Super Runner Series Gas Fryers

Installation & Operation Manual

Series SR42, SR52 & SR62

NON-CE &

CE

For Service, Call (318) 865-1711

**Dean, 8700 Line Avenue, PO Box 51000,
Shreveport, Louisiana 71135-1000
Shipping Address: 8700 Line Avenue,
Shreveport, Louisiana 71106**

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NOTICE

This appliance is intended for professional use only and is to be operated by qualified personnel only. A Frymaster/DEAN Factory Authorized Service Center (FASC) or other qualified professional should perform installation, maintenance, and repairs. Installation, maintenance, or repairs by unqualified personnel may void the manufacturer's warranty.

NOTICE

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.

NOTICE TO U.S. CUSTOMERS

This equipment is to be installed in compliance with the basic plumbing code of the Building Officials and Code Administrators International, Inc. (BOCA) and the Food Service Sanitation Manual of the U.S. Food and Drug Administration.

⚠ 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.

⚠ DANGER

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. If a flexible gas line is used, an additional restraining cable must be connected at all times when the fryer is in use.

⚠ DANGER

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.

⚠ DANGER

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

⚠ DANGER

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.

NOTICE

IF, DURING THE WARRANTY PERIOD, THE CUSTOMER USES A PART FOR THIS ENODIS EQUIPMENT OTHER THAN AN UNMODIFIED NEW OR RECYCLED PART PURCHASED DIRECTLY FROM FRYMASTER/DEAN, OR ANY OF ITS AUTHORIZED SERVICE CENTERS, AND/OR THE PART BEING USED IS MODIFIED FROM ITS ORIGINAL CONFIGURATION, THIS WARRANTY WILL BE VOID. FURTHER, FRYMASTER/DEAN AND ITS AFFILIATES WILL NOT BE LIABLE FOR ANY CLAIMS, DAMAGES OR EXPENSES INCURRED BY THE CUSTOMER WHICH ARISE DIRECTLY OR INDIRECTLY, IN WHOLE OR IN PART, DUE TO THE INSTALLATION OF ANY MODIFIED PART AND/OR PART RECEIVED FROM AN UNAUTHORIZED SERVICE CENTER.

NOTICE

The Commonwealth of Massachusetts requires any and all gas products to be installed by a licensed plumber or pipe fitter.

SUPER RUNNER SERIES GAS FRYERS
CHAPTER 1: INSTALLATION INSTRUCTIONS

1.1 Safety Information

Before attempting to operate your unit, read the instructions in this manual thoroughly. Throughout this manual you will find notations enclosed in double-bordered boxes with the symbol ⚠. The information contained in the box concerns actions or conditions that may cause or result in injury to personnel or damage to your system, and/or cause your system to malfunction.

1.2 General Installation Instructions

⚠ DANGER
Building codes prohibit a fryer with its open frypot of hot oil being installed beside an open flame of any type, including those of broilers and ranges.

⚠ DANGER
This appliance must be installed with sufficient ventilation to prevent the occurrence of unacceptable concentrations of substances harmful to the health of personnel in the room where it is installed.

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

⚠ DANGER
Single fryers must be restrained to prevent tipping when installed in order to avoid the splashing of hot liquid. The means of restraint may be the manner of installation, such as connection to battery of appliances or installing the fryer in an alcove, or by separate means, such as straps or chains.

⚠ DANGER
Do not attach an apron drainboard to a single unit. The appliance may become unstable, tip over, and cause injury. The appliance area must be free and clear of combustible material at all times.

NOTICE
This appliance is only for professional use and shall be used by qualified personnel only.

CLEARANCE AND VENTILATION

This fryer must be installed with a 6-inch (150-mm) clearance at both sides and back when installed adjacent to combustible construction. No clearance is required when installed adjacent to non-combustible construction. A minimum of 24-inches (600-mm) clearance should be provided at the front of the fryer.

The fryer flue opening must not be placed close to the intake of an 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. 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.

The fryer 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. Filters should be installed at an angle of 45°. Place a drip tray beneath the lowest edge of the filter. For U.S. installation, NFPA standard No. 96 states, "A minimum distance of 18-inches (450-mm) should be maintained between the flue outlet and the lower edge of the grease filter". *Frymaster recommends that the minimum distance be 24-inches (600-mm) from the flue outlet to the bottom edge of the filter.*

INSTALLATION

NOTE: ***Unless special ordered, this fryer is designed for operation at altitudes of 2000 feet (610 meters) and below. The unit must be modified for operation above 2000 feet (610 meters).***

For units equipped with legs: Lift the unit and move it into its final position. Do not drag or push the fryer into position. Doing so may damage the legs. Level the unit front to back and side to side. If the fryer is not level, the unit will not function efficiently. Super Runner Series gas fryers cannot be curb mounted and must be equipped with either legs or casters provided.

A. Adjust leg height with an adjustable or 1-1/16-inch (27-mm) open-end wrench by turning the hexagon-shaped foot on the bottom of the leg. **NOTE:** The foot is for minor leg height adjustment only. **Do not adjust outward more than ¾-inch (19-mm)**.

B. When leveling the unit, the leg body should be held firmly to keep the leg from bending or rotating while turning the foot to the required height.

For units equipped with casters: Roll the unit into its final position and lock the front casters.

1.3 Pre-Connection Preparation

⚠ WARNING
If the incoming gas pressure is in excess of ½" PSI (3.45 kPa/35 mbar), a step-down regulator will be required.

CE UNITS ONLY:

Dean Super Runner gas fryers have obtained CE markings for countries and gas categories shown below:

Countries		Supply Pressures and Gas (mbar)		Appliance Categories
BE	Belgium	G20 G31	20/25 37	IIE(R)B3P
DE	Germany	G20 G31	20 50	I2E I3P
DK	Denmark	G20	20	I2H
ES	Spain	G20 G31	20 37 and 50	II2H3P
FR	France	G20/G25 G31	20/25 37 and 50	II2ESI3P
GB	Great Britain	G20 G31	20 37	II2H3P
GR	Greece	G20 G31	20 37 and 50	II2H3P
IR	Ireland	G20 G31	20 37	II2H3P
IT	Italy	G20	20	I2H
LU	Luxembourg	G20/G25 G31	20/25 50	II2E3P
NL	The Netherlands	G25 G31	25 50	II2L3P
PT	Portugal	G20 G31	20 37	II2H3P

NON-CE UNITS ONLY:

NATIONAL CODE REQUIREMENTS:

This equipment is to be installed in compliance with the Basic Plumbing Code of the Building Officials and Code Administrators International, Inc. (BOCA) and the Food Service Sanitation Manual of the U.S. Food and Drug Administration.

This equipment is manufactured to use the type of gas specified on the rating plate attached to the door. Connect equipment stamped "NAT" only to natural gas and that stamped "PRO" only to LP (Propane) gas.

AUSTRALIAN REQUIREMENTS:

To be installed on a firm, level surface in accordance with AS 5601 / AG 601, local authority, gas, electricity, and any other relevant statutory regulations. The Australian orifice size and manifold pressures are listed below for the SR62.

Model	Gas Type	Orifice Size	Manifold Pressure KPa	Manifold Pressure Inches WC
SR62	Nat	2.53 mm	0.9 KPa	3.6"
SR62	Prop	1.6 mm	2.4 KPa	9.6"

CE UNITS ONLY:
Nominal Heat Inputs (Qn), Gas Type, Orifice Size, Pressures and Adjustments, Orifice Quantity/Color, Burner Markings and Pilot Markings are listed in the table below:

MODEL*	NOMINAL HEAT INPUT-Qn (kW)	GAS TYPE	ORIFICE SIZE (MM)	MANIFOLD GAS PRESSURE		ORIFICE QTY/ COLOR	BURNER MARKING	PILOT MARKING
				MBAR	INCH W.C.			
SR62 GM	37.5	G20	2.40	12,0	4,8	5/BLUE	Blue	26N
		G25	2.40	17,5	7,0	5/BLUE	Blue	26N
		G31	1.51	22,0	8,8	5/RED	Red	16LP
SR52 GM	30	G20	2.40	12,0	4,8	4/BLUE	Blue	26N
		G25	2.40	17,5	7,0	4/BLUE	Blue	26N
		G31	1.51	22,0	8,8	4/RED	Red	16LP
SR42 GM	26	G20	2.40	12,0	4,8	3/BLUE	Blue	26N
		G25	2.40	17,5	7,0	3/BLUE	Blue	26N
		G31	1.51	22,0	8,8	3/RED	Red	16LP

*SR prefix- Super Runner Series
*GM suffix- gas millivolt system with no electrical supply connections required

NON-CE UNITS ONLY:

Nominal Heat Inputs (Qn), Gas Type, Orifice Size, Pressures and Adjustments, Orifice Quantity, and Pilot Markings are listed in the table below:

MODEL*	NOMINAL HEAT INPUT-Qn (BTU)	GAS TYPE	ORIFICE SIZE (MM)	MANIFOLD GAS PRESSURE (INCH W.C.)	ORIFICE QUANTITY	PILOT MARKING
SR62 GM	150	NAT	2.53(#39)	4	5	26N
		LP	1.51(#53)	11	5	16LP
SR52 GM	120	NAT	2.53(#39)	4	4	26N
		LP	1.51(#53)	11	4	16LP
SR42 GM	105	NAT	2.80(#35)	4	3	26N
		LP	1.70(#51)	11	3	16LP

*SR prefix- Super Runner Series
*GM suffix- gas millivolt system with no electrical supply connections required

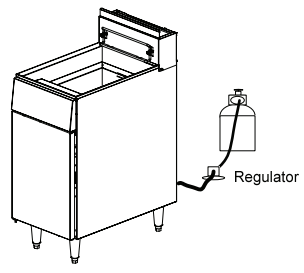
NOTE: Outlet gas pressure must be adjusted strictly within the above requirements 5 to 10 minutes after the appliance is operating.

1.4 Connection to the Gas Supply Line

NOTE: The gas supply (service) line must be the same size or greater than the fryer inlet line. This appliance is equipped with a ½-inch (15-mm) inlet. The gas supply line must be sized to accommodate all gas-fired equipment connected to the line. Consult the local gas company or supplier, or your local contractor for minimum supply line requirements.

NOTE: If quick-disconnect supply lines or flex lines are used, increase supply line size to ¾-inch (22-mm) or larger.

Propane Applications;
Proper Regulator Must Be Installed



⚠ DANGER
A manual shut-off valve must be installed in the gas supply (service) line upstream of this appliance and in a position where it can be reached quickly in the event of an emergency.

⚠ DANGER
The fryer must be connected to the gas supply specified on the rating and serial number plate located on the inside of the appliance door. DO NOT ATTACH THIS APPLIANCE TO A GAS SUPPLY FOR WHICH IT IS NOT CONFIGURED!

⚠ DANGER
Before connecting new pipe to this appliance, the pipe must be blown out thoroughly to remove all foreign material. Foreign material in the burner and gas valve will cause improper and potentially dangerous operation.

⚠ DANGER
All connections must be sealed with a joint compound suitable for the gas being used and all connections must be tested for leaks using a solution of soapy water before lighting any pilots. Never use matches, candles, or any other ignition source to check for leaks. If gas odors are detected, shut off the gas supply to the appliance at the main shut-off valve and immediately contact the local gas company or an authorized service agency for service.

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. **NOTE: The installation must be inspected after it is complete to ensure it meets the intent of these instructions. The on-site supervisor and/or operator(s) should be informed that the appliance is installed with restraints. If restraints are removed to move fryer (cleaning beneath and behind, relocation, etc.), ensure that they are re-installed when fryer is returned to its permanently installed position.**

1.5 Gas Conversion Procedures

⚠ DANGER
This appliance was configured at the factory for a specific type of gas. Converting from one gas type to another requires the installation of specific gas-conversion components.

Switching to a different type of gas without installing the proper conversion components may result in fire or explosion. NEVER ATTACH THIS APPLIANCE TO A GAS SUPPLY FOR WHICH IT IS NOT CONFIGURED!

Conversion of this appliance from one type of gas to another should only be performed by qualified, licensed, and authorized installation or service personnel, as defined in Section 1.5 of this manual.

CE UNITS ONLY:

See gas valve illustration and gas valve, burner and orifice location when performing the following conversions.

When converting from G20 to G25 gas, the following procedures apply:

- Equipment replacement is not required.
- Adjust orifice gas pressure to the appropriate value listed in the table on page 1-3 by turning the gas valve "adjustment screw".
- After adjustment, replace the adjustment-screw cover.

When converting from G20 (or G25) gas to G31 propane (or vice-versa), the following procedures apply:

- Burner orifices and pilot orifice **MUST** be replaced.
- Adjust orifice gas pressure to the appropriate value listed in the table on page 1-3 by turning the gas-valve adjustment screw.
- After adjustment, replace the adjustment-screw cover.
- Affix the new label included with the conversion kit next the existing rating plate stating that the gas type has been converted. Remove any references to the previously used gas from the existing rating plate.

When converting from G20 (20 mbar) to G25 (25 mbar), or vice-versa, or G31 (37 mbar) to G31 (50 mbar), the following procedures apply:

- Check pilot-adjustment and adjust as necessary.
- Other adjustments are not necessary.

Conversion from one gas family to another (i.e. changing from natural gas to propane) requires special components. Obtain the necessary components using the cross-reference in Section 1.6, Gas Conversion Components.

Conversions can only be executed by qualified, factory-authorized personnel.

NON-CE UNITS ONLY:

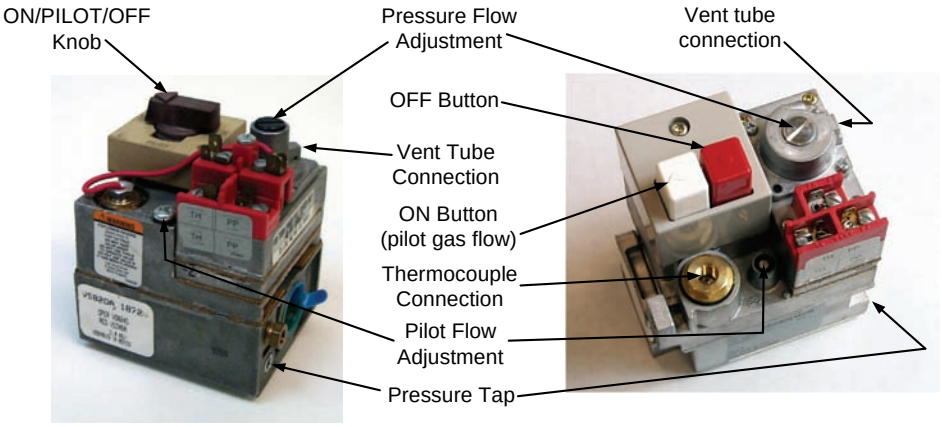
See gas valve illustration below and gas valve, burner and orifice location on page 1-6 when performing the following conversions.

When converting from natural gas to propane (or vice-versa), the following procedures apply:

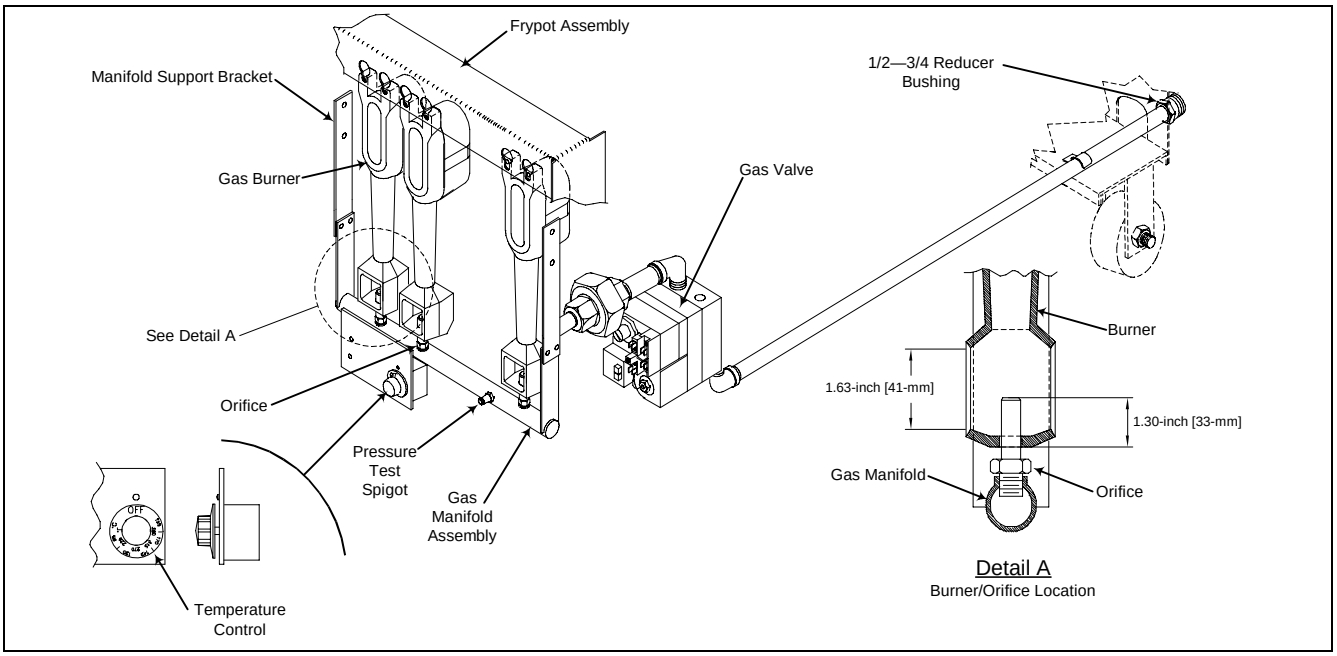
- Burner orifices and pilot orifice **MUST** be replaced (see page 1-6 for required component part numbers).
- Adjust orifice gas pressure by turning the gas-valve adjustment screw (see page 1-3 for gas types and pressures).
- After adjustment, replace the adjustment-screw cover.
- Affix the new label included with the conversion kit next the existing rating plate stating that the gas type has been converted. Remove any references to the previously used gas from the existing rating plate.

Conversion from one gas family to another (i.e. changing from natural gas to propane) requires special components. Obtain the necessary components using the table on page 1-6.

Conversions can only be executed by qualified, factory-authorized personnel.



Typical Non-CE Gas Valve **Typical CE Gas Valve**

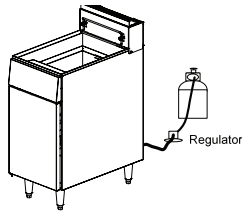


Typical gas valve, burner and orifice locations (SR42 shown above).

1.6 Gas Conversion Components

Use the following components to convert from natural gas to propane and vice-versa. See Section 1.5 for orifice quantities required for conversion.

Propane Applications:
Proper Regulator Must Be Installed



Natural Gas to Propane Kit. 826-1817	Propane To Natural Gas Kit, 826-2017
Bushing, NPT Flush, SR 42 series only	Bushing, NPT Flush, SR 42 series only
Pilot Orifice (16LP) **CE & Non-CE**	Pilot Orifice (26N) **CE & Non-CE**
Burner Orifice, 1.51mm- **CE ONLY**: *All Super Runner Series*	Burner Orifice, 2.40mm- **CE ONLY**: *All Super Runner Series*
Burner Orifice, 1.51mm (#53)- **NON-CE ONLY**: *SR52 & SR62 Series Only*	Burner Orifice, 2.53mm (#39)- **NON-CE ONLY**: *SR52 & SR62 Series Only*
Burner Orifice, 1.70mm (#51)- **NON-CE ONLY**: *SR42 Series Only*	Burner Orifice, 2.80mm (#35)- **NON-CE ONLY**: *S42 Series Only*
Rating label, contact factory at time of conversion	Rating label, contact factory at time of conversion
* Burner orifices listed above are for fryers operating at altitudes of 2000 feet (610 meters) or less. For altitudes greater than 2000 feet (610 meters), contact the factory for the correct orifice size.	

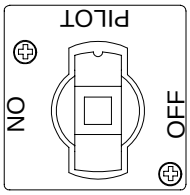
2.1 Initial Startup

Wash the unit and accessories thoroughly with hot, soapy water to remove any film residue, dust or debris. Rinse and wipe dry. Close the drain valve completely. Ensure the operating thermostat and high-limit thermostat sensing bulbs inside the frypot are securely seated in the holding clamp.

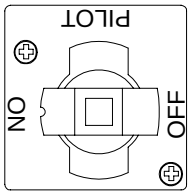
2.1.1 Operating the Gas Valve

NON-CE UNITS ONLY:

Rotate the knob counter-clockwise to the ON or PILOT positions. Depress and rotate the knob clockwise to turn the valve OFF.



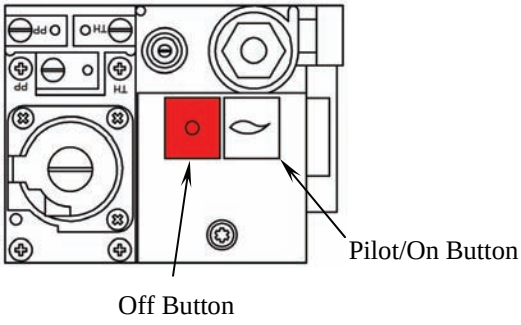
PILOT Position



ON Position

CE UNITS ONLY:

Depress white button to light pilot and turn gas valve on. Depress red button to turn the valve off.



2.1.2 Pilot Lighting Procedures

NOTE: This fryer was tested, adjusted and calibrated to sea level conditions before leaving the factory. Adjustments may be necessary to meet local conditions, and are to be performed only by qualified service personnel. Adjustments are the responsibilities of the customer or dealer and are not covered by Dean warranty.

The pilot is located high in the cabinet center, at the base of the frypot. Use a long match or taper to light the pilot. Perform the following steps in sequence before lighting the pilot:

NON-CE UNITS ONLY:

1. Turn off the manual shut-off valve on the incoming gas supply line.
2. Turn the operating thermostat to the OFF position.
3. Depress and turn the gas valve knob to the OFF position.
4. Wait at least 5 minutes for any accumulated gas to disperse.

5. Fill the frypot with oil, shortening or water to the bottom OIL LEVEL line scribed on the frypot back. Ensure heating tubes are covered in liquid prior to engaging burners.

   NOTE: If solid shortening is used, pack the shortening into the frypot, ensuring the shortening is packed beneath, between and above the tubes prior to operating fryer.

6. Open the manual shut-off valve on the incoming gas supply line and rotate the gas valve knob to the PILOT position.
7. Push and hold the knob in and apply a lighted match or taper to the pilot burner head. Continue to hold the knob in for about 60 seconds after the flame appears on the pilot. Release the knob. The pilot should remain lit.

⚠ DANGER
If the pilot fails to remain lit, turn the gas valve "OFF" and wait 5 minutes before attempting to re-light.

CE UNITS ONLY:

1. Ensure that the following steps are done in sequence before lighting or re-lighting the pilot:
2. Turn off the manual shut-off valve on the incoming service line.
3. Turn the operating thermostat "OFF".
4. Depress the red button on the safety control valve to turn "OFF".
5. Wait at least 5 minutes for any accumulated gas to disperse.
6. Fill the frypot with oil, shortening or water to the bottom OIL LEVEL line scribed on the frypot back. Ensure heating tubes are covered in liquid prior to engaging burners.

   NOTE: If solid shortening is used, pack the shortening into the frypot, ensuring the shortening is packed beneath, between and above the tubes prior to operating fryer.

7. Open the manual shut-off valve on the incoming service line.
8. Apply a lighted match or taper to the pilot burner head. (If fryer is equipped with a piezo ignitor, go to Step 9).
9. Press the white button on the gas valve and hold approximately 45 seconds to 1 minute, until the pilot stays lit. (If fryer is equipped with a piezo ignitor, press and hold the white button, then repeatedly press the piezo ignitor button until the pilot lights. Release the white button after approximately 45 seconds to 1 minute.)
10. If the pilot does not stay lit, depress the white button and re-light the pilot, holding the button in longer before releasing. Trapped air may necessitate re-lighting the pilot several times until a constant gas flow is attained.
11. When the pilot stays lit, release the white button.

2.1.3 Lighting the Burners

⚠ WARNING
NEVER set a complete block of solid shortening on top of the heating tubes. To do so will damage the heating tubes and frypot, and void the warranty.

1. Ensure the frypot is filled with oil or shortening to the lower of the two oil level lines embossed on the back wall of the frypot. **NOTE:** If solid shortening is used, pack the shortening into the frypot, ensuring the shortening is packed beneath, between and above the tubes prior to operating fryer.

⚠ DANGER
"Dry-firing" the fryer will cause damage to the frypot and can cause a fire. Always ensure that shortening, cooking oil or water covers the burner tubes before lighting the burners.

2. With the pilot lit, push down and slowly turn the gas valve knob to the ON position.

3. Rotate the operating thermostat knob to the desired frying temperature. The burner should light and burn with a strong blue flame.

⚠ DANGER
If the pilot and burners go out, the fryer must be completely shut down at least five minutes before re-lighting.

2.2 Shutting the Fryer Down

For temporary shutdown, turn the operating thermostat to the OFF position and cover the frypot.

For complete shutdown, turn the operating thermostat to the OFF position, turn the gas valve knob to the OFF position (Non-CE) or press the red button (CE) and cover the frypot.

2.3 Daily Operation

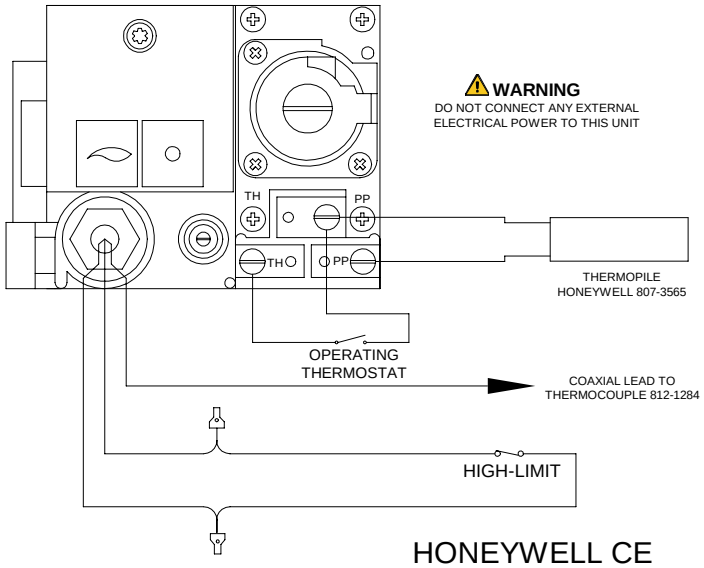
1. Do not allow grease to accumulate or harden on the frame, body, or flue of the fryer. Clean the fryer inside and out with a solution of detergent and hot water daily.
2. Filter the cooking oil by draining the frypot through a filter cone at least daily. After the oil has been drained from the frypot, remove any residue from the pot, using a scraper if necessary.
3. Clean the frypot at least once each week by filling it to just below the upper oil level mark with water. Add one cup of detergent and bring the solution to a boil. Allow the solution to simmer for 10-15 minutes, then drain and rinse the frypot with clean water twice. Add ¼ cup of white vinegar to the last rinse to neutralize any alkalinity remaining from the detergent. Wipe the frypot surfaces with a dry towel before refilling with cooking oil. If the fryer is not to be used immediately after cleaning, it is suggested that the inside of the frypot be wiped down with a light coat of cooking oil to prevent rust.

2.4 Recommended Spare Parts

DESCRIPTION	PART # SR42- NON-CE	PART # SR42- CE	PART # SR52/SR62- NON-CE	PART # SR52/SR62- CE
Operating Thermostat	807-3515	807-1692	807-3515	807-1692
High-Limit Thermostat	807-3516	807-3560	807-3680	807-3560
Thermopile	810-2033	807-3565	810-2033	807-3565
Thermocouple	N/A	812-1284	N/A	812-1284
Pilot Burner, Natural Gas	810-2032	810-2032	810-2032	810-2032
Pilot Burner, Propane Gas	810-2155	810-2155	810-2155	810-2155
Pilot Bracket, AGA	N/A	200-6564	N/A	200-6564
Pilot Thermopile Bracket	N/A	810-2401	N/A	810-2401
Piezo Ignitor Trigger	N/A	810-1001	N/A	810-1001
Piezo Ignitor Bracket	N/A	200-1868	N/A	200-1868
Piezo Ignitor Electrode	N/A	807-3540	N/A	807-3540
Orifice, Natural	810-2040	810-2060	810-2048	810-2060
Orifice, Natural, units built after 4/07	810-3097	810-3101	N/A	N/A
Orifice, Propane	810-2064	810-2059	810-2059	810-2059
Orifice, Propane, units built after 4/07	810-3099	810-3102	N/A	N/A
Gas Valve, Natural	807-1603	807-2122	807-1603	807-2122
Gas Valve, Propane	807-1604	807-2121	807-1604	807-2121
Leg	810-2053	810-2053	810-2053	810-2053
Caster, 5-inch w/o Brake	810-0356	810-0356	810-0356	810-0356
Caster, 5-inch w/Brake	810-0357	810-0357	810-0357	810-0357

2.5 Wiring Diagram

CE UNITS ONLY:



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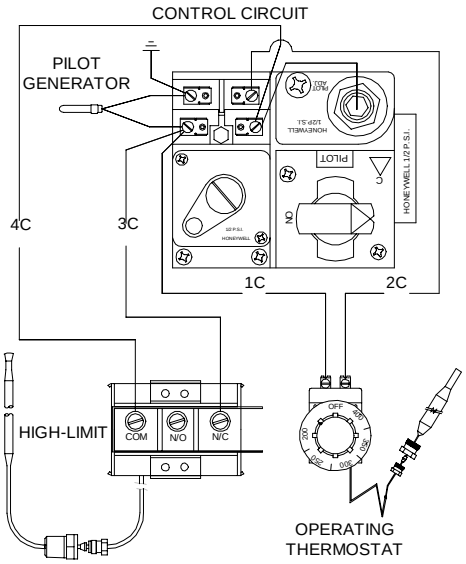

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