VULCAN

INSTALLATION & OPERATION MANUAL

GRD AND GRC SERIES GAS FRYERS

MODELS

GRD25	ML-052513
GRD35	ML-052080
GRD45	ML-052081
GRD65	ML-052082
GRD85	ML-052306
GRC35	ML-052083
GRC45	ML-052084
GRC65	ML-052085
GRC85	ML-052307
GRD35F	ML-126732
GRD45F	ML-126735
GRD65F	ML-126738
GRD85F	ML-126741
GRC35F	ML-126433
GRC45F	ML-126736
GRC65F	ML-126739
GRC85F	ML-126742

GRD35

For additional information on Vulcan-Hart Company or to locate an authorized
parts and service provider in your area, visit our Web site at www.vulcanhart.com

IMPORTANT FOR YOUR SAFETY

THIS MANUAL HAS BEEN PREPARED FOR PERSONNEL QUALIFIED TO INSTALL GAS EQUIPMENT, WHO SHOULD PERFORM THE INITIAL FIELD START-UP AND ADJUSTMENTS OF THE EQUIPMENT COVERED BY THIS MANUAL.

POST IN A PROMINENT LOCATION THE INSTRUCTIONS TO BE FOLLOWED IN THE EVENT THE SMELL OF GAS IS DETECTED. THIS INFORMATION CAN BE OBTAINED FROM THE LOCAL GAS SUPPLIER.

IMPORTANT

IN THE EVENT A GAS ODOR IS DETECTED, SHUT DOWN UNITS AT MAIN SHUTOFF VALVE AND CONTACT THE LOCAL GAS COMPANY OR GAS SUPPLIER FOR SERVICE.

FOR YOUR SAFETY

DO NOT STORE OR USE GASOLINE OR OTHER FLAMMABLE VAPORS 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.

IN THE EVENT OF A POWER FAILURE, DO NOT ATTEMPT TO OPERATE THIS DEVICE.

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INSTALLATION, OPERATION AND CARE OF MODELS GRD AND GRC SERIES GAS FRYERS

PLEASE KEEP THIS MANUAL FOR FUTURE USE

GENERAL

Vulcan GRD and GRC Series Gas Fryers are produced with quality workmanship and material. Proper installation, usage and maintenance of your fryer will result in many years of satisfactory performance.

It is suggested that you thoroughly read this entire manual and carefully follow all of the instructions provided.

The Mobile Filter is covered in a separate instruction manual. Fryers equipped with the KleenScreen filtering system are covered in the Vulcan KleenScreen Filtration System User's Guide. Follow the instructions in the appropriate manual for filtering, draining and dumping shortening.

Vulcan GRD and GRC Series Gas Fryers are available in various sizes, with an array of features and options for a range of commercial fryer applications. The overall tank widths on the 35 and 45 models are the same. The 45 models have a larger tank capacity than the 35 models. The 65 models have a larger tank capacity than the 45 models . The 65 and 85 models are the same width. The 85 models have a larger tank capacity than the 65 models.

The GRD models have digital controls and a solid state thermostat. The GRC Fryers have a microprocessor (computer) control and timer.

SPECIFICATIONS

| Model	No. Tubes	BTU/Hr.	Width	Lbs. of Fry Compound
GRD25	2	60,000	10 1/2"" (27 cm)	25-30 (11-14 kg)
GRD35, GRC35	3	90,000	15 1/2"" (39 cm)	35-40 (16-18 kg)
GRD45, GRC45	4	120,000	15 1/2"" (39 cm)	45-50 (20-23 kg)
GRD65, GRC65	5	150,000	21"" (53 cm)	65-75 (29-34 kg)
GRD85, GRC85	5	150,000	21"" (53 cm)	70-85 (32-39 kg)

OPTIONS AND FEATURES

- Stainless Steel Tank (Standard)

- Basket Lift with Timer (GRD and GRC series)

- Tri-, Twin- or Single-Basket (GRD and GRC series)

- Manual Pilot or Electronic Ignition (GRD and GRC series)

- Filter-Ready (Stand-alone fryers only)

- KleenScreen Filtration System (F models only)

BATTERY CONFIGURATIONS

- Batteries can be configured with any GRD and GRC Series Fryer or Frymate Dump Station; only one Frymate Dump Station per battery (Fig. 1).

- With the exception of model GRD25, all GRD and GRC Series Fryers can be free-standing or arranged in batteries of 2 to 4 units.

- The number preceding the model number of your GRD or GRC Series Fryer refers to the number of units in a battery.

- All options and accessories can be used in any battery configuration.

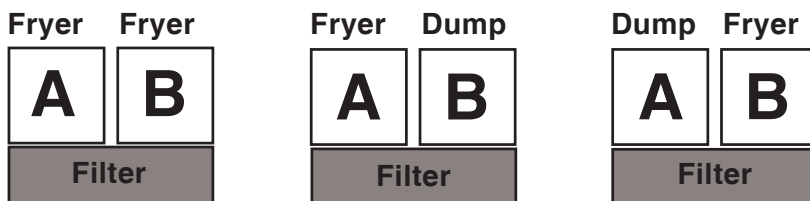- All "F" suffix filter models maybe in batteries of 2 to 4.

Non Filter Models

A	*		D	*
A	B		D	☐		☐	D
A	B	C		D	☐	☐		☐	D	☐		☐	☐	D
A	B	C	D		D	☐	☐	☐		☐	D	☐	☐		☐	☐	D	☐		☐	☐	☐	D
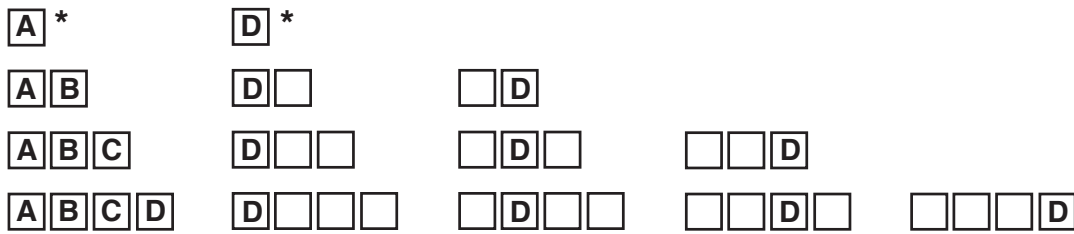
D = Dump Station   ☐ = Fryer

*Indicates interplumbing is not applicable.

Fig. 1

Fitler Models

2 Cabinets in Battery

Fryer	Fryer		Fryer	Dump		Dump	Fryer
A	B		A	B		A	B
Filter			Filter			Filter	

3 Cabinets in Battery

Fryer	Fryer	Fryer
A	**B**	**C**

Filter (under B and C)

Fryer	Dump	Fryer
A	**B**	**C**

Filter (under B and C)

Fryer	Fryer	Dump
A	**B**	**C**

Filter (under B and C)

Dump	Fryer	Fryer
A	**B**	**C**

Filter (under B and C)
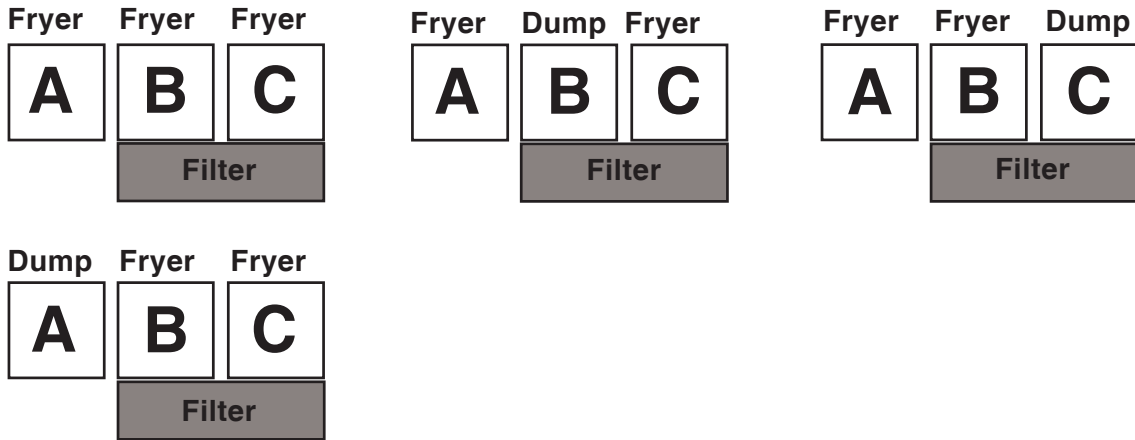
4 Cabinets in Battery (For 35, 45 and Electric 50 Only)

Fryer	Fryer	Fryer	Fryer
A	**B**	**C**	**D**

Filter (under B and C)

Dump	Fryer	Fryer	Fryer
A	**B**	**C**	**D**

Filter (under B and C)

Fryer	Dump	Fryer	Fryer
A	**B**	**C**	**D**

Filter (under B and C)

Fryer	Fryer	Dump	Fryer
A	**B**	**C**	**D**

Filter (under B and C)

Fryer	Fryer	Fryer	Dump
A	**B**	**C**	**D**

Filter (under B and C)
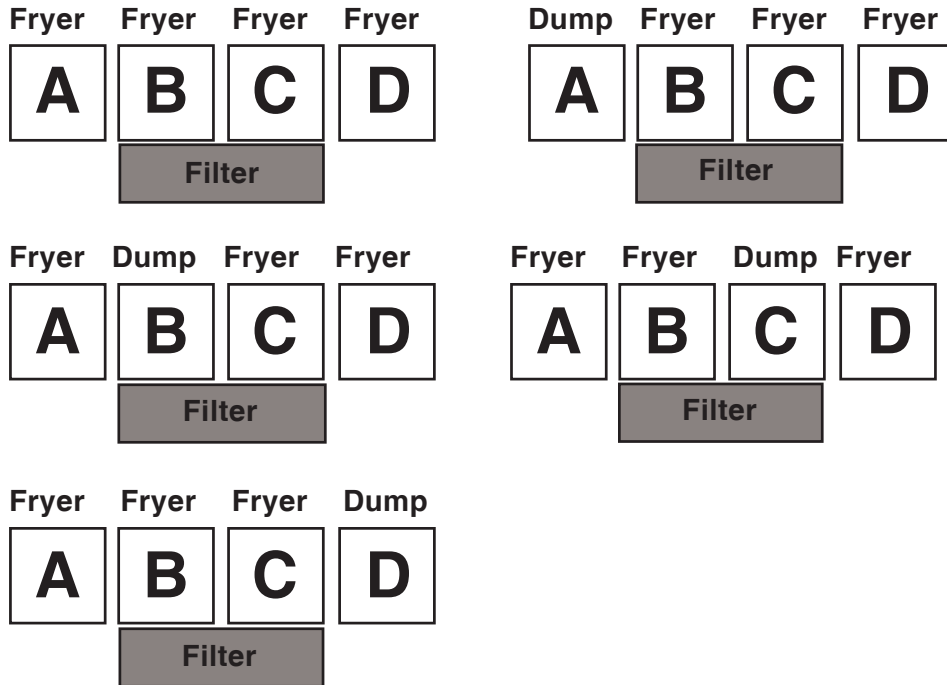
The configurations shown are standard (default) locations. Any deviation will result in substantially increased lead times. Check with your sales manager or Vulcan customer service for acceptance of different configurations.

FIELD-INSTALLED ACCESSORIES

- Casters
- Twin Baskets
- Tri-Baskets (65 and 85 models only)
- Single Baskets
- Heat Lamp (RO only)
- Flex Hose 4' (1.2 m) (gas connection)
- Flex hose S/S 5' (1.5 m) (gas connection)
- Vat Cover
- Batter Tray
- Tank Skimmer
- Tank Scoop

FACTORY-INSTALLED OPTIONS

- Basket Lift
- Battery Configuration
- Battery Interplumbing (F models only)
- Electronic Igniter

GR SERIES FRYMATE (Dump Station)

Model RO Frymate Dump Station can be configured in a battery with fryers 15 $\frac{1}{2}$" (39 cm) or 21" (53 cm) in width.

Frymate provides a final prep area where excess oil drains away and product is seasoned, packaged and kept ready for sale.

RO Series Frymate - Finish Options

RO15, RO21, RO21S	Front Door	Sides & Dummy Flue	Legs
Standard	Stainless Steel	Stainless Steel	Stainless Steel Legs
Optional	Not Applicable	N/A	Casters
Model RO15 is for use with all 35 and 45 Series Fryers. Model RO21 is for use with all 65 Series Fryers. Model RO21S is for use with all 85 Series Fryers.			

RO Series Frymate - Features

Sizes	Heat Lamp	Tops	
		Drain	Pan Perforated
35 & 45	Opt.	Std.	N/A
65 & 85	Opt.	Std.	Opt.

INSTALLATION

Before installing the fryer, verify that the type of gas (natural or propane) agrees with the specifications on the fryer data plate, which is located on the inside of the door panel. Ensure the fryer is configured for the proper elevation.

UNPACKING

This fryer was carefully inspected before leaving the factory. The transportation company assumes full responsibility for safe delivery upon acceptance of the shipment.

Immediately after unpacking the fryer, check for possible shipping damage. If the fryer is damaged, save the packaging material and contact the carrier within 15 days of delivery.

Do not use the door or its handle to lift the fryer.

Remove tiedown straps from each burner (Fig. 2).
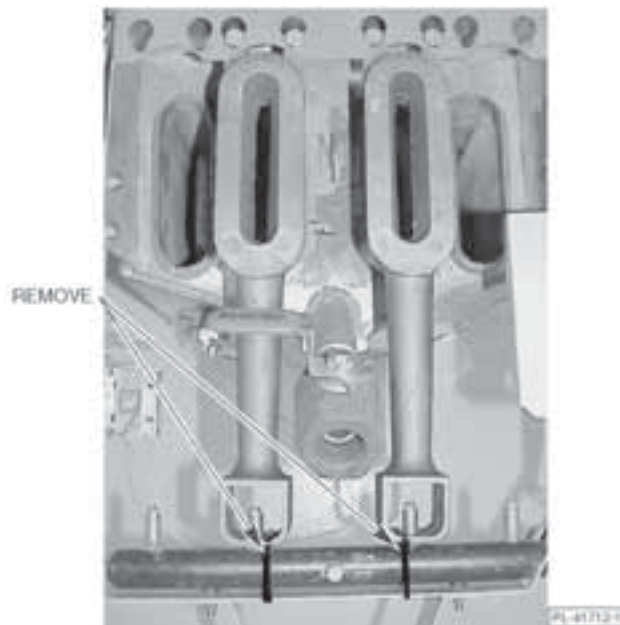
Fig. 2

LOCATION

The equipment area must be kept free and clear of combustible substances. Minimum clearance from combustible construction is 6" (15 cm) from the sides and 6" (15 cm) from the back of the fryer. Minimum clearance from noncombustible construction is 0" from the sides and 0" from the back.

At least 16" (41 cm) clearance must be between the fryer and any open-top flame units. Adequate clearances for servicing and proper operation must be allowed. The fryer may be installed on combustible floors.

Install the fryer in an area with sufficient air supply for combustion of the gas at the fryer burners. Provide adequate clearance for air openings into the combustion chamber. Do not obstruct the flow of combustion and ventilation air. Do not permit fans to blow directly on the fryer. Avoid wall-type fans which create cross-currents within a room. Avoid open windows next to the sides or back.

INSTALLATION CODES AND STANDARDS

The fryer must be installed in accordance with:

In the United States of America:

1. State and local codes, or in the absence of local codes, with:

2. National Fuel Gas Code, ANSI-Z223.1 (latest edition), available from The American Gas Association, Inc., 1515 Wilson Blvd., Arlington, VA 22209.

3. National Electrical Code ANSI/NFPA70 (latest edition) (if applicable).

In Canada:

1. Local codes.

2. CSA Standard C22.2 No. 3 Electrical Features of Fuel Burning Equipment (latest edition).

3. CAN/CGA-B149.1 National Fuel Gas Code (latest edition), available from The Canadian Gas Association, 178 Rexdale Rd., Etobicoke, Ontario, Canada M9W 1R3.

ASSEMBLY

When installed, the fryer must be restrained to prevent tipping in to avoid the splashing of hot liquid. The means of restraint may be the manner of installation, such as connection to a battery of appliances or installing the fryer in an alcove, or by separate means, such as adequate ties.

Fryers Mounted on Legs (Non-Batteried Fryers)

Fryers serviced from the rear must have a minimum clearance of 18" (46 cm) from the wall when mounted on legs.

1. Position fryer in an open space near the final installation area.

2. Tilt fryer on its side. Be careful not to scratch the finish.

3. Thread legs into mounting holes provided on bottom of fryer, then tighten.

4. Carefully raise fryer to its normal position.

Fryers Mounted on Casters

Separate instructions for installing casters to the fryer are included with the casters.

- For an appliance equipped; with casters, instructions that (1) the installation shall be made with a connector that complies with the Standard for *Connectors for Movable Gas Appliances, ANSI Z21.69* or *Connectors for Moveable Gas Appliances, CAN/CGA-6.16*, and a quick-disconnect device that complies with the Standard for *Quick-Disconnect Devices for Use With Gas Fuel, ANSI Z21.41*, or *Quick Disconnect Devices for Use with Gas Fuel, CANI-6.9*, (2) adequate means must be provided to limit the movement of the appliance.

- The fryer must be installed with a connector (not supplied by Vulcan) complying with the above code(s).

- The fryer must be installed with restraining means to guard against transmission of strain to the connector, as specified in the manufacturer's instructions (Fig. 3).

- The fryer must be installed with the casters provided.

- Turn the gas supply off before disconnecting the restraint.
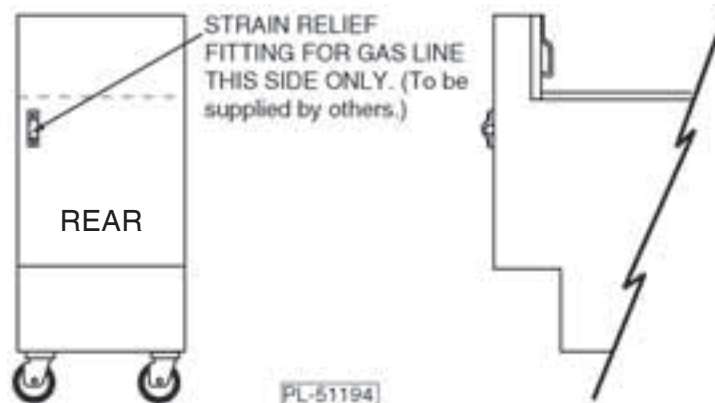
Fig. 3

GAS CONNECTIONS

CAUTION: All gas supply connections and any pipe joint compound must be resistant to the action of propane gases.

The gas inlet is located on the lower right rear of the fryer. Codes require that a gas shutoff valve be installed in the gas line ahead of the fryer.

The gas supply line must be at least the equivalent of $1/2$" iron pipe for single units and 1 $1/4$" for batteries. If using the optional quick-disconnect flex hose: $3/4$" iron pipe for single units and 1 $1/4$" iron pipe for batteries.

Make sure the pipes are clean and free of obstructions, dirt and piping compound. A battery requires one or two connections of appropriate size and type for the gas requirement.

WARNING: PRIOR TO LIGHTING, CHECK ALL JOINTS IN THE GAS SUPPLY LINE FOR LEAKS. USE SOAP AND WATER SOLUTION. DO NOT USE AN OPEN FLAME.

After piping has been checked for leaks, fully purge gas pipes to remove air.

GAS PRESSURES AND ORIFICES

The gas pressure should be set at 4" W.C. (Water Column) (1 kPa) pressure for natural gas and 10" W.C. (2.46 kPa) pressure for propane gas. If incoming pressure exceeds $1/2$ psig (3.45 kPa), an additional pressure regulator must be installed.

TESTING THE GAS SUPPLY PIPING SYSTEM

When test pressures exceed $1/2$ psig (3.45 kPa), the fryer and its individual shutoff valve must be disconnected from the gas supply piping system.

When test pressures are $1/2$ psig (3.45 kPa) or less, the fryer must be isolated from the gas supply piping system by closing its individual shutoff valve.

LEVELING FRYER

1.   Place a spirit level on top of the fryer after gas connections have been made.

2.   Adjust the legs to ensure that the fryer is level front-to-back and side-to side in the final installed position.

FLUE CONNECTIONS

The fryer must be located under a hood with adequate connection to an exhaust duct. The hood must extend 6" (15 cm) beyond fryer sides.

Adequate ventilation must be provided and comply with *Vapor Removal from Cooking Equipment,* ANSI-NFPA Standard #96 (latest edition), available from the National Fire Protection Association, Batterymarch Park, Quincy, MA 02269.

Clearance above the fryer should be adequate for combustion byproducts to be removed efficiently. An 18" (46 cm) minimum clearance should be maintained between the flue vent and the filters of the hood venting system. Never make flue connections directly to the fryer.

Do not obstruct the flow of the flue gases from the appliance. Proper air balance should be maintained in the room.

ELECTRICAL CONNECTIONS

WARNING: ELECTRICAL AND GROUNDING CONNECTIONS MUST COMPLY WITH THE NATIONAL ELECTRICAL CODE AND/OR OTHER LOCAL CODES.

WARNING: APPLIANCES EQUIPPED WITH ELECTRICAL SUPPLY CORD(S) ARE PROVIDED WITH A THREE-PRONG GROUNDING PLUG, WHICH MUST BE CONNECTED TO A PROPERLY GROUNDED RECEPTACLE. IF THE RECEPTACLE IS NOT THE PROPER GROUNDING TYPE, CONTACT AN ELECTRICIAN. DO NOT REMOVE THE GROUNDING PRONG FROM THE PLUG**.**

Fryers are equipped with a 120 V, 60 Hz, 1-phase cord and plug.

Do not connect fryer to electrical supply until after gas connections have been made.

OPERATION

WARNING: HOT OIL AND PARTS CAN CAUSE BURNS. USE CARE WHEN OPERATING, CLEANING AND SERVICING THE FRYER.

WARNING: SPILLING HOT FRYING COMPOUND CAN CAUSE SEVERE BURNS. DO NOT MOVE FRYER WITHOUT DRAINING ALL FRYING COMPOUND FROM THE TANK.

BEFORE FIRST USE

- Clean the protective metal oils from all surface parts and the tank interior using a noncorrosive, grease-dissolving commercial cleaner. Follow the cleaner manufacturer's directions.

- Rinse thoroughly and drain (open the front door to access the drain valve).

  NOTE: On fryers equipped with the KleenScreen filtering system, **do not** drain cleaning solution into the pump or filter system. See the KleenScreen manual for information on cleaning.

- Wipe tank completely dry with a soft, clean cloth.

- Clean all fryer accessories.

- Rinse all accessories thoroughly after cleaning and wipe dry.

Seasoning

Light seasoning of the backsplash area is required after every cleaning to avoid possible surface corrosion. Apply a thin layer of cooking oil over the entire backsplash area with a soft, lint-free cloth.

FILLING FRY TANK WITH SHORTENING

Liquid shortening may be used in all GRD and GRC Series Fryers. Solid shortening can only be used in fryers equipped with a melt cycle. Melting solid shortening without using a melt cycle will damage the fry tank and scorch the shortening. See Melt Options in this manual under your particular model for more information. Make sure the gas valve is off when draining or filling.

1. Fill the fryer tank.

2. Shortening level should be between the MIN and MAX lines in fry tank (Fig. 4). Shortening will expand when heated; do not fill the fry tank past the MAX line.

3. Add fresh shortening as needed.
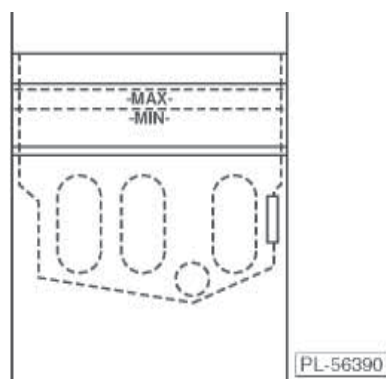
Fig. 4

LIGHTING INSTRUCTIONS FOR MANUAL PILOT IGNITION (Fig. 6)

CAUTION: Before turning the burners on, the fry tank must be filled with liquid or melted shortening.

Fig. 6

1. Turn thermostat knob (located behind the door panel) to OFF.

2. Push gas valve extension arm in and turn arm to OFF. Wait 5 minutes for unburned gas to vent.

3. Push gas valve extension arm in and turn to PILOT.

4. While still depressing the arm, light the pilot with a lit taper. Continue with steps 2 through 4 until the pilot remains lit when the extension arm is released.

5. Push in and turn gas valve extension arm to ON.

6. Repeat steps 1 through 5 if gas supply is interrupted.

STARTUP WITH ELECTRONIC IGNITER

CAUTION: Before turning the burners on, the fry tank must be filled with liquid or melted shortening.

1. Plug the power cord into an appropriate grounded receptacle and turn the main gas valve on.

2. Fill the fry tank with shortening. If using solid shortening, the fryer must be equipped with a melt cycle.

3. Open access door; turn the gas valve extension arm located inside the cabinet door to OFF (Fig. 7). Wait 5 minutes for unburned gas to vent.
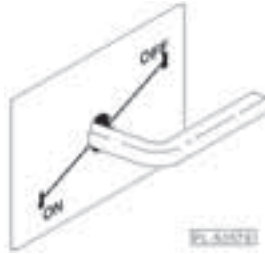
Fig. 7

4. Turn the gas valve extension arm to ON.

5. Press the power switch on.

6. If pilot fails to light within 90 seconds, press power switch off and repeat steps 3 through 5 until the pilot lights. If the pilot fails to light after several repeated attempts, contact your local Vulcan-Hart Service office.

7. Thirty seconds after the pilot ignites, the fryer begins heating to the programmed fry temperature.

8. When the set temperature is reached, the burners shut off and the set temperature is displayed in the window. The fryer then cycles on and off to maintain the set temperature.

GRD SERIES

CONTROLS

GRD Series Fryers are equipped with digital controls and a solid state thermostat.

Control Guide

CONTROL	DESCRIPTION
Power switch (— o)	Power switch; for turning the fryer on or off.
BOIL	For cleaning purposes when the fryer is filled with water. Temperature is maintained at approxmiately 192°F (89°C).
PROGRAM (V)	For entering and exiting the program mode. For scrolling through program parameters.
UP	Raises and lowers left fry basket (optional). Starts and stops the timer. Silences the alarm after the timer times out. For entering temperature and time values in the program mode.
DOWN	Raises and lowers right fry basket (optional). Starts and stops the timer. Silences the alarm after the timer times out. For entering temperature and time values in the program mode.
TEMP	For viewing actual shortening temperature and set temperature.

PROGRAMMING

Temperature, time and other parameters must be set before operating. Once these parameters are set, the fryer can be operated at the touch of a button.

Press ⓥ to enter the program mode and scroll through the parameters. If the Parameter Lock feature is on, LoC is displayed in the window and program entry cannot be accessed. To access the program mode while LoC is on, press [UP] [UP] [DOWN] [DOWN] within 6 seconds of pressing ⓥ . To turn the Parameter Lock feature off, see Program Guide below.

Programming Guide

Once in the program mode, the parameters are displayed in the order listed below. To exit the program and save changes, press and hold ⓥ for approximately 2 seconds.

PARAMETER	SELECT	DISPLAY	SCROLL
Left Timer	Press [UP] or [DOWN] to enter time.	LED is lit above the left basket icon. The time value is displayed in window.	Press ⓥ and scroll to next item.
Right Timer	Press [UP] or [DOWN] to enter time.	LED is lit above the right basket icon. The time value is displayed in window.	Press ⓥ and scroll to next item.
Set Temperature	Press [UP] or [DOWN] to enter temperature.	The temperature value is displayed in window.	Press ⓥ and scroll to next item.
Offset Calibration	For service only	**00F** or **-00F**	Press ⓥ and scroll to next item.
Melt Options: Liquid shortening Solid shortening No melt	Press [UP] or [DOWN] to select melt option.	**CY L** (Liquid shortening) or **CY S** (Solid shortening) or **CY O** (No melt)	Press ⓥ and scroll to next item.
Energy Source	Press [UP] or [DOWN] to select source of heat.	**gAS** or **ELEC**	Press ⓥ and scroll to next item.
Parameter Lock	Press [UP] or [DOWN] to lock or unlock program entry.	**LoC** (Unlock Parameter) or **ULoC** (Lock Parameter)	Press ⓥ and scroll to next item.
Fahrenheit or Celsius	Press [UP] or [DOWN] to select Fahrenheit or Celsius.	**F** or **C**	Press ⓥ and scroll to next item.

Melt Options (GRD Series)

When using solid shortening in the fryer, the CY S (solid shortening) option must be used. Solid shortening must be gently warmed to a liquid state before heating to frying temperatures. Melting solid shortening without using this option will damage the fry tank and scorch the shortening.

The controller has three options for bring shortening up to temperature:

CY L (Liquid shortening) - For slowly bringing liquid shortening up to temperature.

CY S (Solid shortening) - For slowly melting solid shortening.

CY O (No melt) - For immediately bringing liquid shortening up to fry temperature.

Upon startup, if the CY L or CY S melt option is selected and the shortening temperature is below 135°F (57°C), CY is displayed in the window and the fryer cycles to bring the shortening up to temperature. If the shortening temperature is over 135°F (57°C), HEAT is displayed in the window and the fryer quickly heats up to set temperature.

The temperature is displayed in the window when the fryer has reached the set temperature. After the first initial startup, the fryer always defaults to the last entered melt option.

USING THE FRYER (After Startup)

Models Without Basket Lift Option

1. Load the fry basket(s); do not overfill. See Recommended Basket Capacities on page 30.

2. Carefully lower basket(s) into shortening.

3. Press ⊕ to start the left timer. Press ⊕ to start the right timer.

4. When the timer times out, a beeper sounds. Press ⊕ to silence the left timer beeper. Press ⊕ to silence the right timer beeper.

Models With Basket Lift Option

1. Place the fry basket(s) on the lift arm.

2. Load the fry basket(s); do not overfill.

3. Press ⊕ to lower the left basket. Press ⊕ to lower the right basket. The timer(s) begin counting down.

4. When the timer times out, a beeper sounds and the basket(s) automatically raise. Press ⊕ to silence the left timer beeper. Press ⊕ to silence the right timer beeper.

SHUTDOWN

1. Press the power switch off.

2. For models equipped with a manual pilot, turn the gas valve extension arm to PILOT (the pilot will continue to burn). To shut off all gas to the system, including the pilot, turn gas valve extension arm to OFF.

3. For models with electronic igniter, turn the gas valve extension arm to OFF.

EXTENDED SHUTDOWN

1. Turn the main gas shutoff valve off.

2. Press the power switch off.

3. Unplug the fryer.

4. Turn the gas valve extension arm to OFF.

5. Drain the fryer.

6. Allow the fryer to cool, then apply a thin coat of cooking oil to tank interior and tank back to prevent rust.

GRC SERIES

CONTROLS

GRC Series Fryers have a microprocessor (computer) thermostat and timer.
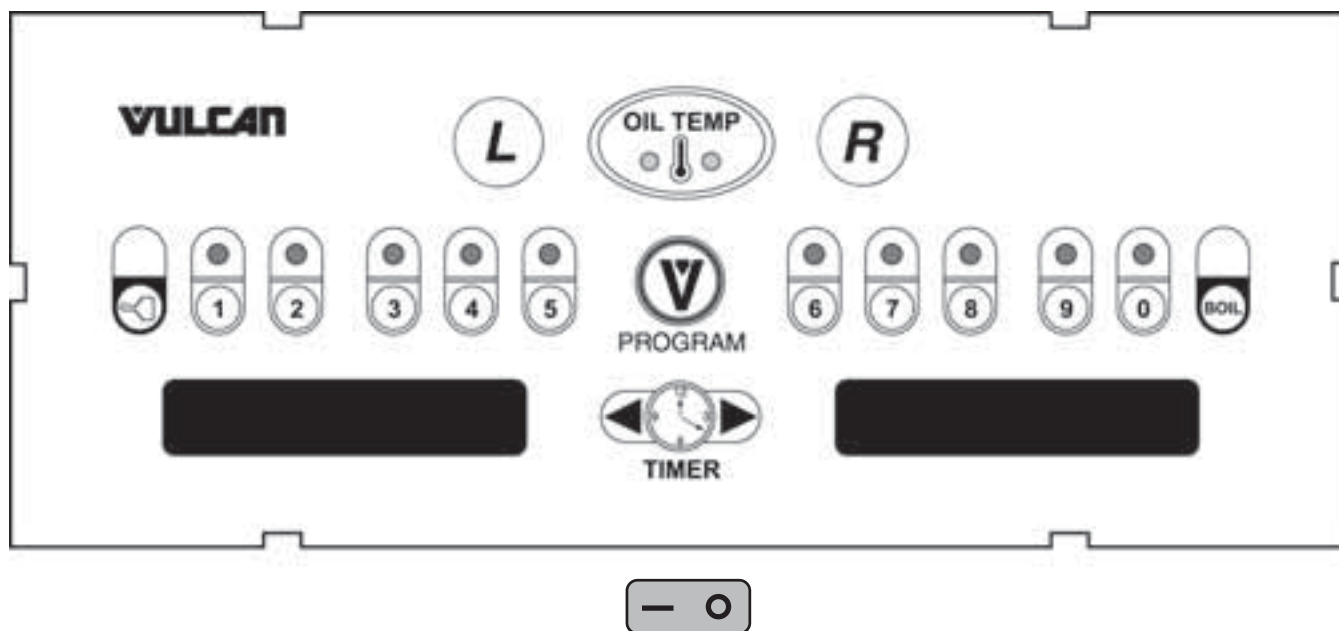
Control Guide

CONTROL	DESCRIPTION
— ⊙ (Power switch)	Power switch; for turning the fryer on or off.
OIL TEMP	For setting fry temperature. For viewing actual shortening temperature and set temperature.
Ⓥ PROGRAM	For entering and exiting the program mode.
1 Through 0	For selecting program parameters. For starting timers 1 through 0. For entering temperature and time values.
◁	For toggling through the selections under program parameters.
◀🕐	For setting time on timers 1 through 5 in the program mode.
🕐▶	For setting time on timers 6 through 0 in the program mode.
BOIL	For cleaning purposes when the fryer is filled with water. Temperature is maintained at approximately 192°F (89°C).

PROGRAMMING

Temperature, time and other parameters must be set before operating. Follow the Program Guide to configure the fryer to your particular operation.

Programming Guide

Press ⓥ to enter into the program mode, then follow the steps under each parameter to enter the desired information. To exit the parameter and save changes, press ⓥ . To exit the program completely, press ⓥ again.

NOTE: To use set back parameter, the computer must be programmed for basket lifts.

| PARAMETER	STEPS	LEFT DISPLAY	RIGHT DISPLAY
Fahrenheit or Celsius	Press (0)	SELECT	OPTIONS
	Press (1)	DEGREES F or C	F or C
	Press ◁ to select Fahrenheit or Celsius.	DEGREES F or C	F or C
	Press ⓥ when complete.	PROGRAM	
No Password Required	Press (0)	SELECT	OPTIONS
	Press (2)	SET PASS	NEW PASS
	Press ◁ to select NO PASS.	NO PASS	NEW PASS
	Press ⓥ when complete.	PROGRAM	
Password Required	Press (0)	SELECT	OPTIONS
	Press (2)	SET PASS	NEW PASS
	Press ◁ to select PASS REQ.	PASS REQ	NEW PASS
	Press ⓥ and enter numeric code.	CODE XXXX	NEW PASS
	Press ⓥ when complete.	PROGRAM	
Beeper Volume	Press (0)	SELECT OPTIONS	OPTIONS
	Press (3)	VOLUME #	BEEPER
	Press ◁ to select volume.	1, 2 or 3	BEEPER
	Press ⓥ when complete.	PROGRAM	

Programming Guide (Cont.)

PARAMETER	STEPS	LEFT DISPLAY	RIGHT DISPLAY
Language	Press	SELECT	OPTIONS
	Press	ENGLISH (Factory Default)	LANGUAGE
	Press ___ to select a language.	ENGLISH/ESPANOL FRANCAIS/DEUTSCH HOLLAND	
	Press Ⓥ when complete.	PROGRAM	
Melt Options	Press	SELECT	OPTIONS
	Press	NO MELT/LIQUID/SOLID	
	Press ___ to select melt options. (See Melt Options)	NO MELT/LIQUID/SOLID	
	Press Ⓥ when complete.	PROGRAM	
Recovery Time	Press	SELECT	OPTIONS
	Press	RECOVERY*	
	Press Ⓥ when complete.	PROGRAM	
Filter	Press	SELECT OPTIONS	OPTIONS
	Press	FILTER	PROG 0000
	Press ___ to scroll through options. (See Filter)	FILTER	PROG 0000 ACT 0000 TIME 00:00
	Press Ⓥ when complete.	PROGRAM	
Dispose	Press	SELECT	OPTIONS
	Press	DISPOSE	PROG 00
	Press ___ to scroll through options. (See Dispose)	DISPOSE	PROG 00 ACT00
	Press Ⓥ when complete.	PROGRAM	
Set Back To 275°F	Press	SELECT	OPTIONS
	Press Enter 11-99 min. of idle time 00=no set back	IDLE SET BACK	PROG 00
	Press Ⓥ when complete.	PROGRAM	PROG 00

*Recovery - During a cold start, the controller measures the time the fryer takes to heat from 200°F to 250°F (93°C to 121°C) and compares it with factory default values.

Melt Options (GRC Series)

When using solid shortening in the fryer, the SOLID melt option must be used. Solid shortening must be gently warmed to a liquid state before heating to frying temperatures. Melting solid shortening without using this option will damage the fry tank and scorch the shortening.

The controller has three options for bring shortening up to temperature. Upon startup, the fryer will display the selected melt option in the window when heating:

HEATING	NO MELT - For immediately bringing shortening up to fry temperature.
MELT L	LIQUID - For slowly bringing liquid shortening up to temperature.
MELT S	SOLID - For slowly melting solid shortening.

If the LIQUID or SOLID melt option is selected and the shortening temperature is below 135°F (57°C), MELT L or MELT S is displayed in the window and the fryer cycles to bring the shortening up to temperature. If the shortening temperature is over 135°F (57°C), HEATING is displayed in the window and the fryer quickly heats up to set temperature.

The temperature is displayed in the window when the fryer has reached the set temperature. After the first initial startup, the fryer always defaults to the last entered melt option.

Filter

The Filter parameter can be programed to alert the operator to filter the shortening by counting the number of cook counts. When the actual cook count is the same as the programmed cook count, FILTER flashes in the window. It also can be programmed to time the filtering process.

- PROG 0000 - Enter the number of cook counts you want the controller to count before giving a filter alert (each time a timer times out is equal to one cook count). To disable the filter reminder, enter 9999.

- ACT 0000 - Leave at 0000 unless editing. This is the number of cook counts.

- TIME 00:00 - Enter the amount of time for timing the filtering process. Leave at zero if you do not wish to use the timer.

- Pressing either arrow on ◄🕐► starts the filter timer after the drain valve is opened.

- After the timer times out, FILTER DONE is displayed in the window and a beeper sounds for 5 seconds. The filter prompt and cook count are reset to zero. After the beeper stops, CLOSE DRAIN is displayed in the window (see Daily Filtering on page 31 for more information).

Dispose

The controller can also be programmed to alert the operator to dispose of the shortening by counting the number of times the shortening is filtered. When the filter count is the same as the programmed filter count, DISPOSE is displayed in the window.

- PROG 00 - Enter the number of filter counts you want the controller to count before giving a dispose alert. To disable the dispose reminder, enter 99.

- ACT 00 - Leave at 00 unless editing. This is the number of times the shortening has been filtered.

TEMPERATURE AND TIME PROGRAMMING

Temperature

1. Press ⓥ to enter program mode. PROGRAM is displayed in the window.

2. Press 🔘 to enter temperature mode. 000°F and TEMP are displayed in the window.

3. Press 🔘 through 🔘 to enter desired fry temperature. The fry temperature is displayed in the window.

4. Press ⓥ to exit the temperature mode. Press again to exit program mode completely.

Time

There are ten timers with advanced timing features on the GRC fryer for setting fry times on multiple products.

Timers 🔘 through 🔘 :

1. Press ⓥ and enter the program mode. PROGRAM is displayed in the window.

2. Press ◀🕐. The LED's on timers 🔘 through 🔘 are lit and SELECT PRODUCT is displayed in the window.

3. To select a timer, press one of the lit timer numbers; CK# 00:00 and TIME are displayed in the window.

4. Enter the desired time using keys 🔘 through 🔘 . The time is displayed in the window. After entering the time, press ⓥ ; SELECT PRODUCT is displayed in the window and the LED's on timers 🔘 through 🔘 are lit.

5. Repeat steps 3 and 4 to program the remaining timers, or press ⓥ ⓥ to exit the program completely.

Timers ⊟ through ⊟ :

1. Press Ⓥ and enter the program mode. PROGRAM is displayed in the window.

2. Press ⏱▶ . The LED's on timers ⊟ through ⊟ are lit and SELECT PRODUCT is displayed in the window.

3. To select a timer, press one of the lit timer numbers; CK# 00:00 and TIME are displayed in the window.

4. Enter the desired time using keys ⊟ through ⊟ . The time is displayed in the window. After entering the time, press Ⓥ ; SELECT PRODUCT is displayed in the window and the LED's on timers ⊟ through ⊟ are lit.

5. Repeat steps 3 and 4 to program the remaining timers or press Ⓥ Ⓥ to exit the program completely.

Advanced Time Features

Each timer has additional timing functions that can be programmed to fit your particular operation.

- DUTY TIME - Notifies the operator during a fry cycle to perform a particular task (shake a basket, flip a product, etc.). When the remaining cook time is the same as the Duty time, a beeper sounds and DUTY # displays in the window. Press the flashing timer number to silence the beeper. The beeper cancels after 5 seconds if not silenced.

- HOLD TIME - Starts after the initial timer beeper is silenced; HD# XX:XX is displayed in the window. After timing out, a beeper sounds. Press the flashing timer number to silence the beeper. The beeper cancels after 5 seconds if not silenced.

- COMPENSATED TIME - Automatically adjusts the time for variations in load sizes.

- STRAIGHT TIME - Does not adjust time for variations; used for regular timing operations.

Setting Advanced Time Features

1. Press ⓥ and enter the program mode.

2. Press ◀🕐 for timers 🔢 through 🔢 , or press 🕐▶ for timers 🔢 through 🔢 . The LEDs are lit on the timers available for programming, and SELECT PRODUCT is displayed in the window.

3. Select a timer; the programmed time is displayed in the window.

    A. Duty Time:

        1) Press either arrow on ◀🕐▶ ; DT# 00:00 is displayed in the window.

        2) Enter the desired time using keys 🔢 through 🔢 . The time is displayed in the window.

        3) Continue to the next step or press ⓥ to choose another timer.

    B. Hold Time:

        1) Press either arrow on ◀🕐▶ ; HD# 00:00 is displayed in the window.

        2) Enter the desired time using keys 🔢 through 🔢 .

        3) Continue to the next step or press ⓥ to choose another timer.

    C. Compensated or Straight Time:

        1) Press either arrow on ◀🕐▶ ; COMP or STRAIGHT is displayed in the window.

        2) Press 🔘 to select COMP or STRAIGHT.

        3) Press ⓥ to choose another timer or press ⓥ ⓥ ⓥ to exit program mode completely.

Time Programming Quick Chart
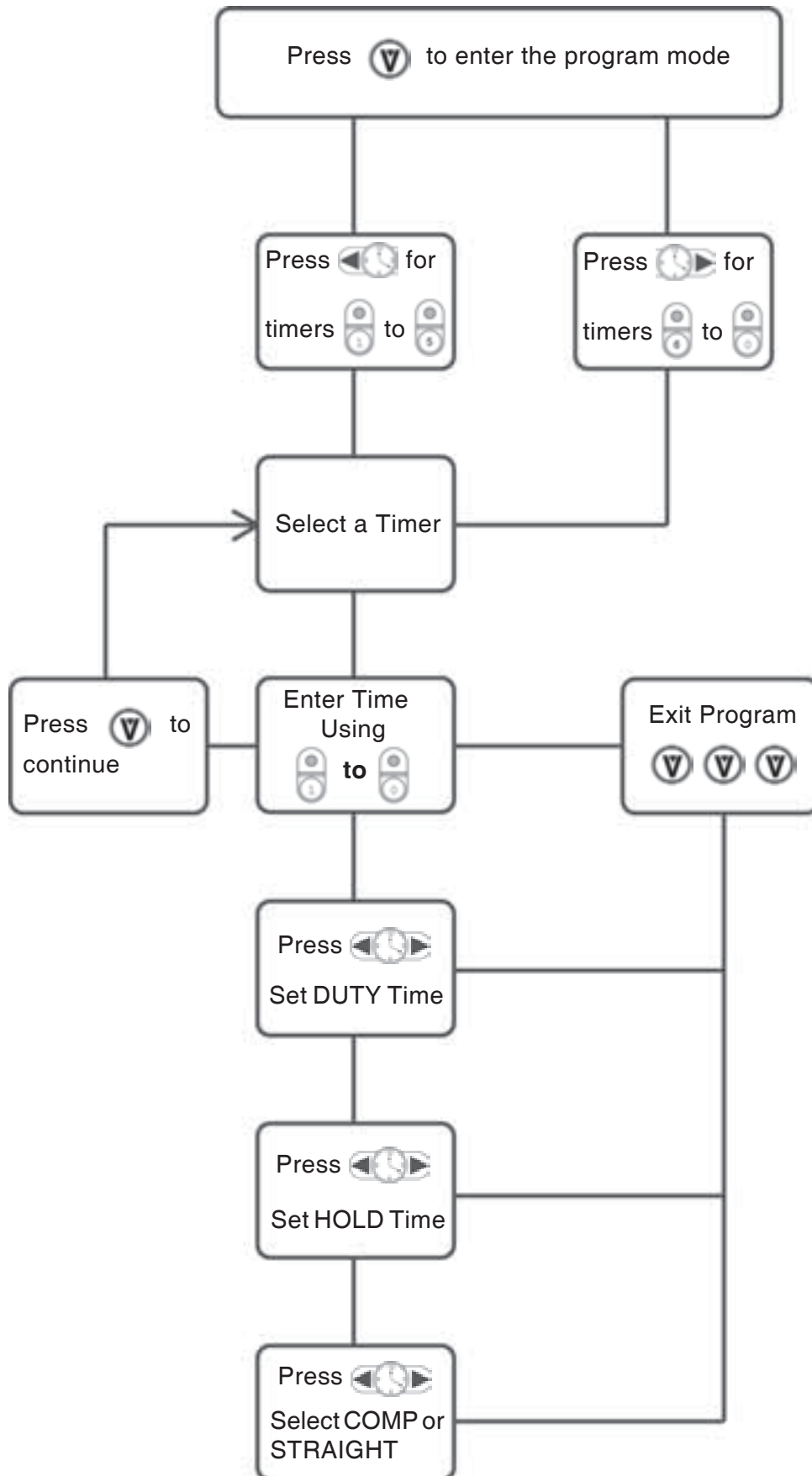
USING THE FRYER (After Startup)

Models Without Basket Lift Option

1. Load the fry basket(s), do not overfill. See Recommended Basket Capacities on page 30.

2. Carefully lower basket(s) into shortening.

3. Press the desired number to start the timer. Timers [1] through [3] are for the left basket and [4] through [6] are for the right basket.

4. When the timer(s) time out, a beeper sounds, REMOVE # is displayed in the window and the timer number flashes. Press the flashing timer number to silence the beeper.

Models With Basket Lift Option

1. Place the fry basket(s) on the lift arm.

2. Load the fry basket(s), do not overfill.

3. Press the desired number to start the timer. Timers [1] through [3] are for the left basket, and [4] through [6] are for the right basket.

4. When the timer(s) time out, a beeper sounds and REMOVE # is displayed in the window. The timer number flashes and the basket(s) automatically raise. Press the flashing timer number to silence the beeper.

NOTE: To cancel a timer after it has started, press and hold the timer number for 5 seconds.

SHUTDOWN

1. Press the power switch off.

2. For models with electronic ignition, turn the gas valve extension arm to OFF.

EXTENDED SHUTDOWN

1. Turn the main gas shutoff valve off.

2. Press the power switch off.

3. Unplug the fryer.

4. Turn the gas valve extension arm to OFF.

5. Drain the fryer.

6. Allow the fryer to cool, then apply a thin coat of cooking oil to tank interior and tank back to prevent rust.

FRYING GUIDELINES (All Models)

- Heat shortening to set temperature.

- Fry pieces of product that are about the same size together.

- Drain or wipe dry raw or wet foods to minimize splatter when lowering into the hot shortening.

- Keep shortening between the MIN and MAX lines. Shortening will expand when heated; do not fill the fry tank past the MAX line.

- Add fresh shortening as needed.

Fry Basket Guidelines

- Shake the basket gently to avoid splattering the shortening.

- Do not overfill baskets (see Recommended Basket Capacities below).

- Hang baskets on rear basket hangers when frying is complete.

- To help reduce batter buildup, dip the basket into shortening before loading.

Recommended Basket Capacities

Sizes	Total Lbs. of Product (1 Basket)	Total Lbs. of Product (2 Baskets)	Total Lbs. of Product (3 Baskets)
25	1 1/2 (0.7 kg)	N/A	N/A
35	1 1/2 (0.7 kg)	3 (1.4 kg)	N/A
45	2 1/2 (1.1 kg)	5 (2.3 kg)	N/A
65	3 (1.4 kg)	6 (2.7 kg)	9 (4.1 kg)
85	3 1/2 (1.6 kg)	7 (3.2 kg)	10 1/2 (4.8 kg)

DAILY FILTERING

WARNING: HOT OIL AND PARTS CAN CAUSE BURNS. USE CARE WHEN OPERATING, CLEANING AND SERVICING THE FRYER.

Filtering Guidelines (All Models)

- Stand alone fryers are available in filter-ready and non-filter-ready versions.

- Battery interplumbing is available only on fryers equipped with KleenScreen.

- A cold fryer will not drain properly. Always filter shortening in a liquid state. The shortening under the cold zone area will remain hard, even if the heat is on for a few minutes. If necessary, use the cleanout rod to carefully stir the hard shortening to an area above the cold zone (Fig. 8) where it will melt.

- Filter shortening at least once a day (see Shortening Life on page 33).
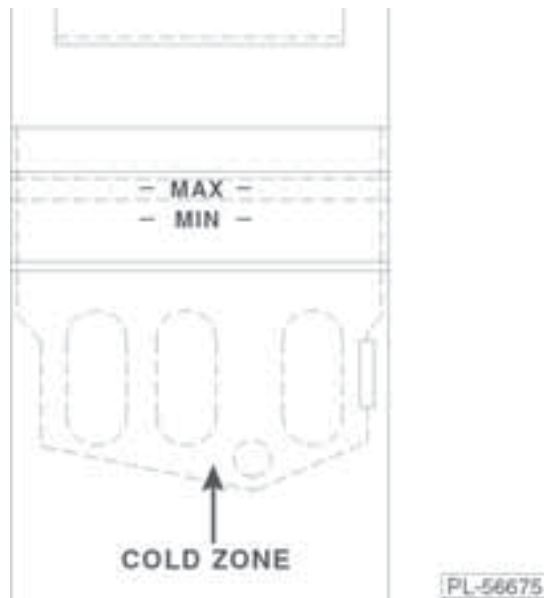
Fig. 8

Filter-Ready Fryers (For Use With Mobile Filter Only)

- The Mobile Filter is covered in a separate instruction manual. Follow the instructions.

Battery Interplumbing (Only Available on KleenScreen Models)

A battery of fryers equipped with optional interplumbing connects the fry tanks to a common drain. Each tank has an individual drain valve. Only one tank can be filtered at a time. Instructions for the KleenScreen filtering system are covered in a separate manual. Follow the instructions.

Filtering Procedures (Non-Filter-Ready Fryers)

1. Shut down the fryer.
2. Slowly remove basket(s).
3. Open fryer door and attach the drain pipe to the drain valve.
4. Select a container that will hold all the liquified shortening and place it below the drain pipe.
5. If using a filter bag, tie it securely to the drain pipe. If a different filter medium is used, place it in the container.
6. Open drain valve carefully so the oil stream is directed through the filter. See Filtering Guidelines on page 31 for draining tips.
7. Flush out scraps and sediment in the fry tank with a small amount of warm shortening.
8. Drain the tank thoroughly and wipe clean.
9. Should it be necessary to clean the tank more thoroughly, see Cleaning on page 33.
10. Close the drain valve.
11. Pour the filtered shortening back into the fry tank.
12. Shortening level should be between the MIN and MAX lines.

HIGH LIMIT DEVICE (All Models)

If the shortening becomes overheated, a high-temperature device will close the gas valve and extinguish the pilot. Should this occur, the pilot will be unable to relight until the shortening temperature is below 300°F (149°C). If the temperature is below 300°F (149°C) and the pilot will not relight, contact your local Vulcan-Hart Service office.

DRAIN INTERLOCK (GRD and GRC Series)

Prevents the burners from operating when the drain valve is open.

SHORTENING LIFE (All Models)

Shortening life can be extended by following these guidelines:

- Do not salt foods over the fryer.
- Use good quality shortening.
- Filter shortening daily (at a minimum).
- Replace shortening if it becomes poorly flavored.
- Keep equipment and surroundings clean.
- Remove excess moisture and particles from food products before placing in fryer.

CLEANING

WARNING: HOT OIL AND PARTS CAN CAUSE BURNS. USE CARE WHEN OPERATING, CLEANING AND SERVICING THE FRYER.

DAILY

- Clean all exterior surfaces of your fryer at least once daily.

- Use a damp cloth with warm water and a mild soap or detergent.

- Rinse thoroughly, then polish with a soft, dry cloth.

- Keep the fryer exterior clean and free of accumulated grease to prevent stubborn stains from forming. If regular cleaning is neglected, grease will be burned on and discolorations may form.

- Remove discolorations by washing with any detergent or soap and water.

- Use a self-soaping nonmetallic scouring pad for particularly stubborn discolorations.

- Always rub with the grain of the stainless steel.

- Do not use a scouring pad or harsh cleaners on the keypad or display area.

- Cleaning instructions for the KleenScreen filtering system are covered in a separate manual. Follow the instructions accordingly.

WEEKLY OR AS REQUIRED

1. Drain shortening.

   NOTE: Fryers equipped with the KleenScreen filtering system are covered in a separate manual. Follow the instructions for draining the tank.

2. Flush out scraps and sediment with a small amount of warm shortening.

3. Allow the tank to drain thoroughly.

4. Close the drain valve and fill the tank with a noncorrosive, grease-dissolving commercial cleaner. Follow the manufacturer's instructions.

5. Boil the solution for 15 to 20 minutes. If the cleaner is a water-based chemical, temperature may be 190°F to 212°F (88°C to 100°C). Set the temperature as low as possible. Follow the manufacturer's instructions. Monitor boiling to prevent overflow.

   NOTE: For fryers equipped with the BOIL feature, fill the tank with water and cleaner and press BOIL. Fryer will automatically set the boil temperature.

6. Drain the cleaning solution from the tank.

   NOTE: On fryers equipped with the KleenScreen filtering system, **do not** drain cleaning solution into the pump or filter system. See the KleenScreen manual for more information.

7. Close the drain valve and refill the tank with water.

8. Add 1 cup (235 mL) of vinegar to neutralize alkaline left by the cleaner.

9. Bring the solution to a boil, do not allow to boil over, and let stand for a few minutes.

10. Drain the tank.

11. Rinse the tank thoroughly with clear, hot water (all traces of cleaner must be removed).

12. Dry the tank thoroughly.

13. Close the drain valve and add shortening.

14. Shortening level should be between the MIN and MAX lines. Shortening will expand when heated; do not fill the fry tank past the MAX line. The fryer is now ready for use.

MAINTENANCE

WARNING: HOT OIL AND PARTS CAN CAUSE BURNS. USE CARE WHEN OPERATING, CLEANING AND SERVICING THE FRYER.

WARNING: SPILLING HOT FRYING COMPOUND CAN CAUSE SEVERE BURNS. DO NOT MOVE FRYER WITHOUT DRAINING ALL FRYING COMPOUND FROM THE TANK.

Fryers should be kept on a regulator preventive maintenance schedule. Contact your local Vulcan-Hart Service office for details.

LUBRICATION

Motors used on basket lifts are permanently lubricated.

VENT

When the fryer is cool, inspect annually. Check the flue and clear any obstructions.

SERVICE

Contact your local Vulcan-Hart Service office.

TROUBLESHOOTING GUIDE

SYMPTOM	POSSIBLE CAUSES
No power when switch is turned on.	Tripped external breaker; external fuse blown. Verify fryer is plugged in and/or check external circuit breakers and/or fuse. Problem with power switch; call service. Problem with high limit; call service.
Fryer will not heat.	Gas supply not on or partially on. Verify external gas supply valve is on. Check hose connection (if applicable). Power not on. Verify power is on. Gas valve in fryer not on. Verify gas valve is on in fryer; verify pilot comes on. Problem with electrical system; turn off gas supply and call service.
Fryer continues to heat.	Combination valve is stuck in open position; turn off gas supply and call service. Problem with electrical system; call service.
Fryer heats, but will not reach desired temperature.	Gas supply pressure inadequate; call service.
Fryer stops during operation.	Tripped external breaker; external fuse blown. Verify fryer is plugged in and/or check external circuit breakers and/or fuse. Check gas supply. Verify pilot is on. Shortening is too hot; high limit switch is open; call service.

ALARMS AND ERROR MESSAGES (GRD and GRC Series)

Pilot Out - If the pilot is out, the control displays the following message:

    GRD Models -   FIrE OUt

    GRC Models -   PILOT OUT

If no action is taken after 90 seconds, an alarm sounds continuously, the heat demand is disabled and any running cooking cycles are cancelled**.** The control displays the following message:

    GRD Models -   Ign LoC

    GRC Models -   IGNITION LOCKOUT

The fryer must be turned off, then back on before the pilot can be relit and normal fryer functions resumed. See pages 15 and/or 16 for lighting instructions pertaining to your particular model.

Open Probe - If an open probe is detected, the heat demand is disabled and any running cooking cycles are cancelled. All operator buttons are disabled. The control displays the following message:

    GRD Models -   Prob

    GRC Models -   OPEN PROBE

The alarm sounds continuously until the fault clears or the fryer is turned off, then back on. If the problem persists, call service.

Shorted Probe - If a shorted probe is detected, the heat demand is disabled and any running cooking cycles are cancelled. All operator buttons are disabled. The control displays the following message:

    GRD Models -   Hi

    GRC Models -   SHORTED PROBE

The alarm sounds continuously until the fault clears or the fryer is turned off, then back on. If the problem persists, call service.

Hi Temperature - If the temperature is greater than or equal to 415°F (212°C), the heat demand is disabled and any running cooking cycles are cancelled. All operator buttons are disabled. The control displays the following message:

    GRD Models -   Hi

    GRC Models -   SHORTED PROBE

The alarm sounds continuously until the fault clears or the fryer is turned off, then back on. Normal fryer operations resumes when temperature drops below 415°F (212°C). If the problem persists, call service.