter the oil or fry tank.
3. Use a non-abrasive scouring powder or pad to remove stains, if necessary.

WEEKLY CLEANING (BOIL OUT)

THE FRYER SHOULD BE THOROUGHLY CLEANED ONCE A WEEK, INCLUDING A COMPLETE DRAINING AND BOIL-OUT PROCESS.

1. Obtain a container large enough to hold 1.5 times the oil capacity of one tank. The container must also be capable of withstanding boiling water temperatures. **CAUTION:** Completely shut down the fryer before replacing oil with water or performing heating during cleaning. This will prevent the heating system from activating during draining and refilling.
2. Drain the oil from the fryer. Discard or save it for reuse. Remove the tube rack and mesh tube screens. Clear any large debris from the bottom of the fry tank. Once cleaned, reinstall the tube rack and screens. Close the drain valve and fill the fry tank with water and a non-caustic detergent.
3. Restart the fryer and set the thermostat to 200°F. Bring the water to a slow simmer. Do not let it reach a rolling boil, as excessive foaming may occur. Once simmering, turn off the fryer.
4. Allow the fryer to soak for 20 minutes to loosen oil deposits and carbon buildup. Use a fryer brush to clean the tank, heating tubes, and side walls. Then perform the daily cleaning procedure.
5. Wipe the tank dry with clean cloths. Close the drain valve and remove the container.
6. Refill the fryer with fresh oil.

FLUE INSPECTION (EVERY 6 MONTHS)

IT IS RECOMMENDED THAT EVERY SIX MONTHS, WITH THE FRYER COMPLETELY COOLED DOWN, YOU INSPECT THE FLUE AREA. CHECK FOR SIGNS OF CORROSION OR BLOCKAGE. ENSURE THE COOKER REMAINS TURNED OFF THROUGHOUT THE INSPECTION.

WARNING: INSPECTING THE FLUE DURING OPERATION MAY RESULT IN BODILY INJURY.

Troubleshooting

If the equipment does not operate properly, please check the following before placing a service call:

ISSUE	MIGHT BE CAUSED BY	RECOMMENDED SOLUTION
Pilot will not light.	No gas supply or gas isolation valve is OFF.	Ensure the gas isolation valve is turned on, and that the gas tanks are not empty.
	Pilot burner is clogged/blocked.	Check the pilot burner if clogged, and clean, or replace if necessary.
	Pilot valve is closed.	Open the pilot valve.

Troubleshooting (continued)

ISSUE	MIGHT BE CAUSED BY	RECOMMENDED SOLUTION
Pilot flame is very small and can be easily blown out by a small draft.	Pilot valve opening is at a minimum.	Adjust pilot valve to the desired flame, enough to withstand the surrounding draft and light the burner.
	Pilot head is partially blocked.	Check the pilot head for any blockage. Clean or remove the blockage. Replace the pilot head if necessary. Replace pilot valve.
	Faulty or broken pilot valve.	Ensure that the gas tanks are not empty, and the gas isolation valve is turned ON.
Main Burner will not light.	No gas supply or gas isolation valve is OFF.	Adjust the gas supply pressure to required standard.
	Insufficient gas supply pressure.	NG – 7" W.C. and LPG - 12" W.C.
	Clogged or blocked burner injector.	Clean the burner injector or replace it if necessary.
	Faulty or broken gas valve.	Replace the gas valve.
Main Burner and Pilot Burner suddenly shut off.	Not enough gas supply pressure.	Ensure that the gas tanks are not empty and there is enough gas supply. Otherwise, contact your gas dealer.
Flame does not come out from some of the holes of the main burner.	Holes are clogged with carbon or food debris.	Clean the burner or replace it if necessary.
Burner and Pilot flame color is yellow.	Wrong gas type used.	Check the gas type used, change to the correct gas type.
	Wrong orifice installed.	Check the orifice installed. Replace it with correct orifice for the gas type used.
Yellow tipping of flames.	Lack of primary air due incorrect air shutter adjustment.	Open the air shutters to get rid of yellow flame.
	Lint and dust may have blocked primary air openings or have collected inside the burner tube or on the underside of the burner ports which reduced primary air injection.	a. Clean and readjust the burner's air shutter. b. Replace the burners if necessary.
	The burner orifice/injector might have spun out of line.	Check and realign the injector to the burner.
	Blocked or clogged injector orifice.	a. Check and clean the injector orifice. b. Replace it if necessary.
Pilot produces carbon deposits	Connected to wrong gas supply.	Check the unit's rating plate to confirm the correct gas type (Natural Gas or LP/Propane).
	Pressure not adjusted correctly.	Use a manometer to measure gas pressure at the pilot. Adjust the gas pressure regulator to match manufacturer specifications
	Pilot gas not adjusted correctly.	Adjust the pilot flame screw to achieve a small, sharp blue flame that wraps around the thermopile or pilot sensor.
Burners produce carbon deposits	Wrong size orifices.	Verify the orifice size stamped on the orifice itself (e.g., #39 for NG, #52 for LP) and replace it with the correct orifice specified for your fryer model and gas type.
	Connected to wrong gas supply.	Check the unit's rating plate to confirm the correct gas type (Natural Gas or LP/Propane).
	Pressure not adjusted correctly.	Use a manometer to measure gas pressure at the pilot. Adjust the gas pressure regulator to match manufacturer specifications
	Flue obstructed.	Turn off and cool the fryer. Then, remove the burners and clean all ports using a stiff wire brush or compressed air. Replace any burners that show corrosion, cracks, or damage.

Service and Repair

THIS EQUIPMENT MUST ONLY BE SERVICED BY AN AUTHORIZED AGENT.

NOTE

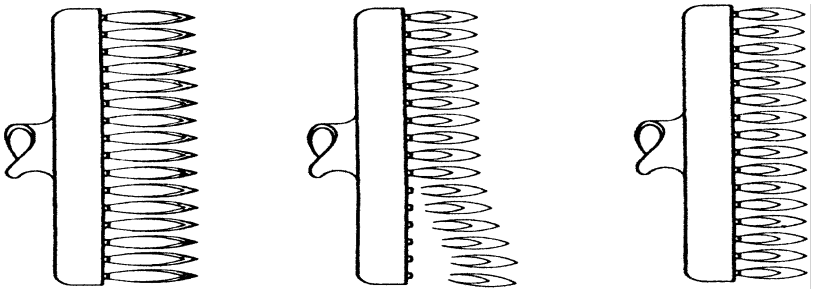
Parts protected by the manufacturer or its agent are not to be adjusted by the installer unless the installer is an authorized service agent.

If you have any questions or problems DO NOT send unit to WINCO® without first contacting our customer service department.

See "Limited Warranty" on www.wincous.com for details.

CHECKING AND ADJUSTING MAIN BURNERS

The main burners should burn with a steady SPECTRUM, and the inner cone of the flame from each port should be about 3/4" long. The flame from each main burner should enter each heat tube without touching the front of the fryer or the sides, top, or bottom of each tube.



Yellow Tips
(Too little air or too much gas)

Blowing or Lifting Flames
(Too much air)

Normal Flame

CHECKING AND ADJUSTING PRESSURE REGULATOR

The combination gas valve (includes pressure regulator) is factory set at 7" W.C. for natural gas and 12" W.C. for propane gas. To check the manifold pressure, do the following:

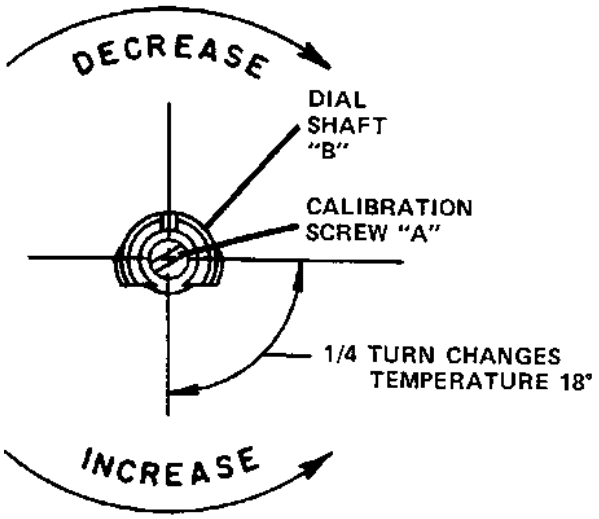
1. Turn thermostat "OFF" and combination gas valve knob to the "PILOT" setting.
2. Remove pressure tap plug from burner manifold located directly below the burners in the cabinet.
3. Install a fitting appropriate to connect a manometer.
4. Turn combination gas valve to "ON" position and thermostat to "ON." The burners will ignite. Be certain that sufficient oil is covering the tubes.
5. With burners on, read manometer.
6. If the manometer does not read 7" W.C. for natural gas, or 12" W.C. for propane gas, adjust regulator.
7. Remove regulator adjustment screw cap (see diagram on page 15).
8. With small screwdriver rotate adjustment screw "CLOCKWISE" to increase or "COUNTERCLOCKWISE" to decrease pressure. Be sure to adjust with burners "ON."
9. Turn thermostat "OFF" and set combination gas valve knob to "PILOT" position.
10. Remove manometer and replace pressure tap plug.
11. Replace adjustment screw cap.

Service and Repair

CHECKING AND ADJUSTING CALIBRATION OF THERMOSTAT

All thermostat controls are carefully calibrated at the factory (i.e., the dial is properly set to control appliance temperatures accurately). Only a qualified appliance service technician should perform this adjustment.

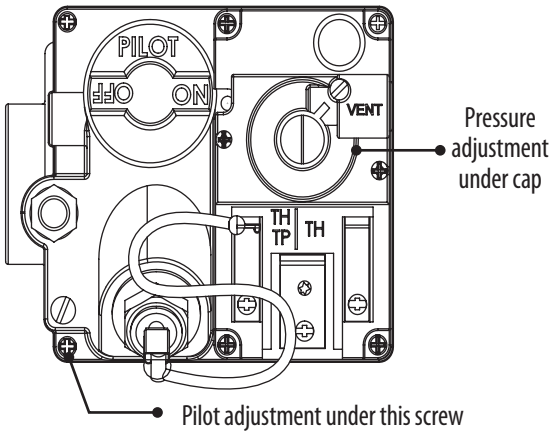
1. To check appliance temperatures, use a thermocouple-type temperature test instrument or reliable thermometer. Place the thermocouple of test instrument or thermometer in the center of the fryer.
2. Turn the control dial to the temperature setting requiring the greatest accuracy. Allow enough time for temperature to stabilize, or until several temperature readings are identical.
3. Recalibrate if setting and actual temperature differ by more than 10°F.
4. Remove dial from dial shaft "B." Be careful that dial shaft does not rotate in either direction (which would change the dial setting).
5. Hold dial shaft "B" steady and with a screwdriver turn calibration screw "A" clockwise to decrease the temperature, or counterclockwise to increase the temperature.
6. Replace dial. Let the appliance operate until the temperature has stabilized before a final check is made to determine whether or not the calibration has been corrected.
7. Once correct, seal the calibration screw with glyptol.

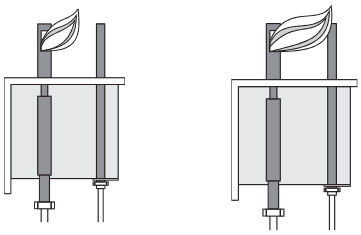


CHECKING AND ADJUSTING AUTO SAFETY PILOT

The pilot flame should surround the thermopile for 1/2". It must be large and sharp enough to cause the thermopile to glow a dull red, or sufficient to hold the safety valve open.

1. Remove pilot adjustment cap.
2. Adjust pilot key to provide properly sized flame shown in diagram.
3. Replace pilot adjustment cap





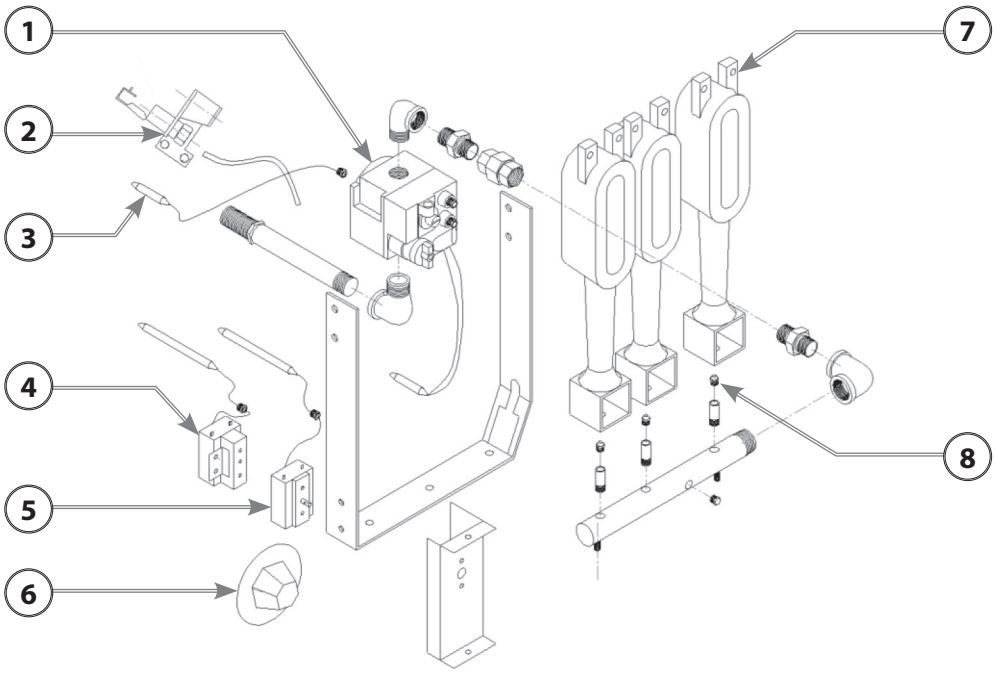
Proper flame size

Improper flame size

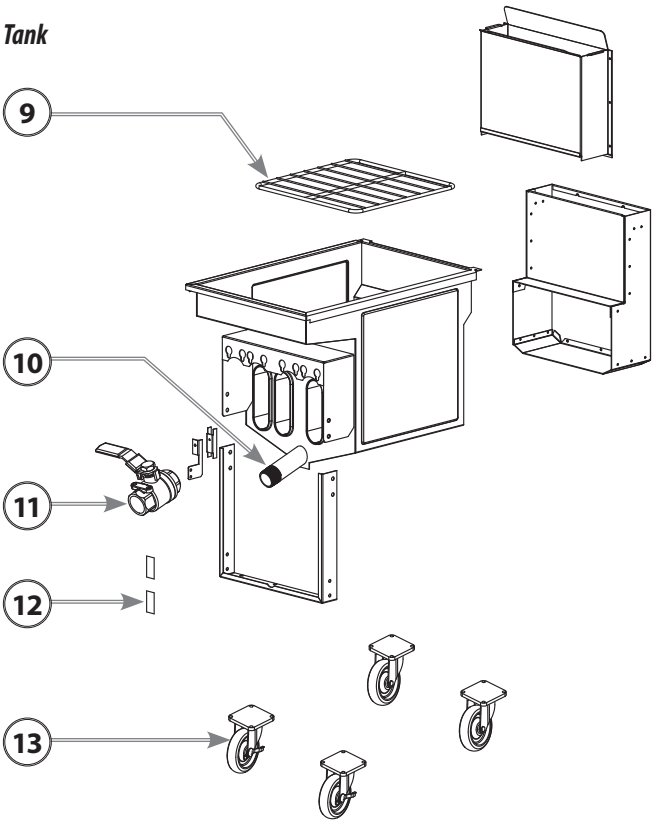
Exploded Views

3-tube unit shown

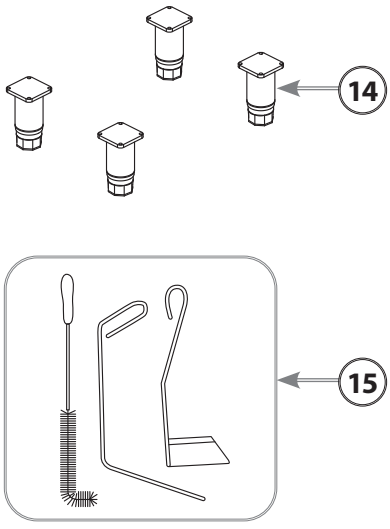
Internal



Tank



Optional Accessories



Spare Parts List

GAS DEEP FRYER		NGGF-40-NG NGGF-40-LP	NGGF-50-NG NGGF-50-LP	NGGF-70-NG NGGF-70-LP
NO.	DESCRIPTION	PART #	PART #	PART #
1	Combination Valve, Mili-Volt, NG	NGGF-COMBIV-NG	NGGF-COMBIV-NG	NGGF-COMBIV-NG
	Combination Valve, Mili-Volt, LP	NGGF-COMBIV-LP	NGGF-COMBIV-LP	NGGF-COMBIV-LP
2	Burner, Pilot NG	NGGF-PILOT-NG	NGGF-PILOT-NG	NGGF-PILOT-NG
	Burner, Pilot LP	NGGF-PILOT-LP	NGGF-PILOT-LP	NGGF-PILOT-LP
3	Thermopile	NGGF-TPILE	NGGF-TPILE	NGGF-TPILE
4	Thermostat High limit 450°F	NGGF-HLIMIT	NGGF-HLIMIT	NGGF-HLIMIT
5	Capillary Thermostat, Regulating 200-400°F	NGGF-TSTAT	NGGF-TSTAT	NGGF-TSTAT
6	Thermostat Knob	NGGF-TKNOB	NGGF-TKNOB	NGGF-TKNOB
7	Cast Iron Burner	NGGF-IRNBUR	NGGF-IRNBUR	NGGF-IRNBUR
8	Orifice #39 NG	ORF-39	ORF-39	ORF-39
	Orifice #52 LP	ORF-52	ORF-52	ORF-52
9	Screen	NGGF-SCREEN40	NGGF-SCREEN50	NGGF-SCREEN70
10	Drain Extension	NGGF-DRAIN-EXT	NGGF-DRAIN-EXT	NGGF-DRAIN-EXT
11	Ball Drain Valve 1-1/4"	NGGF-DRAIN-VAL	NGGF-DRAIN-VAL	NGGF-DRAIN-VAL
12	Door Magnet	NGGF-MAGNET	NGGF-MAGNET	NGGF-MAGNET
13	Caster Set Adjustable & Swivel (4 pcs)	CST-KIT	CST-KIT	CST-KIT

SCAN TO ORDER PARTS

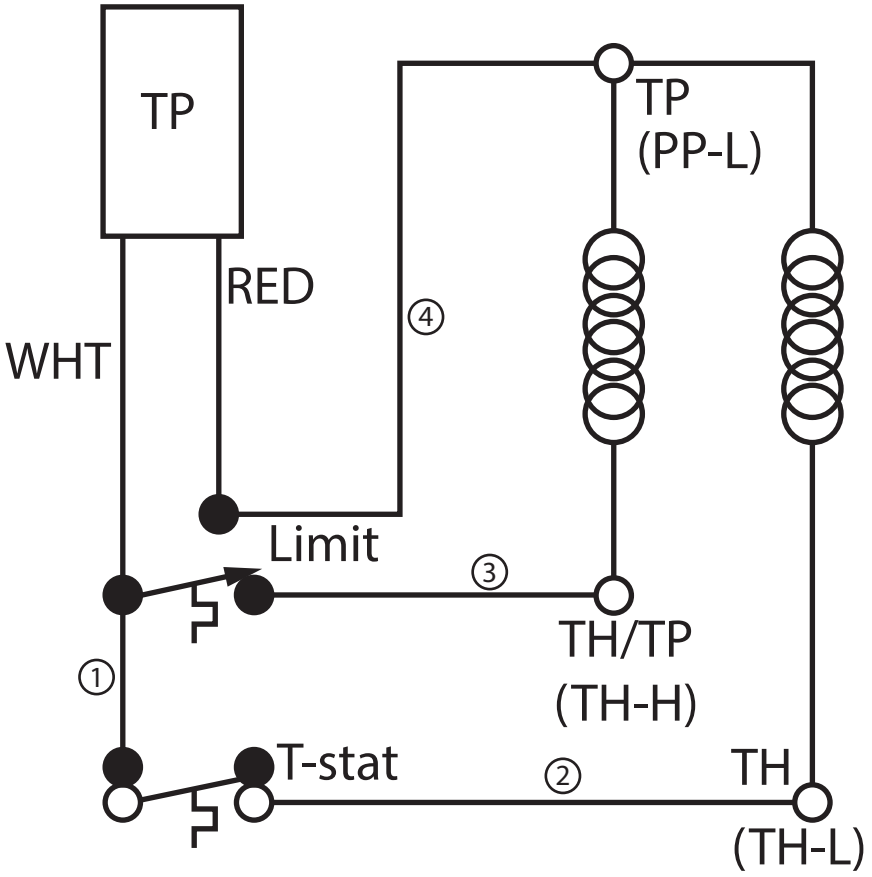
If having trouble or unable to scan, enter the web address https://www.wincous.com/pages/order-parts

Optional Accessories

NO.	DESCRIPTION	PART #
14	Adjustable Foot Kit for Fryer (4 pcs)	ADJFOOT-KIT
15	Tank Cleaning Tool Set	GF-CLNKIT
	Conversion Kit, NG to LP	CONVKIT-NG-LP
	Conversion Kit, LP to NG	CONVKIT-LP-NG
	Connecting Strip	CNT-STP

NO.	DESCRIPTION	PART #
	Door Assembly	NGGF-DORASSY
	Cleanout Rod - 30"L	SFCR-30
	Universal Fryer Connector Strip for 3 or 4 Tube Fryers - 21-5/8"L	SFCS-21
	Universal Fryer Connector Strip for 5 Tube Fryers - 25-5/8"L	SFCS-25

Wiring Diagram



winco®

SPECTRUM™

Models: NGGF-40-LP, NGGF-40-NP,
NGGF-50-LP, NGGF-50-NP,
NGGF-70-LP, and NGGF-70-NP

www.wincous.com