Reliant™ FOOD EQUIPMENT

GFOP Gas Fryer & NC Noodle Cooker

USER'S MANUAL

GFOP User Manual 0621

For complete specifications on all Reliant products, please visit **www.paragondirect.ca**

GAS FRYER & GAS NOODLE COOKER OPERATING INSTRUCTIONS

Models: REL-GFOP-40 / REL-GFOP-50 / REL-NC-75

PLEASE READ THESE INSTRUCTIONS CAREFULLY TO AVOID INCORRECT USAGE OF UNIT AND TO AVOID SAFETY HAZARDS.

NOTICE: Use this appliance for its intended purpose as described in this User Manual.

Dear Purchaser/User:

Thank you for choosing our product. For your safety and ease of use, please read and follow this guide's instructions carefully. Keep this manual in a safe place for your future reference. This manual is subject to change without further notice. The manufacturer reserves the right of final interpretation.

NOTE: This appliance is designed for commercial purposes, NOT for household use.

We strongly advise the user to obtain and post in a prominent location safety instructions from the local gas supplier to address any event where the user suspects a gas leak.

FOR YOUR SAFETY:

Do not store or use gasoline or other flammable vapours or liquids in the vicinity of this or any other appliance.

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.

Contents

NOTICE: This appliance is intended for professional use only and is to be operated by qualified personnel only. A qualified professional should perform installation, maintenance, and repairs. Installation, maintenance, or repairs by unqualified personnel may void the manufacturer's warranty.

This equipment must be installed in accordance with the appropriate national and local codes of the country and/or region in which the appliance is installed.

DANGER: Improper installation, adjustment, maintenance or service, and unauthorized alterations or modifications can cause property damage, injury, or death. Read the installation, operating, and service instructions thoroughly before installing or servicing this equipment. Only qualified service personnel may convert this appliance to use a gas other than that for which it was originally configured.

Adequate means must be provided to limit the movement of this appliance without depending upon the gas line connection. Single fryers equipped with legs must be stabilized by installing anchor straps. All fryers equipped with casters must be stabilized by installing restraining chains. If a flexible gas line is used, an additional restraining cable must be connected at all times when the fryer is in use.

Adequate means must be provided to limit the movement of this appliance without depending upon the gas line connection. Single fryers equipped with legs must be stabilized by installing anchor straps. All fryers equipped with casters must be stabilized by installing restraining chains. If a flexible gas line is used, an additional restraining cable must be connected at all times when the fryer is in use.

The front ledge of the fryer is not a step! Do not stand on the fryer. Serious injury can result from slips or contact with the hot oil.

Do not store or use gasoline or other flammable liquids or vapours in the vicinity of this or any other appliance.

Instructions to be followed in the event the operator smells gas or otherwise detects a gas leak must be posted in a prominent location. This information can be obtained from the local gas company or gas supplier.

This product contains chemicals known to the state of California to cause cancer and/or birth defects or other reproductive harm. Operation, installation, and servicing of this product could expose you to airborne particles of glasswool or ceramic fibres, crystalline silica, and/or carbon monoxide. Inhalation of airborne particles of glasswool or ceramic fibres is known to the State of California to cause cancer. Inhalation of carbon monoxide is known to the State of California to cause birth defects or other reproductive harm.

1: GENERAL INFORMATION

Retain and store this manual in a safe place for future use.

1.1 SAFETY INFORMATION

Before attempting to operate your unit, read the instructions in this manual thoroughly.

DANGER Hot cooking oil or shortening causes severe burns. Never attempt to move a fryer containing hot cooking oil/shortening or to transfer hot cooking oil/shortening from one container to another.

1.2 EQUIPMENT DESCRIPTION

The gas fryers are designed for all-purpose frying. These fryers use a millivolt temperature control circuit, which requires no external power.

All models use an open-pot design with no tubes and have a hand-sized opening into the deep cold zone, which makes cleaning the frypot quick and easy.

The fryers require installation of legs or optional casters at point of use. All fryers are shipped with a package of standard accessories. Each fryer is adjusted, tested, and inspected at the factory before crating for shipment.

Frypots are constructed of welded, heavy-gauge stainless steel or cold-rolled steel. Heat is supplied by a burner assembly having multiple gas jets, which are focused on deflectors located around the lower side of the frypot. The deflectors concentrate the heat produced by the burners on the bottom of the frypot.

The burner assembly can be configured for natural gas, propane, or manufactured gas, as required by the customer. A drain is tapped into the center of the frypot, with a front-controlled manual ball valve.

Each fryer is equipped with a thermostat for precise temperature control. The thermostat is located near the centreline of the frypot for rapid response to changes in loads and to provide the most accurate temperature measurement. A high temperature thermostat (hi-limit) shuts off gas to the burner assembly if the controlling thermostat fails.

1.3 INSTALLATION, OPERATING, AND SERVICE PERSONNEL

Operating information for this fryer has been prepared for use by qualified and/or authorized personnel only, as defined in Section 1.4.

All installation and service on this unit must be performed by qualified, certified, licensed, and or/authorized installation or service personnel.

1.4 DEFINITIONS

QUALIFIED AND/OR AUTHORIZED OPERATING PERSONNEL:

Qualified/authorized operating personnel are those who have carefully read the information in this manual and have familiarized themselves with the equipment functions, or who have had previous experience with the operation of the equipment covered in this manual.

Failure to use qualified service personnel will void the Warranty on your equipment.

1.5 SHIPPING DAMAGE CLAIM PROCEDURE

This unit was carefully inspected and packed before leaving the factory. The transportation company assumes full responsibility for safe delivery upon acceptance of the equipment for transport.

What to do if your equipment arrives damaged:

1. File a claim for damages immediately, regardless of the extent of damages.
2. Inspect for and record all visible loss or damage, and ensure that this information is noted on the freight bill or express receipt and is signed by the person making the delivery.

1.6 SPECIFICATION

Model		Capacity	Orifice (mm)	BTU/hr.
REL-GFOP-40	NG	40lbs	1.65mm	90,000
	Propane		1.0mm	90,000
REL-GFOP-50	NG	50lbs	1.45mm	120,000
	Propane		0.8mm	110,000
REL-NC	NG	60lbs	1.45mm	130,000
	Propane		0.8mm	120,000

2: INSTALLATION INSTRUCTIONS

2.1 GENERAL INSTALLATION REQUIREMENTS

PROPER INSTALLATION IN ACCORDANCE WITH THE INSTRUCTIONS THAT FOLLOW IS ESSENTIAL FOR EFFICIENT, TROUBLE-FREE OPERATION OF YOUR FRYER. ANY UNAUTHORIZED ALTERATIONS MADE TO THIS EQUIPMENT WILL VOID THE FRYMASTER WARRANTY.

Upon arrival, inspect the fryer carefully for visible or concealed damage.

CLEARANCE AND VENTILATION

The fryer(s) must be installed with a 6” (150 mm) clearance at both sides and back when installed adjacent to combustible construction; no clearance is required when installed adjacent to noncombustible construction. A minimum of 24” (600 mm) clearance should be provided at the front of the fryer.

One of the most important considerations of efficient fryer operation is ventilation. Make sure the fryer is installed to efficiently remove combustion by-products, and the kitchen ventilation system does not produce drafts that interfere with proper burner operation.

The fryer flue opening must not be placed close to the intake of the exhaust fan, and the fryer must never have its flue extended in a “chimney” fashion. An extended flue will change the combustion characteristics of the fryer, causing longer recovery time. It also frequently causes delayed ignition. To provide the airflow necessary for good combustion and burner operation, the areas surrounding the fryer front, sides, and rear must be kept clear and unobstructed.

Fryers must be installed in an area with an adequate air supply and adequate ventilation. Adequate distances must be maintained from the flue outlet of the fryer to the lower edge of the ventilation filter bank.

DANGER: No structural material on the fryer should be altered or removed to accommodate placement of the fryer under a hood.

NATIONAL CODE REQUIREMENTS

The type of gas for which the fryer is equipped is marked on the data plate attached to the inside of the fryer door. Connect a fryer marked “NAT” only to natural gas, those marked “LPG” only to propane gas, and those marked “MFG” only to manufactured gas.

When installing this equipment in the UNITED STATES, the installation must conform to the latest edition of the National Fuel Gas Code, ANSI Z223.1. In CANADA, installation must conform to the latest edition of Standard CAN-/GCA-B149.1 or .2, “Installation Codes for Gas Burning Appliances & Equipment”. In addition to the applicable national code or standard, installation must also be in accordance with any local codes for the area in which the equipment is installed.

Installation shall be made with a gas connector that complies with national and local codes. In the UNITED STATES, the applicable code is ANSI Z21.69 with Addenda, “Standard for Connectors for Movable Gas Appliances”. Quick-Disconnect devices, if used, shall likewise comply with national and local codes. In the UNITED STATES, the code is ANSI Z21.41, “Standard for Quick-Disconnect Devices for Use with Gas Fuel”.

2.2 CASTER/LEG INSTALLATION

Depending upon the specific configuration ordered, your fryer may have been shipped without installed casters or legs.

Install the casters/legs in accordance with the instructions included in your accessory package.

2.3 PRE-CONNECTION PREPARATIONS

DANGER: Do not connect fryer to gas supply before completing each step in this section.

After the fryer has been positioned under the fry station exhaust hood, ensure the following has been accomplished:

1. Adequate means must be provided to limit the movement of fryers without depending upon the gas line connections. If a flexible gas hose is used, a restraining cable must be connected at all times when the fryer is in use. The restraining cable and installation instructions are packed with the flexible hose in the accessories box that was shipped with your unit.
2. These fryers must be stabilized by installing restraining chains on fryers equipped with casters or anchor straps on fryers equipped with legs. Follow the instructions shipped with the casters/legs to properly install the chains or straps.
3. Level fryers equipped with legs by extending the adjustable portion of the leg out approximately 1 inch, and then further adjust the legs, ensuring the fryer is level and at the proper height in the exhaust hood. For fryers equipped with casters, the floor where the fryer is to be installed must be level.
4. Refer to the data plate on the inside of the fryer door to verify that the fryer is configured for the proper type of gas before connecting the fryer quick-disconnect device or piping from the gas supply line.
5. Verify that the minimum and maximum gas supply pressures for the type of gas to be used are in accordance with the table below.

2.4 CONNECTION TO GAS LINE

The size of the gas line used for installation is very important. If the line is too small, the gas pressure at the burner manifold will be low. This may cause pilot outage, slow recovery and delayed ignition. The incoming gas supply line should be a minimum of 1½" (38 mm) in diameter. All single fryers using natural gas require a ¾" or ½" connection. For fryers using LP gas, one pipe size smaller may be used. If in doubt about the correct pipe size, consult the local gas company.

Before connecting new pipe to your unit, the pipe must be thoroughly blown out to remove any foreign particles. If these foreign particles get into the burner and controls, they will cause improper and sometimes dangerous operation.

Standard for Incoming Gas Pressure		
Gas	**Minimum**	**Maximum**
Natural	6" WC 1.49 kPa 14.94 mbar	14" WC 3.49 kPa 34.87 mbar
LP	11" WC 2.74 kPa 27.37 mbar	14" WC 3.49 kPa 34.87 mbar

1. Connect the quick-disconnect hose to the fryer quick-disconnect fitting at the rear of the fryer and to the building gas line.

NOTE: Some fryers are configured for a rigid connection to the gas supply line. These units are connected directly to the gas supply line.

When using thread compound, use very small amounts on male threads only. Use a pipe thread compound that is not affected by the chemical action of LP gases (Loctite™ PST56765 Sealant is one such compound). DO NOT apply compound to the first two threads. This will ensure that the burner orifices and control valve do not become clogged.

2. Open the gas supply to the fryer and check all piping, fittings, and gas connections for leaks. A soap and water solution should be used for this purpose.

DANGER: Never use matches, candles, or any other ignition source to check for leaks.

If gas odours are detected, shut off the gas supply to the fryer at the main shut-off valve and contact the local gas company or an authorized service agency for service.

NOTE: The fryer must be disconnected from the gas supply piping during any pressure testing of the gas supply piping pressures equal to or greater than ½ psig (3.45kPa or 13.84 in. W.C.).

3. Close the fryer drain valve and fill the frypot with water or boil-out solution to the bottom OIL LEVEL line at the rear of the frypot. Light the fryer and perform the boil-out procedures that are described in the “Start-Up Procedure” and “Boiling Out the Frypot” topics found in Chapter 3 of this manual.

WARNING: “Dry-firing” your unit will cause damage to the frypot. Always ensure that melted shortening, cooking oil, or water is in the frypot before firing your unit.

4. It is suggested that the burner manifold pressure be checked at this time by the local gas company or an authorized service agent. Refer to “Check Burner Manifold Pressure” in Section 4.3 of this manual for the proper procedure.

2.5 CONVERTING TO ANOTHER GAS TYPE

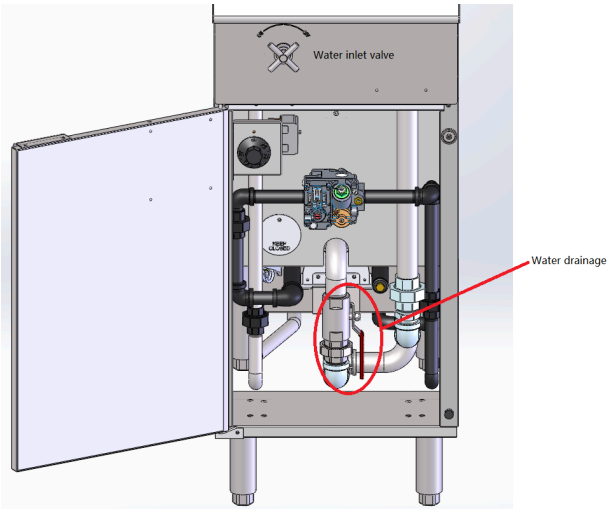
DANGER: Switching to a different type of gas without installing the proper conversion kit may result in fire or explosion.

NEVER ATTACH YOUR FRYER TO A GAS SUPPLY FOR WHICH IT IS NOT CONFIGURED!

Your fryer is configured at the factory for either natural gas or Propane (LP) gas. If you desire to switch from one type of gas to another, a dealer Authorized technician must install a gas conversion kit.

2.6 WATER CONNECTION ONLY FOR NOODLE COOKER.

This model is specially designed to boil pasta and noodles. Water should be connected to this unit. The black pipe is for gas connection. The middle pipe is for waste water drainage. Please make sure you have the right connection. Wrong connection would damage the valve and cause gas leakage.



3: OPERATING INSTRUCTIONS

3.1 START-UP PROCEDURE

CAUTION: If this is the first time the fryer is being used after installation, refer to Section 3.2, Boil-Out Procedure.

CAUTION: Before lighting the fryer, make sure the fryer is OFF and the frypot drain valve is closed. Fill the frypot to the bottom OIL LEVEL line.

To prevent scorching, if solid shortening is being used, make sure it is tightly packed down into the bottom of the frypot. Solid shortening should be melted at low temperature.

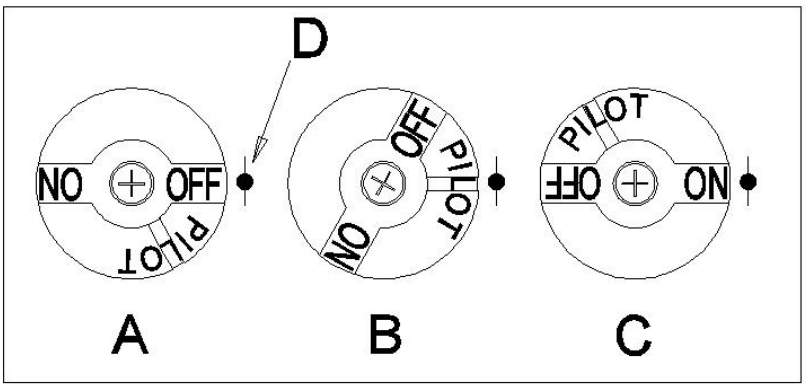
Operating the Gas Valve:

The knob on the gas valve is placed in the PILOT or ON position by rotating it counter-clockwise. To return the knob to the OFF position, the knob must be depressed slightly to disengage its stop tab, then rotated clockwise.

Lighting the Pilot and Burner:

WARNING: Frypot must be filled with water or cooking oil/shortening before lighting.

1. Open the door.
2. Turn the thermostat OFF (see figure below, view A). The thermostat is located behind the door.
3. Push the gas control valve knob and turn to OFF. Wait 5 minutes for unburned gas to vent.
4. Push and turn gas control valve knob to the “L” in PILOT (see figure below, view B).
5. While still holding the knob in, light the pilot with a lit flame. Continue to depress the knob until pilot remains lit when knob is released. If the pilot does not remain lit, repeat step 3 through 5.
6. Depress and turn gas control knob to ON (See figure below, view C).
7. If gas supply is interrupted, repeat steps 2 through 6.



A Gas Valve Knob, View A
B Gas Valve Knob, View B
C Gas Valve Knob, View C
D Indicator Point, All Views

CAUTION: If the pilot fails to remain lit, wait five minutes before attempting to re-light.

1. With the pilot lit, push down and slowly turn the knob to the ON position.
2. The burner should light and burn with a strong blue flame. Once the burner has been lit, it is controlled by the thermostat.

CAUTION: If the pilot and main burner go out, the fryer(s) must be completely shut down at least five minutes before re-lighting.

3.2 BOILING OUT THE FRYPOT

To ensure that the frypot is free of any contamination resulting from its manufacture, shipping, and handling during installation, the frypot must be boiled out before first use. It is recommended to boil out the frypot each time the oil or shortening is changed.

1. Before lighting the burner, close the frypot drain valve and fill the frypot with a mixture of cold water and boil-out solution or detergent. Fill to the lower oil-level line.
2. Light the fryer in accordance with the lighting instructions in Section 3.1.
3. Simmer the solution for one hour.

DANGER: Never leave the fryer unattended during the boil-out process. If the boil-out solution boils over, turn the fryer off immediately and let the solution cool for a few minutes before resuming the process. To lessen the chance of boil over, turn the fryer's gas valve knob to the PILOT position occasionally.

1. After the solution has simmered for one hour, turn the gas valve knob to the PILOT position and allow the solution to cool.
2. Add one gallon (3.8 litres) of cold water and stir. Drain the solution into a suitable container and clean the frypot thoroughly.

WARNING: Do not drain boil-out solution into a shortening disposal unit or portable filter unit. These units are not intended for this purpose, and will be damaged by the solution.

3. Rinse the frypot at least twice by filling the frypot with clean water and draining. Dry the frypot thoroughly with a clean, dry towel.

DANGER: Remove all drops of water from the frypot before filling with cooking oil or shortening. Failure to do so may cause spattering of hot liquid when the oil or shortening is heated to cooking temperature.

3.3 FILLING WITH COOKING OIL OR SHORTENING

1. Ensure the fryer's gas valve is off or in the pilot position.
2. Close the frypot drain valve; remove the basket support rack if required.
3. Fill the frypot to the lower oil-level line. When solid shortening is used, it must be thoroughly packed down into the frypot's cold zone.
4. To melt solid shortening without scorching, the gas valve knob should be turned to the ON position for about three seconds and then to the PILOT position for about 10 seconds repeatedly until the shortening is completely melted. If any smoke is seen during this process, the oil is heating too quickly and scorching. This melting process is not necessary with liquid shortening.

3.4 SHUTTING THE FRYER DOWN

For short-term shut down during the workday, rotate the gas valve knob clockwise to the PILOT position.

When shutting the fryers down at closing time, rotate the gas valve knob to the PILOT position (see Figure 1 on Page 3-1). Depress the gas valve knob and rotate slightly clockwise. Release and continue rotating clockwise to the OFF position.

3.5 THERMOSTAT OPERATION

The thermostat is connected to a graduated knob located inside the fryer door. Rotating the knob clockwise to the desired cooking temperature (setpoint) directly adjusts the thermostat to that temperature. The thermostat controls the frypot temperature by regulating the gas supply to the burner via the gas valve.

The thermostat is in the full OFF position when the word OFF is at the top of the knob. A "click" will be heard when the knob is rotated from the OFF position to a temperature, or when it is rotated back to the OFF position.

3.6 DRAINING AND FILTERING

DANGER: Draining and filtering of cooking oil or shortening 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 or shortening. Cooking oil or shortening 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 or shortening and will produce a higher quality product.

DANGER: NEVER attempt to drain cooking oil or shortening from the fryer with the burner lit! Doing so may result in a flash fire if the oil or shortening 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 .
2. Position a metal container with a sealable cover under the drain extension. The metal container must withstand the hot cooking oil or shortening without leaking. Open valve slowly to avoid splattering.
3. 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 or shortening 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.

4. The drained shortening should be allowed to cool to 100 F (38 C) or lower before transporting the container and removing the drain extension. Cooking oil or shortening at a temperature of 140 F (60 C) or higher will result in severe burns if it comes in contact with your skin.
5. After draining the cooking oil or shortening, clean all food particles and residual oil/shortening from the frypot before refilling. Be careful! The residual oil/shortening remains hot enough to cause severe burns if it comes in contact with your skin.
6. Close the drain valve and refill the frypot with clean, filtered cooking oil or shortening to the lower oil level line.

4: PREVENTIVE MAINTENANCE & TROUBLESHOOTING

4.1 DAILY CHECKS AND SERVICES

Inspect Fryer and Accessories for Damage

Look for loose wires, leaks, foreign material in frypot or inside cabinet, and any other indications that the fryer and accessories are not ready and safe for operation.

Inspect the burner deflectors to verify that each is positioned directly above its orifice, and that the flame ignites approximately 2 inches (60mm) above the orifice. The flame should strike the center of the deflector and be a rich blue color.

Clean Fryer Cabinet Inside and Out

Clean inside the fryer cabinet with dry, clean cloth. Wipe all accessible metal surfaces and components to remove accumulations of oil or shortening and dust.

Clean the outside of the fryer cabinet with a clean, damp cloth soaked with dishwashing detergent, removing oil/shortening, dust, and lint from the fryer cabinet.

DANGER: Never attempt to clean the fryer during the cooking process or when the frypot is filled with hot oil/shortening. If water comes in contact with oil/shortening heated to cooking temperature, it can cause the oil/shortening to splatter and severely burn nearby personnel.

Filter Cooking Oil/Shortening

The cooking oil/shortening used in your fryer should be filtered at least twice every day (more often if the fryer is in constant use).

4.2 QUARTERLY CHECKS AND SERVICES

Drain and Clean Frypot

During normal usage of your fryer, a deposit of carbonized cooking oil or shortening will gradually form on the inside of the frypot. This deposit must be periodically removed to maintain your fryer's efficiency.

Follow the procedures for draining the frypot in Section 3.6, the follow the "Boiling Out the Frypot" procedures.

Clean Detachable Parts and Accessories

As with the frypot, a deposit of carbonized oil/shortening will accumulate on detachable parts and accessories such as baskets and sediment trays.

Wipe all detachable parts and accessories with a clean cloth dampened with a detergent solution. Rinse and thoroughly dry each part.

Clean Gas Valve Vent Tube

1. Carefully unscrew the vent tube from the gas valve. NOTE: The vent tube may be straightened for ease in removal.
2. Pass a piece of ordinary binding wire (.052 inch diameter) through the tube to remove any obstruction.
3. Remove the wire and blow through the tube to ensure it is clear.

Clean Detachable Parts and Accessories

As with the frypot, a deposit of carbonized oil/shortening will accumulate on detachable parts and accessories such as baskets and sediment trays.

Wipe all detachable parts and accessories with a clean cloth dampened with a detergent solution. Rinse and thoroughly dry each part.

Clean Gas Valve Vent Tube

1. Carefully unscrew the vent tube from the gas valve. NOTE: The vent tube may be straightened for ease in removal.
2. Pass a piece of ordinary binding wire (.052 inch diameter) through the tube to remove any obstruction.
3. Remove the wire and blow through the tube to ensure it is clear.
4. Reinstall tube and bend it so that the opening is pointing downward.

4.3 SEMI-ANNUAL CHECKS AND SERVICE

Check Burner Manifold Pressure

WARNING: This task should be performed by qualified service personnel only.

WARNING: The frypot must be filled with water or cooking oil/shortening during this procedure.

1. Ensure that the gas valve knob is in the OFF position.
2. Remove the pressure tap plug from burner manifold.
3. Insert the fitting for a manometer or pressure gauge into the pressure tap hole.
4. Place the gas valve in the PILOT position and light the pilot. When the pilot lights and continues toburn, increase the setting on the thermostat knob until the burner lights. Compare the manometer or gauge reading to the appropriate table below.

for Burner Manifold Pressure		Standard for Burner Manifold Pressure	
Gas Type	Pressure	Gas Type	Pressure
Natural	4.0” WC (1.00 kPa or 9.96 mbar)	Natural	3.5” WC (0.87 kPa or 8.72 mbar)
LP	10.0” W.C (2.49 kPa or 24.91 mbar)	LP	8.25” W.C. (2.06 kPa or 20.55 mbar)

1. If the burner manifold pressure does not meet the specifications in the tables, unscrew the slotted cap from the top of the gas valve regulator (adjacent to the gas valve vent tube) and turn the adjusting screw to obtain the correct pressure. Turn the screw clockwise to increase pressure, counter-clockwise to decrease pressure.
2. After adjusting the manifold pressure to the correct value, reinstall the regulator cap and turn the gas valve knob to the OFF position.
3. Remove the manometer or pressure gauge fitting from the pressure tap hole and reinstall the pipe plug.
4. Place the gas valve in the PILOT position and check for gas leaks. If no leaks are found, re-light the pilot and return the unit to operation.

4.4 OPERATOR TROUBLESHOOTING

The tables that follow provide operators with a list of possible malfunctions, the probable causes of the malfunctions, and the corrective actions to take to correct the problem.

In some cases the operator may not be able to correct the problem, but will at least be able to accurately diagnose the problem, and that will assist a qualified service technician in restoring the equipment to full operation in the shortest possible time.

Problem	Probable Cause	Corrective Action
Burner does not light at all.	A. Pilot is not lit.	A. Light pilot.
	B. Loose, dirty, or corroded terminals on gas valve.	B. Clean and tighten terminals on gas valve.
	C. Loose, dirty, or corroded terminals on thermostat.	C. Clean and tighten terminals on thermostat.
	D. Thermostat, gas valve, or hi-limit wires broken or shorted.	D. Examine wires for signs of abrasions, cuts, kinks, etc. If the wiring is obviously damaged, it will probably be necessary to replace the associated component. Call FASC.
	E. Thermostat out of calibration.	E. Check calibration of thermostat in accordance with procedures in Section 4.2 of this manual.
	F. If the above causes have all been ruled out, the probable causes are a failed thermostat or a failed gas valve.	F. Call FASC.
Burner does not light all the way around.	A. One or more burner orifices clogged.	A. Turn gas valve knob to OFF position. Use thin wire to clear obstruction from burner orifices.
	B. Blocked flue.	B. Clear blockage from flue.
	C. Fryer flue connected directly to vent hood with a chimney-like duct.	C. Remove chimney-like duct and allow for at least 18" (45.7cm) between flue outlet and vent hood filters.
	D. If the above causes have all been ruled out, the probable causes are a broken or missing target (GF40), a bent or missing flame deflector (GF14), or incorrect burner gas pressure.	D. Call FASC.
Burner experiences delayed ignition.	A. Too little make-up air in kitchen.	A. Adjust kitchen ventilation system to increase make-up air.
	B. Pilot flame directed away from first orifice of burner.	B. Reposition pilot hood to direct flame toward first burner orifice.
	C. One or more burner orifices clogged.	C. Use a thin wire to clear obstruction from orifices.
	D. If the above causes have all been ruled out, the probable causes are low pilot flame (less than 1" (25mm)), low incoming gas pressure, or a too small incoming gas line.	D. Call FASC
Flame rolling out from under fryer.	A. Flue obstructed.	A. Remove obstruction from flue.
	B. Too little make-up air in kitchen.	B. Adjust kitchen ventilation system to increase make-up air.
Pilot repeatedly goes out.	A. Clogged pilot orifice.	A. Use a small wire to clear obstruction from pilot orifice.
	B. Pilot flame blowing away from pilot generator (excessive draft in kitchen).	B. Eliminate draft in kitchen.
	C. Pilot generator not inserted fully into pilot burner.	C. Reinsert pilot generator into pilot burner until flame surrounds tip.
	D. Corroded connection where pilot generator connects to gas valve.	D. Clean pilot generator connection at gas valve.
	E. If all of the above causes have been ruled out, the probable causes are low pilot flame, pilot generator low millivolt output, high resistance in hi-limit thermostat contacts, or a defective pilot magnet in the gas valve.	E. Call FASC.